



**CORRECTIVE ACTION COMPLETION
REPORT
LPC #0998290002 - LASALLE COUNTY**

**WEDRON SILICA COMPANY
3450 EAST 2056th ROAD
WEDRON, LASALLE COUNTY, ILLINOIS
INCIDENT NO. 20140173
LEAKING UST TECHNICAL FILE**

SUBMITTED TO:

Illinois Environmental Protection Agency
Bureau of Land - #24
Leaking Underground Storage Tank Section
1021 North Grand Avenue East / P.O. Box 19276
Springfield, Illinois 62791-9276

PREPARED BY:

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August 28, 2015
GZA File No. 20.0151178.51

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Illinois Environmental Protection Agency
Bureau of Land - #24
Leaking Underground Storage Tank Section
1021 North Grand Avenue East / P.O. Box 19276
Springfield, Illinois 62791-9276



Attention: Mr. Harry A. Chappel, P.E.
Unit Manager

Subject: Corrective Action Completion Report
LPC #0998290002 - LaSalle County
Wedron/Wedron Silica Company
3450 East 2056th Road, Wedron, LaSalle County, Illinois
Incident No. 20140173
Leaking UST Technical File

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Dear Mr. Chappel:

GZA GeoEnvironmental, Inc. is providing the following Corrective Action Completion Report to the Illinois Environmental Protection Agency for addressing gasoline constituents reported for soil and groundwater samples collected proximal to a former gasoline underground storage tank system on the Wedron Silica Company property at 3450 East 2056th Road in Wedron, LaSalle County, Illinois. With completion of the remedial action, Wedron Silica Company respectfully requests a No Further Remediation letter be granted for Incident No. 20140173.

The report was prepared in accordance with Title 35, Subtitle G, Chapter I, Subchapter d, Part 734 of the Illinois Administrative Code. Limitations for this report are provided in Appendix A. If you have questions, contact the undersigned at (262) 754-2560.

Very truly yours,

GZA GeoEnvironmental, Inc.



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J:\151100to151199\151178 Wedron\50_51 Community Groundwater\AST-UST Closure\IEPA Reporting\Corrective Action Completion Report\
FINAL 151178.51 Corrective Action Completion Report 8-28-15.docx

Attachment

c: Mr. Steve Faryan, United States Environmental Protection Agency
Mr. Mike Melton, Wedron Silica Company
Mr. David Olchawa, Wedron Silica Company
Mr. William Bath, Lockheed Martin

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WEDRON/WEDRON SILICA COMPANY
3450 EAST 2056th ROAD
WEDRON, LASALLE COUNTY, ILLINOIS
INCIDENT NO. 20140173**

TABLE OF CONTENTS



	<u>Page</u>
EXECUTIVE SUMMARY	iii
1.0 INTRODUCTION	1
2.0 BACKGROUND	1
2.1 SITE INVESTIGATION RESULTS SUMMARY	1
3.0 REMEDIAL ACTION	5
3.1 SOIL BORINGS AND SOIL SAMPLING	5
3.2 ADDITIONAL SOIL SAMPLING ANALYTICAL RESULTS	7
3.3 TACO TIER 2 C _{SAT} CALCULATIONS AND COMPARISON TO SOIL ANALYTICAL RESULTS	7
3.4 EXCAVATION REMEDIAL ACTION	8
3.5 EXCAVATION SOIL SAMPLE ANALYTICAL RESULTS	9
4.0 POST-REMEDATION SOIL AND GROUNDWATER CONCENTRATIONS	10
5.0 ENGINEERED BARRIERS AND INSTITUTIONAL CONTROLS	11
6.0 WATER-SUPPLY WELLS	12
7.0 CONCLUSIONS	12
8.0 REFERENCES	12
9.0 LICENSED PROFESSIONAL ENGINEER CERTIFICATION	13

TABLES

Table 1	Soil Analytical Results Compared to TACO Tier 1 Remediation Objectives and Tier 2 C _{sat} Values
Table 2	Groundwater Analytical Results Compared to TACO Tier 1 Groundwater Remediation Objectives

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TABLE OF CONTENTS



FIGURES

Figure 1	Site Location Map
Figure 2	Former 4,000-Gallon Gasoline USTs and Surrounding Area
Figure 3	Approximate Extent of Remedial Excavation and Excavation Sidewall and Bottom Soil Sample Results
Figure 4	Gasoline Indicator Constituent Concentrations in Comparison to TACO Tier 1 Class I Migration to Groundwater Soil Remediation Objectives
Figure 5	Gasoline Indicator Constituent Concentrations in Comparison to TACO Tier 1 Industrial Inhalation Soil Remediation Objectives
Figure 6	Gasoline Indicator Constituent Concentrations in Comparison to TACO Tier 1 Construction Worker Inhalation Soil Remediation Objectives
Figure 7	Groundwater Gasoline Indicator Constituent Concentrations in Comparison to TACO Tier 1 Class I Groundwater Remediation Objectives
Figure 8	Setback Zones for Wells Within 500 Feet of the Former UST System

APPENDICES

Appendix A	Limitations
Appendix B	Soil Boring Logs
Appendix C	Soil Analytical Report and Chain-of-Custody Form
Appendix D	TACO Tier 2 C_{sat} Calculation Inputs and Results Based on the Site-Specific F_{oc} Concentration
Appendix E	Summary of Soil Disposed
Appendix F	Remedial Excavation Photo-Documentation
Appendix G	Excavation Sidewall and Bottom Soil Samples Analytical Report and Chain-of-Custody Form

EXECUTIVE SUMMARY



The former gasoline underground storage tank (UST) system (LPC #0998290002 - LaSalle County) was closed in 1998, and consisted of two 4,000-gallon unleaded gasoline USTs, two approximately 5-foot long piping runs and two side-by-side fuel dispensers. The UST system was located on the Wedron Silica Company (Wedron Silica) property at 3450 East 2056th Road in Wedron, LaSalle County, Illinois (“Site”). The Site consists of active and reclaimed sandstone quarries and buildings used for processing, storage, maintenance and administration purposes. Based on the industrial Site use, analytical results for soil and groundwater samples analyzed for gasoline indicator constituents were compared to Tiered Approach to Corrective Action Objectives (TACO) Tier 1 Class I industrial groundwater remediation objectives (GROs) and the TACO Tier 1 industrial soil remediation objectives (SROs) for various potential pathways of exposure. The Site will remain under industrial use into the foreseeable future and the closest non-industrial use property is residential located more than 350 feet north and side gradient of the former UST system.

The results of the Site investigation, conducted between December 2013 and November 2014, under the direction of the Illinois Environmental Protection Agency (IEPA), were documented in the January 12, 2015, Site Investigation Completion Report. The Site Investigation Completion Report was conditionally approved by the IEPA in a letter dated February 4, 2015, and received by Wedron Silica and GZA GeoEnvironmental, Inc. (GZA) on February 9, 2015. The actions proposed for addressing gasoline constituents reported for soil and groundwater samples collected proximal to a former gasoline UST system were presented to the IEPA in the April 23, 2015, Revised Corrective Action Plan and consisted of a combination of the following:

1. Excavation and off-Site disposal of soil;
2. Illinois TACO¹ Tier 2 calculations;
3. An engineering control; and
4. Institutional controls.

The Revised Corrective Action Plan was conditionally approved by the IEPA in a letter dated May 12, 2015.

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

The analytical results for soil and groundwater samples analyzed from the Site investigation revealed the following:

1. Gasoline-indicator constituents were reported at concentrations greater than TACO Tier 1 Class I soil migration to groundwater SROs² in one or more soil samples collected from soil borings drilled within approximately 12 feet of the former gasoline UST system.
2. Gasoline-indicator constituents were not detected or were reported at concentrations less than TACO Tier 1 Class I soil migration to groundwater SROs in the six to eight soil samples collected from five soil borings drilled at distances greater than 12 feet of the former gasoline UST system.
3. One gasoline-indicator constituent, benzene, was reported at concentrations greater than the TACO Tier 1 industrial outdoor inhalation SRO³ in soil samples collected from within 7 feet of grade from soil borings drilled adjacent to (within 4 feet) the former gasoline UST system dispensers and from one boring drilled approximately 12 feet north of the former gasoline UST system dispensers.
4. Benzene and other gasoline-indicator constituents were not detected or were reported at concentrations less than TACO Tier 1 industrial outdoor inhalation SROs in the soil samples collected from borings drilled at distances greater than 12 feet of the former gasoline UST system dispensers.
5. Various gasoline-indicator constituents were reported at concentrations greater than TACO Tier 1 construction worker inhalation SROs⁴ in soil samples collected from borings drilled within 12 feet of the former gasoline UST system dispensers.
6. Gasoline-indicator constituents were not detected or were reported at concentrations less than TACO Tier 1 construction worker inhalation SROs in the soil samples collected from borings drilled at distances greater than 12 feet of the former gasoline UST system.
7. Total xylenes, 1,2,4-trimethylbenzene (1,2,4-TMB) and/or 1,3,5-trimethylbenzene (1,3,5-TMB) were reported at concentrations greater than the TACO Tier 1 soil

² Appendix B, Section 742, Table B of the IAC.

³ Ibid.

⁴ Ibid.

saturation (C_{sat}) values⁵ in soil samples collected from soil borings drilled adjacent to (within 4 feet) the former gasoline UST system dispensers.

8. Two gasoline constituents (benzene and 1,3,5-TMB) were reported at concentrations greater than their respective TACO Tier 1 Class I GROs⁶ for a sample from monitoring well MW-19 (located immediately adjacent to the former gasoline dispensers). Benzene was reported at concentrations of 0.0084 and 0.0086 (in the duplicate) milligrams per liter (mg/l) compared to the 0.005 mg/l TACO Tier 1 GRO, and 1,3,5-TMB was reported at concentrations of 0.29 and 0.30 (in the duplicate) mg/l compared to the 0.070 mg/l TACO Tier 1 GRO.
9. With the exception of gasoline constituents reported for MW-19 and very low methyl tert-butyl ether (MTBE) concentrations (less than 0.0017 J mg/l compared to a 0.070 mg/l TACO Tier 1 Class I GRO) reported for MW-17, MW-20, MW-21 and MW-22, gasoline-indicator constituents were reported as not detected for other samples collected from monitoring wells installed near the former gasoline UST system and for samples collected from monitoring wells further north in the Wedron community. Gasoline constituents were also reported as not detected in samples collected by the United States Environmental Protection Agency (USEPA) in the closest potable water supply wells further to the north in the Wedron community.
10. Benzene was reported for the groundwater sample from MW-19 at a concentration less than the Tier 1 Industrial/Commercial GRO for the potential indoor inhalation exposure pathway considering diffusion and advection⁷ (0.41 mg/l). A Tier 1 Industrial/Commercial GRO for the potential indoor inhalation exposure pathway for 1,3,5-TMB has not been established.

The following reported soil and groundwater concentrations greater than TACO SROs were addressed through remedial action, engineering controls and TACO Tier 2 calculations:

1. The benzene soil concentrations reported at concentrations greater than the industrial outdoor inhalation SRO were addressed by excavation of approximately 125 cubic yards (approximately 194 tons) of soil from the affected area, off-Site disposal of the excavated soil and the collection of excavation sidewall and bottom samples to demonstrate industrial outdoor inhalation SROs were met.

⁵ Appendix A, Section 742, Table A of the IAC.

⁶ Appendix B, Section 742, Table E of the IAC.

⁷ Appendix B, Section 742, Table H of the IAC.



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2. The deeper soil with reported concentrations greater than the industrial outdoor inhalation SROs for gasoline constituents was addressed with an engineered barrier consisting of compacted clay placed over that soil in the base of the remedial excavation.
 3. The gasoline constituents reported in shallow soil samples (less than 6 feet deep) at concentrations greater than their TACO Tier 1 C_{sat} values were addressed by excavation and off-Site disposal and the collection of excavation sidewall and bottom samples to demonstrate TACO Tier 1 C_{sat} values were met.
 4. For the gasoline constituents reported in deeper soil samples (greater than 16 feet deep) at concentrations greater than their TACO Tier 1 C_{sat} values, a soil sample was collected from the IEPA-recommended location (from 31 to 33 feet below grade adjacent to boring location MW-22) and submitted for laboratory fraction organic carbon (f_{oc}) analysis. Using the Site-specific f_{oc} value, TACO Tier 2 C_{sat} values were calculated for comparison to the entire soil concentration data set. There are no reported concentrations of gasoline constituents greater than the TACO Tier 2 Site-specific C_{sat} values.

The following reported soil and groundwater concentrations greater than TACO SROs and GROs will be addressed with institutional controls⁸:

1. Related to the use of industrial SROs and GROs, an institutional control will be filed for continued industrial use of the former UST area.
2. An institutional control restricting the installation of drinking water wells within 200 feet of former monitoring well MW-19 will be filed. The institutional control will be filed in response to the gasoline-indicator constituents reported at concentrations greater than the TACO Tier 1 Class I soil migration to groundwater SROs and the benzene and 1,3,5-TMB in the groundwater sample from MW-19 reported at concentrations greater than the TACO Tier 1 Class I GRO.
3. An institutional control will be filed to address implementation of the protective measures consistent with good industrial hygiene practice for construction workers for the area identified with reported soil concentrations greater than the construction worker inhalation SROs.

⁸ The institutional controls referenced in this CACR are proposed in accord with Title 35, Subtitle G, Chapter I, Subchapter F, Part 742 Section 742.1000 c)1) of the IAC.

4. An institutional control will be filed for foundation construction compatible with the use of the Tier 1 Industrial GRO for the potential vapor intrusion (VI) route based on diffusion and advection (Appendix B, Table H of TACO) or for implementation of an approved building control technology (BCT) for the exclusion of the VI pathway.

With completion of the remedial action, construction of the engineering control and proposed institutional controls, Wedron Silica Company respectfully requests that the IEPA grant a No Further Remediation letter for Incident No. 20140173.



1.0 INTRODUCTION



GZA GeoEnvironmental, Inc. (GZA) is providing the following Corrective Action Completion Report (CACR) to the Illinois Environmental Protection Agency (IEPA) for documenting activities conducted to address gasoline constituents reported for soil and groundwater samples. The gasoline constituents were reported for soil and groundwater samples collected proximal to a former gasoline underground storage tank (UST) system on the Wedron Silica Company (Wedron Silica) property at 3450 East 2056th Road in Wedron, LaSalle County, Illinois (“Site”). The former gasoline UST system was closed in 1998 (LPC #0998290002 - LaSalle County), and consisted of two 4,000-gallon unleaded gasoline USTs, two piping runs approximately 5 feet long and two side-by-side fuel dispensers. The area of the former gasoline USTs and the surrounding area, including the Wedron community, are shown on Figures 1 and 2.

This CACR was prepared in accordance with Title 35, Subtitle G, Chapter I, Subchapter d, Part 734 of the Illinois Administrative Code (IAC). The corrective action was conducted in accordance with the April 23, 2015, Revised Corrective Action Plan (Revised CAP), which was conditionally approved by the IEPA in a letter dated May 12, 2015. Limitations for this CACR are provided in Appendix A.

2.0 BACKGROUND

The former gasoline UST system was located southwest of the unincorporated Wedron community in the Northwest $\frac{1}{4}$ of the Northwest $\frac{1}{4}$ of the Southeast $\frac{1}{4}$ of Section 9 (near the center of Section 9), Township 34 North, Range 4 East, Dayton Township, LaSalle County, Illinois. The Site consists of active and reclaimed sandstone quarries and buildings used for processing, storage, maintenance and administration purposes. Currently, the Site has an industrial land use and is projected to remain industrial into the future. The closest non-industrial property is located more than 350 feet north of the former gasoline UST system, beyond Alice Street (also known as 3458th Road), as shown on Figure 2. The closest residence to the former gasoline UST system is located in the southern portion of the community of Wedron, approximately 425 feet to the north and on the north side of Alice Street.

2.1 SITE INVESTIGATION RESULTS SUMMARY

Site investigation activities were conducted between December 2013 and November 2014, under IEPA’s oversight. The results of the Site investigation were documented in the January 12, 2015, Site Investigation Completion Report. The Site Investigation Completion

Report was conditionally approved in a letter dated February 4, 2015, and received by Wedron Silica and GZA on February 9, 2015.

Based on the industrial Site use, soil and groundwater analytical results were compared to Illinois Tiered Approach to Corrective Action Objectives (TACO)⁹ Tier 1 Class I industrial groundwater remediation objectives (GROs) and the TACO Tier 1 industrial soil remediation objectives (SROs) for various potential applicable pathways of exposure.



The soil and groundwater analytical results obtained from the Site investigation revealed the following:

1. Gasoline-indicator constituents were reported at concentrations greater than TACO Tier 1 Class I soil migration to groundwater SROs¹⁰ in one or more soil samples from the borings drilled within approximately 12 feet of the former gasoline UST system.
2. Gasoline-indicator constituents were not detected or were reported at concentrations less than TACO Tier 1 Class I migration to groundwater SROs in the six to eight soil samples collected from borings drilled at distances greater than 12 feet of the former gasoline UST system.
3. One gasoline-indicator constituent, benzene, was reported at concentrations greater than the TACO Tier 1 industrial outdoor inhalation SRO¹¹ in soil samples collected from within 7 feet of grade from the borings drilled within 4 feet of the former gasoline UST system dispensers and from one boring drilled approximately 12 feet north of the former gasoline UST system dispensers. One gasoline constituent, 1,2,4-trimethylbenzene (1,2,4-TMB), was reported at concentrations greater than the TACO Tier 1 industrial outdoor inhalation SRO in soil samples collected from depths greater than 15 feet in two borings (GP-14A and GP-22) drilled between the former dispensers and USTs.
4. Benzene and other gasoline-indicator constituents were not detected or were reported at concentrations less than TACO Tier 1 industrial outdoor inhalation SROs in the soil samples collected from borings drilled at distances greater than 12 feet of the former gasoline UST system.

⁹ Title 35, Subtitle G, Chapter I, Subchapter F, Part 742 of the IAC.

¹⁰ Appendix B, Section 742, Table B of the IAC.

¹¹ Ibid.

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5. Various gasoline-indicator constituents were reported at concentrations greater than TACO Tier 1 construction worker inhalation SROs¹² in soil samples collected from borings drilled within 12 feet of the former gasoline UST system dispensers.
 6. Gasoline-indicator constituents were not detected or were reported at concentrations less than TACO Tier 1 construction worker inhalation SROs in the soil samples collected from borings drilled at distances greater than 12 feet of the former gasoline UST system.
 7. Total xylenes, 1,2,4-TMB and/or 1,3,5-trimethylbenzene (1,3,5-TMB) were reported at concentrations greater than the TACO Tier 1 soil saturation (C_{sat}) values¹³ in soil samples collected from soil borings drilled adjacent to (within 4 feet) the former gasoline UST system dispensers.
 8. Two gasoline constituents, benzene and 1,3,5-TMB, were reported at concentrations greater than their respective TACO Tier 1 Class I GROs¹⁴ for a sample from MW-19 (located immediately adjacent to the former gasoline dispensers). Benzene was reported at concentrations of 0.0084 and 0.0086 (in the duplicate) milligrams per liter (mg/l) compared to the 0.005 mg/l TACO Tier 1 GRO, and 1,3,5-TMB was reported at concentrations of 0.29 and 0.30 (in the duplicate) mg/l compared to the 0.070 mg/l TACO Tier 1 GRO.
 9. The modeled GRO extents in groundwater for gasoline constituents reported at concentrations greater than TACO Tier 1 Class I GROs were calculated using analytical equation R-26¹⁵ (Dissolved Hydrocarbon Concentration along Centerline $C_{(x)}$). The inputs to the analytical equation and the model results were previously presented in Appendix B of the Revised CAP. The modeled GRO extents downgradient of MW-19 are approximately:
 - 1.5 feet (44 centimeters) for benzene; and
 - 4.8 feet (146 centimeters) for 1,3,5-TMB.
 10. The theoretical modeled migration extent of groundwater with concentrations of gasoline constituents greater than TACO Tier 1 Class I GROs downgradient of the

¹² Ibid.

¹³ Appendix A, Section 742, Table A of the IAC.

¹⁴ Appendix B, Section 742, Table E of the IAC.

¹⁵ Appendix C, Section 742, Table C of the IAC, RBCA Equations.

former fuel dispensers was calculated using analytical equations R-14¹⁶ (Leaching Factor) and R-26. The inputs to the analytical equation and the model results were previously presented in Appendix C of the Revised CAP. The theoretical modeled extents of groundwater with concentrations greater than GROs are approximately as follows:



- 23 feet (701 centimeters) for benzene based on a modeled theoretical source groundwater concentration of 1.7 mg/l;
 - 4.8 feet (146 centimeters) for ethylbenzene based on a modeled theoretical source groundwater concentration of 58 mg/l;
 - 6.9 feet (211 centimeters) for naphthalene based on a theoretical source groundwater concentration at the naphthalene solubility limit of 31 mg/l;
 - 0.3 feet (8 centimeters) for toluene based on a modeled theoretical source groundwater concentration of 3.1 mg/l;
 - 31 feet (947 centimeters) for 1,3,5-TMB based on a theoretical source groundwater concentration at the 1,3,5-TMB solubility limit of 50 mg/l;
 - 32 feet (979 centimeters) for 1,2,4-TMB based on a theoretical source groundwater concentration at the 1,2,4-TMB solubility limit of 59 mg/l; and
 - 2.2 feet (68 centimeters) for total xylenes based on a theoretical source groundwater concentration at the total xylenes solubility limit of 110 mg/l.
11. With the exception of gasoline constituents reported for MW-19 and very low methyl tert-butyl ether (MTBE) concentrations (less than 0.0017 J mg/l compared to a 0.070 mg/l TACO Tier 1 Class I GRO) reported for MW-17, MW-20, MW-21 and MW-22, gasoline constituents were reported as not detected for other samples collected from wells installed near the former gasoline UST system and for samples collected from monitoring wells further north in the Wedron community. Gasoline constituents were also reported as not detected in samples collected by the United States Environmental Protection Agency (USEPA) in the Wedron community potable water supply wells located closest to the former gasoline UST system.

¹⁶ Appendix C, Section 742, Table C of the IAC, RBCA Equations.

12. Benzene was reported for the groundwater sample from MW-19 at a concentration less than the Tier 1 Industrial/Commercial GRO for the potential indoor inhalation exposure pathway considering diffusion and advection¹⁷ (0.41 mg/l). A Tier 1 Industrial/Commercial GRO for the potential indoor inhalation exposure pathway for 1,3,5-TMB has not been established.



The actions proposed for addressing gasoline constituents reported for soil and groundwater samples collected proximal to the former gasoline UST system, consisting of soil excavation and off-Site disposal, soil sampling and TACO Tier 2 C_{sat} calculations and engineering and institutional controls, were presented to the IEPA in the Revised CAP. The Revised CAP was conditionally approved by the IEPA in a letter dated May 12, 2015.

3.0 REMEDIAL ACTION

Because the excavation was to occur in a high-traffic area into a major processing portion of the Site operation and possibly up to and beyond a power pole that supplies power for processing operations, a more precise understanding of the area to be excavated was desired to facilitate planning and executing the remedial excavation. The additional soil sampling conducted in advance of the proposed excavation of soil is described below.

3.1 SOIL BORINGS AND SOIL SAMPLING

Geoprobe[®] soil borings WS-SB-GP-27 through WS-SB-GP-36 were drilled by Earth Solutions, Inc. of St. Charles, Illinois at the approximate locations shown on Figure 2 on June 3, 2015. The Geoprobe[®] borings were drilled with a Geoprobe[®] 7822DT drilling rig. With the exception of soil boring WS-SB-GP-35, soil samples were collected continuously to target depths utilizing a 4- or 5-foot long, 1-inch diameter, stainless steel sampling tube fitted with acetate liners. For soil boring WS-SB-GP-35, a single soil sample was collected from the 31- to 33-foot depth interval. Soil borings WS-SB-GP-27 through WS-SB-GP-31, WS-SB-GP-34 and WS-SB-GP-36 were drilled to depths of 10 feet below grade; and soil borings WS-SB-GP-32 and WS-SB-GP-33 were drilled to 35 feet below grade, the approximate depth of the water table based on the 37.15-foot water table depth from top-of-casing (34.8 feet below grade) measured in nearby monitoring well MW-22 on the day of drilling. Soil boring WS-SB-GP-35 was drilled to a depth of 33 feet.

Soil cuttings were placed in a Department of Transportation (DOT)-compliant, 55-gallon drum for temporary storage prior to disposal with the soil excavated as part of the subsequent

¹⁷ Appendix B, Section 742, Table H of the IAC.

remedial action. Drilling equipment was decontaminated by steam cleaning between borings and down-hole sampling equipment was scrubbed with a soap-water solution and rinsed with potable water.

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 a 10.6 eV lamp and calibrated to 100 parts per million (ppm) isobutylene prior to each day's use. 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 for previous work conducted at the Site. Upon completion of the soil sampling activities, soil borings were abandoned by filling each boring with bentonite chips to within several inches of grade and matching surface material to grade. Soil boring logs containing geological descriptions and field screening results recorded as iu are provided in Appendix B.



Three soil samples (the 2- to 4-foot, 4- to 6-foot and 6- to 8-foot intervals) from the upper 10 feet of each continuously sampled soil boring were submitted to a State-certified laboratory for analyses for gasoline constituents. These intervals encompass the zones in which the reported benzene concentrations greater than the industrial outdoor inhalation SRO occurred in the Site investigation borings. The 8- to 10-foot intervals from soil borings WS-SB-GP-32 and WS-SB-GP-34 were also submitted for analyses based on the elevated field-screen readings recorded from the 6- to 8-foot interval. For continuously sampled soil borings drilled to deeper than 10 feet (soil borings WS-SB-GP-32 and WS-SB-GP-33), a soil sample was selected for laboratory analyses for gasoline constituents from each 5-foot interval greater than 10 feet below grade based on field indications from field screening, odors, staining, etc. As recommended by the IEPA and due to the lack of gasoline impact on prior field screening and laboratory testing of soil samples collected from below 25 feet in prior soil boring location WS-SB-MW-22, a 31- to 33-foot below grade soil sample was collected from soil boring WS-SB-GP-35 for f_{oc} analysis. Soil boring WS-SB-GP-35 was drilled immediately adjacent to MW-22 and the 31- to 33-foot below grade soil sample was collected a distance of approximately 1.5 to 2 feet above the water table. A soil sample collected between approximately 0 to 4 feet below grade from a soil boring drilled at the location of prior soil boring WS-SB-GP-6 was also submitted for laboratory analyses for waste profile characteristics.

Soil samples selected for laboratory analyses were preserved, placed on ice and transported by GZA to Environmental Chemistry Consulting Services, Inc. (ECCS) of Madison,



Wisconsin (State of Illinois Accreditation #200062) for analyses of benzene, toluene, ethylbenzene, xylenes (BTEX) and 1,2,4- and 1,3,5-TMBs in accordance with USEPA Method 8260B. The soil sample from soil boring WS-SB-GP-35 was analyzed for organic carbon (f_{oc}) in accordance with American Society for Testing and Materials (ASTM) Method D2974-87, *Standard Test Methods for Moisture, Ash, and Organic Matter of Peat and Other Organic Soils*. The waste profile sample was analyzed for flashpoint in accordance with USEPA Method 1010, free liquids in accordance with USEPA Method 9095, TCLP BTEX and MTBE in accordance with USEPA Method 8260B and lead in accordance with USEPA Method 6010. The waste profile and f_{oc} analyses were conducted by Pace Analytical Services, Inc. (Pace) of Green Bay, Wisconsin (State of Illinois Accreditation #200050) as a subcontractor to ECCS. The soil analytical laboratory reports and the chains-of-custody for the soil samples are provided in Appendix C.

3.2 ADDITIONAL SOIL SAMPLING ANALYTICAL RESULTS

The soil analytical results obtained for the soil borings drilled on June 3, 2015, are summarized on Table 1 along with the historical data. Because the June 3, 2015 soil boring and soil sampling activities were conducted to refine the area targeted for remediation by excavation and off-Site disposal for the industrial outdoor inhalation potential exposure pathway, the analytical results were compared primarily to the industrial outdoor inhalation SROs. The reported concentrations for the soil samples collected on June 3, 2015 are less than the industrial outdoor inhalation SROs and identified the likely outer extent of planned remedial excavation. Based on the reported waste-profile analytical results, the soil planned for excavation was classified as a special waste for disposal purposes.

The f_{oc} concentration for the 31- to 33-foot soil sample from soil boring WS-SB-GP-35 (at the location recommended by the IEPA) was reported as 0.99%.

3.3 TACO TIER 2 C_{SAT} CALCULATIONS AND COMPARISON TO SOIL ANALYTICAL RESULTS

TACO Tier 2 calculations for C_{sat} values were made for BTEX and 1,2,4- and 1,3,5-TMBs using the Site-specific 0.99% f_{oc} concentration and analytical equation S-29¹⁸. The TACO Tier 2 C_{sat} calculation inputs and results are provided in Appendix D. The TACO Tier 2 C_{sat} calculations resulted in the following TACO Tier 2 C_{sat} values:

- Benzene: 1,117 milligrams per kilogram (mg/kg);

¹⁸ Appendix C, Section 742, Table A of the IAC, SSL Equations.

- Toluene: 898 mg/kg;
- Ethylbenzene: 562 mg/kg;
- Xylenes (Total): 448 mg/kg;
- 1,2,4-TMB: 942 mg/kg; and
- 1,3,5-TMB: 334 mg/kg



The TACO Tier 2 C_{sat} values are provided in Table 1 for comparison to soil analytical results. Based on a comparison of the TACO Tier 2 C_{sat} values to the analytical results obtained from soil borings (for soil sample intervals that remain at the Site after conducting the remedial action) and excavation sidewall and bottom samples, TACO Tier 2 C_{sat} values are not exceeded for each of the soil samples collected on the Site during the investigation and remedial action.

3.4 EXCAVATION REMEDIAL ACTION

On July 29, 2015, RW Collins of Chicago, Illinois excavated approximately 125 cubic yards (approximately 194 tons) of soil from the remedial excavation shown on Figure 3. The excavated soil was transported to Republic Services LandComp Landfill (Republic) in Ottawa, Illinois for disposal under Waste Profile Number 41701511890 assigned by Republic upon receipt of a disposal manifest signed by a Wedron Silica representative. A summary of the loads of soil disposed in the landfill and the transportation manifests are provided in Appendix E.

The following activities were conducted prior to beginning the excavation:

- The existing gasoline aboveground storage tank (AST), present within the planned excavation footprint, was moved;
- The power pole located near the planned northern extent of the remedial excavation was supported by Wedron Silica's electrical contractor;
- Concrete on the east side of the planned excavation was saw cut; and

- Monitoring well MW-19, located within the planned excavation footprint, was abandoned by filling with bentonite in accordance with the state standard¹⁹.

A qualified GZA field representative directed all remedial activities including the extents and depth of excavation based on the field screening of soil with a PID and the presence of staining and odor in soil. The excavation was continued until soil staining and odors were no longer evident and the results of field screening of soil decreased to near background levels. The excavation bottom varied from 5 to 7.5 feet deep, as shown on Figure 3. In the western portion of the excavation, the excavation terminated in a sand layer at depths ranging from approximately 5 feet (north side) to 7.5 feet (south side). In the eastern portion of the excavation, the excavation was terminated in a stiff clay layer at a depth of approximately 6 feet. The excavation extended laterally to the planned extent of the excavation (out to the approximate locations of the June 2015 borings where reported soil concentrations were less than the TACO Tier 1 industrial outdoor inhalation SROs), after which the excavation sidewall was evaluated for the presence of staining and odors and soil samples were collected for field screening. Based on the field screening results and observations related to staining and odor, the excavation was not extended further. Photo-documentation of the remedial excavation and backfilling is provided in Appendix F.



Five excavation sidewall samples (Wall 1 through Wall 5) were collected from a depth of 4 feet along the 90-foot excavation perimeter (at least one sample for each 20 feet of excavation wall) and two excavation bottom samples (Bottom 1 and Bottom 2) were collected from the approximately 500-square-foot (ft²) excavation base (at least one sample for each 400 ft² of excavation base). Based on field screening, the bottom samples were at 0.3 and 1.6 ppm²⁰ for the Bottom 1 and Bottom 2 soil samples, respectively; and the sidewall samples were at 1.1, 0.9, 22, 8 and 9 ppm for Wall 1 through Wall 5, respectively. The excavation sidewall and bottom samples were preserved with methanol, placed on ice in a cooler and transported by GZA under chain-of-custody for BTEX analyses by ECCS in accordance with USEPA Method 8260B. The analytical report for the excavation closure samples is provided in Appendix G.

3.5 EXCAVATION SOIL SAMPLE ANALYTICAL RESULTS

The excavation sidewall and bottom sample analytical results are summarized on Table 1 along with the historical soil data for soil that was not removed as part of the remedial excavation. The TACO Tier 1 soil component of groundwater ingestion, industrial ingestion, industrial outdoor air inhalation, construction worker ingestion and construction

¹⁹ Title 77, Chapter I, Subchapter r, Part 920, Section 920.120 of the IAC.

²⁰ Based on calibration of the PID to a 100 ppm isobutylene calibration gas.

worker inhalation SROs and TACO Tier 2 C_{sat} values are also provided on Table 1 for comparison.

Based on the analytical results for the five excavation sidewall and two excavation bottom samples, there were no reported BTEX concentrations greater than TACO Tier 1 soil component of groundwater ingestion, industrial ingestion, industrial outdoor air inhalation, construction worker ingestion and construction worker inhalation SROs or TACO Tier 2 C_{sat} values. Therefore, the remedial objective of removal of the shallow soil (less than 10 feet deep) with reported concentrations greater than the industrial outdoor air inhalation SRO for benzene has been met.



4.0 POST-REMEDATION SOIL AND GROUNDWATER CONCENTRATIONS

The analytical results for the soil remaining after completion of the remedial action are summarized on Table 1, and the groundwater analytical results obtained during the Site investigation are summarized on Table 2. With the additional soil data obtained from the June 2015 soil borings, the calculation of the Tier 2 C_{sat} values and completion of the remedial excavation, the maximum extents of areas with reported concentrations greater than the various TACO SROs and GROs were modified, as appropriate, and are summarized as follows:

1. The maximum extent (the area out to soil borings with no reported exceedances consisting of MW-17, MW-18, MW-21 and MW-22) of soil with reported concentrations of gasoline-indicator constituents greater than TACO Tier 1 Class I soil migration to groundwater SROs covers approximately 0.15 acre (approximately 6,650 ft²), as depicted on Figure 4.
2. The maximum extent (the area out to soil borings with no reported exceedances) of soil with reported indicator parameter concentrations greater than the TACO Tier 1 industrial outdoor inhalation SRO covers approximately 0.006-acre (approximately 280 ft²), as depicted on Figure 5. The maximum extent is covered by the approximately 500 ft² engineered barrier (4-foot thick clay cap) constructed in the base of the remedial excavation.
3. The maximum extent (the area out to soil borings with no reported exceedances consisting of WS-SB-GP-15, WS-SB-GP-16, MW-17 and MW-21) of soil with reported concentrations of gasoline-indicator constituents greater than TACO Tier 1 construction worker inhalation SROs covers approximately 0.07-acre (approximately 3,125 ft²), as depicted on Figure 6.

4. There are no reported concentrations of gasoline constituents greater than the TACO Tier 2 Site-specific C_{sat} values.
5. The maximum extent (the area out to monitoring wells with no reported exceedances consisting of MW-17, MW-18, MW-21 and MW-22) of groundwater with reported concentrations of gasoline constituents greater than TACO Tier 1 Class I GROs covers approximately 0.15-acre (approximately 6,650 ft²), as depicted on Figure 7. The modeled GRO extents (less than 4.8 feet) in groundwater for gasoline constituents reported at concentrations greater than TACO Tier 1 Class I GROs and the theoretical modeled extents (less than 32 feet) of groundwater with concentrations greater than GROs, as presented in Item 10 of Section 2.1, are less than the maximum extent of groundwater with reported concentrations of gasoline constituents greater than TACO Tier 1 Class I GROs, as depicted on Figure 7.



5.0 ENGINEERED BARRIERS AND INSTITUTIONAL CONTROLS

The following institutional controls²¹ and engineered barriers are part of the overall remedy that will achieve remedial objectives:

1. Related to the use of industrial SROs and GROs, an institutional control will be filed for continued industrial use of the former UST area.
2. The deeper soil with reported concentrations greater than the industrial outdoor inhalation SROs for gasoline constituents were addressed with an engineered barrier consisting of compacted clay placed over that soil in the base of the remedial excavation. Approximately 4 feet of clay cap were placed in 1- to 2-foot lifts in the base of remedial excavation and compacted with a vibratory roller to greater than 95% of the modified proctor value. The clay cap was covered with granular fill to grade and compacted with a vibratory roller to greater than 95% of the modified proctor value.
3. An institutional control will be filed to address implementation of the protective measures consistent with good industrial hygiene practice for construction workers in the area identified with soil concentrations greater than the construction worker inhalation SROs.

²¹ The institutional controls referenced in this CACR are proposed in accord with Title 35, Subtitle G, Chapter I, Subchapter F, Part 742 Section 742.1000 c)1) of the IAC.

4. An institutional control restricting the installation of drinking water wells within 200 feet of former monitoring well MW-19 will be filed. The institutional control will be filed to address the gasoline-indicator constituents reported at concentrations greater than the TACO Tier 1 Class I soil migration to groundwater SROs and the benzene and 1,3,5-TMB in the groundwater sample from MW-19 reported at concentrations greater than the TACO Tier 1 Class I GRO.
5. An institutional control will be filed with the property for any buildings constructed over the area of reported gasoline constituent concentrations greater than TACO Tier 1 Class I GROs to include a full concrete slab-on-grade floor, full concrete basement floor and walls with no sumps, or an approved building control technology (BCT). This restriction allows the potential vapor intrusion exposure pathway to be addressed by comparison with the GROs found in TACO Appendix B, Section 742, Table H or by exclusion of the potential pathway via implementation of the BCT.

6.0 WATER-SUPPLY WELLS

Based on the results of the water well survey documented in the Site Investigation Completion Report, the closest known water supply wells are the Wedron Silica Main Office well located approximately 350 feet hydraulically sidegradient and northeast of the former UST system and two residential water supply wells approximately 450 feet hydraulically sidegradient and north/northeast of the former UST system. The three water supply wells and their 200-foot setback zones are shown on Figure 8. The area of actual or modeled GRO exceedances does not intersect the setback zones for the three wells.

7.0 CONCLUSIONS

Implementation of the approved Revised CAP has met the remediation objectives approved by the IEPA for the Site. The accuracy and completeness of the data provided and referenced herein and the performance of the remedial action, construction of the engineering control, and proposed institutional controls described herein are sufficient to allow issuance of a No Further Remediation letter for the Site. Therefore, Wedron Silica Company respectfully requests that the IEPA grant a No Further Remediation letter for Incident No. 20140173.

8.0 REFERENCES

November 13, 2013, Quality Assurance Project Plan, EPA Docket No. RCRA 05-2013-0011, Wedron Illinois, prepared by GZA GeoEnvironmental, Inc. for Wedron Silica Company and Lockheed Martin Corporation

January 12, 2015, Site Investigation Completion Report, LPC #0998290002 - LaSalle County, Wedron/Wedron Silica Company, 3450 2056th Road, Wedron, LaSalle County, Illinois, Incident No. 20140173, Leaking UST Technical File, prepared GZA GeoEnvironmental, Inc. and submitted to the Illinois Environmental Protection Agency



February 4, 2015, Illinois Environmental Protection Agency conditional approved letter of the January 12, 2015 Site Investigation Completion Report

April 23, 2015, Revised Corrective Action Plan, LPC #0998290002 - LaSalle County, Wedron/Wedron Silica Company, 3450 2056th Road, Wedron, LaSalle County, Illinois, Incident No. 20140173, Leaking UST Technical File, prepared GZA GeoEnvironmental, Inc. and submitted to the Illinois Environmental Protection Agency

May 12, 2015, Illinois Environmental Protection Agency conditional approval letter of the April 23, 2015 Revised Corrective Action Plan

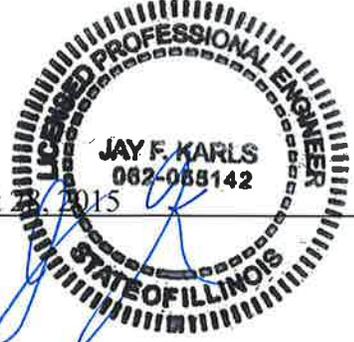
9.0 LICENSED PROFESSIONAL ENGINEER CERTIFICATION

I certify under penalty of law that all activities that are the subject of this report were conducted under my supervision or were conducted under the supervision of another Licensed Professional Engineer or Licensed Professional Geologist and reviewed by me; that this report and all attachments were prepared under my supervision; that, to the best of my knowledge and belief, the work described in the plan, budget, or report has been completed in accordance with the Environmental Protection Act [415 ILCS 5], 35 Ill. Adm. Code 734, and generally accepted standards and practices of my profession; and that the information presented is accurate and complete. I am aware there are significant penalties for submitting false statements or representations to the Agency, including but not limited to fines, imprisonment, or both as provided in Sections 44 and 57.17 of the Environmental Protection Act [415 ILCS 5/44 and 57.17].



Jay F. Karls, P.E.
Senior Project Manager

P.E. Seal


August 21, 2015
Date



TABLES



TABLE 1
SOIL ANALYTICAL RESULTS COMPARED TO TACO TIER I REMEDIATION OBJECTIVES AND TIER 2 C_{SAT} VALUES
Former 4,000-Gallon Gasoline UST System
Wedron, Illinois

Analyte	CAS Registry No.	TACO Tier 1 Soil Component of Groundwater Ingestion Remediation Objectives	TACO Tier 1 Industrial Ingestion Remediation Objectives	TACO Tier 1 Industrial Inhalation Remediation Objectives	TACO Tier 1 Construction Worker Ingestion Remediation Objectives	TACO Tier 1 Construction Worker Inhalation Remediation Objectives	TACO Tier 2 C _{sat} Concentration	Excavation Wall 1 (4')	Excavation Wall 2 (4')	Excavation Wall 3 (4')	Excavation Wall 4 (4')	Excavation Wall 5 (4')	Excavation Bottom 1 (6')	Excavation Bottom 2 (7.5')	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')	WS-SB-GP-14A (5'-6.6')	WS-SB-GP-14A (11.7'-13.3')
								7/29/2015	7/29/2015	7/29/2015	7/29/2015	7/29/2015	7/29/2015	7/29/2015	7/29/2015	12/3/2013	12/3/2013	12/3/2013	12/3/2013	12/3/2013	12/3/2013	12/3/2013	5/8/2014
Sample Date								7/29/2015	7/29/2015	7/29/2015	7/29/2015	7/29/2015	7/29/2015	7/29/2015	12/3/2013	12/3/2013	12/3/2013	12/3/2013	12/3/2013	12/3/2013	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	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
Benzene	71-43-2	0.03	100	1.6	2,300	2.2	1,117	<0.025	<0.027	0.026	<0.024	0.006 J	<0.022	<0.028	<i>Soil Removed With July 29, 2015 Remedial Action</i>	<i>Soil Removed With July 29, 2015 Remedial Action</i>	<i>Soil Removed With July 29, 2015 Remedial Action</i>	<i>Soil Removed With July 29, 2015 Remedial Action</i>	<i>Soil Removed With July 29, 2015 Remedial Action</i>	<i>Soil Removed With July 29, 2015 Remedial Action</i>	<i>Soil Removed With July 29, 2015 Remedial Action</i>	<i>Soil Removed With July 29, 2015 Remedial Action</i>	<0.052
Ethylbenzene	100-41-4	13	200,000	400	20,000	58	562	<0.025	<0.027	0.13	0.011 J	0.0041 J	0.0076 J	<0.028									0.15
Naphthalene	91-20-3	12	41,000	270	4,100	1.8	NA	NT	NT	NT	NT	NT	NT	<0.52									
Toluene	108-88-3	12	410,000	650	410,000	42	898	<0.025 B	<0.027 B	<0.025 B	<0.024 B	<0.023 B	<0.022 B	<0.028 B									0.065
1,3,5-Trimethylbenzene	108-67-8	2	20,000	NE	20,000	0.79	334	NT	NT	NT	NT	NT	NT	NT									1.3
1,2,4-Trimethylbenzene	95-63-6	NE	NE	140	NE	8.9	942	NT	NT	NT	NT	NT	NT	NT									3.1
Total Xylene	1330-20-7	150	410,000	320	41,000	5.6	448	<0.075	<0.081	0.069 J	0.0227 J	0.0147 J	0.021 J	0.018 J	0.46								



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SOIL ANALYTICAL RESULTS COMPARED TO TACO TIER I REMEDIATION OBJECTIVES AND TIER 2 C_{SAT} VALUES
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Analyte	CAS Registry No.	TACO Tier 1 Soil Component of Groundwater Ingestion Remediation Objectives	TACO Tier 1 Industrial Ingestion Remediation Objectives	TACO Tier 1 Industrial Inhalation Remediation Objectives	TACO Tier 1 Construction Worker Ingestion Remediation Objectives	TACO Tier 1 Construction Worker Inhalation Remediation Objectives	TACO Tier 2 C _{sat} Concentration	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')	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')	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')
								5/8/2014	5/8/2014	5/8/2014	5/8/2014	5/8/2014	5/8/2014	5/8/2014	5/8/2014	5/8/2014	5/8/2014	5/8/2014	5/8/2014	5/8/2014	5/8/2014	5/8/2014	5/8/2014
Sample Date								5/8/2014	5/8/2014	5/8/2014	5/8/2014	5/8/2014	5/8/2014	5/8/2014	5/8/2014	5/8/2014	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	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
Benzene	71-43-2	0.03	100	1.6	2,300	2.2	1,117	<0.56	<2.5	<0.96	<2.5	<0.47	<0.024	<0.024	<0.027	<0.026	<0.033	0.015 J	0.046	<i>Soil Removed With July 29, 2015 Remedial Action</i>	<i>Soil Removed With July 29, 2015 Remedial Action</i>	0.018 J	<0.024
Ethylbenzene	100-41-4	13	200,000	400	20,000	58	562	1.1	7.2	7.1	11	5.1	0.0099 J	<0.024	<0.027	0.0082 J	<0.033	0.011 J	0.032			<0.025	<0.024
Naphthalene	91-20-3	12	41,000	270	4,100	1.8	NA	<5.6	28 J	<3.6	22 J	5.3	0.018 B,J	<0.024	<0.27	<0.26	<0.33	<0.34	<0.27			0.013 B,J	<0.24
Toluene	108-88-3	12	410,000	650	410,000	42	898	0.15 J	2 J	0.32 J	2 J	0.18 J	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027			<0.025	<0.024
1,3,5-Trimethylbenzene	108-67-8	2	20,000	NE	20,000	0.79	334	10	54	NT	46	9.8	0.026	0.0049 J	<0.027	0.0067 J	<0.033	<0.034	0.0054 J			<0.025	0.035
1,2,4-Trimethylbenzene	95-63-6	NE	NE	140	NE	8.9	942	28	170	NT	140	29	0.076 J	<0.024	<0.027	<0.026	<0.033	<0.034	0.059			<0.025	0.091
Total Xylene	1330-20-7	150	410,000	320	41,000	5.6	448	1.6 J	42	42	76	37	0.065 J	<0.072	<0.081	<0.078	<0.099	<0.102	0.13	0.075	0.24		



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Analyte	CAS Registry No.	TACO Tier 1 Soil Component of Groundwater Ingestion Remediation Objectives	TACO Tier 1 Industrial Ingestion Remediation Objectives	TACO Tier 1 Industrial Inhalation Remediation Objectives	TACO Tier 1 Construction Worker Ingestion Remediation Objectives	TACO Tier 1 Construction Worker Inhalation Remediation Objectives	TACO Tier 2 C _{sat} Concentration	WS-SB-GP-16	WS-SB-GP-16	WS-SB-GP-17	WS-SB-GP-17	WS-SB-GP-17	WS-SB-GP-17	WS-SB-GP-17	WS-SB-GP-17	WS-SB-GP-17	WS-SB-GP-17	WS-SB-GP-18	WS-SB-GP-18	WS-SB-GP-18	WS-SB-GP-18	WS-SB-GP-18	WS-SB-GP-18
								(21.7'-23.3')	(28.3'-30')	(3.3'-5')	(6.7'-8.3')	(13.3'-15')	(18.3'-20')	(21.7'-23')	(26.7'-28.3')	(31.7'-33.3')	(1.7'-3.3')	(6.7'-8.3')	(13.3'-15')	(16.7'-18.3')	(23.3'-25')	(28.3'-30')	
Sample Date								5/8/2014	5/8/2014	5/9/2014	5/9/2014	5/9/2014	5/9/2014	5/9/2014	5/9/2014	5/9/2014	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	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
Benzene	71-43-2	0.03	100	1.6	2,300	2.2	1,117	<0.024	0.42	0.034	<0.027	0.12	0.012 J	0.033	0.31	0.011 J	<0.031	<0.027	<0.027	0.12 J	0.057	0.025 J	0.073
Ethylbenzene	100-41-4	13	200,000	400	20,000	58	562	0.033	0.67	2.2	0.0066 J	0.013 J	0.31	0.26	2.2	0.097	<0.031	<0.027	<0.027	1.5	0.25	0.085	0.39
Naphthalene	91-20-3	12	41,000	270	4,100	1.8	NA	<0.24	0.078 J	0.24	0.016 B,J	<0.28	1.1	1.1	2.3 J	0.19 J	<0.31	<0.27	<0.27	<2.5	<0.3	<0.3	<0.33
Toluene	108-88-3	12	410,000	650	410,000	42	898	<0.024	0.15	<0.024	<0.027	<0.028	<0.028	0.059	0.57	<0.026	<0.031	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033
1,3,5-Trimethylbenzene	108-67-8	2	20,000	NE	20,000	0.79	334	0.018 J	0.46	0.2	<0.027	0.051	2.1	1.1	5.6	0.066	<0.031	<0.027	<0.027	2.5	0.3	0.12	0.79
1,2,4-Trimethylbenzene	95-63-6	NE	NE	140	NE	8.9	942	0.29	2.1	1	0.0088 J	0.06	7.8	4	21	0.22	0.0061 J	<0.027	<0.027	6	1.1	0.39	2.2 J
Total Xylene	1330-20-7	150	410,000	320	41,000	5.6	448	0.22	2.2	0.33	0.012 J	1.7	1.6	1.4	12	0.28	<0.092	<0.08	<0.08	3.9	1	0.43	2.3



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SOIL ANALYTICAL RESULTS COMPARED TO TACO TIER I REMEDIATION OBJECTIVES AND TIER 2 C_{SAT} VALUES
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Analyte	CAS Registry No.	TACO Tier 1 Soil Component of Groundwater Ingestion Remediation Objectives	TACO Tier 1 Industrial Ingestion Remediation Objectives	TACO Tier 1 Industrial Inhalation Remediation Objectives	TACO Tier 1 Construction Worker Ingestion Remediation Objectives	TACO Tier 1 Construction Worker Inhalation Remediation Objectives	TACO Tier 2 C _{sat} Concentration	WS-SB-GP-18	WS-SB-GP-22	WS-SB-GP-22	WS-SB-GP-22	WS-SB-GP-22	WS-SB-GP-22	WS-SB-GP-22	WS-SB-GP-22	WS-SB-GP-22	WS-SB-GP-22	WS-SB-GP-22	WS-SB-GP-22	WS-SB-GP-22	WS-SB-GP-22	WS-SB-GP-22	WS-SB-GP-22	
								(31.7'-33.3')	(3.3'-5')	(5'-6.7')	(13.3'-15')	(16.7'-18.3')	(21.7'-23.3')	(21.7'-23.3') Duplicate #7	(25'-26.7')	(31.7'-33.3')	(3.3'-5')	(5'-6.7')	(13.3'-15')	(15'-20')	(23.3'-25')	(28.3'-30')	(30'-31.7')	
Sample Date								5/8/2014	11/7/2014	11/7/2014	11/7/2014	11/7/2014	11/7/2014	11/7/2014	11/7/2014	11/7/2014	11/7/2014	11/7/2014	11/7/2014	11/7/2014	11/7/2014	11/7/2014	11/7/2014	11/7/2014
VOCs (8260B)		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	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	71-43-2	0.03	100	1.6	2,300	2.2	1,117	0.01 J	Soil Removed With July 29, 2015 Remedial Action	Soil Removed With July 29, 2015 Remedial Action	0.011 J	<3.1	<3.7	<3.4	<0.15	<4	Soil Removed With July 29, 2015 Remedial Action	0.017 J	0.14	0.019 J	0.076	0.008 J	0.0048 J	
Ethylbenzene	100-41-4	13	200,000	400	20,000	58	562	0.0075 J			0.015 J	4 J	3.5 J	3.2 J	0.95 J	49 J		0.012 J	1.7	0.15	0.32	0.052	0.012 J	
Naphthalene	91-20-3	12	41,000	270	4,100	1.8	NA	<0.31			0.11 J	22 J	26 J	28 J	9.2 J	58 J		<0.29	<0.26	0.051 B,J	0.069 B,J	<0.31	<0.27	
Toluene	108-88-3	12	410,000	650	410,000	42	898	<0.031			0.041 B	<3.1	<3.7	<3.4	0.23 J	<4		0.039 B	0.042 B	<0.029	0.065 B	<0.031	<0.027	
1,3,5-Trimethylbenzene	108-67-8	2	20,000	NE	20,000	0.79	334	0.033			0.29	55 J	42 J	40 J	9.3 J	120 J		<0.029	0.9	0.33	0.69	0.29	0.37	
1,2,4-Trimethylbenzene	95-63-6	NE	NE	140	NE	8.9	942	0.048			0.52	170 J	130 J	130 J	25 J	360 J		<0.29	1.9	1.1	2.4	0.92	1.1	
Total Xylene	1330-20-7	150	410,000	320	41,000	5.6	448	0.16	0.21	8.3 J	14 J	12 J	4.6 J	310 J	<0.29	6	0.56	1.7	0.37	0.35				



TABLE 1
SOIL ANALYTICAL RESULTS COMPARED TO TACO TIER I REMEDIATION OBJECTIVES AND TIER 2 C_{SAT} VALUES
Former 4,000-Gallon Gasoline UST System
Wedron, Illinois

Analyte	CAS Registry No.	TACO Tier 1 Soil Component of Groundwater Ingestion Remediation Objectives	TACO Tier 1 Industrial Ingestion Remediation Objectives	TACO Tier 1 Industrial Inhalation Remediation Objectives	TACO Tier 1 Construction Worker Ingestion Remediation Objectives	TACO Tier 1 Construction Worker Inhalation Remediation Objectives	TACO Tier 2 C _{sat} Concentration	WS-SB-GP-24 (3.3'-5')	WS-SB-GP-24 (3.3'-5') Duplicate #8	WS-SB-GP-24 (6.7'-8.3')	WS-SB-GP-24 (13.3'-15')	WS-SB-GP-24 (15'-16.7')	WS-SB-GP-24 (23.3'-25')	WS-SB-GP-24 (28.3'-30')	WS-SB-GP-24 (28.3'-30') Duplicate #9	WS-SB-GP-24 (31.7'-33.3')	WS-SB-GP-25 (6.7'-8.3')	WS-SB-GP-26 (6.7'-8.3')	WS-SB-GP-27 (2'-4')	WS-SB-GP-27 (4'-6')	WS-SB-GP-27 (6'-8')	WS-SB-GP-28 (2'-4')	WS-SB-GP-28 (4'-6')	
								11/7/2014	11/7/2014	11/7/2014	11/7/2014	11/7/2014	11/7/2014	11/7/2014	11/7/2014	11/7/2014	11/7/2014	11/7/2014	11/7/2014	11/7/2014	11/7/2014	11/7/2014	11/7/2014	11/7/2014
Sample Date																								
VOCs (8260B)		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	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	71-43-2	0.03	100	1.6	2,300	2.2	1,117	Soil Removed With July 29, 2015 Remedial Action	Soil Removed With July 29, 2015 Remedial Action	<0.031	<0.27	0.019 J	0.031	0.1	0.11	0.0075 J	<0.026	<0.021	<0.028	0.22	<0.027	0.37	<0.027	
Ethylbenzene	100-41-4	13	200,000	400	20,000	58	562			<0.031	1.2 J	0.28	0.19	0.83	0.86	0.018 J	<0.026	<0.021	0.053	1.7	<0.027	1.8	<0.027	
Naphthalene	91-20-3	12	41,000	270	4,100	1.8	NA			<0.31	<2.8 J	0.043 B,J	0.031 B,J	<0.33	<0.29	0.075 B,J	<0.26 J	<0.21	NT	NT	NT	NT	NT	
Toluene	108-88-3	12	410,000	650	410,000	42	898			<0.031	<0.27	<0.03	<0.03	0.068 B	0.08 B	<0.029	<0.026 J	<0.021 J	0.0097	0.098	<0.027	0.025	<0.027	
1,3,5-Trimethylbenzene	108-67-8	2	20,000	NE	20,000	0.79	334			<0.031	2.8 J	0.85	0.42	2.2	2	0.37	<0.026 J	<0.021 J	0.028	1.6	0.0096 J	0.18	<0.027	
1,2,4-Trimethylbenzene	95-63-6	NE	NE	140	NE	8.9	942			<0.031	8.1 J	2.7	1.5	7.3	7	1.3	<0.026 J	<0.021 J	0.18	4.7	0.037	0.64	<0.027	
Total Xylene	1330-20-7	150	410,000	320	41,000	5.6	448			<0.093	2.8 J	1	1	4.9	4.9	0.41	<0.076 J	<0.063 J	0.039	2	<0.080	1.4	<0.080	



TABLE 1
SOIL ANALYTICAL RESULTS COMPARED TO TACO TIER I REMEDIATION OBJECTIVES AND TIER 2 C_{SAT} VALUES
Former 4,000-Gallon Gasoline UST System
Wedron, Illinois

Analyte	CAS Registry No.	TACO Tier 1 Soil Component of Groundwater Ingestion Remediation Objectives	TACO Tier 1 Industrial Ingestion Remediation Objectives	TACO Tier 1 Industrial Inhalation Remediation Objectives	TACO Tier 1 Construction Worker Ingestion Remediation Objectives	TACO Tier 1 Construction Worker Inhalation Remediation Objectives	TACO Tier 2 C _{sat} Concentration	WS-SB-GP-28 (6'-8')	WS-SB-GP-29 (2'-4')	WS-SB-GP-29 (4'-6')	WS-SB-GP-29 (6'-8')	WS-SB-GP-30 (2'-4')	WS-SB-GP-30 (4'-6')	WS-SB-GP-30 (6'-8')	WS-SB-GP-31 (2'-4')	WS-SB-GP-31 (4'-6')	WS-SB-GP-31 (6'-8')	WS-SB-GP-32 (2'-4')	WS-SB-GP-32 (4'-6')	WS-SB-GP-32 (6'-8')	WS-SB-GP-32 (8'-10')	WS-SB-GP-32 (13.3'-15')	WS-SB-GP-32 (15'-16.7')	
								6/3/2015	6/3/2015	6/3/2015	6/3/2015	6/3/2015	6/3/2015	6/3/2015	6/3/2015	6/3/2015	6/3/2015	6/3/2015	6/3/2015	6/3/2015	6/3/2015	6/3/2015	6/3/2015	6/3/2015
Sample Date								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	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
Benzene	71-43-2	0.03	100	1.6	2,300	2.2	1,117	<0.032	<0.026	<0.024	0.068	<0.027	<0.027	0.02 J	<0.024	<0.028	<0.026	<0.029	<0.030	<0.026	<0.022	<0.056	<0.054	
Ethylbenzene	100-41-4	13	200,000	400	20,000	58	562	0.009 J	0.0046 J	<0.024	0.25	<0.027	<0.027	<0.031	<0.024	<0.028	<0.026	<0.029	<0.030	<0.026	<0.022	<0.056	<0.054	
Naphthalene	91-20-3	12	41,000	270	4,100	1.8	NA	NT	NT	NT														
Toluene	108-88-3	12	410,000	650	410,000	42	898	0.0096 J,HC	<0.026	0.0043 J	<0.026	<0.027	<0.027	<0.031	<0.024	<0.028	<0.026	<0.029	<0.030	<0.026	<0.022	<0.056	<0.054	
1,3,5-Trimethylbenzene	108-67-8	2	20,000	NE	20,000	0.79	334	<0.032	<0.026	<0.024	0.65	<0.027	<0.027	<0.031	<0.024	<0.028	<0.026	<0.029	<0.030	0.0026 J	0.007 J	0.0067 J	0.1	
1,2,4-Trimethylbenzene	95-63-6	NE	NE	140	NE	8.9	942	0.0083 J	<0.026	0.0039 J	2	<0.027	<0.027	<0.031	<0.024	<0.028	0.012 J	<0.029	0.0083 J	0.015 J	0.14	0.036 J	2.6	
Total Xylene	1330-20-7	150	410,000	320	41,000	5.6	448	0.013 J	<0.077	0.0063 J	0.95	<0.080	<0.081	<0.093	<0.072	<0.083	<0.078	<0.088	<0.089	0.015 J	<0.065	<0.17	<0.16	



TABLE 1
SOIL ANALYTICAL RESULTS COMPARED TO TACO TIER I REMEDIATION OBJECTIVES AND TIER 2 C_{SAT} VALUES
Former 4,000-Gallon Gasoline UST System
Wedron, Illinois

Analyte	CAS Registry No.	TACO Tier 1 Soil Component of Groundwater Ingestion Remediation Objectives	TACO Tier 1 Industrial Ingestion Remediation Objectives	TACO Tier 1 Industrial Inhalation Remediation Objectives	TACO Tier 1 Construction Worker Ingestion Remediation Objectives	TACO Tier 1 Construction Worker Inhalation Remediation Objectives	TACO Tier 2 C _{sat} Concentration	WS-SB-GP-32	WS-SB-GP-32	WS-SB-GP-32	WS-SB-GP-33	WS-SB-GP-33	WS-SB-GP-33	WS-SB-GP-33	WS-SB-GP-33	WS-SB-GP-33	WS-SB-GP-33	WS-SB-GP-34	WS-SB-GP-34	WS-SB-GP-34	WS-SB-GP-34	WS-SB-GP-34	
								(21.7'-23.3')	(26.7'-28.3')	(30'-31.7')	(2'-4')	(4'-6')	(6'-8')	(13.3'-15')	(18.3'-20')	(21.7'-23.3')	(26.7'-28.3')	(30'-31.7')	(2'-4')	(4'-6')	(6'-8')	(8'-10')	
Sample Date								6/3/2015	6/3/2015	6/3/2015	6/3/2015	6/3/2015	6/3/2015	6/3/2015	6/3/2015	6/3/2015	6/3/2015	6/3/2015	6/3/2015	6/3/2015	6/3/2015	6/3/2015	
VOCs (8260B)		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	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	71-43-2	0.03	100	1.6	2,300	2.2	1,117	<0.56	0.081	0.011 J	<0.027	<0.026	<0.024	<0.023	<0.028	<0.031	0.023 J	<1.4	<0.24	0.07	0.0027 J	<0.026	
Ethylbenzene	100-41-4	13	200,000	400	20,000	58	562	<0.56	0.15	0.082	<0.027	<0.021	0.0044 J	0.0074 J	1.1	0.02 J	0.094	2.5	3.2	0.25	0.0037 J	0.26	
Naphthalene	91-20-3	12	41,000	270	4,100	1.8	NA	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	
Toluene	108-88-3	12	410,000	650	410,000	42	898	<0.56	0.36	0.041	<0.027	<0.021	0.0073 J,HC	<0.023	0.092 HC	<0.031	0.067	<1.4	0.9	<0.026	0.0055 J,HC	0.17	
1,3,5-Trimethylbenzene	108-67-8	2	20,000	NE	20,000	0.79	334	8.1	0.28	0.48	<0.027	<0.021	0.025	0.017 J	18	0.17	1.4	16	7.7	0.64	0.036	0.79	
1,2,4-Trimethylbenzene	95-63-6	NE	NE	140	NE	8.9	942	26	0.95	1.4	<0.027	0.0079 J	0.062	0.11	50	0.6	4.2	51	17	2	0.11	2.4	
Total Xylene	1330-20-7	150	410,000	320	41,000	5.6	448	1.2 J	0.76	0.41	<0.082	<0.079	0.012 J	0.054 J	2	0.12	1.2	14	25	0.95	0.066 J	2.3	



TABLE 1
SOIL ANALYTICAL RESULTS COMPARED TO TACO TIER I REMEDIATION OBJECTIVES AND TIER 2 C_{SAT} VALUES
 Former 4,000-Gallon Gasoline UST System
 Wedron, Illinois

Analyte	CAS Registry No.	TACO Tier 1 Soil Component of Groundwater Ingestion Remediation Objectives	TACO Tier 1 Industrial Ingestion Remediation Objectives	TACO Tier 1 Industrial Inhalation Remediation Objectives	TACO Tier 1 Construction Worker Ingestion Remediation Objectives	TACO Tier 1 Construction Worker Inhalation Remediation Objectives	TACO Tier 2 C _{sat} Concentration	WS-SB-GP-35	WS-SB-GP-36	WS-SB-GP-36	WS-SB-GP-36	WS-SB-MW-14	WS-SB-MW-15	WS-SB-MW-15	WS-SB-MW-16	WS-SB-MW-16	WS-SB-MW-17	WS-SB-MW-17	WS-SB-MW-17	WS-SB-MW-17	WS-SB-MW-17	WS-SB-MW-17	WS-SB-MW-17
								(31'-33')	(2'-4')	(4'-6')	(6'-8')	(28'-30')	(32'-34')	(32'-34') Duplicate #1	(13'-15')	(13'-15')	(1.7'-3.3')	(6.7'-8.3')	(11.7'-13.3')	(16.7'-18.3')	(23.3'-25')	(23.3'-25') Duplicate #5	(28.3'-30')
Sample Date								6/3/2015	6/3/2015	6/3/2015	6/3/2015	11/4/2014	11/3/2014	11/3/2014	11/4/2014	11/4/2014	11/6/2014	11/6/2014	11/6/2014	11/6/2014	11/6/2014	11/6/2014	11/6/2014
VOCs (8260B)		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	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	71-43-2	0.03	100	1.6	2,300	2.2	1,117	NT	<0.023	<0.024	<0.026 H	<0.025	<0.026	<0.027	<0.024	<0.025	<0.024	<0.026	<0.03	0.0068 J	<0.03	<0.029	<0.031
Ethylbenzene	100-41-4	13	200,000	400	20,000	58	562	NT	<0.023	<0.024	<0.026 H	<0.025	<0.026	0.0048 J	<0.024	<0.025	<0.024	<0.026	<0.03	<0.026	<0.03	<0.029	<0.031
Naphthalene	91-20-3	12	41,000	270	4,100	1.8	NA	NT	NT	NT	NT	0.007 B,J	0.0079 B,J	0.0095 J	<0.24	<0.25	<0.24	<0.26	<0.3	<0.26	<0.3	<0.29	<0.31
Toluene	108-88-3	12	410,000	650	410,000	42	898	NT	<0.023	<0.024	<0.026 H	<0.025	<0.026	<0.027	<0.024	<0.025	<0.024	<0.026	<0.03	<0.026	<0.03	<0.029	<0.031
1,3,5-Trimethylbenzene	108-67-8	2	20,000	NE	20,000	0.79	334	NT	<0.023	<0.024	<0.026 H	<0.025	<0.026	<0.027	<0.024	<0.025	<0.024	<0.026	<0.03	<0.26	<0.03	<0.029	<0.031
1,2,4-Trimethylbenzene	95-63-6	NE	NE	140	NE	8.9	942	NT	<0.023	<0.024	<0.026 H	<0.025	<0.026	<0.027	<0.024	<0.025	<0.024	<0.026	<0.03	<0.26	<0.03	<0.029	<0.031
Total Xylene	1330-20-7	150	410,000	320	41,000	5.6	448	NT	<0.070	<0.071	<0.078 H	<0.075	<0.079	<0.08	<0.072	<0.074	<0.071	<0.078	<0.089	<0.078	<0.091	<0.087	<0.093



TABLE 1
SOIL ANALYTICAL RESULTS COMPARED TO TACO TIER I REMEDIATION OBJECTIVES AND TIER 2 C_{SAT} VALUES
 Former 4,000-Gallon Gasoline UST System
 Wedron, Illinois

Analyte	CAS Registry No.	TACO Tier 1 Soil Component of Groundwater Ingestion Remediation Objectives	TACO Tier 1 Industrial Ingestion Remediation Objectives	TACO Tier 1 Industrial Inhalation Remediation Objectives	TACO Tier 1 Construction Worker Ingestion Remediation Objectives	TACO Tier 1 Construction Worker Inhalation Remediation Objectives	TACO Tier 2 C _{sat} Concentration	WS-SB-MW-18	WS-SB-MW-18	WS-SB-MW-18	WS-SB-MW-18	WS-SB-MW-18	WS-SB-MW-18	WS-SB-MW-18	WS-SB-MW-20	WS-SB-MW-20	WS-SB-MW-20	WS-SB-MW-20	WS-SB-MW-20	WS-SB-MW-20	WS-SB-MW-20	WS-SB-MW-20	WS-SB-MW-20	
								(3.3'-5')	(8.3'-10')	(13.3'-15')	(16.7'-18.3')	(23.3'-25')	(28.3'-30')	(33.3'-35')	(1.7'-3.3')	(6.7'-8.3')	(11.7'-13.3')	(16.7'-18.3')	(21.7'-23.3')	(26.7'-28.3')	(26.7'-28.3')	(31.7'-33.3')		
Sample Date								11/6/2014	11/6/2014	11/6/2014	11/6/2014	11/6/2014	11/6/2014	11/6/2014	11/5/2014	11/5/2014	11/5/2014	11/5/2014	11/5/2014	11/5/2014	11/5/2014	11/5/2014	11/5/2014	
VOCs (8260B)		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	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	71-43-2	0.03	100	1.6	2,300	2.2	1,117	<0.029	<0.029	<0.027	<0.03	<0.03	<0.03	<0.027	<0.029	<0.032	<0.027	<0.024	<0.025	<0.024	<0.026	<0.026	<0.025	
Ethylbenzene	100-41-4	13	200,000	400	20,000	58	562	<0.029	<0.029	<0.027	<0.03	<0.03	<0.03	<0.027	<0.029	<0.032	<0.027	<0.024	<0.025	<0.024	<0.026	<0.026	<0.025	
Naphthalene	91-20-3	12	41,000	270	4,100	1.8	NA	<0.29	<0.29	<0.27	<0.3	<0.3	<0.3	<0.27	<0.29	<0.32	0.0054 B,J	0.0043 J	<0.25	<0.24	<0.26	<0.26	<0.25	
Toluene	108-88-3	12	410,000	650	410,000	42	898	<0.029	<0.029	<0.027	<0.03	<0.03	<0.03	<0.027	<0.029	<0.032	<0.027	<0.024	<0.025	<0.024	<0.026	<0.026	<0.025	
1,3,5-Trimethylbenzene	108-67-8	2	20,000	NE	20,000	0.79	334	<0.029	<0.029	<0.027	<0.03	<0.03	<0.03	<0.027	<0.029	<0.032	<0.027	<0.024	<0.025	<0.024	<0.026	<0.026	<0.025	
1,2,4-Trimethylbenzene	95-63-6	NE	NE	140	NE	8.9	942	<0.029	<0.029	<0.027	<0.03	<0.03	<0.03	<0.027	<0.029	<0.032	<0.027	0.0047 J	<0.025	<0.024	<0.026	<0.026	<0.025	
Total Xylene	1330-20-7	150	410,000	320	41,000	5.6	448	<0.087	<0.087	<0.08	<0.09	<0.089	<0.09	<0.082	<0.087	<0.095	<0.082	<0.071	<0.074	<0.073	<0.079	<0.079	<0.074	



TABLE 1
SOIL ANALYTICAL RESULTS COMPARED TO TACO TIER I REMEDIATION OBJECTIVES AND TIER 2 C_{SAT} VALUES
Former 4,000-Gallon Gasoline UST System
Wedron, Illinois

Analyte	CAS Registry No.	TACO Tier 1 Soil Component of Groundwater Ingestion Remediation Objectives	TACO Tier 1 Industrial Ingestion Remediation Objectives	TACO Tier 1 Industrial Inhalation Remediation Objectives	TACO Tier 1 Construction Worker Ingestion Remediation Objectives	TACO Tier 1 Construction Worker Inhalation Remediation Objectives	TACO Tier 2 C _{sat} Concentration	WS-SB-MW-21	WS-SB-MW-21	WS-SB-MW-21	WS-SB-MW-21	WS-SB-MW-21	WS-SB-MW-21	WS-SB-MW-22	WS-SB-MW-22	WS-SB-MW-22	WS-SB-MW-22	WS-SB-MW-22	WS-SB-MW-22	WS-SB-MW-22	
								(1.7'-3.3')	(6.7'-8.3')	(11.7'-13.3')	(16.7'-18.3')	(16.7'-18.3') Duplicate #4	(21.7'-23.3')	(1.7'-3.3')	(8.3'-10')	(13.3'-15')	(13.3'-15') Duplicate #10	(18.3'-20')	(21.7'-23.3')	(25'-26.7')	(30'-31.7')
Sample Date								11/5/2014	11/5/2014	11/5/2014	11/5/2014	11/5/2014	11/5/2014	11/10/2014	11/10/2014	11/10/2014	11/10/2014	11/10/2014	11/10/2014	11/10/2014	11/10/2014
VOCs (8260B)		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	mg/kg	mg/kg	mg/kg
Benzene	71-43-2	0.03	100	<i>1.6</i>	2,300	<u>2.2</u>	1,117	<0.022	<0.028	<0.025	<0.025	<0.026	<0.027	<0.027	<0.029	0.0065 J	0.027 J	0.026	0.015 J	<0.027	<0.024
Ethylbenzene	100-41-4	13	200,000	<i>400</i>	20,000	<u>58</u>	562	<0.022	<0.028	<0.025	<0.025	<0.026	<0.027	<0.027	<0.029	<0.025	0.036 J	<0.025	<0.023	<0.027	<0.024
Naphthalene	91-20-3	12	41,000	<i>270</i>	4,100	<u>1.8</u>	NA	<0.22	<0.28	<0.25	0.008 J	0.0069 J	<0.27	<0.27	<0.29	<0.25	0.11 J	<0.25	<0.23	<0.27	<0.24
Toluene	108-88-3	12	410,000	<i>650</i>	410,000	<u>42</u>	898	<0.022	<0.028	<0.025	<0.025	<0.026	<0.027	<0.027	<0.029	<0.025	<0.039	<0.025	<0.023	<0.027	<0.024
1,3,5-Trimethylbenzene	108-67-8	2	20,000	NE	20,000	<u>0.79</u>	334	<0.022	<0.028	<0.025	<0.025	<0.026	<0.027	<0.027	<0.029	<0.025	0.018 J	<0.025	<0.023	<0.027	<0.024
1,2,4-Trimethylbenzene	95-63-6	NE	NE	<i>140</i>	NE	<u>8.9</u>	942	<0.022	<0.028	<0.025	<0.025	<0.026	<0.027	<0.027	<0.029	<0.025	0.074	<0.025	<0.023	<0.027	<0.024
Total Xylene	1330-20-7	150	410,000	<i>320</i>	41,000	<u>5.6</u>	448	<0.066	<0.084	<0.075	<0.075	<0.079	<0.082	<0.08	<0.086	<0.075	0.092 J	<0.076	<0.068	<0.081	<0.072

Notes:

1. Samples were collected by GZA GeoEnvironmental, Inc. (GZA) on the dates indicated and were submitted to Environmental Chemistry Consulting Services, Inc. (ECCS) of Madison, Wisconsin for analysis. USEPA split samples were collected by Weston and were analyzed by TestAmerica of Savannah, Georgia for VOCs in accordance with USEPA Method 8260B and semi-volatiles (naphthalene) in accordance with USEPA Method 8270D.
2. Concentrations are provided in milligrams per kilogram (mg/kg) and provided in **bold** font if reported at a concentration greater than the limit of quantification.
3. Only constituents exceeding an Illinois Tiered Approach to Corrective Action Objectives (TACO) Tier 1 Class I Soil Component of Groundwater Ingestion Remediation Objectives (ROs) are listed. See the January 12, 2015 Site Investigation Completion Report for the Site for a full listing of analytical results.
4. Reported concentrations are compared to TACO Tier 1 Soil Component of Groundwater Ingestion, Industrial Ingestion and Inhalation, Construction Worker Ingestion and Inhalation ROs, and C_{sat} concentrations for the Groundwater Pathway and Outdoor Air Pathway Exposure Routes. "NE" denotes that a TACO RO has not been established for the category, and "NA" denotes that the category is not applicable.
5. Sample results reported at a concentrations greater than the TACO Tier I Class I Soil Component of Groundwater Ingestion RO are highlighted in yellow.
6. Sample results reported at a concentration greater than the TACO Tier I Industrial Inhalation RO are presented in *italics*.
7. Sample results reported at a concentration greater than a TACO Tier I Construction Worker Inhalation RO are underlined.
8. TACO Tier II C_{sat} Concentration were calculated using the Site-specific F_{oc} concentration of 0.0099 gm/gm.
9. "<" = Results were less than the limit of quantification (LOQ). "J" = Indicates an estimated value. "HC" = Results may be biased high because of high continuing calibration verification. "B" = Compound was detected in a blank. "NT" = Sample was not tested for the constituent. "H" = Sample was analyzed one day past the standard analytical hold time.
10. For several of the soil samples collected from the Site and reported as not detected in the table, the laboratory reporting limit (RL) as presented in the table exceeded one or more of the ROs. If the RL exceeded an RO for an undetected constituent, the RO was compared to the detection limit (DL) to evaluate whether the constituent should be highlighted as described in Notes 5 through 9. The following DLs were used for comparison against ROs: benzene in GP-14A (0.0033 mg/kg at 11.7'-13.3', 0.16 mg/kg at 23.2-25', 0.16 mg/kg at 28.3'-30', and 0.030 mg/kg at 31.7' to 33.3'), benzene in GP-15 (0.0021 mg/kg at 16.7'-18.3 Dup), benzene in GP-18 (0.002 mg/kg at 1.7'-3.3'), benzene in GP-22 (0.2 mg/kg at 16.7'-18.3', 0.24 mg/kg at 21.7'-23.3', 0.22 mg/kg at 21.7'-23.3' dup, 0.0098 mg/kg at 25'-26.7', and 0.25 mg/kg at 31.7-33.3'), benzene in GP-24 (0.002 mg/kg in 6.7'-8.3' and 0.017 mg/kg at 13.3'-15'), benzene in GP-28 (0.002 mg/kg at 6'-8'), benzene in GP-32 (0.0034 mg/kg at 15'-16.7' and 0.036 mg/kg at 21.7'-23.3'), benzene in GP-33 (0.088 mg/kg at 30'-31.7'), benzene in GP-34 (0.015 mg/kg at 2'-4'), benzene in GP-33 (0.002 mg/kg at 21.7'-23.3'), benzene in GP-32 (0.0036 mg/kg at 13.3'-15'), benzene in MW-17 (0.002 mg/kg at 28.3'-30'), benzene in MW-20 (0.002 mg/kg at 1.7'-3.3'), naphthalene in GP-16 (0.041 mg/kg at 3.3'-5'), naphthalene in GP-18 (0.037 mg/kg at 13.3'-15'), and naphthalene in GP-24 (0.041 mg/kg at 13.3'-15').



TABLE 2
GROUNDWATER ANALYTICAL RESULTS COMPARED TO TACO TIER I GROUNDWATER REMEDIATION OBJECTIVES
 Former 4,000-Gallon Gasoline UST System
 Wedron, Illinois

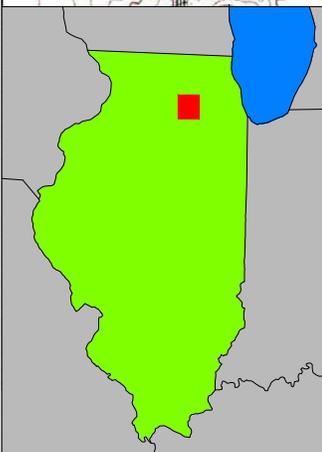
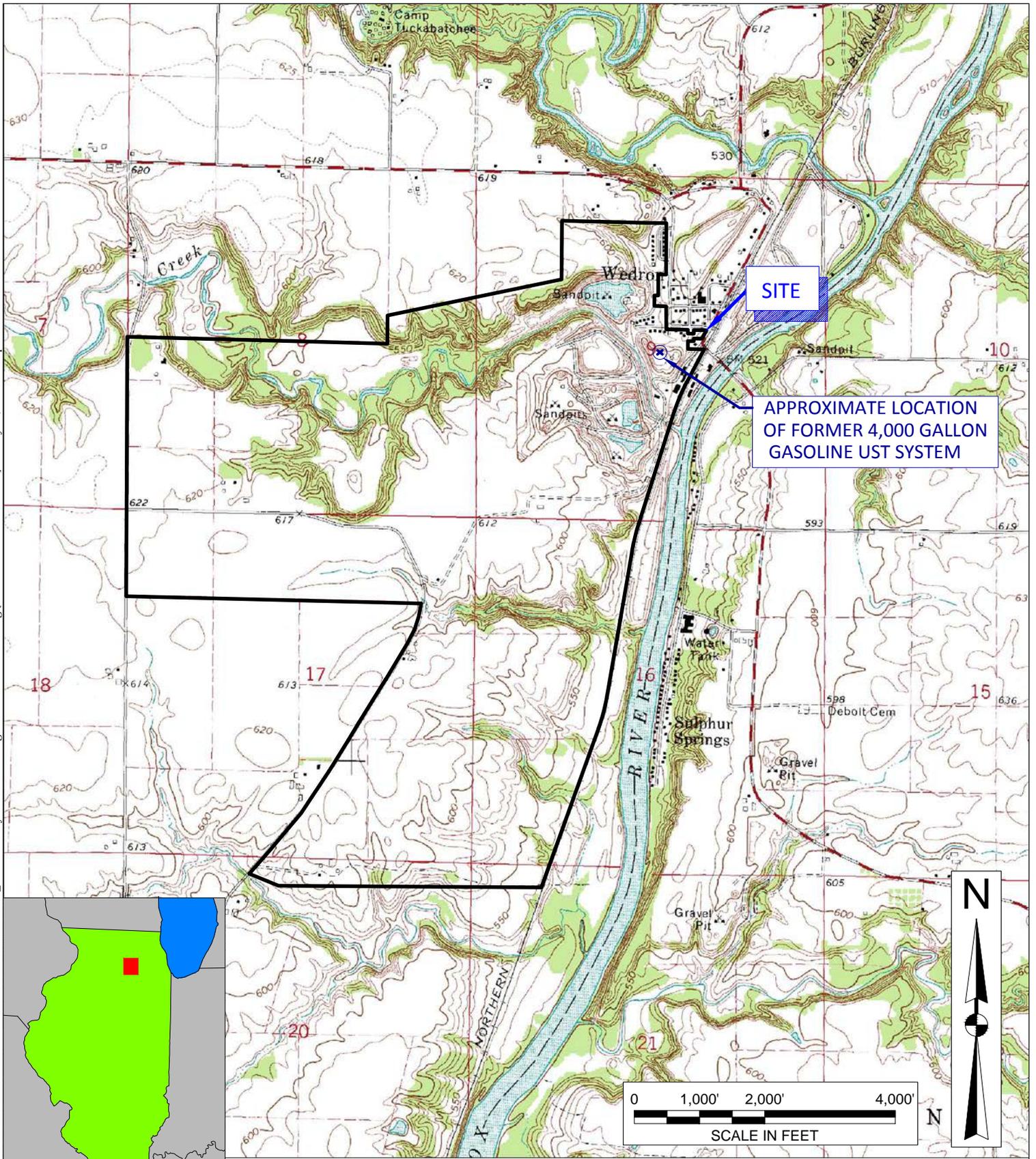
Analyte	CAS Registry No.	TACO Tier I Groundwater Remediation Objectives	TACO Tier I Groundwater Remediation Objectives for Indoor Inhalation - Diffusion and Advection (Table H)	MW-1	MW-2	MW-3	MW-11	MW-12	MW-14	MW-15	MW-16	MW-17	MW-18	MW-19	MW-19 Duplicate #2	MW-20	MW-21	MW-22	MW-22 Duplicate #1	Trip Blank	
Sample Date				25-Nov-14	25-Nov-14	25-Nov-14	25-Nov-14	24-Nov-14	24-Nov-14	24-Nov-14	25-Nov-14	24-Nov-14	25-Nov-14	25-Nov-14	25-Nov-14	25-Nov-14	25-Nov-14	25-Nov-14	25-Nov-14	25-Nov-14	
VOCs (8260B)		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
Benzene	71-43-2	0.005	0.41	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0084	0.0086	<0.0005	<0.0005 J	<0.0005	<0.0005	<0.0005
Ethylbenzene	100-41-4	0.7	1.4	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.21	0.22	<0.0005	<0.0005 J	<0.0005	<0.0005	<0.0005
Methyl t-Butyl Ether	1634-04-4	0.07	6,800	<0.0005 J	<0.0005 J	<0.0005 J	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005 J	0.046 J	0.046 J	0.0012	0.00048 J	0.00028 J	0.00024 J	<0.0005
Toluene	108-88-3	1	530	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0069	0.007	<0.0005	<0.0005 J	<0.0005	<0.0005	<0.0005
1,3,5-Trimethylbenzene	108-67-8	0.07	NE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.29	0.3	<0.0005	<0.0005 J	<0.0005	<0.0005	<0.0005
Total Xylenes	1330-20-7	10	93	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	1.9	1.9	<0.0015	<0.0015 J	<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 of volatile organic compounds in accordance with USEPA Method 8260B.
2. Only indicator constituents and other VOCs reported at a concentration greater than a TACO Tier I remediation objective are shown. See the January 12, 2015 Site Investigation Completion Report for the Site for a full listing of analytical results.
3. Reported concentrations were compared to Tier I remediation objectives for Class I Groundwater listed in 35 IAC 742, Appendix B, Table E and Industrial/Commercial Groundwater listed in 35 IAC 742, Appendix B, Table H, where established. "NE" = Standard is not established for the parameter.
4. "J" = The concentration is estimated.
5. "<" = Results were less than the limit of quantification (LOQ).
6. Sample results reported at concentrations greater than the TACO Tier I Class I Groundwater Ingestion remedial objective are highlighted in yellow.

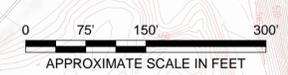
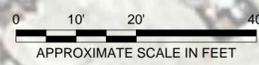
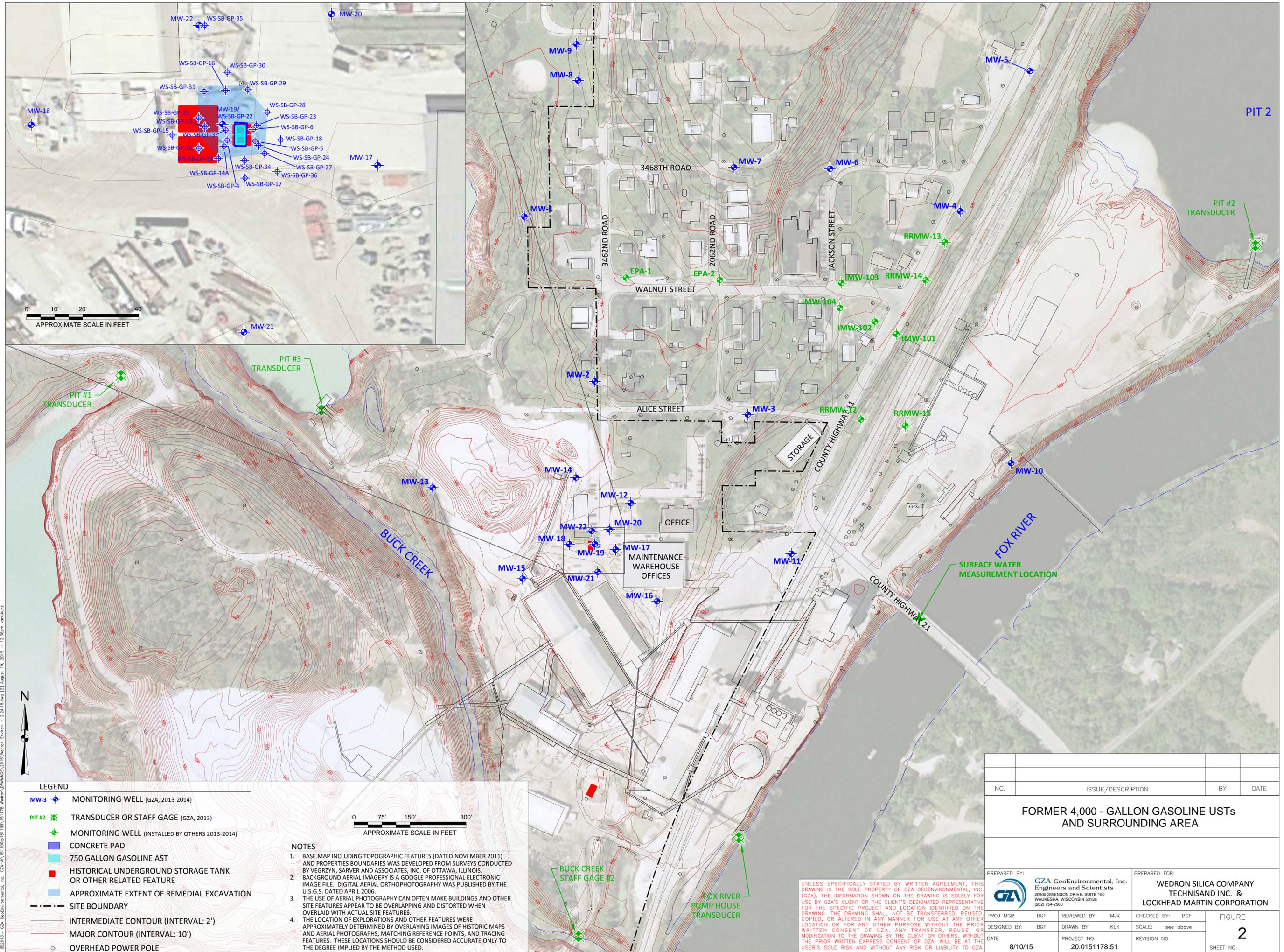


FIGURES



SOURCE: U.S.G.S. WEDRON, ILL. QUADRANGLE MAP (1970)		NO.		ISSUE/DESCRIPTION		BY		DATE					
PREPARED BY:  GZA GeoEnvironmental, Inc. Engineers and Scientists 20900 SWENSON DRIVE, SUITE 150 WAUKESHA, WISCONSIN 53186 (262) 754-2560		SITE LOCATION MAP											
PREPARED FOR: WEDRON SILICA COMPANY TECHNISAND INC. & LOCKHEAD MARTIN CORPORATION													
PROJ MGR:	BGF	REVIEWED BY:	BGF	CHECKED BY:	BGF	DATE	January 9, 2015	PROJECT NO.	20.0151178.51	REVISION NO.		FIGURE	1
DESIGNED BY:	BGF	DRAWN BY:	KLK	SCALE:	1 : 24000							SHEET NO.	

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.



- LEGEND**
- MW-3 MONITORING WELL (GZA, 2013-2014)
 - PIT #2 TRANSDUCER OR STAFF GAGE (GZA, 2013)
 - MONITORING WELL (INSTALLED BY OTHERS 2013-2014)
 - CONCRETE PAD
 - 750 GALLON GASOLINE AST
 - HISTORICAL UNDERGROUND STORAGE TANK OR OTHER RELATED FEATURE
 - APPROXIMATE EXTENT OF REMEDIAL EXCAVATION
 - SITE BOUNDARY
 - INTERMEDIATE CONTOUR (INTERVAL: 2')
 - MAJOR CONTOUR (INTERVAL: 10')
 - OVERHEAD POWER POLE

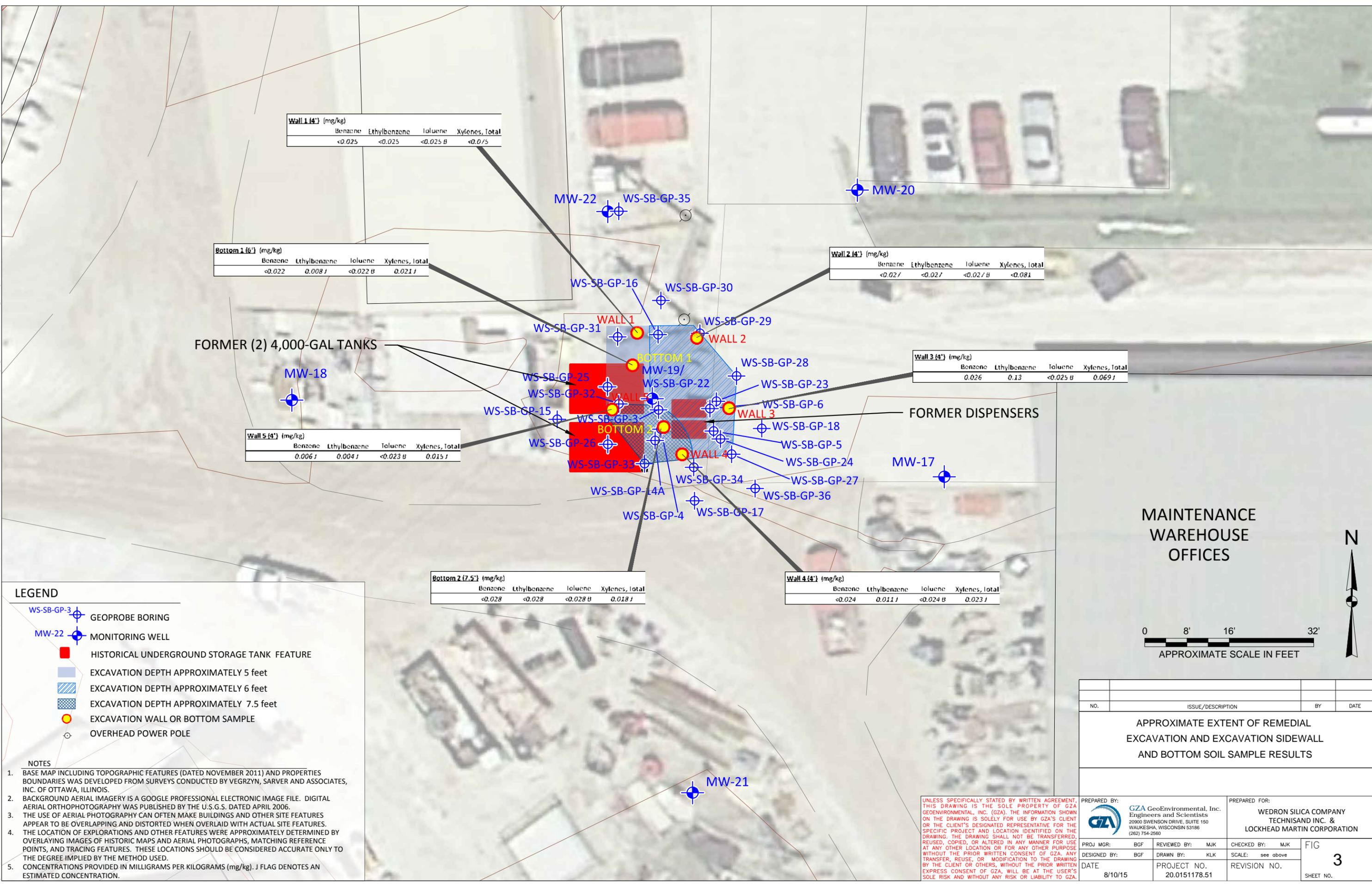
- NOTES**
1. BASE MAP INCLUDING TOPOGRAPHIC FEATURES (DATED NOVEMBER 2011) AND PROPERTIES BOUNDARIES WAS DEVELOPED FROM SURVEYS CONDUCTED BY VEGRYZN, SARVER AND ASSOCIATES, INC. OF OTTAWA, ILLINOIS. BACKGROUND AERIAL IMAGERY IS A GOOGLE PROFESSIONAL ELECTRONIC IMAGE FILE. DIGITAL AERIAL ORTHOPHOTOGRAPHY 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 OVERLAIN 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
FORMER 4,000 - GALLON GASOLINE USTs AND SURROUNDING AREA			
PREPARED BY:		PREPARED FOR:	
GZA GeoEnvironmental, Inc. Engineers and Scientists 20900 SWENSON DRIVE, SUITE 150 WALKESHA, WISCONSIN 53186 (262) 754-2960		WEDRON SILICA COMPANY TECHNISAND INC. & LOCKHEAD MARTIN CORPORATION	
PROJ MGR:	BGF	REVIEWED BY:	MJK
DESIGNED BY:	BGF	DRAWN BY:	KLK
DATE:	8/10/15	PROJECT NO.:	20.0151178.51
		CHECKED BY:	BGF
		SCALE:	see above
		REVISION NO.:	
			FIGURE
			2
			SHEET NO.

©2015 - GZA GeoEnvironmental, Inc. GZA-1511000151190A/151178 Wedron Silica/2015/Wedron - 2.24.15.dwg [2] August 19, 2015 - 12:36pm karnabunz

© 2015 - GZA GeoEnvironmental, Inc. GZA-J:\151100to151199\151178 Wedron\DRAWINGS\2015\Wedron Environ - 2.24.15.dwg [3 - Remedial] August 19, 2015 - 2:21pm kara.kunz



Wall 1 (4') (mg/kg)

Benzene	Ethylbenzene	Toluene	Xylenes, Total
<0.025	<0.025	<0.025 B	<0.075

Bottom 1 (6') (mg/kg)

Benzene	Ethylbenzene	Toluene	Xylenes, Total
<0.022	0.008 J	<0.022 B	0.021 J

Wall 2 (4') (mg/kg)

Benzene	Ethylbenzene	Toluene	Xylenes, Total
<0.027	<0.027	<0.027 B	<0.081

Wall 3 (4') (mg/kg)

Benzene	Ethylbenzene	Toluene	Xylenes, Total
0.026	0.13	<0.025 B	0.069 J

Wall 5 (4') (mg/kg)

Benzene	Ethylbenzene	Toluene	Xylenes, Total
0.006 J	0.004 J	<0.023 B	0.015 J

Bottom 2 (7.5') (mg/kg)

Benzene	Ethylbenzene	Toluene	Xylenes, Total
<0.028	<0.028	<0.028 B	0.018 J

Wall 4 (4') (mg/kg)

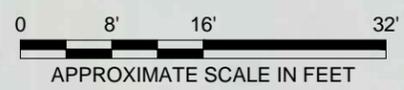
Benzene	Ethylbenzene	Toluene	Xylenes, Total
<0.024	0.011 J	<0.024 B	0.023 J

LEGEND

- WS-SB-GP-3 GEOPROBE BORING
- MW-22 MONITORING WELL
- HISTORICAL UNDERGROUND STORAGE TANK FEATURE
- EXCAVATION DEPTH APPROXIMATELY 5 feet
- EXCAVATION DEPTH APPROXIMATELY 6 feet
- EXCAVATION DEPTH APPROXIMATELY 7.5 feet
- EXCAVATION WALL OR BOTTOM SAMPLE
- OVERHEAD POWER POLE

- NOTES**
1. BASE MAP INCLUDING TOPOGRAPHIC FEATURES (DATED NOVEMBER 2011) AND PROPERTIES BOUNDARIES WAS DEVELOPED FROM SURVEYS CONDUCTED BY VEGRYN, SARVER AND ASSOCIATES, INC. OF OTTAWA, ILLINOIS.
 2. BACKGROUND AERIAL IMAGERY IS A GOOGLE PROFESSIONAL ELECTRONIC IMAGE FILE. DIGITAL AERIAL ORTHOPHOTOGRAPHY WAS PUBLISHED BY THE U.S.G.S. DATED APRIL 2006.
 3. 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.
 4. 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.
 5. CONCENTRATIONS PROVIDED IN MILLIGRAMS PER KILOGRAMS (mg/kg). J FLAG DENOTES AN ESTIMATED CONCENTRATION.

MAINTENANCE
WAREHOUSE
OFFICES



NO.	ISSUE/DESCRIPTION	BY	DATE
APPROXIMATE EXTENT OF REMEDIAL EXCAVATION AND EXCAVATION SIDEWALL AND BOTTOM SOIL SAMPLE RESULTS			
PREPARED BY:		PREPARED FOR:	
GZA GeoEnvironmental, Inc. Engineers and Scientists 20900 SWENSON DRIVE, SUITE 150 WAUKESHA, WISCONSIN 53186 (262) 754-2580		WEDRON SILICA COMPANY TECHNISAND INC. & LOCKHEAD MARTIN CORPORATION	
PROJ MGR:	BGF	REVIEWED BY:	MJK
DESIGNED BY:	BGF	DRAWN BY:	KLK
DATE	8/10/15	PROJECT NO.	20.0151178.51
		CHECKED BY:	MJK
		SCALE:	see above
		REVISION NO.	
			FIG 3 SHEET NO.

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© 2015 - GZA GeoEnvironmental, Inc. GZA-J:\151100to151199\Wedron\DRAWINGS\2015\Wedron Environ - 2.24.15.dwg [4 - SOIL DATA] August 19, 2015 - 2:16pm kara.kunz

WS-SB-GP-16 (mg/kg)				
Benzone	Lthylbenzene	Naphthalene	1,3,5 IMB	
3.3' 5'	Removed by Remedial Action			
5' 6.1'	Removed by Remedial Action			
10' 11.6'	No Exceedances			
15' 16.1'	No Exceedances			
21.1' 23.3'	No Exceedances			
28.3' 30'	0.42			

WS-SB-MW-22 (mg/kg)				
1.1' 3'	8.3' 10'	13.3' 15'	18.3' 20'	21.1' 23.3'
No Exceedances				

WS-SB-GP-22 (mg/kg)					
Benzone	Lthylbenzene	Naphthalene	1,3,5 IMB	Xylenes, Total	
3.3' 5'	Removed by Remedial Action				
5' 6.1'	Removed by Remedial Action				
13.3' 15'	No Exceedances				
16.1' 18.3'	<3.1	22.1	55.1		
21.1' 23.3'	<3.1	26.1	42.1		
21.1' 23.3'	<3.4	28.1	40.1		
25' 26.1'			9.3.1		
31.1' 33.3'	<4	49.1	58.1	120.1	310.1

WS-SB-GP-29 (mg/kg)	
Benzone	
2' 4'	No Exceedances
4' 6'	No Exceedances
6' 8'	0.068

WS-SB-MW-20 (mg/kg)	
Benzone	
1.1' 3.3'	No Exceedances
6.1' 8.3'	No Exceedances
11.1' 13.3'	No Exceedances
16.1' 18.3'	No Exceedances
21.1' 23.3'	No Exceedances
26.1' 28.3'	No Exceedances
31.1' 33.3'	No Exceedances

WS-SB-GP-32 (mg/kg)	
Benzone	
2' 4'	No Exceedances
4' 6'	No Exceedances
6' 8'	No Exceedances
8' 10'	No Exceedances
13.3' 15'	No Exceedances
15' 16.1'	No Exceedances
21.1' 23.3'	<0.56
26.1' 28.3'	0.081
30' 31.1'	No Exceedances

WS-SB-GP-31 (mg/kg)	
Benzone	
2' 4'	No Exceedances
4' 6'	No Exceedances
6' 8'	No Exceedances

WS-SB-GP-25 (mg/kg)	
Benzone	
6.7' 8.3'	No Exceedances

WS-SB-GP-30 (mg/kg)	
Benzone	
2' 4'	No Exceedances
4' 6'	No Exceedances
6' 8'	No Exceedances

WS-SB-GP-28 (mg/kg)	
Benzone	
2' 4'	0.31
4' 6'	No Exceedances
6' 8'	No Exceedances

WS-SB-GP-23 (mg/kg)				
Benzone	Lthylbenzene	Toluene	1,3,5 IMB	
3.3' 5'	Removed by Remedial Action			
5' 6.1'	No Exceedances			
13.3' 15'	0.14			
15' 20'	No Exceedances			
23.3' 25'	0.016			
28.3' 30'	No Exceedances			
30' 31.1'	No Exceedances			

WS-SB-MW-18 (mg/kg)	
Benzone	
3.3' 5'	No Exceedances
8.3' 10'	No Exceedances
13.3' 15'	No Exceedances
16.7' 18.3'	No Exceedances
23.3' 25'	No Exceedances
28.3' 30'	No Exceedances
D28.3' 30'	No Exceedances
33.3' 35'	No Exceedances

WS-SB-GP-15 (mg/kg)	
Benzone	
1.7' 3.3'	No Exceedances
6.7' 8.3'	No Exceedances
11.7' 13.3'	No Exceedances
16.7' 18.3'	No Exceedances
D16.7' 18.3'	No Exceedances
23.3' 25'	No Exceedances
26.7' 28.3'	0.046

WS-SB-GP-33 (mg/kg)				
Benzone	Lthylbenzene	Naphthalene	1,3,5 IMB	
2' 4'	No Exceedances			
4' 6'	No Exceedances			
6' 8'	No Exceedances			
13.3' 15'	No Exceedances			
18.3' 20'	No Exceedances			
21.1' 23.3'	No Exceedances			
26.1' 28.3'	No Exceedances			
30' 31.1'	<1.4			

WS-SB-GP-14A (mg/kg)				
Benzone	Lthylbenzene	Naphthalene	1,3,5 IMB	
3.3' 5'	Removed by Remedial Action			
5' 6.6'	Removed by Remedial Action			
11.1' 13.3'	No Exceedances			
18.3' 20'	<0.56		10	
23.3' 25'	<2.5	28.1	54	
28.3' 30'	<2.5	22.1	46	
31.1' 33.3'			9.8	

WS-SB-GP-24 (mg/kg)			
Benzone	Ethylbenzene	1,3,5-TMB	
3.3' 5'	Removed by Remedial Action		
D3.3' 5'	Removed by Remedial Action		
6.7' 8.3'	No Exceedances		
13.3' 15'		2.8.1	
15' 16.7'	No Exceedances		
23.3' 25'	0.031		
28.3' 30'	0.1	2.2	
D28.3' 30'	0.11	2	
31.7' 33.3'	No Exceedances		

WS-SB-MW-17 (mg/kg)	
Benzone	
1.7' 3.3'	No Exceedances
6.7' 8.3'	No Exceedances
11.7' 13.3'	No Exceedances
16.7' 18.3'	No Exceedances
23.3' 25'	No Exceedances
D23.3' 25'	No Exceedances
28.3' 30'	No Exceedances

WS-SB-GP-18 (mg/kg)			
Benzone	1,3,5 IMB		
1.1' 3.3'	No Exceedances		
D1.1' 3.3'	No Exceedances		
6.1' 8.3'	No Exceedances		
13.3' 15'	0.12	2.5	
16.1' 18.3'	0.051		
23.3' 25'	No Exceedances		
28.3' 30'	0.013		
31.1' 33.3'	No Exceedances		

LEGEND

- WS-SB-GP-3 (Symbol) GEOPROBE BORING
- MW-22 (Symbol) MONITORING WELL
- (Pink Area) APPROXIMATE CLASS I MIGRATION TO GROUNDWATER SOIL REMEDIATION OBJECTIVE (SRO) AREA (DEFINED BY SOIL BORINGS WITH REPORTED SOIL CONCENTRATIONS LESS THAN THE SRO)
- (Red Area) HISTORICAL UNDERGROUND STORAGE TANK FEATURE
- (Blue Area) APPROXIMATE EXTENT OF REMEDIAL EXCAVATION
- (Symbol) TMB TRIMETHYLBENZENE
- (Symbol) OVERHEAD POWER POLE

Soil Component of Groundwater Ingestion Remediation Objectives (mg/kg)						
Benzone	Lthylbenzene	Naphthalene	Toluene	1,3,5 IMB	1,2,4 IMB	Xylenes, Total
0.03	13	12	12	2	NI	150

- NOTES**
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 - 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 TRACING FEATURES. THESE LOCATIONS SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.
 - CONCENTRATIONS PROVIDED IN MILLIGRAMS PER KILOGRAMS (mg/kg). J FLAG DENOTES AN ESTIMATED CONCENTRATION.

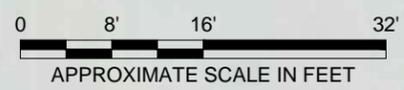
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NO.	ISSUE/DESCRIPTION	BY	DATE

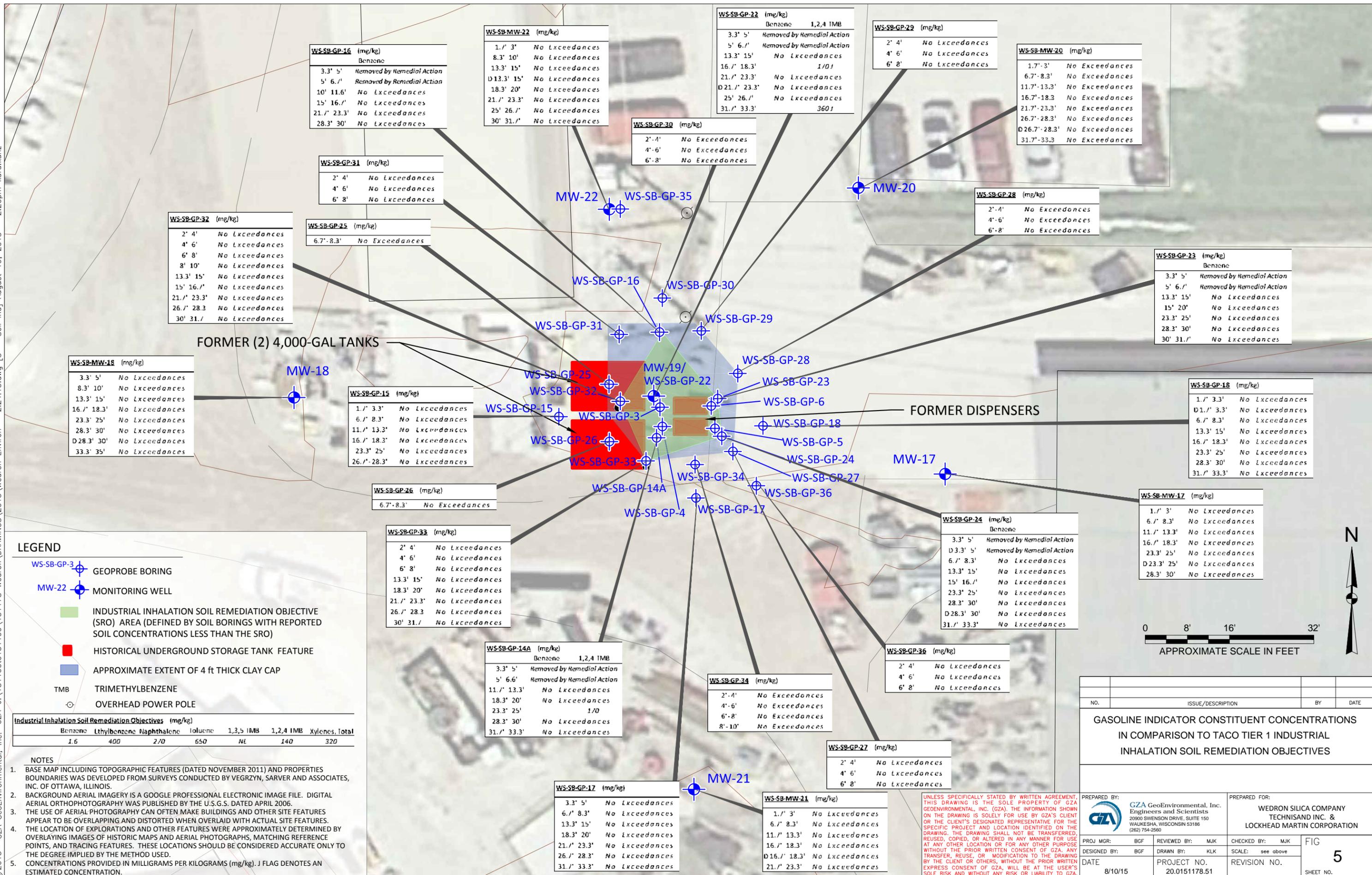
GASOLINE INDICATOR CONSTITUENT CONCENTRATIONS IN COMPARISON TO TACO TIER 1 CLASS I MIGRATION TO GROUNDWATER SOIL REMEDIATION OBJECTIVES

PREPARED BY:	GZA GeoEnvironmental, Inc. Engineers and Scientists 20900 SWENSON DRIVE, SUITE 150 WAUKESHA, WISCONSIN 53186 (262) 754-2590	PREPARED FOR:	WEDRON SILICA COMPANY TECHNISAND INC. & LOCKHEAD MARTIN CORPORATION
PROJ MGR:	BGF	REVIEWED BY:	MJK
DESIGNED BY:	BGF	DRAWN BY:	KLK
DATE:	8/10/15	PROJECT NO.:	20.0151178.51
		CHECKED BY:	MJK
		SCALE:	see above
		REVISION NO.:	

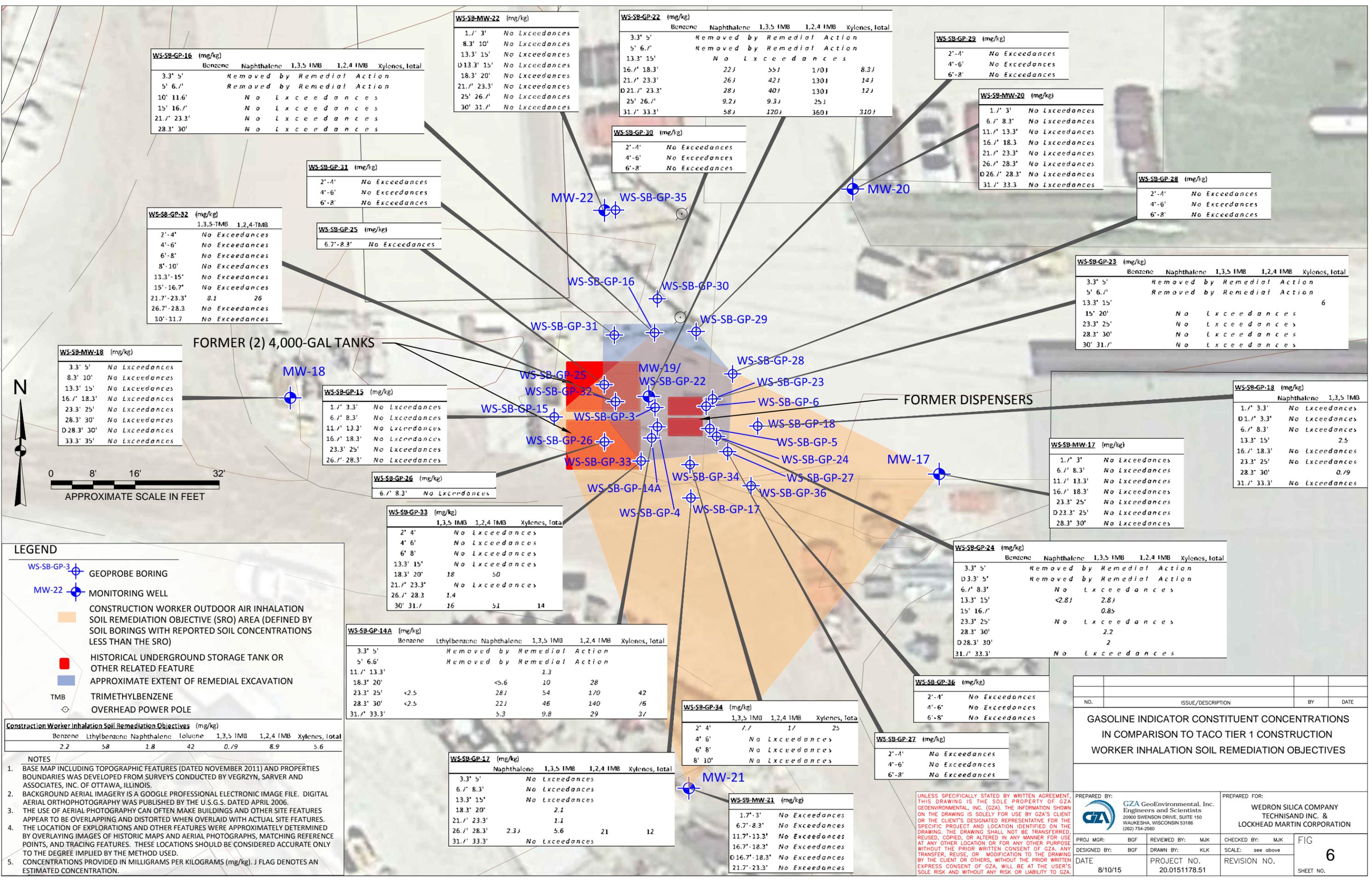
FIG 4
SHEET NO.



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NO.	ISSUE/DESCRIPTION	BY	DATE
GASOLINE INDICATOR CONSTITUENT CONCENTRATIONS IN COMPARISON TO TACO TIER 1 INDUSTRIAL INHALATION SOIL REMEDIATION OBJECTIVES			
PREPARED BY:		PREPARED FOR:	
GZA GeoEnvironmental, Inc. Engineers and Scientists 20900 SWENSON DRIVE, SUITE 150 WAUKESHA, WISCONSIN 53186 (262) 754-2580		WEDRON SILICA COMPANY TECHNISAND INC. & LOCKHEAD MARTIN CORPORATION	
PROJ MGR:	BGF	REVIEWED BY:	MJK
DESIGNED BY:	BGF	DRAWN BY:	KLK
DATE:	8/10/15	PROJECT NO.:	20.0151178.51
		CHECKED BY:	MJK
		SCALE:	see above
		REVISION NO.:	
			FIG 5
			SHEET NO.



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

Depth	Benzene	Naphthalene	1,3,5 IMB	1,2,4 IMB	Xylenes, Total
3.3' 5'	Removed by Remedial Action				
5' 6.1'	Removed by Remedial Action				
10' 11.6'	No Exceedances				
15' 16.1'	No Exceedances				
21.1' 23.3'	No Exceedances				
28.3' 30'	No Exceedances				

WS-SB-MW-22 (mg/kg)

Depth	Concentration
1.1' 3'	No Exceedances
8.3' 10'	No Exceedances
13.3' 15'	No Exceedances
D13.3' 15'	No Exceedances
18.3' 20'	No Exceedances
21.1' 23.3'	No Exceedances
25' 26.1'	No Exceedances
30' 31.1'	No Exceedances

WS-SB-GP-22 (mg/kg)

Depth	Benzene	Naphthalene	1,3,5 IMB	1,2,4 IMB	Xylenes, Total
3.3' 5'	Removed by Remedial Action				
5' 6.1'	Removed by Remedial Action				
13.3' 15'	No Exceedances				
16.1' 18.3'	22J	55J	170J	8.3J	
18.3' 20'	26J	42J	130J	14J	
D21.1' 23.3'	28J	40J	130J	12J	
25' 26.1'	9.2J	9.3J	25J		
31.1' 33.3'	58J	120J	360J	310J	

WS-SB-GP-29 (mg/kg)

2'-4'	No Exceedances
4'-6'	No Exceedances
6'-8'	No Exceedances

WS-SB-MW-20 (mg/kg)

1.1' 3'	No Exceedances
6.1' 8.3'	No Exceedances
11.1' 13.3'	No Exceedances
16.1' 18.3'	No Exceedances
21.1' 23.3'	No Exceedances
26.1' 28.3'	No Exceedances
D26.1' 28.3'	No Exceedances
31.1' 33.3'	No Exceedances

WS-SB-GP-28 (mg/kg)

2'-4'	No Exceedances
4'-6'	No Exceedances
6'-8'	No Exceedances

WS-SB-GP-32 (mg/kg)

Depth	1,3,5-TMB	1,2,4-TMB
2'-4'	No Exceedances	
4'-6'	No Exceedances	
6'-8'	No Exceedances	
8'-10'	No Exceedances	
13.3'-15'	No Exceedances	
15'-16.7'	No Exceedances	
21.7'-23.3'	8.1	26
26.7'-28.3'	No Exceedances	
30'-31.7'	No Exceedances	

WS-SB-GP-31 (mg/kg)

2'-4'	No Exceedances
4'-6'	No Exceedances
6'-8'	No Exceedances

WS-SB-GP-25 (mg/kg)

6.7'-8.3'	No Exceedances
-----------	----------------

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

3.3' 5'	No Exceedances
8.3' 10'	No Exceedances
13.3' 15'	No Exceedances
16.1' 18.3'	No Exceedances
23.3' 25'	No Exceedances
28.3' 30'	No Exceedances
D28.3' 30'	No Exceedances
33.3' 35'	No Exceedances

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

1.1' 3.3'	No Exceedances
6.1' 8.3'	No Exceedances
11.1' 13.3'	No Exceedances
16.1' 18.3'	No Exceedances
23.3' 25'	No Exceedances
26.1' 28.3'	No Exceedances

WS-SB-GP-26 (mg/kg)

6.1' 8.3'	No Exceedances
-----------	----------------

WS-SB-GP-33 (mg/kg)

Depth	1,3,5 IMB	1,2,4 IMB	Xylenes, Total
2' 4'	No Exceedances		
4' 6'	No Exceedances		
6' 8'	No Exceedances		
13.3' 15'	No Exceedances		
18.3' 20'	18	50	
21.1' 23.3'	No Exceedances		
26.1' 28.3'	1.4		
30' 31.1'	16	51	14

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

Depth	Benzene	Lthylbenzene	Naphthalene	1,3,5 IMB	1,2,4 IMB	Xylenes, Total
3.3' 5'	Removed by Remedial Action					
5' 6.6'	Removed by Remedial Action					
11.1' 13.3'	No Exceedances					
18.3' 20'	No Exceedances					
23.3' 25'	<2.5			54	170	42
28.3' 30'	<2.5			46	140	16
31.1' 33.3'		5.3	9.8	29		31

WS-SB-GP-34 (mg/kg)

Depth	1,3,5 IMB	1,2,4 IMB	Xylenes, Total
2' 4'	1.1	1.1	25
4' 6'	No Exceedances		
6' 8'	No Exceedances		
8' 10'	No Exceedances		

WS-SB-GP-36 (mg/kg)

2'-4'	No Exceedances
4'-6'	No Exceedances
6'-8'	No Exceedances

WS-SB-GP-27 (mg/kg)

2'-4'	No Exceedances
4'-6'	No Exceedances
6'-8'	No Exceedances

WS-SB-MW-21 (mg/kg)

1.7' 3'	No Exceedances
6.7'-8.3'	No Exceedances
11.7'-13.3'	No Exceedances
16.7'-18.3'	No Exceedances
D16.7'-18.3'	No Exceedances
21.7'-23.3'	No Exceedances

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

Depth	Naphthalene	1,3,5 IMB	1,2,4 IMB	Xylenes, Total
3.3' 5'	No Exceedances			
6.1' 8.3'	No Exceedances			
13.3' 15'	No Exceedances			
18.3' 20'	No Exceedances			
21.1' 23.3'	2.1			
26.1' 28.3'	2.3J	5.6	21	12
31.1' 33.3'	No Exceedances			

WS-SB-GP-23 (mg/kg)

Depth	Benzene	Naphthalene	1,3,5 IMB	1,2,4 IMB	Xylenes, Total
3.3' 5'	Removed by Remedial Action				
5' 6.1'	Removed by Remedial Action				
13.3' 15'	No Exceedances				
15' 20'	No Exceedances				
23.3' 25'	No Exceedances				
28.3' 30'	No Exceedances				
30' 31.1'	No Exceedances				

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

Depth	Naphthalene	1,3,5 IMB
1.1' 3.3'	No Exceedances	
D1.1' 3.3'	No Exceedances	
6.1' 8.3'	No Exceedances	
13.3' 15'	2.5	
16.1' 18.3'	No Exceedances	
23.3' 25'	No Exceedances	
28.3' 30'	0.79	
31.1' 33.3'	No Exceedances	

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

1.1' 3'	No Exceedances
6.1' 8.3'	No Exceedances
11.1' 13.3'	No Exceedances
16.1' 18.3'	No Exceedances
23.3' 25'	No Exceedances
D23.3' 25'	No Exceedances
28.3' 30'	No Exceedances

WS-SB-GP-24 (mg/kg)

Depth	Benzene	Naphthalene	1,3,5 IMB	1,2,4 IMB	Xylenes, Total
3.3' 5'	Removed by Remedial Action				
D3.3' 5'	Removed by Remedial Action				
6.1' 8.3'	No Exceedances				
13.3' 15'	<2.8J	2.8J			
15' 16.1'	0.85				
23.3' 25'	No Exceedances				
28.3' 30'	2.2				
D28.3' 30'	2				
31.1' 33.3'	No Exceedances				

LEGEND

- WS-SB-GP-3 Geoprobe Boring
- MW-22 Monitoring Well
- Construction Worker Outdoor Air Inhalation Soil Remediation Objective (SRO) Area (Defined by Soil Borings with Reported Soil Concentrations Less than the SRO)
- Historical Underground Storage Tank or Other Related Feature
- Approximate Extent of Remedial Excavation
- TMB Trimethylbenzene
- Overhead Power Pole

Construction Worker Inhalation Soil Remediation Objectives (mg/kg)

Concentration	Benzene	Lthylbenzene	Naphthalene	toluene	1,3,5 IMB	1,2,4 IMB	Xylenes, Total
2.2	5.8	1.8	4.2	0.79	8.9	5.6	

- NOTES**
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GASOLINE INDICATOR CONSTITUENT CONCENTRATIONS IN COMPARISON TO TACO TIER 1 CONSTRUCTION WORKER INHALATION SOIL REMEDIATION OBJECTIVES

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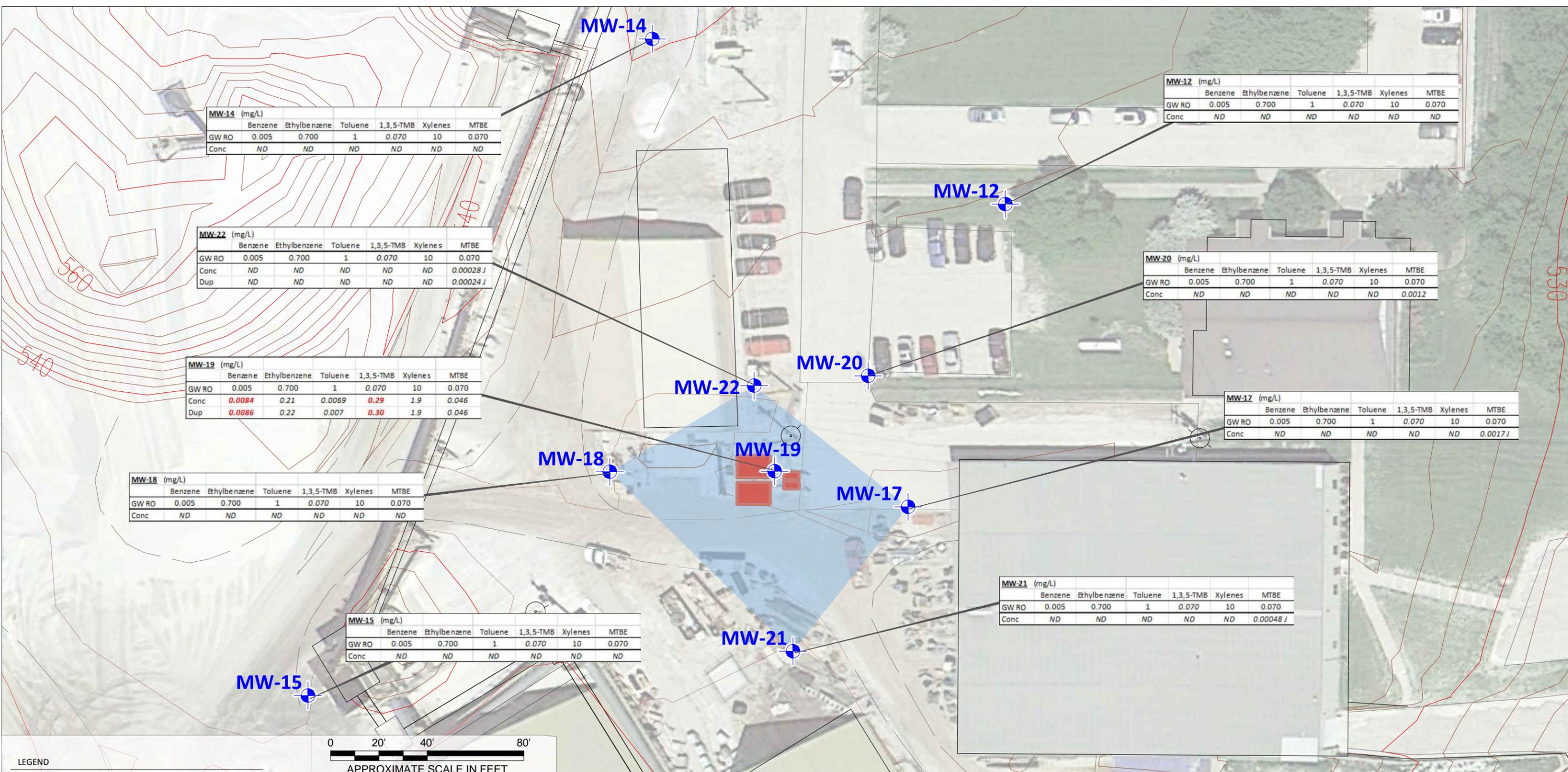
PREPARED BY: **GZA GeoEnvironmental, Inc.**
Engineers and Scientists
20900 SWENSON DRIVE, SUITE 150
WALKER, WISCONSIN 53186
(262) 754-2580

PREPARED FOR: **WEDRON SILICA COMPANY
TECHNISAND INC. &
LOCKHEAD MARTIN CORPORATION**

PROJ MGR: BGF	DESIGNED BY: BGF	DATE: 8/10/15	REVIEWED BY: MJK	DRAWN BY: KLK	PROJECT NO.: 20.0151178.51	CHECKED BY: MJK	SCALE: see above	REVISION NO.:	FIG 6
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MW-14 (mg/L)

	Benzene	Ethylbenzene	Toluene	1,3,5-TMB	Xylenes	MTBE
GW RO	0.005	0.700	1	0.070	10	0.070
Conc	ND	ND	ND	ND	ND	ND

MW-12 (mg/L)

	Benzene	Ethylbenzene	Toluene	1,3,5-TMB	Xylenes	MTBE
GW RO	0.005	0.700	1	0.070	10	0.070
Conc	ND	ND	ND	ND	ND	ND

MW-22 (mg/L)

	Benzene	Ethylbenzene	Toluene	1,3,5-TMB	Xylenes	MTBE
GW RO	0.005	0.700	1	0.070	10	0.070
Conc	ND	ND	ND	ND	ND	0.00028 J
Dup	ND	ND	ND	ND	ND	0.00024 J

MW-20 (mg/L)

	Benzene	Ethylbenzene	Toluene	1,3,5-TMB	Xylenes	MTBE
GW RO	0.005	0.700	1	0.070	10	0.070
Conc	ND	ND	ND	ND	ND	0.0012

MW-19 (mg/L)

	Benzene	Ethylbenzene	Toluene	1,3,5-TMB	Xylenes	MTBE
GW RO	0.005	0.700	1	0.070	10	0.070
Conc	0.0084	0.21	0.0069	0.29	1.9	0.046
Dup	0.0086	0.22	0.007	0.30	1.9	0.046

MW-17 (mg/L)

	Benzene	Ethylbenzene	Toluene	1,3,5-TMB	Xylenes	MTBE
GW RO	0.005	0.700	1	0.070	10	0.070
Conc	ND	ND	ND	ND	ND	0.0017 J

MW-18 (mg/L)

	Benzene	Ethylbenzene	Toluene	1,3,5-TMB	Xylenes	MTBE
GW RO	0.005	0.700	1	0.070	10	0.070
Conc	ND	ND	ND	ND	ND	ND

MW-21 (mg/L)

	Benzene	Ethylbenzene	Toluene	1,3,5-TMB	Xylenes	MTBE
GW RO	0.005	0.700	1	0.070	10	0.070
Conc	ND	ND	ND	ND	ND	0.00048 J

MW-15 (mg/L)

	Benzene	Ethylbenzene	Toluene	1,3,5-TMB	Xylenes	MTBE
GW RO	0.005	0.700	1	0.070	10	0.070
Conc	ND	ND	ND	ND	ND	ND

MW-16 (mg/L)

	Benzene	Ethylbenzene	Toluene	1,3,5-TMB	Xylenes	MTBE
GW RO	0.005	0.700	1	0.070	10	0.070
Conc	ND	ND	ND	ND	ND	ND

LEGEND

- MW-3 MONITORING WELL (GZA, 2013 AND 2014)
- SITE BOUNDARY
- CLASS I GROUNDWATER REMEDIATION OBJECTIVE (GRO) AREA (DEFINED BY WELLS WITH REPORTED CONCENTRATIONS LESS THAN GROs)
- HISTORICAL UNDERGROUND STORAGE TANK OR OTHER RELATED FEATURE
- INTERMEDIATE CONTOUR (INTERVAL: 2')
- MAJOR CONTOUR (INTERVAL: 10')
- OVERHEAD POWER POLE
- MTBE METHYL TERTIARY BUTYL ETHER
- TMB TRIMETHYLBENZENE
- J ESTIMATED CONCENTRATION BELOW THE REPORTING LEVEL (RL)
- DUP DUPLICATE SAMPLE
- ND CONSTITUENT NOT DETECTED ABOVE THE RL LISTED BLOW



- NOTES**
- 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.
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 - GW RO - ILLINOIS TIERED APPROACH TO CORRECTIVE ACTION OBJECTIVE (TACO) TIER 1 CLASS I GROUNDWATER REMEDIATION OBJECTIVE.
 - GW RO EXCEEDANCES DEPICTED IN **BOLD RED FONT**.
 - CONCENTRATIONS PROVIDED IN MILLIGRAMS PER LITER (mg/L).

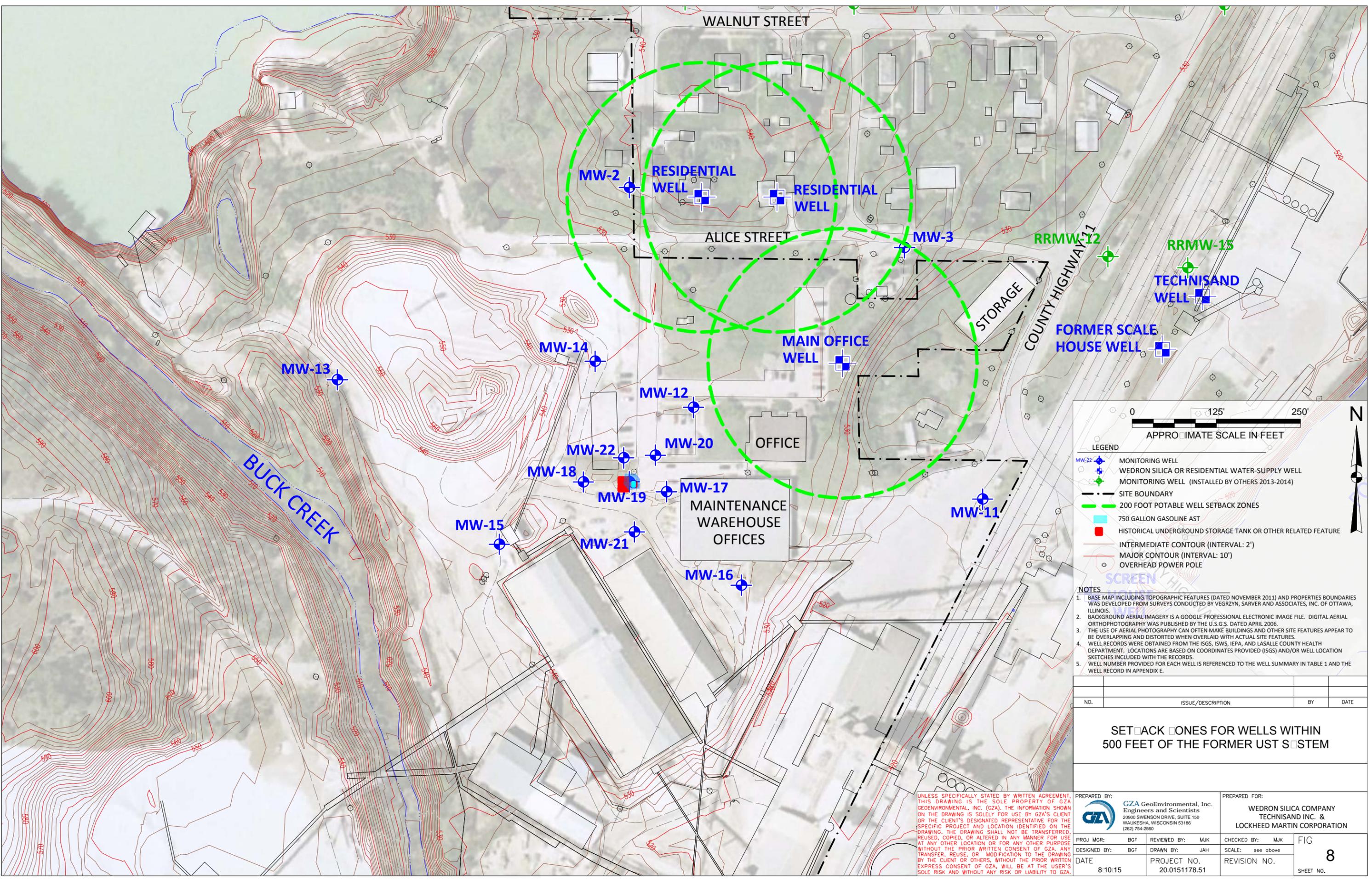
Reporting Levels (mg/L)

	Benzene	Ethylbenzene	Toluene	1,3,5-TMB	Xylenes	MTBE
RL	<0.0005	<0.0005	<0.0005	<0.0005	<0.0015	<0.0005

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NO.	ISSUE/DESCRIPTION	BY	DATE
GROUNDWATER GASOLINE INDICATOR CONSTITUENT CONCENTRATIONS IN COMPARISON TO TACO TIER 1 CLASS I GROUNDWATER REMEDIATION OBJECTIVES			
GZA GeoEnvironmental, Inc. Engineers and Scientists 20900 SWENSON DRIVE, SUITE 150 WALKERSHA, 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:	JAH
DATE:	8/10/15	PROJECT NO.:	20.0151178.51
		CHECKED BY:	MJK
		SCALE:	see above
		REVISION NO.:	
			FIG 7 SHEET NO.

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0 125' 250'
APPROXIMATE SCALE IN FEET

LEGEND

- MW-22: MONITORING WELL
- RESIDENTIAL WELL: WEDRON SILICA OR RESIDENTIAL WATER-SUPPLY WELL
- RRMW-12: MONITORING WELL (INSTALLED BY OTHERS 2013-2014)
- : SITE BOUNDARY
- : 200 FOOT POTABLE WELL SETBACK ZONES
- : 750 GALLON GASOLINE AST
- : HISTORICAL UNDERGROUND STORAGE TANK OR OTHER RELATED FEATURE
- : 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.
2. BACKGROUND AERIAL IMAGERY IS A GOOGLE PROFESSIONAL ELECTRONIC IMAGE FILE. DIGITAL AERIAL ORTHOPHOTOGRAPHY WAS PUBLISHED BY THE U.S.G.S. DATED APRIL 2006.
3. 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.
4. WELL RECORDS WERE OBTAINED FROM THE ISGS, ISWS, IEPA, AND LASALLE COUNTY HEALTH DEPARTMENT. LOCATIONS ARE BASED ON COORDINATES PROVIDED (ISGS) AND/OR WELL LOCATION SKETCHES INCLUDED WITH THE RECORDS.
5. WELL NUMBER PROVIDED FOR EACH WELL IS REFERENCED TO THE WELL SUMMARY IN TABLE 1 AND THE WELL RECORD IN APPENDIX E.

NO.	ISSUE/DESCRIPTION	BY	DATE
SETBACK ZONES FOR WELLS WITHIN 500 FEET OF THE FORMER UST SYSTEM			

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.

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	REVIEWED BY:	MJK
DESIGNED BY:	BGF	DRAWN BY:	JAH
DATE:	8/10/15	PROJECT NO.:	20.0151178.51
		CHECKED BY:	MJK
		SCALE:	see above
		REVISION NO.:	
		FIG	8
		SHEET NO.	



APPENDIX A

Limitations

GEOHYDROLOGICAL LIMITATIONS

Use of Report

1. GZA GeoEnvironmental, Inc. (GZA) prepared this report on behalf of and for the exclusive use of Wedron Silica Company (“Client”) for the stated purpose(s) and location(s) identified in the proposal and/or report. Use of this report, in whole or in part, at other locations or for other purposes, may lead to inappropriate conclusions; we do not accept any responsibility for the consequences of such use(s). Further, reliance by any party not expressly identified in the agreement, for any use, without our prior written permission, shall be at that party’s sole risk, and without any liability to GZA.



Standard of Care

2. GZA’s findings and conclusions are based on the work conducted as part of the Scope of Services set forth in the proposal and/or report and reflect our professional judgment. These findings and conclusions must be considered not as scientific or engineering certainties, but rather as our professional opinions concerning the limited data gathered during the course of our work. Conditions other than described in this report may be found at the subject location(s).
3. GZA’s services were performed using the degree of skill and care ordinarily exercised by qualified professionals performing the same type of services, at the same time, under similar conditions, at the same or a similar property. No warranty, expressed or implied, is made. Specifically, GZA does not and cannot represent that the site contains no hazardous material, oil, or other latent condition beyond that observed by GZA during its study. Additionally, GZA makes no warranty that any response action or recommended action will achieve all of its objectives or that the findings of this study will be upheld by a local, state, or federal agency.
4. In conducting our work, GZA relied upon certain information made available by public agencies, Client and/or others. GZA did not attempt to independently verify the accuracy or completeness of that information. Inconsistencies in this information which we have noted, if any, are discussed in the report.

Subsurface Conditions

5. The generalized soil profile(s) provided in our report are based on widely-spaced subsurface explorations and are intended only to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized, and were based on our assessment of subsurface conditions. The composition of strata and the transitions between strata may be more variable and more complex than indicated. For more specific information on soil conditions at a specific location, refer to the exploration logs.
6. Water level readings have been made in test holes (as described in the report) and monitoring wells at the specified times and under the stated conditions. These data have been reviewed and interpretations have been made in this report. Fluctuations in the level of the groundwater, however, occur due to temporal or spatial variations in areal recharge rates, soil heterogeneities, the presence of subsurface utilities and/or natural or artificially induced perturbations. The observed water table may be other than indicated in the report.

Compliance with Codes and Regulations

7. GZA used reasonable care in identifying and interpreting applicable codes and regulations necessary to execute our scope of work. These codes and regulations are subject to various and possibly contradictory interpretations. Interpretations and compliance with codes and regulations by other parties are beyond our control.

Screening and Analytical Testing



8. GZA collected environmental samples 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, sediment and/or air. Future site activities and uses may result in a requirement for additional testing.
9. Our interpretation of field screening and laboratory data is presented in the report. Unless otherwise noted, GZA relied on the laboratory's quality assurance (QA)/quality control (QC) program to validate these data.
10. 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

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

Additional Information

12. In the event that Client or others authorized to use this report obtain information on environmental or hazardous waste issues at the site not contained in this report, such information shall be brought to GZA's attention forthwith. GZA will evaluate such information and, on the basis of this evaluation, may modify the conclusions stated in this report.

Additional Services

13. GZA recommends that we be retained to provide services during any future investigations, design, implementation activities, construction and/or property development or redevelopment at the site. This will allow us the opportunity to: i) observe conditions and compliance with our design concepts and opinions; ii) allow for changes in the event that conditions are other than anticipated; iii) provide modifications to our design; and iv) assess the consequences of changes in technologies and/or regulations.



APPENDIX B
Soil Boring Logs

Contractor: Earth Solutions
Foreman: Juan Luna
GZA Rep.: Chris Ainsworth
Date Start: 6/3/15
Date Finish: 6/3/15
Boring Loc.: East/Southeast of Tank Pad
GS Elev.: Datum:

Auger/Casing **Sampler**
Type: GPL
O.D. / I.D.: 2"
Hammer Wt.:
Hammer Fall:
Other:

GROUNDWATER READINGS				
Date	Time	Depth	Casing	Stab

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 - 2'	0	9" Poorly-graded SAND (SP), fine; trace Gravel; brown/white, moist (FILL) 21" Very stiff, lean CLAY (CL); trace Sand, fine; trace Gravel; dry (FILL)	1	CL		
2					2' - 4'	146.7					
3											
4	2	48/44	4' - 8'		4' - 6'	504	9" Very stiff, lean CLAY (CL); trace Sand, fine; trace Gravel; moist (FILL) 35" Poorly-graded SAND (SP), fine, with Silt; trace Gravel; brown dry, slightly cemented (FILL)	1	SP		
5					6' - 8'	19.7					
6											
7	3	24/17	8' - 10'		8' - 10'	1.5	Poorly-graded SAND (SP), fine; little Silt; trace Gravel; brown, dry (FILL)	1			
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											

NOTES:

- Soil samples collected from 2 to 4 feet, 4 to 6 feet and 6 to 8 feet for benzene, toluene, ethylbenzene and xylene (BTEX), 1,2,4-trimethylbenzene (TMB) and 1,3,5-TMB analyses.

Contractor: Earth Solutions
Foreman: Juan Luna
GZA Rep.: Chris Ainsworth
Date Start: 6/3/15
Date Finish: 6/3/15
Boring Loc.: East/Northeast of Tank Pad
GS Elev.: Datum:

Auger/Casing **Sampler**
Type: GPL
O.D. / I.D.: 2"
Hammer Wt.:
Hammer Fall:
Other:

GROUNDWATER READINGS				
Date	Time	Depth	Casing	Stab

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	48/28	0 - 4'		0 - 2'	2.3	2" Base course 13" Poorly-graded SAND (SP), fine; trace Silt; trace Gravel, fine; brown, dry (FILL)	0.17	Base Course		
2					2' - 4'	2.9	13" Stiff, lean CLAY (CL), slightly plastic; trace Sand; trace Gravel; gray, dry, fine sand lenses (FILL)	1.27	SP		
3											
4											
5	2	48/48	4' - 8'		4' - 6'	1.4	10" Stiff, lean CLAY (CL), slightly plastic; trace Sand; trace Gravel; gray, dry, fine sand lenses (FILL)	1	CL		
6					6' - 8'	2.0	14" Stiff, lean CLAY (CL); little Sand; trace Gravel, fine; brown, dry (FILL)	6'			
7											
8											
9	3	24/21	8' - 10'		8' - 10'	1.5	Poorly-graded SAND (SP), fine; some Silt; trace Gravel; brown, dry, intermittent lean clay layers (FILL)	1	SP		
10											
11							END OF BORING AT 10'				
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											

NOTES:

- Soil samples collected from 2 to 4 feet, 4 to 6 feet and 6 to 8 feet for benzene, toluene, ethylbenzene and xylene (BTEX), 1,2,4-trimethylbenzene (TMB) and 1,3,5-TMB analyses.

Contractor: Earth Solutions
Foreman: Juan Luna
GZA Rep.: Chris Ainsworth
Date Start: 6/3/15
Date Finish: 6/3/15
Boring Loc.: North of East Tank Pad Corner
GS Elev.: Datum:

Auger/Casing **Sampler**
Type: GPL
O.D. / I.D.: 2"
Hammer Wt.:
Hammer Fall:
Other:

GROUNDWATER READINGS				
Date	Time	Depth	Casing	Stab

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	48/28	0 - 4'		0 - 2'	1.4	2" Base course 12" Poorly-graded SAND (SP), fine; some Silt; trace Gravel; brown, moist (FILL)	0.17	Base Course							
2					2' - 4'	2.6	14" Stiff, lean CLAY (CL), slightly plastic; some Sand, fine; gray, dry, with gravel seams (FILL)	1.17	SP							
3																
4																
5	2	48/42	4' - 8'		4' - 6'	1.3	Poorly-grade SAND, fine; little Silt; trace Gravel; brown, moist to dry, intermittent lean clay layers (FILL)	1	SP							
6					6' - 8'	1.1										
7																
8	3	24/24	8' - 10'		8' - 10'	0	Poorly-grade SAND, fine; little Silt; trace Gravel; brown, moist to dry, intermittent lean clay layers (FILL)	10'								
9																
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																
25																

NOTES:

- Soil samples collected from 2 to 4 feet, 4 to 6 feet and 6 to 8 feet for benzene, toluene, ethylbenzene and xylene (BTEX), 1,2,4-trimethylbenzene (TMB) and 1,3,5-TMB analyses.

Contractor: Earth Solutions
Foreman: Juan Luna
GZA Rep.: Chris Ainsworth
Date Start: 6/3/15
Date Finish: 6/3/15
Boring Loc.: North of WS-SB-GP16
GS Elev.: Datum:

Auger/Casing **Sampler**
Type: GPL
O.D. / I.D.: 2"
Hammer Wt.: _____
Hammer Fall: _____
Other: _____

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab

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'	0	Poorly-graded SAND (SP) with Silt; trace Gravel; brown, dry (FILL)	1	SP		
2					2' - 4'	0					
3											
4	2	48/48	4' - 8'		4' - 6'	0	Poorly-graded SAND (SP) with Silt; trace Gravel; brown, dry to wet at 4-6', slightly cemented from 6-8' (FILL)	1	SP		
5					6' - 8'	0					
6											
7	3	24/24	8' - 10'		8' - 10'	0	15" Poorly-graded SAND (SP), fine; some Silt; trace Gravel; brown, moist 9" Stiff, lean CLAY (CL); trace Sand; trace Gavel; brown, dry	1	CL		
8											
9											
10											
11							END OF BORING AT 10'				
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											

NOTES:

- Soil samples collected from 2 to 4 feet, 4 to 6 feet and 6 to 8 feet for benzene, toluene, ethylbenzene and xylene (BTEX), 1,2,4-trimethylbenzene (TMB) and 1,3,5-TMB analyses.

Contractor: Earth Solutions
Foreman: Juan Luna
GZA Rep.: Chris Ainsworth
Date Start: 6/3/15
Date Finish: 6/3/15
Boring Loc.: West of WS-SB-GP16
GS Elev.: Datum:

Auger/Casing **Sampler**
Type: GPL
O.D. / I.D.: 2"
Hammer Wt.:
Hammer Fall:
Other:

GROUNDWATER READINGS				
Date	Time	Depth	Casing	Stab

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	48/37	0 - 4'		0 - 2'	0	9" Base course 28" Very stiff, lean CLAY (CL); brown, dry, fine sand and gravel layers (FILL)	1	CL	Base Course		
2					2' - 4'	0						0.75'
3												
4												
5	2	48/40	4' - 8'		4' - 6'	0	27" Very stiff, lean CLAY (CL); brown, dry, fine sand and gravel layers (FILL) 13" Poorly-graded SAND (SP); some Silt; trace Gravel; brown, dry	1	CL			
6					6' - 8'	0						6.25'
7												
8												
9	3	24/24	8' - 10'		8' - 10'	0	14" Poorly-graded SAND (SP); some Silt; trace Gravel; brown, dry 10" Hard, lean CLAY (CL); trace Gravel; gray, dry	1	CL			
10												9.2'
11							10'	CL				
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												

NOTES:

- Soil samples collected from 2 to 4 feet, 4 to 6 feet and 6 to 8 feet for benzene, toluene, ethylbenzene and xylene (BTEX), 1,2,4-trimethylbenzene (TMB) and 1,3,5-TMB analyses.

Contractor: Earth Solutions
 Foreman: Juan Luna
 GZA Rep.: Chris Ainsworth
 Date Start: 6/3/15
 Date Finish: 6/3/15
 Boring Loc.: West of Tank Pad
 GS Elev.: Datum:

Auger/Casing Sampler
 Type: _____ GPL
 O.D. / I.D.: _____ 2"
 Hammer Wt.: _____
 Hammer Fall: _____
 Other: _____

GROUNDWATER READINGS				
Date	Time	Depth	Casing	Stab

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 - 2'	0	13" Poorly-graded SAND (SP); trace Silt; trace Gravel; light brown, dry (FILL)	1	SP		
2					2' - 4'	1.0	23" Poorly-graded SAND (SP); trace Silt; tan, damp (FILL)				
3	2	48/31	4' - 8'		4' - 6'	2.3	12" Poorly-graded SAND (SP); trace Silt; tan, damp (FILL)	1	SP		
6					6' - 8'	0	19" Poorly-graded SAND (SP) with Silt; trace Clay; brown, moist, lean clay layers (FILL)				
7					8' - 10'	13	Poorly-graded SAND (SP) with Silt; trace Clay; brown, moist, lean clay layers (FILL)				
9	4	60/32	10' - 15'		10' - 11.7'	0	Poorly-graded SAND (SP); some Silt; trace Gravel; brown to black at 13.5-15', moist (FILL)	1	SP		
11					11.7' - 13.3'	1.2					
13					13.3' - 15'	237					
15	5	60/21	15' - 20'		15' - 16.7'	396	6" Poorly-graded SAND (SP); some Silt; trace Gravel; dark brown, moist (FILL)	1	SP		
17					16.7' - 18.3'	140	15" Poorly-graded SAND (SP), fine; trace Silt; gray, moist (FILL)				
19					18.3' - 20'	318					
21	6	60/29	20' - 25'		20' - 21.7'	425	Poorly-graded SAND (SP), fine; trace Silt; gray, moist (FILL)	1	SP		
22					21.7' - 23.3'	599					
24					23.3' - 25'	69					

NOTES:

- Soil samples collected from 2 to 4 feet, 4 to 6 feet, 6 to 8 feet, 8 to 10 feet, 13.3 to 15 feet, 15 to 16.7 feet and 21.7 to 23.3 feet for benzene, toluene, ethylbenzene and xylene (BTEX), 1,2,4-trimethylbenzene (TMB) and 1,3,5-TMB 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	60/28	25' - 30'		25' - 26.7'	41	Poorly-graded SAND (SP), fine; trace Silt; gray, moist (FILL)	2	SP		
27					26.7' - 28.3'	335					
28					28.3' - 30'	16.4					
29	8	60/36	30' - 35'		30' - 31.7'	41.5	Poorly-graded SAND (SP), little to some Silt, fine; brown, moist	2			
30					31.7' - 33.3'	12.5					
31					33.3' - 35'	4.1					
32											
33											
34											
35								35'			
36							END OF BORING AT 35'				
37											
38											
39											
40											
41											
42											
43											
44											
45											
46											
47											
48											
49											
50											

NOTES:

2. Soil samples collected from 26.7 to 28.3 feet and 30 to 31.7 feet for benzene, toluene, ethylbenzene and xylene (BTEX), 1,2,4-trimethylbenzene (TMB) and 1,3,5-TMB analyses.

Contractor: Earth Solutions
Foreman: Juan Luna
GZA Rep.: Chris Ainsworth
Date Start: 6/3/15
Date Finish: 6/3/15
Boring Loc.: Southwest of Tank Pad
GS Elev.: Datum:

Auger/Casing Sampler
Type: GPL
O.D. / I.D.: 2"
Hammer Wt.:
Hammer Fall:
Other:

GROUNDWATER READINGS				
Date	Time	Depth	Casing	Stab

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	48/39	0 - 4'		0 - 2'	2.2	9" Base course (FILL) 30" Very stiff, lean CLAY (CL); trace Sand; trace Gravel; brown/gray, dry, sand and gravel layers (FILL)	1	CL		
2					2' - 4'	1.1					
3	2	48/48	4' - 8'		4' - 6'	1.0	20" Poorly-graded SAND (SP), fine, with silt; trace Gravel; brown, dry (FILL) 28" Very stiff, lean CLAY (CL); brown, dry, sand and gravel layers	1	SP		
4					6' - 8'	1.6					
5	3	24/24	8' - 10'		8' - 10'	0	Poorly-graded SAND (SP), fine, with Silt; trace Gravel; dark brown, dry, cemented	1	SP		
6											
7	4	60/53	10' - 15'		10' - 11.7'	1.1	10" Poorly-graded SAND (SP), fine, with Silt; trace Gravel; dark brown, dry, cemented 43" Stiff, lean CLAY (CL); trace Sand; trace Gravel; brown, dry	1	CL		
8					11.7' - 13.3'	5.6					
9					13.3' - 15'	11.1					
10	5	60/40	15' - 20'		15' - 16.7'	17.3	20" Stiff, lean CLAY (CL); trace Sand; trace Gravel; brown, dry 20" Poorly-graded SAND (SP), fine; little to trace Silt; black, moist	1	SP		
11					16.7' - 18.3'	405					
12					18.3' - 20'	709					
13	6	60/34	20' - 25'		20' - 21.7'	454	Poorly-graded SAND (SP), fine; gray, moist	1			
14					21.7' - 23.3'	455					
15					23.3' - 25'	318					

NOTES:

- Soil samples collected from 2 to 4 feet, 4 to 6 feet, 6 to 8 feet, 13.3 to 15 feet, 18.3 to 20 feet and 21.7 to 23.3 feet for benzene, toluene, ethylbenzene and xylene (BTEX), 1,2,4-trimethylbenzene (TMB) and 1,3,5-TMB 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	60/31	25' - 30'		25' - 26.7'	127	17" Poorly-graded SAND (SP), fine; gray, moist 14" Poorly-graded SAND (SP), fine; some Silt; some Gravel; brown, moist	2	SP		
27					26.7' - 28.3'	236					
28					28.3' - 30'	152					
29	8	60/38	30' - 35'		30' - 31.7'	472	Poorly-graded SAND (SP), fine; some Silt; trace Gravel; brown, moist	2			
30					31.7' - 33.3'	250					
31					33.3' - 35'	183					
32											
33											
34											
35								35'			
36							END OF BORING AT 35'				
37											
38											
39											
40											
41											
42											
43											
44											
45											
46											
47											
48											
49											
50											

NOTES:

2. Soil samples collected from 26.7 to 28.3 feet and 30 to 31.7 feet for benzene, toluene, ethylbenzene and xylene (BTEX), 1,2,4-trimethylbenzene (TMB) and 1,3,5-TMB analyses.

Contractor: Earth Solutions
Foreman: Juan Luna
GZA Rep.: Chris Ainsworth
Date Start: 6/3/15
Date Finish: 6/3/15
Boring Loc.: South of Tank Pad
GS Elev.: Datum:

Auger/Casing Sampler
Type: GPL
O.D. / I.D.: 2"
Hammer Wt.:
Hammer Fall:
Other:

GROUNDWATER READINGS				
Date	Time	Depth	Casing	Stab

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	48/37	0 - 4'		0 - 2'	12.6	9" Poorly-graded SAND (GP) and GRAVEL; brown, dry (FILL) 4" Poorly-graded SAND (SP), fine; trace Silt; white/gray, moist (FILL) 24" Stiff, lean CLAY (CL); gray, dry, several sand and gravel layers (FILL)	0.75'	GP		
2						1.05'		SP			
3											
4											
5	2	48/48	4' - 8'		4' - 6'	970	Poorly-graded SAND (SP), fine; little Silt; trace Gravel; gray, moist, intermittent lean clay layers (FILL)	1'			
6											
7											
8											
9	3	24/24	8' - 10'		8' - 10'	385	Poorly-graded SAND (SP), fine; trace Silt; trace Gravel; wet, slightly cemented	1'			
10											
11							END OF BORING AT 10'				
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											

NOTES:

- Soil samples collected from 2 to 4 feet, 4 to 6 feet, 6 to 8 feet and 8 to 10 feet for benzene, toluene, ethylbenzene and xylene (BTEX), 1,2,4-trimethylbenzene (TMB) and 1,3,5-TMB analyses.

Contractor: Earth Solutions
 Foreman: Juan Luna
 GZA Rep.: Chris Ainsworth
 Date Start: 6/3/15
 Date Finish: 6/3/15
 Boring Loc.: _____
 GS Elev.: _____ Datum: _____

Auger/Casing Sampler
 Type: _____ GPL
 O.D. / I.D.: _____ 2"
 Hammer Wt.: _____
 Hammer Fall: _____
 Other: _____

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab

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							Soil Boring WS-SB-GP35 was drilled immediately adjacent to soil boring WS-SB-MW22 and only the 31- to 33-foot soil interval was sampled. See soil boring WS-SB-MW22 for a description of soil and field screen results.				
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
20											
25											
30											
31								1	31'		
32	1	24/24	31' - 33'							SP	
33									33'		
34											
35									2		

NOTES:

- Soil sample collected from 31 to 33 feet for fraction organic carbon analysis.
- Water level in MW-22 was 37.15 TOC or approximately 34 feet below ground surface (bgs).

Contractor: Earth Solutions
Foreman: Juan Luna
GZA Rep.: Chris Ainsworth
Date Start: 6/3/15
Date Finish: 6/3/15
Boring Loc.: _____
GS Elev.: Datum:

Auger/Casing Sampler
Type: _____ GPL
O.D. / I.D.: _____ 2"
Hammer Wt.: _____
Hammer Fall: _____
Other: _____

GROUNDWATER READINGS				
Date	Time	Depth	Casing	Stab

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	48/38	0 - 4'		0 - 2'	0	6" Base course 17" Poorly-graded SAND (SP), fine; trace to some Silt; trace Gravel; brown, dry (FILL)	0.5'	Base Course		
2					2' - 4'	0	15" Very stiff, lean CLAY (CL); brown, dry, trace sand and gravel seams (FILL)	1.9'	CL		
3											
4	2	48/48	4' - 8'		4' - 6'	0	Poorly-graded SAND (SP) with Silt; trace Gravel; brown, wet to dry at 6', slightly cemented 6-8' (FILL)	1	SP		
5					6' - 8'	0					
6											
7	3	24/24	8' - 10'		8' - 10'	0	Poorly-graded SAND (SP) with Silt; trace Gravel; gray, wet	1			
8											
9											
10								10'			
11							END OF BORING AT 10'				
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											

NOTES:

- Soil samples collected from 2 to 4 feet, 4 to 6 feet and 6 to 8 feet for benzene, toluene, ethylbenzene and xylene (BTEX), 1,2,4-trimethylbenzene (TMB) and 1,3,5-TMB analyses.



APPENDIX C

Soil Analytical Report and Chain-of-Custody Form



2525 Advance Road
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June 25, 2015

Bernard Fenelon
GZA GeoEnvironmental, Inc
20900 Swenson Drive, Suite 150
Waukesha, WI 53186
RE: Wedron Silica - Wedron, IL

Enclosed are revised analytical results for the samples received by the laboratory on 06/04/2015.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. These results are in compliance with the 2009 NELAC Standards and the appropriate agencies listed below, unless otherwise noted in the case narrative. This analytical report should be reproduced in its entirety.

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

Sincerely,

Jessica Esser
Project Manager

Certification List			Expires
DODELAP	DOD ELAP Accreditation (A2LA)	3269.01	03/31/2016
ILEPA	Illinois Secondary NELAP Accreditation	003174	06/30/2015
KDHE	Kansas Secondary NELAP Accreditation	E-10384	07/31/2015
LELAP	Louisiana Primary NELAP Accreditation	04165	06/30/2015
NJDEP	New Jersey Secondary NELAP Accreditation	WI004	06/30/2015
ODEQ	Oklahoma Department of Environmental Quality Ac	2014-153	08/31/2015
WDNR	Wisconsin Certification under NR 149	113289110	08/31/2015



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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

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WS-SB-GP27 (2-4')	A152312-01	Soil	06/03/2015	06/04/2015
WS-SB-GP27 (4-6')	A152312-02	Soil	06/03/2015	06/04/2015
WS-SB-GP27 (6-8')	A152312-03	Soil	06/03/2015	06/04/2015
WS-SB-GP28 (2-4')	A152312-04	Soil	06/03/2015	06/04/2015
WS-SB-GP28 (4-6')	A152312-05	Soil	06/03/2015	06/04/2015
WS-SB-GP28 (6-8')	A152312-06	Soil	06/03/2015	06/04/2015
WS-SB-GP29 (2-4')	A152312-07	Soil	06/03/2015	06/04/2015
WS-SB-GP29 (4-6')	A152312-08	Soil	06/03/2015	06/04/2015
WS-SB-GP29 (6-8')	A152312-09	Soil	06/03/2015	06/04/2015
WS-SB-GP34 (2-4')	A152312-10	Soil	06/03/2015	06/04/2015
WS-SB-GP34 (4-6')	A152312-11	Soil	06/03/2015	06/04/2015
WS-SB-GP34 (6-8')	A152312-12	Soil	06/03/2015	06/04/2015
WS-SB-GP34 (8-10')	A152312-13	Soil	06/03/2015	06/04/2015
WS-SB-GP33 (2-4')	A152312-14	Soil	06/03/2015	06/04/2015
WS-SB-GP33 (4-6')	A152312-15	Soil	06/03/2015	06/04/2015
WS-SB-GP33 (6-8')	A152312-16	Soil	06/03/2015	06/04/2015
WS-SB-GP33 (13.3-15')	A152312-17	Soil	06/03/2015	06/04/2015
WS-SB-GP33 (18.3-20')	A152312-18	Soil	06/03/2015	06/04/2015
WS-SB-GP33 (21.7-23.3')	A152312-19	Soil	06/03/2015	06/04/2015
WS-SB-GP33 (26.7-28.3')	A152312-20	Soil	06/03/2015	06/04/2015
WS-SB-GP33 (30-31.7')	A152312-21	Soil	06/03/2015	06/04/2015
WS-SB-GP32 (2-4')	A152312-22	Soil	06/03/2015	06/04/2015
WS-SB-GP32 (4-6')	A152312-23	Soil	06/03/2015	06/04/2015
WS-SB-GP32 (6-8')	A152312-24	Soil	06/03/2015	06/04/2015
WS-SB-GP32 (13.3-15')	A152312-25	Soil	06/03/2015	06/04/2015
WS-SB-GP32 (15-16.7')	A152312-26	Soil	06/03/2015	06/04/2015
WS-SB-GP32 (21.7-23.3')	A152312-27	Soil	06/03/2015	06/04/2015
WS-SB-GP32 (26.7-28.3')	A152312-28	Soil	06/03/2015	06/04/2015
WS-SB-GP32 (30-31.7')	A152312-29	Soil	06/03/2015	06/04/2015
WS-SB-GP31 (2-4')	A152312-30	Soil	06/03/2015	06/04/2015
WS-SB-GP31 (4-6')	A152312-31	Soil	06/03/2015	06/04/2015



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

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WS-SB-GP31 (6-8')	A152312-32	Soil	06/03/2015	06/04/2015
WS-SB-GP30 (2-4')	A152312-33	Soil	06/03/2015	06/04/2015
WS-SB-GP30 (4-6')	A152312-34	Soil	06/03/2015	06/04/2015
WS-SB-GP30 (6-8')	A152312-35	Soil	06/03/2015	06/04/2015
WS-SB-GP32 (8-10')	A152312-36	Soil	06/03/2015	06/04/2015
Equipment Blank	A152312-37	Water	06/03/2015	06/04/2015
Trip Blank	A152312-38	Water	06/03/2015	06/04/2015
Methanol Blank	A152312-39	Soil	06/03/2015	06/04/2015

CASE NARRATIVE

Sample Receipt Information:

39 samples were received on 6/4/2015. Samples were received on ice. Samples were received in acceptable condition.

Please see the chain of custody (COC) document at the end of this report for additional information.

Continuing Calibration Verification (CCV):

The HC footnote on multiple samples states that there was a high CCV recovery for toluene. The upper control limit is 120% and the highest recovery was 123%.

Laboratory Control Samples (LCS):

The E1 footnote on samples A152312-37 and A152312-38 indicates that there were quality control sample exceedances for benzene and toluene. The LCS recovery for benzene was below acceptable limits and the LCS recovery for toluene was above acceptable limits. Please see the quality control section of the report for more information.

REASON FOR REVISED REPORT

This report was revised to correct the dilution factor for benzene for sample A152312-26. This report should replace "A152312 FINAL 06 24 2015 1351".



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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

WS-SB-GP27 (2-4')

A152312-01 (Soil)

Date Sampled

06/03/2015 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: A506046

Benzene	ND	1.8	28	ug/kg dry	1	06/15/2015	06/15/2015 15:01	EPA 8260B	
Ethylbenzene	53	2.4	28	ug/kg dry	1	06/15/2015	06/15/2015 15:01	EPA 8260B	
Toluene	9.7	4.6	28	ug/kg dry	1	06/15/2015	06/15/2015 15:01	EPA 8260B	J
1,3,5-Trimethylbenzene	28	2.7	28	ug/kg dry	1	06/15/2015	06/15/2015 15:01	EPA 8260B	
1,2,4-Trimethylbenzene	180	4.0	28	ug/kg dry	1	06/15/2015	06/15/2015 15:01	EPA 8260B	
m,p-Xylene	27	3.5	57	ug/kg dry	1	06/15/2015	06/15/2015 15:01	EPA 8260B	J
o-Xylene	13	3.4	28	ug/kg dry	1	06/15/2015	06/15/2015 15:01	EPA 8260B	J
Xylenes, total	39	7.0	85	ug/kg dry	1	06/15/2015	06/15/2015 15:01	EPA 8260B	J
Surrogate: Dibromofluoromethane			97.6 %	84.7-120		06/15/2015	06/15/2015 15:01	EPA 8260B	
Surrogate: Toluene-d8			92.8 %	90.5-108		06/15/2015	06/15/2015 15:01	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			114 %	88.3-113		06/15/2015	06/15/2015 15:01	EPA 8260B	S

Classical Chemistry Parameters

Preparation Batch: A506017

% Solids	90.0		0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	SM 2540B	
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Revised Report

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 Waukesha WI, 53186

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

WS-SB-GP27 (4-6')

A152312-02 (Soil)

Date Sampled
06/03/2015 10:30

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: A506046

Benzene	220	3.2	49	ug/kg dry	2	06/15/2015	06/15/2015 15:23	EPA 8260B	D
Ethylbenzene	1700	4.2	49	ug/kg dry	2	06/15/2015	06/15/2015 15:23	EPA 8260B	D
Toluene	98	7.9	49	ug/kg dry	2	06/15/2015	06/15/2015 15:23	EPA 8260B	HC, D
1,3,5-Trimethylbenzene	1600	4.7	49	ug/kg dry	2	06/15/2015	06/15/2015 15:23	EPA 8260B	D
1,2,4-Trimethylbenzene	4700	6.9	49	ug/kg dry	2	06/15/2015	06/15/2015 15:23	EPA 8260B	D
m,p-Xylene	1900	6.1	99	ug/kg dry	2	06/15/2015	06/15/2015 15:23	EPA 8260B	D
o-Xylene	110	5.9	49	ug/kg dry	2	06/15/2015	06/15/2015 15:23	EPA 8260B	D
Xylenes, total	2000	12	150	ug/kg dry	2	06/15/2015	06/15/2015 15:23	EPA 8260B	D

Surrogate: Dibromofluoromethane

90.8 % 84.7-120

06/15/2015

06/15/2015 15:23

EPA 8260B

Surrogate: Toluene-d8

99.4 % 90.5-108

06/15/2015

06/15/2015 15:23

EPA 8260B

Surrogate: 4-Bromofluorobenzene

106 % 88.3-113

06/15/2015

06/15/2015 15:23

EPA 8260B

Classical Chemistry Parameters

Preparation Batch: A506017

% Solids	88.3	0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	SM 2540B		
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Revised Report

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 Waukesha WI, 53186

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

WS-SB-GP27 (6-8')

A152312-03 (Soil)

Date Sampled
06/03/2015 10:35

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: A506046

Benzene	ND	1.7	27	ug/kg dry	1	06/15/2015	06/15/2015 15:45	EPA 8260B	
Ethylbenzene	ND	2.2	27	ug/kg dry	1	06/15/2015	06/15/2015 15:45	EPA 8260B	
Toluene	ND	4.3	27	ug/kg dry	1	06/15/2015	06/15/2015 15:45	EPA 8260B	
1,3,5-Trimethylbenzene	9.6	2.6	27	ug/kg dry	1	06/15/2015	06/15/2015 15:45	EPA 8260B	J
1,2,4-Trimethylbenzene	37	3.7	27	ug/kg dry	1	06/15/2015	06/15/2015 15:45	EPA 8260B	
m,p-Xylene	6.4	3.3	53	ug/kg dry	1	06/15/2015	06/15/2015 15:45	EPA 8260B	J
o-Xylene	ND	3.2	27	ug/kg dry	1	06/15/2015	06/15/2015 15:45	EPA 8260B	
Xylenes, total	ND	6.5	80	ug/kg dry	1	06/15/2015	06/15/2015 15:45	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			98.6 %	84.7-120		06/15/2015	06/15/2015 15:45	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			95.6 %	90.5-108		06/15/2015	06/15/2015 15:45	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			109 %	88.3-113		06/15/2015	06/15/2015 15:45	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch: A506017

% Solids	87.0		0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	SM 2540B	
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Revised Report

GZA GeoEnvironmental, Inc
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 Waukesha WI, 53186

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

**WS-SB-GP28 (2-4')
 A152312-04 (Soil)**

**Date Sampled
 06/03/2015 11:05**

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: A506046

Benzene	370	1.7	27	ug/kg dry	1	06/15/2015	06/15/2015 16:07	EPA 8260B	
Ethylbenzene	1800	2.2	27	ug/kg dry	1	06/15/2015	06/15/2015 16:07	EPA 8260B	
Toluene	25	4.3	27	ug/kg dry	1	06/15/2015	06/15/2015 16:07	EPA 8260B	HC, J
1,3,5-Trimethylbenzene	180	2.6	27	ug/kg dry	1	06/15/2015	06/15/2015 16:07	EPA 8260B	
1,2,4-Trimethylbenzene	640	3.7	27	ug/kg dry	1	06/15/2015	06/15/2015 16:07	EPA 8260B	
m,p-Xylene	1100	3.3	54	ug/kg dry	1	06/15/2015	06/15/2015 16:07	EPA 8260B	
o-Xylene	340	3.2	27	ug/kg dry	1	06/15/2015	06/15/2015 16:07	EPA 8260B	
Xylenes, total	1400	6.5	80	ug/kg dry	1	06/15/2015	06/15/2015 16:07	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			91.4 %	84.7-120		06/15/2015	06/15/2015 16:07	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			97.2 %	90.5-108		06/15/2015	06/15/2015 16:07	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			105 %	88.3-113		06/15/2015	06/15/2015 16:07	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch: A506017

% Solids	84.0		0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	SM 2540B	
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Project: Wedron Silica - Wedron, IL
 Project Number: 20.0151178.51
 Project Manager: Bernard Fenelon

WS-SB-GP28 (4-6')

A152312-05 (Soil)

Date Sampled
 06/03/2015 11:15

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: A506046

Benzene	ND	1.7	27	ug/kg dry	1	06/15/2015	06/15/2015 16:29	EPA 8260B	
Ethylbenzene	ND	2.3	27	ug/kg dry	1	06/15/2015	06/15/2015 16:29	EPA 8260B	
Toluene	ND	4.3	27	ug/kg dry	1	06/15/2015	06/15/2015 16:29	EPA 8260B	
1,3,5-Trimethylbenzene	ND	2.6	27	ug/kg dry	1	06/15/2015	06/15/2015 16:29	EPA 8260B	
1,2,4-Trimethylbenzene	ND	3.8	27	ug/kg dry	1	06/15/2015	06/15/2015 16:29	EPA 8260B	
m,p-Xylene	ND	3.3	54	ug/kg dry	1	06/15/2015	06/15/2015 16:29	EPA 8260B	
o-Xylene	ND	3.2	27	ug/kg dry	1	06/15/2015	06/15/2015 16:29	EPA 8260B	
Xylenes, total	ND	6.5	80	ug/kg dry	1	06/15/2015	06/15/2015 16:29	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			99.4 %	84.7-120		06/15/2015	06/15/2015 16:29	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			93.8 %	90.5-108		06/15/2015	06/15/2015 16:29	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			103 %	88.3-113		06/15/2015	06/15/2015 16:29	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch: A506017

% Solids	88.1		0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	SM 2540B	
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Revised Report

GZA GeoEnvironmental, Inc
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 Waukesha WI, 53186

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

WS-SB-GP28 (6-8')

A152312-06 (Soil)

Date Sampled
 06/03/2015 11:20

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: A506046

Benzene	ND	2.0	32	ug/kg dry	1	06/15/2015	06/15/2015 16:50	EPA 8260B	
Ethylbenzene	9.0	2.7	32	ug/kg dry	1	06/15/2015	06/15/2015 16:50	EPA 8260B	J
Toluene	9.6	5.1	32	ug/kg dry	1	06/15/2015	06/15/2015 16:50	EPA 8260B	HC, J
1,3,5-Trimethylbenzene	ND	3.1	32	ug/kg dry	1	06/15/2015	06/15/2015 16:50	EPA 8260B	
1,2,4-Trimethylbenzene	8.3	4.5	32	ug/kg dry	1	06/15/2015	06/15/2015 16:50	EPA 8260B	J
m,p-Xylene	8.3	4.0	64	ug/kg dry	1	06/15/2015	06/15/2015 16:50	EPA 8260B	J
o-Xylene	4.5	3.8	32	ug/kg dry	1	06/15/2015	06/15/2015 16:50	EPA 8260B	J
Xylenes, total	13	7.8	96	ug/kg dry	1	06/15/2015	06/15/2015 16:50	EPA 8260B	J
<i>Surrogate: Dibromofluoromethane</i>			99.8 %	84.7-120		06/15/2015	06/15/2015 16:50	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			109 %	90.5-108		06/15/2015	06/15/2015 16:50	EPA 8260B	S
<i>Surrogate: 4-Bromofluorobenzene</i>			108 %	88.3-113		06/15/2015	06/15/2015 16:50	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch: A506017

% Solids	81.3		0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	SM 2540B	
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2525 Advance Road
 Madison, WI 53718
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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

WS-SB-GP29 (2-4')

A152312-07 (Soil)

Date Sampled
06/03/2015 11:35

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: A506046

Benzene	ND	1.7	26	ug/kg dry	1	06/15/2015	06/15/2015 17:12	EPA 8260B	
Ethylbenzene	4.6	2.2	26	ug/kg dry	1	06/15/2015	06/15/2015 17:12	EPA 8260B	J
Toluene	ND	4.1	26	ug/kg dry	1	06/15/2015	06/15/2015 17:12	EPA 8260B	
1,3,5-Trimethylbenzene	ND	2.5	26	ug/kg dry	1	06/15/2015	06/15/2015 17:12	EPA 8260B	
1,2,4-Trimethylbenzene	ND	3.6	26	ug/kg dry	1	06/15/2015	06/15/2015 17:12	EPA 8260B	
m,p-Xylene	ND	3.2	52	ug/kg dry	1	06/15/2015	06/15/2015 17:12	EPA 8260B	
o-Xylene	ND	3.1	26	ug/kg dry	1	06/15/2015	06/15/2015 17:12	EPA 8260B	
Xylenes, total	ND	6.3	77	ug/kg dry	1	06/15/2015	06/15/2015 17:12	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			98.6 %	84.7-120		06/15/2015	06/15/2015 17:12	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			95.0 %	90.5-108		06/15/2015	06/15/2015 17:12	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			100 %	88.3-113		06/15/2015	06/15/2015 17:12	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch: A506017

% Solids	84.4		0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	SM 2540B	
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Revised Report

GZA GeoEnvironmental, Inc
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 Waukesha WI, 53186

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

WS-SB-GP29 (4-6')

A152312-08 (Soil)

Date Sampled
 06/03/2015 11:40

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: A506046

Benzene	ND	1.5	24	ug/kg dry	1	06/15/2015	06/15/2015 17:34	EPA 8260B	
Ethylbenzene	ND	2.0	24	ug/kg dry	1	06/15/2015	06/15/2015 17:34	EPA 8260B	
Toluene	4.3	3.9	24	ug/kg dry	1	06/15/2015	06/15/2015 17:34	EPA 8260B	HC, J
1,3,5-Trimethylbenzene	ND	2.3	24	ug/kg dry	1	06/15/2015	06/15/2015 17:34	EPA 8260B	
1,2,4-Trimethylbenzene	3.9	3.4	24	ug/kg dry	1	06/15/2015	06/15/2015 17:34	EPA 8260B	J
m,p-Xylene	ND	3.0	48	ug/kg dry	1	06/15/2015	06/15/2015 17:34	EPA 8260B	
o-Xylene	3.4	2.9	24	ug/kg dry	1	06/15/2015	06/15/2015 17:34	EPA 8260B	J
Xylenes, total	6.3	5.9	72	ug/kg dry	1	06/15/2015	06/15/2015 17:34	EPA 8260B	J
<i>Surrogate: Dibromofluoromethane</i>			100 %	84.7-120		06/15/2015	06/15/2015 17:34	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			105 %	90.5-108		06/15/2015	06/15/2015 17:34	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			106 %	88.3-113		06/15/2015	06/15/2015 17:34	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch: A506017

% Solids	90.0		0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	SM 2540B	
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 20900 Swenson Drive, Suite 150
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Project: Wedron Silica - Wedron, IL
 Project Number: 20.0151178.51
 Project Manager: Bernard Fenelon

WS-SB-GP29 (6-8')

A152312-09 (Soil)

Date Sampled
 06/03/2015 11:45

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: A506046

Benzene	68	1.7	26	ug/kg dry	1	06/15/2015	06/15/2015 17:56	EPA 8260B	
Ethylbenzene	250	2.2	26	ug/kg dry	1	06/15/2015	06/15/2015 17:56	EPA 8260B	
Toluene	ND	4.2	26	ug/kg dry	1	06/15/2015	06/15/2015 17:56	EPA 8260B	
1,3,5-Trimethylbenzene	650	2.5	26	ug/kg dry	1	06/15/2015	06/15/2015 17:56	EPA 8260B	
1,2,4-Trimethylbenzene	2000	3.7	26	ug/kg dry	1	06/15/2015	06/15/2015 17:56	EPA 8260B	
m,p-Xylene	940	3.3	53	ug/kg dry	1	06/15/2015	06/15/2015 17:56	EPA 8260B	
o-Xylene	14	3.2	26	ug/kg dry	1	06/15/2015	06/15/2015 17:56	EPA 8260B	J
Xylenes, total	950	6.4	79	ug/kg dry	1	06/15/2015	06/15/2015 17:56	EPA 8260B	

Surrogate: Dibromofluoromethane

94.8 % 84.7-120

06/15/2015

06/15/2015 17:56

EPA 8260B

Surrogate: Toluene-d8

95.2 % 90.5-108

06/15/2015

06/15/2015 17:56

EPA 8260B

Surrogate: 4-Bromofluorobenzene

107 % 88.3-113

06/15/2015

06/15/2015 17:56

EPA 8260B

Classical Chemistry Parameters

Preparation Batch: A506017

% Solids	93.3		0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	SM 2540B	
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Project: Wedron Silica - Wedron, IL
 Project Number: 20.0151178.51
 Project Manager: Bernard Fenelon

**WS-SB-GP34 (2-4')
 A152312-10 (Soil)**

**Date Sampled
 06/03/2015 12:10**

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: A506046

Benzene	ND	15	240	ug/kg dry	10	06/15/2015	06/15/2015 18:18	EPA 8260B	
Ethylbenzene	3200	20	240	ug/kg dry	10	06/15/2015	06/15/2015 18:18	EPA 8260B	D
Toluene	900	38	240	ug/kg dry	10	06/15/2015	06/15/2015 18:18	EPA 8260B	HC, D
1,3,5-Trimethylbenzene	7700	23	240	ug/kg dry	10	06/15/2015	06/15/2015 18:18	EPA 8260B	D
1,2,4-Trimethylbenzene	17000	84	600	ug/kg dry	25	06/15/2015	06/17/2015 02:55	EPA 8260B	D
m,p-Xylene	20000	30	480	ug/kg dry	10	06/15/2015	06/15/2015 18:18	EPA 8260B	D
o-Xylene	4600	29	240	ug/kg dry	10	06/15/2015	06/15/2015 18:18	EPA 8260B	D
Xylenes, total	25000	59	720	ug/kg dry	10	06/15/2015	06/15/2015 18:18	EPA 8260B	D
Surrogate: Dibromofluoromethane			89.4 %	84.7-120		06/15/2015	06/15/2015 18:18	EPA 8260B	
Surrogate: Toluene-d8			98.2 %	90.5-108		06/15/2015	06/15/2015 18:18	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			112 %	88.3-113		06/15/2015	06/15/2015 18:18	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch: A506017

% Solids	89.8		0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	SM 2540B	
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GZA GeoEnvironmental, Inc
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Project: Wedron Silica - Wedron, IL
 Project Number: 20.0151178.51
 Project Manager: Bernard Fenelon

WS-SB-GP34 (4-6')

A152312-11 (Soil)

Date Sampled
06/03/2015 12:15

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: A506046

Benzene	70	1.6	26	ug/kg dry	1	06/15/2015	06/15/2015 18:39	EPA 8260B	
Ethylbenzene	250	2.2	26	ug/kg dry	1	06/15/2015	06/15/2015 18:39	EPA 8260B	
Toluene	ND	4.1	26	ug/kg dry	1	06/15/2015	06/15/2015 18:39	EPA 8260B	
1,3,5-Trimethylbenzene	640	2.5	26	ug/kg dry	1	06/15/2015	06/15/2015 18:39	EPA 8260B	
1,2,4-Trimethylbenzene	2000	3.6	26	ug/kg dry	1	06/15/2015	06/15/2015 18:39	EPA 8260B	
m,p-Xylene	940	3.2	51	ug/kg dry	1	06/15/2015	06/15/2015 18:39	EPA 8260B	
o-Xylene	15	3.1	26	ug/kg dry	1	06/15/2015	06/15/2015 18:39	EPA 8260B	J
Xylenes, total	950	6.3	77	ug/kg dry	1	06/15/2015	06/15/2015 18:39	EPA 8260B	

Surrogate: Dibromofluoromethane

103 % 84.7-120

06/15/2015

06/15/2015 18:39

EPA 8260B

Surrogate: Toluene-d8

96.2 % 90.5-108

06/15/2015

06/15/2015 18:39

EPA 8260B

Surrogate: 4-Bromofluorobenzene

106 % 88.3-113

06/15/2015

06/15/2015 18:39

EPA 8260B

Classical Chemistry Parameters

Preparation Batch: A506017

% Solids	89.8		0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	SM 2540B	
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Revised Report

GZA GeoEnvironmental, Inc
 20900 Swenson Drive, Suite 150
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Project: Wedron Silica - Wedron, IL
 Project Number: 20.0151178.51
 Project Manager: Bernard Fenelon

WS-SB-GP34 (6-8')

A152312-12 (Soil)

Date Sampled
 06/03/2015 12:20

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: A506046

Benzene	2.7	1.5	23	ug/kg dry	1	06/15/2015	06/15/2015 19:01	EPA 8260B	J
Ethylbenzene	3.7	1.9	23	ug/kg dry	1	06/15/2015	06/15/2015 19:01	EPA 8260B	J
Toluene	5.5	3.7	23	ug/kg dry	1	06/15/2015	06/15/2015 19:01	EPA 8260B	HC, J
1,3,5-Trimethylbenzene	36	2.2	23	ug/kg dry	1	06/15/2015	06/15/2015 19:01	EPA 8260B	
1,2,4-Trimethylbenzene	110	3.2	23	ug/kg dry	1	06/15/2015	06/15/2015 19:01	EPA 8260B	
m,p-Xylene	62	2.8	46	ug/kg dry	1	06/15/2015	06/15/2015 19:01	EPA 8260B	
o-Xylene	4.1	2.7	23	ug/kg dry	1	06/15/2015	06/15/2015 19:01	EPA 8260B	J
Xylenes, total	66	5.6	69	ug/kg dry	1	06/15/2015	06/15/2015 19:01	EPA 8260B	J
<i>Surrogate: Dibromofluoromethane</i>			96.4 %	84.7-120		06/15/2015	06/15/2015 19:01	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			109 %	90.5-108		06/15/2015	06/15/2015 19:01	EPA 8260B	S
<i>Surrogate: 4-Bromofluorobenzene</i>			107 %	88.3-113		06/15/2015	06/15/2015 19:01	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch: A506017

% Solids	93.1		0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	SM 2540B	
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Revised Report

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

WS-SB-GP34 (8-10')

A152312-13 (Soil)

Date Sampled
06/03/2015 12:50

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: A506046

Benzene	ND	1.7	26	ug/kg dry	1	06/15/2015	06/15/2015 19:23	EPA 8260B	
Ethylbenzene	260	2.2	26	ug/kg dry	1	06/15/2015	06/15/2015 19:23	EPA 8260B	
Toluene	170	4.2	26	ug/kg dry	1	06/15/2015	06/15/2015 19:23	EPA 8260B	
1,3,5-Trimethylbenzene	790	2.5	26	ug/kg dry	1	06/15/2015	06/15/2015 19:23	EPA 8260B	
1,2,4-Trimethylbenzene	2400	3.6	26	ug/kg dry	1	06/15/2015	06/15/2015 19:23	EPA 8260B	
m,p-Xylene	1800	3.2	52	ug/kg dry	1	06/15/2015	06/15/2015 19:23	EPA 8260B	
o-Xylene	550	3.1	26	ug/kg dry	1	06/15/2015	06/15/2015 19:23	EPA 8260B	
Xylenes, total	2300	6.4	78	ug/kg dry	1	06/15/2015	06/15/2015 19:23	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			100 %	84.7-120		06/15/2015	06/15/2015 19:23	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			95.4 %	90.5-108		06/15/2015	06/15/2015 19:23	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			112 %	88.3-113		06/15/2015	06/15/2015 19:23	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch: A506017

% Solids	88.6		0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	SM 2540B	
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Revised Report

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 Waukesha WI, 53186

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

WS-SB-GP33 (2-4')

A152312-14 (Soil)

Date Sampled
 06/03/2015 13:00

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: A506046

Benzene	ND	1.7	27	ug/kg dry	1	06/15/2015	06/17/2015 02:12	EPA 8260B	
Ethylbenzene	ND	2.3	27	ug/kg dry	1	06/15/2015	06/17/2015 02:12	EPA 8260B	
Toluene	ND	4.4	27	ug/kg dry	1	06/15/2015	06/17/2015 02:12	EPA 8260B	
1,3,5-Trimethylbenzene	ND	2.6	27	ug/kg dry	1	06/15/2015	06/17/2015 02:12	EPA 8260B	
1,2,4-Trimethylbenzene	ND	3.8	27	ug/kg dry	1	06/15/2015	06/17/2015 02:12	EPA 8260B	
m,p-Xylene	ND	3.4	55	ug/kg dry	1	06/15/2015	06/17/2015 02:12	EPA 8260B	
o-Xylene	ND	3.3	27	ug/kg dry	1	06/15/2015	06/17/2015 02:12	EPA 8260B	
Xylenes, total	ND	6.7	82	ug/kg dry	1	06/15/2015	06/17/2015 02:12	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			99.2 %	84.7-120		06/15/2015	06/17/2015 02:12	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			98.6 %	90.5-108		06/15/2015	06/17/2015 02:12	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			99.8 %	88.3-113		06/15/2015	06/17/2015 02:12	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch: A506017

% Solids	86.1		0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	SM 2540B	
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Revised Report

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

WS-SB-GP33 (4-6')

A152312-15 (Soil)

Date Sampled
06/03/2015 13:15

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: A506046

Benzene	ND	1.7	26	ug/kg dry	1	06/15/2015	06/15/2015 20:06	EPA 8260B	
Ethylbenzene	ND	2.2	26	ug/kg dry	1	06/15/2015	06/15/2015 20:06	EPA 8260B	
Toluene	ND	4.2	26	ug/kg dry	1	06/15/2015	06/15/2015 20:06	EPA 8260B	
1,3,5-Trimethylbenzene	ND	2.5	26	ug/kg dry	1	06/15/2015	06/15/2015 20:06	EPA 8260B	
1,2,4-Trimethylbenzene	7.9	3.7	26	ug/kg dry	1	06/15/2015	06/15/2015 20:06	EPA 8260B	J
m,p-Xylene	ND	3.3	53	ug/kg dry	1	06/15/2015	06/15/2015 20:06	EPA 8260B	
o-Xylene	ND	3.2	26	ug/kg dry	1	06/15/2015	06/15/2015 20:06	EPA 8260B	
Xylenes, total	ND	6.5	79	ug/kg dry	1	06/15/2015	06/15/2015 20:06	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			99.6 %	84.7-120		06/15/2015	06/15/2015 20:06	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			93.8 %	90.5-108		06/15/2015	06/15/2015 20:06	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			105 %	88.3-113		06/15/2015	06/15/2015 20:06	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch: A506017

% Solids	87.9		0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	SM 2540B	
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Revised Report

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

WS-SB-GP33 (6-8')

A152312-16 (Soil)

Date Sampled
06/03/2015 13:20

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: A506046

Benzene	ND	1.5	24	ug/kg dry	1	06/15/2015	06/15/2015 20:28	EPA 8260B	
Ethylbenzene	4.4	2.0	24	ug/kg dry	1	06/15/2015	06/15/2015 20:28	EPA 8260B	J
Toluene	7.3	3.9	24	ug/kg dry	1	06/15/2015	06/15/2015 20:28	EPA 8260B	HC, J
1,3,5-Trimethylbenzene	25	2.3	24	ug/kg dry	1	06/15/2015	06/15/2015 20:28	EPA 8260B	
1,2,4-Trimethylbenzene	62	3.4	24	ug/kg dry	1	06/15/2015	06/15/2015 20:28	EPA 8260B	
m,p-Xylene	7.7	3.0	48	ug/kg dry	1	06/15/2015	06/15/2015 20:28	EPA 8260B	J
o-Xylene	3.9	2.9	24	ug/kg dry	1	06/15/2015	06/15/2015 20:28	EPA 8260B	J
Xylenes, total	12	5.9	73	ug/kg dry	1	06/15/2015	06/15/2015 20:28	EPA 8260B	J
Surrogate: Dibromofluoromethane			92.0 %	84.7-120		06/15/2015	06/15/2015 20:28	EPA 8260B	
Surrogate: Toluene-d8			117 %	90.5-108		06/15/2015	06/15/2015 20:28	EPA 8260B	S
Surrogate: 4-Bromofluorobenzene			111 %	88.3-113		06/15/2015	06/15/2015 20:28	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch: A506017

% Solids	90.9		0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	SM 2540B	
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2525 Advance Road
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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

WS-SB-GP33 (13.3-15')

Date Sampled
 06/03/2015 13:40

A152312-17 (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: A506046

Benzene	ND	1.5	23	ug/kg dry	1	06/15/2015	06/15/2015 20:50	EPA 8260B	
Ethylbenzene	7.4	2.0	23	ug/kg dry	1	06/15/2015	06/15/2015 20:50	EPA 8260B	J
Toluene	ND	3.7	23	ug/kg dry	1	06/15/2015	06/15/2015 20:50	EPA 8260B	
1,3,5-Trimethylbenzene	17	2.2	23	ug/kg dry	1	06/15/2015	06/15/2015 20:50	EPA 8260B	J
1,2,4-Trimethylbenzene	110	3.3	23	ug/kg dry	1	06/15/2015	06/15/2015 20:50	EPA 8260B	
m,p-Xylene	54	2.9	46	ug/kg dry	1	06/15/2015	06/15/2015 20:50	EPA 8260B	
o-Xylene	ND	2.8	23	ug/kg dry	1	06/15/2015	06/15/2015 20:50	EPA 8260B	
Xylenes, total	54	5.7	70	ug/kg dry	1	06/15/2015	06/15/2015 20:50	EPA 8260B	J

Surrogate: Dibromofluoromethane

102 % 84.7-120

06/15/2015

06/15/2015 20:50

EPA 8260B

Surrogate: Toluene-d8

95.4 % 90.5-108

06/15/2015

06/15/2015 20:50

EPA 8260B

Surrogate: 4-Bromofluorobenzene

113 % 88.3-113

06/15/2015

06/15/2015 20:50

EPA 8260B

Classical Chemistry Parameters

Preparation Batch: A506017

% Solids	90.3		0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	SM 2540B	
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Revised Report

GZA GeoEnvironmental, Inc
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 Waukesha WI, 53186

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

WS-SB-GP33 (18.3-20')

Date Sampled
 06/03/2015 13:45

A152312-18 (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: A506046

Benzene	ND	1.8	28	ug/kg dry	1	06/15/2015	06/15/2015 21:12	EPA 8260B	
Ethylbenzene	1100	2.3	28	ug/kg dry	1	06/15/2015	06/15/2015 21:12	EPA 8260B	
Toluene	92	4.5	28	ug/kg dry	1	06/15/2015	06/15/2015 21:12	EPA 8260B	HC
1,3,5-Trimethylbenzene	18000	270	2800	ug/kg dry	100	06/15/2015	06/18/2015 06:46	EPA 8260B	D
1,2,4-Trimethylbenzene	50000	390	2800	ug/kg dry	100	06/15/2015	06/18/2015 06:46	EPA 8260B	D
m,p-Xylene	1800	3.5	56	ug/kg dry	1	06/15/2015	06/15/2015 21:12	EPA 8260B	
o-Xylene	200	3.3	28	ug/kg dry	1	06/15/2015	06/15/2015 21:12	EPA 8260B	
Xylenes, total	2000	6.8	83	ug/kg dry	1	06/15/2015	06/15/2015 21:12	EPA 8260B	
Surrogate: Dibromofluoromethane			94.0 %	84.7-120		06/15/2015	06/15/2015 21:12	EPA 8260B	
Surrogate: Toluene-d8			108 %	90.5-108		06/15/2015	06/15/2015 21:12	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			182 %	88.3-113		06/15/2015	06/15/2015 21:12	EPA 8260B	S

Classical Chemistry Parameters

Preparation Batch: A506018

% Solids	93.9		0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	SM 2540B	
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Project: Wedron Silica - Wedron, IL
 Project Number: 20.0151178.51
 Project Manager: Bernard Fenelon

**WS-SB-GP33 (21.7-23.3')
 A152312-19 (Soil)**

**Date Sampled
 06/03/2015 13:50**

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: A506057

Benzene	ND	2.0	31	ug/kg dry	1	06/16/2015	06/17/2015 00:02	EPA 8260B	
Ethylbenzene	20	2.6	31	ug/kg dry	1	06/16/2015	06/17/2015 00:02	EPA 8260B	J
Toluene	ND	4.9	31	ug/kg dry	1	06/16/2015	06/17/2015 00:02	EPA 8260B	
1,3,5-Trimethylbenzene	170	3.0	31	ug/kg dry	1	06/16/2015	06/17/2015 00:02	EPA 8260B	
1,2,4-Trimethylbenzene	600	4.3	31	ug/kg dry	1	06/16/2015	06/17/2015 00:02	EPA 8260B	
m,p-Xylene	110	3.8	62	ug/kg dry	1	06/16/2015	06/17/2015 00:02	EPA 8260B	
o-Xylene	12	3.7	31	ug/kg dry	1	06/16/2015	06/17/2015 00:02	EPA 8260B	J
Xylenes, total	120	7.5	93	ug/kg dry	1	06/16/2015	06/17/2015 00:02	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			104 %	84.7-120		06/16/2015	06/17/2015 00:02	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			99.8 %	90.5-108		06/16/2015	06/17/2015 00:02	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			99.0 %	88.3-113		06/16/2015	06/17/2015 00:02	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch: A506018

% Solids	96.3		0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	SM 2540B	
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Project: Wedron Silica - Wedron, IL
 Project Number: 20.0151178.51
 Project Manager: Bernard Fenelon

**WS-SB-GP33 (26.7-28.3')
 A152312-20 (Soil)**

Date Sampled
 06/03/2015 14:10

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: A506057

Benzene	23	1.8	28	ug/kg dry	1	06/16/2015	06/17/2015 00:45	EPA 8260B	J
Ethylbenzene	94	2.4	28	ug/kg dry	1	06/16/2015	06/17/2015 00:45	EPA 8260B	
Toluene	67	4.5	28	ug/kg dry	1	06/16/2015	06/17/2015 00:45	EPA 8260B	
1,3,5-Trimethylbenzene	1400	2.7	28	ug/kg dry	1	06/16/2015	06/17/2015 00:45	EPA 8260B	
1,2,4-Trimethylbenzene	4200	40	280	ug/kg dry	10	06/16/2015	06/18/2015 04:34	EPA 8260B	D
m,p-Xylene	1100	3.5	57	ug/kg dry	1	06/16/2015	06/17/2015 00:45	EPA 8260B	
o-Xylene	72	3.4	28	ug/kg dry	1	06/16/2015	06/17/2015 00:45	EPA 8260B	
Xylenes, total	1200	6.9	85	ug/kg dry	1	06/16/2015	06/17/2015 00:45	EPA 8260B	

Surrogate: Dibromofluoromethane

100 % 84.7-120

06/16/2015

06/17/2015 00:45

EPA 8260B

Surrogate: Toluene-d8

101 % 90.5-108

06/16/2015

06/17/2015 00:45

EPA 8260B

Surrogate: 4-Bromofluorobenzene

101 % 88.3-113

06/16/2015

06/17/2015 00:45

EPA 8260B

Classical Chemistry Parameters

Preparation Batch: A506018

% Solids	93.9		0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	SM 2540B	
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GZA GeoEnvironmental, Inc
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Project: Wedron Silica - Wedron, IL
 Project Number: 20.0151178.51
 Project Manager: Bernard Fenelon

WS-SB-GP33 (30-31.7')

A152312-21 (Soil)

Date Sampled
06/03/2015 14:20

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: A506057

Benzene	ND	88	1400	ug/kg dry	50	06/16/2015	06/17/2015 18:21	EPA 8260B	
Ethylbenzene	2500	120	1400	ug/kg dry	50	06/16/2015	06/17/2015 18:21	EPA 8260B	D
Toluene	ND	220	1400	ug/kg dry	50	06/16/2015	06/17/2015 18:21	EPA 8260B	
1,3,5-Trimethylbenzene	16000	130	1400	ug/kg dry	50	06/16/2015	06/17/2015 18:21	EPA 8260B	D
1,2,4-Trimethylbenzene	51000	190	1400	ug/kg dry	50	06/16/2015	06/17/2015 18:21	EPA 8260B	D
m,p-Xylene	14000	170	2700	ug/kg dry	50	06/16/2015	06/17/2015 18:21	EPA 8260B	D
o-Xylene	580	160	1400	ug/kg dry	50	06/16/2015	06/17/2015 18:21	EPA 8260B	J, D
Xylenes, total	14000	340	4100	ug/kg dry	50	06/16/2015	06/17/2015 18:21	EPA 8260B	D

Surrogate: Dibromofluoromethane

107 % 84.7-120

06/16/2015

06/17/2015 18:21

EPA 8260B

Surrogate: Toluene-d8

98.8 % 90.5-108

06/16/2015

06/17/2015 18:21

EPA 8260B

Surrogate: 4-Bromofluorobenzene

99.8 % 88.3-113

06/16/2015

06/17/2015 18:21

EPA 8260B

Classical Chemistry Parameters

Preparation Batch: A506018

% Solids	87.5	0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	SM 2540B		
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Project: Wedron Silica - Wedron, IL
 Project Number: 20.0151178.51
 Project Manager: Bernard Fenelon

WS-SB-GP32 (2-4')

A152312-22 (Soil)

Date Sampled
06/03/2015 14:44

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: A506057

Benzene	ND	1.9	29	ug/kg dry	1	06/16/2015	06/16/2015 21:08	EPA 8260B	
Ethylbenzene	ND	2.5	29	ug/kg dry	1	06/16/2015	06/16/2015 21:08	EPA 8260B	
Toluene	ND	4.7	29	ug/kg dry	1	06/16/2015	06/16/2015 21:08	EPA 8260B	
1,3,5-Trimethylbenzene	ND	2.8	29	ug/kg dry	1	06/16/2015	06/16/2015 21:08	EPA 8260B	
1,2,4-Trimethylbenzene	ND	4.1	29	ug/kg dry	1	06/16/2015	06/16/2015 21:08	EPA 8260B	
m,p-Xylene	ND	3.7	59	ug/kg dry	1	06/16/2015	06/16/2015 21:08	EPA 8260B	
o-Xylene	ND	3.5	29	ug/kg dry	1	06/16/2015	06/16/2015 21:08	EPA 8260B	
Xylenes, total	ND	7.2	88	ug/kg dry	1	06/16/2015	06/16/2015 21:08	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			99.2 %	84.7-120		06/16/2015	06/16/2015 21:08	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			98.2 %	90.5-108		06/16/2015	06/16/2015 21:08	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			95.2 %	88.3-113		06/16/2015	06/16/2015 21:08	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch: A506018

% Solids	98.1		0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	SM 2540B	
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 Waukesha WI, 53186

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

WS-SB-GP32 (4-6')

A152312-23 (Soil)

Date Sampled
06/03/2015 15:00

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: A506057

Benzene	ND	1.9	30	ug/kg dry	1	06/16/2015	06/16/2015 21:52	EPA 8260B	
Ethylbenzene	ND	2.5	30	ug/kg dry	1	06/16/2015	06/16/2015 21:52	EPA 8260B	
Toluene	ND	4.7	30	ug/kg dry	1	06/16/2015	06/16/2015 21:52	EPA 8260B	
1,3,5-Trimethylbenzene	ND	2.8	30	ug/kg dry	1	06/16/2015	06/16/2015 21:52	EPA 8260B	
1,2,4-Trimethylbenzene	8.3	4.1	30	ug/kg dry	1	06/16/2015	06/16/2015 21:52	EPA 8260B	J
m,p-Xylene	ND	3.7	59	ug/kg dry	1	06/16/2015	06/16/2015 21:52	EPA 8260B	
o-Xylene	ND	3.5	30	ug/kg dry	1	06/16/2015	06/16/2015 21:52	EPA 8260B	
Xylenes, total	ND	7.2	89	ug/kg dry	1	06/16/2015	06/16/2015 21:52	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			97.6 %	84.7-120		06/16/2015	06/16/2015 21:52	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			98.4 %	90.5-108		06/16/2015	06/16/2015 21:52	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			96.2 %	88.3-113		06/16/2015	06/16/2015 21:52	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch: A506018

% Solids	96.1		0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	SM 2540B	
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Revised Report

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

WS-SB-GP32 (6-8')

A152312-24 (Soil)

Date Sampled
06/03/2015 15:05

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: A506057

Benzene	ND	1.7	26	ug/kg dry	1	06/16/2015	06/16/2015 22:35	EPA 8260B	
Ethylbenzene	ND	2.2	26	ug/kg dry	1	06/16/2015	06/16/2015 22:35	EPA 8260B	
Toluene	ND	4.1	26	ug/kg dry	1	06/16/2015	06/16/2015 22:35	EPA 8260B	
1,3,5-Trimethylbenzene	2.6	2.5	26	ug/kg dry	1	06/16/2015	06/16/2015 22:35	EPA 8260B	J
1,2,4-Trimethylbenzene	15	3.6	26	ug/kg dry	1	06/16/2015	06/16/2015 22:35	EPA 8260B	J
m,p-Xylene	9.8	3.2	52	ug/kg dry	1	06/16/2015	06/16/2015 22:35	EPA 8260B	J
o-Xylene	5.2	3.1	26	ug/kg dry	1	06/16/2015	06/16/2015 22:35	EPA 8260B	J
Xylenes, total	15	6.3	77	ug/kg dry	1	06/16/2015	06/16/2015 22:35	EPA 8260B	J

Surrogate: Dibromofluoromethane

98.2 % 84.7-120

06/16/2015 06/16/2015 22:35 EPA 8260B

Surrogate: Toluene-d8

96.2 % 90.5-108

06/16/2015 06/16/2015 22:35 EPA 8260B

Surrogate: 4-Bromofluorobenzene

97.2 % 88.3-113

06/16/2015 06/16/2015 22:35 EPA 8260B

Classical Chemistry Parameters

Preparation Batch: A506018

% Solids	83.9		0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	SM 2540B	
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Revised Report

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

WS-SB-GP32 (13.3-15')

Date Sampled
 06/03/2015 15:10

A152312-25 (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: A506057

Benzene	ND	3.6	56	ug/kg dry	2	06/16/2015	06/17/2015 03:39	EPA 8260B	
Ethylbenzene	ND	4.7	56	ug/kg dry	2	06/16/2015	06/17/2015 03:39	EPA 8260B	
Toluene	ND	8.9	56	ug/kg dry	2	06/16/2015	06/17/2015 03:39	EPA 8260B	
1,3,5-Trimethylbenzene	6.7	5.3	56	ug/kg dry	2	06/16/2015	06/17/2015 03:39	EPA 8260B	J, D
1,2,4-Trimethylbenzene	36	7.8	56	ug/kg dry	2	06/16/2015	06/17/2015 03:39	EPA 8260B	J, D
m,p-Xylene	ND	6.9	110	ug/kg dry	2	06/16/2015	06/17/2015 03:39	EPA 8260B	
o-Xylene	ND	6.7	56	ug/kg dry	2	06/16/2015	06/17/2015 03:39	EPA 8260B	
Xylenes, total	ND	14	170	ug/kg dry	2	06/16/2015	06/17/2015 03:39	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			95.4 %	84.7-120		06/16/2015	06/17/2015 03:39	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			99.2 %	90.5-108		06/16/2015	06/17/2015 03:39	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			222 %	88.3-113		06/16/2015	06/17/2015 03:39	EPA 8260B	S

Classical Chemistry Parameters

Preparation Batch: A506018

% Solids	83.6		0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	SM 2540B	
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Revised Report

GZA GeoEnvironmental, Inc
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 Waukesha WI, 53186

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

**WS-SB-GP32 (15-16.7')
 A152312-26 (Soil)**

**Date Sampled
 06/03/2015 15:35**

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: A506057

Benzene	ND	3.4	54	ug/kg dry	2	06/16/2015	06/17/2015 14:41	EPA 8260B	
Ethylbenzene	ND	4.5	54	ug/kg dry	2	06/16/2015	06/17/2015 14:41	EPA 8260B	
Toluene	ND	8.6	54	ug/kg dry	2	06/16/2015	06/17/2015 14:41	EPA 8260B	
1,3,5-Trimethylbenzene	100	5.1	54	ug/kg dry	2	06/16/2015	06/17/2015 14:41	EPA 8260B	D
1,2,4-Trimethylbenzene	2600	7.5	54	ug/kg dry	2	06/16/2015	06/17/2015 14:41	EPA 8260B	D
m,p-Xylene	ND	6.6	110	ug/kg dry	2	06/16/2015	06/17/2015 14:41	EPA 8260B	
o-Xylene	ND	6.4	54	ug/kg dry	2	06/16/2015	06/17/2015 14:41	EPA 8260B	
Xylenes, total	ND	13	160	ug/kg dry	2	06/16/2015	06/17/2015 14:41	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			95.0 %	84.7-120		06/16/2015	06/17/2015 14:41	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			104 %	90.5-108		06/16/2015	06/17/2015 14:41	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			315 %	88.3-113		06/16/2015	06/17/2015 14:41	EPA 8260B	S

Classical Chemistry Parameters

Preparation Batch: A506018

% Solids	87.3		0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	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

WS-SB-GP32 (21.7-23.3')

A152312-27 (Soil)

Date Sampled
06/03/2015 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: A506057

Benzene	ND	36	560	ug/kg dry	20	06/16/2015	06/17/2015 13:57	EPA 8260B	
Ethylbenzene	ND	47	560	ug/kg dry	20	06/16/2015	06/17/2015 13:57	EPA 8260B	
Toluene	ND	89	560	ug/kg dry	20	06/16/2015	06/17/2015 13:57	EPA 8260B	
1,3,5-Trimethylbenzene	8100	53	560	ug/kg dry	20	06/16/2015	06/17/2015 13:57	EPA 8260B	D
1,2,4-Trimethylbenzene	26000	78	560	ug/kg dry	20	06/16/2015	06/17/2015 13:57	EPA 8260B	D
m,p-Xylene	1200	69	1100	ug/kg dry	20	06/16/2015	06/17/2015 13:57	EPA 8260B	D
o-Xylene	ND	67	560	ug/kg dry	20	06/16/2015	06/17/2015 13:57	EPA 8260B	
Xylenes, total	1200	140	1700	ug/kg dry	20	06/16/2015	06/17/2015 13:57	EPA 8260B	J, D
<i>Surrogate: Dibromofluoromethane</i>			97.2 %	84.7-120		06/16/2015	06/17/2015 13:57	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			98.2 %	90.5-108		06/16/2015	06/17/2015 13:57	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			100 %	88.3-113		06/16/2015	06/17/2015 13:57	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch: A506018

% Solids	94.9		0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	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

**WS-SB-GP32 (26.7-28.3')
 A152312-28 (Soil)**

**Date Sampled
 06/03/2015 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: A506057

Benzene	81	1.9	29	ug/kg dry	1	06/16/2015	06/17/2015 13:13	EPA 8260B	
Ethylbenzene	150	2.5	29	ug/kg dry	1	06/16/2015	06/17/2015 13:13	EPA 8260B	
Toluene	360	4.7	29	ug/kg dry	1	06/16/2015	06/17/2015 13:13	EPA 8260B	
1,3,5-Trimethylbenzene	280	2.8	29	ug/kg dry	1	06/16/2015	06/17/2015 13:13	EPA 8260B	
1,2,4-Trimethylbenzene	950	4.1	29	ug/kg dry	1	06/16/2015	06/17/2015 13:13	EPA 8260B	
m,p-Xylene	690	3.6	59	ug/kg dry	1	06/16/2015	06/17/2015 13:13	EPA 8260B	
o-Xylene	69	3.5	29	ug/kg dry	1	06/16/2015	06/17/2015 13:13	EPA 8260B	
Xylenes, total	760	7.1	88	ug/kg dry	1	06/16/2015	06/17/2015 13:13	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			103 %	84.7-120		06/16/2015	06/17/2015 13:13	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			98.2 %	90.5-108		06/16/2015	06/17/2015 13:13	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			99.2 %	88.3-113		06/16/2015	06/17/2015 13:13	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch: A506018

% Solids	95.9		0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	SM 2540B	
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Project: Wedron Silica - Wedron, IL
 Project Number: 20.0151178.51
 Project Manager: Bernard Fenelon

WS-SB-GP32 (30-31.7')

A152312-29 (Soil)

Date Sampled
06/03/2015 15:55

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: A506057

Benzene	11	1.8	28	ug/kg dry	1	06/16/2015	06/17/2015 12:30	EPA 8260B	J
Ethylbenzene	82	2.3	28	ug/kg dry	1	06/16/2015	06/17/2015 12:30	EPA 8260B	
Toluene	41	4.5	28	ug/kg dry	1	06/16/2015	06/17/2015 12:30	EPA 8260B	
1,3,5-Trimethylbenzene	480	2.7	28	ug/kg dry	1	06/16/2015	06/17/2015 12:30	EPA 8260B	
1,2,4-Trimethylbenzene	1400	3.9	28	ug/kg dry	1	06/16/2015	06/17/2015 12:30	EPA 8260B	
m,p-Xylene	380	3.5	56	ug/kg dry	1	06/16/2015	06/17/2015 12:30	EPA 8260B	
o-Xylene	32	3.4	28	ug/kg dry	1	06/16/2015	06/17/2015 12:30	EPA 8260B	
Xylenes, total	410	6.8	84	ug/kg dry	1	06/16/2015	06/17/2015 12:30	EPA 8260B	

Surrogate: Dibromofluoromethane

103 % 84.7-120

06/16/2015

06/17/2015 12:30

EPA 8260B

Surrogate: Toluene-d8

100 % 90.5-108

06/16/2015

06/17/2015 12:30

EPA 8260B

Surrogate: 4-Bromofluorobenzene

99.4 % 88.3-113

06/16/2015

06/17/2015 12:30

EPA 8260B

Classical Chemistry Parameters

Preparation Batch: A506018

% Solids	89.6	0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	SM 2540B		
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Project: Wedron Silica - Wedron, IL
 Project Number: 20.0151178.51
 Project Manager: Bernard Fenelon

WS-SB-GP31 (2-4')

A152312-30 (Soil)

Date Sampled
06/03/2015 16:10

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: A506057

Benzene	ND	1.5	24	ug/kg dry	1	06/16/2015	06/17/2015 16:09	EPA 8260B	
Ethylbenzene	ND	2.0	24	ug/kg dry	1	06/16/2015	06/17/2015 16:09	EPA 8260B	
Toluene	ND	3.9	24	ug/kg dry	1	06/16/2015	06/17/2015 16:09	EPA 8260B	
1,3,5-Trimethylbenzene	ND	2.3	24	ug/kg dry	1	06/16/2015	06/17/2015 16:09	EPA 8260B	
1,2,4-Trimethylbenzene	ND	3.4	24	ug/kg dry	1	06/16/2015	06/17/2015 16:09	EPA 8260B	
m,p-Xylene	ND	3.0	48	ug/kg dry	1	06/16/2015	06/17/2015 16:09	EPA 8260B	
o-Xylene	ND	2.9	24	ug/kg dry	1	06/16/2015	06/17/2015 16:09	EPA 8260B	
Xylenes, total	ND	5.9	72	ug/kg dry	1	06/16/2015	06/17/2015 16:09	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			100 %	84.7-120		06/16/2015	06/17/2015 16:09	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			97.2 %	90.5-108		06/16/2015	06/17/2015 16:09	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			98.2 %	88.3-113		06/16/2015	06/17/2015 16:09	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch: A506018

% Solids	90.6		0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	SM 2540B	
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 Waukesha WI, 53186

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

WS-SB-GP31 (4-6')

A152312-31 (Soil)

Date Sampled
06/03/2015 16:15

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: A506057

Benzene	ND	1.8	28	ug/kg dry	1	06/16/2015	06/17/2015 16:53	EPA 8260B	
Ethylbenzene	ND	2.3	28	ug/kg dry	1	06/16/2015	06/17/2015 16:53	EPA 8260B	
Toluene	ND	4.4	28	ug/kg dry	1	06/16/2015	06/17/2015 16:53	EPA 8260B	
1,3,5-Trimethylbenzene	ND	2.7	28	ug/kg dry	1	06/16/2015	06/17/2015 16:53	EPA 8260B	
1,2,4-Trimethylbenzene	ND	3.9	28	ug/kg dry	1	06/16/2015	06/17/2015 16:53	EPA 8260B	
m,p-Xylene	ND	3.4	55	ug/kg dry	1	06/16/2015	06/17/2015 16:53	EPA 8260B	
o-Xylene	ND	3.3	28	ug/kg dry	1	06/16/2015	06/17/2015 16:53	EPA 8260B	
Xylenes, total	ND	6.8	83	ug/kg dry	1	06/16/2015	06/17/2015 16:53	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			104 %	84.7-120		06/16/2015	06/17/2015 16:53	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			98.2 %	90.5-108		06/16/2015	06/17/2015 16:53	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			103 %	88.3-113		06/16/2015	06/17/2015 16:53	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch: A506018

% Solids	81.2		0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	SM 2540B	
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Project: Wedron Silica - Wedron, IL
 Project Number: 20.0151178.51
 Project Manager: Bernard Fenelon

WS-SB-GP31 (6-8')

A152312-32 (Soil)

Date Sampled
06/03/2015 16:20

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: A506057

Benzene	ND	1.7	26	ug/kg dry	1	06/16/2015	06/17/2015 01:29	EPA 8260B	
Ethylbenzene	ND	2.2	26	ug/kg dry	1	06/16/2015	06/17/2015 01:29	EPA 8260B	
Toluene	ND	4.1	26	ug/kg dry	1	06/16/2015	06/17/2015 01:29	EPA 8260B	
1,3,5-Trimethylbenzene	ND	2.5	26	ug/kg dry	1	06/16/2015	06/17/2015 01:29	EPA 8260B	
1,2,4-Trimethylbenzene	12	3.6	26	ug/kg dry	1	06/16/2015	06/17/2015 01:29	EPA 8260B	J
m,p-Xylene	ND	3.2	52	ug/kg dry	1	06/16/2015	06/17/2015 01:29	EPA 8260B	
o-Xylene	ND	3.1	26	ug/kg dry	1	06/16/2015	06/17/2015 01:29	EPA 8260B	
Xylenes, total	ND	6.3	78	ug/kg dry	1	06/16/2015	06/17/2015 01:29	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			102 %	84.7-120		06/16/2015	06/17/2015 01:29	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			96.8 %	90.5-108		06/16/2015	06/17/2015 01:29	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			98.2 %	88.3-113		06/16/2015	06/17/2015 01:29	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch: A506018

% Solids	91.3		0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	SM 2540B	
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Project: Wedron Silica - Wedron, IL
 Project Number: 20.0151178.51
 Project Manager: Bernard Fenelon

WS-SB-GP30 (2-4')

A152312-33 (Soil)

Date Sampled
06/03/2015 16:40

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: A506057

Benzene	ND	1.7	27	ug/kg dry	1	06/16/2015	06/17/2015 17:37	EPA 8260B	
Ethylbenzene	ND	2.3	27	ug/kg dry	1	06/16/2015	06/17/2015 17:37	EPA 8260B	
Toluene	ND	4.3	27	ug/kg dry	1	06/16/2015	06/17/2015 17:37	EPA 8260B	
1,3,5-Trimethylbenzene	ND	2.6	27	ug/kg dry	1	06/16/2015	06/17/2015 17:37	EPA 8260B	
1,2,4-Trimethylbenzene	ND	3.8	27	ug/kg dry	1	06/16/2015	06/17/2015 17:37	EPA 8260B	
m,p-Xylene	ND	3.3	54	ug/kg dry	1	06/16/2015	06/17/2015 17:37	EPA 8260B	
o-Xylene	ND	3.2	27	ug/kg dry	1	06/16/2015	06/17/2015 17:37	EPA 8260B	
Xylenes, total	ND	6.5	80	ug/kg dry	1	06/16/2015	06/17/2015 17:37	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			103 %	84.7-120		06/16/2015	06/17/2015 17:37	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			98.2 %	90.5-108		06/16/2015	06/17/2015 17:37	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			100 %	88.3-113		06/16/2015	06/17/2015 17:37	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch: A506018

% Solids	89.8		0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	SM 2540B	
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Revised Report

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

WS-SB-GP30 (4-6')

A152312-34 (Soil)

Date Sampled
06/03/2015 16:45

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: A506057

Benzene	ND	1.7	27	ug/kg dry	1	06/16/2015	06/17/2015 19:49	EPA 8260B	
Ethylbenzene	ND	2.3	27	ug/kg dry	1	06/16/2015	06/17/2015 19:49	EPA 8260B	
Toluene	ND	4.3	27	ug/kg dry	1	06/16/2015	06/17/2015 19:49	EPA 8260B	
1,3,5-Trimethylbenzene	ND	2.6	27	ug/kg dry	1	06/16/2015	06/17/2015 19:49	EPA 8260B	
1,2,4-Trimethylbenzene	ND	3.8	27	ug/kg dry	1	06/16/2015	06/17/2015 19:49	EPA 8260B	
m,p-Xylene	ND	3.3	54	ug/kg dry	1	06/16/2015	06/17/2015 19:49	EPA 8260B	
o-Xylene	ND	3.2	27	ug/kg dry	1	06/16/2015	06/17/2015 19:49	EPA 8260B	
Xylenes, total	ND	6.6	81	ug/kg dry	1	06/16/2015	06/17/2015 19:49	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			108 %	84.7-120		06/16/2015	06/17/2015 19:49	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			98.2 %	90.5-108		06/16/2015	06/17/2015 19:49	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			97.8 %	88.3-113		06/16/2015	06/17/2015 19:49	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch: A506018

% Solids	86.1		0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	SM 2540B	
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GZA GeoEnvironmental, Inc
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Project: Wedron Silica - Wedron, IL
 Project Number: 20.0151178.51
 Project Manager: Bernard Fenelon

WS-SB-GP30 (6-8')

A152312-35 (Soil)

Date Sampled
 06/03/2015 16:50

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: A506057

Benzene	20	2.0	31	ug/kg dry	1	06/16/2015	06/17/2015 20:33	EPA 8260B	J
Ethylbenzene	ND	2.6	31	ug/kg dry	1	06/16/2015	06/17/2015 20:33	EPA 8260B	
Toluene	ND	4.9	31	ug/kg dry	1	06/16/2015	06/17/2015 20:33	EPA 8260B	
1,3,5-Trimethylbenzene	ND	3.0	31	ug/kg dry	1	06/16/2015	06/17/2015 20:33	EPA 8260B	
1,2,4-Trimethylbenzene	ND	4.3	31	ug/kg dry	1	06/16/2015	06/17/2015 20:33	EPA 8260B	
m,p-Xylene	ND	3.8	62	ug/kg dry	1	06/16/2015	06/17/2015 20:33	EPA 8260B	
o-Xylene	ND	3.7	31	ug/kg dry	1	06/16/2015	06/17/2015 20:33	EPA 8260B	
Xylenes, total	ND	7.5	93	ug/kg dry	1	06/16/2015	06/17/2015 20:33	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			103 %	84.7-120		06/16/2015	06/17/2015 20:33	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			97.8 %	90.5-108		06/16/2015	06/17/2015 20:33	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			98.2 %	88.3-113		06/16/2015	06/17/2015 20:33	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch: A506018

% Solids	90.9		0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	SM 2540B	
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Revised Report

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

**WS-SB-GP32 (8-10')
 A152312-36 (Soil)**

**Date Sampled
 06/03/2015 17:00**

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: A506057

Benzene	ND	1.4	22	ug/kg dry	1	06/16/2015	06/17/2015 21:17	EPA 8260B	
Ethylbenzene	ND	1.8	22	ug/kg dry	1	06/16/2015	06/17/2015 21:17	EPA 8260B	
Toluene	ND	3.5	22	ug/kg dry	1	06/16/2015	06/17/2015 21:17	EPA 8260B	
1,3,5-Trimethylbenzene	7.0	2.1	22	ug/kg dry	1	06/16/2015	06/17/2015 21:17	EPA 8260B	J
1,2,4-Trimethylbenzene	140	3.0	22	ug/kg dry	1	06/16/2015	06/17/2015 21:17	EPA 8260B	
m,p-Xylene	ND	2.7	44	ug/kg dry	1	06/16/2015	06/17/2015 21:17	EPA 8260B	
o-Xylene	ND	2.6	22	ug/kg dry	1	06/16/2015	06/17/2015 21:17	EPA 8260B	
Xylenes, total	ND	5.3	65	ug/kg dry	1	06/16/2015	06/17/2015 21:17	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			99.2 %	84.7-120		06/16/2015	06/17/2015 21:17	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			98.2 %	90.5-108		06/16/2015	06/17/2015 21:17	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			98.4 %	88.3-113		06/16/2015	06/17/2015 21:17	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch: A506018

% Solids	91.6		0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	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

Equipment Blank
A152312-37 (Water)

Date Sampled
06/03/2015 17:30

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: A506068

Benzene	ND	0.089	0.50	ug/L	1	06/17/2015	06/17/2015 23:06	EPA 8260B	E1
Ethylbenzene	ND	0.054	0.50	ug/L	1	06/17/2015	06/17/2015 23:06	EPA 8260B	
Toluene	0.060	0.053	0.50	ug/L	1	06/17/2015	06/17/2015 23:06	EPA 8260B	B, E1, J
1,3,5-Trimethylbenzene	ND	0.075	0.50	ug/L	1	06/17/2015	06/17/2015 23:06	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.060	0.50	ug/L	1	06/17/2015	06/17/2015 23:06	EPA 8260B	
m,p-Xylene	ND	0.057	1.0	ug/L	1	06/17/2015	06/17/2015 23:06	EPA 8260B	
o-Xylene	ND	0.058	0.50	ug/L	1	06/17/2015	06/17/2015 23:06	EPA 8260B	
Xylenes, total	ND	0.12	1.5	ug/L	1	06/17/2015	06/17/2015 23:06	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			99.6 %	81.3-129		06/17/2015	06/17/2015 23:06	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			108 %	87.3-110		06/17/2015	06/17/2015 23:06	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			104 %	86.7-110		06/17/2015	06/17/2015 23:06	EPA 8260B	



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Revised Report

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 Waukesha WI, 53186

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

Trip Blank
A152312-38 (Water)

Date Sampled
06/03/2015 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: A506068

Benzene	ND	0.089	0.50	ug/L	1	06/17/2015	06/17/2015 23:50	EPA 8260B	E1
Ethylbenzene	ND	0.054	0.50	ug/L	1	06/17/2015	06/17/2015 23:50	EPA 8260B	
Toluene	0.15	0.053	0.50	ug/L	1	06/17/2015	06/17/2015 23:50	EPA 8260B	B, E1, J
1,3,5-Trimethylbenzene	ND	0.075	0.50	ug/L	1	06/17/2015	06/17/2015 23:50	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.060	0.50	ug/L	1	06/17/2015	06/17/2015 23:50	EPA 8260B	
m,p-Xylene	ND	0.057	1.0	ug/L	1	06/17/2015	06/17/2015 23:50	EPA 8260B	
o-Xylene	ND	0.058	0.50	ug/L	1	06/17/2015	06/17/2015 23:50	EPA 8260B	
Xylenes, total	ND	0.12	1.5	ug/L	1	06/17/2015	06/17/2015 23:50	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			100 %	81.3-129		06/17/2015	06/17/2015 23:50	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			111 %	87.3-110		06/17/2015	06/17/2015 23:50	EPA 8260B	S
<i>Surrogate: 4-Bromofluorobenzene</i>			102 %	86.7-110		06/17/2015	06/17/2015 23:50	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

Methanol Blank

Date Sampled

A152312-39 (Soil)

06/03/2015 16:20

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: A506057

Benzene	ND	1.6	25	ug/kg wet	1	06/16/2015	06/18/2015 05:18	EPA 8260B	
Ethylbenzene	ND	2.1	25	ug/kg wet	1	06/16/2015	06/18/2015 05:18	EPA 8260B	
Toluene	ND	4.0	25	ug/kg wet	1	06/16/2015	06/18/2015 05:18	EPA 8260B	
1,3,5-Trimethylbenzene	ND	2.4	25	ug/kg wet	1	06/16/2015	06/18/2015 05:18	EPA 8260B	
1,2,4-Trimethylbenzene	ND	3.5	25	ug/kg wet	1	06/16/2015	06/18/2015 05:18	EPA 8260B	
m,p-Xylene	ND	3.1	50	ug/kg wet	1	06/16/2015	06/18/2015 05:18	EPA 8260B	
o-Xylene	ND	3.0	25	ug/kg wet	1	06/16/2015	06/18/2015 05:18	EPA 8260B	
Xylenes, total	ND	6.1	75	ug/kg wet	1	06/16/2015	06/18/2015 05:18	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			101 %	84.7-120		06/16/2015	06/18/2015 05:18	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			97.8 %	90.5-108		06/16/2015	06/18/2015 05:18	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			96.0 %	88.3-113		06/16/2015	06/18/2015 05:18	EPA 8260B	



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

Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control

ECCS

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch A506046 - EPA 5030B

Blank (A506046-BLK1)

Prepared: 06/15/2015 Analyzed: 06/15/2015 14:18

Benzene	ND	25	ug/kg wet							
Ethylbenzene	ND	25	ug/kg wet							
Toluene	ND	25	ug/kg wet							
1,3,5-Trimethylbenzene	ND	25	ug/kg wet							
1,2,4-Trimethylbenzene	ND	25	ug/kg wet							
m,p-Xylene	ND	50	ug/kg wet							
o-Xylene	ND	25	ug/kg wet							
Xylenes, total	ND	75	ug/kg wet							
<i>Surrogate: Dibromofluoromethane</i>	4.91		ug/L	5.000		98.2	84.7-120			
<i>Surrogate: Toluene-d8</i>	4.68		ug/L	5.000		93.6	90.5-108			
<i>Surrogate: 4-Bromofluorobenzene</i>	5.02		ug/L	5.000		100	88.3-113			

LCS (A506046-BS1)

Prepared: 06/15/2015 Analyzed: 06/15/2015 14:40

Benzene	218	25	ug/kg wet	250.0		87.2	80.5-123			
Ethylbenzene	251	25	ug/kg wet	250.0		100	89.9-113			
Toluene	287	25	ug/kg wet	250.0		115	78.8-117			
1,3,5-Trimethylbenzene	231	25	ug/kg wet	250.0		92.2	85.2-120			
1,2,4-Trimethylbenzene	224	25	ug/kg wet	250.0		89.4	86.8-118			
m,p-Xylene	489	50	ug/kg wet	500.0		97.7	90.1-114			
o-Xylene	245	25	ug/kg wet	250.0		97.8	85.8-113			
<i>Surrogate: Dibromofluoromethane</i>	4.89		ug/L	5.000		97.8	84.7-120			
<i>Surrogate: Toluene-d8</i>	5.33		ug/L	5.000		107	90.5-108			
<i>Surrogate: 4-Bromofluorobenzene</i>	4.98		ug/L	5.000		99.6	88.3-113			

Matrix Spike (A506046-MS1)

Source: A152312-17

Prepared: 06/15/2015 Analyzed: 06/15/2015 21:33

Benzene	5.78		ug/L	5.000	ND	116	77-128			
Ethylbenzene	5.57		ug/L	5.000	0.160	108	85.7-117			
Toluene	5.92		ug/L	5.000	ND	118	72.1-124			
1,3,5-Trimethylbenzene	5.62		ug/L	5.000	0.360	105	82-122			
1,2,4-Trimethylbenzene	7.61		ug/L	5.000	2.29	106	80.4-122			
m,p-Xylene	11.9		ug/L	10.00	1.16	108	87.9-115			
o-Xylene	5.35		ug/L	5.000	ND	107	82.9-116			
<i>Surrogate: Dibromofluoromethane</i>	4.97		ug/L	5.000		99.4	84.7-120			
<i>Surrogate: Toluene-d8</i>	4.86		ug/L	5.000		97.2	90.5-108			
<i>Surrogate: 4-Bromofluorobenzene</i>	5.59		ug/L	5.000		112	88.3-113			

Matrix Spike Dup (A506046-MSD1)

Source: A152312-17

Prepared: 06/15/2015 Analyzed: 06/15/2015 22:16

Benzene	5.60		ug/L	5.000	ND	112	77-128	3.16	20	
Ethylbenzene	5.77		ug/L	5.000	0.160	112	85.7-117	3.63	20	
Toluene	5.80		ug/L	5.000	ND	116	72.1-124	2.05	20	
1,3,5-Trimethylbenzene	5.64		ug/L	5.000	0.360	106	82-122	0.380	20	
1,2,4-Trimethylbenzene	7.68		ug/L	5.000	2.29	108	80.4-122	1.31	20	
m,p-Xylene	12.4		ug/L	10.00	1.16	112	87.9-115	3.82	20	
o-Xylene	5.52		ug/L	5.000	ND	110	82.9-116	3.13	20	



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

Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control
ECCS

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch A506046 - EPA 5030B

Matrix Spike Dup (A506046-MSD1)	Source: A152312-17	Prepared: 06/15/2015	Analyzed: 06/15/2015 22:16							
Surrogate: Dibromofluoromethane	4.72	ug/L	5.000	94.4	84.7-120					
Surrogate: Toluene-d8	4.79	ug/L	5.000	95.8	90.5-108					
Surrogate: 4-Bromofluorobenzene	5.70	ug/L	5.000	114	88.3-113					S

Batch A506057 - EPA 5030B

Blank (A506057-BLK1)	Prepared: 06/16/2015	Analyzed: 06/17/2015 22:01								
Benzene	ND	25 ug/kg wet								
Ethylbenzene	ND	25 ug/kg wet								
Toluene	ND	25 ug/kg wet								
1,3,5-Trimethylbenzene	ND	25 ug/kg wet								
1,2,4-Trimethylbenzene	ND	25 ug/kg wet								
m,p-Xylene	ND	50 ug/kg wet								
o-Xylene	ND	25 ug/kg wet								
Xylenes, total	ND	75 ug/kg wet								
Surrogate: Dibromofluoromethane	5.08	ug/L	5.000	102	84.7-120					
Surrogate: Toluene-d8	4.94	ug/L	5.000	98.8	90.5-108					
Surrogate: 4-Bromofluorobenzene	4.86	ug/L	5.000	97.2	88.3-113					

LCS (A506057-BS1)

LCS (A506057-BS1)	Prepared: 06/16/2015	Analyzed: 06/16/2015 19:42								
Benzene	258	25 ug/kg wet	250.0	103	80.5-123					
Ethylbenzene	251	25 ug/kg wet	250.0	100	89.9-113					
Toluene	256	25 ug/kg wet	250.0	102	78.8-117					
1,3,5-Trimethylbenzene	246	25 ug/kg wet	250.0	98.4	85.2-120					
1,2,4-Trimethylbenzene	251	25 ug/kg wet	250.0	100	86.8-118					
m,p-Xylene	494	50 ug/kg wet	500.0	98.8	90.1-114					
o-Xylene	247	25 ug/kg wet	250.0	98.8	85.8-113					
Surrogate: Dibromofluoromethane	4.97	ug/L	5.000	99.4	84.7-120					
Surrogate: Toluene-d8	5.03	ug/L	5.000	101	90.5-108					
Surrogate: 4-Bromofluorobenzene	4.89	ug/L	5.000	97.8	88.3-113					

Matrix Spike (A506057-MS1)

Matrix Spike (A506057-MS1)	Source: A152315-01	Prepared: 06/16/2015	Analyzed: 06/16/2015 18:14							
Benzene	5.13	ug/L	5.000	ND	103	77-128				
Ethylbenzene	5.08	ug/L	5.000	ND	102	85.7-117				
Toluene	5.11	ug/L	5.000	ND	102	72.1-124				
1,3,5-Trimethylbenzene	4.98	ug/L	5.000	ND	99.6	82-122				
1,2,4-Trimethylbenzene	4.93	ug/L	5.000	ND	98.6	80.4-122				
m,p-Xylene	10.0	ug/L	10.00	ND	100	87.9-115				
o-Xylene	5.03	ug/L	5.000	ND	101	82.9-116				
Surrogate: Dibromofluoromethane	4.92	ug/L	5.000	98.4	84.7-120					
Surrogate: Toluene-d8	4.99	ug/L	5.000	99.8	90.5-108					
Surrogate: 4-Bromofluorobenzene	4.94	ug/L	5.000	98.8	88.3-113					



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Revised Report

GZA GeoEnvironmental, Inc
20900 Swenson Drive, Suite 150
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Project: Wedron Silica - Wedron, IL
Project Number: 20.0151178.51
Project Manager: Bernard Fenelon

Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control
ECCS

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch A506057 - EPA 5030B

Matrix Spike Dup (A506057-MSD1)	Source: A152315-01	Prepared: 06/16/2015		Analyzed: 06/16/2015 18:58					
Benzene	5.25	ug/L	5.000	ND	105	77-128	2.31	20	
Ethylbenzene	5.14	ug/L	5.000	ND	103	85.7-117	1.17	20	
Toluene	5.32	ug/L	5.000	ND	106	72.1-124	4.03	20	
1,3,5-Trimethylbenzene	4.99	ug/L	5.000	ND	99.8	82-122	0.201	20	
1,2,4-Trimethylbenzene	5.07	ug/L	5.000	ND	101	80.4-122	2.80	20	
m,p-Xylene	10.3	ug/L	10.00	ND	103	87.9-115	2.95	20	
o-Xylene	5.14	ug/L	5.000	ND	103	82.9-116	2.16	20	
Surrogate: Dibromofluoromethane	5.00	ug/L	5.000		100	84.7-120			
Surrogate: Toluene-d8	4.94	ug/L	5.000		98.8	90.5-108			
Surrogate: 4-Bromofluorobenzene	4.99	ug/L	5.000		99.8	88.3-113			

Batch A506068 - EPA 5030B

Blank (A506068-BLK1)	Prepared: 06/17/2015		Analyzed: 06/17/2015 22:23	
Benzene	ND	0.50	ug/L	
Ethylbenzene	ND	0.50	ug/L	
Toluene	0.080	0.50	ug/L	J
1,3,5-Trimethylbenzene	ND	0.50	ug/L	
1,2,4-Trimethylbenzene	ND	0.50	ug/L	
m,p-Xylene	ND	1.0	ug/L	
o-Xylene	ND	0.50	ug/L	
Xylenes, total	ND	1.5	ug/L	
Surrogate: Dibromofluoromethane	4.94	ug/L	5.000	98.8
Surrogate: Toluene-d8	5.56	ug/L	5.000	111
Surrogate: 4-Bromofluorobenzene	5.08	ug/L	5.000	102

LCS (A506068-BS1)	Prepared: 06/17/2015		Analyzed: 06/18/2015 02:45	
Benzene	4.12	ug/L	5.000	82.4
Ethylbenzene	5.11	ug/L	5.000	102
Toluene	5.89	ug/L	5.000	118
1,3,5-Trimethylbenzene	5.03	ug/L	5.000	101
1,2,4-Trimethylbenzene	4.85	ug/L	5.000	97.0
m,p-Xylene	10.2	ug/L	10.00	102
o-Xylene	4.96	ug/L	5.000	99.2
Surrogate: Dibromofluoromethane	4.73	ug/L	5.000	94.6
Surrogate: Toluene-d8	5.65	ug/L	5.000	113
Surrogate: 4-Bromofluorobenzene	4.91	ug/L	5.000	98.2



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Revised Report

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

**Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control
 ECCS**

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch A506068 - EPA 5030B

Matrix Spike (A506068-MS1)	Source: A152414-02		Prepared: 06/17/2015		Analyzed: 06/18/2015 01:18	
Benzene	4.60	ug/L	5.000	ND	92.0	79.9-126
Ethylbenzene	5.13	ug/L	5.000	ND	103	83.1-118
Toluene	5.75	ug/L	5.000	0.0600	114	78-117
1,3,5-Trimethylbenzene	4.94	ug/L	5.000	0.0900	97.0	75.9-125
1,2,4-Trimethylbenzene	4.77	ug/L	5.000	0.250	90.4	71.5-127
m,p-Xylene	10.2	ug/L	10.00	ND	102	81-118
o-Xylene	5.06	ug/L	5.000	ND	101	80.6-114
<i>Surrogate: Dibromofluoromethane</i>	<i>4.99</i>	<i>ug/L</i>	<i>5.000</i>		<i>99.8</i>	<i>81.3-129</i>
<i>Surrogate: Toluene-d8</i>	<i>5.49</i>	<i>ug/L</i>	<i>5.000</i>		<i>110</i>	<i>87.3-110</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>4.92</i>	<i>ug/L</i>	<i>5.000</i>		<i>98.4</i>	<i>86.7-110</i>

Matrix Spike Dup (A506068-MSD1)	Source: A152414-02		Prepared: 06/17/2015		Analyzed: 06/18/2015 02:01	
Benzene	4.16	ug/L	5.000	ND	83.2	79.9-126 10.0 20
Ethylbenzene	5.07	ug/L	5.000	ND	101	83.1-118 1.18 20
Toluene	5.73	ug/L	5.000	0.0600	113	78-117 0.352 20
1,3,5-Trimethylbenzene	4.78	ug/L	5.000	0.0900	93.8	75.9-125 3.35 20
1,2,4-Trimethylbenzene	4.67	ug/L	5.000	0.250	88.4	71.5-127 2.24 20
m,p-Xylene	10.1	ug/L	10.00	ND	101	81-118 1.08 20
o-Xylene	5.03	ug/L	5.000	ND	101	80.6-114 0.595 20
<i>Surrogate: Dibromofluoromethane</i>	<i>4.91</i>	<i>ug/L</i>	<i>5.000</i>		<i>98.2</i>	<i>81.3-129</i>
<i>Surrogate: Toluene-d8</i>	<i>5.49</i>	<i>ug/L</i>	<i>5.000</i>		<i>110</i>	<i>87.3-110</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>4.93</i>	<i>ug/L</i>	<i>5.000</i>		<i>98.6</i>	<i>86.7-110</i>



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Revised Report

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

Classical Chemistry Parameters - Quality Control

ECCS

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch A506017 - % Solids

Duplicate (A506017-DUP1)	Source: A152312-01	Prepared: 06/04/2015	Analyzed: 06/05/2015 13:30		
% Solids	90.4	0.00 % by Weight	90.0	0.431	20

Batch A506018 - % Solids

Duplicate (A506018-DUP1)	Source: A152312-18	Prepared: 06/04/2015	Analyzed: 06/05/2015 13:30		
% Solids	88.7	0.00 % by Weight	93.9	5.71	20



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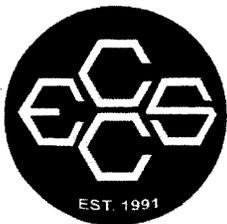
Revised Report

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

Notes and Definitions

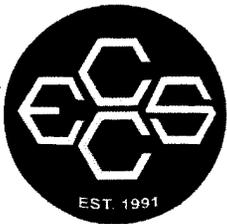
- S Surrogate recovery was outside of laboratory control limits due to an apparent matrix effect.
- J Analyte was detected but is below the reporting limit. The concentration is estimated.
- HC Results may be biased high because of high continuing calibration verification (CCV).
- E1 Estimated value because of quality control sample exceedances.
- D Data reported from a dilution
- B Analyte is also detected in the associated method blank.
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis. If the word 'dry' does not appear after the units, results are reported on an as-is basis.
- RPD Relative Percent Difference



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CHAIN OF CUSTODY

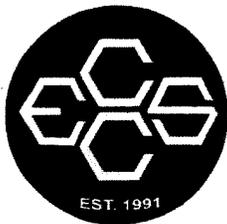
Project Number: <u>20.0151178.51</u>				Lab Work Order #: <u>A152312</u>				Mail Report To: <u>BERNARD FENELON</u>															
Project Name: <u>WEDRON SILICA CO.</u>				Analyses Requested				Company: <u>GZA GEOENVIRONMENTAL, INC.</u>															
Project Location: <u>WEDRON, IL</u>				Preservation Codes				Address: <u>20900 SWENSON DRIVE SUITE 150</u>															
Turn Around (circle one): <u>Normal</u> Rush				<table border="1" style="width:100%; text-align: center;"> <tr> <td>Matrix</td> <td>Total # of Containers</td> <td>BTEX</td> <td>1,2,4 TMB</td> <td>1,3,5 TMB</td> <td>TOTAL SOLIDS</td> </tr> <tr> <td>S</td> <td>2</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> </table>				Matrix	Total # of Containers	BTEX	1,2,4 TMB	1,3,5 TMB	TOTAL SOLIDS	S	2	X	X	X	X	E-mail Address: <u>BERNARD.FENELON@GZA.COM</u>			
Matrix	Total # of Containers	BTEX	1,2,4 TMB					1,3,5 TMB	TOTAL SOLIDS														
S	2	X	X	X	X																		
If Rush, Report Due Date:								Invoice To: <u>SAME</u>															
Sampled By (Print): <u>CHRIS AINSWORTH</u>								Company:															
								Address:															
Sample Description		Collection Date Time								Comments		Lab ID	Lab Receipt Time										
<u>WS-SB-GP 27 (2-4')</u>		<u>6/3/2015</u>	<u>1020</u>	<u>S</u>	<u>2</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>			<u>01</u>											
<u>WS-SB-GP 27 (4-6')</u>			<u>1030</u>			<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>			<u>02</u>											
<u>WS-SB-GP 27 (6-8')</u>			<u>1035</u>			<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>			<u>03</u>											
<u>WS-SB-GP 28 (2-4')</u>			<u>1105</u>			<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>			<u>04</u>											
<u>WS-SB-GP 28 (4-6')</u>			<u>1115</u>			<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>			<u>05</u>											
<u>WS-SB-GP 28 (6-8')</u>			<u>1120</u>			<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>			<u>06</u>											
<u>WS-SB-GP 29 (2-4')</u>			<u>1135</u>			<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>			<u>07</u>											
<u>WS-SB-GP 29 (4-6')</u>			<u>1140</u>			<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>			<u>08</u>											
<u>WS-SB-GP 29 (6-8')</u>			<u>1145</u>			<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>			<u>09</u>											
<u>WS-SB-GP 34 (2-4')</u>			<u>1210</u>			<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>			<u>10</u>											
Preservation Codes A=None B=HCL C=H ₂ SO ₄ D=HNO ₃ E=EnCore F=Methanol G=NaOH O=Other (Indicate)		Relinquished By: <u>[Signature]</u>		Date: <u>6/4/15</u>	Time: <u>1156</u>	Received By: <u>[Signature]</u>		Date: <u>6/4/15</u>	Time: <u>1156</u>														
Matrix Codes A=Air S=Soil W=Water O=Other		Custody Seal: Present/Absent/ Intact/Not Intact Seal #'s		Shipped Via: <u>Hand-delivered</u>		Receipt Temp:		Temp Blank Y N <u>on ice</u>															



**Environmental Chemistry
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CHAIN OF CUSTODY

Project Number: <u>20.0151178.51</u>				Lab Work Order #: <u>A152312</u>				Mail Report To: <u>Bernard Fenelon</u>																					
Project Name: <u>WEDRON SILICA CO.</u>				Analyses Requested				Company: <u>GZA GeoEnvironmental Inc.</u>																					
Project Location: <u>WEDRON, IL</u>				Preservation Codes				Address: <u>20900 SWENSON DRIVE SUITE 150</u>																					
Turn Around (circle one): <u>Normal</u> Rush				<table border="1" style="width:100%; text-align: center;"> <tr> <td style="width:10%;">F</td> <td style="width:10%;">F</td> <td style="width:10%;">F</td> <td style="width:10%;">A</td> <td style="width:10%;"></td> <td style="width:10%;"></td> <td style="width:10%;"></td> <td style="width:10%;"></td> </tr> <tr> <td colspan="2" style="writing-mode: vertical-rl; transform: rotate(180deg);">Matrix</td> <td colspan="2" style="writing-mode: vertical-rl; transform: rotate(180deg);">Total # of Containers</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">BTEX</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">1, 2, 4 TMB</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">1, 3, 5 TMB</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">TOTAL SOLIDS</td> <td style="width:10%;"></td> <td style="width:10%;"></td> </tr> </table>				F	F	F	A					Matrix		Total # of Containers		BTEX	1, 2, 4 TMB	1, 3, 5 TMB	TOTAL SOLIDS			E-mail Address: <u>Bernard.Fenelon@GZA.COM</u>			
F	F	F	A																										
Matrix		Total # of Containers		BTEX	1, 2, 4 TMB	1, 3, 5 TMB	TOTAL SOLIDS																						
If Rush, Report Due Date:								Invoice To: <u>SAME</u>																					
Sampled By (Print): <u>CHRIS AINSWORTH</u>								Company:																					
								Address:																					
Sample Description		Collection Date Time		Matrix	Total # of Containers	BTEX	1, 2, 4 TMB	1, 3, 5 TMB	TOTAL SOLIDS			Comments	Lab ID	Lab Receipt Time															
WS-SB-GP 34 (4-6')		6/3/2015 12:15													5	2	X	X	X	X				11					
WS-SB-GP 34 (6-8')		1220															X	X	X	X				12					
WS-SB-GP 34 (8-10')		1250															X	X	X	X				13					
WS-SB-EP 33 (2-4')		1300															X	X	X	X				14					
WS-SB-GP 33 (4-6')		1315															X	X	X	X				15					
WS-SB-GP 33 (6-8')		1320															X	X	X	X				16					
WS-SB-GP 33 (13.3-15')		1340															X	X	X	X				17					
WS-SB-GP 33 (18.3-20')		1345															X	X	X	X				18					
WS-SB-GP 33 (21.7-23.3')		1350															X	X	X	X				19					
WS-SB-GP 33 (26.7-28.3')		1410				X	X	X	X				20																
Preservation Codes A=None B=HCL C=H ₂ SO ₄ D=HNO ₃ E=EnCore F=Methanol G=NaOH O=Other (Indicate)				Relinquished By: <u>[Signature]</u>				Date: <u>6/4/15</u> Time: <u>1156</u>		Received By: <u>Kari-Ann Kellin</u>				Date: <u>6/4/15</u> Time: <u>1156</u>															
Matrix Codes A=Air S=Soil W=Water O=Other				Custody Seal: Present/Absent Intact/Not Intact Seal #'s				Receipt Temp:																					
				Shipped Via: <u>Hand del.</u>				Temp Blank Y N <u>on ice</u>																					



**Environmental Chemistry
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Madison, WI 53718
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CHAIN OF CUSTODY

Project Number: <u>20.015.178.51</u>				Lab Work Order #: <u>A152312</u>				Mail Report To: <u>BERNARD FENEZON</u>											
Project Name: <u>WEDRON SILICA CO.</u>				Analyses Requested				Company: <u>GZA GEOENVIRONMENTAL INC.</u>											
Project Location: <u>WEDRON, IL.</u>				Preservation Codes				Address: <u>20900 SWENSON DRIVE SUITE 150</u>											
Turn Around (circle one): <u>Normal</u> Rush				<table border="1" style="width:100%; text-align: center;"> <tr> <td>F</td><td>F</td><td>F</td><td>A</td> </tr> <tr> <td>BTEX</td><td>1,2,4 TMB</td><td>1,3,5 TMB</td><td>TOTAL SOLIDS</td> </tr> </table>				F	F	F	A	BTEX	1,2,4 TMB	1,3,5 TMB	TOTAL SOLIDS	E-mail Address: <u>BERNARD.FENEZON@GZA.COM</u>			
F	F	F	A																
BTEX	1,2,4 TMB	1,3,5 TMB	TOTAL SOLIDS																
If Rush, Report Due Date:				Invoice To: <u>SAME</u>				Company:											
Sampled By (Print): <u>CARLIS AINSWORTH</u>				Address:				Address:											
Sample Description	Collection		Matrix	Total # of Containers	BTEX	1,2,4 TMB	1,3,5 TMB	TOTAL SOLIDS			Comments	Lab ID	Lab Receipt Time						
	Date	Time																	
WS-SB-GP33 (30-31.7')	<u>6/3/2015</u>	<u>1420</u>	<u>S</u>	<u>2</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>				<u>21</u>							
WS-SB-GP32 (2-4')		<u>1444</u>			<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>				<u>22</u>							
WS-SB-GP32 (4-6')		<u>1500</u>			<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>				<u>23</u>							
WS-SB-GP32 (6-8')		<u>1505</u>			<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>				<u>24</u>							
WS-SB-GP32 (13.3-15')		<u>1510</u>			<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>				<u>25</u>							
WS-SB-GP32 (15-16.7')		<u>1535</u>			<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>				<u>26</u>							
WS-SB-GP32 (21.7-23.3')		<u>1540</u>			<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>				<u>27</u>							
WS-SB-GP32 (26.7-28.3')		<u>1545</u>			<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>				<u>28</u>							
WS-SB-GP32 (30-31.7')		<u>1555</u>			<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>				<u>29</u>							
WS-SB-GP31 (2-4')		<u>1610</u>			<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>				<u>30</u>							
Preservation Codes A=None B=HCL C=H ₂ SO ₄ D=HNO ₃ E=EnCore F=Methanol G=NaOH O=Other (Indicate)				Relinquished By: <u>[Signature]</u> Date: <u>6/4/15</u> Time: <u>1156</u>				Received By: <u>[Signature]</u> Date: <u>6/4/15</u> Time: <u>1156</u>											
Matrix Codes A=Air S=Soil W=Water O=Other				Custody Seal: Present/Absent <u>Intact/Not Intact</u> Seal #'s				Receipt Temp: <u>on ice</u> Temp Blank Y N											
Shipped Via: <u>Hand Del.</u>																			



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Madison, WI 53718
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608-221-4889 (fax)

CHAIN OF CUSTODY

Project Number: <u>20.0151178.51</u>				Analyses Requested				Lab Work Order #: <u>A152312</u>				Mail Report To: <u>Bernard Fenelon</u>					
Project Name: <u>WEDRON SILICA Co.</u>				Preservation Codes				Company: <u>GZA GeoEnvironmental Inc.</u>				Address: <u>20900 SWENSON DRIVE SUITE 150</u>					
Project Location: <u>WEDRON, IL.</u>				F F F A				E-mail Address: <u>BERNARD.FENELON@GZA.COM</u>				Waukesha WI 53186					
Turn Around (circle one): <u>Normal</u> Rush				Matrix Total # of Containers BTEX 1,2,4 TMB 1,3,5 TMB TOTAL SOLIDS				Invoice To: <u>SAME</u>				Company:					
If Rush, Report Due Date:								Address:				Company:					
Sampled By (Print): <u>Chris Ainsworth</u>								Address:				Company:					
Sample Description	Collection		Matrix	Total # of Containers	BTEX	1,2,4 TMB	1,3,5 TMB	TOTAL SOLIDS			Comments	Lab ID	Lab Receipt Time				
	Date	Time															
WS-SB-GP 31 (4-6')	6/3/2015	1615	S	2	X	X	X	X				31					
WS-SB-GP 31 (6-8')		1620			X	X	X	X				32					
WS-SB-GP 30 (2-4')		1640			X	X	X	X				33					
WS-SB-GP 30 (4-6')		1645			X	X	X	X				34					
WS-SB-GP 30 (6-8')		1650			X	X	X	X				35					
WS-SB-GP 32 (8-10')		1700			X	X	X	X				36					
EQUIPMENT BLANK		1730	W	3	X	X	X				Hcl preserved	37					
TRIP BLANK			W		X	X	X					38					
MEDH BLANK	6/3/15		S	1	X	X	X					39					
Preservation Codes A=None B=HCL C=H ₂ SO ₄ D=HNO ₃ E=EnCore F=Methanol G=NaOH O=Other (Indicate)				Relinquished By: <u>[Signature]</u>				Date: <u>6/4/15</u>		Time: <u>1156</u>		Received By: <u>Kari-An Hill</u>		Date: <u>6/4/15</u>		Time: <u>1156</u>	
Matrix Codes A=Air S=Soil W=Water O=Other				Custody Seal: Present/Absent <u>Intact/Not Intact</u> Seal #'s				Shipped Via: <u>Hand Del</u>		Receipt Temp: Temp Blank Y N <u>on ice</u>							



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June 24, 2015

Bernard Fenelon
GZA GeoEnvironmental, Inc
20900 Swenson Drive, Suite 150
Waukesha, WI 53186
RE: Wedron Silica - Wedron, IL

Enclosed are the analytical results for the samples received by the laboratory on 06/04/2015.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. These results are in compliance with the 2009 NELAC Standards and the appropriate agencies listed below, unless otherwise noted in the case narrative. This analytical report should be reproduced in its entirety.

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

Sincerely,

Jessica Esser
Project Manager

Certification List

Expires

DODELAP	DOD ELAP Accreditation (A2LA)	3269.01	03/31/2016
ILEPA	Illinois Secondary NELAP Accreditation	003174	06/30/2015
KDHE	Kansas Secondary NELAP Accreditation	E-10384	07/31/2015
LELAP	Louisiana Primary NELAP Accreditation	04165	06/30/2015
NJDEP	New Jersey Secondary NELAP Accreditation	WI004	06/30/2015
ODEQ	Oklahoma Department of Environmental Quality Accreditation	2014-153	08/31/2015
WDNR	Wisconsin Certification under NR 149	113289110	08/31/2015



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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

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WS-SB-GP36 (2-4')	A152315-01	Soil	06/03/2015	06/04/2015
WS-SB-GP36 (4-6')	A152315-02	Soil	06/03/2015	06/04/2015
WS-SB-GP36 (6-8')	A152315-03	Soil	06/03/2015	06/04/2015

CASE NARRATIVE

Sample Receipt Information:

3 samples were received on 6/4/2015. Samples were received on ice. Samples were received in acceptable condition.

Please see the chain of custody (COC) document at the end of this report for additional information.

Hold Time:

Sample A152315-03 was analyzed one day past recommended hold time for the VOCs by method 8260 analysis, due to a laboratory error.



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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

WS-SB-GP36 (2-4')

A152315-01 (Soil)

Date Sampled
06/03/2015 17:05

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: A506057

Benzene	ND	1.5	23	ug/kg dry	1	06/16/2015	06/16/2015 17:31	EPA 8260B	
Ethylbenzene	ND	2.0	23	ug/kg dry	1	06/16/2015	06/16/2015 17:31	EPA 8260B	
Toluene	ND	3.7	23	ug/kg dry	1	06/16/2015	06/16/2015 17:31	EPA 8260B	
1,3,5-Trimethylbenzene	ND	2.2	23	ug/kg dry	1	06/16/2015	06/16/2015 17:31	EPA 8260B	
1,2,4-Trimethylbenzene	ND	3.3	23	ug/kg dry	1	06/16/2015	06/16/2015 17:31	EPA 8260B	
m,p-Xylene	ND	2.9	47	ug/kg dry	1	06/16/2015	06/16/2015 17:31	EPA 8260B	
o-Xylene	ND	2.8	23	ug/kg dry	1	06/16/2015	06/16/2015 17:31	EPA 8260B	
Xylenes, total	ND	5.7	70	ug/kg dry	1	06/16/2015	06/16/2015 17:31	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			95.0 %	84.7-120		06/16/2015	06/16/2015 17:31	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			98.2 %	90.5-108		06/16/2015	06/16/2015 17:31	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			95.8 %	88.3-113		06/16/2015	06/16/2015 17:31	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch: A506017

% Solids	91.8		0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	SM 2540B	
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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

WS-SB-GP36 (4-6')

A152315-02 (Soil)

Date Sampled

06/03/2015 17:10

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: A506067

Benzene	ND	1.5	24	ug/kg dry	1	06/17/2015	06/17/2015 22:45	EPA 8260B	
Ethylbenzene	ND	2.0	24	ug/kg dry	1	06/17/2015	06/17/2015 22:45	EPA 8260B	
Toluene	ND	3.8	24	ug/kg dry	1	06/17/2015	06/17/2015 22:45	EPA 8260B	
1,3,5-Trimethylbenzene	ND	2.3	24	ug/kg dry	1	06/17/2015	06/17/2015 22:45	EPA 8260B	
1,2,4-Trimethylbenzene	ND	3.3	24	ug/kg dry	1	06/17/2015	06/17/2015 22:45	EPA 8260B	
m,p-Xylene	ND	3.0	48	ug/kg dry	1	06/17/2015	06/17/2015 22:45	EPA 8260B	
o-Xylene	ND	2.9	24	ug/kg dry	1	06/17/2015	06/17/2015 22:45	EPA 8260B	
Xylenes, total	ND	5.8	71	ug/kg dry	1	06/17/2015	06/17/2015 22:45	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			106 %	84.7-120		06/17/2015	06/17/2015 22:45	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			96.6 %	90.5-108		06/17/2015	06/17/2015 22:45	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			98.8 %	88.3-113		06/17/2015	06/17/2015 22:45	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch: A506017

% Solids	88.6		0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	SM 2540B	
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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

WS-SB-GP36 (6-8')

Date Sampled

A152315-03 (Soil)

06/03/2015 17:15

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: A506067

H

Benzene	ND	1.7	26	ug/kg dry	1	06/17/2015	06/18/2015 00:12	EPA 8260B	
Ethylbenzene	ND	2.2	26	ug/kg dry	1	06/17/2015	06/18/2015 00:12	EPA 8260B	
Toluene	ND	4.2	26	ug/kg dry	1	06/17/2015	06/18/2015 00:12	EPA 8260B	
1,3,5-Trimethylbenzene	ND	2.5	26	ug/kg dry	1	06/17/2015	06/18/2015 00:12	EPA 8260B	
1,2,4-Trimethylbenzene	ND	3.6	26	ug/kg dry	1	06/17/2015	06/18/2015 00:12	EPA 8260B	
m,p-Xylene	ND	3.2	52	ug/kg dry	1	06/17/2015	06/18/2015 00:12	EPA 8260B	
o-Xylene	ND	3.1	26	ug/kg dry	1	06/17/2015	06/18/2015 00:12	EPA 8260B	
Xylenes, total	ND	6.3	78	ug/kg dry	1	06/17/2015	06/18/2015 00:12	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			107 %	84.7-120		06/17/2015	06/18/2015 00:12	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			96.8 %	90.5-108		06/17/2015	06/18/2015 00:12	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			99.4 %	88.3-113		06/17/2015	06/18/2015 00:12	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch: A506017

% Solids	87.8		0.00	% by Weight	1	06/04/2015	06/05/2015 13:30	SM 2540B	
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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

Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control

ECCS

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch A506057 - EPA 5030B

Blank (A506057-BLK1)

Prepared: 06/16/2015 Analyzed: 06/17/2015 22:01

Benzene	ND	25	ug/kg wet							
Ethylbenzene	ND	25	ug/kg wet							
Toluene	ND	25	ug/kg wet							
1,3,5-Trimethylbenzene	ND	25	ug/kg wet							
1,2,4-Trimethylbenzene	ND	25	ug/kg wet							
m,p-Xylene	ND	50	ug/kg wet							
o-Xylene	ND	25	ug/kg wet							
Xylenes, total	ND	75	ug/kg wet							
<i>Surrogate: Dibromofluoromethane</i>	5.08		ug/L	5.000		102	84.7-120			
<i>Surrogate: Toluene-d8</i>	4.94		ug/L	5.000		98.8	90.5-108			
<i>Surrogate: 4-Bromofluorobenzene</i>	4.86		ug/L	5.000		97.2	88.3-113			

LCS (A506057-BS1)

Prepared: 06/16/2015 Analyzed: 06/16/2015 19:42

Benzene	258	25	ug/kg wet	250.0		103	80.5-123			
Ethylbenzene	251	25	ug/kg wet	250.0		100	89.9-113			
Toluene	256	25	ug/kg wet	250.0		102	78.8-117			
1,3,5-Trimethylbenzene	246	25	ug/kg wet	250.0		98.4	85.2-120			
1,2,4-Trimethylbenzene	251	25	ug/kg wet	250.0		100	86.8-118			
m,p-Xylene	494	50	ug/kg wet	500.0		98.8	90.1-114			
o-Xylene	247	25	ug/kg wet	250.0		98.8	85.8-113			
<i>Surrogate: Dibromofluoromethane</i>	4.97		ug/L	5.000		99.4	84.7-120			
<i>Surrogate: Toluene-d8</i>	5.03		ug/L	5.000		101	90.5-108			
<i>Surrogate: 4-Bromofluorobenzene</i>	4.89		ug/L	5.000		97.8	88.3-113			

Matrix Spike (A506057-MS1)

Source: A152315-01

Prepared: 06/16/2015 Analyzed: 06/16/2015 18:14

Benzene	5.13		ug/L	5.000	ND	103	77-128			
Ethylbenzene	5.08		ug/L	5.000	ND	102	85.7-117			
Toluene	5.11		ug/L	5.000	ND	102	72.1-124			
1,3,5-Trimethylbenzene	4.98		ug/L	5.000	ND	99.6	82-122			
1,2,4-Trimethylbenzene	4.93		ug/L	5.000	ND	98.6	80.4-122			
m,p-Xylene	10.0		ug/L	10.00	ND	100	87.9-115			
o-Xylene	5.03		ug/L	5.000	ND	101	82.9-116			
<i>Surrogate: Dibromofluoromethane</i>	4.92		ug/L	5.000		98.4	84.7-120			
<i>Surrogate: Toluene-d8</i>	4.99		ug/L	5.000		99.8	90.5-108			
<i>Surrogate: 4-Bromofluorobenzene</i>	4.94		ug/L	5.000		98.8	88.3-113			

Matrix Spike Dup (A506057-MSD1)

Source: A152315-01

Prepared: 06/16/2015 Analyzed: 06/16/2015 18:58

Benzene	5.25		ug/L	5.000	ND	105	77-128	2.31	20	
Ethylbenzene	5.14		ug/L	5.000	ND	103	85.7-117	1.17	20	
Toluene	5.32		ug/L	5.000	ND	106	72.1-124	4.03	20	
1,3,5-Trimethylbenzene	4.99		ug/L	5.000	ND	99.8	82-122	0.201	20	
1,2,4-Trimethylbenzene	5.07		ug/L	5.000	ND	101	80.4-122	2.80	20	
m,p-Xylene	10.3		ug/L	10.00	ND	103	87.9-115	2.95	20	
o-Xylene	5.14		ug/L	5.000	ND	103	82.9-116	2.16	20	
<i>Surrogate: Dibromofluoromethane</i>	5.00		ug/L	5.000		100	84.7-120			
<i>Surrogate: Toluene-d8</i>	4.94		ug/L	5.000		98.8	90.5-108			



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

Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control

ECCS

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch A506057 - EPA 5030B

Matrix Spike Dup (A506057-MSD1) Source: A152315-01 Prepared: 06/16/2015 Analyzed: 06/16/2015 18:58

Surrogate: 4-Bromofluorobenzene 4.99 ug/L 5.000 99.8 88.3-113

Batch A506067 - EPA 5030B

Blank (A506067-BLK1) Prepared: 06/17/2015 Analyzed: 06/17/2015 23:28

Benzene	ND	25	ug/kg wet
Ethylbenzene	ND	25	ug/kg wet
Toluene	ND	25	ug/kg wet
1,3,5-Trimethylbenzene	ND	25	ug/kg wet
1,2,4-Trimethylbenzene	ND	25	ug/kg wet
m,p-Xylene	ND	50	ug/kg wet
o-Xylene	ND	25	ug/kg wet
Xylenes, total	ND	75	ug/kg wet

Surrogate: Dibromofluoromethane 5.15 ug/L 5.000 103 84.7-120

Surrogate: Toluene-d8 4.82 ug/L 5.000 96.4 90.5-108

Surrogate: 4-Bromofluorobenzene 4.84 ug/L 5.000 96.8 88.3-113

LCS (A506067-BS1) Prepared: 06/17/2015 Analyzed: 06/18/2015 02:23

Benzene	5.22	ug/L	5.000	104	80.5-123
Ethylbenzene	5.11	ug/L	5.000	102	89.9-113
Toluene	5.30	ug/L	5.000	106	78.8-117
1,3,5-Trimethylbenzene	4.97	ug/L	5.000	99.4	85.2-120
1,2,4-Trimethylbenzene	4.97	ug/L	5.000	99.4	86.8-118
m,p-Xylene	10.1	ug/L	10.00	101	90.1-114
o-Xylene	5.06	ug/L	5.000	101	85.8-113

Surrogate: Dibromofluoromethane 5.03 ug/L 5.000 101 84.7-120

Surrogate: Toluene-d8 4.93 ug/L 5.000 98.6 90.5-108

Surrogate: 4-Bromofluorobenzene 4.99 ug/L 5.000 99.8 88.3-113

Matrix Spike (A506067-MS1) Source: A152315-03 Prepared: 06/17/2015 Analyzed: 06/18/2015 00:55

Benzene	5.50	ug/L	5.000	ND	110	77-128
Ethylbenzene	4.95	ug/L	5.000	ND	99.0	85.7-117
Toluene	5.35	ug/L	5.000	ND	107	72.1-124
1,3,5-Trimethylbenzene	4.89	ug/L	5.000	ND	97.8	82-122
1,2,4-Trimethylbenzene	4.92	ug/L	5.000	ND	98.4	80.4-122
m,p-Xylene	9.97	ug/L	10.00	ND	99.7	87.9-115
o-Xylene	5.04	ug/L	5.000	ND	101	82.9-116

Surrogate: Dibromofluoromethane 5.30 ug/L 5.000 106 84.7-120

Surrogate: Toluene-d8 5.08 ug/L 5.000 102 90.5-108

Surrogate: 4-Bromofluorobenzene 5.07 ug/L 5.000 101 88.3-113



2525 Advance Road
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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

Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control

ECCS

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch A506067 - EPA 5030B

Matrix Spike Dup (A506067-MSD1)

Source: A152315-03

Prepared: 06/17/2015 Analyzed: 06/18/2015 01:39

Benzene	5.14		ug/L	5.000	ND	103	77-128	6.77	20	
Ethylbenzene	5.11		ug/L	5.000	ND	102	85.7-117	3.18	20	
Toluene	5.29		ug/L	5.000	ND	106	72.1-124	1.13	20	
1,3,5-Trimethylbenzene	5.07		ug/L	5.000	ND	101	82-122	3.61	20	
1,2,4-Trimethylbenzene	5.03		ug/L	5.000	ND	101	80.4-122	2.21	20	
m,p-Xylene	10.1		ug/L	10.00	ND	101	87.9-115	1.20	20	
o-Xylene	5.01		ug/L	5.000	ND	100	82.9-116	0.597	20	
<i>Surrogate: Dibromofluoromethane</i>	<i>4.94</i>		<i>ug/L</i>	<i>5.000</i>		<i>98.8</i>	<i>84.7-120</i>			
<i>Surrogate: Toluene-d8</i>	<i>4.96</i>		<i>ug/L</i>	<i>5.000</i>		<i>99.2</i>	<i>90.5-108</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>5.06</i>		<i>ug/L</i>	<i>5.000</i>		<i>101</i>	<i>88.3-113</i>			



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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

Classical Chemistry Parameters - Quality Control

ECCS

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch A506017 - % Solids

Duplicate (A506017-DUP1)

Source: A152312-01

Prepared: 06/04/2015 Analyzed: 06/05/2015 13:30

% Solids	90.4	0.00	% by Weight		90.0			0.431	20	
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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

Notes and Definitions

- H The sample was held beyond the accepted holding time.
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis. If the word 'dry' does not appear after the units, results are reported on an as-is basis.
- RPD Relative Percent Difference



Environmental Chemistry Consulting Services, Inc.
 2525 Advance Road
 Madison, WI 53718
 608-221-8700 (phone)
 608-221-4889 (fax)

CHAIN OF CUSTODY

Project Number: <u>20.0151178.51</u>				Analyses Requested				Lab Work Order #: <u>A152315</u>				Mail Report To: <u>Bernard.Feneelon@GZA.com</u>					
Project Name: <u>20.015 WEDRON SILICA G.</u>				Preservation Codes								Company: <u>GZA GEOTECHNICAL ENVIRONMENTAL, INC.</u>					
Project Location: <u>WEDRON, IL.</u>				F F F A								Address: <u>20900 SWENSON DRIVE SUITE 150</u>					
Turn Around (circle one): <u>Normal</u> Rush				Matrix Total # of Containers				BTEX 1,2,4 TMB 1,3,5 TMB Total Solids				E-mail Address: <u>Bernard.Feneelon@GZA.com</u>					
If Rush, Report Due Date:												Invoice To: <u>SAME</u>					
Sampled By (Print): <u>CHRIS AINSWORTH</u>												Company:					
												Address:					
Sample Description		Collection Date Time		Matrix	Total # of Containers	BTEX	1,2,4 TMB	1,3,5 TMB	Total Solids	Comments		Lab ID	Lab Receipt Time				
<u>WS-SB-GP 27 (2-4')</u>		<u>6/3/2015 1705</u>		<u>S</u>	<u>2</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>HOLD SAMPLES PENDING</u>		<u>1</u>					
<u>WS-SB-GP 36 (4-6')</u>		<u>1710</u>		<u>1</u>	<u>1</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>RESULTS FROM</u>		<u>2</u>					
<u>WS-SB-GP 36 (6-8')</u>		<u>1715</u>		<u>1</u>	<u>1</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>WS-SB-GP 27 PENDING</u>		<u>3</u>					
										<u>Run per client</u>							
Preservation Codes A=None B=HCL C=H ₂ SO ₄ D=HNO ₃ E=EnCore F=Methanol G=NaOH O=Other (Indicate)				Relinquished By: <u>[Signature]</u>				Date: <u>6/4/15</u>		Time: <u>1156</u>		Received By: <u>Kari-Anne Gillis</u>		Date: <u>6/4/15</u>		Time: <u>1156</u>	
Matrix Codes A=Air S=Soil W=Water O=Other				Custody Seal: Present/Absent Intact/Not Intact Seal #'s				Receipt Temp:				Temp Blank Y N <u>on ice</u>					
				Shipped Via: <u>Hand Del.</u>													



2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

June 15, 2015

Bernard Fenelon
GZA GeoEnvironmental, Inc
20900 Swenson Drive, Suite 150
Waukesha, WI 53186
RE: Wedron Silica - Wedron, IL

Enclosed are the analytical results for the samples received by the laboratory on 06/04/2015.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. These results are in compliance with the 2009 NELAC Standards and the appropriate agencies listed below, unless otherwise noted in the case narrative. This analytical report should be reproduced in its entirety.

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

Sincerely,

Jessica Esser
Project Manager

Certification List

Expires

DODELAP	DOD ELAP Accreditation (A2LA)	3269.01	03/31/2016
ILEPA	Illinois Secondary NELAP Accreditation	003174	06/30/2015
KDHE	Kansas Secondary NELAP Accreditation	E-10384	07/31/2015
LELAP	Louisiana Primary NELAP Accreditation	04165	06/30/2015
NJDEP	New Jersey Secondary NELAP Accreditation	WI004	06/30/2015
ODEQ	Oklahoma Department of Environmental Quality Accreditation	2014-153	08/31/2015
WDNR	Wisconsin Certification under NR 149	113289110	08/31/2015



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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

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WS-SB-GP35 (31-33')	A152314-01	Soil	06/03/2015	06/04/2015

CASE NARRATIVE

Sample Receipt Information:

1 sample was received on 6/4/2015. Sample was received on ice. Sample was received in acceptable condition.

Please see the chain of custody (COC) document at the end of this report for additional information.



2525 Advance Road
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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

WS-SB-GP35 (31-33')

Date Sampled

A152314-01 (Soil)

06/03/2015 13:55

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 22317

Fractional Organic Carbon	0.99	0.058	0.058	% (w/w)	1	06/10/2015	06/10/2015 12:27	ASTM D2974-87	R1, FOC
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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

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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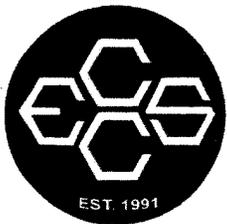
2525 Advance Road
Madison, WI 53718
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608.221.4889 Fax

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

Notes and Definitions

- R1 RPD value was outside control limits.
- FOC Reported results by ASTM D2974-87 for Fractional Organic Carbon (FOC) are determined by multiplying the Soil Organic Matter result by 0.58 (the percentage of organic carbon which compromises the SOM)
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis. If the word 'dry' does not appear after the units, results are reported on an as-is basis.
- RPD Relative Percent Difference



Environmental Chemistry Consulting Services, Inc.
 2525 Advance Road
 Madison, WI 53718
 608-221-8700 (phone)
 608-221-4889 (fax)

CHAIN OF CUSTODY

Project Number: 20.015178.51				Lab Work Order #: A152314				Mail Report To: <u>Bernard Fenelon</u>			
Project Name: <u>Wedron Silica Co.</u>				Analyses Requested				Company: <u>GZA GeoEnvironmental Inc</u>			
Project Location: <u>Wedron, IL</u>				Preservation Codes				Address: <u>20900 SWENSON DRIVE SUITE 150</u>			
Turn Around (circle one): <u>Normal</u> Rush				Matrix	Total # of Containers	FOC	TOTAL SOLIDS	E-mail Address: <u>BERNARD.FENELON@GZA.COM</u>			
If Rush, Report Due Date:								Invoice To: <u>SAME</u>			
Sampled By (Print): <u>CHRIS AINSWORTH</u>								Company:			
Sample Description				Collection		Address:			Comments	Lab ID	Lab Receipt Time
		Date	Time								
<u>WS-SB-GP 35 (31-33)</u>		<u>6/3/2015</u>	<u>1355</u>	<u>S</u>	<u>1</u>	<u>+</u>	<u>X</u>				
Preservation Codes A=None B=HCL C=H ₂ SO ₄ D=HNO ₃ E=EnCore F=Methanol G=NaOH O=Other (Indicate)				Relinquished By: <u>[Signature]</u>		Date: <u>6/4/15</u>	Time: <u>1156</u>	Received By: <u>Kari-Ann Hillier</u>		Date: <u>6/4/15</u>	Time: <u>1156</u>
Matrix Codes A=Air S=Soil W=Water O=Other				Custody Seal: Present/Absent		Intact/Not Intact		Seal #'s		Receipt Temp:	
				Shipped Via: <u>Hand del.</u>						Temp Blank <u>Y N on ice</u>	

June 15, 2015

Jessica Esser
ECCS
2525 Advance Road
Madison, WI 53718

RE: Project: A152314 WEDRON SILICA
Pace Project No.: 40116051

Dear Jessica Esser:

Enclosed are the analytical results for sample(s) received by the laboratory on June 05, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Dan Milewsky
dan.milewsky@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
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CERTIFICATIONS

Project: A152314 WEDRON SILICA

Pace Project No.: 40116051

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

North Dakota Certification #: R-150

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

US Dept of Agriculture #: S-76505

Wisconsin Certification #: 405132750

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: A152314 WEDRON SILICA

Pace Project No.: 40116051

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40116051001	A152314-01	Solid	06/03/15 13:55	06/05/15 09:05

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: A152314 WEDRON SILICA
Pace Project No.: 40116051

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40116051001	A152314-01	ASTM D2974-87	DEY	1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: A152314 WEDRON SILICA

Pace Project No.: 40116051

Sample: A152314-01 **Lab ID: 40116051001** Collected: 06/03/15 13:55 Received: 06/05/15 09:05 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fractional Organic Carbon	Analytical Method: ASTM D2974-87								
Fractional Organic Carbon	0.99	% (w/w)	0.058	0.058	1		06/10/15 12:27		FOC,R1

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: A152314 WEDRON SILICA
Pace Project No.: 40116051

QC Batch:	WET/22317	Analysis Method:	ASTM D2974-87
QC Batch Method:	ASTM D2974-87	Analysis Description:	D2974 Fractional Organic Carbon
Associated Lab Samples:	40116051001		

METHOD BLANK: 1173315 Matrix: Solid
Associated Lab Samples: 40116051001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fractional Organic Carbon	% (w/w)	<0.058	0.058	06/10/15 12:24	FOC

LABORATORY CONTROL SAMPLE: 1173316

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fractional Organic Carbon	% (w/w)	242	230	95	80-120	FOC

SAMPLE DUPLICATE: 1173317

Parameter	Units	40116051001 Result	Dup Result	RPD	Max RPD	Qualifiers
Fractional Organic Carbon	% (w/w)	0.99	0.66	40	10	FOC,R1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALIFIERS

Project: A152314 WEDRON SILICA
Pace Project No.: 40116051

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

FOC Reported results by ASTM D2974-87 for Fractional Organic Carbon (FOC) are determined by multiplying the Soil Organic Matter result by 0.58 (the percentage of organic carbon which comprises the SOM)

R1 RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

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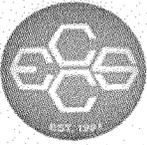
QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: A152314 WEDRON SILICA
Pace Project No.: 40116051

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40116051001	A152314-01	ASTM D2974-87	WET/22317		

REPORT OF LABORATORY ANALYSIS

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SUBCONTRACT ORDER

ECCS

A152314

Amo

40116051

SENDING LABORATORY:

ECCS
2525 Advance Road
Madison, WI 53718
Phone: 608.221.8700
Fax: 608,221,4889
Project Manager: Jessica Esser

RECEIVING LABORATORY:

Pace Analytical
1241 Bellevue Street, Suite 9
Green Bay, WI 54302
Phone : (920) 469-2436
Fax: (920) 469-8827

Turn around Time: Normal
 Rush

Project Name: Wedron Silica - Wedron, IL

		Laboratory ID	Comments
Lab ID: A152314-01	Soil		
Subcontracted Analysis - Pace			FOC - Level IV Data Package
<i>001</i> Solids, Dry Weight			<i>1-4oz bag A</i>
Containers Supplied: 03_4oz WM Amber Glass			

Released By: *Kari-Ann Gillen* Date: *6/4/15* 1500
 Received By: _____ Date: _____
 Released By: *Spadee* Date: *6-5-15* 905
 Received By: *Marimckay* Date: *6-5-15* 905

40116051



Sample Condition Upon Receipt

Pace Analytical Services, Inc.
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Project #: WO#: 40116051

Client Name: ECCS

Courier: Fed Ex UPS Client Pace Other: Speedee

Tracking #: 007423 03 15515 23607



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

Custody Seal on Samples Present: yes no Seals intact: yes no

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer Used: SR-65 Type of Ice: Wet Blue Dry None Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 4 / Corr: 4.5 Biological Tissue is Frozen: yes no

Temp Blank Present: yes no

Person examining contents:
Date: 6-5-15
Initials: mm

Temp should be above freezing to 6°C for all sample except Biota.
Frozen Biota Samples should be received ≤ 0°C.

Comments:

Table with 15 rows of inspection criteria and checkboxes. Includes items like 'Chain of Custody Present', 'Short Hold Time Analysis', 'Rush Turn Around Time Requested', etc.

Client Notification/ Resolution: Person Contacted: Date/Time: Comments/ Resolution: If checked, see attached form for additional comments

Project Manager Review: AMH for DM Date: 6/5/15



2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

June 13, 2015

Bernard Fenelon
GZA GeoEnvironmental, Inc
20900 Swenson Drive, Suite 150
Waukesha, WI 53186
RE: Wedron Silica - Wedron, IL

Enclosed are the analytical results for the samples received by the laboratory on 06/04/2015.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. These results are in compliance with the 2009 NELAC Standards and the appropriate agencies listed below, unless otherwise noted in the case narrative. This analytical report should be reproduced in its entirety.

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

Sincerely,

Jessica Esser
Project Manager

Certification List

Expires

DODELAP	DOD ELAP Accreditation (A2LA)	3269.01	03/31/2016
ILEPA	Illinois Secondary NELAP Accreditation	003174	06/30/2015
KDHE	Kansas Secondary NELAP Accreditation	E-10384	07/31/2015
LELAP	Louisiana Primary NELAP Accreditation	04165	06/30/2015
NJDEP	New Jersey Secondary NELAP Accreditation	WI004	06/30/2015
ODEQ	Oklahoma Department of Environmental Quality Accreditation	2014-153	08/31/2015
WDNR	Wisconsin Certification under NR 149	113289110	08/31/2015



2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

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

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WP-1	A152313-01	Soil	06/03/2015	06/04/2015

CASE NARRATIVE

Sample Receipt Information:

1 sample was received on 6/4/2015 1:06:00 PM . Sample was received on ice. Sample was received in acceptable condition.

Please see the chain of custody (COC) document at the end of this report for additional information.



2525 Advance Road
 Madison, WI 53718
 608.221.8700 Phone
 608.221.4889 Fax

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

WP-1
A152313-01 (Soil)

Date Sampled
06/03/2015 10:45

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

EPA 1010 **Preparation Batch:WET 22296**

Flashpoint	>210			deg F	1	06/09/2015	06/09/2015 13:44	EPA 1010	
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EPA 6010 **Preparation Batch:MPRP 12036**

Lead	ND	0.0030	0.0075	mg/L	1	06/10/2015	06/10/2015 18:34	EPA 6010	
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EPA 8260 **Preparation Batch:MSV 28818**

Benzene	32.2	5.0	10.0	ug/L	10	06/11/2015	06/11/2015 11:14	EPA 8260	
Ethylbenzene	43.9	5.0	10.0	ug/L	10	06/11/2015	06/11/2015 11:14	EPA 8260	
Methyl-tert-butyl ether	ND	1.7	10.0	ug/L	10	06/11/2015	06/11/2015 11:14	EPA 8260	
Toluene	17.3	5.0	10.0	ug/L	10	06/11/2015	06/11/2015 11:14	EPA 8260	
Xylene (Total)	173	15.0	30.0	ug/L	10	06/11/2015	06/11/2015 11:14	EPA 8260	

Surrogate: 4-Bromofluorobenzene (S)			96 %	70-130		06/11/2015	06/11/2015 11:14	EPA 8260	
Surrogate: Dibromofluoromethane (S)			92 %	70-130		06/11/2015	06/11/2015 11:14	EPA 8260	
Surrogate: Toluene-d8 (S)			96 %	70-130		06/11/2015	06/11/2015 11:14	EPA 8260	

EPA 9095 **Preparation Batch:WET 22294**

Free Liquids	Pass			no units	1	06/08/2015	06/08/2015 12:37	EPA 9095	
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2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

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

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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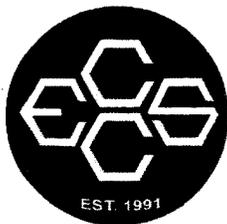
2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

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

Notes and Definitions

- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis. If the word 'dry' does not appear after the units, results are reported on an as-is basis.
- RPD Relative Percent Difference



Environmental Chemistry Consulting Services, Inc.
 2525 Advance Road
 Madison, WI 53718
 608-221-8700 (phone)
 608-221-4889 (fax)

CHAIN OF CUSTODY

Project Number: <u>20.0151178.51</u>				Lab Work Order #: <u>A152313</u>					Mail Report To: <u>BERNARD FENELON</u>							
Project Name: <u>WEDRON SILICA CO.</u>				Analyses Requested					Company: <u>GZA GEOENVIRONMENTAL, INC.</u>							
Project Location: <u>WEDRON, IL.</u>				Preservation Codes					Address: <u>20900 SWENSON DRIVE SUITE 150</u>							
Turn Around (circle one): <u>Normal</u> Rush				Matrix	Total # of Containers	TCLP BTEX/MTEH	TOP LEAD	PAINT FINGER	FLASH POINT	TOTAL SOLIDS	E-mail Address: <u>BERNARD.FENELON@GZA.COM</u>					
If Rush, Report Due Date:											Invoice To: <u>SAME</u>			Company:		
Sampled By (Print): <u>CHRIS AINSWORTH</u>											Address:			Company:		
Sample Description											Collection					Comments
		Date	Time								Lab ID	Lab Receipt Time				
<u>WP-1</u>		<u>6/3/15</u>	<u>1045</u>	<u>S</u>	<u>2</u>	<u>+</u>	<u>+</u>	<u>x</u>	<u>+</u>	<u>x</u>	<u>01</u>					
<u>Cancel TS per client.</u>																
Preservation Codes A=None B=HCL C=H ₂ SO ₄ D=HNO ₃ E=EnCore F=Methanol G=NaOH O=Other (Indicate)				Relinquished By: <u>[Signature]</u>			Date:	Time:	Received By: <u>Kari-Ann Killian</u>			Date:	Time:			
				Relinquished By:			Date:	Time:	Received By:			Date:	Time:			
Matrix Codes A=Air S=Soil W=Water O=Other				Custody Seal: Present/Absent			Intact/Not Intact			Seal #'s			Receipt Temp:			
				Shipped Via: <u>Hand del.</u>						Temp Blank Y N <u>on ice</u>						

June 12, 2015

Jessica Esser
ECCS
2525 Advance Road
Madison, WI 53718

RE: Project: A152313 WEDRON SILICA
Pace Project No.: 40116049

Dear Jessica Esser:

Enclosed are the analytical results for sample(s) received by the laboratory on June 05, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Dan Milewsky
dan.milewsky@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: A152313 WEDRON SILICA

Pace Project No.: 40116049

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

North Dakota Certification #: R-150

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

US Dept of Agriculture #: S-76505

Wisconsin Certification #: 405132750

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: A152313 WEDRON SILICA
Pace Project No.: 40116049

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40116049001	A152313-01	Solid	06/03/15 10:45	06/05/15 09:05

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: A152313 WEDRON SILICA

Pace Project No.: 40116049

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40116049001	A152313-01	EPA 6010	JBR	1
		EPA 8260	LAP	8
		EPA 1010	DEY	1
		EPA 9095	DEY	1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: A152313 WEDRON SILICA

Pace Project No.: 40116049

Sample: A152313-01 **Lab ID: 40116049001** Collected: 06/03/15 10:45 Received: 06/05/15 09:05 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, TCLP									
Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Leachate Method/Date: EPA 1311; 06/09/15 00:00									
Lead	<0.0030	mg/L	0.0075	0.0030	1	06/10/15 09:56	06/10/15 18:34	7439-92-1	
8260 MSV TCLP									
Analytical Method: EPA 8260 Leachate Method/Date: EPA 1311; 06/08/15 00:00									
Benzene	32.2	ug/L	10.0	5.0	10		06/11/15 11:14	71-43-2	
Ethylbenzene	43.9	ug/L	10.0	5.0	10		06/11/15 11:14	100-41-4	
Methyl-tert-butyl ether	<1.7	ug/L	10.0	1.7	10		06/11/15 11:14	1634-04-4	
Toluene	17.3	ug/L	10.0	5.0	10		06/11/15 11:14	108-88-3	
Xylene (Total)	173	ug/L	30.0	15.0	10		06/11/15 11:14	1330-20-7	
Surrogates									
Toluene-d8 (S)	96	%	70-130		10		06/11/15 11:14	2037-26-5	
4-Bromofluorobenzene (S)	96	%	70-130		10		06/11/15 11:14	460-00-4	
Dibromofluoromethane (S)	92	%	70-130		10		06/11/15 11:14	1868-53-7	
1010 Flashpoint, Closed Cup									
Analytical Method: EPA 1010									
Flashpoint	>210	deg F					06/09/15 13:44		
9095 Paint Filter Liquid Test									
Analytical Method: EPA 9095									
Free Liquids	Pass	no units					06/08/15 12:37		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: A152313 WEDRON SILICA
Pace Project No.: 40116049

QC Batch: MPRP/12036 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET TCLP
Associated Lab Samples: 40116049001

METHOD BLANK: 1173042 Matrix: Water
Associated Lab Samples: 40116049001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/L	<0.0030	0.0075	06/10/15 18:01	

METHOD BLANK: 1172336 Matrix: Solid
Associated Lab Samples: 40116049001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/L	<0.015	0.038	06/10/15 18:32	

METHOD BLANK: 1172337 Matrix: Solid
Associated Lab Samples: 40116049001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/L	<0.015	0.038	06/10/15 18:15	

METHOD BLANK: 1172414 Matrix: Solid
Associated Lab Samples: 40116049001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/L	<0.0030	0.0075	06/10/15 18:39	

LABORATORY CONTROL SAMPLE: 1173043

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	mg/L	.5	0.46	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1173044 1173045

Parameter	Units	40115989001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lead	mg/L	<0.015	2.5	2.5	2.2	2.3	90	90	75-125	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: A152313 WEDRON SILICA

Pace Project No.: 40116049

MATRIX SPIKE SAMPLE: 1173046		40116012001	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Lead	mg/L	0.015J	2.5	2.3	91	75-125	

MATRIX SPIKE SAMPLE: 1173047		40116013001	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Lead	mg/L	<0.015	2.5	2.3	91	75-125	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: A152313 WEDRON SILICA
Pace Project No.: 40116049

QC Batch: MSV/28818 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV TCLP
Associated Lab Samples: 40116049001

METHOD BLANK: 1172160 Matrix: Water
Associated Lab Samples: 40116049001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	<0.50	1.0	06/10/15 09:13	
Ethylbenzene	ug/L	<0.50	1.0	06/10/15 09:13	
Methyl-tert-butyl ether	ug/L	<0.17	1.0	06/10/15 09:13	
Toluene	ug/L	<0.50	1.0	06/10/15 09:13	
Xylene (Total)	ug/L	<1.5	3.0	06/10/15 09:13	
4-Bromofluorobenzene (S)	%	94	70-130	06/10/15 09:13	
Dibromofluoromethane (S)	%	92	70-130	06/10/15 09:13	
Toluene-d8 (S)	%	97	70-130	06/10/15 09:13	

METHOD BLANK: 1171838 Matrix: Solid
Associated Lab Samples: 40116049001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	<5.0	10.0	06/10/15 13:15	
Ethylbenzene	ug/L	<5.0	10.0	06/10/15 13:15	
Methyl-tert-butyl ether	ug/L	<1.7	10.0	06/10/15 13:15	
Toluene	ug/L	<5.0	10.0	06/11/15 10:52	
Xylene (Total)	ug/L	<15.0	30.0	06/10/15 13:15	
4-Bromofluorobenzene (S)	%	95	70-130	06/10/15 13:15	
Dibromofluoromethane (S)	%	93	70-130	06/10/15 13:15	
Toluene-d8 (S)	%	99	70-130	06/10/15 13:15	

LABORATORY CONTROL SAMPLE & LCSD: 1172161

Parameter	Units	Spike Conc.	1172162		LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
			LCS Result	LCSD Result						
Benzene	ug/L	50	48.0	50.0	96	100	70-130	4	20	
Ethylbenzene	ug/L	50	54.8	56.3	110	113	70-132	3	20	
Methyl-tert-butyl ether	ug/L	50	35.5	36.1	71	72	48-141	2	20	
Toluene	ug/L	50	54.9	56.0	110	112	70-130	2	20	
Xylene (Total)	ug/L	150	168	172	112	114	70-132	2	20	
4-Bromofluorobenzene (S)	%				98	98	70-130			
Dibromofluoromethane (S)	%				99	99	70-130			
Toluene-d8 (S)	%				97	97	70-130			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: A152313 WEDRON SILICA
Pace Project No.: 40116049

MATRIX SPIKE SAMPLE:		1172163					
Parameter	Units	40115947001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	<5.0	500	478	96	70-130	
Ethylbenzene	ug/L	7.2J	500	546	108	70-132	
Methyl-tert-butyl ether	ug/L	<1.7	500	345	69	48-143	
Toluene	ug/L	51.3	500	548	99	70-130	
Xylene (Total)	ug/L	39.2	1500	1670	109	70-132	
4-Bromofluorobenzene (S)	%				98	70-130	
Dibromofluoromethane (S)	%				100	70-130	
Toluene-d8 (S)	%				97	70-130	

MATRIX SPIKE SAMPLE:		1172180					
Parameter	Units	40115482003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	233	500	712	96	70-130	
Ethylbenzene	ug/L	1190	500	1730	108	70-132	
Methyl-tert-butyl ether	ug/L	6.1J	500	343	67	48-143	
Toluene	ug/L	24700	500	25200	108	70-130 E	
Xylene (Total)	ug/L	6650	1500	8180	102	70-132	
4-Bromofluorobenzene (S)	%				96	70-130	
Dibromofluoromethane (S)	%				98	70-130	
Toluene-d8 (S)	%				97	70-130	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

QUALITY CONTROL DATA

Project: A152313 WEDRON SILICA

Pace Project No.: 40116049

QC Batch: WET/22296

Analysis Method: EPA 1010

QC Batch Method: EPA 1010

Analysis Description: 1010 Flash Point, Closed Cup

Associated Lab Samples: 40116049001

LABORATORY CONTROL SAMPLE: 1172182

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Flashpoint	deg F		82.3			

SAMPLE DUPLICATE: 1172572

Parameter	Units	10308907001 Result	Dup Result	RPD	Max RPD	Qualifiers
Flashpoint	deg F	>210	>210			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: A152313 WEDRON SILICA

Pace Project No.: 40116049

QC Batch: WET/22294

Analysis Method: EPA 9095

QC Batch Method: EPA 9095

Analysis Description: 9095 PAINT FILTER LIQUID TEST

Associated Lab Samples: 40116049001

SAMPLE DUPLICATE: 1171839

Parameter	Units	40115989001 Result	Dup Result	RPD	Max RPD	Qualifiers
Free Liquids	no units	Pass	Pass			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, Inc..

QUALIFIERS

Project: A152313 WEDRON SILICA
Pace Project No.: 40116049

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

E Analyte concentration exceeded the calibration range. The reported result is estimated.

REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, Inc..

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: A152313 WEDRON SILICA

Pace Project No.: 40116049

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40116049001	A152313-01	EPA 3010	MPRP/12036	EPA 6010	ICP/10711
40116049001	A152313-01	EPA 8260	MSV/28818		
40116049001	A152313-01	EPA 1010	WET/22296		
40116049001	A152313-01	EPA 9095	WET/22294		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..



SUBCONTRACT ORDER

ECCS

A152313

Ans

40116049

SENDING LABORATORY:

ECCS
2525 Advance Road
Madison, WI 53718
Phone: 608.221.8700
Fax: 608,221,4889
Project Manager: Jessica Esser

RECEIVING LABORATORY:

Pace Analytical
1241 Bellevue Street, Suite 9
Green Bay, WI 54302
Phone : (920) 469-2436
Fax: (920) 469-8827

Turn around Time: Normal
 Rush

Project Name: Wedron Silica - Wedron, IL

Lab ID	Soil	Sampled	Laboratory ID	Comments
A152313-01		06/03/2015 10:45		
001 Solids, Dry Weight				2-4oz bag A
Paint Filter				TCLP
Lead				Flash Point
Ignitability				TCLP BETX + MTBE
8260 Full List				
Containers Supplied: 03_4oz WM Amber Glass 03_4oz WM Amber Glass				

Released By

Date

Received By

Date

Kari Ann Gillin

6/4/15
1500

Released By

Date

Received By

Date

SPEDONE

6-5-15 905

MAJIMCKAY

6-5-15 905

40116049



Sample Condition Upon Receipt

Pace Analytical Services, Inc.
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Project # WO#: 40116049

Client Name: ECCS

Courier: Fed Ex UPS Client Pace Other: Speedee

Tracking #: 007423 03 15515 23607



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

Custody Seal on Samples Present: yes no Seals intact: yes no

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer Used SR-65 Type of Ice: Wet Blue Dry None Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 4 /Corr: 4.5 Biological Tissue is Frozen: yes

Temp Blank Present: yes no

Person examining contents:
Date: 6-5-15
Initials: mm

Temp should be above freezing to 6°C for all sample except Biota.
Frozen Biota Samples should be received ≤ 0°C.

Comments:

Table with 15 rows of inspection items and checkboxes. Items include Chain of Custody Present, Short Hold Time Analysis, Rush Turn Around Time Requested, etc.

Client Notification/ Resolution:
Person Contacted:
Date/Time:
Comments/ Resolution:

Project Manager Review: [Signature] Date: 6-5-15



APPENDIX D

**TACO Tier 2 C_{sat} Calculation Inputs and Results
Based on the Site-Specific F_{oc} Concentration**



Wedron Silica
Site-Specific C_{sat} Calculations

Equation Number

Parameter ID / Symbol

Exposure Route

Parameter Description

Units

S19

K_d

Outdoor Inhalation - Organics & Mercury

Soil-Water Partition Coefficient

cm^3/g

S29

C_{sat}

Soil Migration to Groundwater

Equation for Derivation of the Soil Saturation Limit

mg/kg

Formula/Equation

$$K_d = K_{oc} \cdot f_{oc}$$

$$C_{sat} = \frac{S}{\rho_b} \cdot [(K_d \cdot \rho_b) + \theta_w + (H' \cdot \theta_a)]$$

Chemical Specific Values												
Compound	CAS	Koc cm^3/g	Kd cm^3/g	Kd cm^3/g	S mg/L	H' (@ 25°C)	C_{sat} mg/kg	ρ_b g/cm^3	θ_a unitless	η unitless	C_{sat} mg/kg	
Benzene	71-43-2	50	0.495	0.495	1800	2.30E-01	1,117	1.70	0.188	0.358	1,117	
Toluene	108-88-3	158	1.564	1.564	530	2.71E-01	898	1.70	0.188	0.358	898	
Ethylbenzene	100-41-4	320	3.168	3.168	170	3.24E-01	562	1.70	0.188	0.358	562	
Xylenes (total)	1330-20-7	398	3.940	3.940	110	2.71E-01	448	1.70	0.188	0.358	448	
1,2,4-Trimethylbenzene	95-63-6	1600	15.84	15.84	59	2.35E-01	942	1.70	0.188	0.358	942	
1,3,5-Trimethylbenzene	108-67-8	660	6.534	6.534	50	3.32E-01	334	1.70	0.188	0.358	334	

Wedron Silica
Site-Specific F_{oc} Calculation Input Values

Site-Specific Parameters, Multiple Exposure Pathways

Symbol	Parameter	Units	Excel Variable	Value Used	Default Value	Source / Notes for Default Value	Site-Specific Value	Source / Notes for Site-Specific Value
f _{oc}	Organic Carbon Content of Soil	g/g	<i>foc_SSL</i>	0.0099	0.002	Site-Specific Recommended Defaults: Surface Soil = 0.006 Subsurface Soil = 0.002	0.0099	Measured value of soil sample collected from 31 to 33 feet from soil boring WS-SB-GP-35.
ρ _b	Dry Soil Bulk Density	g/cm ³	<i>Density_Bulk_Soil_Dry_SSL</i>	1.7	1.5	Default of 1.5, or Gravel = 2.0 Sand = 1.8 Silt = 1.6 Clay = 1.7, or Site-Specific Field Measurement	1.7	Based on soil type of fine sand with silt and clay. Mid-range value between sand and clay selected.
ρ _s	Soil Particle Density (Specific Gravity)	g/cm ³	<i>Density_Particle_Soil</i>	2.65	2.65	Default of 2.65, or Site-Specific Field Measurement		Default value used.
η	Total Porosity	unitless	<i>Porosity_Total_SSL</i>	0.358	0.43	0.43, or	0.358	User-Defined or Calculated, See Below
	Total Porosity, User Defined	unitless		--	--	Gravel = 0.25 Sand = 0.32 Silt = 0.4 Clay = 0.36		Based on soil type of fine sand with silt and clay. Calculated value is within the middle of the range between sand and clay.
	Total Porosity, Calculated	unitless		0.358	--	Calculated Value (Supersedes User-Defined Value)	0.358	Calculated by Equation S24 $\eta = 1 - \frac{\rho_b}{\rho_s}$

Wedron Silica
Site-Specific F_{oc} Calculation Input Values

Site-Specific Parameters, Multiple Exposure Pathways

Symbol	Parameter	Units	Excel Variable	Value Used	Default Value	Source / Notes for Default Value	Site-Specific Value	Source / Notes for Site-Specific Value
θ_a	Air-Filled Porosity	unitless	<i>Porosity_Air Filled_SSL</i>	0.188	0.28	Surface Soil (top 1 meter) = 0.28	0.188	User-Defined or Calculated, See Below
	Air-Filled Porosity, User Defined	unitless		--	--	Subsurface Soil (below 1 meter) = 0.13, or Gravel = 0.05 Sand = 0.14 Silt = 0.24 Clay = 0.19		
	Air-Filled Porosity, Calculated	unitless		0.188	--	Calculated if Bulk Density Specified. Supersedes User-Defined Value.	0.188	Calculated by Equation S21 $\theta_a = \eta - \theta_w$
θ_w	Water-Filled Porosity	unitless	<i>Porosity_Water Filled_SSL</i>	0.170	0.15	Surface Soil (top 1 meter) = 0.15	0.170	User-Defined or Calculated, See Below
	Water-Filled Porosity, User Defined	unitless		0.17	--	Subsurface Soil (below 1 meter) = 0.30, or Gravel = 0.20 Sand = 0.18 Silt = 0.16 Clay = 0.17	0.170	Based on soil type of fine sand with silt and clay. Mid-range value between sand and clay selected.



APPENDIX E

Summary of Soil Disposed

Detail Contract Activity Report

1540248

All Ticket Types

July 01, 2015 to July 31, 2015

History and Waiting

Specific Contract: 41701511890

41701511890

Ticket Date		Facility & Ticket	Customer	Truck	Material	Contract Rate		Billing Quantity
07/29/2015	I	01	955251 333348 - RW COLLINS	LONG303	SW-CONT SOIL	20.00	F	16.34 TN
07/29/2015	I	01	955254 333348 - RW COLLINS	LONGHO	SW-CONT SOIL	20.00	F	18.60 TN
07/29/2015	I	01	955255 333348 - RW COLLINS	LONGHO	SW-CONT SOIL	20.00	F	19.09 TN
07/29/2015	I	01	955263 333348 - RW COLLINS	LONG303	SW-CONT SOIL	20.00	F	24.20 TN
07/29/2015	I	01	955266 333348 - RW COLLINS	LONGHO	SW-CONT SOIL	20.00	F	26.26 TN
07/29/2015	I	01	955269 333348 - RW COLLINS	LONGHO	SW-CONT SOIL	20.00	F	21.45 TN
07/29/2015	I	01	955281 333348 - RW COLLINS	LONG303	SW-CONT SOIL	20.00	F	20.92 TN
07/29/2015	I	01	955284 333348 - RW COLLINS	LONGHO	SW-CONT SOIL	20.00	F	20.96 TN
07/29/2015	I	01	955299 333348 - RW COLLINS	LONGHO	SW-CONT SOIL	20.00	F	26.14 TN
								193.96 TN

Tickets Reported:

9

Items Reported:

9



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV
 If waste is NOT asbestos waste, complete Sections I, II and III

Longhorn 303
 955251

I. GENERATOR (Generator completes Ia-r)

a. Generator's US EPA ID Number		b. Manifest Document Number		c. Page 1 of	
d. Generator's Name and Location: Wedron Silica Company 3450 E 2056 th Rd. Wedron, IL 60557 f. Phone: 815.830.2920			e. Generator's Mailing Address: PO Box 119 Wedron, IL 60557 g. Phone:		
If owner of the generating facility differs from the generator, provide:					
h. Owner's Name:			i. Owner's Phone No.:		
j. Waste Profile #	k. Exp. Date	l. Waste Shipping Name and Description	m. Containers		n. Total Quantity
41701511890	12/31/15	Petroleum (UL Gas) Contd Soil 955251	No.	Type	o. Unit Wt/Vol
			1	CM	16.34 TN.
GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions. I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.					
p. Generator Authorized Agent Name (Print) Michael Melton		q. Signature <i>Michael Melton</i>		r. Date 7/29/15	

II. TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)

a. Transporter's Name and Address: Longhorn express #303 2802 Van esch rd Joliet IL 60431		
b. Phone: 779-205-5747		
c. Driver Name (Print) Juan Moreno	d. Signature <i>Juan Moreno</i>	e. Date 7-29-15

III. DESTINATION (Generator complete IIIa-c and Destination Site completes III d-g)

a. Disposal Facility and Site Address: LandComp LF 2840 E 13th Ottawa, IL 61350 b. Phone: 815.434.1808	c. US EPA Number	d. Discrepancy Indication Space:
I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.		
e. Name of Authorized Agent (Print) TAN	f. Signature <i>TAN</i>	g. Date 7-29-15

IV. ASBESTOS (Generator completes IVa-f and Operator complete IVg-i)

a. Operator's Name and Address:		c. Responsible Agency Name and Address:	
b. Phone:		d. Phone:	
e. Special Handling Instructions and Additional Information:			
f. <input type="checkbox"/> Friable <input type="checkbox"/> Non-Friable <input type="checkbox"/> Both % Friable % Non-Friable			
OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.			
g. Operator's Name and Title (Print)		i. Date	
h. Signature		i. Date	
*Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation or both			



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV
 If waste is NOT asbestos waste, complete Sections I, II and III

Lenghuen 03-201d
 955254

I. GENERATOR (Generator completes Ia-r)

a. Generator's US EPA ID Number		b. Manifest Document Number		c. Page 1 of	
d. Generator's Name and Location: Wedron Silica Company 3450 E 2056 th Rd. Wedron, IL 60557 f. Phone: 815.830.2920			e. Generator's Mailing Address: PO Box 119 Wedron, IL 60557 g. Phone:		
If owner of the generating facility differs from the generator, provide:					
h. Owner's Name:			i. Owner's Phone No.:		
j. Waste Profile #	k. Exp. Date	l. Waste Shipping Name and Description	m. Containers No. Type		n. Total Quantity
41701511890	12/31/15	Petroleum (UL Gas) Contd Soil 955254	1	CM	18.60 TN.
GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions. I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.					
p. Generator Authorized Agent Name (Print) Michael Meltan		q. Signature <i>Michael Meltan</i>		r. Date 7/29/2015	

II. TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)

a. Transporter's Name and Address: BNO - Long term EXPRESS 03 2802 von-esch Rd Joliet IL		
b. Phone:		
c. Driver Name (Print) Hilberto Alvarez	d. Signature <i>Hilberto Alvarez</i>	e. Date 7-29-15

III. DESTINATION (Generator complete IIIa-c and Destination Site completes III d-g)

a. Disposal Facility and Site Address: LandComp LF 2840 E 13th Ottawa, IL 61350 b. Phone: 815.434.1808	c. US EPA Number	d. Discrepancy Indication Space:
I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.		
e. Name of Authorized Agent (Print) TAN	f. Signature <i>TAN</i>	g. Date 7-29-15

IV. ASBESTOS (Generator completes IVa-f and Operator complete IVg-i)

a. Operator's Name and Address:	c. Responsible Agency Name and Address:	
b. Phone:	d. Phone:	
e. Special Handling Instructions and Additional Information:		
f. <input type="checkbox"/> Friable <input type="checkbox"/> Non-Friable <input type="checkbox"/> Both % Friable % Non-Friable		
OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.		
g. Operator's Name and Title (Print)	h. Signature	i. Date
*Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation or both		



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV
If waste is NOT asbestos waste, complete Sections I, II and III

Longhues 94 - 2015
955255

I. GENERATOR (Generator completes Ia-r)

a. Generator's US EPA ID Number		b. Manifest Document Number		c. Page 1 of	
d. Generator's Name and Location: Wedron Silica Company 3450 E 2056 th Rd. Wedron, IL 60557 f. Phone: 815.830.2920			e. Generator's Mailing Address: PO Box 119 Wedron, IL 60557 g. Phone:		
If owner of the generating facility differs from the generator, provide:					
h. Owner's Name:			i. Owner's Phone No.:		
j. Waste Profile #	k. Exp. Date	l. Waste Shipping Name and Description	m. Containers No. Type		n. Total Quantity
41701511890	12/31/15	Petroleum (UL Gas) Contd Soil 955255	1	CM	19.09 TN.
GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions. I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.					
p. Generator Authorized Agent Name (Print) Michael Melton		q. Signature <i>Michael Melton</i>		r. Date 7/29/2015	

II. TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)

a. Transporter's Name and Address: LONGHUES EXPRESS INC 94		
b. Phone:		
c. Driver Name (Print) Afonso Dacoz	d. Signature <i>Afonso Dacoz</i>	e. Date

III. DESTINATION (Generator complete IIIa-c and Destination Site completes III d-g)

a. Disposal Facility and Site Address: LandComp LF 2840 E 13th Ottawa, IL 61350 b. Phone: 815.434.1808	c. US EPA Number	d. Discrepancy Indication Space:
I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.		
e. Name of Authorized Agent (Print) TAN	f. Signature <i>TAN</i>	g. Date 7-29-15

IV. ASBESTOS (Generator completes IVa-f and Operator complete IVg-i)

a. Operator's Name and Address:	c. Responsible Agency Name and Address:	
b. Phone:	d. Phone:	
e. Special Handling Instructions and Additional Information:		
f. <input type="checkbox"/> Friable <input type="checkbox"/> Non-Friable <input type="checkbox"/> Both % Friable % Non-Friable		
OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.		
g. Operator's Name and Title (Print)	h. Signature	i. Date
*Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation or both		



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV
If waste is NOT asbestos waste, complete Sections I, II and III

Long 303 - 2046
955263

I. GENERATOR (Generator completes Ia-r)

a. Generator's US EPA ID Number		b. Manifest Document Number		c. Page 1 of	
d. Generator's Name and Location: Wedron Silica Company 3450 E 2056 th Rd. Wedron, IL 60557 f. Phone: 815.830.2920			e. Generator's Mailing Address: PO Box 119 Wedron, IL 60557 g. Phone:		
If owner of the generating facility differs from the generator, provide:					
h. Owner's Name:			i. Owner's Phone No.:		
j. Waste Profile #	k. Exp. Date	l. Waste Shipping Name and Description	m. Containers No. Type		n. Total Quantity
41701511890	12/31/15	Petroleum (UL Gas) Contd Soil 955263	1	CM	24.20 TN
GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions. I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.					
p. Generator Authorized Agent Name (Print) Michael Melton		q. Signature <i>Michael Melton</i>		r. Date 7/29/2015	

II. TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)

a. Transporter's Name and Address: LongHorn EXPRESS #303 2802 Van Esch Rd Joliet IL 60431		
b. Phone: 779-205-5747		
c. Driver Name (Print) Juan Moreno	d. Signature <i>Juan Moreno</i>	e. Date 7-29-15

III. DESTINATION (Generator complete IIIa-c and Destination Site completes III d-g)

a. Disposal Facility and Site Address: LandComp LF 2840 E 13th Ottawa, IL 61350 b. Phone: 815.434.1808	c. US EPA Number	d. Discrepancy Indication Space:
I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.		
e. Name of Authorized Agent (Print) TAN	f. Signature <i>TAN</i>	g. Date 7-29-15

IV. ASBESTOS (Generator completes IVa-f and Operator complete IVg-i)

a. Operator's Name and Address:	c. Responsible Agency Name and Address:	
b. Phone:	d. Phone:	
e. Special Handling Instructions and Additional Information:		
f. <input type="checkbox"/> Friable <input type="checkbox"/> Non-Friable <input type="checkbox"/> Both % Friable % Non-Friable		
OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.		
g. Operator's Name and Title (Print)	h. Signature	i. Date
*Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation or both		



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV
 If waste is **NOT** asbestos waste, complete Sections I, II and III

I. GENERATOR (Generator completes Ia-f)

a. Generator's US EPA ID Number		b. Manifest Document Number		c. Page 1 of	
d. Generator's Name and Location: Wedron Silica Company 3450 E 2056 th Rd. Wedron, IL 60557 f. Phone: 815.830.2920			e. Generator's Mailing Address: PO Box 119 Wedron, IL 60557 g. Phone:		
If owner of the generating facility differs from the generator, provide:			i. Owner's Phone No.:		
h. Owner's Name:		i. Owner's Phone No.:			
j. Waste Profile #	k. Exp. Date	l. Waste Shipping Name and Description	m. Containers No. Type		n. Total Quantity
41701511890	12/31/15	Petroleum (UL Gas) Contd Soil <i>9552ld</i>	1	cm	26.26 TN
GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions. I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.					
<i>Michael Melton</i>		<i>Michael Melton</i>		7/29/2015	
p. Generator Authorized Agent Name (Print)		q. Signature		r. Date	

II. TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)

a. Transporter's Name and Address: <i>END Longhorn Express Joliet IL</i>		
b. Phone:		
<i>Adriano Alvarez</i>	<i>Adrian Alvarez</i>	7-29-15
c. Driver Name (Print)	d. Signature	e. Date

III. DESTINATION (Generator complete IIIa-c and Destination Site completes III d-g)

a. Disposal Facility and Site Address: LandComp LF 2840 E 13th Ottawa, IL 61350 b. Phone: 815.434.1808	c. US EPA Number	d. Discrepancy Indication Space:
I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.		
<i>TAN</i>	<i>TAN</i>	7-29-15
e. Name of Authorized Agent (Print)	f. Signature	g. Date

IV. ASBESTOS (Generator completes IVa-f and Operator complete IVg-i)

a. Operator's Name and Address:	c. Responsible Agency Name and Address:	
b. Phone:	d. Phone:	
e. Special Handling Instructions and Additional Information:		
f. <input type="checkbox"/> Friable <input type="checkbox"/> Non-Friable <input type="checkbox"/> Both % Friable % Non-Friable		
OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.		
g. Operator's Name and Title (Print)	h. Signature	i. Date
*Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation or both		



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV
 If waste is NOT asbestos waste, complete Sections I, II and III

Langham 94
955269

I. GENERATOR (Generator completes Ia-r)

a. Generator's US EPA ID Number		b. Manifest Document Number		c. Page 1 of		
d. Generator's Name and Location: Wedron Silica Company 3450 E 2056 th Rd. Wedron, IL 60557 f. Phone: 815.830.2920			e. Generator's Mailing Address: PO Box 119 Wedron, IL 60557 g. Phone:			
If owner of the generating facility differs from the generator, provide:			i. Owner's Phone No.:			
h. Owner's Name:			i. Owner's Phone No.:			
j. Waste Profile #	k. Exp. Date	l. Waste Shipping Name and Description	m. Containers		n. Total Quantity	o. Unit Wt/Vol
			No.	Type		
41701511890	12/31/15	Petroleum (UL Gas) Contd Soil <i>955269</i>	1	CM	21.45	+N.
GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions. I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.						
<i>Michael Melfan</i>		<i>Michael Melfan</i>		7/29/2015		
p. Generator Authorized Agent Name (Print)		q. Signature		r. Date		

II. TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)

a. Transporter's Name and Address: <i>Langham</i>		
b. Phone:		
c. Driver Name (Print) <i>Afonso Duque</i>		d. Signature <i>Afonso Duque</i>
		e. Date <i>7/29/15</i>

III. DESTINATION (Generator complete IIIa-c and Destination Site completes III d-g)

a. Disposal Facility and Site Address: LandComp LF 2840 E 13th Ottawa, IL 61350 b. Phone: 815.434.1808		c. US EPA Number	d. Discrepancy Indication Space:
I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.			
e. Name of Authorized Agent (Print) <i>TAN</i>		f. Signature <i>TAN</i>	g. Date <i>7-29-15</i>

IV. ASBESTOS (Generator completes IVa-f and Operator complete IVg-i)

a. Operator's Name and Address:		c. Responsible Agency Name and Address:	
b. Phone:		d. Phone:	
e. Special Handling Instructions and Additional Information:			
f. <input type="checkbox"/> Friable <input type="checkbox"/> Non-Friable <input type="checkbox"/> Both % Friable % Non-Friable			
OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.			
g. Operator's Name and Title (Print)		h. Signature	
		i. Date	
*Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation or both			



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

Long 303 - 20yd.
955281

If waste is asbestos waste, complete Sections I, II, III and IV
If waste is NOT asbestos waste, complete Sections I, II and III

I. GENERATOR (Generator completes Ia-r)

a. Generator's US EPA ID Number		b. Manifest Document Number		c. Page 1 of	
d. Generator's Name and Location: Wedron Silica Company 3450 E 2056 th Rd. Wedron, IL 60557 f. Phone: 815.830.2920			e. Generator's Mailing Address: PO Box 119 Wedron, IL 60557 g. Phone:		
If owner of the generating facility differs from the generator, provide:			i. Owner's Phone No.:		
h. Owner's Name:		i. Owner's Phone No.:			
j. Waste Profile #	k. Exp. Date	l. Waste Shipping Name and Description	m. Containers No. Type		n. Total Quantity
41701511890	12/31/15	Petroleum (UL Gas) Contd Soil 955281	1	cm	20.92 TN
GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions. I certify and warrant that the waste has been treated in accordance with the requirements of 40 CER 268 and is no longer a hazardous waste as defined by 40 CFR 261.					
p. Generator Authorized Agent Name (Print) DAVID OLCHAWA		q. Signature 		r. Date 7/29/15	

II. TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)

a. Transporter's Name and Address: Longhorn express #303 2802 van esch rd doler TN		
b. Phone:		
c. Driver Name (Print) Joaquín Moreno	d. Signature 	e. Date 7-29-15

III. DESTINATION (Generator complete IIIa-c and Destination Site completes III d-g)

a. Disposal Facility and Site Address: LandComp LF 2840 E 13th Ottawa, IL 61350 b. Phone: 815.434.1808		c. US EPA Number	d. Discrepancy Indication Space:
I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.			
e. Name of Authorized Agent (Print) TAN	f. Signature 	g. Date 7-29-15	

IV. ASBESTOS (Generator completes IVa-f and Operator complete IVg-i)

a. Operator's Name and Address:		c. Responsible Agency Name and Address:	
b. Phone:		d. Phone:	
e. Special Handling Instructions and Additional Information:			
f. <input type="checkbox"/> Friable <input type="checkbox"/> Non-Friable <input type="checkbox"/> Both		% Friable % Non-Friable	
OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.			
g. Operator's Name and Title (Print)		i. Date	
h. Signature		i. Date	
*Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation or both			



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

Langhaen 03
955284

If waste is asbestos waste, complete Sections I, II, III and IV
If waste is NOT asbestos waste, complete Sections I, II and III

I. GENERATOR (Generator completes Ia-f)

a. Generator's US EPA ID Number		b. Manifest Document Number		c. Page 1 of		
d. Generator's Name and Location: Wedron Silica Company 3450 E 2056 th Rd. Wedron, IL 60557 f. Phone: 815.830.2920			e. Generator's Mailing Address: PO Box 119 Wedron, IL 60557 g. Phone:			
If owner of the generating facility differs from the generator, provide:			i. Owner's Phone No.:			
h. Owner's Name:						
j. Waste Profile #	k. Exp. Date	l. Waste Shipping Name and Description	m. Containers No.	Type	n. Total Quantity	o. Unit Wt/Vol
41701511890	12/31/15	Petroleum (UL Gas) Contd Soil 955284	1	CM	20.96	TN
GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions. I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.						
p. Generator Authorized Agent Name (Print) DAVID OLCHAWA		q. Signature 		r. Date 7/29/15		

II. TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)

a. Transporter's Name and Address: ENO Long hark Express 03 Joliet IL		
b. Phone:		
c. Driver Name (Print) Alberto Alvares	d. Signature 	e. Date 7-29-15

III. DESTINATION (Generator complete IIIa-c and Destination Site completes III d-g)

a. Disposal Facility and Site Address: LandComp LF 2840 E 13th Ottawa, IL 61350 b. Phone: 815.434.1808	c. US EPA Number	d. Discrepancy Indication Space:
I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.		
e. Name of Authorized Agent (Print) TAN	f. Signature 	g. Date 7-29-15

IV. ASBESTOS (Generator completes IVa-f and Operator complete IVg-i)

a. Operator's Name and Address:	c. Responsible Agency Name and Address:	
b. Phone:	d. Phone:	
e. Special Handling Instructions and Additional Information:		
f. <input type="checkbox"/> Friable <input type="checkbox"/> Non-Friable <input type="checkbox"/> Both % Friable % Non-Friable		
OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.		
g. Operator's Name and Title (Print)	h. Signature	i. Date
*Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation or both		



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

Longhorn 94
955299

If waste is asbestos waste, complete Sections I, II, III and IV
If waste is NOT asbestos waste, complete Sections I, II and III

I. GENERATOR (Generator completes Ia-r)

a. Generator's US EPA ID Number		b. Manifest Document Number		c. Page 1 of	
d. Generator's Name and Location: Wedron Silica Company 3450 E 2056 th Rd. Wedron, IL 60557 f. Phone: 815.830.2920			e. Generator's Mailing Address: PO Box 119 Wedron, IL 60557 g. Phone:		
If owner of the generating facility differs from the generator, provide:					
h. Owner's Name:			i. Owner's Phone No.:		
j. Waste Profile #	k. Exp. Date	l. Waste Shipping Name and Description	m. Containers No. Type		n. Total Quantity
41701511890	12/31/15	Petroleum (UL Gas) Contd Soil 955299	1	UM	20.14 TN
GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions. I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.					
DAVID OLCHAWA				7/29/15	
p. Generator Authorized Agent Name (Print)		q. Signature		r. Date	

II. TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)

a. Transporter's Name and Address: LONGHORN EXPRESS INC		
b. Phone:		
c. Driver Name (Print) Hanson Duence		e. Date 7/29/15
d. Signature 		

III. DESTINATION (Generator complete IIIa-c and Destination Site completes III d-g)

a. Disposal Facility and Site Address: LandComp LF 2840 E 13th Ottawa, IL 61350 b. Phone: 815.434.1808	c. US EPA Number	d. Discrepancy Indication Space:
I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.		
e. Name of Authorized Agent (Print) TAN	f. Signature 	g. Date 7-29-15

IV. ASBESTOS (Generator completes IVa-f and Operator complete IVg-i)

a. Operator's Name and Address:	c. Responsible Agency Name and Address:
b. Phone:	d. Phone:
e. Special Handling Instructions and Additional Information:	
f. <input type="checkbox"/> Friable <input type="checkbox"/> Non-Friable <input type="checkbox"/> Both % Friable % Non-Friable	
OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.	
g. Operator's Name and Title (Print)	i. Date
h. Signature 	
*Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation or both	



APPENDIX F

Remedial Excavation Photo-Documentation

**Wedron Silica Remedial Action
Wedron, Illinois**



Photo No. 1: AST already moved prior to excavating and monitoring well MW-19 prior to abandonment.

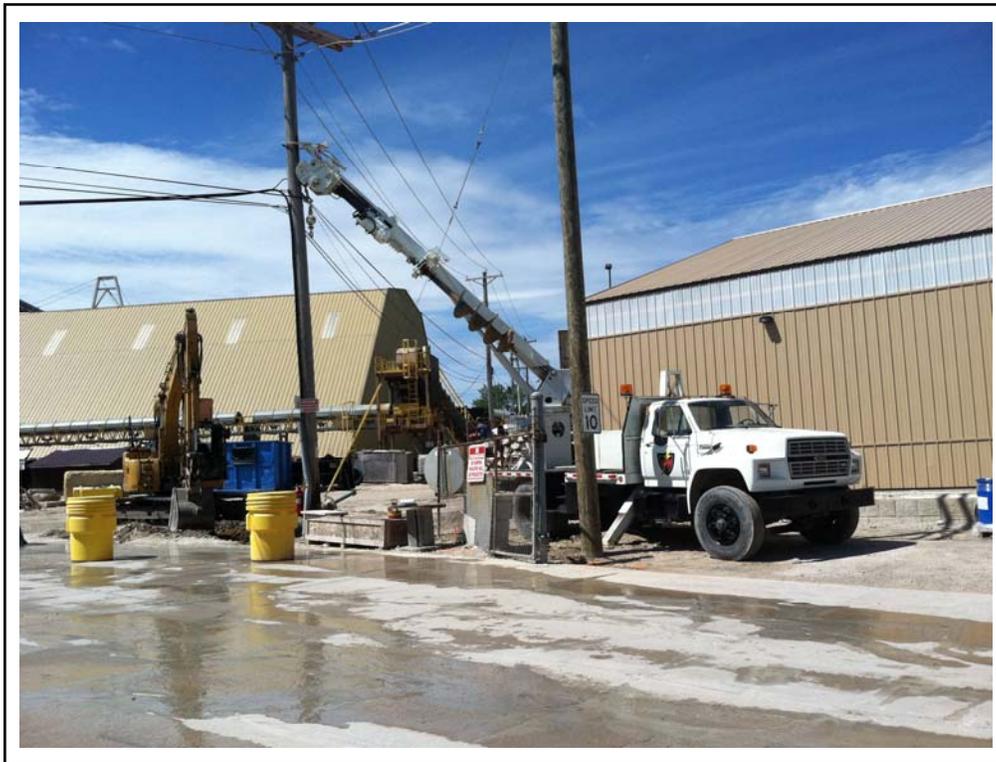


Photo No. 2: Power pole support during excavation.

**Wedron Silica Remedial Action
Wedron, Illinois**



Photo No. 3: Northwest side of excavation with varying bottom depths.



Photo No. 4: East side of excavation at concrete sawcut.

**Wedron Silica Remedial Action
Wedron, Illinois**



Photo No. 5: West side of excavation in deepest portion with backfill from former UST removal visible.



Photo No. 6: South side of excavation with varying bottom depths evident on right side of photograph.

**Wedron Silica Remedial Action
Wedron, Illinois**



Photo No. 7: Compacting clay backfill with vibratory roller.



Photo No. 8: Top of clay cap.

**Wedron Silica Remedial Action
Wedron, Illinois**



Photo No. 9: Finished excavation filled to grade.



APPENDIX G

**Excavation Sidewall and Bottom Soil Samples Analytical Report
and Chain-of-Custody Form**



2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

July 30, 2015

Bernard Fenelon
GZA GeoEnvironmental, Inc
20900 Swenson Drive, Suite 150
Waukesha, WI 53186
RE: Wedron Silica - Wedron, IL

Enclosed are the analytical results for the samples received by the laboratory on 07/29/2015.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. These results are in compliance with the 2009 NELAC Standards and the appropriate agencies listed below, unless otherwise noted in the case narrative. This analytical report should be reproduced in its entirety.

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

Sincerely,

DRAFT REPORT
DATA SUBJECT TO CHANGE

Certification List			Expires
ADEQ	Arkansas Department of Environmental Quality Certification	14-061-0	11/10/2015
DODELAP	DOD ELAP Accreditation (A2LA)	3269.01	03/31/2016
ILEPA	Illinois Secondary NELAP Accreditation	003174	04/30/2016
KDHE	Kansas Secondary NELAP Accreditation	E-10384	09/30/2015
LELAP	Louisiana Primary NELAP Accreditation	04165	06/30/2016
NJDEP	New Jersey Secondary NELAP Accreditation	WI004	09/30/2015
ODEQ	Oklahoma Department of Environmental Quality Accreditation	2014-153	08/31/2015
WDNR	Wisconsin Certification under NR 149	113289110	08/31/2015

DRAFT REPORT

DRAFT REPORT



2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

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

Project: Wedron Silica - Wedron, IL
Project Number: 20.0151178.50
Project Manager: Bernard Fenelon

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Bottom 1 (6')	A153108-01	Soil	07/29/2015	07/29/2015
Wall 1 (4')	A153108-02	Soil	07/29/2015	07/29/2015
Wall 2 (4')	A153108-03	Soil	07/29/2015	07/29/2015
Bottom 2 (7.5')	A153108-04	Soil	07/29/2015	07/29/2015
Wall 3 (4')	A153108-05	Soil	07/29/2015	07/29/2015
Wall 4 (4')	A153108-06	Soil	07/29/2015	07/29/2015
Wall 5 (4')	A153108-07	Soil	07/29/2015	07/29/2015
Methanol Blank	A153108-08	Soil	07/29/2015	07/29/2015

CASE NARRATIVE

Sample Receipt Information:

8 samples were received on 07/29/2015. Samples were received on ice.

The methanol vial for sample A153108-04 was not labeled with the sample description. Client was notified.

Please see the chain of custody (COC) document at the end of this report for additional information.

Hold Time:

Sample Preparation:

Initial Calibrations:

Continuing Calibration Verification (CCV):

Method Blanks:

Laboratory Control Samples (LCS):

Matrix Spike / Matrix Spike Duplicates (MS/MSDs):

Additional Comments:

DRAFT REPORT



2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

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

Project: Wedron Silica - Wedron, IL
Project Number: 20.0151178.50
Project Manager: Bernard Fenelon

Bottom 1 (6')
A153108-01 (Soil)

Date Sampled
07/29/2015 11:00

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: A507121

Benzene	ND	1.4	22	ug/kg dry	1	07/29/2015	07/29/2015 22:10	EPA 8260B	
Ethylbenzene	7.6	1.9	22	ug/kg dry	1	07/29/2015	07/29/2015 22:10	EPA 8260B	J
Methyl t-Butyl Ether	ND	3.9	22	ug/kg dry	1	07/29/2015	07/29/2015 22:10	EPA 8260B	
Toluene	6.3	3.6	22	ug/kg dry	1	07/29/2015	07/29/2015 22:10	EPA 8260B	J
m,p-Xylene	17	2.8	45	ug/kg dry	1	07/29/2015	07/29/2015 22:10	EPA 8260B	J
o-Xylene	4.0	2.7	22	ug/kg dry	1	07/29/2015	07/29/2015 22:10	EPA 8260B	J
Surrogate: Dibromofluoromethane			102 %	84.7-120		07/29/2015	07/29/2015 22:10	EPA 8260B	
Surrogate: Toluene-d8			98.7 %	90.5-108		07/29/2015	07/29/2015 22:10	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			96.8 %	88.3-113		07/29/2015	07/29/2015 22:10	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch: A507120

% Solids	91.1		0.00	% by Weight	1	07/29/2015	07/30/2015 07:45	SM 2540B	
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DRAFT REPORT



2525 Advance Road
 Madison, WI 53718
 608.221.8700 Phone
 608.221.4889 Fax

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

Project: Wedron Silica - Wedron, IL
 Project Number: 20.0151178.50
 Project Manager: Bernard Fenelon

Wall 1 (4')

Date Sampled

A153108-02 (Soil)

07/29/2015 11:30

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: A507121

Benzene	ND	1.6	25	ug/kg dry	1	07/29/2015	07/29/2015 22:53	EPA 8260B	
Ethylbenzene	ND	2.1	25	ug/kg dry	1	07/29/2015	07/29/2015 22:53	EPA 8260B	
Methyl t-Butyl Ether	ND	4.3	25	ug/kg dry	1	07/29/2015	07/29/2015 22:53	EPA 8260B	
Toluene	5.0	4.0	25	ug/kg dry	1	07/29/2015	07/29/2015 22:53	EPA 8260B	J
m,p-Xylene	ND	3.1	50	ug/kg dry	1	07/29/2015	07/29/2015 22:53	EPA 8260B	
o-Xylene	ND	3.0	25	ug/kg dry	1	07/29/2015	07/29/2015 22:53	EPA 8260B	
Surrogate: Dibromofluoromethane			105 %	84.7-120		07/29/2015	07/29/2015 22:53	EPA 8260B	
Surrogate: Toluene-d8			100 %	90.5-108		07/29/2015	07/29/2015 22:53	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			98.6 %	88.3-113		07/29/2015	07/29/2015 22:53	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch: A507120

% Solids	86.5		0.00	% by Weight	1	07/29/2015	07/30/2015 07:45	SM 2540B	
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DRAFT REPORT



2525 Advance Road
 Madison, WI 53718
 608.221.8700 Phone
 608.221.4889 Fax

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.50 Project Manager: Bernard Fenelon
---	--

Wall 2 (4')
A153108-03 (Soil)

Date Sampled
07/29/2015 11:35

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: A507121

Benzene	ND	1.7	27	ug/kg dry	1	07/29/2015	07/29/2015 23:37	EPA 8260B	
Ethylbenzene	ND	2.3	27	ug/kg dry	1	07/29/2015	07/29/2015 23:37	EPA 8260B	
Methyl t-Butyl Ether	ND	4.7	27	ug/kg dry	1	07/29/2015	07/29/2015 23:37	EPA 8260B	
Toluene	5.4	4.3	27	ug/kg dry	1	07/29/2015	07/29/2015 23:37	EPA 8260B	J
m,p-Xylene	ND	3.4	54	ug/kg dry	1	07/29/2015	07/29/2015 23:37	EPA 8260B	
o-Xylene	ND	3.3	27	ug/kg dry	1	07/29/2015	07/29/2015 23:37	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			103 %	84.7-120		07/29/2015	07/29/2015 23:37	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			99.0 %	90.5-108		07/29/2015	07/29/2015 23:37	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			97.4 %	88.3-113		07/29/2015	07/29/2015 23:37	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch: A507120

% Solids	86.1		0.00	% by Weight	1	07/29/2015	07/30/2015 07:45	SM 2540B	
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DRAFT REPORT



2525 Advance Road
 Madison, WI 53718
 608.221.8700 Phone
 608.221.4889 Fax

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

Project: Wedron Silica - Wedron, IL
 Project Number: 20.0151178.50
 Project Manager: Bernard Fenelon

Bottom 2 (7.5')

Date Sampled

A153108-04 (Soil)

07/29/2015 13:50

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: A507121

Benzene	ND	1.8	28	ug/kg dry	1	07/29/2015	07/30/2015 00:20	EPA 8260B	
Ethylbenzene	ND	2.3	28	ug/kg dry	1	07/29/2015	07/30/2015 00:20	EPA 8260B	
Methyl t-Butyl Ether	ND	4.8	28	ug/kg dry	1	07/29/2015	07/30/2015 00:20	EPA 8260B	
Toluene	6.1	4.5	28	ug/kg dry	1	07/29/2015	07/30/2015 00:20	EPA 8260B	J
m,p-Xylene	13	3.5	56	ug/kg dry	1	07/29/2015	07/30/2015 00:20	EPA 8260B	J
o-Xylene	5.0	3.3	28	ug/kg dry	1	07/29/2015	07/30/2015 00:20	EPA 8260B	J
<i>Surrogate: Dibromofluoromethane</i>			103 %	84.7-120		07/29/2015	07/30/2015 00:20	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			100 %	90.5-108		07/29/2015	07/30/2015 00:20	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			98.6 %	88.3-113		07/29/2015	07/30/2015 00:20	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch: A507120

% Solids	89.9		0.00	% by Weight	1	07/29/2015	07/30/2015 07:45	SM 2540B	
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DRAFT REPORT



2525 Advance Road
 Madison, WI 53718
 608.221.8700 Phone
 608.221.4889 Fax

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

Project: Wedron Silica - Wedron, IL
 Project Number: 20.0151178.50
 Project Manager: Bernard Fenelon

Wall 3 (4')

Date Sampled

A153108-05 (Soil)

07/29/2015 14:33

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: A507121

Benzene	26	1.6	25	ug/kg dry	1	07/29/2015	07/30/2015 01:04	EPA 8260B	
Ethylbenzene	130	2.1	25	ug/kg dry	1	07/29/2015	07/30/2015 01:04	EPA 8260B	
Methyl t-Butyl Ether	33	4.3	25	ug/kg dry	1	07/29/2015	07/30/2015 01:04	EPA 8260B	
Toluene	8.5	4.0	25	ug/kg dry	1	07/29/2015	07/30/2015 01:04	EPA 8260B	J
m,p-Xylene	31	3.1	50	ug/kg dry	1	07/29/2015	07/30/2015 01:04	EPA 8260B	J
o-Xylene	38	3.0	25	ug/kg dry	1	07/29/2015	07/30/2015 01:04	EPA 8260B	

Surrogate: Dibromofluoromethane

103 % 84.7-120

07/29/2015

07/30/2015 01:04

EPA 8260B

Surrogate: Toluene-d8

99.5 % 90.5-108

07/29/2015

07/30/2015 01:04

EPA 8260B

Surrogate: 4-Bromofluorobenzene

99.0 % 88.3-113

07/29/2015

07/30/2015 01:04

EPA 8260B

Classical Chemistry Parameters

Preparation Batch: A507120

% Solids	89.0	0.00	% by Weight	1	07/29/2015	07/30/2015 07:45	SM 2540B		
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DRAFT REPORT



2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
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GZA GeoEnvironmental, Inc
20900 Swenson Drive, Suite 150
Waukesha WI, 53186

Project: Wedron Silica - Wedron, IL
Project Number: 20.0151178.50
Project Manager: Bernard Fenelon

Wall 4 (4')

Date Sampled

A153108-06 (Soil)

07/29/2015 14:35

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: A507121

Benzene	ND	1.5	24	ug/kg dry	1	07/29/2015	07/30/2015 03:39	EPA 8260B	
Ethylbenzene	11	2.0	24	ug/kg dry	1	07/29/2015	07/30/2015 03:39	EPA 8260B	J
Methyl t-Butyl Ether	ND	4.1	24	ug/kg dry	1	07/29/2015	07/30/2015 03:39	EPA 8260B	
Toluene	10	3.8	24	ug/kg dry	1	07/29/2015	07/30/2015 03:39	EPA 8260B	J
m,p-Xylene	17	2.9	47	ug/kg dry	1	07/29/2015	07/30/2015 03:39	EPA 8260B	J
o-Xylene	5.7	2.8	24	ug/kg dry	1	07/29/2015	07/30/2015 03:39	EPA 8260B	J

Surrogate: Dibromofluoromethane

107 % 84.7-120

07/29/2015 07/30/2015 03:39 EPA 8260B

Surrogate: Toluene-d8

99.6 % 90.5-108

07/29/2015 07/30/2015 03:39 EPA 8260B

Surrogate: 4-Bromofluorobenzene

% 88.3-113

07/29/2015 07/30/2015 03:39 EPA 8260B

Classical Chemistry Parameters

Preparation Batch: A507120

% Solids	86.8		0.00	% by Weight	1	07/29/2015	07/30/2015 07:45	SM 2540B	
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DRAFT REPORT



2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
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GZA GeoEnvironmental, Inc
20900 Swenson Drive, Suite 150
Waukesha WI, 53186

Project: Wedron Silica - Wedron, IL
Project Number: 20.0151178.50
Project Manager: Bernard Fenelon

Wall 5 (4')

A153108-07 (Soil)

Date Sampled
07/29/2015 14:38

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: A507121

Benzene	6.0	1.5	23	ug/kg dry	1	07/29/2015	07/30/2015 03:10	EPA 8260B	J
Ethylbenzene	4.1	1.9	23	ug/kg dry	1	07/29/2015	07/30/2015 03:10	EPA 8260B	J
Methyl t-Butyl Ether	ND	4.0	23	ug/kg dry	1	07/29/2015	07/30/2015 03:10	EPA 8260B	
Toluene	22	3.7	23	ug/kg dry	1	07/29/2015	07/30/2015 03:10	EPA 8260B	J
m,p-Xylene	11	2.9	46	ug/kg dry	1	07/29/2015	07/30/2015 03:10	EPA 8260B	J
o-Xylene	3.7	2.8	23	ug/kg dry	1	07/29/2015	07/30/2015 03:10	EPA 8260B	J

Surrogate: Dibromofluoromethane

104 % 84.7-120

07/29/2015 07/30/2015 03:10 EPA 8260B

Surrogate: Toluene-d8

98.6 % 90.5-108

07/29/2015 07/30/2015 03:10 EPA 8260B

Surrogate: 4-Bromofluorobenzene

97.6 % 88.3-113

07/29/2015 07/30/2015 03:10 EPA 8260B

Classical Chemistry Parameters

Preparation Batch: A507120

% Solids	88.9	0.00	% by Weight	1	07/29/2015	07/30/2015 07:45	SM 2540B		
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DRAFT REPORT



2525 Advance Road
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GZA GeoEnvironmental, Inc
 20900 Swenson Drive, Suite 150
 Waukesha WI, 53186

Project: Wedron Silica - Wedron, IL
 Project Number: 20.0151178.50
 Project Manager: Bernard Fenelon

Methanol Blank

Date Sampled

A153108-08 (Soil)

07/29/2015 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: A507121

Benzene	ND	1.6	25	ug/kg wet	1	07/29/2015	07/30/2015 02:41	EPA 8260B	
Ethylbenzene	ND	2.1	25	ug/kg wet	1	07/29/2015	07/30/2015 02:41	EPA 8260B	
Methyl t-Butyl Ether	ND	4.3	25	ug/kg wet	1	07/29/2015	07/30/2015 02:41	EPA 8260B	
Toluene	4.0	4.0	25	ug/kg wet	1	07/29/2015	07/30/2015 02:41	EPA 8260B	J
m,p-Xylene	ND	3.1	50	ug/kg wet	1	07/29/2015	07/30/2015 02:41	EPA 8260B	
o-Xylene	ND	3.0	25	ug/kg wet	1	07/29/2015	07/30/2015 02:41	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			105 %	84.7-120		07/29/2015	07/30/2015 02:41	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			98.5 %	90.5-108		07/29/2015	07/30/2015 02:41	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			97.3 %	88.3-113		07/29/2015	07/30/2015 02:41	EPA 8260B	

DRAFT REPORT



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

Project: Wedron Silica - Wedron, IL
Project Number: 20.0151178.50
Project Manager: Bernard Fenelon

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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DRAFT REPORT



2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

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

Project: Wedron Silica - Wedron, IL
Project Number: 20.0151178.50
Project Manager: Bernard Fenelon

Notes and Definitions

- J Analyte was detected but is below the reporting limit. The concentration is estimated.
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis. If the word 'dry' does not appear after the units, results are reported on an as-is basis.
- RPD Relative Percent Difference



**Environmental Chemistry
Consulting Services, Inc.**
2525 Advance Road
Madison, WI 53718
608-221-8700 (phone)
608-221-4889 (fax)

CHAIN OF CUSTODY

Project Number: 20.0151178.50				Lab Work Order #: A153108				Mail Report To: BERNARD FENCLO							
Project Name: WEDRON SILICA				Analyses Requested				Company: GZA GEOTECHNICAL, INC.							
Project Location: WEDRON, IL				Preservation Codes				Address: 20900 SWENSON DRIVE SUITE 180 WAUKESHA, WI 53186							
Turn Around (circle one): Normal (Rush)				Matrix	Total # of Containers	VOC	DRY Wt	E-mail Address: BERNARD.FENCLO@GZA.COM							
If Rush, Report Due Date:								Invoice To: SAME							
Sampled By (Print): CHRIS AINSWORTH								Company:							
Sampled By (Print): CHRIS AINSWORTH				Address:											
Sample Description	Collection		Matrix	Total # of Containers	VOC	DRY Wt					Comments	Lab ID	Lab Receipt Time		
	Date	Time													
Bottom 1 (6')	7/29/15	1100	S	2	X	X						01			
Wall 1 (4')		1130	S	2	X	X						02			
Wall 2 (4')		1135	S	2	X	X						03			
Bottom 2 (2.5')		1350	S	2	X	X				meth vial not labeled je		04			
WALL 3 (4')		1433	S	2	X	X						05			
WALL 4 (4')		1435	S	2	X	X						06			
WALL 5 (4')		1438	S	2	X	X						07			
Methanol Blank je					X							08			
Preservation Codes A=None B=HCL C=H ₂ SO ₄ D=HNO ₃ E=EnCore F=Methanol G=NaOH O=Other (Indicate)				Relinquished By:				Date: 7/29/15	Time: 14:40	Received By:		Date: 7/29/15	Time: 14:40		
Matrix Codes A=Air S=Soil W=Water O=Other				Custody Seal: Present/Absent Intact/Not Intact Seal #s				Date: 7/29/15	Time: 17:10	Received By:		Date: 07-29-15	Time: 1710		
				Shipped Via: WALK-IN				Receipt Temp: on ice		Temp Blank Y N					