



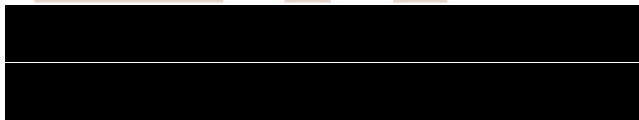
ENVIRONMENTAL
CONSULTANTS

PHASE II ENVIRONMENTAL SITE ASSESSMENT



THORNTON, ILLINOIS 60476

PREPARED FOR



BANK & TRUST

SCHAUMBURG, ILLINOIS 60173

PREPARED BY

A3 Environmental, LLC
11 East Main Street
St. Charles, Illinois 60174
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PROJECT NUMBER: **2019.464**

DATE: **SEPTEMBER 17, 2019**



September 16, 2019

[REDACTED] Bank & Trust
[REDACTED]
Schaumburg, Illinois 60173

RE: Limited Phase II Environmental Site Assessment
[REDACTED]
Thornton, Illinois 60476
A3E Project No.: 2019.464

Dear Michael Connelly:

A3 Environmental, LLC (“A3E”) has completed a Limited Phase II Environmental Site Assessment of the above referenced property. The work was conducted in accordance with A3E’s letter of engagement and generally accepted industry standards. This report was prepared solely for the use of [REDACTED] Bank & Trust (hereinafter “Client” or “User”) and any party specifically referenced in Section 1.6 User Reliance. No other party shall use or rely on this report or the findings herein, without the prior written consent of A3E.

Thank you for the opportunity to provide our services. If you have any questions or need any additional information, please contact the undersigned at paul@a3environmental.com

Sincerely,

A3 Environmental, LLC

Prepared By:

Paul Marek
Project Manager

Senior Reviewer:

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Professional Geologist

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1.0 INTRODUCTION

A3 Environmental, LLC (A3E) performed this Limited *Phase II Environmental Site Assessment (ESA)* in conformance with the scope and limitations of The American Society for Testing and Materials (ASTM) Standard Practice for *Environmental Site Assessments: Phase II Environmental Site Assessment (ESA) Process (E1903-11)* at the following property (hereinafter referred to as the “*target property*”).

Site Description	
Property Name	[REDACTED]
Property Address	[REDACTED]
City, County, State, Zip	Thornton, Cook County, Illinois 60476
Property Use	The <i>target property</i> is currently occupied by a commercial trucking and excavating company.
Parcel Number(s)	[REDACTED]

The *target property* location is depicted on **Figure 1**. **Figure 2** identifies the surrounding land uses.

1.1 IEPA DOCUMENT REVIEW

According to documents available on the IEPA document explorer, five (5) Underground Storage Tanks (USTs) were removed from the *target property* by Great Lakes Group in 1994 in response to reported releases associated with each of the tanks. Following the UST removals, approximately 600 cubic yards of soil were removed from the *target property*, however no confirmatory samples were collected at the time of the soil excavation and disposal. A 45 day report was submitted to the IEPA by Gabriel Environmental in July 2003 detailing the UST removals, soil removal and UST conditions which noted for each of the five (5) UST’s that the cause of the releases was “holes in the tank.”

1.2 PURPOSE

The purpose of the Limited Phase II ESA was to evaluate the *target property* and to investigate the current status of the soil on site, as aforementioned, no confirmatory samples were collected following the UST and soil removal activities in 1994.

The Client is advised that if the ESA is obtained with the intent of qualifying the purchaser as an innocent landowner, contiguous property owner, or bona fide prospective purchaser under CERCLA, there will be continuing obligations of due care and responsiveness and additional legal requirements that likely apply to such status. A3E accepts and undertakes no responsibility as to such requirements and advises that counsel be separately consulted with respect to such requirements.

1.3 SCOPE OF SERVICES

The scope of work for this assessment was in general accordance with the American Society of Testing and Materials (ASTM) Standard Practices for Environmental Site Assessments: Phase II ESA Process (ASTM Designation: E1903-11). These methodologies are described as representing good commercial and customary practice for conducting a Phase II ESA of a property for the purpose of evaluating recognized environmental conditions.

Specifically, the scope of work included the following tasks:

- Review of Existing Information
- Field Exploration
- Sampling and Chemical Analysis
- Evaluation of Chemical Analysis Results
- Discussion of Findings and Conclusions

1.4 LIMITATIONS AND EXCEPTION OF ASSESSMENTS

The report has been prepared in accordance with generally accepted environmental methodologies referred to in ASTM 1903-11, and contains all of the limitations inherent in these methodologies. No other warranties, expressed or implied, are made as to the professional services provided under the terms of our contract and included in this report.

1.5 LIMITING CONDITIONS AND METHODOLOGIES USED

No ESA can eliminate all uncertainty. Furthermore, any sample, either surface or subsurface, taken for chemical analysis may or may not be representative of a larger population. Professional judgment and interpretation are inherent in the process and uncertainty is inevitable. Additional assessment may be able to reduce the uncertainty.

Even when Phase II ESA work is executed with an appropriate site-specific standard of care, certain conditions present especially difficult detection problems. Such conditions may include, but are not limited to, complex geological settings, the fate and transport characteristics of certain hazardous substances and petroleum products, the distribution of existing contamination, physical limitations imposed by the location of utilities and other man-made objects, and the limitations of assessment technologies.

Phase II ESAs do not generally require an exhaustive assessment of environmental conditions on a property. There is a point at which the cost of information obtained and the time required to obtain it outweigh the usefulness of the information and, in fact, may be a material detriment to the orderly completion of transactions. If hazardous substance or petroleum releases are confirmed on a parcel of property, the extent of further assessment is related to the degree of uncertainty that is acceptable to the user with respect to the real estate transaction.

Measurements and sampling data only represent the site conditions at the time of data collection. Therefore, the usability of data collected as part of this Phase II ESA may have a finite lifetime depending on the application and use being made of the data. An environmental professional should evaluate whether the generated data are appropriate for any subsequent use beyond the original purpose for which it was collected.

1.6 USER RELIANCE

This Limited Phase II ESA and report was prepared on behalf and for the exclusive use of [REDACTED] Bank & Trust (*user*), and its agents, and attorneys. The report and its findings shall not, in whole or in part, be disseminated or conveyed to another party, nor used by another party in whole or in part, without prior written consent by A3 Environmental, LLC.

2.0 SITE INVESTIGATION ACTIVITIES

2.1 UTILITY CLEARANCE

Prior to drilling activities C.S. Drilling, of Naperville, Illinois, contracted by A3E, contacted the Illinois One Call system, Illinois-811, to complete a subsurface utility clearance for the Site.

2.2 DESCRIPTION OF SAMPLING PLAN

The Limited Phase II ESA was completed on Friday, August 30, 2019. A site-specific sampling plan was developed to ensure that the objectives of the assessment were achieved.

The sampling plan included the advancement of up to ten (10) soil borings in the locations where former USTs were located on the target property to investigate whether or not soils above Illinois Environmental Protection Agency (IEPA) Tiered Approach to Corrective Action Objectives (TACO) Tier 1 Soil Remediation Objectives (SROs) were present on the *target property*. The boring locations were located downgradient from the former UST basins. A3E advanced ten (10) soil borings to depths varying between six (6) and fourteen (14) feet bgs based on the estimated inverts of the former USTs on the *target property*. One (1) soil sample was collected from each soil boring for laboratory analysis and analyzed for chemical constituents based on the contents of each of the former USTs.

Groundwater was encountered at a depth of approximately 14 feet bgs during the site investigation. The construction of monitoring wells was not in the scope of work for this limited Phase II ESA, therefore, groundwater samples were not collected during site investigation activities.

2.3 METHODS OF SAMPLING

All Limited Phase II ESA sampling procedures were performed according to standards set forth by the United States Environmental Protection Agency (USEPA) SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," ASTM E1903-11 standard, "Standard for Environmental Site Assessments: Phase II Environmental Site Assessment Process", Occupational Health & Safety Administration (OSHA) 1910 Standards and the Illinois EPA.

A3E conducted field activities according to standard industry practice for collecting representative soil samples and to prevent cross-contamination. Each boring was installed using a direct-push Geoprobe® sampling unit. Continuous subsurface soil samples were collected using 4-foot stainless steel sampling tubes lined with acetate sample liners.

At each 4-foot interval, the acetate liner was opened and a representative soil sample from each two-foot section was immediately placed in a zipper locked, 4-mil plastic bag, with airspace and allowed to warm to ambient conditions. Each soil sample was field-screened using a RAE System photo-ionization detector (PID) with a 10.6 eV lamp, calibrated to a standard of 100 parts per million by volume (ppmv) isobutylene for VOCs. The field screening was used to provide a relative indication of the potential presence of volatile organic vapors to aid in the selection of samples for laboratory analysis.

Based on field screening results, visual observations, and the estimated depths of the inverts of the former USTs located on site, one soil sample was collected from each soil boring for laboratory analysis on the basis of the following criteria:

- The soil samples were collected based on the estimated depths of the former UST inverts.
- The soil sample was within an unsaturated zone that exhibits the highest headspace concentration and/or visual evidence of impact.
- When no outward evidence of impact was observed in the boring (i.e., PID readings were within “background” range and there was no visual/olfactory indication of impact), one sample was selected from a depth most likely to display the presence of impact.

All soil samples were placed in laboratory-provided sample containers, labeled, and stored in an ice-filled cooler. The samples were provided under strict chain of custody procedures to Pace Analytical in Green Bay, Wisconsin, a National Environmental Laboratory Accreditation (NELAC) accredited laboratory and an Illinois Certified Laboratory.

2.4 ANALYTICAL METHODS

The following table identifies the compounds and analysis methods used to determine the concentrations of compound-of-concern (COC) in soil and groundwater.

Compound	USEPA Analytical Method	Matrix
Benzene, Ethylbenzene, Toluene, Xylenes (BTEX)/Volatile Organic Compounds (VOCs)	8260	Soil
Polynuclear Aromatic Hydrocarbons (PNAs)/Semi-Volatile Organic Compounds	8270	Soil
Polychlorinated Biphenyls (PCBs)	8015	Soil
RCRA Metals/Lead	6010	Soil
pH	9040	Soil

2.5 FIELD ACTIVITY

On Friday, August 30, 2019, A3E completed Limited Phase II ESA activities at the *target property*.

The Limited Phase II ESA consisted of advancing ten (10) soil borings (SB-1 through SB-10) to depths varying between 6 and 15 feet below ground surface (bgs) in the areas where the former USTs were located on the *target property*. The locations of the soil borings are depicted on **Figure 3**. One (1) soil sample was collected from each soil boring for laboratory analysis. Laboratory analysis was based on the contents of each of the former USTs on site.

Soil Boring Location	Depth (ft)	UST Contents	Compound
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Soil Boring Location	Depth (ft)	UST Contents	Compound
SB-1	6-7'	Gasoline	BTEX, Lead, pH
SB-2	6-8'	Gasoline	BTEX, Lead, pH
SB-3	5-6'	Diesel	BTEX, PNAs
SB-4	12-14'	Diesel	BTEX, PNAs
SB-5	8-10'	Diesel	BTEX, PNAs
SB-6	12-14'	Diesel	BTEX, PNAs
SB-7	2-4'	Used Oil	VOCs, SVOCs, PCBs, RCRA Metals, pH
SB-8	2-4'	Used Oil	VOCs, SVOCs, PCBs, RCRA Metals, pH
SB-9	10-12'	Diesel	BTEX, PNAs
SB-10	10-12'	Diesel	BTEX, PNAs

Copies of the soil boring logs, which include the soil lithology and PID readings, are included in **Appendix A**. The site is underlain by fill material comprised of fine to medium gravel and concrete pieces from the surface to a depth of 7 feet bgs. Beneath the fill is gray silty clay followed by tan and gray sandy silty clay to a depth between 7 and 15 feet bgs. Saturated conditions were only encountered in two (2) soil borings (SB-4 and SB-9) at a depth of 14 feet bgs.

Odors and staining were observed in all of the soil samples collected, with the exception of soil boring SB-10 where there was no indication of staining or odors. Petroleum odors and staining were observed ranging from depths of approximately 5-14 feet bgs. The odors and staining were typically observed at the invert depth and below each of the former UST locations. Elevated PID readings were also noted on site. PID field screening readings are provided in the completed soil boring logs which are attached as **Appendix A**.

3.0 ANALYTICAL RESULTS

3.1 SOIL ANALYTICAL RESULTS

Sampled depths and detected analytes in each of the collected subsurface soil samples were compared to the IEPA TACO Tier 1 SROs for Industrial/Commercial properties - Ingestion, Inhalation, Construction Worker Ingestion/Inhalation, and the Soil Component of the Groundwater Ingestion Route (SCOGI-Class II). The laboratory analytical results for the soil samples collected during the Limited Phase II ESA Site Investigation are provided in **Table 1**. The laboratory analytical reports are presented in **Appendix B**.

Volatile Organic Compounds (VOCs)

Soil analytical results from this investigation indicated that concentrations of VOCs were below IEPA TACO Tier 1 SROs for industrial/commercial properties with the exception of Benzene, detected in soil sample SB-4 which exceeds the Class II Soil Component to the Groundwater Ingestion Route (SCOGI). Soil BTEX and VOC results are summarized in **Tables 1a and 1b, respectively**.

Semi-Volatile Organic Compounds (SVOCs)

Soil analytical results from this investigation indicated that concentrations of various SVOC constituents and PNA constituents were below the TACO Tier 1 SROs for industrial/commercial properties or the allowable background concentrations set by the IEPA for Metropolitan Areas. Soil SVOC results are summarized in **Table 1c**.

Polychlorinated Biphenyls (PCBs)

Soil analytical results from this investigation indicated that concentrations of PCBs were not detected in any of the soil samples collected on site. Soil PCB results are summarized in **Table 1e**.

RCRA Metals

Soil analytical results from this investigation indicated that concentrations RCRA Metals in the soil samples were below the TACO Tier 1 SROs for industrial/commercial properties or the allowable background concentrations set by the IEPA for Metropolitan Areas. Soil RCRA Metal results are summarized in **Table 1f**.

3.2 PATHWAY EXPOSURE EVALUATION

The VOC constituent, Benzene, in the soil sample SB-4, exceeded the Class II SCOGI; therefore, the pathway is incomplete and further investigation or activities are warranted.

4.0 CONCLUSION AND RECOMMENDATIONS

A3 Environmental, LLC (A3E) performed this Limited Phase II Environmental Site Assessment (ESA) in conformance with the scope and limitations of The American Society for Testing and Materials (ASTM) Standard Practice for *Environmental Site Assessments: Phase II Environmental Site Assessment (ESA) Process (E1903-11)* for the [REDACTED] located at [REDACTED] in Thorntons, Cook County, Illinois (hereinafter referred to as the *target property*). The *target property* location is depicted on **Figure 1**.

The Limited Phase II ESA was performed to determine the presence of environmental impacts associated with documents found on the IEPA document explorer. Based on a review of historical documents, A3E identified the following information:

- Five USTs were removed from the *target property* in 1994 in response to reported releases associated with each of the tanks. Following the tank removals, approximately 600 cubic yards of soil were removed from the site, however no confirmatory samples were collected at the time of the soil excavation and disposal.

In order to assess if subsurface soils and/or groundwater was impacted by the above identified information, A3E advanced 10 soil borings at the *target property* using GeoProbe® direct push drilling methods. The soil borings were advanced to a depth of 15 feet bgs to evaluate potential contamination. Groundwater was encountered at a depth of approximately 14 bgs, however, groundwater samples were not collected.

Soil samples were analyzed for Volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs), Polychlorinated Biphenyls (PCBs) and RCRA Metals which represent the indicator contaminants associated with the identified contents of the former USTs on the target property. The soil results were compared to the IEPA TACO Tier 1 SROs for Industrial/Commercial properties-Ingestion and Inhalation, Construction Worker Ingestion and Inhalation, and the Soil Component of the Groundwater Ingestion Route (SCOGI-Class II).

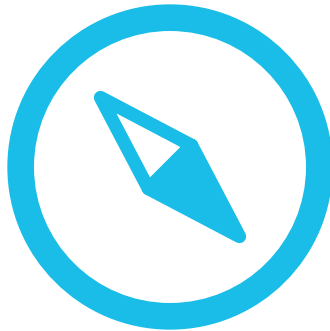
One (1) soil sample, SB-4, exhibited a concentration of the VOC constituent, Benzene, exceeding the Class II SCOGI.

Based on the analytical results of this assessment it appears that soils in the vicinity of SB-4 have been impacted from the former Gasoline UST located on site. It is A3E's understanding that there is no specific requirement for notification to the Illinois Emergency Management Agency (IEMA). Notwithstanding, A3E recommends that current property ownership seek legal counsel to confirm the applicable reporting requirements for the exceedance.

A3E recommends enrolling the site with the Illinois EPA Site Remediation Program (SRP) to receive a "No Further Remediation" (NFR) letter for the site. The SRP is a voluntary Illinois EPA program and the NFR is considered *prima facie* evidence that the site does not constitute a significant risk of harm to human health and to the environment, so long as the site is utilized in accordance with the terms of the NFR letter. The IEPA will require an additional site investigation in order to delineate the horizontal and vertical extent of soils above TACO Tier 1 SROs and to determine the groundwater characteristics at the site. If the site is to be enrolled with the IEPA, A3E recommends coordinating any planned site development and remediation activities in order to minimize the cost associated with site remediation development.



A3E's conclusions and recommendations are based on the results of this assessment, specifically, the IEPAs historical documents and the ten (10) soil samples collected during the Limited Phase II ESA site investigation activities on site. It is possible that varying subsurface conditions, including soil types, types of contaminants and concentrations of contaminants may exist at other locations on the *target property*. Because of this, A3E cannot be held accountable for identifying these based on scope and/or budget limitations. Further, this assessment was not intended to satisfy the level of inquiry that may be necessary to support remedial activities or determine migration pathways related to the reported releases from the former USTs located on the *target property*.



FIGURES



TABLES

Table 1a
 Soil Analytical Results
 BTEX
 TACO Tier 1 SROs
 Thornton, IL

Analyte	INDUSTRIAL COMMERCIAL		CONSTRUCTION WORKER		SOIL COMPONENT TO GROUNDWATER Class II	Sample	SB-1	SB-2	SB-3	SB-4	SB-5	SB-6
	Ingestion	Inhalation	Ingestion	Inhalation		Date	8/30/2019	8/30/2019	8/30/2019	8/30/2019	8/30/2019	8/30/2019
	Depth (ft)	6-8	6-8	5-6		12-14	8-10	12-14				
Benzene	100	1.6	2,300	2.2	0.17	0.058	<0.0029	<0.0031	0.43	0.12	<0.0029	
Toluene	200,000	400	410,000	42	29	<0.015	<0.0033	<0.0036	<0.033	0.041 J	<0.0033	
Ethylbenzene	410,000	650	20,000	58	19	0.24	<0.0038	<0.0040	0.053 J	0.062 J	<0.0037	
Xylenes, Total	410,000	320	41,000	5.6	150	0.40	0.0094 J	<0.010	<0.14	0.33 J	<0.0091	

NOTES

All results expressed in milligrams per kilogram (mg/kg)
 Shaded/Bolded values = Concentration exceeds IEPA SRO
 SROs = Soil Remediation Objectives
 NC = No toxicity criteria for this exposure route.
 NA = Not analyzed for this constituent.

Table 1a
 Soil Analytical Results
 BTEX
 TACO Tier 1 SROs
 Thornton, IL

Analyte	INDUSTRIAL COMMERCIAL		CONSTRUCTION WORKER		SOIL COMPONENT TO GROUNDWATER	Sample	SB-7	SB-8	SB-9	SB-10
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	Date	8/30/2019	8/30/2019	8/30/2019	8/30/2019
						Depth (ft)	2-4	2-4	10-12	10-12
Benzene	100	1.6	2,300	2.2	0.17		<0.0036	<0.011	<0.0036	<0.0031
Toluene	200,000	400	410,000	42	29		<0.0041	0.020 J	<0.0041	<0.0035
Ethylbenzene	410,000	650	20,000	58	19		<0.0046	0.018 J	<0.0046	<0.0039
Xylenes, Total	410,000	320	41,000	5.6	150		<0.011	0.086 J	<0.012	<0.0098

NOTES

All results expressed in milligrams per kilogram (mg/kg)
 Shaded/Bolded values = Concentration exceeds IEPA SRO
 SROs = Soil Remediation Objectives
 NC = No toxicity criteria for this exposure route.
 NA = Not analyzed for this constituent.

Table 1b
Soil Analytical Results
VOCs
TACO Tier 1 SROs
Thornton, IL

Analyte	CONSTRUCTION WORKER		INDUSTRIAL COMMERCIAL		SOIL COMPONENT TO GROUNDWATER	Sample Date	SB-7	SB-8
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	Depth (ft)	8/30/2019	8/30/2019
						2-4	2-4	2-4
Acetone	NC	100,000	NC	100,000	25		<0.062	<0.12
Benzene	2,300	2.2	100	1.6	0.17		<0.0036	<0.011
Bromodichloromethane	2,000	3,000	92	3,000	0.6		<0.0033	<0.011
Bromoform	16,000	140	720	100	0.8		<0.011	<0.023
Bromomethane	1,000	3.9	2,900	15	1.2		<0.0080	<0.082
2-Butanone	NC	NC	NC	NC	NC		<0.0097	<0.15
Carbon disulfide	20,000	9.0	200,000	720	160		0.0045 J	<0.013
Carbon tetrachloride	410	0.90	44	0.64	0.33		<0.0042	<0.014
Chlorobenzene	4,100	1.3	41,000	210	6.5		<0.0039	<0.017
Chloroethane	NC	NC	NC	NC	NC		<0.0048	<0.079
Chloroform	2,000	0.76	940	0.54	2.9		<0.0043	<0.055
Chloromethane	NC	NC	NC	NC	NC		<0.0033	<0.024
Dibromochloromethane	41,000	1,300	41,000	1,300	0.4		<0.0034	<0.021
1,1-Dichloroethane	200,000	130	200,000	1,700	110		<0.0054	<0.021
1,2-Dichloroethane	1,400	0.99	63	0.70	0.1		<0.00054	<0.018
1,1-Dichloroethene	10,000	3.0	100,000	470	0.3		<0.0045	<0.021
cis-1,2-Dichloroethene	20,000	1,200	20,000	1,200	1.1		<0.0056	<0.020
trans-1,2-Dichloroethene	41,000	3,100	41,000	3,100	3.4		<0.0039	<0.019
1,2-Dichloropropane	1,800	0.50	84	23	0.15		<0.0035	<0.020
cis-1,3-Dichloropropene	1,200	0.39	57	2.1	0.02		<0.0076	<0.020
trans-1,3-Dichloropropene	1,200	0.39	57	2.1	0.02		<0.0028	<0.017
Ethylbenzene	20,000	58	200,000	400	19		<0.0046	0.018 J
2-Hexanone	NC	NC	NC	NC	NC		<0.015	<0.061
4-Methyl-2-pentanone	NC	NC	NC	NC	NC		<0.0037	<0.019
Methylene chloride	12,000	34	760	24	0.2		<0.0038	<0.048
Methyl tert-butyl ether	2,000	140	20,000	8,800	0.32		<0.0055	<0.015
Styrene	41,000	430	410,000	1,500	18		<0.016	<0.011
1,1,2,2-Tetrachloroethane	NC	NC	NC	NC	NC		<0.0066	<0.021
Tetrachloroethene	2,400	28	110	20	0.3		<0.0065	<0.015
Toluene	410,000	42	410,000	650	29		<0.0041	0.020 J
1,1,1-Trichloroethane	NC	1,200	---	1,200	9.6		<0.0043	<0.017
1,1,2-Trichloroethane	8,200	1,800	8,200	1,800	0.3		<0.0041	<0.024
Trichloroethene	1,200	12	520	8.9	0.3		<0.0041	<0.028
Vinyl chloride	170	1.1	7.9	1.1	0.07		<0.0064	<0.025
Xylenes, Total	41,000	5.6	410,000	320	150		<0.011	0.086 J

NOTES

All results expressed in milligrams per kilogram (mg/kg)
Shaded/Bolded values = Concentration exceeds IEPA SRO
SROs = Soil Remediation Objectives
NC = No toxicity criteria for this exposure route.
NA = Not analyzed for this constituent.

Table 1c
Soil Analytical Results
SVOCs
TACO Tier 1 SROs
Thornton, IL

Analyte	INDUSTRIAL COMMERCIAL		CONSTRUCTION WORKER		SOIL COMPONENT TO GROUNDWATER	Sample Date	SB-7 8/30/2019	SB-8 8/30/2019
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	Depth (ft)	2-4	2-4
Acenaphthene	120,000	NC	120,000	NC	2,900		0.19 J	<0.35
Acenaphthylene	NC	NC	NC	NC	NC		<0.064	<0.35
Anthracene	610,000	NC	610,000	NC	59,000		0.22	<0.16
Benzo(a)anthracene	8	NC	170	NC	8		0.26	<0.15
Benzo(a)pyrene	0.8	NC	17	NC	82		0.19	<0.15
Benzo(b)fluoranthene	8	NC	170	NC	25		0.25	<0.17
Benzo(g,h,i)perylene	NC	NC	NC	NC	NC		0.15 J	<0.26
Benzo(k)fluoranthene	78	NC	1,700	NC	250		0.11 J	<0.24
4-Bromophenylphenyl ether	NC	NC	NC	NC	NC		<0.037	<0.21
Butylbenzylphthalate	410,000	930	410,000	930	930		<0.029	<0.16
Carbazole	290	NC	6,200	NC	2.8		0.034 J	<0.15
4-Chloro-3-methylphenol	NC	NC	NC	NC	NC		<0.055	<0.31
4-Chloroaniline	8,200	NC	820	NC	0.7		<0.029	<0.16
bis(2-Chloroethoxy)methane	NC	NC	NC	NC	NC		<0.048	<0.26
bis(2-Chloroethyl) ether	5	0.47	75	0.66	0.0004		<0.056	<0.31
2-Chloronaphthalene	NC	NC	NC	NC	NC		<0.023	<0.13
2-Chlorophenol	10,000	53,000	10,000	53,000	4		<0.044	<0.25
4-Chlorophenylphenyl ether	NC	NC	NC	NC	NC		<0.033	<0.18
Chrysene	780	NC	17,000	NC	800		0.27	<0.15
Dibenz(a,h)anthracene	0.8	NC	17	NC	7.6		<0.048	<0.27
Dibenzofuran	NC	NC	NC	NC	NC		0.16	0.27 J
1,2-Dichlorobenzene	180,000	560	18,000	310	43		<0.056	<0.31
1,3-Dichlorobenzene	NC	NC	NC	NC	NC		<0.025	<0.14
1,4-Dichlorobenzene	NC	17,000	NC	340	11		<0.025	<0.14
3,3'-Dichlorobenzidine	13	NC	280	NC	0.033		<0.048	<0.27
2,4-Dichlorophenol	6,100	NC	610	NC	1		<0.048	<0.26
Diethylphthalate	1,000,000	2,000	1,000,000	2,000	470		<0.030	<0.16
2,4-Dimethylphenol	41,000	NC	41,000	NC	9		<0.035	<0.19
Dimethylphthalate	NC	NC	NC	NC	NC		<0.023	<0.13
Di-n-butylphthalate	200,000	2,300	200,000	2,300	2,300		<0.027	0.16 J
4,6-Dinitro-2-methylphenol	NC	NC	NC	NC	NC		<0.055	<0.30
2,4-Dinitrophenol	4,100	NC	410	NC	0.2		<0.054	<0.30
2,4-Dinitrotoluene	8.4	NC	180	NC	0.0008		<0.025	<0.14
2,6-Dinitrotoluene	8.4	NC	180	NC	0.0007		<0.034	<0.19
Di-n-octylphthalate	41,000	10,000	4,100	10,000	10,000		<0.040	<0.22
bis(2-Ethylhexyl)phthalate	410	31,000	4,100	31,000	31,000		<0.030	<0.16
Fluoranthene	82,000	NC	82,000	NC	21,000		0.67	<0.14
Fluorene	82,000	NC	82,000	NC	2,800		0.14	0.51
Hexachloro-1,3-butadiene	NC	NC	NC	NC	NC		<0.045	<0.25
Hexachlorobenzene	4	1.8	78	2.6	11		<0.030	<0.17
Hexachlorocyclopentadiene	14,000	16	14,000	1.1	2,200		<0.042	<0.23
Hexachloroethane	2,000	NC	2,000	NC	2.6		<0.029	<0.16
Indeno(1,2,3-cd)pyrene	8	NC	170	NC	69		0.14	<0.21
Isophorone	410,000	4,600	410,000	4,600	8		<0.027	<0.15
2-Methylnaphthalene	NC	NC	NC	NC	NC		<0.046	6.6
2-Methylphenol(o-Cresol)	100,000	NC	100,000	NC	15		<0.032	<0.18
3&4-Methylphenol(m&p)	NC	NC	NC	NC	NC		<0.033	<0.18
Naphthalene	41,000	270	4,100	1.8	18		<0.062	0.59 J
2-Nitroaniline	NC	NC	NC	NC	NC		<0.051	<0.28
3-Nitroaniline	NC	NC	NC	NC	NC		<0.030	<0.17
4-Nitroaniline	NC	NC	NC	NC	NC		<0.074	<0.41
Nitrobenzene	1,000	140	1,000	9.4	0.1		<0.036	<0.20
2-Nitrophenol	NC	NC	NC	NC	NC		<0.056	<0.31
4-Nitrophenol	NC	NC	NC	NC	NC		<0.045	<0.25
N-Nitroso-di-n-propylamine	0.8	NC	18	NC	0.00005		<0.028	<0.16
N-Nitrosodiphenylamine	1,200	NC	25,000	NC	5.6		<0.24	<1.3
2,2'-Oxybis(1-chloropropane)	NC	NC	NC	NC	NC		<0.046	<0.25
Pentachlorophenol	24	NC	520	NC	0.14		<0.039	<0.22
Phenanthrene	NC	NC	NC	NC	NC		0.20	1.0
Phenol	610,000	NC	61,000	NC	100		<0.042	<0.23
Pyrene	61,000	NC	61,000	NC	21,000		0.56	0.23 J
1,2,4-Trichlorobenzene	20,000	3,200	2,000	920	53		<0.020	<0.11
2,4,5-Trichlorophenol	200,000	NC	200,000	NC	1,400		<0.031	<0.17
2,4,6-Trichlorophenol	520	390	110,000	540	0.77		<0.027	<0.15

NOTES
All results expressed in milligrams per kilogram (mg/kg)
Shaded/Bolded values = Concentration exceeds IEPA SRO
SROs = Soil Remediation Objectives
NC = No toxicity criteria for this exposure route.
NA = Not analyzed for this constituent.
* = Construction Worker Inhalation Objectives

Table 1d
Soil Analytical Results
PNAs
TACO Tier 1 SROs
[REDACTED]
Thornton, IL

Analyte	INDUSTRIAL COMMERCIAL		CONSTRUCTION WORKER		SOIL COMPONENT TO GROUNDWATER	Sample	SB-3	SB-4
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	Date	8/30/2019	8/30/2019
						Depth (ft)	5-6	12-14
Acenaphthene	120,000	NC	120,000	NC	2,900		0.018	0.35 J
Acenaphthylene	NC	NC	NC	NC	NC		0.016	<0.16
Anthracene	610,000	NC	610,000	NC	59,000		0.033	<0.27
Benzo(a)anthracene	8	NC	170	NC	8		0.054	<0.15
Benzo(a)pyrene	0.8	NC	17	NC	82		0.068	<0.12
Benzo(b)fluoranthene	8	NC	170	NC	25		0.094	<0.13
Benzo(g,h,i)perylene	NC	NC	NC	NC	NC		0.080	<0.097
Benzo(k)fluoranthene	78	NC	1,700	NC	250		0.028	<0.12
Chrysene	780	NC	17,000	NC	800		0.044	<0.16
Dibenz(a,h)anthracene	0.8	NC	17	NC	7.6		0.016	<0.11
Fluoranthene	82,000	NC	82,000	NC	21,000		0.11	<0.25
Fluorene	82,000	NC	82,000	NC	2,800		0.015	0.63 J
Indeno(1,2,3-cd)pyrene	8	NC	170	NC	69		0.065	<0.10
Naphthalene	41,000	270	4,100	1.8	18		0.13	0.55 J
Phenanthrene	NC	NC	NC	NC	NC		0.14	1.2 J
Pyrene	61,000	NC	61,000	NC	21,000		0.11	<0.21

NOTES

All results expressed in milligrams per kilogram (mg/kg)
 Shaded/Bolded values = Concentration exceeds IEPA SRO
 SROs = Soil Remediation Objectives
 NC = No toxicity criteria for this exposure route.
 NA = Not analyzed for this constituent.

Table 1d
Soil Analytical Results
PNAs
TACO Tier 1 SROs
[REDACTED]
Thornton, IL

Analyte	INDUSTRIAL COMMERCIAL		CONSTRUCTION WORKER		SOIL COMPONENT TO GROUNDWATER	Sample	SB-5	SB-6	SB-7	SB-8	SB-9	SB-10
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	Date	8/30/2019	8/30/2019	8/30/2019	8/30/2019	8/30/2019	8/30/2019
						Depth (ft)	8-10	12-14	2-4	2-4	10-12	10-12
Acenaphthene	120,000	NC	120,000	NC	2,900		0.0096 J	0.50	0.11	0.36	0.54	0.016 J
Acenaphthylene	NC	NC	NC	NC	NC		0.032	0.17	0.013	0.11	0.12	0.040
Anthracene	610,000	NC	610,000	NC	59,000		0.026	0.16 J	0.098	0.077 J	0.12	0.036
Benzo(a)anthracene	8	NC	170	NC	8		0.055	<0.036	0.14	0.055 J	0.070	0.13
Benzo(a)pyrene	0.8	NC	17	NC	82		0.063	<0.028	0.14	0.029 J	0.068	0.15
Benzo(b)fluoranthene	8	NC	170	NC	25		0.078	<0.032	0.19	0.047 J	0.075	0.16
Benzo(g,h,i)perylene	NC	NC	NC	NC	NC		0.068	<0.023	0.067	0.030 J	0.048	0.094
Benzo(k)fluoranthene	78	NC	1,700	NC	250		0.029	<0.028	0.059	<0.024	0.030	0.054
Chrysene	780	NC	17,000	NC	800		0.061	<0.038	0.13	0.034 J	0.085	0.13
Dibenz(a,h)anthracene	0.8	NC	17	NC	7.6		0.013	<0.025	0.022	<0.021	0.011 J	0.022
Fluoranthene	82,000	NC	82,000	NC	21,000		0.11	<0.059	0.26	0.064 J	0.082	0.17
Fluorene	82,000	NC	82,000	NC	2,800		0.014 J	0.60	0.022	0.39	0.31	0.022
Indeno(1,2,3-cd)pyrene	8	NC	170	NC	69		0.045	<0.025	0.061	<0.021	0.032	0.069
Naphthalene	41,000	270	4,100	1.8	18		0.011 J	0.79	0.016 J	0.68	0.32	0.033 J
Phenanthrene	NC	NC	NC	NC	NC		0.076	1.1	0.072	0.62	<0.032	0.13
Pyrene	61,000	NC	61,000	NC	21,000		0.086	0.11 J	0.20	0.098 J	0.15	0.18

NOTES

All results expressed in milligrams per kilogram (mg/kg)
 Shaded/Bolded values = Concentration exceeds IEPA SRO
 SROs = Soil Remediation Objectives
 NC = No toxicity criteria for this exposure route.
 NA = Not analyzed for this constituent.

Table 1e
 Soil Analytical Results
 PCBs Pesticides
 TACO Tier 1 SROs
 Thornton, IL

Analyte	INDUSTRIAL COMMERCIAL		CONSTRUCTION WORKER		SOIL COMPONENT TO GROUNDWATER	Sample	SB-7	SB-8
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	Date	8/30/2019	8/30/2019
						Depth (ft)	2-4	2-4
PCB								
Aroclor 1016	-	-	-	-	-		<0.027	<0.029
Aroclor 1221	-	-	-	-	-		<0.027	<0.029
Aroclor 1232	-	-	-	-	-		<0.027	<0.029
Aroclor 1242	-	-	-	-	-		<0.027	<0.029
Aroclor 1248	-	-	-	-	-		<0.027	<0.029
Aroclor 1254	-	-	-	-	-		<0.027	<0.029
Aroclor 1260	-	-	-	-	-		<0.027	<0.029
Total PCBs	1	NC	1	NC	NC		<0.027	<0.029

NOTES
 PCBs = Polychlorinated Biphenyls
 All results expressed in milligrams per kilogram (mg/kg)
 Shaded/Bolded values = Concentration exceeds IEPA SRO
 SROs = Soil Remediation Objectives
 NC = No toxicity criteria for this exposure route.
 NA = Not analyzed for this constituent.
 * = Construction Worker Inhalation Objectives

Table 1f
 Soil Analytical Results
 RCRA Metals
 TACO Tier 1 SROs
 Thornton, IL

Analyte	INDUSTRIAL COMMERCIAL		CONSTRUCTION WORKER		SOIL COMPONENT TO GROUNDWATER				Sample	SB-1	SB-2	SB-7	SB-8
	Ingestion	Inhalation	Ingestion	Inhalation	CLASS I	CLASS II	CLASS III	CLASS IV	Date	8/30/2019	8/30/2019	8/30/2019	8/30/2019
									Depth	6-8	6-8	2-4	2-4
Arsenic	13.0/11.3	1,200	61	25,000	120	120	120	130		NA	NA	4.4 J	6.5
Barium	140,000	910,000	14,000	870,000	1,700	1,800	2,100	2,100		NA	NA	9.9	65.2
Cadmium	2,000	2,800	200	59,000	110	590	4,300	4,300		NA	NA	0.18 J	0.38 J
Chromium	6,100	420	4,100	690	16.2***	16.2***	16.2***	NC		NA	NA	5.8	12.7
Lead	800	NC	700	NC	1,420	1,420	1,420	1,420		167	42.6	7.3	29.6
Mercury	610	16	61	0.1	16	32	40	40		NA	NA	<0.011	0.031 J
Selenium	10,000	NC	1,000	NC	4.5	3.3	2.4	1.8		NA	NA	<1.4	<1.5
Silver	10,000	NC	1,000	NC	NC	NC	NC	NC		NA	NA	<0.36	0.48 J
pH	NC	NC	NC	NC	pH 6.9 to 7.24	pH 7.25 to 7.74	pH 7.75 to 8.24	pH 8.25 to 8.74		8.2	7.29	7.87	8.23

NOTES

All results expressed in milligrams per kilogram (mg/kg)

Shaded/Bolded values = Concentration exceeds IEPA SRO

NC = No toxicity criteria for this exposure route.

NA = Not analyzed for this constituent.

** = 742 Appendix B, Table C - Class I Value

*** = 742 Appendix A, Table G - Background Value for Counties within MSA

SROs = Soil Remediation Objectives



**SOIL BORING LOGS
MONITORING WELL LOGS**

A3E Project No.	2019.464	Start Time:	8:10 AM	Boring No:	SB-1
Project:		End Time:	8:20 AM	Monitoring Well No:	NA
Location:	Thornton, IL				
Date Drilled:	8/30/2019			Drilling Co:	CS Drilling
Total Depth:	12 feet bgs			Method:	GeoProbe
Hole Diameter:	2"			Driller:	Chris
GW Elevation	NA			Geologist:	Matt Larsen
Weather	70 degrees/Sunny			Sampling Method(s):	Continuous Sampling
				Analysis Equip:	Mini Rae 2000

Sample Depth	Headspace (ppm)	Depth (feet)	Graph Symbol	Lithologic Description	Moisture	Observations/Remarks
0-1		1		No Recovery		
1-2		2	█	Fill, brown, silty gravel, brick fragments, loose	Dry	
2-3	192.0	3				
3-4		4	█	Fill, brown sandy, gravel	Dry	
4-5		5		No Recovery		
5-6	282.0	6	█	Fill, black staining, trace fine sand, petroleum odors	Moist	Sample SB-1 collected from 6 7 feet bgs
6-7	101	7	█	Silty Clay, gray with black staining, trace sand and fine gravel	Moist	Petroleum odors
7-8	96.2	8				
8-9	241.0	9	█	No Recovery		
9-10	72.0	10	█	Silty Clay, gray with black staining, trace sand and fine gravel	Moist	Petroleum odors

REFUSAL AT 11 FEET BGS.
END OF BORING



A3E Project No.	2019.464	Start Time:	8:30 AM	Boring No.:	SB-2
Project:		End Time:	8:45 AM	Monitoring Well No.:	NA
Location:	Thornton, IL				
Date Drilled:	8/30/2019			Drilling Co.:	CS Drilling
Total Depth:	12 feet bgs			Method:	GeoProbe
Hole Diameter:	2"			Driller:	Chris
GW Elevation	NA			Geologist:	Matt Larsen
Weather	70 degrees/Sunny			Sampling Method(s):	Continuous Sampling
				Analysis Equip:	Mini Rae 2000

Sample Depth	Headspace (ppm)	Depth (feet)	Graph Symbol	Lithologic Description	Moisture	Observations/Remarks
0-1		1		No Recovery		
1-2	0.0	2		Fill Concrete/Gravel, Fill, Tan-Gray	Dry	
2-3	0.0	3		Fill, Silty, Clay, Fill, Gravel, Brown	Dry	
3-4		4				
4-5		5		No Recovery		
5-6	0.0	6		Fill, silty clay, gray, sandy, staining, petroleum odor	Moist	Sample SB-2 collected from 6 8 feet bgs
6-7		7				
7-8		8				
8-9	6.0	9		Silty Clay, Gray, Some Staining	Moist	petroleum odors
9-10	4.0	10		Silty Clay, gray with tan/orange mottling, trace medium gravel and fine sand	Moist	
10-11	0	11				

REFUSAL AT 11 FEET BGS.
END OF BORING



A3E Project No.	2019.464	Start Time:	8:30 AM	Boring No.:	SB-3
Project:	██████████	End Time:	8:45 AM	Monitoring Well No.:	NA
Location:	Thornton, IL				
Date Drilled:	8/30/2019			Drilling Co.:	CS Drilling
Total Depth:	12 feet bgs			Method:	GeoProbe
Hole Diameter:	2"			Driller:	Chris
GW Elevation	NA			Geologist:	Matt Larsen
Weather	70 degrees/Sunny			Sampling Method(s):	Continuous Sampling
				Analysis Equip:	Mini Rae 2000

Sample Depth	Headspace (ppm)	Depth (feet)	Graph Symbol	Lithologic Description	Moisture	Observations/Remarks
0-1	0.0	1		Fill, gray, concrete pieces, gravel	Dry	
1-2	0.0	2		Silty Clay, gray, tan/orange mottling, trace sand and gravel	Dry	
2-3	0.0	3		Sandy Gravel, tan/brown	Dry	
3-4		4				
4-5		5				
5-6	0.2	6		Sandy Gravel, black staining, petroleum odor	Moist	Sample SB-3 collected from 5 6 feet bgs

REFUSAL AT 7 FEET BGS. AT MULTIPLE POINTS
END OF BORING



A3E Project No.	2019.464	Start Time:	8:50 AM	Boring No.:	SB-4
Project:	██████████	End Time:	9:00 AM	Monitoring Well No.:	
Location:	Thornton, IL				
Date Drilled:	8/30/2019			Drilling Co.:	CS Drilling
Total Depth:	12 feet bgs			Method:	GeoProbe
Hole Diameter:	2"			Driller:	Chris
GW Elevation:	NA			Geologist:	Matt Larsen
Weather:	70 degrees/Sunny			Sampling Method(s):	Continuous Sampling
				Analysis Equip.:	Mini Rae 2000

Sample Depth	Headspace (ppm)	Depth (feet)	Graph Symbol	Lithologic Description	Moisture	Observations/Remarks
0-1	0.0	1	█	Fill, concrete pieces and gravel	Dry	
1-2		2				
2-3	5.5	3	█	Fill, sily clay, with gravel and debris	Dry	
3-4		4				
4-5		5		No Recovery		
5-6		6				
6-7		7	█	Fill, concrete and gravel, black staining	Dry	Strong petroleum odors
7-8	199.3	8	█	Silty Clay, gray with black staining, trace sand and gravel	Moist	
8-9	182.1	9	█			
9-10	150.5	10	█	Silty Clay, light gray, trace sand and gravel	Moist	
10-11	170	11	█	Silty Clay, gray with tan mottling, trace sand and gravel		
11-12	240	12				
12-13	446	13	█	Silty Clay, gray with tan mottling, trace sand and gravel, black staining	Wet	Sample SB-4 collected from 12-14 feet bgs

REFUSAL AT 14 FEET BGS.
END OF BORING



A3E Project No.	2019.464	Start Time:	9:10 AM	Boring No.:	SB-5
Project:		End Time:	9:25 AM	Monitoring Well No.:	NA
Location:	Thornton, IL				
Date Drilled:	8/30/2019			Drilling Co.:	CS Drilling
Total Depth:	12 feet bgs			Method:	GeoProbe
Hole Diameter:	2"			Driller:	Chris
GW Elevation	NA			Geologist:	Matt Larsen
Weather	70 degrees/Sunny			Sampling Method(s):	Continuous Sampling
				Analysis Equip:	Mini Rae 2000

Sample Depth	Headspace (ppm)	Depth (feet)	Graph Symbol	Lithologic Description	Moisture	Observations/Remarks
0-1		1		Asphalt		
1-2		2		Fill, gravel	Dry	
2-3	2.2	3		Fill, silty clay, dark gray, trace sand and gravel	Moist	
3-4		4		Fill, silty clay, light brown, gray mottling, trace sand and gravel	Dry	
4-5		5		No Recovery		
5-6	4.4	6		Silty Clay, tan, trace sand and gravel	Moist	Light staining
6-7	0	7				
7-8		8		Silty Clay, brown, trace sand and gravel	Dry	
8-9	8.5	9		Silty Clay, light brown, trace sand and gravel	Moist	Sample SB-5 collected from 8 10 feet bgs./ Petroleum odor
9-10		10				

REFUSAL AT 11 FEET BGS.
END OF BORING



A3E Project No.	2019.464	Start Time:	9:30 AM	Boring No.:	SB-6
Project:	██████████	End Time:	9:45 AM	Monitoring Well No.:	NA
Location:	Thornton, IL				
Date Drilled:	8/30/2019			Drilling Co.:	CS Drilling
Total Depth:	12 feet bgs			Method:	GeoProbe
Hole Diameter:	2"			Driller:	Chris
GW Elevation:	NA			Geologist:	Matt Larsen
Weather:	70 degrees/Sunny			Sampling Method(s):	Continuous Sampling
				Analysis Equip.:	Mini Rae 2000

Sample Depth	Headspace (ppm)	Depth (feet)	Graph Symbol	Lithologic Description	Moisture	Observations/Remarks
0-1	0.0	1	█	Asphalt	Dry	
1-2		2		Fill, tan and gray, gravelly silty sand		
2-3		3				
3-4		4				
4-5	0.0	5	█		No Recovery	
5-6		6				
6-7	0.0	7	█	Fill, dark brown, silty clay, debris	Moist	
7-8		8				
8-9		9		No Recovery		
9-10		10	█	Silty Clay, gray and tan mottling, trace sand and gravel	Moist	
10-11	2	11	█	Silty Clay, gray, trace sand and gravel	Moist	Black staining and petroleum odor Sample Collected from 12-14 feet bgs.
11-12	16	12				
12-13	200	13				
13-14		14				

REFUSAL AT 15 FEET BGS.
END OF BORING



A3E Project No.	2019.464	Start Time:	10:00 AM	Boring No.:	SB-7
Project:		End Time:	10:10 AM	Monitoring Well No.:	NA
Location:	Thornton, IL				
Date Drilled:	8/30/2019			Drilling Co.:	CS Drilling
Total Depth:	12 feet bgs			Method:	GeoProbe
Hole Diameter:	2"			Driller:	Chris
GW Elevation	NA			Geologist:	Matt Larsen
Weather	70 degrees/Sunny			Sampling Method(s):	Continuous Sampling
				Analysis Equip:	Mini Rae 2000

Sample Depth	Headspace (ppm)	Depth (feet)	Graph Symbol	Lithologic Description	Moisture	Observations/Remarks
0-1		1		Asphalt		
1-2		2		Fill, gravel backfill	Dry	
2-3	30.6	3		Fill, tan with black staining, sandy, silty gravel	Moist	Sample SB-7 collected from 2 4 feet bgs Black staining
3-4	28.0	4				
4-5	16.7	5				
5-6		6		No Recovery		
6-7		7				
7-8	10	8		Silty Clay, black staining, trace sand and gravel	Moist	Black staining

END OF BORING



A3E Project No.	2019.464	Start Time:	10:10 AM	Boring No.:	SB-8
Project:	██████████	End Time:	10:20 AM	Monitoring Well No.:	NA
Location:	Thornton, IL				
Date Drilled:	8/30/2019			Drilling Co.:	CS Drilling
Total Depth:	12 feet bgs			Method:	GeoProbe
Hole Diameter:	2"			Driller:	Chris
GW Elevation	NA			Geologist:	Matt Larsen
Weather	70 degrees/Sunny			Sampling Method(s):	Continuous Sampling
				Analysis Equip:	Mini Rae 2000

Sample Depth	Headspace (ppm)	Depth (feet)	Graph Symbol	Lithologic Description	Moisture	Observations/Remarks
0-1		1		Asphalt		
1-2	0.0	2		Fill, gray, gravel with concrete pieces	Dry	Black staining at 3 feet bgs Sample SB-8 collected from 2 4 feet bgs
2-3	52.5	3				
3-4		4		Silty Clay, Black, Staining	Moist	petroleum odor
4-5		5		No Recovery		
5-6		6				
6-7	8.2	7		Sandy Silt with Gravel, Staining	Moist	
7-8	5.3	8				

END OF BORING



A3E Project No.	2019.464	Start Time:	10:30 AM	Boring No.:	SB-9
Project:	██████████	End Time:	10:45 AM	Monitoring Well No.:	NA
Location:	Thornton, IL				
Date Drilled:	8/30/2019			Drilling Co.:	CS Drilling
Total Depth:	12 feet bgs			Method:	GeoProbe
Hole Diameter:	2"			Driller:	Chris
GW Elevation	NA			Geologist:	Matt Larsen
Weather	70 degrees/Sunny			Sampling Method(s):	Continuous Sampling
				Analysis Equip:	Mini Rae 2000

Sample Depth	Headspace (ppm)	Depth (feet)	Graph Symbol	Lithologic Description	Moisture	Observations/Remarks
0-1		1		NR		
1-2	0.0	2	█	Fill, dark gray and brown, gravel, asphalt and concrete pieces	Dry	
2-3		3				
3-4	0.0	4	█	Fill, silty clay with gravel	Moist	Minor staining
4-5		5		No Recovery		
5-6	0.0	6	█	Fill, dark brown, silty clay, debris and gravel	Moist	
6-7		7				
7-8		8				
8-9	0.0	9	█	Silty Clay, gray, trace gravel	Wet	Minor staining Sample SB-9 collected from 10-12 feet bgs
9-10	0.0	10				
10-11	11.8	11				
11-12	8.5	12				
12-13		13		No Recovery		
13-14	2.4	14	█	Silty Clay, tan and gray, trace gravel	Sat.	Minor staining

REFUSAL AT 15 FEET BGS.
END OF BORING



A3E Project No.	2019.464	Start Time:	10:50 AM	Boring No.:	SB-10
Project:	██████████	End Time:	11:05 AM	Monitoring Well No.:	NA
Location:	Thornton, IL				
Date Drilled:	8/30/2019			Drilling Co.:	CS Drilling
Total Depth:	12 feet bgs			Method:	GeoProbe
Hole Diameter:	2"			Driller:	Chris
GW Elevation	NA			Geologist:	Matt Larsen
Weather	70 degrees/Sunny			Sampling Method(s):	Continuous Sampling
				Analysis Equip:	Mini Rae 2000

Sample Depth	Headspace (ppm)	Depth (feet)	Graph Symbol	Lithologic Description	Moisture	Observations/Remarks
0-1		1		No Recovery		
1-2		2				
2-3	0.0	3	█	Fill, dark gray and brown, gravel, asphalt and concrete pieces	Dry	
3-4		4				
4-5		5		No Recovery		
5-6	0.0	6	█	Silty Clay, Some Gravel, Dark Gray	Moist	
6-7		7		No Recovery		
7-8		8				
8-9		9				
9-10		10				
10-11	0.0	11	█	Silty Clay, Tan, Dark Brown	Moist	Sample SB-10 collected from 10-12 feet bgs.
11-12	0.0	12				
12-13		13		No Recovery		
13-14	0.0	14	█	Gravel amd Silty Clay, Gray	Sat.	

REFUSAL AT 15 FEET BGS.
END OF BORING





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ANALYTICAL REPORTS**



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