

June 11, 2019

Mr. Damianos T. Skaros, P.E.  
Division of Environmental Remediation, Region 9  
New York State Department of Environmental Conservation  
270 Michigan Avenue  
Buffalo, New York 14203

RE: NYSDEC Spill File No. 1812634  
415 Chandler Street  
Jamestown, New York

Dear Mr. Skaros:

This document, prepared by Day Environmental, Inc. (DAY) on behalf of Weber-Knapp Company, summarizes information collected to date during the implementation of the studies completed at the property at 415 Chandler Street, Jamestown, New York (Site). The scope of the most-recent studies is described in an investigation work plan prepared by DAY titled *Investigation Work Plan, 415 Chandler Street, Jamestown, New York* dated March 25, 2019. This work was done to assess the nature and extent of chlorinated volatile organic compound (VOC) impact identified during previous studies in order to close NYSDEC Spill No. 1812634, which was opened on March 25, 2019.

The attached information includes the results of a soil vapor intrusion (SVI) assessment and the initial round of subsurface delineation that included the advancement of test borings, installation of groundwater monitoring points, sample collection/testing and completion of an elevation survey.

The SVI assessment was conducted within the building at the Site, and it included completion of a chemical inventory within the building on March 29, 2019, and collection of five sub-slab soil vapor samples and five indoor air samples from below/within the building, and one background air sample from an exterior location near the building on April 4, 2019. The approximate locations from which the sub-slab soil vapor samples, indoor air samples, and background air sample were collected are depicted on Figure 1. A summary of the compounds detected in the soil vapor/air samples collected on April 4, 2019 is provided as Table 1, and the results of select VOCs (i.e., trichloroethene, cis-1,2-dichloroethene and vinyl chloride) are also presented on Figure 1. The location and results of a sub-slab vapor sample collected during a previous study on September 5, 2018 (i.e., designated SSV-6) is also depicted on Figure 1 and presented in Table 1. [Note: the results of the chemical inventory are not included with this transmittal, but are available upon request.]

Between April 29 and 30, 2019, twelve direct push test borings (designated DTB-101 through DTB-112) were advanced on the southern portion of the Site (i.e., in the vicinity of monitoring well MW-R, the location where elevated concentrations of chlorinated VOCs were detected during a previous study), and nine of the test borings (DTB-101 through DTB-104 and DTB-106 through DTB-110) were converted into groundwater monitoring points. Based on the results of field screening using a parts per billion (ppb)-range PID, five soil samples [i.e., DTB-102 (7-8'), DTB-102 (8-9'), DTB-103 (0-1'), DTB-104 (8-9') and DTB-111 (8-9')] were retained for subsequent testing of VOCs by an analytical laboratory. A summary of the compounds detected in these soil samples is presented as Table 2, and the results of select VOCs detected in the soil samples tested are also depicted on Figure 2. The approximate locations of the test

borings/groundwater monitoring points advanced/constructed between April 29 and 30, 2019 are depicted on Figure 2 and Figure 3. Test boring logs, describing the subsurface conditions observed in the test borings advanced between April 29 and 30, 2019 and identifying the screened intervals of the groundwater monitoring points installed, are included as Attachment A.

On May 1, 2019, each of the nine groundwater monitoring points was developed and subsequently sampled using a peristaltic pump. The approximate depths of the pump intakes during sampling are indicated on the logs provided in Attachment A. The groundwater samples (along with the groundwater samples described above) were transported under chain-of-custody control to ALS laboratory in Rochester, New York and tested for VOCs. A summary of the compounds detected in the groundwater samples collected on May 1, 2019 is presented as Table 3, and the results of select VOCs are also depicted on Figure 3. [Note: the results of groundwater samples collected from monitoring wells installed for an environmental evaluation in December 2018, and a confirmatory sampling event that occurred on February 21, 2019 are also included in Table 3 and depicted on Figure 3.]

On May 31, 2019, DAY measured ground surface and top of monitoring point elevations (i.e., referenced to an arbitrary site datum) for the test borings/monitoring points installed at the Site using a Topcon RL-H4C construction laser. Based on groundwater elevations calculated using static water level measurements made on May 31, 2019, DAY prepared the potentiometric groundwater contour map included as Figure 4.

DAY will contact you in several days to review the results of the studies described herein and to discuss additional steps necessary to close Spill File No. 1812634. In the interim, please contact the undersigned if you have questions.

Very truly,  
Day Environmental, Inc.



Charles A. Hampton  
Project Manager



Raymond L. Kampff  
Principal

**Attachments:**

Figure 1 – Site Plan with Select Soil Vapor Intrusion Test Results

Figure 2 – Test Location Plan with Select VOC Results in Soil

Figure 3 – Test Location Plan Depicting Select Groundwater Test Result

Figure 4 – Potentiometric Groundwater Contour Map Measured May 31, 2019

Table 1 – Summary of Detected Volatile Organic Compounds - Indoor Air and Sub-Slab Soil Vapor Samples

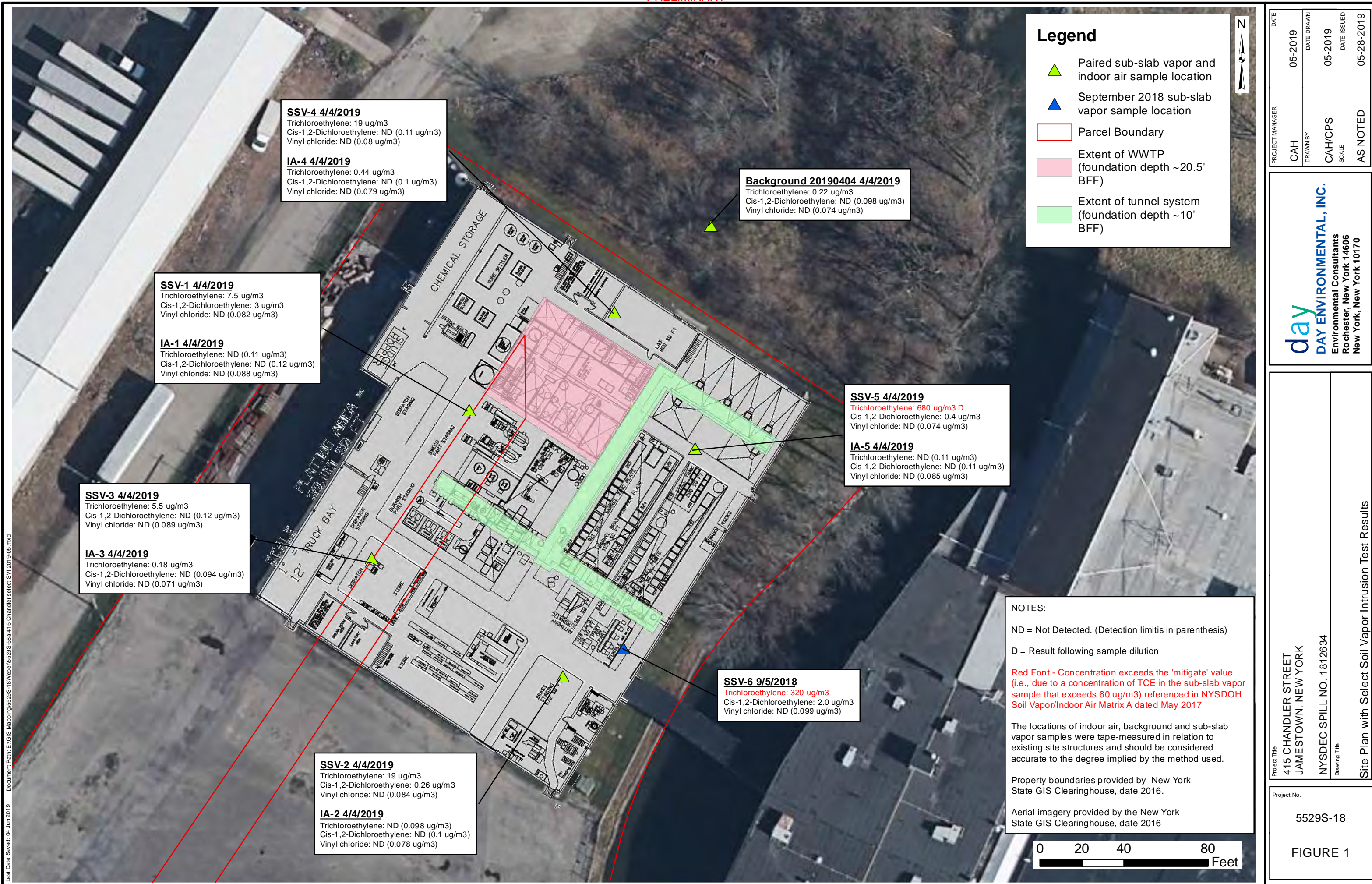
Table 2 – Summary of Detected Volatile Organic Compounds – Soil Samples

Table 3 – Summary of Detected Volatile Organic Compounds – Groundwater Samples

Attachment A – Test Boring Logs – DTB-101 through DTB-112

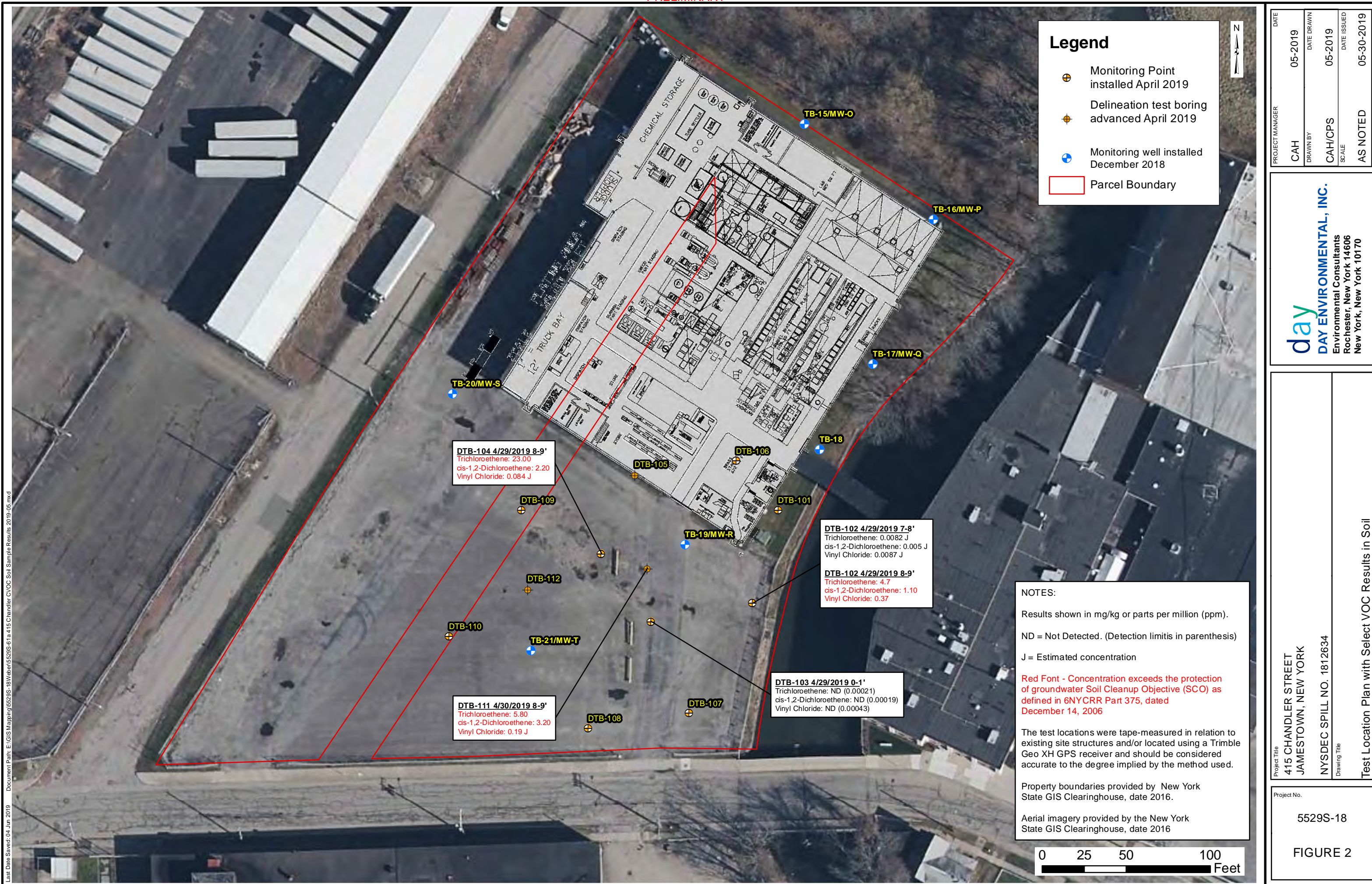
## FIGURES





Last Date Saved: 04 Jun 2019 Document Path: E:\GIS Mapping\5529S-18\Water\5529S-58a 415 Chandler select SVI 2019-05.mxd





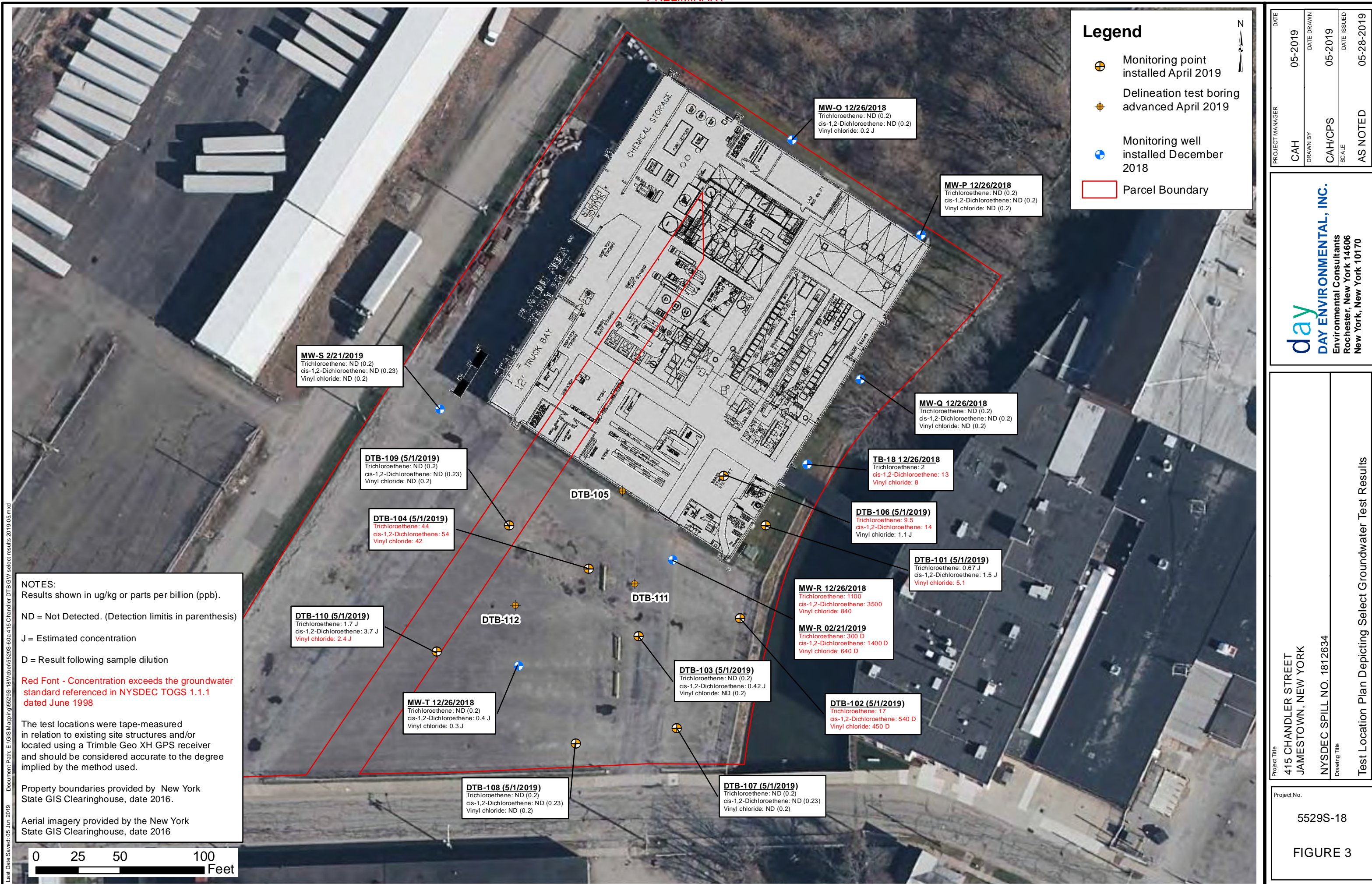
Last Date Saved: 04 Jun 2019 Document Path: E:\GIS Mapping\5529S-18\Water\5529S-18 415 Chandler CVOC Soil Sample Results 2019-05.mxd

PROJECT MANAGER	CAH	DATE	05-2019
DRAWN BY	CAH/CPS	DATE DRAWN	05-2019
SCALE	AS NOTED	DATE ISSUED	05-30-2019

**DAY ENVIRONMENTAL, INC.**  
Environmental Consultants  
Rochester, New York 14606  
New York, New York 10170

Project Title	415 CHANDLER STREET JAMESTOWN, NEW YORK
Drawing Title	Test Location Plan with Select VOC Results in Soil
Project No.	5529S-18





DATE	05-2019
PROJECT MANAGER	CAH
DATE DRAWN	05-2019
DRAWN BY	CAH/CPS
DATE ISSUED	05-28-2019
SCALE	AS NOTED

**DAY ENVIRONMENTAL, INC.**  
Environmental Consultants  
Rochester, New York 14606  
New York, New York 10170

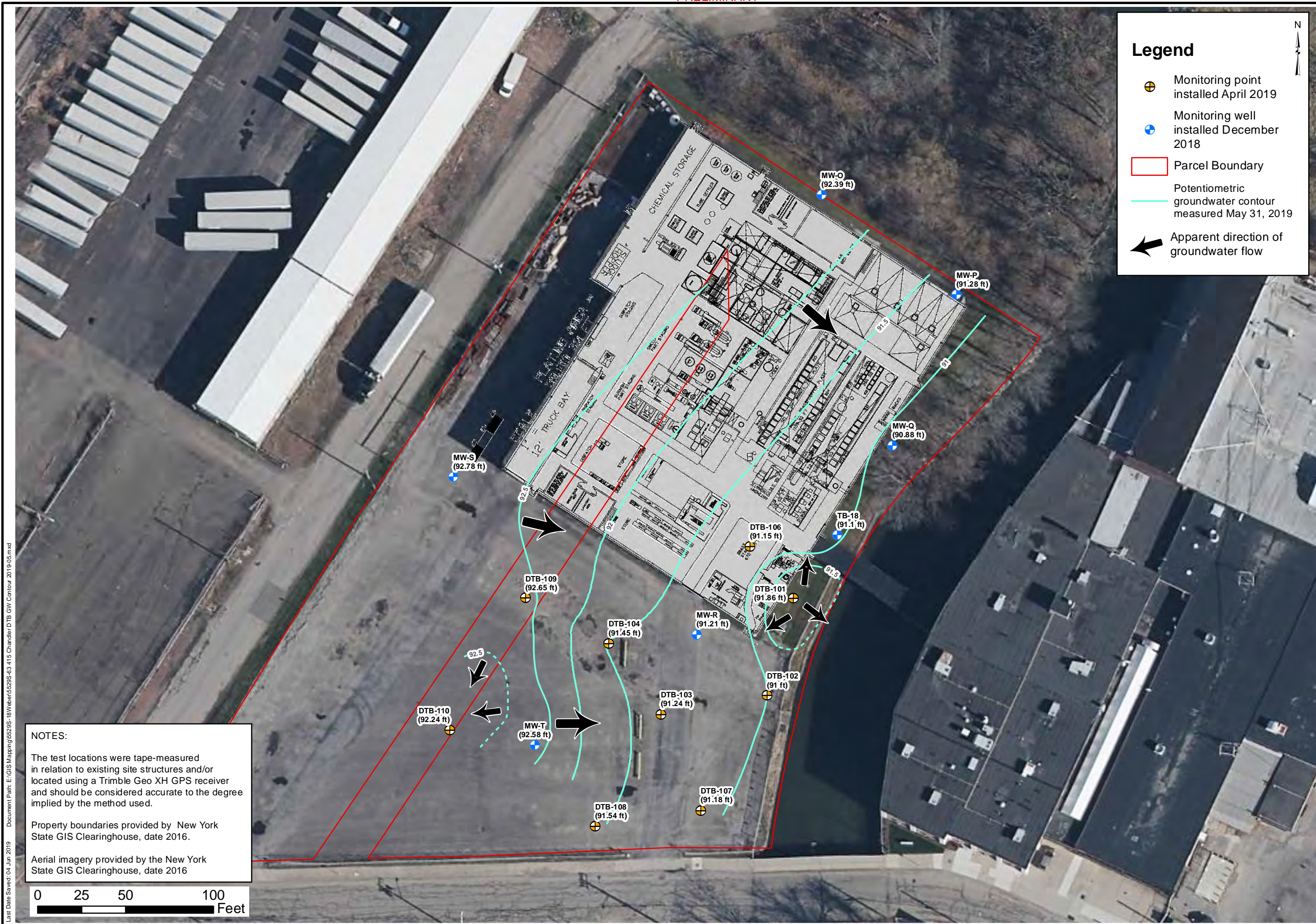
Project Title  
**415 CHANDLER STREET  
JAMESTOWN, NEW YORK**

NYSDEC SPILL NO. 1812634  
Drawing Title  
**Test Location Plan Depicting Select Groundwater Test Results**

Project No.  
**5529S-18**

**FIGURE 3**





Legend

- Monitoring point installed April 2019
- Monitoring well installed December 2018
- Parcel Boundary
- Potentiometric groundwater contour measured May 31, 2019
- Apparent direction of groundwater flow

NOTES:

The test locations were tape-measured in relation to existing site structures and/or located using a Trimble Geo XH GPS receiver and should be considered accurate to the degree implied by the method used.

Property boundaries provided by New York State GIS Clearinghouse, date 2016.

Aerial imagery provided by the New York State GIS Clearinghouse, date 2016

0 25 50 100 Feet

DATE	06-2019
PROJECT MANAGER	CAH
DATE DRAWN	06-2019
DRAWN BY	CAH/CPS
SCALE	AS NOTED
DATE ISSUED	06-03-2019

**DAY ENVIRONMENTAL, INC.**  
Environmental Consultants  
Rochester, New York 14606  
New York, New York 10170

Project Title	415 CHANDLER STREET JAMESTOWN, NEW YORK
Drawing Title	Potentiometric Groundwater Contour Map Measured May 31, 2019
Project No.	5529S-18
	FIGURE 4

Last Date Saved: 04 Jun 2019 Document Path: E:\GIS Mapping\5529S-18\Water\5529S-63 415 Chandler DTB GW Contour 2019-05.mxd



TABLES



415 Chandler Street  
Jamestown, New York  
NYSDEC Spill No.1812634

Summary of Detected Volatile Organic Compounds - Indoor Air and Sub-Slab Soil Vapor

Compound	NYSDOH air guidance value	Indoor Air Reference Value (ug/m3) <sup>(1)</sup>	Sample Desigantion and Date											
			IA-1	IA-2	IA-3	IA-4	IA-5	SSV-1	SSV-2	SSV-3	SSV-4	SSV-5	SSV-6	Background
			4/4/2019	4/4/2019	4/4/2019	4/4/2019	4/4/2019	4/4/2019	4/4/2019	4/4/2019	4/4/2019	4/4/2019	9/5/2018	4/4/2019
1,1,1-Trichloroethane	NA	20.6	ND (0.1)	ND (0.09)	ND (0.083)	2.8	ND (0.098)	16	17	13	15	9.9	ND (0.11)	ND (0.086)
1,2,4-Trimethylbenzene	NA	9.5	ND (0.11)	0.98	1.1	ND (0.1)	1.1	4	4.9	9.1	5.2	3	8.4	ND (0.096)
1,2-Dichloroethane	NA	<0.9	ND (0.091)	ND (0.08)	0.24	0.16	ND (0.088)	0.59	ND (0.087)	ND (0.093)	ND (0.083)	ND (0.077)	ND (0.10)	0.23
1,3,5-Trimethylbenzene	NA	3.7	ND (0.12)	ND (0.1)	ND (0.096)	ND (0.11)	ND (0.11)	2	2.6	4.9	2.7	1.4	3.1	ND (0.1)
1,3-Butadiene	NA	<3.0	ND (0.14)	ND (0.12)	ND (0.11)	ND (0.12)	ND (0.13)	ND (0.13)	0.46	1.4	ND (0.12)	ND (0.11)	ND (0.15)	ND (0.11)
1,4-Dioxane	NA	NA	ND (0.097)	ND (0.086)	ND (0.079)	ND (0.087)	ND (0.094)	2	ND (0.093)	ND (0.099)	ND (0.089)	ND (0.082)	ND (0.11)	ND (0.082)
2-Hexanone	NA	NA	ND (0.1)	ND (0.09)	ND (0.083)	ND (0.091)	ND (0.098)	5.6	ND (0.097)	ND (0.1)	ND (0.093)	ND (0.086)	ND (0.11)	ND (0.086)
4-Ethyltoluene	NA	3.6	ND (0.13)	ND (0.12)	ND (0.11)	ND (0.12)	ND (0.13)	0.95	ND (0.12)	1.5	1	ND (0.11)	2.7	ND (0.11)
4-Methyl-2-pentanone	NA	6	2.3	4.2	3.3	1.4	5.3	6.2	3.4	3.8	3.7	1.5	1.2	0.94
Acetone	NA	98.9	28	46	32	19	28	260	190	170	110	48	26	11
Acetonitrile	NA	NA	ND (0.2)	ND (0.18)	ND (0.16)	ND (0.18)	ND (0.19)	2.2	4.9	2.7	2.5	ND (0.17)	ND (0.22)	ND (0.17)
Acrolein	NA	NA	ND (0.23)	ND (0.2)	ND (0.19)	ND (0.21)	ND (0.22)	ND (0.21)	1.6	ND (0.24)	ND (0.21)	ND (0.2)	ND (0.26)	ND (0.2)
alpha-Pinene	NA	3.6	ND (0.13)	0.9	2.4	1.1	ND (0.12)	6.1	1.2	ND (0.13)	3.6	ND (0.11)	2.3	2.4
Benzene	NA	9.4	0.55	0.63	0.61	0.41	0.48	4.8	5.5	9.3	10	1.9	10	0.35
Carbon Disulfide	NA	4.2	ND (0.25)	ND (0.22)	ND (0.2)	ND (0.22)	ND (0.24)	10	7.5	16	4.7	1.9	8	ND (0.21)
Carbon Tetrachloride	NA	<1.3	0.36	0.36	0.36	0.38	0.36	0.15	ND (0.11)	0.19	10	0.16	ND (0.13)	0.36
Chloroform	NA	1.1	0.36	ND (0.097)	0.15	1.8	ND (0.11)	0.44	0.23	0.22	0.41	1.2	ND (0.12)	ND (0.092)
Chloromethane	NA	3.7	0.36	0.36	0.34	0.33	0.31	ND (0.12)	ND (0.13)	ND (0.14)	ND (0.12)	ND (0.11)	ND (0.15)	0.33
cis-1,2-Dichloroethene	NA	<1.9	ND (0.12)	ND (0.1)	ND (0.094)	ND (0.1)	ND (0.11)	3	0.26	ND (0.12)	ND (0.11)	0.4	2	ND (0.098)
Cyclohexane	NA	NA	ND (0.23)	ND (0.2)	ND (0.19)	ND (0.21)	ND (0.22)	5.1	4.2	14	12	3.2	11	ND (0.2)
Dibromochloromethane	NA	NA	ND (0.11)	ND (0.095)	ND (0.088)	ND (0.097)	ND (0.1)	0.26	ND (0.1)	ND (0.11)	ND (0.099)	ND (0.091)	ND (0.12)	ND (0.091)
Dichlorodifluoromethane (CFC 12)	NA	16.5	2.2	2.1	1.9	2	1.9	2	4.1	1.9	1.9	1.9	5.2	1.9
d-Limonene	NA	22.5	ND (0.17)	ND (0.15)	0.85	1.1	ND (0.16)	2.2	27	1.5	1.8	0.84	2.2	ND (0.14)
Ethanol	NA	210	8.2	17	15	20	13	85	13	13	23	ND (0.48)	ND (0.64)	ND (0.48)
Ethyl Acetate	NA	5.4	13	4.1	15	19	20	17	4.7	5	150	8.4	ND (0.48)	9.4
Ethylbenzene	NA	5.7	ND (0.12)	ND (0.1)	0.77	ND (0.1)	ND (0.11)	8.9	6.2	9.2	9.9	4	7.7	ND (0.098)
Isopropyl Alcohol	NA	NA	5.9	14	11	24	13	ND (0.31)	ND (0.32)	5.7	11	3.7	ND (0.38)	4.5
Isopropylbenzene	NA	NA	ND (0.12)	ND (0.1)	ND (0.096)	ND (0.11)	ND (0.11)	0.94	0.82	1.3	22	ND (0.1)	ND (0.13)	ND (0.1)
m,p-Xylenes	NA	22.2	ND (0.22)	ND (0.19)	2.4	2	ND (0.21)	23	15	33	27	7.4	35	2
Methyl Ethyl Ketone (2-Butanone)	NA	12	17	38	19	5.5	25	24	28	23	19	5.4	33	2.5
Methylene Chloride	60 <sup>(2)</sup>	10	1.1	1.4	3.8	2.8	1.4	19	8.3	7.5	11	6.2	ND (0.26)	3.1
Naphthalene	NA	5.1	ND (0.2)	ND (0.18)	ND (0.16)	ND (0.18)	ND (0.19)	0.76	1	0.87	0.79	0.94	1.5	ND (0.17)
n-Butyl Acetate	NA	4.5	1.5	1.9	1.6	1.2	1.7	2.1	ND (0.11)	ND (0.11)	ND (0.1)	ND (0.095)	ND (0.13)	1.9
n-Heptane	NA	NA	ND (0.13)	ND (0.12)	1.1	0.87	ND (0.13)	13	ND (0.12)	33	24	5.7	21	0.97
n-Hexane	NA	10.2	ND (0.17)	ND (0.15)	ND (0.14)	ND (0.15)	ND (0.16)	9.3	5.8	32	21	6.8	32	ND (0.14)
n-Nonane	NA	7.8	1.5	2.7	1.5	ND (0.12)	2.3	18	15	37	23	7.2	11	ND (0.12)
n-Octane	NA	4.5	ND (0.18)	ND (0.16)	ND (0.15)	ND (0.17)	ND (0.18)	20	14	40	29	8.8	16	ND (0.16)
n-Propylbenzene	NA	NA	ND (0.12)	ND (0.1)	ND (0.096)	ND (0.11)	ND (0.11)	1	1.1	1.8	1.5	0.75	1.9	ND (0.1)
o-Xylene	NA	7.9	ND (0.12)	ND (0.1)	0.84	ND (0.11)	ND (0.11)	7.6	6	12	8.8	2.6	11	0.69
Propene	NA	NA	7.6	7.7	7	1.2	2.1	5.1	4	11	4.2	0.87	2.9	ND (0.17)
Styrene	NA	1.9	ND (0.13)	ND (0.12)	ND (0.11)	ND (0.12)	ND (0.13)	1.6	0.83	ND (0.14)	0.89	ND (0.11)	3.2	ND (0.11)
Tetrachloroethene	30 <sup>(3)</sup>	15.9	ND (0.11)	ND (0.094)	0.48	0.25	ND (0.1)	19	1.2	0.57	7.6	1.5	6.2	0.45
Tetrahydrofuran (THF)	NA	NA	ND (0.1)	ND (0.091)	ND (0.084)	ND (0.092)	ND (0.1)	ND (0.096)	ND (0.098)	ND (0.11)	7	ND (0.087)	ND (0.12)	ND (0.087)
Toluene	NA	43	59	140	78	19	97	82	44	69	180	34	120	8.1
Trichloroethene	2 <sup>(4)</sup>	4.2	ND (0.11)	ND (0.098)	0.18	0.44	ND (0.11)	7.5	19	5.5	19	680	320	0.22
Trichlorofluoromethane	NA	18.1	1.2	1.1	1.1	1.1	0.99	1.2	0.92	0.96	1.2	0.95	1.4	1.1
Trichlorotrifluoroethane	NA	3.5	ND (0.12)	ND (0.1)	ND (0.095)	ND (0.1)	ND (0.11)	ND (0.11)	ND (0.11)	ND (0.12)	0.91	ND (0.099)	ND (0.13)	ND (0.099)

NOTES

Volatile organic compound (VOC) concentrations are presented in micrograms per cubic meter (µg/m³).

No NYSDOH criteria is available for soil vapor samples

ND = Not detected at concentration above analytical laboratory method detection limit indicated in parenthesis.

NA = Not Available.

<sup>(1)</sup>Unless otherwise noted the Indoor Air Reference Value shown is the 90th percentile referenced in Table C2 of the NYSDOH document titled "Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York" dated October 2006.

<sup>(2)</sup> NYSDOH derived air guidance values in NYSDOH document titled "Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York" dated October 2006.

<sup>(3)</sup> Guidance value identified in NYSDOH September 2013 Fact Sheet "Tetrachloroethene (PERC) in Indoor and Outdoor Air".

<sup>(4)</sup> Guidance value identified in NYSDOH August 2015 Fact Sheet "Trichloroethene (TCE) in Indoor and Outdoor Air".

Highlighted value exceeds the Indoor Air Reference Value

Highlighted value exceeds the NYSDOH Indoor Air Guidance Value



Table 2  
415 Chandler Street  
Jamestown, New York  
NYSDEC Spill No.1812634

SUMMARY OF DETECTED VOLATILE ORGANIC COMPOUNDS (VOC) - SOIL SAMPLES

Compound	Unrestricted Use SCO <sup>(1)</sup>	Protection of Groundwater SCO <sup>(2)</sup>	Restricted Industrial Use SCO <sup>(3)</sup>	Sample Designation and Date				
				DTB-102 (7-8')	DTB-102 (8-9')	DTB-103 (0-1')	DTB-104 (8-9')	DTB-111 (8-9')
				4/29/2019	4/29/2019	4/29/2019	4/29/2019	4/30/2019
1,1-Dichloroethene*	0.33	0.33	1,000	ND (0.0005)	0.013 J	ND (0.00027)	ND (0.024)	0.020 J
1,2,3-Trichlorobenzene	NS	NS	NS	0.0017 BJ	ND (0.018)	ND (0.00048)	ND (0.042)	ND (0.022)
1,2,4-Trichlorobenzene	NS	3.4	NS	0.0015 BJ	0.015 BJ	ND (0.00039)	ND (0.034)	ND (0.027)
1,2,4-Trimethylbenzene	3.6	3.6	380	0.00076 J	ND (0.0068)	0.0056	ND (0.016)	ND (0.0081)
1,2-Dichlorobenzene	1.1	1.1	1,000	0.00052 J	ND (0.0068)	ND (0.00019)	ND (0.016)	ND (0.0081)
1,3,5-Trimethylbenzene	8.4	8.4	380	0.00052 J	ND (0.0068)	0.0031 J	ND (0.016)	ND (0.0081)
2-Butanone (MEK)	0.12	0.3	100	0.025	ND (0.068)	0.0056	ND (0.16)	ND (0.081)
4-Isopropyltoluene	NS	10	NS	0.00055 J	ND (0.0068)	0.0014 J	ND (0.016)	ND (0.0081)
Acetone	0.05	0.05	1,000	0.27	ND (0.160)	0.061	ND (0.38)	ND (0.190)
Benzene	0.06	0.06	89	0.0006 J	ND (0.0068)	ND (0.00019)	ND (0.016)	ND (0.0081)
Carbon Disulfide	NS	2.7	NS	0.016	0.011 J	0.00098 J	0.028 J	0.016 J
cis-1,2-Dichloroethene	0.25	0.25	1,000	0.005 J	1.10	ND (0.00019)	2.20	3.20
Cyclohexane	NS	NS	NS	0.0061 J	ND (0.0089)	0.00062 J	ND (0.024)	ND (0.011)
Ethylbenzene	1	1	780	ND (0.00034)	ND (0.0068)	0.00032 J	ND (0.016)	ND (0.0081)
Isopropylbenzene (Cumene)	NS	2.3	NS	0.00048 J	ND (0.0068)	0.00042 J	ND (0.016)	ND (0.0081)
Methyl Acetate	NS	NS	NS	0.028	0.44 B	0.0093	ND (0.067)	ND (0.034)
Methylcyclohexane	NS	NS	NS	0.030	ND (0.011)	0.0012 J	ND (0.025)	ND (0.013)
Methyl tert-Butyl Ether	0.93	0.93	1,000	0.00052 J	ND (0.0068)	0.0009 J	ND (0.016)	ND (0.0081)
m,p-Xylenes	0.26	0.26	1,000	ND (0.00063)	ND (0.013)	0.00061 J	ND (0.03)	ND (0.015)
o-Xylene	0.26	0.26	1,000	ND (0.00034)	ND (0.0068)	0.0012 J	ND (0.016)	ND (0.0081)
n-Butylbenzene	0.25	12	1,000	0.00039 J	ND (0.0068)	0.0024 J	ND (0.016)	ND (0.0081)
n-Propylbenzene	3.9	3.9	1,000	ND (0.00034)	ND (0.0068)	0.00076 J	ND (0.016)	ND (0.0081)
sec-Butylbenzene	11	11	1,000	0.00055 J	ND (0.0068)	0.0011 J	ND (0.016)	ND (0.0081)
tert-Butylbenzene	5.9	5.9	1,000	0.00066 J	ND (0.0068)	ND (0.00019)	ND (0.016)	ND (0.0081)
Toluene	0.7	0.7	1,000	0.0013 J	ND (0.0068)	0.00087 J	0.042 J	ND (0.0081)
trans-1,2-Dichloroethene	0.19	0.19	1,000	0.00064 J	0.028 J	ND (0.00019)	0.040 J	0.089 J
Trichloroethene (TCE)	0.47	0.47	400	0.0082 J	4.7	ND (0.00021)	23.00	5.80
Vinyl Chloride	0.02	0.02	27	0.0087 J	0.37	ND (0.00043)	0.084 J	0.19 J

NOTES

Results and SCOs are presented in milligrams per kilogram (mg/kg) or parts per million (ppm).

(1) = Soil Cleanup Objective (SCO) for Unrestricted Use as referenced in 6 NYCRR Part 375 dated 12/14/06.

(2) = Soil Cleanup Objective (SCO) for the protection of groundwater as referenced in 6 NYCRR Part 375 dated 12/14/06 and NYSDEC Comissioner's Policy 51 supplimentals SCOs dated 10/21/20

(3) = Soil Cleanup Objective (SCO) for Restricted Industrial Use as referenced in 6 NYCRR Part 375 dated 12/14/06.

NS = No Standard

ND = Not Detected at a concentration greater than the method detection limit shown in parenthesis

J = Detected above the Method Detection Limit but below the Reporting Limit; therefore, result is an estimated concentration.

B = Compound was also detected in the method blank at a concentration that may have contributed to the sample result.

Highlighted value exceeds the Unrestricted Use SCO and/or Protection of Groundwater SCO

Highlighted value exceeds the Restricted Industrial Use SCO



Summary of Detected VOC results in ug/l or Parts Per Billion (ppb) - Groundwater Samples

Detected Constituent	CAS Number	Groundwater Standard or Guidance Value <sup>(1)</sup>	Sample Location and Date							
			TB-18	MW-O	MW-P	MW-Q	MW-R		MW-S	MW-T
			12/26/2018 Water	12/26/2018 Water	12/26/2018 Water	12/26/2018 Water	12/26/2018 Water	2/21/2019 Water	2/21/2019 Water	12/26/2018 Water
Acetone	67-64-1	50	0.7 U	0.7 U	1 J	0.7 U	0.7 U	4.2 J	2.1 U	2 J
Benzene	71-43-2	1	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.20 U	0.2 U
Bromomethane	74-83-9	5	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.70 U	0.70 U	0.3 U
2-Butanone (MEK)	78-93-3	50	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.78 U	0.78 U	0.3 U
Carbon Disulfide	75-15-0	60	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	1.6 B	0.25 U	0.2 U
1,1-Dichloroethane	75-34-3	5	0.6 J	0.2 U	0.2 U	0.2 J	0.2 U	0.20 U	0.20 U	0.2 U
1,1-Dichloroethene	75-35-4	5	0.2 U	0.2 U	0.2 U	0.2 U	38 X	50 X	0.25 U	0.2 U
cis-1,2-Dichloroethene	156-59-2	5	13 X	0.2 U	0.2 U	0.2 U	3,500 X	1400 D X	0.23 U	0.4 J
trans-1,2-Dichloroethene	156-60-5	5	0.4 J	0.2 U	0.2 U	0.2 U	12 X	4.6	0.20 U	0.2 U
4-Isopropyltoluene	99-87-6	5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.21 J	0.20 U	0.2 U
Tetrachloroethene	127-18-4	5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.21 U	0.21 U	0.2 U
Toluene	108-88-3	5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.20 U	0.2 U
1,1,2-Trichloroethane	79-00-5	1	0.2 U	0.2 U	0.2 U	0.2 U	2 J X	0.85 J	0.20 U	0.2 U
Trichloroethene (TCE)	79-01-6	5	2	0.2 U	0.2 U	0.2 U	1100 X	300 D X	0.20 U	0.2 U
Vinyl chloride	75-01-4	2	8 X	0.2 J	0.2 U	0.2 U	840 X	640 D X	0.20 U	0.3 J
m,p-Xylenes	179601-23-1	5	1 U	1 U	1 U	1 U	1 U	0.20 U	0.20 U	1 U
Cyclohexane	110-82-7	NA	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.46 J	0.26 U	0.2 U
Methylcyclohexane	108-87-2	NA	0.2 U	0.2 U	0.2 U	0.2 U	1 J	1.3	0.20 U	0.2 U
Total Chlorinated VOCs		NA	24.0	0.2	0.0	0.2	5492.0	2395.5	0.0	0.7
Total VOCs		NA	24.0	0.2	1.0	0.2	5493.0	2403.2	0.0	2.7

Detected Constituent	CAS Number	Groundwater Standard or Guidance Value <sup>(1)</sup>	Sample Location and Date								
			DTB-101	DTB-102	DTB-103	DTB-104	DTB-106	DTB-107	DTB-108	DTB-109	DTB-110
			5/1/2019 Water	5/1/2019 Water	5/1/2019 Water	5/1/2019 Water	5/1/2019 Water	5/1/2019 Water	5/1/2019 Water	5/1/2019 Water	5/1/2019 Water
Acetone	67-64-1	50	3.3 J	2.1 U	2.8 J	2.1 U	7.5 J	3.4 J	4.8 J	2.6 J	2.4 J
Benzene	71-43-2	1	0.20 U	0.20 U	0.20 U	0.24 J	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Bromomethane	74-83-9	5	0.70 U	0.70 U	0.70 U	0.70 U	0.86 J	0.70 U	0.70 U	0.70 U	0.70 U
2-Butanone (MEK)	78-93-3	50	0.78 U	0.78 U	0.78 U	0.78 U	3.6 J	0.78 U	0.78 U	0.78 U	0.78 U
Carbon Disulfide	75-15-0	60	0.28 BJ	0.34 BJ	0.25 U	0.25 U	0.25 U	0.25 U	0.35 BJ	0.25 U	0.25 U
1,1-Dichloroethane	75-34-3	5	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
1,1-Dichloroethene	75-35-4	5	0.25 U	14 X	0.25 U	0.60 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
cis-1,2-Dichloroethene	156-59-2	5	1.5 J	540 D X	0.42 J	54 X	14 X	0.23 U	0.23 U	0.23 U	3.7 J
trans-1,2-Dichloroethene	156-60-5	5	0.20 U	1.6 DJ	0.20 U	0.58 J	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
4-Isopropyltoluene	99-87-6	5	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Tetrachloroethene	127-18-4	5	0.21 U	4.9 DJ	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
Toluene	108-88-3	5	0.99 J	0.20 U	0.20 U	0.20 U	0.34 J	0.20 U	0.20 U	0.20 U	0.20 U
1,1,2-Trichloroethane	79-00-5	1	0.20 U	0.23 J	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Trichloroethene (TCE)	79-01-6	5	0.67 J	17 X	0.20 U	44 X	9.5 X	0.20 U	0.20 U	0.20 U	1.7 J
Vinyl chloride	75-01-4	2	5.1 X	450 D X	0.20 U	42 X	1.1 J	0.20 U	0.20 U	0.20 U	2.4 J X
m,p-Xylenes	179601-23-1	5	0.26 BJ	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Cyclohexane	110-82-7	NA	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Methylcyclohexane	108-87-2	NA	0.20 U	0.42 J	0.20 U	0.32 J	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Total Chlorinated VOCs		NA	7.3	1027.7	0.4	141.2	24.6	0.0	0.0	0.0	0.9
Total VOCs		NA	12.1	1028.5	3.2	141.7	36.9	3.4	5.2	2.6	10.2

Notes:

U = Not detected above the concentration indicated      J = Estimated Value      D = Data reported from a dilution      B = Also detected in associated blank

VOC = Volatile Organic Compound      NA = Not available      NT = Not tested

<sup>(1)</sup> Groundwater standard or guidance value are as referenced in NYSDEC TOGS 1.1.1 dated June 1998 with April 2000 and June 2004 addendums.      X = Concentration exceeds groundwater standard or guidance value



ATTACHMENT A

TEST BORING LOGS

TB-101 through TB-112



		ENVIRONMENTAL CONSULTANTS AN AFFILIATE OF DAY ENGINEERING, P.C.	
Project #: <u>5529S-18</u> Project Address: <u>415 Chandler Street</u> <u>Jamestown, NY</u> DAY Representative: <u>C. Hampton</u> Drilling Contractor: <u>Nothnagle</u> Sampling Method: <u>Direct Push</u>		<b>Test Boring DTB-101</b>	
		Ground Elevation: - _____ Datum: - _____ <span style="float: right;">Page 1 of 1</span> Date Started: <u>4/29/2019</u> Date Ended: <u>4/29/2019</u> Borehole Depth: <u>12.0'</u> Borehole Diameter: <u>2 1/4 inch</u> Completion Method: <input checked="" type="checkbox"/> Well Installed <input type="checkbox"/> Backfilled with Grout <input type="checkbox"/> Backfilled with Cuttings Water Level (Date): _____	

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	Recovery (ft)	N-Value or RQD%	Headspace PID (ppb)	PID Reading (ppb)	Sample Description	Notes
1	NA	S-1	0-4	1.9'	NA		0	TOPSOIL	Monitoring Point Depth: 10 ft. Screened Interval: 7 - 10 ft. 5/1/19 GW Sample Collection Depth: 8.5 ft.
2							7	Gray, Crushed Rock	
3							39	Brown/Tan, Silty fine to coarse Sand and fine to coarse Gravel, damp (FILL)	
4						34			
5	NA	S-2	4-8	2.7'	NA		0	Black, fine to coarse Sand and Cinders, little Gravel, moist (FILL)	
6							34		
7						148	16	Gray, Clayey fine to coarse Sand, little fine to coarse Gravel, moist (FILL)	
8							39	Brick fragments (FILL)	
9							39	Gray, SILT, little fine to coarse Gravel, trace Sand, wet	
10	NA	S-3	8-12	3.4'	NA	64	0	Gray, coarse GRAVEL, little Cobbles, little Silty Sand, wet	
11							61	Red/Brown, Clayey fine Sand, little fine to medium Gravel, wet (TILL)	
12							33	...Gray/Brown	
13							32		
14								Bottom of Test Boring @ 12.0'	
15									
16									

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions. 2) Stratification lines represent approximate boundaries. Transitions may be gradual. 3) PID readings are referenced to an isobutylene standard. A RAE Systems PPBRAE 3000 equipped with a 10.6 eV lamp was used to obtain the PID readings. 4) NA = Not Available or Not Applicable 5) Headspace PID readings may be influenced by moisture		<b>Test Boring DTB-101</b>
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1563 LYLE AVENUE ROCHESTER, NEW YORK 14606 (585) 454-0210 FAX (585) 454-0825	420 LEXINGTON AVENUE, SUITE 300 NEW YORK, NEW YORK 10170 (212) 986-8645 FAX (212) 986-8657
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		ENVIRONMENTAL CONSULTANTS AN AFFILIATE OF DAY ENGINEERING, P.C.	
Project #: 5529S-18 Project Address: 415 Chandler Street Jamestown, NY		<b>Test Boring DTB-102</b>	
DAY Representative: C. Hampton Drilling Contractor: Nothnagle Sampling Method: Direct Push		Ground Elevation: -      Datum: -      Page 1 of 1 Date Started: 4/29/2019      Date Ended: 4/29/2019 Borehole Depth: 12.0'      Borehole Diameter: 2 1/4 inch Completion Method: <input checked="" type="checkbox"/> Well Installed <input type="checkbox"/> Backfilled with Grout <input type="checkbox"/> Backfilled with Cuttings Water Level (Date): _____	

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	Recovery (ft)	N-Value or RQD%	Headspace PID (ppb)	PID Reading (ppb)	Sample Description	Notes
1							0	ASPHALT	
2	NA	S-1	0-4	2.0'	NA	24	13	Brown/Tan, fine to coarse Sand and fine to coarse Gravel, trace Silt, damp (FILL)	
3							0	...little cobbles	
4							0	Brown, Clayey fine Sand, little fine to coarse Gravel, Cinders,	
5							0	Brick fragments, moist (FILL)	
6	NA	S-2	4-8	1.8'	NA		0	....Brick fragment layer	
7						354	0	...wet	
8							319	Gray, coarse SAND fine Gravel, wet	
9							314	Gray, SILT and Wood fibers, wet	
10	NA	S-3	8-12	3.8'	NA	113	99	Gray, Silty fine SAND, little fine to medium Gravel, wet (TILL)	Monitoring Point Depth: 9.5 ft.
11							21	...Sand lense	Screened Interval: 6.5 - 9.5 ft.
12							0	...Red/Brown	5/1/19 GW Sample Collection Depth: 8 ft.
13							0		
14								Bottom of Test Boring @ 12.0'	
15									
16									

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions. 2) Stratification lines represent approximate boundaries. Transitions may be gradual. 3) PID readings are referenced to an isobutylene standard. A RAE Systems PPBRAE 3000 equipped with a 10.6 eV lamp was used to obtain the PID readings. 4) NA = Not Available or Not Applicable 5) Headspace PID readings may be influenced by moisture		<b>Test Boring DTB-102</b>
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Project #: 5529S-18 Project Address: 415 Chandler Street Jamestown, NY DAY Representative: C. Hampton Drilling Contractor: Nothnagle Sampling Method: Direct Push	<div> <div> <div>Ground Elevation: -</div> <div>Date Started: 4/29/2019</div> <div>Borehole Depth: 12.0'</div> <div>Completion Method: <input checked="" type="checkbox"/> Well Installed</div> <div>Water Level (Date):</div> </div> <div> <div>Datum: -</div> <div>Date Ended: 4/29/2019</div> <div>Borehole Diameter: 2 1/4 inch</div> <div> <input type="checkbox"/> Backfilled with Grout           <input type="checkbox"/> Backfilled with Cuttings         </div> </div> </div>	<div> <div>Test Boring DTB-103</div> <div>Page 1 of 1</div> </div>
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Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	Recovery (ft)	N-Value or RQD%	Headspace PID (ppb)	PID Reading (ppb)	Sample Description	Notes
1						11,720	20,352	ASPHALT Brown, fine to coarse Sand and fine to coarse Gravel, trace Silt, damp (FILL)	<b>Paint thinner-type odor 0-1'</b>
2	NA	S-1	0-4	2.1'	NA		2201		
3						54	484	...little cobbles	
4								Gray/Brown, Clayey fine coarse Sand, fine to coarse Gravel, moist (FILL)	
5							8		
6	NA	S-2	4-8	2.4'	NA		50		
7							2	Gray, coarse SAND and fine to coarse Gravel, trace Clay, moist	
8						50	3	(fine to medium sand lense) ...wet	
9							0	...little Sand	<b>Monitoring Point Depth: 9.5 ft. Screened Interval: 6.5 - 9.5 ft. 5/1/19 GW Sample Collection Depth: 8 ft.</b>
10	NA	S-3	8-12	3.4'	NA	9	0	Gray, Sandy CLAY, trace Gravel, wet	
11						32	0		
12						214	0	Red/Brown, Silty fine SAND, little fine to medium Gravel, wet (TILL)	
13								Bottom of Test Boring @ 12.0'	
14									
15									
16									

Notes:	<p>1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.</p> <p>2) Stratification lines represent approximate boundaries. Transitions may be gradual.</p> <p>3) PID readings are referenced to an isobutylene standard. A RAE Systems PPBRAE 3000 equipped with a 10.6 eV lamp was used to obtain the PID readings.</p> <p>4) NA = Not Available or Not Applicable</p> <p>5) Headspace PID readings may be influenced by moisture</p>
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**Test Boring DTB-103**

1563 LYELL AVENUE  
ROCHESTER, NEW YORK 14606  
(585) 454-0210  
FAX (585) 454-0825

420 LEXINGTON AVENUE, SUITE 300  
NEW YORK, NEW YORK 10170  
(212) 986-8645  
FAX (212) 986-8657



		ENVIRONMENTAL CONSULTANTS AN AFFILIATE OF DAY ENGINEERING, P.C.	
Project #: 5529S-18 Project Address: 415 Chandler Street Jamestown, NY		<b>Test Boring DTB-104</b>	
DAY Representative: C. Hampton Drilling Contractor: Nothnagle Sampling Method: Direct Push		Ground Elevation: -      Datum: -      Page 1 of 1 Date Started: 4/29/2019      Date Ended: 4/29/2019 Borehole Depth: 12.0'      Borehole Diameter: 2 1/4 inch Completion Method: <input checked="" type="checkbox"/> Well Installed <input type="checkbox"/> Backfilled with Grout <input type="checkbox"/> Backfilled with Cuttings Water Level (Date): _____	

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	Recovery (ft)	N-Value or RQD%	Headspace PID (ppb)	PID Reading (ppb)	Sample Description	Notes
1						1395	3775	ASPHALT	Monitoring Point Depth: 10 ft. Screened Interval: 7 - 10 ft. 5/1/19 GW Sample Collection Depth: 8.5 ft.
2	NA	S-1	0-4	2.4'	NA		311	Brown/Tan, fine to coarse Sand and fine to coarse Gravel, little Silt, damp (FILL)	
3							194		
4							80	Brown, medium Sand, little fine to medium Gravel, little Silt, moist (FILL)	
5							73	...Brick fragments, trace Cobbles	
6	NA	S-2	4-8	2.4'	NA	1500	2488	Gray/Black	
7							47	...wet	
8						7598	1129	Brown, medium to coarse SAND and fine to coarse GRAVEL, trace Clay, wet	
9						38,750	2681	Gray, Sandy CLAY, trace Gravel, wet	
10	NA	S-3	8-12	4.0'	NA	27,230	3391		
11							59	Red/Brown, Silty fine SAND, little fine to medium Gravel, wet (TILL)	
12						359	0		
13							0		
14									
15									
16								Bottom of Test Boring @ 12.0'	

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions. 2) Stratification lines represent approximate boundaries. Transitions may be gradual. 3) PID readings are referenced to an isobutylene standard. A RAE Systems PPBRAE 3000 equipped with a 10.6 eV lamp was used to obtain the PID readings. 4) NA = Not Available or Not Applicable 5) Headspace PID readings may be influenced by moisture		<b>Test Boring DTB-104</b>
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Project #: 5529S-18 Project Address: 415 Chandler Street Jamestown, NY		<b>Test Boring DTB-105</b>	
DAY Representative: C. Hampton Drilling Contractor: Nothnagle Sampling Method: Direct Push		Ground Elevation: - Datum: - <span style="float: right;">Page 1 of 1</span> Date Started: 4/29/2019 Date Ended: 4/29/2019 Borehole Depth: 16.0' Borehole Diameter: 2 1/4 inch Completion Method: <input type="checkbox"/> Well Installed <input type="checkbox"/> Backfilled with Grout <input checked="" type="checkbox"/> Backfilled with Cuttings Water Level (Date):	

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	Recovery (ft)	N-Value or RQD%	Headspace PID (ppb)	PID Reading (ppb)	Sample Description	Notes
1							0	TOPSOIL	
2	NA	S-1	0-4	2.4'	NA		0	Brown/Tan, medium to coarse Sand and fine to coarse Gravel, little Silt, damp (FILL)	
3						890*	0	Brown, medium SAND, little fine to coarse Gravel, little Silt, moist (FILL)	
4							0	...trace Cobbles	
5							0		
6	NA	S-2	4-8	2.6'	NA		0	Brown, Clayey fine SAND and medium to coarse GRAVEL, shale fragments, moist	
7						346	0	...fine to medium Gravel	
8							0	...wet	
9						2152	141	Gray fine Sandy CLAY, trace Gravel, wet	
10	NA	S-3	8-12	4.0'	NA		0		
11						313	0		
12							0		
13							0	Red/Brown, Silty fine SAND, little fine to medium Gravel, wet (TILL)	
14	NA	S-4	12-16	4.0'	NA		0		
15							0		
16							0		
Bottom of Test Boring @ 16.0'									

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions. 2) Stratification lines represent approximate boundaries. Transitions may be gradual. 3) PID readings are referenced to an isobutylene standard. A RAE Systems PPBRAE 3000 equipped with a 10.6 eV lamp was used to obtain the PID readings. 4) NA = Not Available or Not Applicable 5) Headspace PID readings may be influenced by moisture		<b>Test Boring DTB-105</b>
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\* Headspace on empty bag = 204 ppm.



Project #: 5529S-18 Project Address: 415 Chandler Street Jamestown, NY DAY Representative: C. Hampton Drilling Contractor: Nothnagle Sampling Method: Direct Push	<div> <div>Test Boring DTB-106</div> <div>Page 1 of 1</div> </div>
Ground Elevation: - Date Started: 4/29/2019 Borehole Depth: 15.0' Completion Method: <input checked="" type="checkbox"/> Well Installed Water Level (Date):	Datum: - Date Ended: 4/29/2019 Borehole Diameter: 2 1/4 inch <input type="checkbox"/> Backfilled with Grout <input type="checkbox"/> Backfilled with Cuttings

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	Recovery (ft)	N-Value or RQD%	Headspace PID (ppb)	PID Reading (ppb)	Sample Description	Notes
1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  16								CONCRETE	Background PID readings: 10-90 ppb  <

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions

2) Stratification lines represent approximate boundaries. Transitions may be gradual.

3) PID readings are referenced to an isobutylene standard. A RAE Systems PPBRAE 3000 equipped with a 10.6 eV lamp was used to obtain the PID readings.

4) NA = Not Available or Not Applicable

5) Headspace PID readings may be influenced by moisture

**Test Boring DTB-106**

1563 LYELL AVENUE  
ROCHESTER, NEW YORK 14606  
(585) 454-0210  
FAX (585) 454-0825

[www.dayenvironmental.com](http://www.dayenvironmental.com)

420 LEXINGTON AVENUE, SUITE 300  
NEW YORK, NEW YORK 10170  
(212) 986-8645  
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Project #: 5529S-18 Project Address: 415 Chandler Street Jamestown, NY		<b>Test Boring DTB-107</b>	
DAY Representative: C. Hampton Drilling Contractor: Nothnagle Sampling Method: Direct Push		Ground Elevation: - Datum: - <span style="float: right;">Page 1 of 1</span> Date Started: 4/30/2019 Date Ended: 4/30/2019 Borehole Depth: 12' Borehole Diameter: 2 1/4 inch Completion Method: <input checked="" type="checkbox"/> Well Installed <input type="checkbox"/> Backfilled with Grout <input type="checkbox"/> Backfilled with Cuttings Water Level (Date):	

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	Recovery (ft)	N-Value or RQD%	Headspace PID (ppb)	PID Reading (ppb)	Sample Description	Notes
1						74	2188	ASPHALT	Monitoring Point Depth: 10 ft. Screened Interval: 7 - 10 ft. 5/1/19 GW Sample Collection Depth: 8.5 ft.
2	NA	S-1	0-4	2.7'	NA		348	Brown/Tan, medium to coarse Sand and fine to coarse Gravel, little Silt, damp (FILL)	
3							201	Black, fine Clayey Sand, little Cinders, little Ash, little fine to medium Gravel, moist (FILL)	
4							91	...Brick fragments	
5							0	Tan, fine to medium Clayey SAND and fine to coarse Gravel, moist	
6	NA	S-2	4-8	1.6'	NA		0	...little Clay	
7						134	0	Brown, SILT, some fine to medium Gravel, little Sand, wet	
8							0	...and fine to medium GRAVEL	
9						162	0	Red/Brown, fine Silty SAND, little fine to medium Gravel, wet (TILL)	
10	NA	S-3	8-12	3.3'	NA		0		
11							0		
12						21	0		
13								Bottom of Test Boring @ 12.0'	
14									
15									
16									

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions. 2) Stratification lines represent approximate boundaries. Transitions may be gradual. 3) PID readings are referenced to an isobutylene standard. A RAE Systems PPBRAE 3000 equipped with a 10.6 eV lamp was used to obtain the PID readings. 4) NA = Not Available or Not Applicable 5) Headspace PID readings may be influenced by moisture		<b>Test Boring DTB-107</b>
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		ENVIRONMENTAL CONSULTANTS AN AFFILIATE OF DAY ENGINEERING, P.C.	
Project #: 5529S-18 Project Address: 415 Chandler Street Jamestown, NY		<b>Test Boring DTB-108</b>	
DAY Representative: C. Hampton Drilling Contractor: Nothnagle Sampling Method: Direct Push		Ground Elevation: -      Datum: -      Page 1 of 1 Date Started: 4/30/2019      Date Ended: 4/30/2019 Borehole Depth: 12'      Borehole Diameter: 2 1/4 inch Completion Method: <input checked="" type="checkbox"/> Well Installed <input type="checkbox"/> Backfilled with Grout <input type="checkbox"/> Backfilled with Cuttings Water Level (Date): _____	

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	Recovery (ft)	N-Value or RQD%	Headspace PID (ppb)	PID Reading (ppb)	Sample Description	Notes
1						253	24	ASPHALT	
2	NA	S-1	0-4	2.6'	NA		0	Brown/Red, medium to coarse Sand and fine to coarse Gravel, little Silt, damp (FILL) ...trace Cobbles	
3							0	Brown, medium Clayey Sand, little fine to coarse Gravel, Brick fragments, damp (FILL)	
4							0	...Gray	
5							0	Brown, SILT, some fine to medium Gravel, little fine Sand, moist	
6	NA	S-2	4-8	3.1'	NA		0	...little Clay	
7						124	0	Brown, Clayey medium to coarse SAND and fine to medium GRAVEL	Monitoring Point Depth: 9.5 ft.
8							0	...wet	Screened Interval: 6.5 - 9.5 ft.
9							0	Red/Brown, Silty fine SAND, little fine to medium Gravel, wet (TILL)	5/1/19 GW Sample Collection Depth: 8 ft.
10	NA	S-3	8-12	3.4'	NA		0	...trace Cobbles	
11						173	0	...Sand lense	
12							0		
13								Bottom of Test Boring @ 12.0'	
14									
15									
16									

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions. 2) Stratification lines represent approximate boundaries. Transitions may be gradual. 3) PID readings are referenced to an isobutylene standard. A RAE Systems PPBRAE 3000 equipped with a 10.6 eV lamp was used to obtain the PID readings. 4) NA = Not Available or Not Applicable 5) Headspace PID readings may be influenced by moisture		<b>Test Boring DTB-108</b>
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		ENVIRONMENTAL CONSULTANTS AN AFFILIATE OF DAY ENGINEERING, P.C.	
Project #: 5529S-18 Project Address: 415 Chandler Street Jamestown, NY		<b>Test Boring DTB-109</b>	
DAY Representative: C. Hampton Drilling Contractor: Nothnagle Sampling Method: Direct Push		Ground Elevation: - Datum: - <span style="float: right;">Page 1 of 1</span> Date Started: 4/30/2019 Date Ended: 4/30/2019 Borehole Depth: 12' Borehole Diameter: 2 1/4 inch Completion Method: <input checked="" type="checkbox"/> Well Installed <input type="checkbox"/> Backfilled with Grout <input type="checkbox"/> Backfilled with Cuttings Water Level (Date):	

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	Recovery (ft)	N-Value or RQD%	Headspace PID (ppb)	PID Reading (ppb)	Sample Description	Notes
1						1182	178	ASPHALT	
2	NA	S-1	0-4	2.0'	NA		9	Brown/Tan, medium, to coarse Sand and fine to coarse Gravel, little Silt, damp (FILL) ...trace Cobbles	
3							0		
4							25	Tan, Clayey fine to medium SAND, little fine to coarse Gravel, little Cobbles, moist	
5							0		
6	NA	S-2	4-8	3.0'	NA	235	0	Gray, Clayey GRAVEL, little coarse Sand, wet	Monitoring Point Depth: 8 ft. Screened Interval: 5 - 8 ft. 5/1/19 GW Sample Collection Depth: 6.5 ft.
7							0	Gray, Clayey fine to medium SAND, little fine to medium Gravel, wet (TILL)	
8							0	...red/brown, Silty fine SAND	
9							0		
10	NA	S-3	8-12	4.0'	NA		0		
11						227	0		
12							0		
13								Bottom of Test Boring @ 12.0'	
14									
15									
16									

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions. 2) Stratification lines represent approximate boundaries. Transitions may be gradual. 3) PID readings are referenced to an isobutylene standard. A RAE Systems PPBRAE 3000 equipped with a 10.6 eV lamp was used to obtain the PID readings. 4) NA = Not Available or Not Applicable 5) Headspace PID readings may be influenced by moisture		<b>Test Boring DTB-109</b>
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		ENVIRONMENTAL CONSULTANTS AN AFFILIATE OF DAY ENGINEERING, P.C.	
Project #: 5529S-18 Project Address: 415 Chandler Street Jamestown, NY		<b>Test Boring DTB-110</b>	
DAY Representative: C. Hampton Drilling Contractor: Nothnagle Sampling Method: Direct Push		Ground Elevation: -      Datum: -      Page 1 of 1 Date Started: 4/30/2019      Date Ended: 4/30/2019 Borehole Depth: 12'      Borehole Diameter: 2 1/4 inch Completion Method: <input checked="" type="checkbox"/> Well Installed <input type="checkbox"/> Backfilled with Grout <input type="checkbox"/> Backfilled with Cuttings Water Level (Date): _____	

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	Recovery (ft)	N-Value or RQD%	Headspace PID (ppb)	PID Reading (ppb)	Sample Description	Notes
1						151	609	ASPHALT	Monitoring Point Depth: 10 ft. Screened Interval: 7 - 10 ft. 5/1/19 GW Sample Collection Depth: 8.5 ft.
2	NA	S-1	0-4	2.3'	NA		0	Tan/Brown, medium to coarse Sand and fine to coarse Gravel, little Silt, damp (FILL)	
3							0		
4							0	Brown, SILT, some fine to coarse Gravel, little fine Sand, moist	
5							0	Tan, Clayey fine to medium SAND and fine to coarse GRAVEL, damp	
6	NA	S-2	4-8	2.4'	NA		0	...coarse Sand	
7						65	0	Gray, fine to coarse GRAVEL, little Sand, little Clay, wet	
8							0		
9							0	Red/Brown, Clayey fine SAND, little fine to medium Gravel, wet (Till)	
10	NA	S-3	8-12	4.0'	NA		0	...silty fine SAND	
11						55	0		
12							0		
13								Bottom of Test Boring@ 12.0'	
14									
15									
16									

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions. 2) Stratification lines represent approximate boundaries. Transitions may be gradual. 3) PID readings are referenced to an isobutylene standard. A RAE Systems PPBRAE 3000 equipped with a 10.6 eV lamp was used to obtain the PID readings. 4) NA = Not Available or Not Applicable 5) Headspace PID readings may be influenced by moisture		<b>Test Boring DTB-110</b>
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		ENVIRONMENTAL CONSULTANTS AN AFFILIATE OF DAY ENGINEERING, P.C.	
Project #: 5529S-18 Project Address: 415 Chandler Street Jamestown, NY		<b>Test Boring DTB-111</b>	
DAY Representative: C. Hampton Drilling Contractor: Nothnagle Sampling Method: Direct Push		Ground Elevation: - Datum: - <span style="float: right;">Page 1 of 2</span> Date Started: 4/30/2019 Date Ended: 4/30/2019 Borehole Depth: 22.0' Borehole Diameter: 2 1/4 inch Completion Method: <input type="checkbox"/> Well Installed <input checked="" type="checkbox"/> Backfilled with Grout <input type="checkbox"/> Backfilled with Cuttings Water Level (Date):	

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	Recovery (ft)	N-Value or RQD%	Headspace PID (ppb)	PID Reading (ppb)	Sample Description	Notes
1						608	0	ASPHALT	
2	NA	S-1	0-4	2.2'	NA		0	Brown/Tan, medium to coarse Sand and fine to coarse Gravel, little Silt, damp (FILL)	
3							0	Tan, Clayey fine to medium SAND and fine to coarse GRAVEL, damp	
4							0		
5							0	Brown, SILT, little medium to coarse Gravel, trace Sand, moist	
6	NA	S-2	4-8	2.7'	NA		158		
7							461	Gray, Clayey fine to coarse SAND and fine to coarse GRAVEL, moist	
8						1477		...wet ...little Sand	
9							812	Gray, Sandy CLAY, trace fine to coarse Gravel, wet	
10	NA	S-3	8-12	4.0'	NA		2063		
11							678		
12							0		
13							0		
14							536		
15							0		
16							0		
17								Red/Brown, fine to medium SAND, little fine to medium Gravel, wet (TILL)	
18							378		
19	NA	S-4	12-16	4.0'	NA		15		
20							10		
21							0		
22							0		
23							419		
24							0		

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions. 2) Stratification lines represent approximate boundaries. Transitions may be gradual. 3) PID readings are referenced to an isobutylene standard. A RAE Systems PPBRAE 3000 equipped with a 10.6 eV lamp was used to obtain the PID readings. 4) NA = Not Available or Not Applicable 5) Headspace PID readings may be influenced by moisture		<b>Test Boring DTB-111</b>
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 DAY ENVIRONMENTAL, INC.								ENVIRONMENTAL CONSULTANTS AN AFFILIATE OF DAY ENGINEERING, P.C.	
Project #: 5529S-18 Project Address: 415 Chandler Street Jamestown, NY DAY Representative: C. Hampton Drilling Contractor: Nothnagle Sampling Method: Direct Push								<b>Test Boring DTB-111</b>	
Ground Elevation: -      Datum: -      Page 2 of 2 Date Started: 4/30/2019      Date Ended: 4/30/2019 Borehole Depth: 22.0'      Borehole Diameter: 2 1/4 inch Completion Method: <input type="checkbox"/> Well Installed <input checked="" type="checkbox"/> Backfilled with Grout <input type="checkbox"/> Backfilled with Cuttings Water Level (Date):									

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	Recovery (ft)	N-Value or RQD%	Headspace PID (ppb)	PID Reading (ppb)	Sample Description	Notes
17	NA	S-5	16-19	3.0'	NA	380	34	...Gray, some medium to coarse Gravel	
18							0		
19						272	0		
20	NA	S-6	19-22	3.0'	NA	357	0	...Rock fragment	
21							0		
22							0		
23								Bottom of Test Boring @ 22.0'	
24									
25									
26									
27									
28									
29									
30									
31									
32									

<b>Notes:</b> 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions. 2) Stratification lines represent approximate boundaries. Transitions may be gradual. 3) PID readings are referenced to an isobutylene standard. A RAE Systems PPBRAE 3000 equipped with a 10.6 eV lamp was used to obtain the PID readings. 4) NA = Not Available or Not Applicable 5) Headspace PID readings may be influenced by moisture								<b>Test Boring DTB-111</b>	
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 <b>DAY ENVIRONMENTAL, INC.</b>								<b>ENVIRONMENTAL CONSULTANTS</b> AN AFFILIATE OF DAY ENGINEERING, P.C.							
Project #: <u>5529S-18</u> Project Address: <u>415 Chandler Street</u> <u>Jamestown, NY</u> DAY Representative: <u>C. Hampton</u> Drilling Contractor: <u>Nothnagle</u> Sampling Method: <u>Direct Push</u>								<div style="border: 1px solid black; padding: 2px; text-align: center; font-weight: bold;">Test Boring DTB-112</div> <div style="display: flex; justify-content: space-between;"> <div>           Ground Elevation: -            Date Started: <u>4/30/2019</u>            Borehole Depth: <u>12.0'</u>            Completion Method: <input type="checkbox"/> Well Installed <input checked="" type="checkbox"/> Backfilled with Grout <input type="checkbox"/> Backfilled with Cuttings            Water Level (Date): _____         </div> <div>           Datum: -            Date Ended: <u>4/30/2019</u>            Borehole Diameter: <u>2 1/4 inch</u> </div> <div style="border: 1px solid black; padding: 2px; font-size: small;">Page 1 of 1</div> </div>							
Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	Recovery (ft)	N-Value or RQD%	Headspace PID (ppb)	PID Reading (ppb)	Sample Description	Notes						
1						212	279	ASPHALT							
2	NA	S-1	0-4	1.8'	NA		79	Brown/Tan, medium to coarse Sand and fine to coarse Gravel, little Silt, damp (FILL)							
3								Brown, Clayey medium Sand and fine to coarse Gravel, trace Cobbles, Crushes Stone. moist (FILL)							
4							3	...little Ash and Cinders							
5								PEAT and Gray SILT, moist							
6	NA	S-2	4-8	1.7'	NA	1475	192	...wood fibers							
7							3	Tan, Clayey fine SAND, little medium to coarse Gravel, wet							
8							0								
9							0	Gray, Clayey fine SAND, little fine to medium Gravel, wet (TILL)							
10	NA	S-3	8-12	4.0'	NA		8	...Red/Brown, Silty fine SAND							
11							0								
12							0								
13								Bottom of Test Boring @ 12.0'							
14															
15															
16															

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.  
 2) Stratification lines represent approximate boundaries. Transitions may be gradual.  
 3) PID readings are referenced to an isobutylene standard. A RAE Systems PPBRAE 3000 equipped with a 10.6 eV lamp was used to obtain the PID readings.  
 4) NA = Not Available or Not Applicable  
 5) Headspace PID readings may be influenced by moisture

**Test Boring DTB-112**  
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 ROCHESTER, NEW YORK 14606  
 (585) 454-0210  
 FAX (585) 454-0825

420 LEXINGTON AVENUE, SUITE 300  
 NEW YORK, NEW YORK 10170  
 (212) 986-8645  
 FAX (212) 986-8657

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