

Limited Phase II Environmental Site Assessment

3001 W. Auburn Road
Rochester Hills, Michigan

City of Rochester Hills

December 1, 2021

ASTI ENVIRONMENTAL



Limited Phase II Environmental Site Assessment

3001 W. Auburn Road
Rochester Hills, Michigan

December 1, 2021

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1.0 INTRODUCTION

ASTI Environmental (ASTI) was retained by the City of Rochester Hills to conduct a Limited Phase II Environmental Site Assessment (ESA) of the property located at 3001 W. Auburn Road in the City of Rochester Hills, Oakland County, Michigan (Subject Property). This investigation was prepared for the benefit of the City of Rochester Hills and ASTI acknowledges that said party may rely upon the contents and conclusions presented in this report. The Subject Property comprises 10.19 acres of land on two parcels with Parcel IDs 70-15-31-227-033 and 70-15-31-227-034. A Site Location Map is provided as Figure 1.

The Limited Phase II ESA was conducted in accordance with ASTI's proposal dated November 1, 2021.

2.0 PURPOSE AND PROPERTY HISTORY AND INFORMATION

2.1 Purpose

ASTI completed a Phase I ESA of the Subject Property on October 19, 2021 that identified the following recognized environmental condition (REC) with respect to the Subject Property:

- In the 1967 aerial photograph, apparent surface disturbance indicative of unknown filling operations was identified on the northern portion of the Subject Property. During the site reconnaissance fill materials and debris consisting of concrete/brick/metal were observed in this area. The type of backfill and grading materials is unknown. Fill materials may contain hazardous substances and/or petroleum products. The apparent filling operations are considered a REC.

The purpose of this Limited Phase II Environmental Site Assessment was to evaluate this REC to determine if a release of hazardous substances and/or petroleum products has occurred at the Subject Property.

2.2 Historical Uses of the Subject Property

Based on the Phase I ESA research, the Subject Property appeared undeveloped from at least 1937 until approximately 1949 when the southern portion was developed as farmland. Farming operations ceased by 1972. In the 1967 aerial photograph, apparent surface disturbance was identified on the northern portion of the Subject Property. The Subject Property has remained vacant land since farming ceased.

2.3 Current Uses of the Subject Property

The Subject Property consists of 10.19 acres of vacant land with no obvious use.

2.4 Existing Infrastructure Features

The Subject Property is currently undeveloped wooded land. Potable water, storm water, and sewerage services area available to the Subject Property through the City of Rochester Hills. Electrical services are available from DTE and natural gas is available through Consumers Energy.

3.0 SAMPLING LOCATIONS

On November 8, 2021, ASTI advanced three soil borings (SB-1 through SB-3) at the Subject Property. The soil borings were advanced to a depth of 5 feet below ground surface (bgs). A Sample Location Map is provided as Figure 2.

Boring/sample ID, boring/sample locations, and depth were as follows:

Boring/Sample ID	Boring/Sample Location	Depth of Boring (bgs)
SB-1	Northwestern portion of the Subject Property regarding the surface disturbance in the 1967 aerial photograph and construction debris on the surface	5 feet
SB-2	North-central portion of the Subject Property regarding the surface disturbance in the 1967 aerial photograph and construction debris on the surface	5 feet
SB-3	Northeastern portion of the Subject Property regarding the surface disturbance in the 1967 aerial photograph and construction debris on the surface	5 feet

4.0 SAMPLE COLLECTION PROCEDURES

The soil borings were advanced with a stainless-steel hand auger. Soil was extracted from the ground in the auger bucket and was placed directly into clean plastic bags for classification and screening or sample jars for laboratory analysis. Soil encountered during field activities was identified by ASTI's field personnel, examined for visual and/or olfactory evidence of impact, and screened using a photoionization detector (PID) with notes recorded in a field logbook. Prior to sampling, the PID was calibrated to manufacturer specifications using 100 parts per million (ppm) isobutylene calibration gas. All down-hole equipment was decontaminated using an Alconox[®] wash and clean water rinse between borings to minimize the risk of cross contamination of samples.

ASTI collected one soil sample from each soil boring. One duplicate soil sample (Dup-1s) was collected at SB-3 (2-3') for quality assurance/quality control (QA/QC) purposes. The soil samples were collected directly from the auger bucket into laboratory certified clean, unpreserved 8-ounce glass jars and 40-milliliter(ml) vials preserved with methanol, which were subsequently placed on ice, and submitted to Fibertec Environmental Services (Fibertec) in Holt, Michigan under standard chain-of-custody procedures.

Groundwater was encountered in each soil boring and temporary monitoring wells were installed in soil borings SB-1 and SB-2. The wells were constructed using new one-inch diameter, five-foot long, 10-slot polyvinyl chloride (PVC) screens threaded onto a new one-inch diameter PVC riser. The groundwater at each location was sampled using a peristaltic pump set at a flow rate of approximately 200 ml/minute. Groundwater was purged from each monitoring well with turbidity readings taken until the turbidity was below 40 nephelometric turbidity units (NTUs). The groundwater samples were collected into two 40-ml glass vials preserved in the field with hydrochloric acid, one 125-ml plastic bottle preserved in the field with nitric acid, and a 1-liter, unpreserved, amber glass jar. One groundwater duplicate sample (Dup-1gw) was collected at SB-1-GW for QA/QC purposes. The groundwater samples were also placed on ice and submitted to Fibertec under standard chain-of-custody procedures.

The soil and groundwater samples were analyzed for volatile organic compounds (VOCs) by US EPA Method 8260D, polynuclear aromatic hydrocarbons (PNAs) by US EPA Method 8270E, and Michigan 10 metals (arsenic, barium, cadmium, chromium, copper, lead, mercury, selenium, silver, and zinc) by US EPA Methods 6020A and 7471B (soil only) or 7470A (water only).

Sample depth, location rationale, and analysis are provided in the following table.

Boring	Sample Matrix	Sample Depth	Rationale for sample depth	Analysis
SB-1	Soil	2-2.75'	Directly above the water table	VOCs, PNAs, & Michigan 10 metals
	Groundwater	Screened 0-5'	Intersection of the water table	VOCs, PNAs, & Michigan 10 metals
SB-2	Soil	0.5-1'	Directly above the water table	VOCs, PNAs, & Michigan 10 metals
	Groundwater	Screened 0-5'	Intersection of the water table	VOCs, PNAs, & Michigan 10 metals
SB-3	Soil	2-3'	Directly above the water table	VOCs, PNAs, & Michigan 10 metals

5.0 PATHWAY EVALUATION

The Michigan Department of Environment, Great Lakes, and Environment (EGLE) Generic Residential Cleanup Criteria (GRCC) used for comparison to the soil analytical for the Subject Property under Part 201 of Michigan's Natural Resources and Environmental Protection Act, 1994 PA 451, as Amended (Part 201) are the drinking water protection (DWP), groundwater surface water interface protection (GSIP), direct contact (DC), soil volatilization to indoor air inhalation (SVIAI), and particulate soil inhalation (PSI). The groundwater samples were compared to the GRCC for drinking water (DW), groundwater surface water interface (GSI), and groundwater volatilization to indoor air inhalation (GVIAI).

6.0 SOIL AND GROUNDWATER CHARACTERISTICS

The general subsurface lithology encountered in the soil borings underlying surface cover (topsoil) comprised a well graded sand stratum that was encountered to the explored depth of each boring at five feet bgs. No staining or odors were noted in the soil borings and no VOCs were detected on the PID during screening of the soil cores.

Groundwater was encountered in each soil boring at depths between 1-foot bgs in SB-2 and 3 feet bgs in SB-3. For more details on the encountered subsurface stratigraphy, see the soil borings logs Provided as Attachment A.

7.0 ANALYTICAL RESULTS

Soil Analytical

Table 1 presents the laboratory analytical results for the soil samples in comparison to the GRCC.

Metals

The laboratory analytical results for the soil samples reported the metal lead in soil samples SB-3 (2-3') and the associated duplicate sample (Dup-1s) at concentrations above the GRCC for DC and DWP. In addition, concentrations of arsenic were detected at concentrations above the GRCC for DC and/or DWP and GSIP in soil samples SB-3 (2-3') and Dup-1s. The concentration of selenium in soil sample SB-3 (2-3') also exceeded the GRCC for GSIP. These samples were all collected in native sand. The Subject Property is located within the Huron-Erie Glacial Lobe and these samples were collected in native soils. Following Part 324.20101(e)(ii) of NREPA Act 451 of 1994 for use of regional background, the regional background concentration for arsenic in sand in the Huron-Erie Glacial Lobe is 22,800 µg/kg. The highest arsenic concentration in these samples was 7,900 µg/kg. Therefore, the arsenic concentrations reported in these samples fall within the regional background concentration for arsenic and do not represent exceedances of the GRCC or evidence of a release. The regional background concentration for selenium in sand in the Huron-Erie Glacial Lobe is 1,300 µg/kg. The selenium concentration in SB-3 (2-3') was 420 µg/kg and therefore this selenium concentration does not represent an exceedance of the GRCC.

The metal chromium (total) was reported in samples SB-3 (2-3') and Dup-1s at concentrations above the Statewide Default Background Level (SDBL). These samples were further analyzed for hexavalent chromium (Cr⁶⁺) and none was detected above the laboratory reporting limits. Therefore, the chromium (total) analytical results were compared to the GRCC for trivalent chromium (Cr³⁺) and the GRCC for Cr³⁺ were not exceeded in any sample.

No other metals were detected at concentrations exceeding the GRCC.

PNA's

Multiple PNAs were detected in SB-3 (2-3') and Dup-1s at low concentrations below the GRCC. NO PNAs were detected in the remaining samples above laboratory reporting limits.

VOCs

No VOCs were detected in the soil samples above the laboratory reporting limits.

Groundwater Analytical

Table 2 presents the laboratory analytical results for the groundwater samples in comparison to the GRCC.

Metals

The laboratory analytical results reported the metals arsenic, selenium, and copper in groundwater samples SB-1-GW and the associated duplicate groundwater sample (Dup-1gw) at concentrations below the GRCC. No other metals were detected in the groundwater samples above the laboratory reporting limits.

PNAs and VOCs

No PNAs or VOCs were detected in the groundwater samples above the laboratory reporting limits.

The Laboratory Analytical Reports and chain-of-custody documentation are provided in Attachment B.

Quality Assurance/Quality Control

The Laboratory Analytical Report indicated that no VOCs were detected above the laboratory reporting limits in the methanol blank. In addition, both the duplicate soil and groundwater samples were within acceptable ranges of the associated parent samples. The following qualifiers were used for select VOCs in the groundwater samples:

- L+ : Recovery in the associated laboratory sample (LCS) exceeds the upper control limit. Results may be biased high.

- V+ : Recovery in the associated continuing calibration verification sample (CCV) exceeds the upper control limit. Results may be biased high.
- Y1 : Sample was diluted due to a sample matrix issue.

These qualifiers did not affect the findings of this investigation because no VOCs were detected in the groundwater samples above the laboratory reporting limits and these qualifiers were generally biased high.

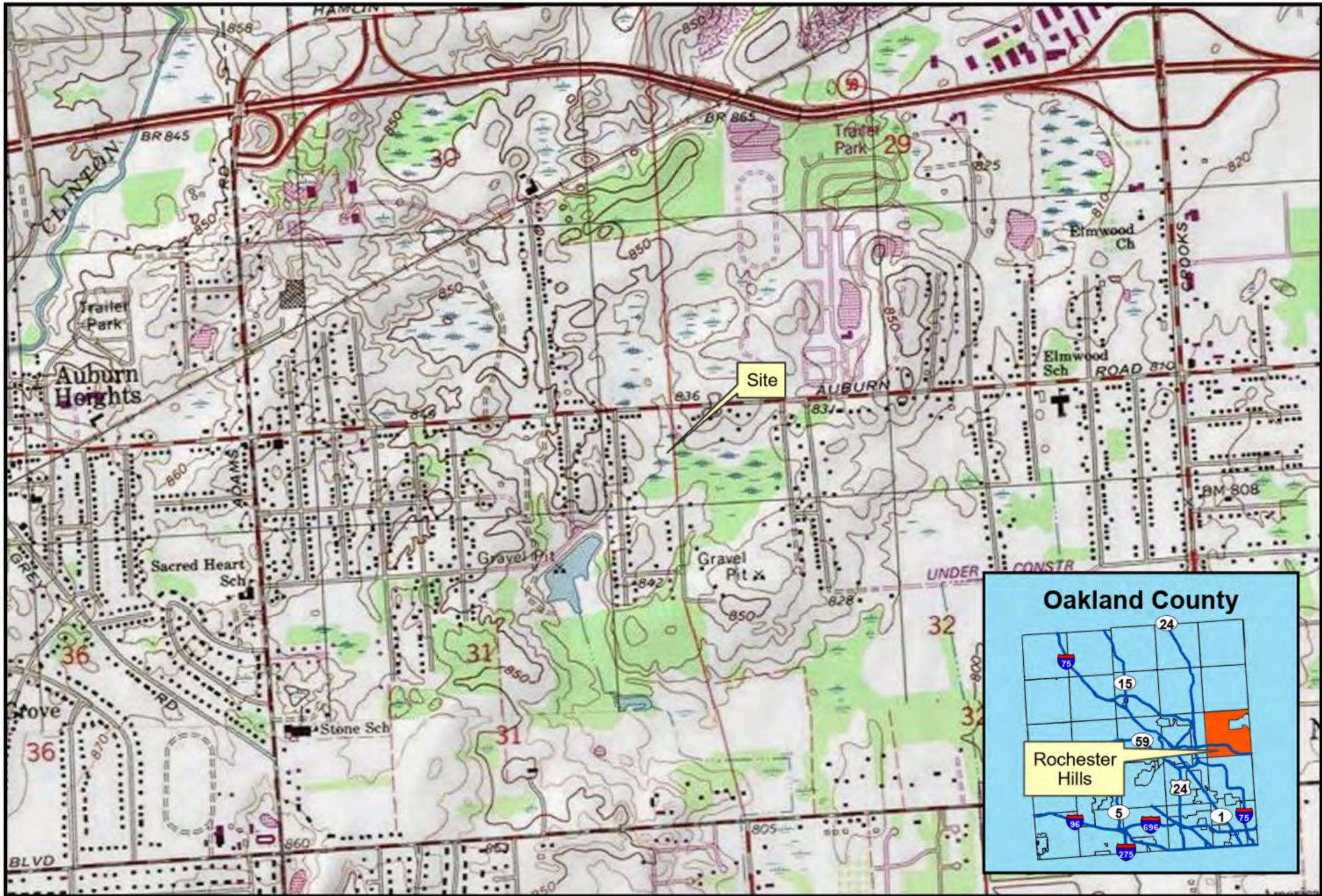
8.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the laboratory analytical results, the metal lead is present in soil at concentrations above the GRCC. It is therefore ASTI's opinion that the Subject Property is a "facility" as defined in Part 201.

ASTI recommends that City of Rochester Hills have a Baseline Environmental Assessment (BEA) prepared for the Subject Property to obtain statutory liability protection for the pre-existing contamination, unless the contamination is removed from the Subject Property with appropriate verification of soil remediation (VSR) sampling collected to demonstrate remediation to below the unrestricted GRCC. If the City of Rochester decides to leave the soil contamination in-place, ASTI recommends additional sampling be conducted to determine the extents of the release in order to determine due care response activities needed to prepare a Due Care Plan (DCP) for the Subject Property. The DCP should be prepared for the City of Rochester Hills to satisfy Part 20107a Due Care Obligations for an owner and/or operator of a facility.

FIGURES

- 1 Site Location Map
- 2 Sample Location Map



3001 W. Auburn Road

Rochester Hills, MI

2,000 1,000 0

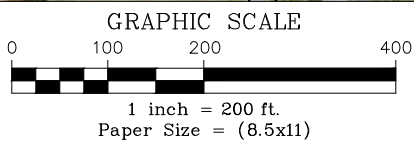
2,000
Feet







Created for: The City of Rochester Hills
 Created by: RMH, December 1, 2021, ASTI Project 11482-26

Figure 1 - Site Location Map

Y:\Project Files\Current and Closed\11000-11999\11400-11499\11482 - City of Rochester Hills\11482-26 Phase II 3001 Auburn Rd\CAD\11482-26.dwg: 11/20/2021 3:57 PM



LEGEND

-  Property Line
-  Parcel Boundary Line
-  Approximate Area of Apparent Disturbance
-  Soil Boring Location



3001 W. Auburn Road

Client: City of Rochester Hills

ASTI Project 11482-26, JRN, November 30, 2021

Rochester Hills, MI



Figure 2 - Sample Location Map

TABLES

- 1 Summary of Soil Sample Analytical Results
- 2 Summary of Groundwater Sample Analytical Results

Table 1 Summary of Soil Sample Analytical Results
 3001 W. Auburn Road, Rochester Hills, MI
 ASTI File No. 11482-26

Parameters (µg/kg)	Statewide Default Background Levels*	Residential Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Residential Soil Volatilization to Indoor Air Inhalation Criteria*	Residential Infinite Source Volatile Soil Inhalation for 5 Meter Source Thickness	Residential Particulate Soil Inhalation Criteria*	Residential Direct Contact Criteria*	Residential Soil Volatilization to Indoor Air Pathway Screening Levels**	SB-1 (2-2.75') 11/8/2021 µg/kg	SB-2 (0.5-1') 11/8/2021 µg/kg	SB-3 (2-3') 11/8/2021 µg/kg	Dup-1s SB-3 (2-3') 11/8/2021 µg/kg	Meth Blank 11/8/2021 µg/kg
Metals													
Arsenic	5,800	4,600	4,600	NLV	NLV	720,000	7,600	NA	4,400	4,900	6,900	7,900	~
Barium	75,000	1,300,000	(G)	NLV	NLV	330,000,000	37,000,000	NA	17,000	29,000	650,000	610,000	~
Cadmium	1,200	6,000	(G,X)	NLV	NLV	1,700,000	550,000	NA	170	200	1,600	1,300	~
Chromium, Total	18,000 (total)	1,000,000,000 (D)	(G,X)	NLV	NLV	330,000,000	790,000,000	NA	6,500	8,100	21,000	21,000	~
Chromium VI	NA	30,000	3,300	NLV	NLV	260,000	2,500,000	NA	~	~	<490	<480	~
Lead, Coarse Fraction	21,000	700,000	(G,X)	NLV	NLV	100,000,000	400,000	NA	~	~	2,490,000	808,000	~
Lead, Fine Fraction	21,000	700,000	(G,X)	NLV	NLV	100,000,000	400,000	NA	~	~	3,100,000	1,430,000	~
Lead, Total (Calculated)	21,000	700,000	(G,X)	NLV	NLV	100,000,000	400,000	NA	~	~	2,520,000	849,000	~
Copper	32,000	5,800,000	(G)	NLV	NLV	130,000,000	20,000,000	NA	6,700	10,000	27,000	28,000	~
Lead	21,000	700,000	(G,X)	NLV	NLV	100,000,000	400,000	NA	4,600	5,900	2,100,000	1,300,000	~
Mercury, Total	130	1,700	50 (M); 1.2	48,000	52,000	20,000,000	160,000	22 (M)	<50	<50	59	54	~
Selenium	410	4,000	400	NLV	NLV	130,000,000	2,600,000	NA	270	390	420	380	~
Silver	1,000	4,500	100 (M); 27	NLV	NLV	6,700,000	2,500,000	NA	<100	<100	280	250	~
Zinc	47,000	2,400,000	(G)	NLV	NLV	ID	170,000,000	NA	20,000	33,000	890,000	790,000	~
PNAs													
Acenaphthylene	NA	5,900	ID	1,600,000	2,200,000	2,300,000,000	1,600,000	DATA	<330	<330	<330	360	~
Anthracene	NA	41,000	ID	1,000,000,000 (D)	1,400,000,000	67,000,000,000	230,000,000	13,000,000	<330	<330	<330	560	~
Benzo(a)anthracene	NA	NLL	NLL	NLV	NLV	ID	20,000	160,000 (MM)	<330	<330	1,000	1,500	~
Benzo(a)pyrene	NA	NLL	NLL	NLV	NLV	1,500,000	2,000	NA	<330	<330	910	1,400	~
Benzo(b)fluoranthene	NA	NLL	NLL	ID	ID	ID	20,000	NA	<330	<330	1,300	1,800	~
Benzo(g,h,i)perylene	NA	NLL	NLL	NLV	NLV	800,000,000	2,500,000	NA	<330	<330	600	850	~
Benzo(k)fluoranthene	NA	NLL	NLL	NLV	NLV	ID	200,000	NA	<330	<330	400	650	~
Chrysene	NA	NLL	NLL	ID	ID	2,000,000	2,000,000	NA	<330	<330	930	1,400	~
Fluoranthene	NA	730,000	5,500	1,000,000,000 (D)	740,000,000	9,300,000,000	46,000,000	NA	<330	<330	1,600	3,300	~
Indeno(1,2,3-cd)pyrene	NA	NLL	NLL	NLV	NLV	ID	20,000	NA	<330	<330	640	910	~
Phenanthrene	NA	56,000	2,100	2,800,000	160,000	6,700,000	1,600,000	1,700	<330	<330	570	1,200	~
Pyrene	NA	480,000	ID	1,000,000,000 (D)	650,000,000	6,700,000,000	29,000,000	25,000,000	<330	<330	1,500	2,900	~
Remaining PNAs	NA	CS	CS	CS	CS	CS	CS	CS	<RL	<RL	<RL	<RL	~
VOCs													
All VOCs	NA	CS	CS	CS	CS	CS	CS	CS	<RL	<RL	<RL	<RL	<RL

*Per R299.46, June 25, 2018

**Per Residential Volatilization to Indoor Air Pathway (VIAP) Screening Levels obtained from 2013 Guidance Document for the Vapor Intrusion Pathway (2013 VI Guidance); Appendix D.1- VIAP Screening Levels; Table 1; updated September 4, 2020.

~ Parameter not tested for at this location.

Italicized analytical results exceed one or more GRCC but are below regional background concentrations.

Bold/Highlighted-Concentrations exceed one or more GRCC values.

ID-Inadequate data to develop criterion.

NA-Not available.

NLL-Hazardous substance is not likely to leach under most soil conditions.

NLV-Hazardous substance is not likely to volatilize under most conditions.

D-Calculated criterion exceeds 100%, hence it is reduced to 100% or 1.0e+9 ppb.

G-Groundwater Surface Water Interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water.

M-Calculated criterion is below the analytical target detection limit, therefore, the criteria defaults to the target detection limit.

X-The Groundwater Surface Water Interface (GSI) criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source.

DATA-Insufficient physical chemical parameters to calculate a VIAP screening level for specified media. If detections are present in specified media, health-based soil vapor value should be used to evaluate risk.

MM-Hazardous substance is a carcinogen with a mutagenic mode of action. The cancer potency values used in calculating

VIAP screening levels are modified using age-dependent adjustment factors for those carcinogenic chemicals identified as mutagenic.

CS-Compound specific

<RL-Below reporting limit

Table 2 Summary of Groundwater Sample Analytical Results
 3001 W. Auburn Road, Rochester Hills, MI
 ASTI File No. 11482-26

Parameters (µg/L)	Residential	Groundwater	Residential	SB-1-GW 11/8/2021	Dup-1gw	SB-2-GW 11/8/2021
	Drinking Water Criteria*	Surface Water Interface Criteria	Groundwater Volatilization to Indoor Air Inhalation Criteria*		SB-1-GW 11/8/2021	
Metals						
Total Arsenic	10 (A)	10	NLV	6.2	7.1	<5.0
Total Barium	2000 (A)	(G)	NLV	260	270	<100
Total Cadmium	5.0 (A)	(G,X)	NLV	<1.0	<1.0	<1.0
Total Chromium	100 (A)	11	NLV	<10	<10	<10
Total Copper	1000 (E)	(G)	NLV	13	11	<4.0
Total Lead	4.0 (L)	(G,X)	NLV	<3.0	<3.0	<3.0
Total Mercury	2 (A)	0.0013	56 (S)	<0.20	<0.20	<0.20
Total Selenium	50 (A)	5	NLV	<5.0	<5.0	<5.0
Total Silver	34	0.2 (M)	NLV	<0.20	<0.20	<0.20
Total Zinc	2,400	(G)	NLV	<50	<50	<50
PNAs						
All PNAs	CS	CS	CS	<RL	<RL	<RL
VOCs						
All VOCs	CS	CS	CS	<RL	<RL	<RL

*Per R299.44, June 25, 2018.

NA-Not available.

NLV-Hazardous substance is not likely to volatilize under most conditions.

A-Criterion is the State of Michigan drinking water standard established pursuant to Section 5.

E-Criterion is the aesthetic drinking water value, as required by Section 20120a(5) of the act.

G-Groundwater Surface Water Interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water.

L-Criteria for lead are derived using a biologically based model, as allowed for under Section 20120a(10)

of the act, and are not calculated using the algorithms and assumptions specified in pathway-specific rules.

M-Calculated criterion is below the analytical target detection limit, therefore, the criterion defaults to the target detection limit.

S-Criterion defaults to the hazardous substance-specific water solubility limit.

X-The Groundwater Surface Water Interface (GSI) criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as drinking water source.

CS-Compound specific.

<RL-Below reporting limit.

ATTACHMENTS

Attachment A
Soil Boring Logs

ASTI Environmental
 10448 Citation Dr., Suite 100
 Brighton, MI 48116

SOIL BORING LOG

Boring Data
 Boring ID: SB-1
 Total Depth: 5' bgs

Date Completed: 11/8/2021

Proj. Name: 3001 Auburn Rd
Proj. Number: 11482-26

Site Address: 3001 West Auburn Road
Rochester Hills, Michigan

Drilled by: ERG
Method: Hand auger
Geologist: Mitchel Dykla

TW Data
 Size: 1"
 Type: PVC
 Screen Length: 0-5' bgs
 Well Depth: 5' bgs

GW Depth (▼): 2.75' bgs

Depth		Description	PID (ppm)	Sample Depth
From	To			
0	8"	Topsoil, fine to medium grained sand, trace silt, trace to some organics, black, moist, loose (sand)	0.0	
8"	2'	SAND, fine to medium grained, trace to some silt, trace organics, black, moist, loose (sandy loam)	0.0	
2'	2.75'	SAND, medium to coarse grained, trace to some very fine to fine and very coarse grained sand, trace gravel, brown, moist, loose (sand)	0.0	Soil at 2-2.75'
2.75'	5'	SAND, medium to coarse grained, trace to some very fine to fine and very coarse grained sand, trace gravel, brown, wet, loose (sand)	0.0	
		End of Boring		

ppm = parts per million
 TW = temporary monitoring well
 bgs = below ground surface
 () = USDA soil texture

ASTI Environmental
 10448 Citation Dr., Suite 100
 Brighton, MI 48116

SOIL BORING LOG

Boring Data
 Boring ID: SB-2
 Total Depth: 5' bgs

Date Completed: 11/8/2021

Proj. Name: 3001 Auburn Rd
Proj. Number: 11482-26

Site Address: 3001 West Auburn Road
Rochester Hills, Michigan

Drilled by: ERG
Method: Hand auger
Geologist: Mitchel Dykla

TW Data
 Size: 1"
 Type: PVC
 Screen Length: 0-5' bgs
 Well Depth: 5' bgs
 GW Depth (▼): 1' bgs

Depth		Description	PID (ppm)	Sample Depth
From	To			
0	8"	Topsoil, fine to medium grained sand, trace silt, trace to some organics, black, moist, loose (sand)	0.0	Soil at 0.5-1'
8"	1'	SAND, fine to medium grained, trace to some silt, trace organics, black, moist, loose (sandy loam)	0.0	
1'	5'	SAND, medium to coarse grained, trace to some very fine to fine and very coarse grained sand, trace gravel, brown, wet, loose (sand)	0.0	
		End of Boring		

ppm = parts per million
 TW = temporary monitoring well
 bgs = below ground surface
 () = USDA soil texture

ASTI Environmental
 10448 Citation Dr., Suite 100
 Brighton, MI 48116

SOIL BORING LOG

Boring Data
 Boring ID: SB-3
 Total Depth: 5' bgs

Date Completed: 11/8/2021

Proj. Name: 3001 Auburn Rd
Proj. Number: 11482-26

Site Address: 3001 West Auburn Road
Rochester Hills, Michigan

Drilled by: ERG
Method: Hand auger
Geologist: Mitchel Dykla

TW Data
 Size: NA
 Type: NA
 Screen Length: NA
 Well Depth: NA

GW Depth (▼): 3' bgs

Depth		Description	PID (ppm)	Sample Depth
From	To			
0	8"	Topsoil, fine to medium grained sand, trace silt, trace to some organics, black, moist, loose (sand)	0.0	
8"	2'	SAND, fine to medium grained, trace to some silt, trace organics, black, moist, loose (sandy loam)	0.0	
2'	3'	SAND, medium to coarse grained, trace to some very fine to fine and very coarse grained sand, trace gravel, brown, moist, loose (sand)	0.0	Soil at 2-3'
3'	5'	SAND, medium to coarse grained, trace to some very fine to fine and very coarse grained sand, trace gravel, brown, wet, loose (sand)	0.0	
		End of Boring		

ppm = parts per million
 TW = temporary monitoring well
 bgs = below ground surface
 () = USDA soil texture

Attachment B

Laboratory Analytical Reports and Chain-of-Custody Documentation



Thursday, November 18, 2021

Fibertec Project Number: A05135
Project Identification: 3001 W. Auburn Rd. (11482-26) /11482-26
Submittal Date: 11/09/2021

Mr. Jeremy Efros
Applied Science & Technology, Inc. - Brighton
10448 Citation Dr.
Suite 100
Brighton, MI 48116

Dear Mr. Efros,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note TO-15 samples will be disposed of 7 calendar days after the reporting date. All other samples will be disposed of 30 days after the reporting date.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,

By Sue Ricketts at 12:21 PM, Nov 18, 2021

For Daryl P. Strandbergh
Laboratory Director

Enclosures

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Analytical Laboratory Report
Laboratory Project Number: A05135
Laboratory Sample Number: A05135-001

Order: A05135
Page: 2 of 29
Date: 11/18/21

Client Identification: Applied Science & Technology, Inc. - Brighton	Sample Description: SB-1 (2-2.75')	Chain of Custody: 196703
Client Project Name: 3001 W. Auburn Rd. (11482-26)	Sample No:	Collect Date: 11/08/21
Client Project No: 11482-26	Sample Matrix: Soil/Solid	Collect Time: 10:15

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Water (Moisture) Content Dried at 105 ± 5°C Aliquot ID: **A05135-001** Matrix: **Soil/Solid**
Method: ASTM D2216-10 Description: **SB-1 (2-2.75')**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
‡ 1. Percent Moisture (Water Content)	15		%	1	1.0	11/10/21	MC211110	11/11/21	MC211110	LET

Michigan 10 Elements by ICP/MS Aliquot ID: **A05135-001** Matrix: **Soil/Solid**
Method: EPA 0200.2/EPA 6020A Description: **SB-1 (2-2.75')**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Arsenic	4400		µg/kg	100	1000	11/15/21	PT21K15A	11/15/21	T421K15A	CJA
2. Barium	17000		µg/kg	1000	1000	11/15/21	PT21K15A	11/15/21	T421K15A	CJA
3. Cadmium	170		µg/kg	50	1000	11/15/21	PT21K15A	11/15/21	T421K15A	CJA
4. Chromium	6500		µg/kg	500	1000	11/15/21	PT21K15A	11/15/21	T421K15A	CJA
5. Copper	6700		µg/kg	1000	1000	11/15/21	PT21K15A	11/15/21	T421K15A	CJA
6. Lead	4600		µg/kg	1000	1000	11/15/21	PT21K15A	11/15/21	T421K15A	CJA
7. Selenium	270		µg/kg	200	1000	11/15/21	PT21K15A	11/15/21	T421K15A	CJA
8. Silver	U		µg/kg	100	1000	11/15/21	PT21K15A	11/15/21	T421K15A	CJA
9. Zinc	20000		µg/kg	1000	1000	11/15/21	PT21K15A	11/15/21	T421K15A	CJA

Mercury by CVAAS Aliquot ID: **A05135-001** Matrix: **Soil/Solid**
Method: EPA 7471B Description: **SB-1 (2-2.75')**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Mercury	U		µg/kg	50	10	11/15/21	PM21K15A	11/15/21	M721K15A	JLH

Volatile Organic Compounds (VOCs) by GC/MS, 5035 Aliquot ID: **A05135-001A** Matrix: **Soil/Solid**
Method: EPA 5035A/EPA 8260D Description: **SB-1 (2-2.75')**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Acetone	U		µg/kg	1000	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
‡ 2. Acrylonitrile	U		µg/kg	130	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
3. Benzene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
4. Bromobenzene	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
5. Bromochloromethane	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
6. Bromodichloromethane	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
7. Bromoform	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
8. Bromomethane	U		µg/kg	200	1.0	11/12/21	VP21K12C	11/13/21 20:05	VP21K12C	ANB
9. 2-Butanone	U		µg/kg	750	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB

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Analytical Laboratory Report
Laboratory Project Number: A05135
Laboratory Sample Number: A05135-001

Order: A05135
Page: 3 of 29
Date: 11/18/21

Client Identification: Applied Science & Technology, Inc. - Brighton	Sample Description: SB-1 (2-2.75')	Chain of Custody: 196703
Client Project Name: 3001 W. Auburn Rd. (11482-26)	Sample No:	Collect Date: 11/08/21
Client Project No: 11482-26	Sample Matrix: Soil/Solid	Collect Time: 10:15

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS, 5035
Method: EPA 5035A/EPA 8260D

Aliquot ID: A05135-001A **Matrix: Soil/Solid**
Description: SB-1 (2-2.75')

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
10. n-Butylbenzene	U		µg/kg	67	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
11. sec-Butylbenzene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
12. tert-Butylbenzene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
13. Carbon Disulfide	U		µg/kg	250	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
14. Carbon Tetrachloride	U		µg/kg	67	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
15. Chlorobenzene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
16. Chloroethane	U		µg/kg	330	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
17. Chloroform	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
18. Chloromethane	U		µg/kg	250	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
19. 2-Chlorotoluene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/kg	250	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
21. Dibromochloromethane	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
22. Dibromomethane	U		µg/kg	250	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
23. 1,2-Dichlorobenzene	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
24. 1,3-Dichlorobenzene	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
25. 1,4-Dichlorobenzene	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
26. Dichlorodifluoromethane	U		µg/kg	250	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
27. 1,1-Dichloroethane	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
28. 1,2-Dichloroethane	U		µg/kg	67	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
29. 1,1-Dichloroethene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
30. cis-1,2-Dichloroethene	U		µg/kg	67	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
31. trans-1,2-Dichloroethene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
32. 1,2-Dichloropropane	U		µg/kg	67	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
33. cis-1,3-Dichloropropene	U		µg/kg	67	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
34. trans-1,3-Dichloropropene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
35. Ethylbenzene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
36. Ethylene Dibromide	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
37. 2-Hexanone	U		µg/kg	2500	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
38. Isopropylbenzene	U		µg/kg	250	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
39. 4-Methyl-2-pentanone	U		µg/kg	2500	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
40. Methylene Chloride	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
‡ 41. 2-Methylnaphthalene	U		µg/kg	330	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
42. MTBE	U		µg/kg	250	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
43. Naphthalene	U		µg/kg	330	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
44. n-Propylbenzene	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
45. Styrene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
46. 1,1,1,2-Tetrachloroethane	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB

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Analytical Laboratory Report
Laboratory Project Number: A05135
Laboratory Sample Number: A05135-001

Order: A05135
Page: 4 of 29
Date: 11/18/21

Client Identification: Applied Science & Technology, Inc. - Brighton	Sample Description: SB-1 (2-2.75')	Chain of Custody: 196703
Client Project Name: 3001 W. Auburn Rd. (11482-26)	Sample No:	Collect Date: 11/08/21
Client Project No: 11482-26	Sample Matrix: Soil/Solid	Collect Time: 10:15

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS, 5035 Aliquot ID: **A05135-001A** Matrix: **Soil/Solid**
Method: EPA 5035A/EPA 8260D Description: **SB-1 (2-2.75')**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
47. 1,1,2,2-Tetrachloroethane	U		µg/kg	67	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
48. Tetrachloroethene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
49. Toluene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
50. 1,2,4-Trichlorobenzene	U		µg/kg	250	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
51. 1,1,1-Trichloroethane	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
52. 1,1,2-Trichloroethane	U		µg/kg	67	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
53. Trichloroethene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
54. Trichlorofluoromethane	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
55. 1,2,3-Trichloropropane	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
‡ 56. 1,2,3-Trimethylbenzene	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
57. 1,2,4-Trimethylbenzene	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
58. 1,3,5-Trimethylbenzene	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
59. Vinyl Chloride	U		µg/kg	40	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
60. m&p-Xylene	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
61. o-Xylene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB
‡ 62. Xylenes	U		µg/kg	150	1.0	11/15/21	VP21K15A	11/15/21 18:05	VP21K15A	ANB

Polynuclear Aromatic Hydrocarbons (PNAs) Aliquot ID: **A05135-001** Matrix: **Soil/Solid**
Method: EPA 3546/EPA 8270E Description: **SB-1 (2-2.75')**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acenaphthene (SIM)	U		µg/kg	330	10	11/15/21	PS21K15E	11/15/21 18:49	S621K15B	ALS
2. Acenaphthylene (SIM)	U		µg/kg	330	10	11/15/21	PS21K15E	11/15/21 18:49	S621K15B	ALS
3. Anthracene (SIM)	U		µg/kg	330	10	11/15/21	PS21K15E	11/15/21 18:49	S621K15B	ALS
4. Benzo(a)anthracene (SIM)	U		µg/kg	330	10	11/15/21	PS21K15E	11/15/21 18:49	S621K15B	ALS
5. Benzo(a)pyrene (SIM)	U	V+	µg/kg	330	10	11/15/21	PS21K15E	11/15/21 18:49	S621K15B	ALS
6. Benzo(b)fluoranthene (SIM)	U		µg/kg	330	10	11/15/21	PS21K15E	11/15/21 18:49	S621K15B	ALS
7. Benzo(ghi)perylene (SIM)	U		µg/kg	330	10	11/15/21	PS21K15E	11/15/21 18:49	S621K15B	ALS
8. Benzo(k)fluoranthene (SIM)	U		µg/kg	330	10	11/15/21	PS21K15E	11/15/21 18:49	S621K15B	ALS
9. Chrysene (SIM)	U		µg/kg	330	10	11/15/21	PS21K15E	11/15/21 18:49	S621K15B	ALS
10. Dibenzo(a,h)anthracene (SIM)	U		µg/kg	330	10	11/15/21	PS21K15E	11/15/21 18:49	S621K15B	ALS
11. Fluoranthene (SIM)	U		µg/kg	330	10	11/15/21	PS21K15E	11/15/21 18:49	S621K15B	ALS
12. Fluorene (SIM)	U		µg/kg	330	10	11/15/21	PS21K15E	11/15/21 18:49	S621K15B	ALS
13. Indeno(1,2,3-cd)pyrene (SIM)	U		µg/kg	330	10	11/15/21	PS21K15E	11/15/21 18:49	S621K15B	ALS
14. 2-Methylnaphthalene (SIM)	U		µg/kg	330	10	11/15/21	PS21K15E	11/15/21 18:49	S621K15B	ALS
15. Naphthalene (SIM)	U		µg/kg	330	10	11/15/21	PS21K15E	11/15/21 18:49	S621K15B	ALS

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Analytical Laboratory Report
Laboratory Project Number: A05135
Laboratory Sample Number: A05135-001

Order: A05135
 Page: 5 of 29
 Date: 11/18/21

Client Identification: Applied Science & Technology, Inc. - Brighton	Sample Description: SB-1 (2-2.75')	Chain of Custody: 196703
Client Project Name: 3001 W. Auburn Rd. (11482-26)	Sample No:	Collect Date: 11/08/21
Client Project No: 11482-26	Sample Matrix: Soil/Solid	Collect Time: 10:15

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Polynuclear Aromatic Hydrocarbons (PNAs) Aliquot ID: **A05135-001** Matrix: **Soil/Solid**
 Method: **EPA 3546/EPA 8270E** Description: **SB-1 (2-2.75')**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
16. Phenanthrene (SIM)	U		µg/kg	330	10	11/15/21	PS21K15E	11/15/21 18:49	S621K15B	ALS
17. Pyrene (SIM)	U		µg/kg	330	10	11/15/21	PS21K15E	11/15/21 18:49	S621K15B	ALS

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Analytical Laboratory Report
Laboratory Project Number: A05135
Laboratory Sample Number: A05135-002

Order: A05135
 Page: 6 of 29
 Date: 11/18/21

Client Identification: Applied Science & Technology, Inc. - Brighton	Sample Description: SB-2 (0.5-1')	Chain of Custody: 196703
Client Project Name: 3001 W. Auburn Rd. (11482-26)	Sample No:	Collect Date: 11/08/21
Client Project No: 11482-26	Sample Matrix: Soil/Solid	Collect Time: 10:32

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Water (Moisture) Content Dried at 105 ± 5°C Aliquot ID: **A05135-002** Matrix: **Soil/Solid**
 Method: **ASTM D2216-10** Description: **SB-2 (0.5-1')**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
‡ 1. Percent Moisture (Water Content)	38		%	1	1.0	11/10/21	MC211110	11/11/21	MC211110	LET

Michigan 10 Elements by ICP/MS Aliquot ID: **A05135-002** Matrix: **Soil/Solid**
 Method: **EPA 0200.2/EPA 6020A** Description: **SB-2 (0.5-1')**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Arsenic	4900		µg/kg	100	1000	11/15/21	PT21K15A	11/15/21	T421K15A	CJA
2. Barium	29000		µg/kg	1000	1000	11/15/21	PT21K15A	11/15/21	T421K15A	CJA
3. Cadmium	200		µg/kg	50	1000	11/15/21	PT21K15A	11/15/21	T421K15A	CJA
4. Chromium	8100		µg/kg	500	1000	11/15/21	PT21K15A	11/15/21	T421K15A	CJA
5. Copper	10000		µg/kg	1000	1000	11/15/21	PT21K15A	11/15/21	T421K15A	CJA
6. Lead	5900		µg/kg	1000	1000	11/15/21	PT21K15A	11/15/21	T421K15A	CJA
7. Selenium	390		µg/kg	200	1000	11/15/21	PT21K15A	11/15/21	T421K15A	CJA
8. Silver	U		µg/kg	100	1000	11/15/21	PT21K15A	11/15/21	T421K15A	CJA
9. Zinc	33000		µg/kg	1000	1000	11/15/21	PT21K15A	11/15/21	T421K15A	CJA

Mercury by CVAAS Aliquot ID: **A05135-002** Matrix: **Soil/Solid**
 Method: **EPA 7471B** Description: **SB-2 (0.5-1')**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Mercury	U		µg/kg	50	10	11/15/21	PM21K15A	11/15/21	M721K15A	JLH

Volatile Organic Compounds (VOCs) by GC/MS, 5035 Aliquot ID: **A05135-002A** Matrix: **Soil/Solid**
 Method: **EPA 5035A/EPA 8260D** Description: **SB-2 (0.5-1')**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U		µg/kg	1100	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
‡ 2. Acrylonitrile	U		µg/kg	220	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
3. Benzene	U		µg/kg	55	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
4. Bromobenzene	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
5. Bromochloromethane	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
6. Bromodichloromethane	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
7. Bromoform	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
8. Bromomethane	U		µg/kg	220	1.0	11/12/21	VP21K12C	11/13/21 20:32	VP21K12C	ANB
9. 2-Butanone	U		µg/kg	750	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB

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Analytical Laboratory Report
Laboratory Project Number: A05135
Laboratory Sample Number: A05135-002

Order: A05135
 Page: 7 of 29
 Date: 11/18/21

Client Identification: Applied Science & Technology, Inc. - Brighton	Sample Description: SB-2 (0.5-1')	Chain of Custody: 196703
Client Project Name: 3001 W. Auburn Rd. (11482-26)	Sample No:	Collect Date: 11/08/21
Client Project No: 11482-26	Sample Matrix: Soil/Solid	Collect Time: 10:32

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS, 5035
Method: EPA 5035A/EPA 8260D

Aliquot ID: A05135-002A **Matrix: Soil/Solid**
Description: SB-2 (0.5-1')

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
10. n-Butylbenzene	U		µg/kg	110	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
11. sec-Butylbenzene	U		µg/kg	55	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
12. tert-Butylbenzene	U		µg/kg	55	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
13. Carbon Disulfide	U		µg/kg	250	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
14. Carbon Tetrachloride	U		µg/kg	110	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
15. Chlorobenzene	U		µg/kg	55	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
16. Chloroethane	U		µg/kg	550	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
17. Chloroform	U		µg/kg	55	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
18. Chloromethane	U		µg/kg	250	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
19. 2-Chlorotoluene	U		µg/kg	55	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/kg	250	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
21. Dibromochloromethane	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
22. Dibromomethane	U		µg/kg	250	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
23. 1,2-Dichlorobenzene	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
24. 1,3-Dichlorobenzene	U		µg/kg	110	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
25. 1,4-Dichlorobenzene	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
26. Dichlorodifluoromethane	U		µg/kg	250	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
27. 1,1-Dichloroethane	U		µg/kg	55	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
28. 1,2-Dichloroethane	U		µg/kg	110	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
29. 1,1-Dichloroethene	U		µg/kg	55	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
30. cis-1,2-Dichloroethene	U		µg/kg	110	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
31. trans-1,2-Dichloroethene	U		µg/kg	55	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
32. 1,2-Dichloropropane	U		µg/kg	110	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
33. cis-1,3-Dichloropropene	U		µg/kg	110	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
34. trans-1,3-Dichloropropene	U		µg/kg	55	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
35. Ethylbenzene	U		µg/kg	55	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
36. Ethylene Dibromide	U		µg/kg	55	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
37. 2-Hexanone	U		µg/kg	2500	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
38. Isopropylbenzene	U		µg/kg	250	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
39. 4-Methyl-2-pentanone	U		µg/kg	2500	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
40. Methylene Chloride	U		µg/kg	110	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
‡ 41. 2-Methylnaphthalene	U		µg/kg	330	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
42. MTBE	U		µg/kg	250	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
43. Naphthalene	U		µg/kg	330	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
44. n-Propylbenzene	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
45. Styrene	U		µg/kg	55	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
46. 1,1,1,2-Tetrachloroethane	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB

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Analytical Laboratory Report
Laboratory Project Number: A05135
Laboratory Sample Number: A05135-002

Order: A05135
Page: 8 of 29
Date: 11/18/21

Client Identification: Applied Science & Technology, Inc. - Brighton	Sample Description: SB-2 (0.5-1')	Chain of Custody: 196703
Client Project Name: 3001 W. Auburn Rd. (11482-26)	Sample No:	Collect Date: 11/08/21
Client Project No: 11482-26	Sample Matrix: Soil/Solid	Collect Time: 10:32

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS, 5035
Method: EPA 5035A/EPA 8260D

Aliquot ID: A05135-002A **Matrix: Soil/Solid**
Description: SB-2 (0.5-1')

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
47. 1,1,2,2-Tetrachloroethane	U		µg/kg	110	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
48. Tetrachloroethene	U		µg/kg	55	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
49. Toluene	U		µg/kg	55	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
50. 1,2,4-Trichlorobenzene	U		µg/kg	250	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
51. 1,1,1-Trichloroethane	U		µg/kg	55	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
52. 1,1,2-Trichloroethane	U		µg/kg	110	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
53. Trichloroethene	U		µg/kg	55	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
54. Trichlorofluoromethane	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
55. 1,2,3-Trichloropropane	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
‡ 56. 1,2,3-Trimethylbenzene	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
57. 1,2,4-Trimethylbenzene	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
58. 1,3,5-Trimethylbenzene	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
59. Vinyl Chloride	U		µg/kg	55	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
60. m&p-Xylene	U		µg/kg	110	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
61. o-Xylene	U		µg/kg	55	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB
‡ 62. Xylenes	U		µg/kg	160	1.0	11/15/21	VP21K15A	11/15/21 18:32	VP21K15A	ANB

Polynuclear Aromatic Hydrocarbons (PNAs)
Method: EPA 3546/EPA 8270E

Aliquot ID: A05135-002 **Matrix: Soil/Solid**
Description: SB-2 (0.5-1')

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acenaphthene (SIM)	U		µg/kg	330	10	11/15/21	PS21K15E	11/15/21 21:08	S621K15B	ALS
2. Acenaphthylene (SIM)	U		µg/kg	330	10	11/15/21	PS21K15E	11/15/21 21:08	S621K15B	ALS
3. Anthracene (SIM)	U		µg/kg	330	10	11/15/21	PS21K15E	11/15/21 21:08	S621K15B	ALS
4. Benzo(a)anthracene (SIM)	U		µg/kg	330	10	11/15/21	PS21K15E	11/15/21 21:08	S621K15B	ALS
5. Benzo(a)pyrene (SIM)	U	V+	µg/kg	330	10	11/15/21	PS21K15E	11/15/21 21:08	S621K15B	ALS
6. Benzo(b)fluoranthene (SIM)	U		µg/kg	330	10	11/15/21	PS21K15E	11/15/21 21:08	S621K15B	ALS
7. Benzo(ghi)perylene (SIM)	U		µg/kg	330	10	11/15/21	PS21K15E	11/15/21 21:08	S621K15B	ALS
8. Benzo(k)fluoranthene (SIM)	U		µg/kg	330	10	11/15/21	PS21K15E	11/15/21 21:08	S621K15B	ALS
9. Chrysene (SIM)	U		µg/kg	330	10	11/15/21	PS21K15E	11/15/21 21:08	S621K15B	ALS
10. Dibenzo(a,h)anthracene (SIM)	U		µg/kg	330	10	11/15/21	PS21K15E	11/15/21 21:08	S621K15B	ALS
11. Fluoranthene (SIM)	U		µg/kg	330	10	11/15/21	PS21K15E	11/15/21 21:08	S621K15B	ALS
12. Fluorene (SIM)	U		µg/kg	330	10	11/15/21	PS21K15E	11/15/21 21:08	S621K15B	ALS
13. Indeno(1,2,3-cd)pyrene (SIM)	U		µg/kg	330	10	11/15/21	PS21K15E	11/15/21 21:08	S621K15B	ALS
14. 2-Methylnaphthalene (SIM)	U		µg/kg	330	10	11/15/21	PS21K15E	11/15/21 21:08	S621K15B	ALS
15. Naphthalene (SIM)	U		µg/kg	330	10	11/15/21	PS21K15E	11/15/21 21:08	S621K15B	ALS

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Analytical Laboratory Report
Laboratory Project Number: A05135
Laboratory Sample Number: A05135-002

Order: A05135
 Page: 9 of 29
 Date: 11/18/21

Client Identification: Applied Science & Technology, Inc. - Brighton	Sample Description: SB-2 (0.5-1')	Chain of Custody: 196703
Client Project Name: 3001 W. Auburn Rd. (11482-26)	Sample No:	Collect Date: 11/08/21
Client Project No: 11482-26	Sample Matrix: Soil/Solid	Collect Time: 10:32

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Polynuclear Aromatic Hydrocarbons (PNAs)	Aliquot ID: A05135-002	Matrix: Soil/Solid
Method: EPA 3546/EPA 8270E	Description: SB-2 (0.5-1')	

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis			
						P. Date	P. Batch	A. Date	A. Batch	Init.	
16. Phenanthrene (SIM)	U		µg/kg	330	10	11/15/21	PS21K15E	11/15/21	21:08	S621K15B	ALS
17. Pyrene (SIM)	U		µg/kg	330	10	11/15/21	PS21K15E	11/15/21	21:08	S621K15B	ALS

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Analytical Laboratory Report
Laboratory Project Number: A05135
Laboratory Sample Number: A05135-003

Order: A05135
 Page: 10 of 29
 Date: 11/18/21

Client Identification: Applied Science & Technology, Inc. - Brighton	Sample Description: SB-3 (2-3')	Chain of Custody: 196703
Client Project Name: 3001 W. Auburn Rd. (11482-26)	Sample No:	Collect Date: 11/08/21
Client Project No: 11482-26	Sample Matrix: Soil/Solid	Collect Time: 11:40

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Water (Moisture) Content Dried at 105 ± 5°C Aliquot ID: **A05135-003** Matrix: **Soil/Solid**
 Method: **ASTM D2216-10** Description: **SB-3 (2-3')**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
‡ 1. Percent Moisture (Water Content)	18		%	1	1.0	11/10/21	MC211110	11/11/21	MC211110	LET

Michigan 10 Elements by ICP/MS Aliquot ID: **A05135-003** Matrix: **Soil/Solid**
 Method: **EPA 0200.2/EPA 6020A** Description: **SB-3 (2-3')**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Arsenic	6900		µg/kg	100	1000	11/15/21	PT21K15A	11/15/21	T421K15A	CJA
2. Barium	650000		µg/kg	10000	20000	11/15/21	PT21K15A	11/15/21	T421K15A	CJA
3. Cadmium	1600		µg/kg	50	1000	11/15/21	PT21K15A	11/15/21	T421K15A	CJA
4. Chromium	21000		µg/kg	500	1000	11/15/21	PT21K15A	11/15/21	T421K15A	CJA
5. Copper	27000		µg/kg	1000	1000	11/15/21	PT21K15A	11/15/21	T421K15A	CJA
6. Lead	2100000		µg/kg	4000	20000	11/15/21	PT21K15A	11/15/21	T421K15A	CJA
7. Selenium	420		µg/kg	200	1000	11/15/21	PT21K15A	11/15/21	T421K15A	CJA
8. Silver	280		µg/kg	100	1000	11/15/21	PT21K15A	11/15/21	T421K15A	CJA
9. Zinc	890000		µg/kg	10000	20000	11/15/21	PT21K15A	11/15/21	T421K15A	CJA

Mercury by CVAAS Aliquot ID: **A05135-003** Matrix: **Soil/Solid**
 Method: **EPA 7471B** Description: **SB-3 (2-3')**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Mercury	59		µg/kg	50	10	11/15/21	PM21K15A	11/15/21	M721K15A	JLH

Volatile Organic Compounds (VOCs) by GC/MS, 5035 Aliquot ID: **A05135-003A** Matrix: **Soil/Solid**
 Method: **EPA 5035A/EPA 8260D** Description: **SB-3 (2-3')**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Acetone	U		µg/kg	1500	2.0	11/15/21	VP21K15A	11/15/21 18:58	VP21K15A	ANB
‡ 2. Acrylonitrile	U		µg/kg	300	2.0	11/15/21	VP21K15A	11/15/21 18:58	VP21K15A	ANB
3. Benzene	U		µg/kg	74	2.0	11/15/21	VP21K15A	11/15/21 18:58	VP21K15A	ANB
4. Bromobenzene	U		µg/kg	100	2.0	11/15/21	VP21K15A	11/15/21 18:58	VP21K15A	ANB
5. Bromochloromethane	U		µg/kg	100	2.0	11/15/21	VP21K15A	11/15/21 18:58	VP21K15A	ANB
6. Bromodichloromethane	U		µg/kg	100	2.0	11/15/21	VP21K15A	11/15/21 18:58	VP21K15A	ANB
7. Bromoform	U		µg/kg	100	2.0	11/15/21	VP21K15A	11/15/21 18:58	VP21K15A	ANB
8. Bromomethane	U		µg/kg	300	2.0	11/12/21	VP21K12C	11/13/21 20:58	VP21K12C	ANB
9. 2-Butanone	U		µg/kg	750	2.0	11/15/21	VP21K15A	11/15/21 18:58	VP21K15A	ANB

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Analytical Laboratory Report
Laboratory Project Number: A05135
Laboratory Sample Number: A05135-003

Order: A05135
Page: 11 of 29
Date: 11/18/21

Client Identification: Applied Science & Technology, Inc. - Brighton	Sample Description: SB-3 (2-3')	Chain of Custody: 196703
Client Project Name: 3001 W. Auburn Rd. (11482-26)	Sample No:	Collect Date: 11/08/21
Client Project No: 11482-26	Sample Matrix: Soil/Solid	Collect Time: 11:40

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS, 5035
Method: EPA 5035A/EPA 8260D

Aliquot ID: A05135-003A **Matrix: Soil/Solid**
Description: SB-3 (2-3')

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis			
						P. Date	P. Batch	A. Date	A. Batch	Init.	
10. n-Butylbenzene	U		µg/kg	150	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB
11. sec-Butylbenzene	U		µg/kg	74	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB
12. tert-Butylbenzene	U		µg/kg	74	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB
13. Carbon Disulfide	U		µg/kg	250	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB
14. Carbon Tetrachloride	U		µg/kg	150	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB
15. Chlorobenzene	U		µg/kg	74	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB
16. Chloroethane	U		µg/kg	740	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB
17. Chloroform	U		µg/kg	74	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB
18. Chloromethane	U		µg/kg	300	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB
19. 2-Chlorotoluene	U		µg/kg	74	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/kg	250	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB
21. Dibromochloromethane	U		µg/kg	100	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB
22. Dibromomethane	U		µg/kg	250	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB
23. 1,2-Dichlorobenzene	U		µg/kg	100	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB
24. 1,3-Dichlorobenzene	U		µg/kg	150	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB
25. 1,4-Dichlorobenzene	U		µg/kg	100	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB
26. Dichlorodifluoromethane	U		µg/kg	300	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB
27. 1,1-Dichloroethane	U		µg/kg	74	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB
28. 1,2-Dichloroethane	U		µg/kg	150	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB
29. 1,1-Dichloroethene	U		µg/kg	74	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB
30. cis-1,2-Dichloroethene	U		µg/kg	150	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB
31. trans-1,2-Dichloroethene	U		µg/kg	74	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB
32. 1,2-Dichloropropane	U		µg/kg	150	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB
33. cis-1,3-Dichloropropene	U		µg/kg	150	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB
34. trans-1,3-Dichloropropene	U		µg/kg	74	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB
35. Ethylbenzene	U		µg/kg	74	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB
36. Ethylene Dibromide	U		µg/kg	74	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB
37. 2-Hexanone	U		µg/kg	2500	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB
38. Isopropylbenzene	U		µg/kg	250	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB
39. 4-Methyl-2-pentanone	U		µg/kg	2500	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB
40. Methylene Chloride	U		µg/kg	150	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB
‡ 41. 2-Methylnaphthalene	U		µg/kg	330	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB
42. MTBE	U		µg/kg	250	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB
43. Naphthalene	U		µg/kg	330	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB
44. n-Propylbenzene	U		µg/kg	100	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB
45. Styrene	U		µg/kg	74	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB
46. 1,1,1,2-Tetrachloroethane	U		µg/kg	100	2.0	11/15/21	VP21K15A	11/15/21	18:58	VP21K15A	ANB

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Analytical Laboratory Report
Laboratory Project Number: A05135
Laboratory Sample Number: A05135-003

Order: A05135
 Page: 12 of 29
 Date: 11/18/21

Client Identification: Applied Science & Technology, Inc. - Brighton	Sample Description: SB-3 (2-3')	Chain of Custody: 196703
Client Project Name: 3001 W. Auburn Rd. (11482-26)	Sample No:	Collect Date: 11/08/21
Client Project No: 11482-26	Sample Matrix: Soil/Solid	Collect Time: 11:40

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS, 5035
Method: EPA 5035A/EPA 8260D

Aliquot ID: A05135-003A **Matrix: Soil/Solid**
Description: SB-3 (2-3')

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
47. 1,1,2,2-Tetrachloroethane	U		µg/kg	150	2.0	11/15/21	VP21K15A	11/15/21 18:58	VP21K15A	ANB
48. Tetrachloroethene	U		µg/kg	74	2.0	11/15/21	VP21K15A	11/15/21 18:58	VP21K15A	ANB
49. Toluene	U		µg/kg	74	2.0	11/15/21	VP21K15A	11/15/21 18:58	VP21K15A	ANB
50. 1,2,4-Trichlorobenzene	U		µg/kg	250	2.0	11/15/21	VP21K15A	11/15/21 18:58	VP21K15A	ANB
51. 1,1,1-Trichloroethane	U		µg/kg	74	2.0	11/15/21	VP21K15A	11/15/21 18:58	VP21K15A	ANB
52. 1,1,2-Trichloroethane	U		µg/kg	150	2.0	11/15/21	VP21K15A	11/15/21 18:58	VP21K15A	ANB
53. Trichloroethene	U		µg/kg	74	2.0	11/15/21	VP21K15A	11/15/21 18:58	VP21K15A	ANB
54. Trichlorofluoromethane	U		µg/kg	100	2.0	11/15/21	VP21K15A	11/15/21 18:58	VP21K15A	ANB
55. 1,2,3-Trichloropropane	U		µg/kg	100	2.0	11/15/21	VP21K15A	11/15/21 18:58	VP21K15A	ANB
‡ 56. 1,2,3-Trimethylbenzene	U		µg/kg	100	2.0	11/15/21	VP21K15A	11/15/21 18:58	VP21K15A	ANB
57. 1,2,4-Trimethylbenzene	U		µg/kg	100	2.0	11/15/21	VP21K15A	11/15/21 18:58	VP21K15A	ANB
58. 1,3,5-Trimethylbenzene	U		µg/kg	100	2.0	11/15/21	VP21K15A	11/15/21 18:58	VP21K15A	ANB
59. Vinyl Chloride	U		µg/kg	74	2.0	11/15/21	VP21K15A	11/15/21 18:58	VP21K15A	ANB
60. m&p-Xylene	U		µg/kg	150	2.0	11/15/21	VP21K15A	11/15/21 18:58	VP21K15A	ANB
61. o-Xylene	U		µg/kg	74	2.0	11/15/21	VP21K15A	11/15/21 18:58	VP21K15A	ANB
‡ 62. Xylenes	U		µg/kg	220	2.0	11/15/21	VP21K15A	11/15/21 18:58	VP21K15A	ANB

Polynuclear Aromatic Hydrocarbons (PNAs)
Method: EPA 3546/EPA 8270E

Aliquot ID: A05135-003 **Matrix: Soil/Solid**
Description: SB-3 (2-3')

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acenaphthene (SIM)	U		µg/kg	330	20	11/15/21	PS21K15E	11/15/21 23:54	S621K15B	ALS
2. Acenaphthylene (SIM)	U		µg/kg	330	20	11/15/21	PS21K15E	11/15/21 23:54	S621K15B	ALS
3. Anthracene (SIM)	U		µg/kg	330	20	11/15/21	PS21K15E	11/15/21 23:54	S621K15B	ALS
4. Benzo(a)anthracene (SIM)	1000		µg/kg	330	20	11/15/21	PS21K15E	11/15/21 23:54	S621K15B	ALS
5. Benzo(a)pyrene (SIM)	910		µg/kg	330	20	11/15/21	PS21K15E	11/16/21 13:50	SN21K16A	ALS
6. Benzo(b)fluoranthene (SIM)	1300		µg/kg	330	20	11/15/21	PS21K15E	11/15/21 23:54	S621K15B	ALS
7. Benzo(ghi)perylene (SIM)	600		µg/kg	330	20	11/15/21	PS21K15E	11/15/21 23:54	S621K15B	ALS
8. Benzo(k)fluoranthene (SIM)	400		µg/kg	330	20	11/15/21	PS21K15E	11/15/21 23:54	S621K15B	ALS
9. Chrysene (SIM)	930		µg/kg	330	20	11/15/21	PS21K15E	11/15/21 23:54	S621K15B	ALS
10. Dibenzo(a,h)anthracene (SIM)	U		µg/kg	330	20	11/15/21	PS21K15E	11/15/21 23:54	S621K15B	ALS
11. Fluoranthene (SIM)	1600		µg/kg	330	20	11/15/21	PS21K15E	11/15/21 23:54	S621K15B	ALS
12. Fluorene (SIM)	U		µg/kg	330	20	11/15/21	PS21K15E	11/15/21 23:54	S621K15B	ALS
13. Indeno(1,2,3-cd)pyrene (SIM)	640		µg/kg	330	20	11/15/21	PS21K15E	11/15/21 23:54	S621K15B	ALS
14. 2-Methylnaphthalene (SIM)	U		µg/kg	330	20	11/15/21	PS21K15E	11/15/21 23:54	S621K15B	ALS
15. Naphthalene (SIM)	U		µg/kg	330	20	11/15/21	PS21K15E	11/15/21 23:54	S621K15B	ALS

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Analytical Laboratory Report
Laboratory Project Number: A05135
Laboratory Sample Number: A05135-003

Order: A05135
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Date: 11/18/21

Client Identification: Applied Science & Technology, Inc. - Brighton	Sample Description: SB-3 (2-3')	Chain of Custody: 196703
Client Project Name: 3001 W. Auburn Rd. (11482-26)	Sample No:	Collect Date: 11/08/21
Client Project No: 11482-26	Sample Matrix: Soil/Solid	Collect Time: 11:40

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Polynuclear Aromatic Hydrocarbons (PNAs) Aliquot ID: **A05135-003** Matrix: **Soil/Solid**
Method: EPA 3546/EPA 8270E Description: **SB-3 (2-3')**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis			Init.
						P. Date	P. Batch	A. Date	A. Batch		
16. Phenanthrene (SIM)	570		µg/kg	330	20	11/15/21	PS21K15E	11/15/21	23:54	S621K15B	ALS
17. Pyrene (SIM)	1500		µg/kg	330	20	11/15/21	PS21K15E	11/15/21	23:54	S621K15B	ALS

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Analytical Laboratory Report
Laboratory Project Number: A05135
Laboratory Sample Number: A05135-004

Order: A05135
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 Date: 11/18/21

Client Identification: Applied Science & Technology, Inc. - Brighton	Sample Description: Dup-1s	Chain of Custody: 196703
Client Project Name: 3001 W. Auburn Rd. (11482-26)	Sample No:	Collect Date: 11/08/21
Client Project No: 11482-26	Sample Matrix: Soil/Solid	Collect Time: NA

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Water (Moisture) Content Dried at 105 ± 5°C Aliquot ID: **A05135-004** Matrix: **Soil/Solid**
 Method: **ASTM D2216-10** Description: **Dup-1s**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
‡ 1. Percent Moisture (Water Content)	17		%	1	1.0	11/10/21	MC211110	11/11/21	MC211110	LET

Michigan 10 Elements by ICP/MS Aliquot ID: **A05135-004** Matrix: **Soil/Solid**
 Method: **EPA 0200.2/EPA 6020A** Description: **Dup-1s**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Arsenic	7900		µg/kg	100	1000	11/15/21	PT21K15A	11/15/21	T421K15A	CJA
2. Barium	610000		µg/kg	5000	10000	11/15/21	PT21K15A	11/15/21	T421K15A	CJA
3. Cadmium	1300		µg/kg	50	1000	11/15/21	PT21K15A	11/15/21	T421K15A	CJA
4. Chromium	21000		µg/kg	500	1000	11/15/21	PT21K15A	11/15/21	T421K15A	CJA
5. Copper	28000		µg/kg	1000	1000	11/15/21	PT21K15A	11/15/21	T421K15A	CJA
6. Lead	1300000		µg/kg	2000	10000	11/15/21	PT21K15A	11/15/21	T421K15A	CJA
7. Selenium	380		µg/kg	200	1000	11/15/21	PT21K15A	11/15/21	T421K15A	CJA
8. Silver	250		µg/kg	100	1000	11/15/21	PT21K15A	11/15/21	T421K15A	CJA
9. Zinc	790000		µg/kg	5000	10000	11/15/21	PT21K15A	11/15/21	T421K15A	CJA

Mercury by CVAAS Aliquot ID: **A05135-004** Matrix: **Soil/Solid**
 Method: **EPA 7471B** Description: **Dup-1s**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Mercury	54		µg/kg	50	10	11/15/21	PM21K15A	11/15/21	M721K15A	JLH

Volatile Organic Compounds (VOCs) by GC/MS, 5035 Aliquot ID: **A05135-004A** Matrix: **Soil/Solid**
 Method: **EPA 5035A/EPA 8260D** Description: **Dup-1s**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Acetone	U		µg/kg	1000	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
‡ 2. Acrylonitrile	U		µg/kg	140	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
3. Benzene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
4. Bromobenzene	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
5. Bromochloromethane	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
6. Bromodichloromethane	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
7. Bromoform	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
8. Bromomethane	U		µg/kg	200	1.0	11/16/21	VP21K15B	11/16/21 09:03	VP21K15B	JMF
9. 2-Butanone	U		µg/kg	750	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB

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Analytical Laboratory Report
Laboratory Project Number: A05135
Laboratory Sample Number: A05135-004

Order: A05135
Page: 15 of 29
Date: 11/18/21

Client Identification: Applied Science & Technology, Inc. - Brighton	Sample Description: Dup-1s	Chain of Custody: 196703
Client Project Name: 3001 W. Auburn Rd. (11482-26)	Sample No:	Collect Date: 11/08/21
Client Project No: 11482-26	Sample Matrix: Soil/Solid	Collect Time: NA

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS, 5035 Aliquot ID: **A05135-004A** Matrix: **Soil/Solid**
Method: EPA 5035A/EPA 8260D Description: **Dup-1s**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
10. n-Butylbenzene	U		µg/kg	71	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
11. sec-Butylbenzene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
12. tert-Butylbenzene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
13. Carbon Disulfide	U		µg/kg	250	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
14. Carbon Tetrachloride	U		µg/kg	71	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
15. Chlorobenzene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
16. Chloroethane	U		µg/kg	350	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
17. Chloroform	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
18. Chloromethane	U		µg/kg	250	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
19. 2-Chlorotoluene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/kg	250	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
21. Dibromochloromethane	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
22. Dibromomethane	U		µg/kg	250	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
23. 1,2-Dichlorobenzene	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
24. 1,3-Dichlorobenzene	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
25. 1,4-Dichlorobenzene	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
26. Dichlorodifluoromethane	U		µg/kg	250	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
27. 1,1-Dichloroethane	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
28. 1,2-Dichloroethane	U		µg/kg	71	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
29. 1,1-Dichloroethene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
30. cis-1,2-Dichloroethene	U		µg/kg	71	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
31. trans-1,2-Dichloroethene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
32. 1,2-Dichloropropane	U		µg/kg	71	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
33. cis-1,3-Dichloropropene	U		µg/kg	71	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
34. trans-1,3-Dichloropropene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
35. Ethylbenzene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
36. Ethylene Dibromide	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
37. 2-Hexanone	U		µg/kg	2500	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
38. Isopropylbenzene	U		µg/kg	250	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
39. 4-Methyl-2-pentanone	U		µg/kg	2500	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
40. Methylene Chloride	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
‡ 41. 2-Methylnaphthalene	U		µg/kg	330	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
42. MTBE	U		µg/kg	250	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
43. Naphthalene	U		µg/kg	330	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
44. n-Propylbenzene	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
45. Styrene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
46. 1,1,1,2-Tetrachloroethane	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB

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Analytical Laboratory Report
Laboratory Project Number: A05135
Laboratory Sample Number: A05135-004

Order: A05135
Page: 16 of 29
Date: 11/18/21

Client Identification: Applied Science & Technology, Inc. - Brighton	Sample Description: Dup-1s	Chain of Custody: 196703
Client Project Name: 3001 W. Auburn Rd. (11482-26)	Sample No:	Collect Date: 11/08/21
Client Project No: 11482-26	Sample Matrix: Soil/Solid	Collect Time: NA

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS, 5035 Aliquot ID: **A05135-004A** Matrix: **Soil/Solid**
Method: EPA 5035A/EPA 8260D Description: **Dup-1s**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
47. 1,1,2,2-Tetrachloroethane	U		µg/kg	71	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
48. Tetrachloroethene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
49. Toluene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
50. 1,2,4-Trichlorobenzene	U		µg/kg	250	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
51. 1,1,1-Trichloroethane	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
52. 1,1,2-Trichloroethane	U		µg/kg	71	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
53. Trichloroethene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
54. Trichlorofluoromethane	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
55. 1,2,3-Trichloropropane	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
‡ 56. 1,2,3-Trimethylbenzene	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
57. 1,2,4-Trimethylbenzene	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
58. 1,3,5-Trimethylbenzene	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
59. Vinyl Chloride	U		µg/kg	40	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
60. m&p-Xylene	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
61. o-Xylene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB
‡ 62. Xylenes	U		µg/kg	150	1.0	11/15/21	VP21K15A	11/15/21 19:25	VP21K15A	ANB

Polynuclear Aromatic Hydrocarbons (PNAs) Aliquot ID: **A05135-004** Matrix: **Soil/Solid**
Method: EPA 3546/EPA 8270E Description: **Dup-1s**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acenaphthene (SIM)	U		µg/kg	330	20	11/15/21	PS21K15E	11/16/21 00:22	S621K15B	ALS
2. Acenaphthylene (SIM)	360		µg/kg	330	20	11/15/21	PS21K15E	11/16/21 00:22	S621K15B	ALS
3. Anthracene (SIM)	560		µg/kg	330	20	11/15/21	PS21K15E	11/16/21 00:22	S621K15B	ALS
4. Benzo(a)anthracene (SIM)	1500		µg/kg	330	20	11/15/21	PS21K15E	11/16/21 00:22	S621K15B	ALS
5. Benzo(a)pyrene (SIM)	1400		µg/kg	330	20	11/15/21	PS21K15E	11/16/21 14:17	SN21K16A	ALS
6. Benzo(b)fluoranthene (SIM)	1800		µg/kg	330	20	11/15/21	PS21K15E	11/16/21 00:22	S621K15B	ALS
7. Benzo(ghi)perylene (SIM)	850		µg/kg	330	20	11/15/21	PS21K15E	11/16/21 00:22	S621K15B	ALS
8. Benzo(k)fluoranthene (SIM)	650		µg/kg	330	20	11/15/21	PS21K15E	11/16/21 00:22	S621K15B	ALS
9. Chrysene (SIM)	1400		µg/kg	330	20	11/15/21	PS21K15E	11/16/21 00:22	S621K15B	ALS
10. Dibenzo(a,h)anthracene (SIM)	U		µg/kg	330	20	11/15/21	PS21K15E	11/16/21 00:22	S621K15B	ALS
11. Fluoranthene (SIM)	3300		µg/kg	330	20	11/15/21	PS21K15E	11/16/21 00:22	S621K15B	ALS
12. Fluorene (SIM)	U		µg/kg	330	20	11/15/21	PS21K15E	11/16/21 00:22	S621K15B	ALS
13. Indeno(1,2,3-cd)pyrene (SIM)	910		µg/kg	330	20	11/15/21	PS21K15E	11/16/21 00:22	S621K15B	ALS
14. 2-Methylnaphthalene (SIM)	U		µg/kg	330	20	11/15/21	PS21K15E	11/16/21 00:22	S621K15B	ALS
15. Naphthalene (SIM)	U		µg/kg	330	20	11/15/21	PS21K15E	11/16/21 00:22	S621K15B	ALS

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Analytical Laboratory Report
Laboratory Project Number: A05135
Laboratory Sample Number: A05135-004

Order: A05135
Page: 17 of 29
Date: 11/18/21

Client Identification: Applied Science & Technology, Inc. - Brighton	Sample Description: Dup-1s	Chain of Custody: 196703
Client Project Name: 3001 W. Auburn Rd. (11482-26)	Sample No:	Collect Date: 11/08/21
Client Project No: 11482-26	Sample Matrix: Soil/Solid	Collect Time: NA

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Polynuclear Aromatic Hydrocarbons (PNAs) Aliquot ID: **A05135-004** Matrix: **Soil/Solid**
Method: EPA 3546/EPA 8270E Description: **Dup-1s**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis			
						P. Date	P. Batch	A. Date	A. Batch	Init.	
16. Phenanthrene (SIM)	1200		µg/kg	330	20	11/15/21	PS21K15E	11/16/21	00:22	S621K15B	ALS
17. Pyrene (SIM)	2900		µg/kg	330	20	11/15/21	PS21K15E	11/16/21	00:22	S621K15B	ALS

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Analytical Laboratory Report
Laboratory Project Number: A05135
Laboratory Sample Number: A05135-005

Order: A05135
Page: 18 of 29
Date: 11/18/21

Client Identification: Applied Science & Technology, Inc. - Brighton	Sample Description: SB-1-GW	Chain of Custody: 196703
Client Project Name: 3001 W. Auburn Rd. (11482-26)	Sample No:	Collect Date: 11/08/21
Client Project No: 11482-26	Sample Matrix: Ground Water	Collect Time: 10:50

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Michigan 10 Elements by ICP/MS, Dissolved Aliquot ID: **A05135-005B** Matrix: **Ground Water**
Method: **EPA 3005A (Dissolved)/EPA 6020A** Description: **SB-1-GW**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Arsenic	6.2		µg/L	5.0	10	11/15/21	PT21K15D	11/15/21	T421K15A	CJA
2. Barium	260		µg/L	100	10	11/15/21	PT21K15D	11/15/21	T421K15A	CJA
3. Cadmium	U		µg/L	1.0	10	11/15/21	PT21K15D	11/15/21	T421K15A	CJA
4. Chromium	U		µg/L	10	10	11/15/21	PT21K15D	11/15/21	T421K15A	CJA
5. Copper	13		µg/L	4.0	10	11/15/21	PT21K15D	11/15/21	T421K15A	CJA
6. Lead	U		µg/L	3.0	10	11/15/21	PT21K15D	11/15/21	T421K15A	CJA
7. Selenium	U		µg/L	5.0	10	11/15/21	PT21K15D	11/15/21	T421K15A	CJA
8. Silver	U		µg/L	0.20	10	11/15/21	PT21K15D	11/15/21	T421K15A	CJA
9. Zinc	U		µg/L	50	10	11/15/21	PT21K15D	11/15/21	T421K15A	CJA

Mercury by CVAAS, Dissolved Aliquot ID: **A05135-005B** Matrix: **Ground Water**
Method: **EPA 7470A** Description: **SB-1-GW**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Mercury	U		µg/L	0.20	1.0	11/12/21	PM21K12B	11/12/21	M721K12B	JLH

Volatile Organic Compounds (VOCs) by GC/MS Aliquot ID: **A05135-005C** Matrix: **Ground Water**
Method: **EPA 5030C/EPA 8260D** Description: **SB-1-GW**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U	Y1 V+	µg/L	50	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
‡ 2. Acrylonitrile	U	Y1	µg/L	5.0	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
3. Benzene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
4. Bromobenzene	U	Y1	µg/L	5.0	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
5. Bromochloromethane	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
6. Bromodichloromethane	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
7. Bromoform	U	Y1	µg/L	5.0	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
8. Bromomethane	U	Y1	µg/L	5.0	5.0	11/12/21	VI21K12B	11/12/21 12:55	VI21K12B	BRC
9. 2-Butanone	U	Y1 V+	µg/L	25	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
10. n-Butylbenzene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
11. sec-Butylbenzene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
12. tert-Butylbenzene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
13. Carbon Disulfide	U	Y1	µg/L	5.0	5.0	11/12/21	VI21K12B	11/12/21 12:55	VI21K12B	BRC
14. Carbon Tetrachloride	U	Y1	µg/L	5.0	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART

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Analytical Laboratory Report
Laboratory Project Number: A05135
Laboratory Sample Number: A05135-005

Order: A05135
Page: 19 of 29
Date: 11/18/21

Client Identification: Applied Science & Technology, Inc. - Brighton	Sample Description: SB-1-GW	Chain of Custody: 196703
Client Project Name: 3001 W. Auburn Rd. (11482-26)	Sample No:	Collect Date: 11/08/21
Client Project No: 11482-26	Sample Matrix: Ground Water	Collect Time: 10:50

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS Aliquot ID: **A05135-005C** Matrix: **Ground Water**
Method: **EPA 5030C/EPA 8260D** Description: **SB-1-GW**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
15. Chlorobenzene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
16. Chloroethane	U	V+ L+ Y1	µg/L	5.0	5.0	11/12/21	VI21K12B	11/12/21 12:55	VI21K12B	BRC
17. Chloroform	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
18. Chloromethane	U	Y1	µg/L	5.0	5.0	11/12/21	VI21K12B	11/12/21 12:55	VI21K12B	BRC
19. 2-Chlorotoluene	U	Y1	µg/L	5.0	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
21. Dibromochloromethane	U	Y1	µg/L	5.0	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
22. Dibromomethane	U	Y1	µg/L	5.0	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
23. 1,2-Dichlorobenzene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
24. 1,3-Dichlorobenzene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
25. 1,4-Dichlorobenzene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
26. Dichlorodifluoromethane	U	Y1	µg/L	5.0	5.0	11/12/21	VI21K12B	11/12/21 12:55	VI21K12B	BRC
27. 1,1-Dichloroethane	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
28. 1,2-Dichloroethane	U	Y1	µg/L	5.0	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
29. 1,1-Dichloroethene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
30. cis-1,2-Dichloroethene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
31. trans-1,2-Dichloroethene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
32. 1,2-Dichloropropane	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
33. cis-1,3-Dichloropropene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
34. trans-1,3-Dichloropropene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
35. Ethylbenzene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
36. Ethylene Dibromide	U	Y1	µg/L	5.0	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
37. 2-Hexanone	U	Y1 V+	µg/L	50	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
38. Isopropylbenzene	U	Y1	µg/L	5.0	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
39. 4-Methyl-2-pentanone	U	Y1	µg/L	50	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
40. Methylene Chloride	U	Y1	µg/L	5.0	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
‡ 41. 2-Methylnaphthalene	U	Y1	µg/L	15	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
42. MTBE	U	Y1	µg/L	5.0	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
43. Naphthalene	U	Y1	µg/L	5.0	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
44. n-Propylbenzene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
45. Styrene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
46. 1,1,1,2-Tetrachloroethane	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
47. 1,1,2,2-Tetrachloroethane	U	Y1	µg/L	5.0	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
48. Tetrachloroethene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART

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Client Identification: Applied Science & Technology, Inc. - Brighton	Sample Description: SB-1-GW	Chain of Custody: 196703
Client Project Name: 3001 W. Auburn Rd. (11482-26)	Sample No:	Collect Date: 11/08/21
Client Project No: 11482-26	Sample Matrix: Ground Water	Collect Time: 10:50

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS Aliquot ID: **A05135-005C** Matrix: **Ground Water**
Method: **EPA 5030C/EPA 8260D** Description: **SB-1-GW**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
49. Toluene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
50. 1,2,4-Trichlorobenzene	U	Y1	µg/L	10	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
51. 1,1,1-Trichloroethane	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
‡ 52. 1,1,2-Trichloroethane	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
53. Trichloroethene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
54. Trichlorofluoromethane	U	Y1	µg/L	2.5	5.0	11/12/21	VI21K12B	11/12/21 12:55	VI21K12B	BRC
55. 1,2,3-Trichloropropane	U	Y1	µg/L	5.0	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
‡ 56. 1,2,3-Trimethylbenzene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
57. 1,2,4-Trimethylbenzene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
58. 1,3,5-Trimethylbenzene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
59. Vinyl Chloride	U	Y1	µg/L	5.0	5.0	11/12/21	VI21K12B	11/12/21 12:55	VI21K12B	BRC
60. m&p-Xylene	U	Y1	µg/L	5.0	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
61. o-Xylene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART
‡ 62. Xylenes	U	Y1	µg/L	7.5	5.0	11/11/21	VM21K11B	11/12/21 02:05	VM21K11B	ART

Polynuclear Aromatic Hydrocarbons (PNAs) Aliquot ID: **A05135-005** Matrix: **Ground Water**
Method: **EPA 3510C/EPA 8270E** Description: **SB-1-GW**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acenaphthene (SIM)	U		µg/L	5.0	1.0	11/12/21	PS21K12A	11/12/21 20:47	SG21K12C	TKT
2. Acenaphthylene (SIM)	U		µg/L	5.0	1.0	11/12/21	PS21K12A	11/12/21 20:47	SG21K12C	TKT
3. Anthracene (SIM)	U		µg/L	5.0	1.0	11/12/21	PS21K12A	11/12/21 20:47	SG21K12C	TKT
4. Benzo(a)anthracene (SIM)	U		µg/L	1.0	1.0	11/12/21	PS21K12A	11/12/21 20:47	SG21K12C	TKT
5. Benzo(a)pyrene (SIM)	U		µg/L	1.0	1.0	11/12/21	PS21K12A	11/12/21 20:47	SG21K12C	TKT
6. Benzo(b)fluoranthene (SIM)	U		µg/L	1.0	1.0	11/12/21	PS21K12A	11/12/21 20:47	SG21K12C	TKT
7. Benzo(ghi)perylene (SIM)	U		µg/L	1.0	1.0	11/12/21	PS21K12A	11/12/21 20:47	SG21K12C	TKT
8. Benzo(k)fluoranthene (SIM)	U		µg/L	1.0	1.0	11/12/21	PS21K12A	11/12/21 20:47	SG21K12C	TKT
9. Chrysene (SIM)	U		µg/L	1.0	1.0	11/12/21	PS21K12A	11/12/21 20:47	SG21K12C	TKT
10. Dibenzo(a,h)anthracene (SIM)	U		µg/L	2.0	1.0	11/12/21	PS21K12A	11/12/21 20:47	SG21K12C	TKT
11. Fluoranthene (SIM)	U		µg/L	1.0	1.0	11/12/21	PS21K12A	11/12/21 20:47	SG21K12C	TKT
12. Fluorene (SIM)	U		µg/L	5.0	1.0	11/12/21	PS21K12A	11/12/21 20:47	SG21K12C	TKT
13. Indeno(1,2,3-cd)pyrene (SIM)	U		µg/L	2.0	1.0	11/12/21	PS21K12A	11/12/21 20:47	SG21K12C	TKT
14. 2-Methylnaphthalene (SIM)	U		µg/L	5.0	1.0	11/12/21	PS21K12A	11/12/21 20:47	SG21K12C	TKT
15. Naphthalene (SIM)	U		µg/L	5.0	1.0	11/12/21	PS21K12A	11/12/21 20:47	SG21K12C	TKT
16. Phenanthrene (SIM)	U		µg/L	2.0	1.0	11/12/21	PS21K12A	11/12/21 20:47	SG21K12C	TKT
17. Pyrene (SIM)	U		µg/L	5.0	1.0	11/12/21	PS21K12A	11/12/21 20:47	SG21K12C	TKT

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Analytical Laboratory Report
Laboratory Project Number: A05135
Laboratory Sample Number: A05135-006

Order: A05135
Page: 21 of 29
Date: 11/18/21

Client Identification: Applied Science & Technology, Inc. - Brighton	Sample Description: SB-2-GW	Chain of Custody: 196703
Client Project Name: 3001 W. Auburn Rd. (11482-26)	Sample No:	Collect Date: 11/08/21
Client Project No: 11482-26	Sample Matrix: Ground Water	Collect Time: 11:50

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Michigan 10 Elements by ICP/MS, Total Recoverable Aliquot ID: **A05135-006A** Matrix: **Ground Water**
Method: **EPA 3005A (Total Recoverable)/EPA 6020A** Description: **SB-2-GW**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Arsenic	U		µg/L	5.0	10	11/17/21	PT21K17A	11/17/21	T421K17B	CJA
2. Barium	U		µg/L	100	10	11/17/21	PT21K17A	11/17/21	T421K17B	CJA
3. Cadmium	U		µg/L	1.0	10	11/17/21	PT21K17A	11/17/21	T421K17B	CJA
4. Chromium	U		µg/L	10	10	11/17/21	PT21K17A	11/17/21	T421K17B	CJA
5. Copper	U		µg/L	4.0	10	11/17/21	PT21K17A	11/17/21	T421K17B	CJA
6. Lead	U		µg/L	3.0	10	11/17/21	PT21K17A	11/17/21	T421K17B	CJA
7. Selenium	U		µg/L	5.0	10	11/17/21	PT21K17A	11/17/21	T421K17B	CJA
8. Silver	U		µg/L	0.20	10	11/17/21	PT21K17A	11/17/21	T421K17B	CJA
9. Zinc	U		µg/L	50	10	11/17/21	PT21K17A	11/17/21	T421K17B	CJA

Mercury by CVAAS, Total Aliquot ID: **A05135-006A** Matrix: **Ground Water**
Method: **EPA 7470A** Description: **SB-2-GW**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Mercury	U		µg/L	0.20	1.0	11/12/21	PM21K12B	11/12/21	M721K12B	JLH

Volatile Organic Compounds (VOCs) by GC/MS Aliquot ID: **A05135-006B** Matrix: **Ground Water**
Method: **EPA 5030C/EPA 8260D** Description: **SB-2-GW**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Acetone	U	V+	µg/L	50	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
3. Benzene	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
4. Bromobenzene	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
5. Bromochloromethane	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
6. Bromodichloromethane	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
7. Bromoform	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
8. Bromomethane	U		µg/L	5.0	1.0	11/12/21	VI21K12B	11/12/21 13:22	VI21K12B	BRC
9. 2-Butanone	U	V+	µg/L	25	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
10. n-Butylbenzene	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
11. sec-Butylbenzene	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
12. tert-Butylbenzene	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
13. Carbon Disulfide	U		µg/L	5.0	1.0	11/12/21	VI21K12B	11/12/21 13:22	VI21K12B	BRC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
15. Chlorobenzene	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART

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Client Identification: Applied Science & Technology, Inc. - Brighton	Sample Description: SB-2-GW	Chain of Custody: 196703
Client Project Name: 3001 W. Auburn Rd. (11482-26)	Sample No:	Collect Date: 11/08/21
Client Project No: 11482-26	Sample Matrix: Ground Water	Collect Time: 11:50

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Aliquot ID: **A05135-006B** Matrix: **Ground Water**

Method: **EPA 5030C/EPA 8260D**

Description: **SB-2-GW**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
16. Chloroethane	U	V+ L+	µg/L	5.0	1.0	11/12/21	VI21K12B	11/12/21 13:22	VI21K12B	BRC
17. Chloroform	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
18. Chloromethane	U		µg/L	5.0	1.0	11/12/21	VI21K12B	11/12/21 13:22	VI21K12B	BRC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
21. Dibromochloromethane	U		µg/L	5.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
22. Dibromomethane	U		µg/L	5.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	11/12/21	VI21K12B	11/12/21 13:22	VI21K12B	BRC
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
35. Ethylbenzene	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
36. Ethylene Dibromide	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
37. 2-Hexanone	U	V+	µg/L	50	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
38. Isopropylbenzene	U		µg/L	5.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
40. Methylene Chloride	U		µg/L	5.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
42. MTBE	U		µg/L	5.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
43. Naphthalene	U		µg/L	5.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
44. n-Propylbenzene	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
45. Styrene	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
47. 1,1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
48. Tetrachloroethene	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
49. Toluene	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART

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Analytical Laboratory Report
Laboratory Project Number: A05135
Laboratory Sample Number: A05135-006

Order: A05135
 Page: 23 of 29
 Date: 11/18/21

Client Identification: Applied Science & Technology, Inc. - Brighton	Sample Description: SB-2-GW	Chain of Custody: 196703
Client Project Name: 3001 W. Auburn Rd. (11482-26)	Sample No:	Collect Date: 11/08/21
Client Project No: 11482-26	Sample Matrix: Ground Water	Collect Time: 11:50

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A05135-006B **Matrix: Ground Water**
Description: SB-2-GW

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
53. Trichloroethene	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	11/12/21	VI21K12B	11/12/21 13:22	VI21K12B	BRC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
59. Vinyl Chloride	U		µg/L	1.0	1.0	11/12/21	VI21K12B	11/12/21 13:22	VI21K12B	BRC
60. m&p-Xylene	U		µg/L	2.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
61. o-Xylene	U		µg/L	1.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART
‡ 62. Xylenes	U		µg/L	3.0	1.0	11/11/21	VM21K11B	11/12/21 02:33	VM21K11B	ART

Polynuclear Aromatic Hydrocarbons (PNAs)
Method: EPA 3510C/EPA 8270E

Aliquot ID: A05135-006 **Matrix: Ground Water**
Description: SB-2-GW

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acenaphthene (SIM)	U		µg/L	5.0	1.0	11/12/21	PS21K12A	11/12/21 21:13	SG21K12C	TKT
2. Acenaphthylene (SIM)	U		µg/L	5.0	1.0	11/12/21	PS21K12A	11/12/21 21:13	SG21K12C	TKT
3. Anthracene (SIM)	U		µg/L	5.0	1.0	11/12/21	PS21K12A	11/12/21 21:13	SG21K12C	TKT
4. Benzo(a)anthracene (SIM)	U		µg/L	1.0	1.0	11/12/21	PS21K12A	11/12/21 21:13	SG21K12C	TKT
5. Benzo(a)pyrene (SIM)	U		µg/L	1.0	1.0	11/12/21	PS21K12A	11/12/21 21:13	SG21K12C	TKT
6. Benzo(b)fluoranthene (SIM)	U		µg/L	1.0	1.0	11/12/21	PS21K12A	11/12/21 21:13	SG21K12C	TKT
7. Benzo(ghi)perylene (SIM)	U		µg/L	1.0	1.0	11/12/21	PS21K12A	11/12/21 21:13	SG21K12C	TKT
8. Benzo(k)fluoranthene (SIM)	U		µg/L	1.0	1.0	11/12/21	PS21K12A	11/12/21 21:13	SG21K12C	TKT
9. Chrysene (SIM)	U		µg/L	1.0	1.0	11/12/21	PS21K12A	11/12/21 21:13	SG21K12C	TKT
10. Dibenzo(a,h)anthracene (SIM)	U		µg/L	2.0	1.0	11/12/21	PS21K12A	11/12/21 21:13	SG21K12C	TKT
11. Fluoranthene (SIM)	U		µg/L	1.0	1.0	11/12/21	PS21K12A	11/12/21 21:13	SG21K12C	TKT
12. Fluorene (SIM)	U		µg/L	5.0	1.0	11/12/21	PS21K12A	11/12/21 21:13	SG21K12C	TKT
13. Indeno(1,2,3-cd)pyrene (SIM)	U		µg/L	2.0	1.0	11/12/21	PS21K12A	11/12/21 21:13	SG21K12C	TKT
14. 2-Methylnaphthalene (SIM)	U		µg/L	5.0	1.0	11/12/21	PS21K12A	11/12/21 21:13	SG21K12C	TKT
15. Naphthalene (SIM)	U		µg/L	5.0	1.0	11/12/21	PS21K12A	11/12/21 21:13	SG21K12C	TKT
16. Phenanthrene (SIM)	U		µg/L	2.0	1.0	11/12/21	PS21K12A	11/12/21 21:13	SG21K12C	TKT
17. Pyrene (SIM)	U		µg/L	5.0	1.0	11/12/21	PS21K12A	11/12/21 21:13	SG21K12C	TKT

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Analytical Laboratory Report
Laboratory Project Number: A05135
Laboratory Sample Number: A05135-007

Order: A05135
Page: 24 of 29
Date: 11/18/21

Client Identification: Applied Science & Technology, Inc. - Brighton	Sample Description: Dup-1gw	Chain of Custody: 196703
Client Project Name: 3001 W. Auburn Rd. (11482-26)	Sample No:	Collect Date: 11/08/21
Client Project No: 11482-26	Sample Matrix: Ground Water	Collect Time: NA

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Michigan 10 Elements by ICP/MS, Dissolved Aliquot ID: **A05135-007B** Matrix: **Ground Water**
Method: **EPA 3005A (Dissolved)/EPA 6020A** Description: **Dup-1gw**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Arsenic	7.1		µg/L	5.0	10	11/15/21	PT21K15D	11/15/21	T421K15A	CJA
2. Barium	270		µg/L	100	10	11/15/21	PT21K15D	11/15/21	T421K15A	CJA
3. Cadmium	U		µg/L	1.0	10	11/15/21	PT21K15D	11/15/21	T421K15A	CJA
4. Chromium	U		µg/L	10	10	11/15/21	PT21K15D	11/15/21	T421K15A	CJA
5. Copper	11		µg/L	4.0	10	11/15/21	PT21K15D	11/15/21	T421K15A	CJA
6. Lead	U		µg/L	3.0	10	11/15/21	PT21K15D	11/15/21	T421K15A	CJA
7. Selenium	U		µg/L	5.0	10	11/15/21	PT21K15D	11/15/21	T421K15A	CJA
8. Silver	U		µg/L	0.20	10	11/15/21	PT21K15D	11/15/21	T421K15A	CJA
9. Zinc	U		µg/L	50	10	11/15/21	PT21K15D	11/15/21	T421K15A	CJA

Mercury by CVAAS, Dissolved Aliquot ID: **A05135-007B** Matrix: **Ground Water**
Method: **EPA 7470A** Description: **Dup-1gw**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Mercury	U		µg/L	0.20	1.0	11/12/21	PM21K12B	11/12/21	M721K12B	JLH

Volatile Organic Compounds (VOCs) by GC/MS Aliquot ID: **A05135-007C** Matrix: **Ground Water**
Method: **EPA 5030C/EPA 8260D** Description: **Dup-1gw**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Acetone	U	Y1 V+	µg/L	50	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
‡ 2. Acrylonitrile	U	Y1	µg/L	5.0	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
3. Benzene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
4. Bromobenzene	U	Y1	µg/L	5.0	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
5. Bromochloromethane	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
6. Bromodichloromethane	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
7. Bromoform	U	Y1	µg/L	5.0	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
8. Bromomethane	U	Y1	µg/L	5.0	5.0	11/12/21	VI21K12B	11/12/21 13:49	VI21K12B	BRC
9. 2-Butanone	U	Y1 V+	µg/L	25	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
10. n-Butylbenzene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
11. sec-Butylbenzene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
12. tert-Butylbenzene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
13. Carbon Disulfide	U	Y1	µg/L	5.0	5.0	11/12/21	VI21K12B	11/12/21 13:49	VI21K12B	BRC
14. Carbon Tetrachloride	U	Y1	µg/L	5.0	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART

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Client Identification: Applied Science & Technology, Inc. - Brighton	Sample Description: Dup-1gw	Chain of Custody: 196703
Client Project Name: 3001 W. Auburn Rd. (11482-26)	Sample No:	Collect Date: 11/08/21
Client Project No: 11482-26	Sample Matrix: Ground Water	Collect Time: NA

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS Aliquot ID: **A05135-007C** Matrix: **Ground Water**
Method: **EPA 5030C/EPA 8260D** Description: **Dup-1gw**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
15. Chlorobenzene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
16. Chloroethane	U	V+ L+ Y1	µg/L	5.0	5.0	11/12/21	VI21K12B	11/12/21 13:49	VI21K12B	BRC
17. Chloroform	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
18. Chloromethane	U	Y1	µg/L	5.0	5.0	11/12/21	VI21K12B	11/12/21 13:49	VI21K12B	BRC
19. 2-Chlorotoluene	U	Y1	µg/L	5.0	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
21. Dibromochloromethane	U	Y1	µg/L	5.0	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
22. Dibromomethane	U	Y1	µg/L	5.0	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
23. 1,2-Dichlorobenzene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
24. 1,3-Dichlorobenzene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
25. 1,4-Dichlorobenzene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
26. Dichlorodifluoromethane	U	Y1	µg/L	5.0	5.0	11/12/21	VI21K12B	11/12/21 13:49	VI21K12B	BRC
27. 1,1-Dichloroethane	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
28. 1,2-Dichloroethane	U	Y1	µg/L	5.0	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
29. 1,1-Dichloroethene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
30. cis-1,2-Dichloroethene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
31. trans-1,2-Dichloroethene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
32. 1,2-Dichloropropane	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
33. cis-1,3-Dichloropropene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
34. trans-1,3-Dichloropropene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
35. Ethylbenzene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
36. Ethylene Dibromide	U	Y1	µg/L	5.0	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
37. 2-Hexanone	U	Y1 V+	µg/L	50	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
38. Isopropylbenzene	U	Y1	µg/L	5.0	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
39. 4-Methyl-2-pentanone	U	Y1	µg/L	50	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
40. Methylene Chloride	U	Y1	µg/L	5.0	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
‡ 41. 2-Methylnaphthalene	U	Y1	µg/L	15	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
42. MTBE	U	Y1	µg/L	5.0	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
43. Naphthalene	U	Y1	µg/L	5.0	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
44. n-Propylbenzene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
45. Styrene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
46. 1,1,1,2-Tetrachloroethane	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
47. 1,1,2,2-Tetrachloroethane	U	Y1	µg/L	5.0	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
48. Tetrachloroethene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART

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Analytical Laboratory Report
Laboratory Project Number: A05135
Laboratory Sample Number: A05135-007

Order: A05135
Page: 26 of 29
Date: 11/18/21

Client Identification: Applied Science & Technology, Inc. - Brighton	Sample Description: Dup-1gw	Chain of Custody: 196703
Client Project Name: 3001 W. Auburn Rd. (11482-26)	Sample No:	Collect Date: 11/08/21
Client Project No: 11482-26	Sample Matrix: Ground Water	Collect Time: NA

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS Aliquot ID: **A05135-007C** Matrix: **Ground Water**
Method: **EPA 5030C/EPA 8260D** Description: **Dup-1gw**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
49. Toluene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
50. 1,2,4-Trichlorobenzene	U	Y1	µg/L	10	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
51. 1,1,1-Trichloroethane	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
‡ 52. 1,1,2-Trichloroethane	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
53. Trichloroethene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
54. Trichlorofluoromethane	U	Y1	µg/L	2.5	5.0	11/12/21	VI21K12B	11/12/21 13:49	VI21K12B	BRC
55. 1,2,3-Trichloropropane	U	Y1	µg/L	5.0	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
‡ 56. 1,2,3-Trimethylbenzene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
57. 1,2,4-Trimethylbenzene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
58. 1,3,5-Trimethylbenzene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
59. Vinyl Chloride	U	Y1	µg/L	5.0	5.0	11/12/21	VI21K12B	11/12/21 13:49	VI21K12B	BRC
60. m&p-Xylene	U	Y1	µg/L	5.0	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
61. o-Xylene	U	Y1	µg/L	2.5	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART
‡ 62. Xylenes	U	Y1	µg/L	7.5	5.0	11/11/21	VM21K11B	11/12/21 03:01	VM21K11B	ART

Polynuclear Aromatic Hydrocarbons (PNAs) Aliquot ID: **A05135-007** Matrix: **Ground Water**
Method: **EPA 3510C/EPA 8270E** Description: **Dup-1gw**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acenaphthene (SIM)	U		µg/L	5.0	1.0	11/12/21	PS21K12A	11/12/21 21:39	SG21K12C	TKT
2. Acenaphthylene (SIM)	U		µg/L	5.0	1.0	11/12/21	PS21K12A	11/12/21 21:39	SG21K12C	TKT
3. Anthracene (SIM)	U		µg/L	5.0	1.0	11/12/21	PS21K12A	11/12/21 21:39	SG21K12C	TKT
4. Benzo(a)anthracene (SIM)	U		µg/L	1.0	1.0	11/12/21	PS21K12A	11/12/21 21:39	SG21K12C	TKT
5. Benzo(a)pyrene (SIM)	U		µg/L	1.0	1.0	11/12/21	PS21K12A	11/12/21 21:39	SG21K12C	TKT
6. Benzo(b)fluoranthene (SIM)	U		µg/L	1.0	1.0	11/12/21	PS21K12A	11/12/21 21:39	SG21K12C	TKT
7. Benzo(ghi)perylene (SIM)	U		µg/L	1.0	1.0	11/12/21	PS21K12A	11/12/21 21:39	SG21K12C	TKT
8. Benzo(k)fluoranthene (SIM)	U		µg/L	1.0	1.0	11/12/21	PS21K12A	11/12/21 21:39	SG21K12C	TKT
9. Chrysene (SIM)	U		µg/L	1.0	1.0	11/12/21	PS21K12A	11/12/21 21:39	SG21K12C	TKT
10. Dibenzo(a,h)anthracene (SIM)	U		µg/L	2.0	1.0	11/12/21	PS21K12A	11/12/21 21:39	SG21K12C	TKT
11. Fluoranthene (SIM)	U		µg/L	1.0	1.0	11/12/21	PS21K12A	11/12/21 21:39	SG21K12C	TKT
12. Fluorene (SIM)	U		µg/L	5.0	1.0	11/12/21	PS21K12A	11/12/21 21:39	SG21K12C	TKT
13. Indeno(1,2,3-cd)pyrene (SIM)	U		µg/L	2.0	1.0	11/12/21	PS21K12A	11/12/21 21:39	SG21K12C	TKT
14. 2-Methylnaphthalene (SIM)	U		µg/L	5.0	1.0	11/12/21	PS21K12A	11/12/21 21:39	SG21K12C	TKT
15. Naphthalene (SIM)	U		µg/L	5.0	1.0	11/12/21	PS21K12A	11/12/21 21:39	SG21K12C	TKT
16. Phenanthrene (SIM)	U		µg/L	2.0	1.0	11/12/21	PS21K12A	11/12/21 21:39	SG21K12C	TKT
17. Pyrene (SIM)	U		µg/L	5.0	1.0	11/12/21	PS21K12A	11/12/21 21:39	SG21K12C	TKT

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Analytical Laboratory Report
Laboratory Project Number: A05135
Laboratory Sample Number: A05135-008

Order: A05135
Page: 27 of 29
Date: 11/18/21

Client Identification: Applied Science & Technology, Inc. - Brighton	Sample Description: Meth Blank	Chain of Custody: 196703
Client Project Name: 3001 W. Auburn Rd. (11482-26)	Sample No:	Collect Date: 11/08/21
Client Project No: 11482-26	Sample Matrix: Blank: Methanol	Collect Time: NA

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS, 5035 Aliquot ID: **A05135-008** Matrix: **Blank: Methanol**
Method: EPA 5035A/EPA 8260D Description: **Meth Blank**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis			
						P. Date	P. Batch	A. Date	A. Batch	Init.	
1. Acetone	U		µg/kg	1000	1.0	11/15/21	VP21K15A	11/15/21	14:08	VP21K15A	ANB
‡ 2. Acrylonitrile	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21	14:08	VP21K15A	ANB
3. Benzene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21	14:08	VP21K15A	ANB
4. Bromobenzene	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21	14:08	VP21K15A	ANB
5. Bromochloromethane	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21	14:08	VP21K15A	ANB
6. Bromodichloromethane	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21	14:08	VP21K15A	ANB
7. Bromoform	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21	14:08	VP21K15A	ANB
8. Bromomethane	U		µg/kg	200	1.0	11/12/21	VP21K12C	11/13/21	15:41	VP21K12C	ANB
9. 2-Butanone	U		µg/kg	750	1.0	11/15/21	VP21K15A	11/15/21	14:08	VP21K15A	ANB
10. n-Butylbenzene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21	14:08	VP21K15A	ANB
11. sec-Butylbenzene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21	14:08	VP21K15A	ANB
12. tert-Butylbenzene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21	14:08	VP21K15A	ANB
13. Carbon Disulfide	U		µg/kg	250	1.0	11/15/21	VP21K15A	11/15/21	14:08	VP21K15A	ANB
14. Carbon Tetrachloride	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21	14:08	VP21K15A	ANB
15. Chlorobenzene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21	14:08	VP21K15A	ANB
16. Chloroethane	U		µg/kg	250	1.0	11/15/21	VP21K15A	11/15/21	14:08	VP21K15A	ANB
17. Chloroform	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21	14:08	VP21K15A	ANB
18. Chloromethane	U		µg/kg	250	1.0	11/15/21	VP21K15A	11/15/21	14:08	VP21K15A	ANB
19. 2-Chlorotoluene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21	14:08	VP21K15A	ANB
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/kg	250	1.0	11/15/21	VP21K15A	11/15/21	14:08	VP21K15A	ANB
21. Dibromochloromethane	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21	14:08	VP21K15A	ANB
22. Dibromomethane	U		µg/kg	250	1.0	11/15/21	VP21K15A	11/15/21	14:08	VP21K15A	ANB
23. 1,2-Dichlorobenzene	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21	14:08	VP21K15A	ANB
24. 1,3-Dichlorobenzene	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21	14:08	VP21K15A	ANB
25. 1,4-Dichlorobenzene	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21	14:08	VP21K15A	ANB
26. Dichlorodifluoromethane	U		µg/kg	250	1.0	11/15/21	VP21K15A	11/15/21	14:08	VP21K15A	ANB
27. 1,1-Dichloroethane	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21	14:08	VP21K15A	ANB
28. 1,2-Dichloroethane	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21	14:08	VP21K15A	ANB
29. 1,1-Dichloroethene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21	14:08	VP21K15A	ANB
30. cis-1,2-Dichloroethene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21	14:08	VP21K15A	ANB
31. trans-1,2-Dichloroethene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21	14:08	VP21K15A	ANB
32. 1,2-Dichloropropane	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21	14:08	VP21K15A	ANB
33. cis-1,3-Dichloropropene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21	14:08	VP21K15A	ANB
34. trans-1,3-Dichloropropene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21	14:08	VP21K15A	ANB
35. Ethylbenzene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21	14:08	VP21K15A	ANB
36. Ethylene Dibromide	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21	14:08	VP21K15A	ANB
37. 2-Hexanone	U		µg/kg	2500	1.0	11/15/21	VP21K15A	11/15/21	14:08	VP21K15A	ANB

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Analytical Laboratory Report
Laboratory Project Number: A05135
Laboratory Sample Number: A05135-008

Order: A05135
Page: 28 of 29
Date: 11/18/21

Client Identification: Applied Science & Technology, Inc. - Brighton	Sample Description: Meth Blank	Chain of Custody: 196703
Client Project Name: 3001 W. Auburn Rd. (11482-26)	Sample No:	Collect Date: 11/08/21
Client Project No: 11482-26	Sample Matrix: Blank: Methanol	Collect Time: NA

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS, 5035 Aliquot ID: **A05135-008** Matrix: **Blank: Methanol**
Method: EPA 5035A/EPA 8260D Description: **Meth Blank**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
38. Isopropylbenzene	U		µg/kg	250	1.0	11/15/21	VP21K15A	11/15/21 14:08	VP21K15A	ANB
39. 4-Methyl-2-pentanone	U		µg/kg	2500	1.0	11/15/21	VP21K15A	11/15/21 14:08	VP21K15A	ANB
40. Methylene Chloride	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 14:08	VP21K15A	ANB
‡ 41. 2-Methylnaphthalene	U		µg/kg	330	1.0	11/15/21	VP21K15A	11/15/21 14:08	VP21K15A	ANB
42. MTBE	U		µg/kg	250	1.0	11/15/21	VP21K15A	11/15/21 14:08	VP21K15A	ANB
43. Naphthalene	U		µg/kg	330	1.0	11/15/21	VP21K15A	11/15/21 14:08	VP21K15A	ANB
44. n-Propylbenzene	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 14:08	VP21K15A	ANB
45. Styrene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 14:08	VP21K15A	ANB
46. 1,1,1,2-Tetrachloroethane	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 14:08	VP21K15A	ANB
47. 1,1,2,2-Tetrachloroethane	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 14:08	VP21K15A	ANB
48. Tetrachloroethene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 14:08	VP21K15A	ANB
49. Toluene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 14:08	VP21K15A	ANB
50. 1,2,4-Trichlorobenzene	U		µg/kg	250	1.0	11/15/21	VP21K15A	11/15/21 14:08	VP21K15A	ANB
51. 1,1,1-Trichloroethane	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 14:08	VP21K15A	ANB
52. 1,1,2-Trichloroethane	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 14:08	VP21K15A	ANB
53. Trichloroethene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 14:08	VP21K15A	ANB
54. Trichlorofluoromethane	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 14:08	VP21K15A	ANB
55. 1,2,3-Trichloropropane	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 14:08	VP21K15A	ANB
‡ 56. 1,2,3-Trimethylbenzene	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 14:08	VP21K15A	ANB
57. 1,2,4-Trimethylbenzene	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 14:08	VP21K15A	ANB
58. 1,3,5-Trimethylbenzene	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 14:08	VP21K15A	ANB
59. Vinyl Chloride	U		µg/kg	40	1.0	11/15/21	VP21K15A	11/15/21 14:08	VP21K15A	ANB
60. m&p-Xylene	U		µg/kg	100	1.0	11/15/21	VP21K15A	11/15/21 14:08	VP21K15A	ANB
61. o-Xylene	U		µg/kg	50	1.0	11/15/21	VP21K15A	11/15/21 14:08	VP21K15A	ANB
‡ 62. Xylenes	U		µg/kg	150	1.0	11/15/21	VP21K15A	11/15/21 14:08	VP21K15A	ANB

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Definitions/ Qualifiers:

- A:** Spike recovery or precision unusable due to dilution.
- B:** The analyte was detected in the associated method blank.
- E:** The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
- J:** The concentration is an estimated value.
- M:** Modified Method
- U:** The analyte was not detected at or above the reporting limit.
- X:** Matrix Interference has resulted in a raised reporting limit or distorted result.
- W:** Results reported on a wet-weight basis.
- *:** Value reported is outside QC limits

Exception Summary:

- L+** : Recovery in the associated laboratory sample (LCS) exceeds the upper control limit. Results may be biased high.
- V+** : Recovery in the associated continuing calibration verification sample (CCV) exceeds the upper control limit. Results may be biased high.
- Y1** : Sample was diluted due to a sample matrix issue.

Analysis Locations:

All analyses performed in Holt.



Accreditation Number(s):

T104704518-19-8 (TX)

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Wednesday, November 24, 2021

Fibertec Project Number: A05135 Supplemental
Project Identification: 3001 W. Auburn Rd. (11482-26) /11482-26
Submittal Date: 11/09/2021

Mr. Jeremy Efros
Applied Science & Technology, Inc. - Brighton
10448 Citation Dr.
Suite 100
Brighton, MI 48116

Dear Mr. Efros,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note TO-15 samples will be disposed of 7 calendar days after the reporting date. All other samples will be disposed of 30 days after the reporting date.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,

By Bailey Welch at 1:53 PM, Nov 24, 2021

For Daryl P. Strandbergh
Laboratory Director

Enclosures

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Analytical Laboratory Report
Laboratory Project Number: A05135
Laboratory Sample Number: A05135-003

Order: A05135
Page: 2 of 4
Date: 11/24/21

Client Identification: Applied Science & Technology, Inc. - Brighton	Sample Description: SB-3 (2-3')	Chain of Custody: 196703
Client Project Name: 3001 W. Auburn Rd. (11482-26)	Sample No:	Collect Date: 11/08/21
Client Project No: 11482-26	Sample Matrix: Soil/Solid	Collect Time: 11:40

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Water (Moisture) Content Dried at 105 ± 5°C Aliquot ID: **A05135-003** Matrix: **Soil/Solid**
Method: ASTM D2216-10 Description: **SB-3 (2-3')**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
‡ 1. Percent Moisture (Water Content)	18		%	1	1.0	11/10/21	MC211110	11/11/21	MC211110	LET

Lead, MDEQ Criteria Aliquot ID: **A05135-003B** Matrix: **Soil/Solid**
Method: EPA 0200.2/EPA 6020A Description: **SB-3 (2-3')**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Lead, Coarse Fraction	2490000		µg/kg	4000	400	11/22/21	PT21K22A	11/22/21	T421K22A	CJA
2. Lead, Fine Fraction	3100000		µg/kg	4000	200	11/22/21	PT21K22A	11/22/21	T421K22A	CJA
3. Lead, Total (Calculated)	2520000		µg/kg	1000	1.0	NA	NA	11/22/21	NA	CJA
‡ 4. Percent Total Solids	81.6		%	0.1	1.0	NA	NA	11/22/21	NA	CJA

Chromium, Hexavalent Aliquot ID: **A05135-003** Matrix: **Soil/Solid**
Method: EPA 3060A/EPA 7196A Description: **SB-3 (2-3')**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Chromium VI	U		µg/kg	490	1.0	11/22/21	W321K22A	11/23/21	W321K22A	JLS

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Analytical Laboratory Report
Laboratory Project Number: A05135
Laboratory Sample Number: A05135-004

Order: A05135
Page: 3 of 4
Date: 11/24/21

Client Identification: Applied Science & Technology, Inc. - Brighton	Sample Description: Dup-1s	Chain of Custody: 196703
Client Project Name: 3001 W. Auburn Rd. (11482-26)	Sample No:	Collect Date: 11/08/21
Client Project No: 11482-26	Sample Matrix: Soil/Solid	Collect Time: NA

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Water (Moisture) Content Dried at 105 ± 5°C Aliquot ID: **A05135-004** Matrix: **Soil/Solid**
Method: ASTM D2216-10 Description: **Dup-1s**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
‡ 1. Percent Moisture (Water Content)	17		%	1	1.0	11/10/21	MC211110	11/11/21	MC211110	LET

Lead, MDEQ Criteria Aliquot ID: **A05135-004B** Matrix: **Soil/Solid**
Method: EPA 0200.2/EPA 6020A Description: **Dup-1s**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Lead, Coarse Fraction	808000		µg/kg	1000	100	11/22/21	PT21K22A	11/22/21	T421K22A	CJA
2. Lead, Fine Fraction	1430000		µg/kg	2000	100	11/22/21	PT21K22A	11/22/21	T421K22A	CJA
3. Lead, Total (Calculated)	849000		µg/kg	1000	1.0	NA	NA	11/22/21	NA	CJA
‡ 4. Percent Total Solids	81.9		%	0.1	1.0	NA	NA	11/22/21	NA	CJA

Chromium, Hexavalent Aliquot ID: **A05135-004** Matrix: **Soil/Solid**
Method: EPA 3060A/EPA 7196A Description: **Dup-1s**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Chromium VI	U		µg/kg	480	1.0	11/22/21	W321K22A	11/23/21	W321K22A	JLS

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Definitions/ Qualifiers:

- A:** Spike recovery or precision unusable due to dilution.
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- W:** Results reported on a wet-weight basis.
- *:** Value reported is outside QC limits

Exception Summary:

Analysis Locations:

All analyses performed in Holt.



Accreditation Number(s):

T104704518-19-8 (TX)

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Client Name: ASTI Environmental		PARAMETERS		Matrix Code		Deliverables									
Contact Person: Jeremy Efros		MATRIX (SEE RIGHT CORNER FOR CODE)		# OF CONTAINERS		HOLD SAMPLE		S Soil	GW Ground Water	<input type="checkbox"/>	Level 2				
Project Name/ Number: 3001 W. Auburn Rd. / 11482-26								VOCs	PNAAs	Mi: 10 Metals	Mi: 10 Metals, Dissolved	A Air	SW Surface Water	<input type="checkbox"/>	Level 3
Email distribution list: jefros@astl-env.com mdyklal@astl-env.com												O Oil	WW Waste Water	<input type="checkbox"/>	Level 4
Quote#												P Wipe	X Other: Specify	<input type="checkbox"/>	EDD
Purchase Order#												Remarks: Received By Lab NOV 09 2021 initials: <u>Jan</u>			
Date	Time	Sample #	Client Sample Descriptor												
11-8-21	1015		SB-1 (Z-2.75')	5	2	X	X	X							
	1032		SB-2 (0.5-1')		2			X							
	1140		SB-3 (Z-3')		2			X							
			Dup-1s		2			X							
	1050		SB-1-GW	GW	4				X		Please Filter for dissolved metals				
	1150		SB-2-GW	GW	4			X							
			Dup-1gw	GW	4			X			Please Filter for dissolved metals				
			Meth Blank	S	1										
Comments:															
Sampled/Relinquished By: <i>[Signature]</i>				Date/ Time: 11-8-21 1300		Received By: ASTI Cold Storage									
Relinquished By: ASTI Cold Storage				Date/ Time:		Received By: <i>[Signature]</i> 11/9/21 4:35									
Relinquished By: <i>[Signature]</i>				Date/ Time: 11/9/21 1745		Received By Laboratory: <i>[Signature]</i>									
Turnaround Time ALL RESULTS WILL BE SENT BY THE END OF THE BUSINESS DAY															
<input type="checkbox"/> 1 bus. day <input type="checkbox"/> 2 bus. days <input type="checkbox"/> 3 bus. days <input type="checkbox"/> 4 bus. days <input checked="" type="checkbox"/> 5-7 bus. days (standard)				Other (specify time/date requirement): _____				LAB USE ONLY							
						Fibertec project number: A05135			Received On Ice						
						Temperature upon receipt at Lab: 2.8°C									
Please see back for terms and conditions															

ASTI ENVIRONMENTAL
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RESTORATION PROJECTS THROUGHOUT THE GREAT LAKES SINCE 1985.

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- **ECOLOGICAL ASSESSMENTS AND RESTORATION**
- **ENVIRONMENTAL ASSESSMENTS AND IMPACT STATEMENTS**
- **ENVIRONMENTAL OPPORTUNITIES ASSESSMENT**
- **GIS MAPPING**
- **HAZARD MITIGATION PLANNING**
- **MINING AND RECLAMATION ASSISTANCE**
- **REMEDIATION IMPLEMENTATION, OPERATION AND MAINTENANCE**
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- **SOIL AND GROUNDWATER ASSESSMENTS**
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