PHASE II ENVIRONMENTAL SITE ASSESSMENT REPORT

1510 EAST STADIUM BOULEVARD
ANN ARBOR, MICHIGAN 48104

SME Project Number: 095650.00.003.002
November 15, 2024

Funded by: Downriver Community Conference, Cooperative Agreement # BF00E02888 and Washtenaw County Brownfield Redevelopment Authority (WCBRA)

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November 15, 2024

Ms. Jennifer Hall
Treasurer
Ann Arbor Housing Development Corporation
2000 South Industrial Highway
Ann Arbor, Michigan 48104

Via E-mail: jhall@a2gov.org

RE: Phase II Environmental Site Assessment Report
1510 East Stadium Boulevard
Ann Arbor, Michigan 48104
SME Project No. 095650.00.003.002

Dear Ms. Hall:

We conducted a Phase II Environmental Site Assessment (ESA) of the above-referenced property. The Phase II ESA was funded by the Downriver Community Conference (DCC) United States Environmental Protection Agency (USEPA) Assessment Grant. The Phase II ESA was conducted according to the objectives identified in our June 26, 2024, proposal (P02560.24) and September 2, 2024, Sampling and Analysis Plan (SAP).

Sincerely,

SME

Troy D. Helmick, CPG
Senior Project Consultant

Daniel R. Cassidy, CPG
Principal Consultant

Enclosures: SME Phase II Environmental Site Assessment Report; Dated November 15, 2024

Distribution: Mr. John D'Addona, Downriver Community Conference via email (John.DAddona@dccwf.org)

Mr. Nathan Voght, Washtenaw County Brownfield Redevelopment Authority via email (voghtn@ewashtenaw.org)

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1. INTRODUCTION

We prepared this report to document the results of a Phase II Environmental Site Assessment (ESA) at 1510 East Stadium Boulevard, in Ann Arbor, Washtenaw County, Michigan (Property; Figure 1). The assessment activities were funded by Downriver Community Conference U.S. Environmental Protection Agency Brownfields Assessment Grant (RLF BL-00E01001) and Washtenaw County Brownfield Redevelopment Authority (WCBRA). We conducted the assessment in accordance with the scope included in our USEPA-approved Sampling and Analysis Plan (SAP), dated September 2, 2024, and Quality Assurance Project Plan (QAPP). Exceptions or deviations from the SAP are discussed in Section 2.2.

1.1 SITE DESCRIPTION AND BACKGROUND

The Property consisted of approximately 0.78 acres of land developed with a two-story former fire station, paved parking and grass covered land at the time of our assessment (Figure 2). East Stadium Boulevard adjoined the Property to the north, beyond which were single-family residences. Single-family residences also adjoined the Property to the east and south. A residence, restaurant, and gasoline station and automobile repair shop adjoined the Property to the west.

We conducted a Phase I ESA of the Property in August 2024. Based on our historical research, Property was vacant land from as early as 1902 until at least 1955 when it was developed with a fire station. The Property operated as a fire station until circa 2010 when it was used as an office and storage space for the City's police department. Multiple underground storage tanks (USTs) were historically located at the Property and associated with the fire station operations. A 550-gallon gasoline-containing UST was reportedly installed in 1954 and removed in 1989. A 1,000-gallon diesel-containing UST was reportedly installed in 1978 and removed in 1991. Releases were reported when the tanks were removed. Both releases were regulatorily closed by 1992, and a closure report was prepared and is now on file with the State of Michigan.

The interior portions of the former fire station building included a first-floor kitchen and dining area, office and storage areas, restrooms, and a vehicle parking garage area. The second floor contained offices, a locker room, a restroom, a recreation room, and former bunk rooms. The basement contained former map storage rooms, an incinerator, and a boiler room with four boiler units. The boiler units were fueled by natural gas. A former fire hose drying tower extended from the first floor to above the second floor. No elevators were present, two former fire poles were sealed closed on the second floor.

Surrounding areas consisted primarily of vacant or residentially developed land until the 1940s. Residential development was present to the north, east, and south from 1949 to 2024. A commercial building historically used as an office and a restaurant was present to the southwest beginning in 1949. A gasoline station and automobile repair shop was developed to the west of the Property as early as 1940 and was still operating by the time of our August 2024 site reconnaissance. Several former and current USTs were present on the west-adjoining gasoline station. The west-adjoining gasoline station was listed as a leaking UST (LUST) site. A Baseline Environmental Assessment (BEA) was conducted on the west-adjoining gasoline station site in 2008. Concentrations of volatile organic compounds (VOCs) and lead were reportedly measured in soil above Part 201 Generic Residential Cleanup Criteria (Part 201 criteria).

We identified the following recognized environmental conditions (RECs) in the Phase I ESA report:

- The potential for contamination to be present associated with the former UST on the southeastern portion of the Property.
- The potential for contamination to be present associated with the incinerator in the basement of the building on the Property.
- The potential for migration of known contamination from the west-adjoining gasoline station onto the Property.

1.2 PURPOSE

We designed the scope of this Phase II ESA to further evaluate the RECs identified by SME during our August 2024 Phase I ESA. The scope of our Phase II ESA was designed to support additional environmental due diligence, liability management, and to further assess current Property conditions prior to acquisition by Ann Arbor Housing Development Corporation.

2. SCOPE OF ASSESSMENT

2.1 GENERAL SCOPE

We conducted the following scope of services as outlined in the USEPA-approved SAP:

- observed Ground Penetrating Radar Systems, LLC (GPRS) to conduct a geophysical survey on September 16, 2024;
- observed and coordinated with GeoServ, Inc. as they advanced five soil borings (SB1 through SB5) and installed two soil gas monitoring wells (SG1 and SG2);
- collected and logged soil samples for field screening and visual classification in accordance with ASTM D2488, Standard Practice for Description and Identification of Soils (Visual-Manual Procedure);
- installed two sub-slab soil gas points (SG3 and SG4) in the basement of the site building;
- collected soil and soil gas samples and submitted them to Fibertec Environmental Services, a Meteri group company (Fibertec), for chemical analyses; and
- prepared this report.

2.2 SAMPLING LOCATION AND RATIONALE

The following summarizes our sample locations (Figure 2) and sampling rationale:

- SB1/SG1 was advanced to evaluate the potential for migration from the west adjoining LUST site.
- SB2, SB3, SB5, and SG2 were advanced to evaluate potential releases from former on-site UST use(s).
- SB4, SG3 and SG4 were advanced to evaluate potential releases associated with the incinerator use in the basement of the fire station.

Sample depth intervals were chosen based on field screening (staining, odor, PID readings, etc.). In the absence of definitive screening results, depth intervals were chosen commensurate with a potential release associated with a given REC or to accommodate a regulatory point of compliance.

The following deviations from the SAP were noted. Groundwater was not encountered during the assessment activities; subsequently, temporary groundwater monitoring wells were not installed, and groundwater samples were not collected. In addition, there was no soil or groundwater analysis for per- and polyfluoroalkyl substances (PFAS), as no groundwater was encountered during our assessment and there are no Part 201 Cleanup Criteria for comparison of soil results.

3. PROCEDURES

Summaries of our procedures for the geophysical survey, soil borings, sampling activities, decontamination, and chemical analyses are summarized in the following subsections. SME's field representative collected soil, and soil gas samples according to the methods described in our standard operating procedures (SOPs) that are available in the EPA-approved QAPP.

3.1 GEOPHYSICAL SURVEY

GPRS conducted a ground penetrating radar (GPR) and electromagnetic (EM) survey to locate potential underground storage tanks (USTs) and other subsurface features to assist in guiding assessment locations and to reduce the risk of encountering obstructions and/or damaging underground utilities at the Property. The potential UST areas were identified during review of historical records during preparation of the Phase I ESA report. GPRS used a triple frequency GPR antenna operating at 250 MHz to 4500 MHz simultaneously to collect data scanning to an approximate depth of 2 feet below ground surface (bgs). The GPR survey was conducted in the former gasoline and diesel UST areas and the proposed soil boring locations at the Property (Figure 2). Additionally, two EM based utility locaters were used to help identify existing utilities at the Property. GPRS' UST scanning report and GPR survey photos are located in Appendix A.

3.2 SOIL SAMPLING

GeoServ, Inc. advanced the soil borings using hydraulically driven, direct-push coring equipment. For the direct-push borings, each soil sample was collected using a 5-foot-long, 2-inch outside-diameter, GeoProbe® MacroCore® Sampler fitted with a single-use, disposable, acetate liner.

The soil in each sample core was visually evaluated, and representative samples were collected by SME personnel from each soil type for visual classification in general accordance with ASTM D2488, Standard Practice for Description and Identification of Soils (Visual-Manual Procedure). A portion of each soil sample from each two-foot depth interval was used for field screening of ionizable vapors using a calibrated photoionization detector (PID) equipped with a 10.6 eV lamp. Field screening consisted of placing a portion of the sample in a sealed plastic bag for headspace analysis for the emission of ionizable vapors. The tip of the PID was inserted in the headspace of the bag, and PID readings were recorded on our soil boring logs. Detailed information regarding the soil conditions encountered at each boring is documented on the soil boring logs in Appendix B.

The amount of soil collected at each sampling location was dependent on chemical analyses requirements. First, soil samples intended for VOC laboratory analyses were removed from the sample liner and placed in methanol-preserved 40-milliliter (mL) glass vials following U.S. EPA Method 5035A. Soil volumes sufficient for analyses of additional parameters (PAHs, and metals) were then removed from the sample liner prior to transfer to pre-cleaned, unpreserved glass jars supplied by the laboratory.

3.3 SOIL GAS SAMPLING

GeoServ, Inc. advanced soil borings SG1 and SG2 using truck-mounted, hydraulically driven, direct-push coring equipment. Each soil sample at these borings was collected using a 5-foot-long, 2-inch outside-diameter, GeoProbe® MacroCore® Sampler fitted with a single-use, disposable, acetate liner. The soil in each sample core was visually evaluated by SME personnel and representative samples were collected from each soil unit for visual classification in accordance with ASTM D2488, Standard Practice for Description and Identification of Soils (Visual-Manual Procedure). A portion of each soil sample was placed in a sealed plastic bag for field screening of ionizable VOCs using a calibrated PID equipped with a 10.6 eV lamp. Field screening consisted of allowing the sample bag to warm and release ionizable VOCs, then piercing the bag with the tip of the PID to read the total VOCs within the headspace of the bag. PID readings were recorded on the soil boring logs (Appendix B).

Soil gas wells were installed at borings SG1 and SG2 by GeoServ, Inc. Six inches of filter pack sand was placed in the borehole prior to installing each soil gas well. The soil gas wells were constructed of 6-inch-long, 0.25-inch diameter, stainless steel soil gas implant connected to 0.25-inch outside diameter Teflon tubing. The soil gas implant was placed at a depth of 5-feet to 5.5-feet bgs. The annulus of the borehole surrounding the implant and extending approximately 6-inches above the top of the implant was filled with filter pack sand; the remainder of the borehole annulus was filled with bentonite hydrated in approximate 6-inch to 1-foot lifts to the ground surface to create an airtight seal. The tubing was capped at the surface to prevent materials from entering the soil gas well. SME personnel installed two sub-slab soil gas points (SG3 and SG4) in the building basement. Each point consisted of a clean, prefabricated, brass Vapor Pins® placed in a 5/8-inch diameter borehole placed through the basement concrete floor slab.

The air inside the soil gas wells and sub-slab soil gas points were allowed to equilibrate for approximately 48 hours before the soil gas wells and sub-slab soil gas points were purged, and soil gas samples were collected. SME field staff checked for a tight annular seal and sampling train prior to sampling using a system comprised of Teflon tubing, a plastic shroud, argon tracer gas, and a hand-held argon detector. We enriched the shroud with argon gas and monitored argon concentrations from the effluent end of the purge line. We also measured concentrations from the shroud directly at the beginning and end of the leak test to verify argon was sufficiently concentrated/saturated within the ambient air inside the shroud. No concentrations of argon greater than the sensitivity of the instrument (1 percent by volume) were detected in the purge effluent indicating adequate the annular seal and tightness of the sampling train. Upon completion of purging and leak testing, SME field staff-initiated sample collection.

For VOC soil gas sample collection, the soil gas tubing was connected to a flow controller, which stabilized the air flow at approximately 200 mL/minute. This sample flow rate was maintained by critical orifices attached to the bottles provided by the laboratory. Sampling began by connecting the flow controller to the Bottle-Vac™ sampler (for VOC analysis). Sample collection was discontinued once the bottle had filled to approximately 80 percent capacity, which equated to a final pressure of approximately 1-inch to 5-inches of mercury indicated on the flow controller pressure gauge for each bottle. We noted the initial and final container pressure readings displayed on the flow controller pressure gauge, the laboratory reported bottle pressure readings (recorded on the container label), and the times at which the bottle quick-connect valves were opened and closed. The sampling times and pressures were recorded on the respective sample labels.

Following completion of the soil gas sampling, SME field staff measured the oxygen, carbon dioxide, and methane concentrations in soil gas at each of the soil gas wells and sub-slab soil gas points using a handheld multi-gas meter and VOC concentrations in soil gas using a PID. Methane was evaluated for potential explosive or asphyxiant risk and also as an indicator of biotic breakdown of hydrocarbons. Oxygen and carbon dioxide were measured and compared to ambient conditions as a secondary line of evidence to document the integrity of the soil gas well and sub-slab soil gas point seals. No methane was measured above 0% in the ambient air or the soil gas. The combined oxygen and carbon dioxide levels present beneath the ground surface and floor slab at each soil gas wells and sub-slab soil gas points were distinct from ambient air; this provided another line of evidence that the sub-slab soil gas points were sealed from the ambient conditions.

3.4 SOIL BORING RESTORATION

We returned residual soil cuttings to their corresponding borehole after soil, and soil gas sampling activities were completed. The remaining space was then filled with bentonite chips, and we restored with surface materials. After soil gas sample collection, the soil gas wells, and sub-slab soil gas points were left in-place for potential future sampling.

3.5 QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC)

3.5.1 FIELD QA

SME's field representative wore a new pair of disposable nitrile sampling gloves during collection of each sample to minimize cross-contamination. GeoServ, Inc. decontaminated its direct-push sampling equipment with high-pressure, hot water before use and between sample locations. SME personnel decontaminated other soil sampling equipment with a laboratory grade detergent and distilled water wash and rinsed equipment with distilled water before each use. GeoServ, Inc. used new, pre-cleaned well materials and tubing for the collection of the groundwater samples. They also used new Teflon tubing for the construction of the soil gas wells and collection of the soil gas samples.

Fibertec supplied the pre-cleaned containers used for sample collection. After sample collection, the containerized soil samples were kept cool (i.e., kept on ice or refrigerated) until delivery to the analytical laboratory. SME's field representative followed chain-of-custody procedures to document the sample handling sequence. Field instrument calibration, sample handling and custody requirements, laboratory analytical methods, analysis reporting limits (RLs), QA/QC procedures, and reporting protocols were consistent with those described in the USEPA-approved QAPP applicable to this assessment.

3.5.2 FIELD QC

We collected field duplicate soil and soil gas samples to evaluate matrix homogeneity and the precision of sampling activities. We collected soil samples for site-specific matrix spike and matrix spike duplicate analyses to evaluate sample matrix recovery and accuracy. We also collected one soil gas equipment blank to evaluate the potential for cross-contamination during sample collection. We included one aqueous trip blank to evaluate the potential for cross-contamination during sample storage and transport to the laboratory and one methanol blank to evaluate potential contaminants in the laboratory-provided methanol.

3.6 CHEMICAL ANALYSES

We submitted 10 soil samples to Fibertec for chemical analysis of VOCs, PAHs, and/or metals (arsenic, barium, cadmium, chromium, copper, lead, mercury, selenium, silver, and zinc). We submitted six soil gas samples to Fibertec for analysis of VOCs. Soil from SB1 (1-2') and Soil Dup SB2 (12.5-14.5') were also selected for analysis of hexavalent chromium because total chromium was measured at a concentration above the most restrictive criterion for hexavalent chromium in multiple soil samples and these two soil samples had the highest total chromium concentrations.

Fibertec analyzed the samples using the reference methods listed below:

- VOCs – USEPA Method 8260 (soil), U.S. EPA TO-15 (soil gas)
- PAHs – USEPA Method 8270 (soil)
- Arsenic, barium, cadmium, chromium, copper, lead, selenium, silver, and zinc – USEPA Method 6020 (soil)
- Mercury – USEPA Method 7471 (soil)

The laboratory analysis reports, complete list of specific analytical reference methods, reporting limits, and chain of custody documentation for the samples collected on the Property are included in Appendix C.

4. RESULTS

The geophysical survey results, surface and subsurface conditions encountered, and results of chemical analyses are described in the following subsections.

4.1 GEOPHYSICAL SURVEY

GPRS identified no potential USTs within the historically documented areas. A small anomaly was detected and marked out near the historical diesel UST area. GPRS commented that the anomaly did not appear to be a UST. The anomalous area was marked and recommended not to advance soil borings within or near the area. GPRS also located and marked the water and gas lines from the building to the road. The survey report is included in Appendix A.

4.2 SURFACE AND SUBSURFACE CONDITIONS

Descriptions of the soil conditions encountered at the soil boring locations are documented on the soil boring logs (Appendix B). The surface material consisted of topsoil. The surface material was generally underlain by sand and clay fill materials. The fill contained varying amounts of clay and gravel. Fill materials observed ranging from 0.5 feet to 12.5 feet below ground surface (bgs). The fill materials and were underlain by native sand that extended to the explored depths of the soil borings. No PID measurements greater than 1 part per million (ppm) were noted during field screening of the soil samples except 6.4 ppm was noted at the 1-foot interval of SB1. No odors or staining were observed during field screening of the soil samples. Groundwater was not encountered during assessment activities.

4.3 RESULTS OF CHEMICAL ANALYSES

Results from the chemical analyses performed on soil and soil gas samples collected during our assessment are summarized in the following paragraphs and are presented in Tables 1 and 2, respectively. We compared the soil results to Part 201 criteria to determine if the Property is a “facility,” as defined in Part 201[1]. As allowed by statute by Part 201, we used the Michigan background soil survey values for the Huron-Erie glacial lobe and soil type-specific (sand) value for arsenic. We also compared the soil and soil gas results to EGLE’s September 4, 2020 Residential (VIAP) Screening Levels as an initial evaluation of the vapor intrusion pathway related to future residential buildings. The applicability of those screening levels for the future use of the Property should be reviewed when the future development plans are finalized. Laboratory analysis reports and chain-of-custody documentation are included in Appendix C.

4.3.1 SOIL SAMPLE RESULTS

No target analytes were measured above Part 201 criteria or Michigan background soil survey values for the Huron-Erie lobe. Benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene, pyrene, barium, cadmium, total chromium, copper, lead and zinc were measured at concentrations above laboratory reporting limits but below Part 201 criteria and/or Michigan background soil survey values. A summary of the constituents, chemical abstract numbers, measured concentrations, sample locations and depths, and Part 201 criteria and Michigan background soil survey values are presented in Table 1.

[1] Part 201, Environmental Remediation, of the Michigan Natural Resources and Environmental Protection Act (NREPA), PA 451 of 1994, as amended.

4.3.2 SOIL GAS SAMPLE RESULTS

No target analytes were measured in soil gas samples at concentrations above the Residential VIAP Screening Levels. Ethanol and xylenes were measured at concentrations above laboratory reporting limits but below screening levels. No other VOCs were measured in soil gas samples at concentrations above the Residential VIAP Screening Levels.

4.4 DATA VERIFICATION/VALIDATION AND USABILITY

We evaluated the representativeness of the data collected during our subsurface assessment to determine if the data set was valid and of usable quality. The laboratory QC results are detailed in the Case Narrative included in Appendix C.

4.4.1 FIELD QC

With the exception of total chromium, the relative percent differences (RPDs) in analyses of target analytes in the duplicate soil samples from SB2 were within the precision limit of ±50 percent. The elevated RPD for total chromium is likely associated with the heterogeneity of the native sand. The total chromium results from the duplicate samples were at least 10,000 times lower that the lowest Part 201 criterion; therefore, the potential lack of precision in the total chromium results do not impair our ability to identify compounds present at concentrations above Part 201 criteria.

No VOCs were detected above laboratory RLs in the trip blank or methanol blank, which indicated that cross-contamination did not occur during sample storage and transport to the laboratory. No analyzed constituents were detected above laboratory reporting limits in the soil gas equipment blanks, which indicates that the equipment used for sampling was not cross-contaminated.

4.4.2 LABORATORY QC

Fibertec reported that the laboratory control samples/laboratory control samples duplicate (LCS/LCSD), surrogate recoveries, and results from analyses of the continuing calibration verification (CCV) samples and method blanks were within acceptance limits except as discussed in the following bullets.

- Acetone concentrations reported for all analyzed soil samples were reported as qualified because the CCV were below the acceptance limits. Fibertec reported that the results could be biased low. Acetone was not measured at concentrations above the laboratory reporting limits. The reporting limit for this compound was at least 15 times lower than the applicable lowest Part 201 criteria; therefore, this potential low bias did not materially affect our conclusions.
- Lead concentration reported in soil sample from SB3 (1-3') was reported as qualified because the spiked sample recoveries for the MS/MSD were below the acceptance limits. Fibertec reported that the results could be biased low. The associated laboratory control sample MS/MSD duplicate was reported with increased variability with lead results. Lead result was measured at concentrations above the laboratory reporting limits; however, the lead result was at least 14 times lower than the applicable lowest Part 201 criteria; therefore, this potential low bias did not materially affect our conclusions.
- Fluorene concentration reported in soil sample from SB3 (1-3') was reported as qualified because the spiked sample recoveries for the MS/MSD were below the acceptance limits. Fibertec reported that the results could be biased low. The associated laboratory control sample was acceptable. Fluorene was not measured at concentrations above the laboratory reporting limits. The reporting limits for fluorene was at least 15 times lower than the applicable lowest Part 201 criteria; therefore, this potential low bias did not materially affect our conclusions.

- The 1,2-dibromo-3-chloropropane and 2-methylnaphthalene concentrations for all analyzed soil samples were reported as qualified because the CCV was above the acceptance limits. Fibertec reported that the results could be biased high. These compounds were not measured at concentrations above reporting limits in the soil samples; therefore, these potential high biases did not materially affect our conclusions.
- 2-methylnaphthalene concentrations for all analyzed soil samples were reported as qualified because the LCS was above the acceptance limits. Fibertec reported that the results could be biased high. 2-methylnaphthalene was not measured at concentrations above reporting limits in the soil samples; therefore, these potential high biases did not materially affect our conclusions.
- Multiple VOC concentrations in the trip blank sample were reported as qualified because the CCV and/or the LCS were above the acceptance limits. Fibertec reported that the results could be biased high. No VOCs were measured at concentrations above reporting limits in the trip blank sample; therefore, these potential high biases did not materially affect our conclusions.

It is our opinion that the data set generated is of usable quality and meets the Project-specific objectives.

5. CONCLUSIONS

We conducted a Phase II ESA of the property located at 1510 East Stadium Boulevard, in Ann Arbor, Washtenaw County, Michigan. We designed the scope of the Phase II ESA to further evaluate the RECs identified in our Phase I ESA, dated August 9, 2024, and to support additional environmental due diligence, liability management, and to further assess current Property conditions prior to acquisition by Ann Arbor Housing Development Corporation. The results of our Phase II ESA demonstrated the Property does not meet the definition of a “facility” as defined by Part 201 because no constituents were measured concentrations greater than Part 201 criteria.

The conclusions in this report are based on visual observations and chemical results from samples collected from the area of investigation only. If additional surface, subsurface, or chemical data become available after the date of issue of this report, the conclusions contained in this report may require modification after SME has reviewed the additional information. This review by SME of additional information would be conducted upon receipt of a request from the client.

In the process of obtaining information in preparation of this report, procedures were followed that represent reasonable practices and principles in a manner consistent with that level of care and skill ordinarily exercised by members of this profession currently practicing under similar conditions.

PREPARED BY:

Troy D. Helmick, CPG
Senior Project Consultant

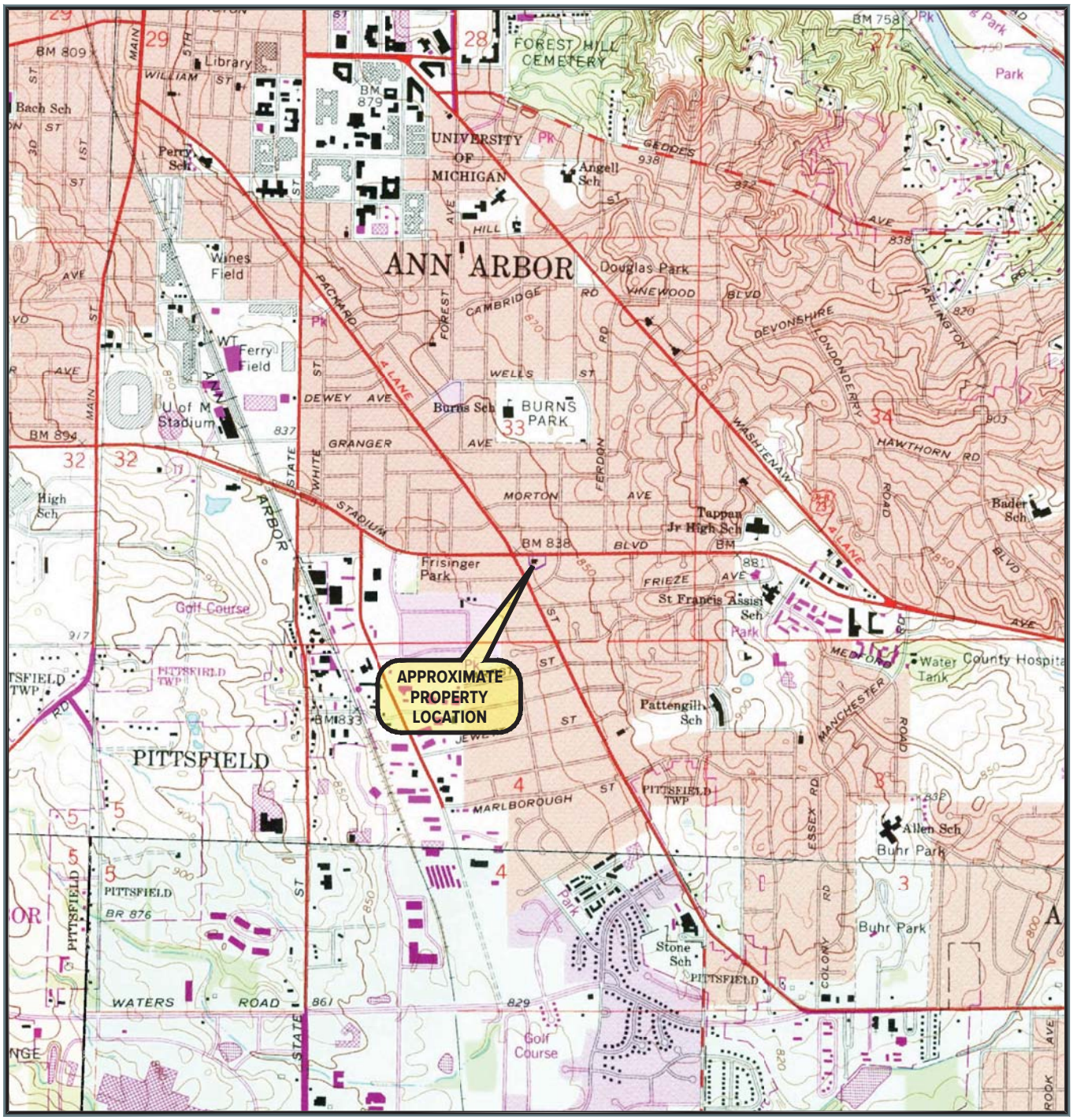
REVIEWED BY:

Daniel R. Cassidy, CPG
Principal Consultant

6. REFERENCES

1. Part 201 of 1994 PA 451, as amended, the Natural Resources and Environmental Protection Act.
2. Michigan Department of Environment, Great Lakes, and Energy, Promulgated Cleanup Criteria, R 299.44, R 299.46, and R 299.49, Part 201 Generic Residential Cleanup Criteria and Screening Levels and associated Footnotes.
3. SME, Phase I Environmental Site Assessment, 1510 East Stadium Boulevard, Ann Arbor, Michigan, August 9, 2024.
4. EGLE, Soil Background and Use of the 2005 Michigan Background Soil Survey, September 2019, Revised January 2023.

FIGURES



SCALE: 1" = 2000'

Base map obtained from ERIS®

USGS QUADRANGLE(s) REFERENCED

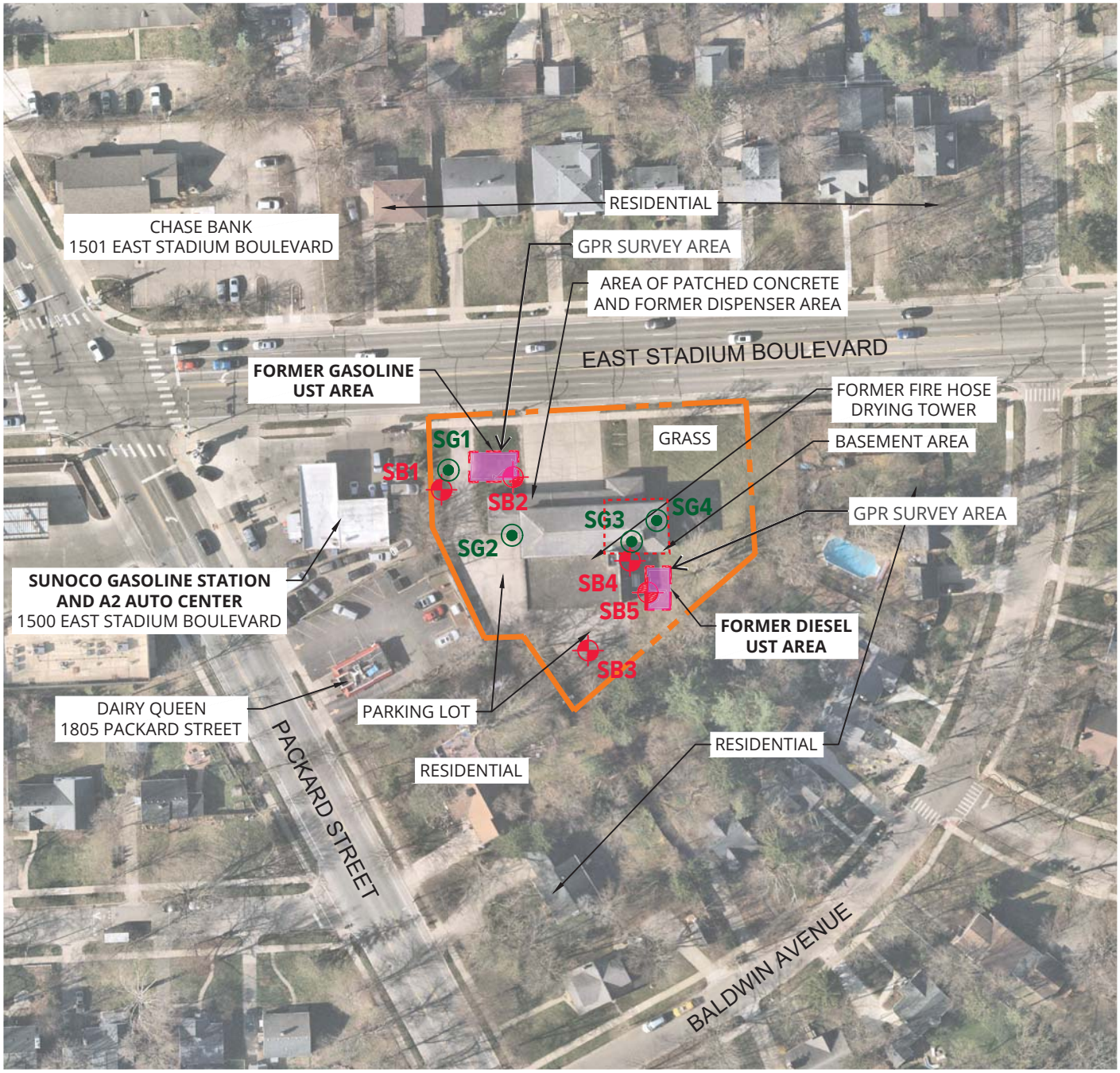
ANN ARBOR EAST (MI) 1983
YPSILANTI WEST (MI) 1983
SALINE (MI) 1983
ANN ARBOR WEST (MI) 1983

No.	Revision Date		
		Date	7-24-2024
		Drawn By	MNR
		Designed By	JLAM
		Scale	1" = 2000'
		Project	095650.00.003.002

PROPERTY LOCATION MAP
1510 EAST STADIUM BOULEVARD
ANN ARBOR, MICHIGAN

SME
www.sme-usa.com

Figure No. 1



LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- **BOLD TEXT** INDICATES RECs
- APPROXIMATE SOIL BORING LOCATION
- APPROXIMATE SOIL GAS SAMPLE LOCATION
- APPROXIMATE GPR SURVEY AREA

NOTE:
1. BASE DRAWING INFORMATION TAKEN FROM NEARMAP WITH AN IMAGE DATE OF 4-8-2024 AND SITE RECONNAISSANCE.

0' 100' 200'

GRAPHIC SCALE: 1" = 100'

N W E S

No.	Revision Date		
		Date	11-4-2024
		Drawn By	MNR
		Designed By	JLAM
		Scale	AS NOTED
		Project	095650.00.003.002

PROPERTY FEATURES AND ASSESSMENT LOCATIONS 1510 EAST STADIUM BOULEVARD ANN ARBOR, MICHIGAN

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Figure No. 2

Nov 04, 2024 - 2:30pm - matt.nowakrochford

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TABLES

SME

TABLE 1

SUMMARY OF SOIL ANALYTICAL RESULTS
1510 EAST STADIUM BOULEVARD
ANN ARBOR, MICHIGAN
SME PROJECT NO.: 095650.00.003.002

Constituent		Part 201 Generic Residential Cleanup Criteria			VIAP Screening Levels	Chemical Analysis Results Sample Identification Depth (Feet) Date Collected Soil Type Environmental Concern						Maximum Concentration Measured at Property
		Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Direct Contact Criteria	Residential Volatilization to Indoor Air Pathway (VIAP) Screening Levels	SB1	SB2	Soil Dup (SB2)	SB3	SB4	SB5	
						(1' - 2')	(12.5' - 14.5')	(12.5' - 14.5')	(1' - 3')	(5' - 7')	(11' - 13')	
						9/17/2024	9/17/2024	9/17/2024	9/17/2024	9/17/2024	9/17/2024	
						Fill Sand	Native Sand	Native Sand	Fill Sand	Fill Sand	Native Sand	
						Off-Site Migration	Former Property UST	Former Property UST	Historical Site Activities	Former Incinerator	Former Property UST	
Volatile Organic Compounds (VOCs)	**CAS #**											
Other Analyzed VOCs	CS	CS	CS	CS	CS	<RL	<RL	<RL	<RL	<RL	<RL	0
Polynuclear Aromatic Hydrocarbons (PAHs)												
Benzo(a)anthracene	56-55-3	NLL	NLL	20,000	160,000	**790**	<330	<330	**580**	<330	<330	790
Benzo(a)pyrene	50-32-8	NLL	NLL	2,000	NA	**770**	<330	<330	**630**	<330	<330	770
Benzo(b)fluoranthene	205-99-2	NLL	NLL	20,000	NA	**1,100**	<330	<330	**960**	<330	<330	1,100
Benzo(g,h,i)perylene	191-24-2	NLL	NLL	2,500,000	NA	**430**	<330	<330	**400**	<330	<330	430
Benzo(k)fluoranthene	207-08-9	NLL	NLL	200,000	NA	**380**	<330	<330	**350**	<330	<330	380
Chrysene	218-01-9	NLL	NLL	2,000,000	NA	**830**	<330	<330	**680**	<330	<330	830
Fluoranthene	206-44-0	730,000	5,500	46,000,000	NA	**2,000**	<330	<330	**1,600**	<330	<330	2,000
Indeno(1,2,3-cd)pyrene	193-39-5	NLL	NLL	20,000	NA	**510**	<330	<330	**480**	<330	<330	510
Phenanthrene	85-01-8	56,000	2,100	1,600,000	1,700	**1,100**	<330	<330	**770**	<330	<330	1,100
Pyrene	129-00-0	480,000	ID	29,000,000	25,000,000	**1,600**	<330	<330	**1,100**	<330	<330	1,600
Other Analyzed PAHs	CS	CS	CS	CS	CS	<RL	<RL	<RL	<RL	<RL	<RL	0
Metals												
Arsenic	7440-38-2	*^^26,300*	*^^26,300*	*^^26,300*	NA	**3,800**	**10,000**	**9,800**	**4,300**	**6,000**	**4,600**	10,000
Barium	7440-39-3	1,300,000	440,000	37,000,000	NA	**40,000**	**13,000**	**12,000**	**15,000**	**17,000**	**9,800**	40,000
Cadmium	7440-43-9	6,000	3,600	550,000	NA	**210**	**180**	**200**	**140**	**99**	**140**	210
Chromium, Total*	16065-83-1	1,000,000,000	1,000,000,000	790,000,000	NA	**8,200**	**7,600**	**18,000**	**5,900**	**7,300**	**6,100**	18,000
Chromium VI*	18540-29-9	30,000	3,300	2,500,000	NA	<420	NE	<430	NE	NE	NE	0
Copper	7440-50-8	5,800,000	75,000	20,000,000	NA	**7,800**	**14,000**	**15,000**	**8,100**	**11,000**	**7,600**	15,000
Lead	7439-92-1	700,000	6,000,000	400,000	NA	**27,000**	**5,700**	**5,700**	**28,000**	**5,100**	**4,200**	28,000
Selenium	7782-49-2	4,000	*410*	2,600,000	NA	<200	<200	<200	<200	<200	<200	0
Silver	7440-22-4	4,500	*1,000*	2,500,000	NA	<100	<100	<100	<100	<100	<100	0
Zinc	7440-66-6	2,400,000	170,000	170,000,000	NA	**29,000**	**38,000**	**40,000**	**21,000**	**26,000**	**29,000**	40,000
Mercury	7439-97-6	1,700	*130*	160,000	22	<50	<50	<50	<50	<50	<50	0

Notes are found on the last page of this table.

TABLE 1
SUMMARY OF SOIL ANALYTICAL RESULTS
1510 EAST STADIUM BOULEVARD
ANN ARBOR, MICHIGAN
SME PROJECT NO.: 095650.00

Notes:

- Concentrations reported in micrograms per kilogram (µg/kg).
- Analytical results were compared to the October 12, 2023 Promulgated Cleanup Criteria, Residential and/or Nonresidential Part 201 Generic Cleanup Criteria and Screening Levels.
- Analytical results were also compared to the EGLE September 4, 2020, Revised February 2024 Residential and/or Nonresidential Volatilation to Indoor Air Pathway (VIAP) Screening Levels.
- Refer to the analytical report for the full list of analytes.
- CS - Criterion is specific to individual constituent.
- <RL - Analytical result was below laboratory reporting limit.
- NA - Not applicable.
- NE - Not evaluated.
- NLL - Not likely to leach.
- GSI Protection was calculated for the indicated metals using the EGLE spreadsheet for calculating GSI. A default water hardness value of 150 mg/L as CaCO3 was used to calculate GSI. Results are presented for surface water receiving bodies not protected as a drinking water source.
- *Italicized* - the respective criterion was below the Statewide Default Background Level (SDBL) and therefore the value defaulted to the SDBL value.
- * - Total chromium results compared to trivalent chromium criteria because hexavalent chromium was analyzed and not measured above the laboratory reporting limit in the two soil samples that had the highest total chromium concentration.
- Concentrations were also compared to, and found to be below, the ambient and indoor air criteria and the soil saturation concentration screening levels.
- ^^ - Values is the sand regional background metal concentration for the Huron-Erie glacial lobe published by EGLE in their 2019 guidance document titled "Soil Background and Use of the 2005 Michigan Background Soil Survey."

VOLATILIZATION TO INDOOR AIR PATHWAY SCREENING LEVELS ASSESSMENT

The following checklist will assist in determining if site conditions allow the use of the Volatilization to Indoor Air Pathway (VIAP) Screening Levels or if the development of site-specific criteria or site-specific target levels (SSTLs) is necessary.

Proposed use of the VIAP Screening Levels requires documentation of site conditions that must include:

- ***Photographs in photo log with date stamp showing building type (and size for non-residential requests) for structures or as-builts that document the responses on the screening levels checklist (slab-on-grade, basement, etc.).***
- ***Documentation that the depth to shallowest encountered groundwater is representative of site conditions taking variability into account (monitor well logs, soil boring logs, groundwater elevation tables, etc.)***

Residential VIAP Screening Levels (Table 1) are calculated based on unrestricted residential use of a property. The building input parameters assume a residential structure with a basement.

CSM SUPPORTS	PAGE NUMBER	ADDITIONAL INFO NEEDED	RESIDENTIAL VIAP SCREENING LEVEL ASSESSMENT
Yes ☑ No ☐		☐	Is there a poured concrete floor, block or poured concrete wall in a basement? *If no, site-specific criteria or SSTLs must be developed.*
Yes ☐ No ☑		☐	Is there a slab-on-grade foundation? *If yes, site-specific criteria or SSTLs must be developed.*
Yes ☐ No ☑		☐	Is there a crawl space foundation, with dirt floor or poured concrete slab? *If yes, site-specific criteria or SSTLs must be developed.*
Yes ☐ No ☑		☐	Is the structure a high-rise apartment with 6 or more floors (including a basement)? *If yes, site-specific criteria or SSTLs must be developed.*
Yes ☐ No ☑		☐	Is there any other building construction inconsistent with the residential structure assumptions*? If yes, site-specific criteria or SSTLs must be developed.*
Yes ☐ No ☑		☐	Is the depth to first encountered groundwater, considering seasonal variation, ≤ 10 feet? *If yes, shallow groundwater VIAP screening levels may be used or site-specific criteria or SSTLs must be developed.*
Yes ☑ No ☐		☐	Is the depth to first encountered groundwater, considering seasonal variation, > 10 feet? *If yes, groundwater not in contact VIAP screening levels may be used or site-specific criteria or SSTLs must be developed.*

Nonresidential VIAP Screening Levels (Table 2) are calculated based on restricted nonresidential use of a property. The building input parameters assume a nonresidential structure that has a poured concrete slab-on-grade and has less than 50,000 ft^2 of continuously open space.

CSM SUPPORTS	PAGE NUMBER	ADDITIONAL INFO NEEDED	NONRESIDENTIAL VIAP SCREENING LEVEL ASSESSMENT
Yes ☐ No ☐		☐	Is the structure > 50,000 ft^2 of continuously open space with no areas < 50,000 ft^2? *If yes, site-specific criteria or SSTLs must be developed.*
Yes ☐ No ☐		☐	Is there a basement? *If yes, site-specific criteria or SSTLs must be developed.*
Yes ☐ No ☐		☐	Is there a below grade pit, crawlspace (with dirt floor or poured concrete slab), or elevator shaft that extend below grade such that conditions do not meet the assumptions of a slab-on-grade? *If yes, site-specific criteria or SSTLs must be developed.*
Yes ☐ No ☐		☐	Is there a combination of foundation types? *If yes, site-specific criteria or SSTLs must be developed.*
Yes ☐ No ☐		☐	Is the structure a former residential structure that is now a nonresidential use? *If yes, site-specific criteria or SSTLs must be developed.*
Yes ☐ No ☐		☐	Is there any other building construction inconsistent with the nonresidential structure assumptions? *If yes, site-specific criteria or SSTLs must be developed.*
Yes ☐ No ☐		☐	Is depth to first encountered groundwater, considering seasonal variation, ≤ 5 feet? *If yes, shallow groundwater VIAP screening levels may be used or site-specific criteria or SSTLs must be developed.*
Yes ☐ No ☐		☐	Is depth to first encountered groundwater, considering seasonal variation, > 5 feet? *If yes, groundwater not in contact VIAP screening levels may be used or site-specific criteria or SSTLs must be developed.*

TABLE 2
SUMMARY OF SOIL GAS ANALYTICAL RESULTS
1510 EAST STADIUM BOULEVARD
ANN ARBOR, MI
SME PROJECT NO.: 095650.00.003.002

Constituent		Volatilization to Indoor Air Pathway Screening Levels	Chemical Analysis Results Sample Identification Depth (Feet) Date Collected Environmental Concern					Maximum Concentration Measured at Property
		Residential	SG1	SG2	SG3	SG4	SGDUP (SG2)	
			(5' - 5.5')	(5' - 5.5')	Subslab	Subslab	(5' - 5.5')	
			9/19/2024	9/19/2024	9/19/2024	9/19/2024	9/19/2024	
			Off-Site Migration	Former Property UST	Former Site Boiler	Former Site Boiler	Former Property UST	
VOCs (TO-15)	**CAS #**							
Ethanol	64-17-5	630,000	**24**	**31**	<23	**89**	<23	89
m&p-Xylene	136777-61-2	NA	<52	**86**	<52	<52	**78**	86
Xylenes	1330-20-7	7,600	<100	**130**	<100	<100	**120**	130
Other Analyzed VOCs	CS	CS	<RL	<RL	<RL	<RL	<RL	0

Notes are found on the last page of this table.

TABLE 3
SUMMARY OF SOIL GAS ANALYTICAL RESULTS
1510 EAST STADIUM BOULEVARD
ANN ARBOR, MICHIGAN
SME PROJECT NO.: 095650.00

Notes:

- Concentrations reported in micrograms per cubic meter (µg/m3).
- Analytical results were compared to the EGLE September 4, 2020, Revised February 2024 Residential and/or Nonresidential Volatilization to Indoor Air Pathway (VIAP) Screening l
- Results exceeding one or more screening levels/criteria are shaded, as are the screening level/criteria exceeded
- Refer to the analytical report for the full list of analytes.
- CS - Criterion is specific to individual constituent.
- <RL - Analytical result was below laboratory reporting limit.
- ID - Insufficient data to develop criteria.
- NA - Not available
- NE - Not evaluated

APPENDIX A
GEOPHYSICAL SURVEY REPORT

Summary of Scanning for Underground Storage Tanks (UST's)

Prepared For: SME

Prepared By:
Adam Sorge
Adam.Sorge@gprsinc.com
Project Manager-Great Lakes
419-265-6499

September 16, 2024

September 16, 2024

SME
Attn: Darren McKinnon
Email: Brendan.huehn@sme-usa.com
Site: Ann Arbor

We appreciate the opportunity to provide this report for our work completed on September 16, 2024.

PURPOSE

The purpose of this project was to search for any suspected underground storage tanks (USTs) or suspected UST-related piping/anomalies remaining on the property. The scope of work consisted of 2 locations measuring approximately 200 square feet. The interiors of buildings were excluded from the scope of this project. The client marked the desired locations prior to our scanning and our markings were then placed onto the surface using spray paint.

EQUIPMENT

- **Underground Scanning GPR Antenna**. The antenna with frequencies ranging from 250 MHz-450 MHz is mounted in a stroller frame which rolls over the surface. The surface needs to be reasonably smooth and unobstructed in order to obtain readable scans. Obstructions such as curbs, landscaping, and vegetation will limit the feasibility of GPR. The data is displayed on a screen and marked in the field in real time. The total depth achieved can be as much as 8' or more with this antenna but can vary widely depending on the types of materials being scanned through. Some soil types such as clay may limit maximum depths to 3' or less. As depth increases, targets must be larger in order to be detected and non-metallic targets can be especially difficult to locate. Depths provided should always be treated as estimates as their accuracy can be affected by multiple factors. For more information, please visit: Link
- **Electromagnetic Pipe Locator**. The EM locator can passively detect the electromagnetic fields from live AC power or from radio signals travelling along some conductive utilities. It can also be used in conjunction with a transmitter to connect directly to accessible, metallic pipes or tracer wires. A current is sent through the pipe or tracer wire at a specific frequency and the resulting EM field can then be detected by the receiver. A utility's ability to be located depends on a variety of factors including access to the utility, conductivity, grounding, interference from other fields, and many others. Depths provided should always be treated as estimates as their accuracy can be affected by multiple factors. For more information, please visit: Link
- **GPS**. This handheld GPS unit offers accuracy down to 4 inches; however, the accuracy will depend on the satellite environment and obstructions and should not be considered to be survey-grade. Features can be collected as points, lines, or areas and then exported into Google Earth or overlaid on a CAD drawing. For more information, please visit: Link

PROCESS

The EM pipe locator was used to connect to accessible, traceable pipes that may be tank-related such as vent pipes or product lines. A current is induced onto the pipe which creates an electromagnetic field that can be traced using the receiver. We can then attempt to trace these pipes to their origin or end point and paint or flag their locations.

Initial GPR scans were collected in order to evaluate the data and calibrate the equipment. Based on these findings, a scanning strategy is formed, consisting of scanning the entire area in a grid with 2 foot scan spacing in order to locate any potential UST's that may remain at the site. The GPR data is viewed in real time and anomalies in the data were located and marked on the surface along with their depths using spray paint. Relevant scan examples were saved and will be provided in this report.

LIMITATIONS

Please keep in mind that there are limitations to any subsurface investigation. The equipment may not achieve maximum effectiveness due to soil conditions, above ground obstructions, reinforced concrete, and a variety of other factors. No subsurface investigation or equipment can provide a complete image of what lies below. Our results should always be used in conjunction with as many methods as possible including consulting existing plans and drawings, exploratory excavation or potholing, visual inspection of above-ground features, and utilization of services such as One Call/811. Depths are dependent on many factors so depth accuracy can vary throughout a site and should be treated as estimates only. Relevant scan examples were saved and will be provided in this report.

FINDINGS

The subsurface conditions at the time of the scanning allowed for maximum GPR depth penetration of 2 feet in most areas. The equipment and methods used did not detect reactions from potential UST's. There was one area that contained a small anomaly which was marked out. This area was about 4 feet wide, and did not appear to be a UST, but also did not run anywhere. The boring location in the front of the property had no utilities or obstructions around it. The location in the back of the property had a water line and the unknown anomaly near it. The following pages will provide further explanation of the findings.

Prepared for: SME
Prepared By: GPRS
Date of Scanning: 9-16-24

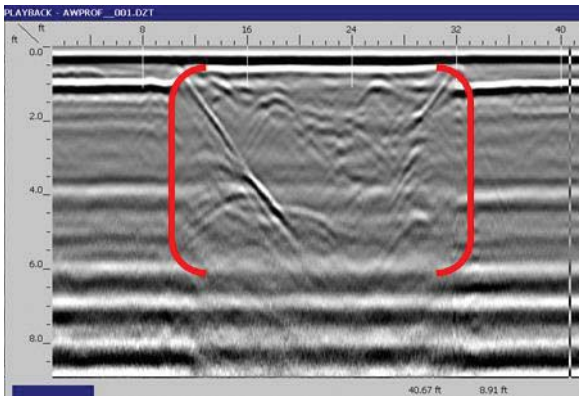
Terms and Conditions
GPRS does not provide land survey or civil engineering data collection or documentation. This is provided as a reference map of the field markings and is not survey-grade.

LEGEND

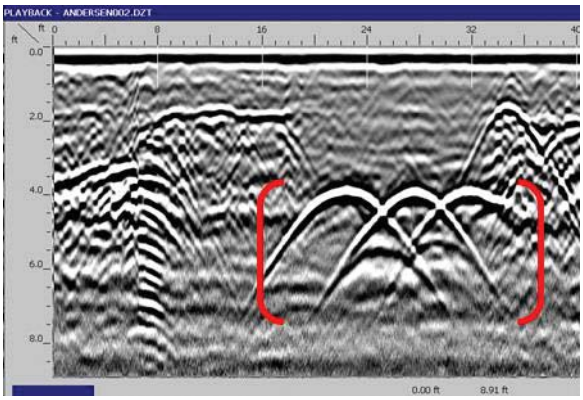
	GAS		WATER
	UNKNOWN ANOMALY		SOIL BORING MARKER

Ann Arbor

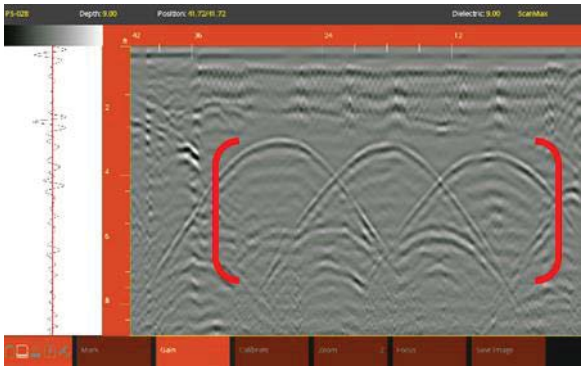
Prepared by:
GPRS



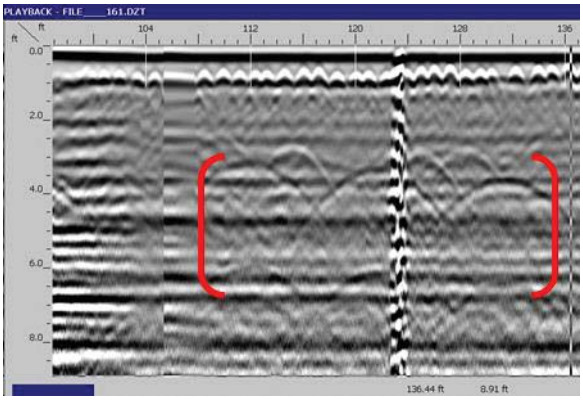
Sample GPR data screenshot showing a possible former tank pit or excavation. The change in the data from the excavation is apparent but GPR cannot determine whether this is due to a tank removal or whether tanks may still exist beyond the maximum depth penetration of the GPR signal.



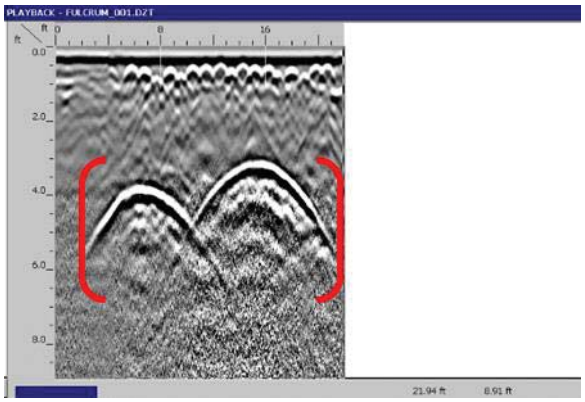
Sample GPR data screenshot showing three reactions from probable USTs. The diameters cannot be determined from these hyperbolas but they can be seen to be larger than a reaction from a typical utility.



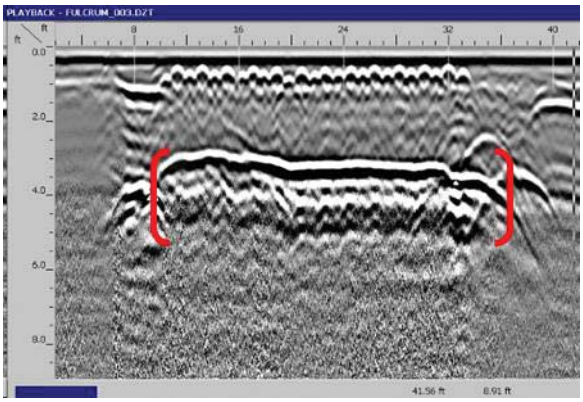
Sample GPR data screenshot showing three reactions from known USTs at an active fueling station. The concrete above the USTs is reinforced with wire mesh.



Sample GPR data screenshot showing three reactions from known USTs at an active fueling station. These USTs are non-metallic and therefore have a weaker reflection that is more difficult and sometimes impossible to identify in the GPR data.



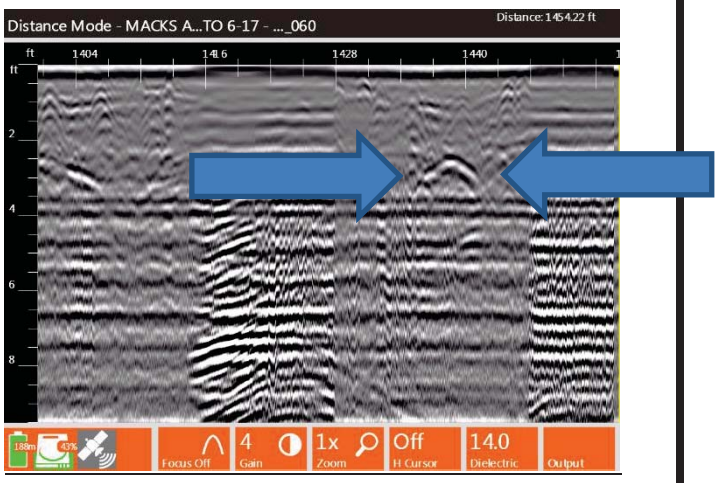
Sample GPR data screenshot showing two potential USTs. These reactions are larger than a typical utility but large utilities can look identical to a UST.



Sample GPR data screenshot showing a scan collected parallel along the top one of the suspected USTs shown in the data to the left. A parallel scan is used to determine a clear beginning and end to the reaction to the reaction which is an indicator of a UST and to determine an approximate length.

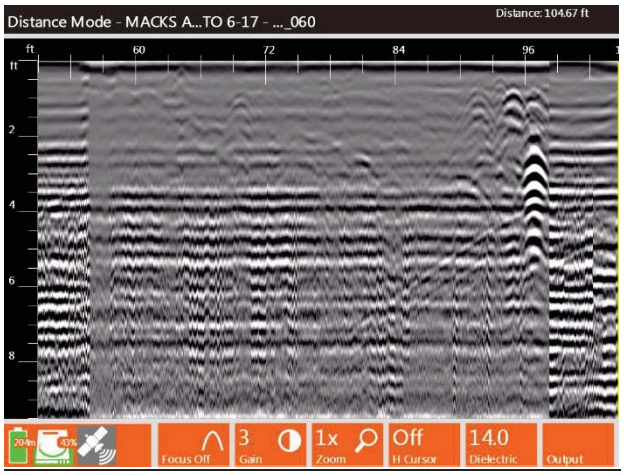
Sample Data Screenshots. (Not taken from this project)	Location: previously collected from various sites	GPRS

Picture 1:This image depicts the soil boring in the front of the building near the road.



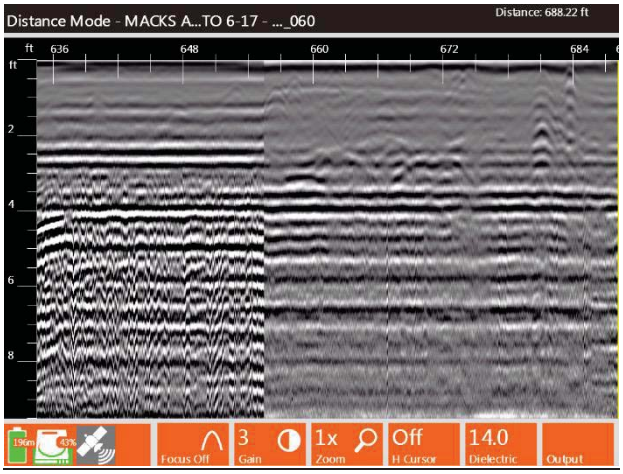
Picture 2: This image depicts a screenshot of data obtained with our 350 Mg Hz utility antenna. The arrows point to the anomaly from Picture 3 located behind the building.

Picture 3:This image depicts our surface markings behind the building. The circled area is where the anomaly was located at a depth of 1'-2' that was found in Picture 2. There was also a waterline running through the scan area near the soil boring location.



Picture 4: This image depicts a screenshot of data obtained with our 350 Mg Hz utility antenna. This data represents the normal data for the site.

Picture 5:This image depicts our surface markings of the area behind the building.



Picture 6: This image depicts a screenshot of data obtained with our 350 Mg Hz utility antenna. This represents normal data for the area behind the building.

CLOSING

GPRS, Inc. has been in business since 2001, specializing in underground storage tank location, concrete scanning, utility locating, and shallow void detection for projects throughout the United States. I encourage you to visit our website (www.gprsinc.com) and contact any of the numerous references listed.

GPRS scanned the proposed areas in search for any signs of a UST. Upon scanning, no evidence was found indicating the presence of a UST. GPRS also cleared the 2 soil boring locations. The location behind the building had an anomaly near it, as well as a water line. The client also requested the gas service be located, GPRS marked out the gas line from the road to the building.

GPRS appreciates the opportunity to offer our services, and we look forward to continuing to work with you on future projects. Please feel free to contact us for additional information or with any questions you may have regarding this report.

Signed,

Adam Sorge
Project Manager—Great Lakes

Direct: 419-265-6499

Adam.Sorge@gprsinc.com

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Reviewed,

Parker Schings
Senior Project Manager—Great Lakes

Direct: 419-376-5021

Parker.Schings@gprsinc.com

www.gprsinc.com

FIELD ACTIVITY REPORT

Project: 1510 E Stadium Boulevard
Site: 1510 E Stadium Boulevard, Ann Arbor, Michigan

Project Number:
095650.00.003.002

Area of Work		Date	09/16/2024
Field Representative	Brendan Huehn	Arrival Time	12:45
Type of Work	UST GPRS and sub-slab vapor pin install	Departure Time	14:30
Site sketch produced?	NO	Contractor	GPRS
Weather	Clear, 80		

General Notes:

Visitors

Visitor	Representing	Arrival Time	Departure Time
Adam Sorge	GPRS	12:45	

Site Observations

Time	Notes
12:45	SME arrived on site and with Adam Sorge with GPRS.
12:54	Adam scanned the two former UST areas where we will advance soil boring tomorrow. Adam did not see any sign of existing USTs in the north. Adam saw signs of an underground structure/anomaly near the southern UST boring area. The anomaly was approximately 5' away from our boring location.
12:58	Adam also located the gas line entering the building from the north.
13:20	Tom Pierce arrived to let me into the building.
13:28	After clearing the UST boring areas and gas utility, I prepared my sub slab Vapor pin installation equipment while waiting for Tom Pierce with the Ann Arbor Housing Commission to arrive and grant me access to the building.
14:02	I completed installing the two vapor pins in the basement. One on the north end of the active boilers and one in the center of the former coal storage room.
14:30	SME departed the site and is scheduled to return tomorrow, 9/16, to advance soil borings.

Completed by: Brendan Huehn
Reviewed by:

Photo 1: North UST boring area

Photo 2: South UST boring area

APPENDIX B
SOIL BORING LOGS

BORING SB1

BORING DEPTH: 20 FEET

PROJECT NAME: 1510 E. Stadium Boulevard
PROJECT NUMBER: 095650.00.003.002
CLIENT: DCC
PROJECT LOCATION: 1510 E Stadium Boulevard, Ann Arbor, Michigan
DATE STARTED: 9/17/24 **COMPLETED:** 9/17/24
BORING METHOD: Direct Push
OPERATOR: GeoServ (DG) **RIG NO.:** Geoprobe
LOGGED BY: BMH **CHECKED BY:** TDH

DEPTH (FEET)	SYMBOLIC PROFILE	ELEVATION: (Not Surveyed) PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY (inches)	PID (ppm)	SOIL ANALYTICAL SAMPLE ANALYZED	REMARKS
0		0.5 TOPSOIL- Fine to Medium SILTY SAND- Dark Brown- Moist (SM)			6.4		
		FILL- Fine SAND- Trace Gravel- Moist (SP)	LS1	37	<1		
5					<1		
		6.5 Fine to Medium SAND- Trace Gravel- Brown- Moist (SP)	LS2	43	<1		
10		11.0			<1		
		Fine to Coarse SAND- Trace Gravel- Brown to Gray- Moist (SP)	LS3	46	<1		
15					<1		
			LS4	34	<1		
20		20.0 END OF BORING AT 20.0 FEET.			<1		
25							

GROUNDWATER & BACKFILL INFORMATION

GROUNDWATER WAS NOT ENCOUNTERED

BACKFILL METHOD: Soil Cuttings

NOTES:
1. Soil samples were classified according to ASTM D2488, Standard Practice for Description and Identification of Soils (Visual-Manual Procedure) for environmental purposes only. Therefore, the boring logs and associated report(s) should not be used for geotechnical evaluation or design.
2. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
3. Listed depths under the profile description are rounded to the nearest tenth of a foot (e.g. 5.75 = 5.8). Refer to the report and attachments for actual sample depths and/or intervals (where applicable).
4. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
5. No odors noted and no staining observed.

SME

BORING SB2

BORING DEPTH: 20 FEET

PROJECT NAME: 1510 E. Stadium Boulevard

PROJECT NUMBER: 095650.00.003.002

CLIENT: DCC

PROJECT LOCATION: 1510 E Stadium Boulevard, Ann Arbor, Michigan

DATE STARTED: 9/17/24 **COMPLETED:** 9/17/24

BORING METHOD: Direct Push

OPERATOR: GeoServ (DG) **RIG NO.:** Geoprobe

LOGGED BY: BMH **CHECKED BY:** TDH

DEPTH (FEET)	SYMBOLIC PROFILE	ELEVATION: (Not Surveyed) PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY (inches)	PID (ppm)	SOIL ANALYTICAL SAMPLE ANALYZED	REMARKS
0		TOPSOIL- Fine SILTY SAND- Dark Brown- Moist (SM)			<1		
1.0		FILL- Fine to Medium SAND- Trace Gravel- Dark Brown to Brown- Moist (SP)	LS1	29	<1		
5					<1		
			LS2	30	<1		
8.0		FILL- Fine to Medium SAND- Trace Gravel- Brown- Moist (SP)			<1		
10			LS3	34	<1		
11.5		FILL- Fine to Medium CLAYEY SAND- Trace Gravel- Brown- Moist (SC)			<1		
12.5		Fine to Coarse SAND- Trace Gravel- Brown to Gray- Moist (SP)			<1		
15			LS4	10	<1		
20.0		END OF BORING AT 20.0 FEET.			<1		
20							
25							

GROUNDWATER & BACKFILL INFORMATION

GROUNDWATER WAS NOT ENCOUNTERED

BACKFILL METHOD: Soil Cuttings

NOTES:
1. Soil samples were classified according to ASTM D2488, Standard Practice for Description and Identification of Soils (Visual-Manual Procedure) for environmental purposes only. Therefore, the boring logs and associated report(s) should not be used for geotechnical evaluation or design.
2. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
3. Listed depths under the profile description are rounded to the nearest tenth of a foot (e.g. 5.75 = 5.8). Refer to the report and attachments for actual sample depths and/or intervals (where applicable).
4. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
5. No odors noted and no staining observed.

SME

BORING SB3

BORING DEPTH: 20 FEET

PROJECT NAME: 1510 E. Stadium Boulevard

PROJECT NUMBER: 095650.00.003.002

CLIENT: DCC

PROJECT LOCATION: 1510 E Stadium Boulevard, Ann Arbor, Michigan

DATE STARTED: 9/17/24 **COMPLETED:** 9/17/24

BORING METHOD: Direct Push

OPERATOR: GeoServ (DG) **RIG NO.:** Geoprobe

LOGGED BY: BMH **CHECKED BY:** TDH

DEPTH (FEET)	SYMBOLIC PROFILE	ELEVATION: (Not Surveyed) PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY (inches)	PID (ppm)	SOIL ANALYTICAL SAMPLE ANALYZED	REMARKS
0		0.5 TOPSOIL- Fine to Medium SAND- Dark Brown- Moist (SP)					
		FILL- Fine to Medium SAND with Clay- Trace Gravel- Dark Brown to Brown- Moist (SP-SC)	LS1	45	<1		
		3.0			<1		
5		Fine to Medium SAND- Trace Gravel and Clay- Brown to Light Brown- Moist (SP)	LS2	51	<1		
					<1		
10		12.0	LS3	48	<1		
		Fine to Coarse SAND- Trace Gravel- Brown to Gray- Moist (SP)			<1		
15			LS4	35	<1		
		20.0			<1		
20		END OF BORING AT 20.0 FEET.					
25							

GROUNDWATER & BACKFILL INFORMATION

GROUNDWATER WAS NOT ENCOUNTERED

BACKFILL METHOD: Soil Cuttings & Bentonite

NOTES:
1. Soil samples were classified according to ASTM D2488, Standard Practice for Description and Identification of Soils (Visual-Manual Procedure) for environmental purposes only. Therefore, the boring logs and associated report(s) should not be used for geotechnical evaluation or design.
2. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
3. Listed depths under the profile description are rounded to the nearest tenth of a foot (e.g. 5.75 = 5.8). Refer to the report and attachments for actual sample depths and/or intervals (where applicable).
4. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
5. No odors noted and no staining observed.

SME

BORING SB4

BORING DEPTH: 20 FEET

PROJECT NAME: 1510 E. Stadium Boulevard

PROJECT NUMBER: 095650.00.003.002

CLIENT: DCC

PROJECT LOCATION: 1510 E Stadium Boulevard, Ann Arbor, Michigan

DATE STARTED: 9/17/24 **COMPLETED:** 9/17/24

BORING METHOD: Direct Push

OPERATOR: GeoServ (DG) **RIG NO.:** Geoprobe

LOGGED BY: BMH **CHECKED BY:** TDH

DEPTH (FEET)	SYMBOLIC PROFILE	ELEVATION: (Not Surveyed) PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY (inches)	PID (ppm)	SOIL ANALYTICAL SAMPLE ANALYZED	REMARKS
0		0.5 TOPSOIL- Fine SILTY SAND- Dark Brown- Moist (SM)					
		FILL- SANDY LEAN CLAY- Trace- Gravel- Brown (CL)	LS1	31	<1		
5		5.0			<1		
		FILL- Fine to Medium SAND- Trace Gravel and Clay- Dark Brown to Brown- Moist (SP)	LS2	32	<1		
10		12.0	LS3	40	<1		
15		Fine to Coarse SAND- Trace Gravel- Light Brown to Gray- Moist (SP)	LS4	32	<1		
20		20.0 END OF BORING AT 20.0 FEET.			<1		
25							

GROUNDWATER & BACKFILL INFORMATION

GROUNDWATER WAS NOT ENCOUNTERED

BACKFILL METHOD: Soil Cuttings & Bentonite

NOTES:
1. Soil samples were classified according to ASTM D2488, Standard Practice for Description and Identification of Soils (Visual-Manual Procedure) for environmental purposes only. Therefore, the boring logs and associated report(s) should not be used for geotechnical evaluation or design.
2. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
3. Listed depths under the profile description are rounded to the nearest tenth of a foot (e.g. 5.75 = 5.8). Refer to the report and attachments for actual sample depths and/or intervals (where applicable).
4. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
5. No odors noted and no staining observed.

BORING SB5

BORING DEPTH: 20 FEET

PROJECT NAME: 1510 E. Stadium Boulevard
PROJECT NUMBER: 095650.00.003.002
CLIENT: DCC
PROJECT LOCATION: 1510 E Stadium Boulevard, Ann Arbor, Michigan
DATE STARTED: 9/17/24 **COMPLETED:** 9/17/24
BORING METHOD: Direct Push
OPERATOR: GeoServ (DG) **RIG NO.:** Geoprobe
LOGGED BY: BMH **CHECKED BY:** TDH

DEPTH (FEET)	SYMBOLIC PROFILE	ELEVATION: (Not Surveyed) PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY (inches)	PID (ppm)	SOIL ANALYTICAL SAMPLE ANALYZED	REMARKS
0		0.5 TOPSOIL- Fine to Medium SILT SAND- Dark Brown- Moist (SM)			<1		
		FILL- Fine to Medium CLAYEY SAND- Trace Gravel- Dark Brown to Brown- Moist (SC)	LS1	34	<1		
5		5.0			<1		
		Fine to Medium SAND- Trace Gravel- Brown- Moist (SP)	LS2	45	<1		
10		11.0			<1		
			LS3	41	<1		
15		Fine to Coarse SAND- Trace Gravel- Light Brown to Gray- Moist			<1		
			LS4	37	<1		
20		20.0 END OF BORING AT 20.0 FEET.					
25							

GROUNDWATER & BACKFILL INFORMATION

GROUNDWATER WAS NOT ENCOUNTERED

BACKFILL METHOD: Soil Cuttings & Bentonite

NOTES:
1. Soil samples were classified according to ASTM D2488, Standard Practice for Description and Identification of Soils (Visual-Manual Procedure) for environmental purposes only. Therefore, the boring logs and associated report(s) should not be used for geotechnical evaluation or design.
2. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
3. Listed depths under the profile description are rounded to the nearest tenth of a foot (e.g. 5.75 = 5.8). Refer to the report and attachments for actual sample depths and/or intervals (where applicable).
4. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
5. No odors noted and no staining observed.

WELL SG1

WELL DEPTH: 6 FEET

PROJECT NAME: 1510 E. Stadium Boulevard
PROJECT NUMBER: 095650.00.003.002
CLIENT: DCC
PROJECT LOCATION: 1510 E Stadium Boulevard, Ann Arbor, Michigan
DATE STARTED: 9/17/24 **COMPLETED:** 9/17/24
BORING METHOD: Direct Push
OPERATOR: GeoServ (DG) **RIG NO.:** Geoprobe
LOGGED BY: BMH **CHECKED BY:** TDH

DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	PID (ppm)	WELL DIAGRAM	REMARKS
0.0		TOPSOIL- Fine to Medium SILTY SAND- Dark Brown- Moist (SM)	6.4	Hydrated Bentonite	
0.5		FILL- Fine SAND- Trace Gravel- Moist (SP)	<1		
2.5			<1	1/4" OD PFTE Tubing 6" Double Woven Stainless Steel Mesh Implant Filter pack sand	
5.0					
6.0		END OF BORING AT 6.0 FEET.			

GROUNDWATER INFORMATION

GROUNDWATER WAS NOT ENCOUNTERED

WELL WATER LEVEL DATA

NOTES:
1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
3. Listed depths under the profile description are rounded to the nearest tenth of a foot (e.g. 5.75 = 5.8). Refer to the report and attachments for actual sample depths and/or intervals (where applicable).
4. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
5. No odors noted and no staining observed.

WELL SG2

WELL DEPTH: 6 FEET

PROJECT NAME: 1510 E. Stadium Boulevard
PROJECT NUMBER: 095650.00.003.002
CLIENT: DCC
PROJECT LOCATION: 1510 E Stadium Boulevard, Ann Arbor, Michigan
DATE STARTED: 9/17/24 **COMPLETED:** 9/17/24
BORING METHOD: Direct Push
OPERATOR: GeoServ (DG) **RIG NO.:** Geoprobe
LOGGED BY: BMH **CHECKED BY:** TDH

DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	WELL DIAGRAM	REMARKS
0.0		ASPHALT PAVEMENT		
0.3		FILL- Fine to Medium SAND with Gravel- Dark Brown to Brown- Moist (SP)		
1.0		FILL- Fine to Medium SAND- Trace Gravel- Dark Brown- Moist (SP)	Hydrated Bentonite	
2.5				
3.0		Fine to Medium SAND- Trace Gravel- Light Brown- Moist (SP)	1/4" OD PFTE Tubing; 6" Double Woven Stainless Steel Mesh Implant; Filter pack sand	
5.0				
6.0		END OF BORING AT 6.0 FEET.		

GROUNDWATER INFORMATION

GROUNDWATER WAS NOT ENCOUNTERED

WELL WATER LEVEL DATA

NOTES:
1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
3. Listed depths under the profile description are rounded to the nearest tenth of a foot (e.g. 5.75 = 5.8). Refer to the report and attachments for actual sample depths and/or intervals (where applicable).
4. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
5. No odors noted and no staining observed.

APPENDIX C
LABORATORY REPORT

Fibertec environmental services
A METIRI GROUP COMPANY

Thursday, October 3, 2024

Fibertec Project Number:	A22497
Project Identification:	095650.00 /095650.00
Submittal Date:	09/18/2024

Mr. Troy Helmick
Soil and Materials Engineers, Inc. - Plymouth
43980 Plymouth Oaks Blvd
Plymouth, MI 48170

Dear Mr. Helmick,

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 Katherine Jones at 3:14 PM, Oct 03, 2024

For Robert J. Morelli
Director of Laboratory Operations

Enclosures

Fibertec environmental services
A METIRI GROUP COMPANY

Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-001

Order: A22497
Date: 10/03/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**SB1 (1-2)**	Chain of Custody:	**222244**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	Sample Matrix:	**Soil/Solid**	Collect Time:	**09:50**

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: A22497-001** **Matrix: Soil/Solid**
Method: ASTM D2216-10 **Description: SB1 (1-2)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
‡ 1. Percent Moisture (Water Content)	**5**		%	1	1.0	09/23/24	MC240923	09/24/24	MC240923	LJK

Michigan 10 Elements by ICP/MS **Aliquot ID: A22497-001** **Matrix: Soil/Solid**
Method: EPA 0200.2/EPA 6020B **Description: SB1 (1-2)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Arsenic	**3800**		µg/kg	100	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
2. Barium	**40000**		µg/kg	1000	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
3. Cadmium	**210**		µg/kg	50	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
4. Chromium	**8200**		µg/kg	500	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
5. Copper	**7800**		µg/kg	1000	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
6. Lead	**27000**		µg/kg	1000	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
7. Selenium	U		µg/kg	200	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
8. Silver	U		µg/kg	100	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
9. Zinc	**29000**		µg/kg	1000	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS

Mercury by CVAAS **Aliquot ID: A22497-001** **Matrix: Soil/Solid**
Method: EPA 7471B **Description: SB1 (1-2)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Mercury	U		µg/kg	50	10	09/27/24	PM24I27C	09/30/24	M724I30A	JLH

Volatile Organic Compounds (VOCs) by GC/MS, 5035 **Aliquot ID: A22497-001A** **Matrix: Soil/Solid**
Method: EPA 5035A/EPA 8260D **Description: SB1 (1-2)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Acetone	U	V-	µg/kg	1000	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
‡ 2. Acrylonitrile	U		µg/kg	110	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
3. Benzene	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
4. Bromobenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
5. Bromochloromethane	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
6. Bromodichloromethane	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
7. Bromoform	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
8. Bromomethane	U		µg/kg	200	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC

Fibertec environmental services
A METIRI GROUP COMPANY

Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-001

Order: A22497
Date: 10/03/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**SB1 (1-2)**	Chain of Custody:	**222244**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	Sample Matrix:	**Soil/Solid**	Collect Time:	**09:50**

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: A22497-001A** **Matrix: Soil/Solid**
Method: EPA 5035A/EPA 8260D **Description: SB1 (1-2)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
9. 2-Butanone	U		µg/kg	750	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
10. n-Butylbenzene	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
11. sec-Butylbenzene	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
12. tert-Butylbenzene	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
13. Carbon Disulfide	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
14. Carbon Tetrachloride	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
15. Chlorobenzene	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
16. Chloroethane	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
17. Chloroform	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
18. Chloromethane	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
19. 2-Chlorotoluene	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U	V+	µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
21. Dibromochloromethane	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
22. Dibromomethane	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
23. 1,2-Dichlorobenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
24. 1,3-Dichlorobenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
25. 1,4-Dichlorobenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
26. Dichlorodifluoromethane	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
27. 1,1-Dichloroethane	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
28. 1,2-Dichloroethane	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
29. 1,1-Dichloroethene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
30. cis-1,2-Dichloroethene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
31. trans-1,2-Dichloroethene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
32. 1,2-Dichloropropane	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
33. cis-1,3-Dichloropropene	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
34. trans-1,3-Dichloropropene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
35. Ethylbenzene	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
36. Ethylene Dibromide	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
37. 2-Hexanone	U		µg/kg	2500	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
38. Isopropylbenzene	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
39. 4-Methyl-2-pentanone	U		µg/kg	2500	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
40. Methylene Chloride	U		µg/kg	110	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
‡ 41. 2-Methylnaphthalene	U	V+ L+	µg/kg	330	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
42. MTBE	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
43. Naphthalene	U		µg/kg	330	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
44. n-Propylbenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC

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Fibertec environmental services
A METIRI GROUP COMPANY

Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-001

Order: A22497
Date: 10/03/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**SB1 (1-2)**	Chain of Custody:	**222244**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	Sample Matrix:	**Soil/Solid**	Collect Time:	**09:50**

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: A22497-001A** **Matrix: Soil/Solid**
Method: EPA 5035A/EPA 8260D **Description: SB1 (1-2)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
45. Styrene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
46. 1,1,1,2-Tetrachloroethane	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
47. 1,1,2,2-Tetrachloroethane	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
48. Tetrachloroethene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
49. Toluene	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
50. 1,2,4-Trichlorobenzene	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
51. 1,1,1-Trichloroethane	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
52. 1,1,2-Trichloroethane	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
53. Trichloroethene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
54. Trichlorofluoromethane	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
55. 1,2,3-Trichloropropane	U		µg/kg	110	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
57. 1,2,4-Trimethylbenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
58. 1,3,5-Trimethylbenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
59. Vinyl Chloride	U		µg/kg	40	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
60. m&p-Xylene	U		µg/kg	110	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
61. o-Xylene	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC
‡ 62. Xylenes	U		µg/kg	170	1.0	09/26/24	VP24I26A	09/26/24 20:21	VP24I26A	ELC

Polynuclear Aromatic Hydrocarbons (PNAs) **Aliquot ID: A22497-001** **Matrix: Soil/Solid**
Method: EPA 3546/EPA 8270E **Description: SB1 (1-2)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Acenaphthene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 21:30	SN24I21B	CRC
2. Acenaphthylene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 21:30	SN24I21B	CRC
3. Anthracene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 21:30	SN24I21B	CRC
4. Benzo(a)anthracene (SIM)	**790**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 21:30	SN24I21B	CRC
5. Benzo(a)pyrene (SIM)	**770**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 21:30	SN24I21B	CRC
6. Benzo(b)fluoranthene (SIM)	**1100**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 21:30	SN24I21B	CRC
7. Benzo(ghi)perylene (SIM)	**430**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 21:30	SN24I21B	CRC
8. Benzo(k)fluoranthene (SIM)	**380**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 21:30	SN24I21B	CRC
9. Chrysene (SIM)	**830**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 21:30	SN24I21B	CRC
10. Dibenzo(a,h)anthracene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 21:30	SN24I21B	CRC
11. Fluoranthene (SIM)	**2000**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 21:30	SN24I21B	CRC
12. Fluorene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 21:30	SN24I21B	CRC
13. Indeno(1,2,3-cd)pyrene (SIM)	**510**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 21:30	SN24I21B	CRC

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Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-001

Order: A22497
Date: 10/03/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**SB1 (1-2)**	Chain of Custody:	**222244**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	Sample Matrix:	**Soil/Solid**	Collect Time:	**09:50**

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: A22497-001** **Matrix: Soil/Solid**
Method: EPA 3546/EPA 8270E **Description: SB1 (1-2)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
14. 2-Methylnaphthalene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 21:30	SN24I21B	CRC
15. Naphthalene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 21:30	SN24I21B	CRC
16. Phenanthrene (SIM)	**1100**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 21:30	SN24I21B	CRC
17. Pyrene (SIM)	**1600**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 21:30	SN24I21B	CRC

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Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-002

Order: A22497
Date: 10/03/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**SB2 (12.5-14.5)**	Chain of Custody:	**222244**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	Sample Matrix:	**Soil/Solid**	Collect Time:	**10:20**

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: A22497-002** **Matrix: Soil/Solid**
Method: ASTM D2216-10 **Description: SB2 (12.5-14.5)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
‡ 1. Percent Moisture (Water Content)	**6**		%	1	1.0	09/23/24	MC240923	09/24/24	MC240923	LJK

Michigan 10 Elements by ICP/MS **Aliquot ID: A22497-002** **Matrix: Soil/Solid**
Method: EPA 0200.2/EPA 6020B **Description: SB2 (12.5-14.5)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Arsenic	**10000**		µg/kg	100	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
2. Barium	**13000**		µg/kg	1000	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
3. Cadmium	**180**		µg/kg	50	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
4. Chromium	**7600**		µg/kg	500	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
5. Copper	**14000**		µg/kg	1000	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
6. Lead	**5700**		µg/kg	1000	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
7. Selenium	U		µg/kg	200	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
8. Silver	U		µg/kg	100	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
9. Zinc	**38000**		µg/kg	1000	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS

Mercury by CVAAS **Aliquot ID: A22497-002** **Matrix: Soil/Solid**
Method: EPA 7471B **Description: SB2 (12.5-14.5)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Mercury	U		µg/kg	50	10	09/27/24	PM24I27C	09/30/24	M724I30A	JLH

Volatile Organic Compounds (VOCs) by GC/MS, 5035 **Aliquot ID: A22497-002A** **Matrix: Soil/Solid**
Method: EPA 5035A/EPA 8260D **Description: SB2 (12.5-14.5)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Acetone	U	V-	µg/kg	1000	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
‡ 2. Acrylonitrile	U		µg/kg	110	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
3. Benzene	U		µg/kg	55	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
4. Bromobenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
5. Bromochloromethane	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
6. Bromodichloromethane	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
7. Bromoform	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
8. Bromomethane	U		µg/kg	200	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC

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Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-002

Order: A22497
Date: 10/03/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**SB2 (12.5-14.5)**	Chain of Custody:	**222244**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	Sample Matrix:	**Soil/Solid**	Collect Time:	**10:20**

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: A22497-002A** **Matrix: Soil/Solid**
Method: EPA 5035A/EPA 8260D **Description: SB2 (12.5-14.5)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
9. 2-Butanone	U		µg/kg	750	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
10. n-Butylbenzene	U		µg/kg	55	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
11. sec-Butylbenzene	U		µg/kg	55	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
12. tert-Butylbenzene	U		µg/kg	55	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
13. Carbon Disulfide	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
14. Carbon Tetrachloride	U		µg/kg	55	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
15. Chlorobenzene	U		µg/kg	55	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
16. Chloroethane	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
17. Chloroform	U		µg/kg	55	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
18. Chloromethane	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
19. 2-Chlorotoluene	U		µg/kg	55	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U	V+	µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
21. Dibromochloromethane	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
22. Dibromomethane	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
23. 1,2-Dichlorobenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
24. 1,3-Dichlorobenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
25. 1,4-Dichlorobenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
26. Dichlorodifluoromethane	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
27. 1,1-Dichloroethane	U		µg/kg	55	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
28. 1,2-Dichloroethane	U		µg/kg	55	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
29. 1,1-Dichloroethene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
30. cis-1,2-Dichloroethene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
31. trans-1,2-Dichloroethene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
32. 1,2-Dichloropropane	U		µg/kg	55	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
33. cis-1,3-Dichloropropene	U		µg/kg	55	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
34. trans-1,3-Dichloropropene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
35. Ethylbenzene	U		µg/kg	55	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
36. Ethylene Dibromide	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
37. 2-Hexanone	U		µg/kg	2500	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
38. Isopropylbenzene	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
39. 4-Methyl-2-pentanone	U		µg/kg	2500	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
40. Methylene Chloride	U		µg/kg	110	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
‡ 41. 2-Methylnaphthalene	U	V+ L+	µg/kg	330	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
42. MTBE	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
43. Naphthalene	U		µg/kg	330	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
44. n-Propylbenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC

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Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-002

Order: A22497
Date: 10/03/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**SB2 (12.5-14.5)**	Chain of Custody:	**222244**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	Sample Matrix:	**Soil/Solid**	Collect Time:	**10:20**

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: A22497-002A** **Matrix: Soil/Solid**
Method: EPA 5035A/EPA 8260D **Description: SB2 (12.5-14.5)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
45. Styrene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
46. 1,1,1,2-Tetrachloroethane	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
47. 1,1,2,2-Tetrachloroethane	U		µg/kg	55	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
48. Tetrachloroethene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
49. Toluene	U		µg/kg	55	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
50. 1,2,4-Trichlorobenzene	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
51. 1,1,1-Trichloroethane	U		µg/kg	55	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
52. 1,1,2-Trichloroethane	U		µg/kg	55	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
53. Trichloroethene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
54. Trichlorofluoromethane	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
55. 1,2,3-Trichloropropane	U		µg/kg	110	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
57. 1,2,4-Trimethylbenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
58. 1,3,5-Trimethylbenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
59. Vinyl Chloride	U		µg/kg	40	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
60. m&p-Xylene	U		µg/kg	110	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
61. o-Xylene	U		µg/kg	55	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC
‡ 62. Xylenes	U		µg/kg	160	1.0	09/26/24	VP24I26A	09/26/24 20:45	VP24I26A	ELC

Polynuclear Aromatic Hydrocarbons (PNAs) **Aliquot ID: A22497-002** **Matrix: Soil/Solid**
Method: EPA 3546/EPA 8270E **Description: SB2 (12.5-14.5)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Acenaphthene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 21:57	SN24I21B	CRC
2. Acenaphthylene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 21:57	SN24I21B	CRC
3. Anthracene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 21:57	SN24I21B	CRC
4. Benzo(a)anthracene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 21:57	SN24I21B	CRC
5. Benzo(a)pyrene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 21:57	SN24I21B	CRC
6. Benzo(b)fluoranthene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 21:57	SN24I21B	CRC
7. Benzo(ghi)perylene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 21:57	SN24I21B	CRC
8. Benzo(k)fluoranthene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 21:57	SN24I21B	CRC
9. Chrysene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 21:57	SN24I21B	CRC
10. Dibenzo(a,h)anthracene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 21:57	SN24I21B	CRC
11. Fluoranthene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 21:57	SN24I21B	CRC
12. Fluorene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 21:57	SN24I21B	CRC
13. Indeno(1,2,3-cd)pyrene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 21:57	SN24I21B	CRC

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Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-002

Order: A22497
Date: 10/03/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**SB2 (12.5-14.5)**	Chain of Custody:	**222244**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	Sample Matrix:	**Soil/Solid**	Collect Time:	**10:20**

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: A22497-002** **Matrix: Soil/Solid**
Method: EPA 3546/EPA 8270E **Description: SB2 (12.5-14.5)**

						Preparation		Analysis		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	P. Date	P. Batch	A. Date	A. Batch	Init.
14. 2-Methylnaphthalene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 21:57	SN24I21B	CRC
15. Naphthalene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 21:57	SN24I21B	CRC
16. Phenanthrene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 21:57	SN24I21B	CRC
17. Pyrene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 21:57	SN24I21B	CRC

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Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-003

Order: A22497
Date: 10/03/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**SB3 (1-3)**	Chain of Custody:	**222244**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	Sample Matrix:	**Soil/Solid**	Collect Time:	**10:50**

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: A22497-003** **Matrix: Soil/Solid**
Method: ASTM D2216-10 **Description: SB3 (1-3)**

	Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
‡	1. Percent Moisture (Water Content)	**6**		%	1	1.0	09/23/24	MC240923	09/24/24	MC240923	LJK

Michigan 10 Elements by ICP/MS **Aliquot ID: A22497-003** **Matrix: Soil/Solid**
Method: EPA 0200.2/EPA 6020B **Description: SB3 (1-3)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Arsenic	**4300**		µg/kg	100	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
2. Barium	**15000**		µg/kg	1000	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
3. Cadmium	**140**		µg/kg	50	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
4. Chromium	**5900**		µg/kg	500	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
5. Copper	**8100**		µg/kg	1000	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
6. Lead	**28000**	F-*	µg/kg	1000	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
7. Selenium	U		µg/kg	200	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
8. Silver	U		µg/kg	100	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
9. Zinc	**21000**		µg/kg	1000	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS

Mercury by CVAAS **Aliquot ID: A22497-003** **Matrix: Soil/Solid**
Method: EPA 7471B **Description: SB3 (1-3)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Mercury	U		µg/kg	50	10	09/27/24	PM24I27C	09/30/24	M724I30A	JLH

Volatile Organic Compounds (VOCs) by GC/MS, 5035 **Aliquot ID: A22497-003A** **Matrix: Soil/Solid**
Method: EPA 5035A/EPA 8260D **Description: SB3 (1-3)**

	Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
	1. Acetone	U	V-	µg/kg	1000	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
‡	2. Acrylonitrile	U		µg/kg	120	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
	3. Benzene	U		µg/kg	58	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
	4. Bromobenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
	5. Bromochloromethane	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
	6. Bromodichloromethane	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
	7. Bromoform	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC

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Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-003

Order: A22497
Date: 10/03/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**SB3 (1-3)**	Chain of Custody:	**222244**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	Sample Matrix:	**Soil/Solid**	Collect Time:	**10:50**

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: A22497-003A** **Matrix: Soil/Solid**
Method: EPA 5035A/EPA 8260D **Description: SB3 (1-3)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
8. Bromomethane	U		µg/kg	200	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
9. 2-Butanone	U		µg/kg	750	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
10. n-Butylbenzene	U		µg/kg	58	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
11. sec-Butylbenzene	U		µg/kg	58	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
12. tert-Butylbenzene	U		µg/kg	58	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
13. Carbon Disulfide	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
14. Carbon Tetrachloride	U		µg/kg	58	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
15. Chlorobenzene	U		µg/kg	58	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
16. Chloroethane	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
17. Chloroform	U		µg/kg	58	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
18. Chloromethane	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
19. 2-Chlorotoluene	U		µg/kg	58	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U	V+	µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
21. Dibromochloromethane	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
22. Dibromomethane	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
23. 1,2-Dichlorobenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
24. 1,3-Dichlorobenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
25. 1,4-Dichlorobenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
26. Dichlorodifluoromethane	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
27. 1,1-Dichloroethane	U		µg/kg	58	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
28. 1,2-Dichloroethane	U		µg/kg	58	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
29. 1,1-Dichloroethene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
30. cis-1,2-Dichloroethene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
31. trans-1,2-Dichloroethene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
32. 1,2-Dichloropropane	U		µg/kg	58	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
33. cis-1,3-Dichloropropene	U		µg/kg	58	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
34. trans-1,3-Dichloropropene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
35. Ethylbenzene	U		µg/kg	58	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
36. Ethylene Dibromide	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
37. 2-Hexanone	U		µg/kg	2500	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
38. Isopropylbenzene	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
39. 4-Methyl-2-pentanone	U		µg/kg	2500	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
40. Methylene Chloride	U		µg/kg	120	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
‡ 41. 2-Methylnaphthalene	U	V+ L+ *	µg/kg	330	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
42. MTBE	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC

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Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-003

Order: A22497
Date: 10/03/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**SB3 (1-3)**	Chain of Custody:	**222244**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	Sample Matrix:	**Soil/Solid**	Collect Time:	**10:50**

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: A22497-003A** **Matrix: Soil/Solid**
Method: EPA 5035A/EPA 8260D **Description: SB3 (1-3)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
43. Naphthalene	U		µg/kg	330	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
44. n-Propylbenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
45. Styrene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
46. 1,1,1,2-Tetrachloroethane	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
47. 1,1,2,2-Tetrachloroethane	U		µg/kg	58	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
48. Tetrachloroethene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
49. Toluene	U		µg/kg	58	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
50. 1,2,4-Trichlorobenzene	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
51. 1,1,1-Trichloroethane	U		µg/kg	58	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
52. 1,1,2-Trichloroethane	U		µg/kg	58	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
53. Trichloroethene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
54. Trichlorofluoromethane	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
55. 1,2,3-Trichloropropane	U		µg/kg	120	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
57. 1,2,4-Trimethylbenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
58. 1,3,5-Trimethylbenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
59. Vinyl Chloride	U		µg/kg	40	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
60. m&p-Xylene	U		µg/kg	120	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
61. o-Xylene	U		µg/kg	58	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC
‡ 62. Xylenes	U		µg/kg	170	1.0	09/26/24	VP24I26A	09/26/24 23:37	VP24I26A	ELC

Polynuclear Aromatic Hydrocarbons (PNAs) **Aliquot ID: A22497-003** **Matrix: Soil/Solid**
Method: EPA 3546/EPA 8270E **Description: SB3 (1-3)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Acenaphthene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 22:24	SN24I21B	CRC
2. Acenaphthylene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 22:24	SN24I21B	CRC
3. Anthracene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 22:24	SN24I21B	CRC
4. Benzo(a)anthracene (SIM)	**580**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 22:24	SN24I21B	CRC
5. Benzo(a)pyrene (SIM)	**630**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 22:24	SN24I21B	CRC
6. Benzo(b)fluoranthene (SIM)	**960**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 22:24	SN24I21B	CRC
7. Benzo(ghi)perylene (SIM)	**400**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 22:24	SN24I21B	CRC
8. Benzo(k)fluoranthene (SIM)	**350**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 22:24	SN24I21B	CRC
9. Chrysene (SIM)	**680**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 22:24	SN24I21B	CRC
10. Dibenzo(a,h)anthracene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 22:24	SN24I21B	CRC

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Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-003

Order: A22497
Date: 10/03/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**SB3 (1-3)**	Chain of Custody:	**222244**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	Sample Matrix:	**Soil/Solid**	Collect Time:	**10:50**

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: A22497-003** **Matrix: Soil/Solid**
Method: EPA 3546/EPA 8270E **Description: SB3 (1-3)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
11. Fluoranthene (SIM)	**1600**	F-*	µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 22:24	SN24I21B	CRC
12. Fluorene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 22:24	SN24I21B	CRC
13. Indeno(1,2,3-cd)pyrene (SIM)	**480**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 22:24	SN24I21B	CRC
14. 2-Methylnaphthalene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 22:24	SN24I21B	CRC
15. Naphthalene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 22:24	SN24I21B	CRC
16. Phenanthrene (SIM)	**770**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 22:24	SN24I21B	CRC
17. Pyrene (SIM)	**1100**	*	µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 22:24	SN24I21B	CRC

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Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-004

Order: A22497
Date: 10/03/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**MS (SB3 (1-3))**	Chain of Custody:	**222244**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	Sample Matrix:	**Soil/Solid**	Collect Time:	**10:50**

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: A22497-004** **Matrix: Soil/Solid**
Method: ASTM D2216-10 **Description: MS (SB3 (1-3))**

						Preparation		Analysis		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	P. Date	P. Batch	A. Date	A. Batch	Init.
‡ 1. Percent Moisture (Water Content)	**7**		%	1	1.0	09/23/24	MC240923	09/24/24	MC240923	LJK

Michigan 10 Elements by ICP/MS **Aliquot ID: A22497-004** **Matrix: Soil/Solid**
Method: EPA 0200.2/EPA 6020B **Description: MS (SB3 (1-3))**

						Preparation		Analysis		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	P. Date	P. Batch	A. Date	A. Batch	Init.
1. Arsenic	**15000**		µg/kg	100	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
2. Barium	**68000**		µg/kg	1000	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
3. Cadmium	**9900**		µg/kg	50	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
4. Chromium	**29000**		µg/kg	500	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
5. Copper	**31000**		µg/kg	1000	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
6. Lead	**32000**		µg/kg	1000	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
7. Selenium	**9800**		µg/kg	200	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
8. Silver	**9500**		µg/kg	100	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
9. Zinc	**80000**		µg/kg	1000	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS

Mercury by CVAAS **Aliquot ID: A22497-004** **Matrix: Soil/Solid**
Method: EPA 7471B **Description: MS (SB3 (1-3))**

						Preparation		Analysis		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	P. Date	P. Batch	A. Date	A. Batch	Init.
1. Mercury	**190**		µg/kg	50	10	09/27/24	PM24I27C	09/30/24	M724I30A	JLH

Volatile Organic Compounds (VOCs) by GC/MS, 5035 **Aliquot ID: A22497-004A** **Matrix: Soil/Solid**
Method: EPA 5035A/EPA 8260D **Description: MS (SB3 (1-3))**

						Preparation		Analysis		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	**2200**	V-	µg/kg	1000	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
‡ 2. Acrylonitrile	**2900**		µg/kg	120	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
3. Benzene	**3000**		µg/kg	58	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
4. Bromobenzene	**2900**		µg/kg	100	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
5. Bromochloromethane	**2800**		µg/kg	100	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
6. Bromodichloromethane	**3200**		µg/kg	100	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
7. Bromoform	**3200**		µg/kg	100	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
8. Bromomethane	**2400**		µg/kg	200	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC

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Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-004

Order: A22497
Date: 10/03/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**MS (SB3 (1-3))**	Chain of Custody:	**222244**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	Sample Matrix:	**Soil/Solid**	Collect Time:	**10:50**

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: A22497-004A** **Matrix: Soil/Solid**
Method: EPA 5035A/EPA 8260D **Description: MS (SB3 (1-3))**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
9. 2-Butanone	**2400**		µg/kg	750	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
10. n-Butylbenzene	**2900**		µg/kg	58	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
11. sec-Butylbenzene	**3000**		µg/kg	58	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
12. tert-Butylbenzene	**2500**		µg/kg	58	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
13. Carbon Disulfide	**3300**		µg/kg	250	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
14. Carbon Tetrachloride	**3400**		µg/kg	58	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
15. Chlorobenzene	**3000**		µg/kg	58	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
16. Chloroethane	**3100**		µg/kg	250	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
17. Chloroform	**2800**		µg/kg	58	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
18. Chloromethane	**2800**		µg/kg	250	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
19. 2-Chlorotoluene	**2900**		µg/kg	58	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	**3200**	V+	µg/kg	250	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
21. Dibromochloromethane	**3200**		µg/kg	100	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
22. Dibromomethane	**3100**		µg/kg	250	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
23. 1,2-Dichlorobenzene	**3000**		µg/kg	100	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
24. 1,3-Dichlorobenzene	**3000**		µg/kg	100	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
25. 1,4-Dichlorobenzene	**2900**		µg/kg	100	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
26. Dichlorodifluoromethane	**2700**		µg/kg	250	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
27. 1,1-Dichloroethane	**2800**		µg/kg	58	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
28. 1,2-Dichloroethane	**2700**		µg/kg	58	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
29. 1,1-Dichloroethene	**2900**		µg/kg	50	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
30. cis-1,2-Dichloroethene	**2800**		µg/kg	50	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
31. trans-1,2-Dichloroethene	**2900**		µg/kg	50	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
32. 1,2-Dichloropropane	**2900**		µg/kg	58	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
33. cis-1,3-Dichloropropene	**3300**		µg/kg	58	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
34. trans-1,3-Dichloropropene	**3200**		µg/kg	50	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
35. Ethylbenzene	**3000**		µg/kg	58	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
36. Ethylene Dibromide	**2900**		µg/kg	50	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
37. 2-Hexanone	**2800**		µg/kg	2500	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
38. Isopropylbenzene	**3100**		µg/kg	250	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
39. 4-Methyl-2-pentanone	**3000**		µg/kg	2500	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
40. Methylene Chloride	**2400**		µg/kg	120	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
‡ 41. 2-Methylnaphthalene	**2600**	V+ L+	µg/kg	330	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
42. MTBE	**2900**		µg/kg	250	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
43. Naphthalene	**2800**		µg/kg	330	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
44. n-Propylbenzene	**3000**		µg/kg	100	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC

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Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-004

Order: A22497
Date: 10/03/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**MS (SB3 (1-3))**	Chain of Custody:	**222244**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	Sample Matrix:	**Soil/Solid**	Collect Time:	**10:50**

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: A22497-004A** **Matrix: Soil/Solid**
Method: EPA 5035A/EPA 8260D **Description: MS (SB3 (1-3))**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
45. Styrene	**2900**		µg/kg	50	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
46. 1,1,1,2-Tetrachloroethane	**3500**		µg/kg	100	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
47. 1,1,2,2-Tetrachloroethane	**3100**		µg/kg	58	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
48. Tetrachloroethene	**3400**		µg/kg	50	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
49. Toluene	**2900**		µg/kg	58	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
50. 1,2,4-Trichlorobenzene	**2800**		µg/kg	250	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
51. 1,1,1-Trichloroethane	**3300**		µg/kg	58	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
52. 1,1,2-Trichloroethane	**3000**		µg/kg	58	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
53. Trichloroethene	**3100**		µg/kg	50	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
54. Trichlorofluoromethane	**3100**		µg/kg	100	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
55. 1,2,3-Trichloropropane	**2700**		µg/kg	120	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
‡ 56. 1,2,3-Trimethylbenzene	**2800**		µg/kg	100	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
57. 1,2,4-Trimethylbenzene	**3000**		µg/kg	100	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
58. 1,3,5-Trimethylbenzene	**2900**		µg/kg	100	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
59. Vinyl Chloride	**3200**		µg/kg	40	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
60. m&p-Xylene	**5900**		µg/kg	120	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
61. o-Xylene	**2900**		µg/kg	58	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC
‡ 62. Xylenes	**8900**		µg/kg	180	1.0	09/26/24	VP24I26A	09/27/24 00:01	VP24I26A	ELC

Polynuclear Aromatic Hydrocarbons (PNAs) **Aliquot ID: A22497-004** **Matrix: Soil/Solid**
Method: EPA 3546/EPA 8270E **Description: MS (SB3 (1-3))**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Acenaphthene (SIM)	**1100**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 18:48	SN24I21B	CRC
2. Acenaphthylene (SIM)	**1200**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 18:48	SN24I21B	CRC
3. Anthracene (SIM)	**1200**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 18:48	SN24I21B	CRC
4. Benzo(a)anthracene (SIM)	**1400**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 18:48	SN24I21B	CRC
5. Benzo(a)pyrene (SIM)	**1700**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 18:48	SN24I21B	CRC
6. Benzo(b)fluoranthene (SIM)	**1800**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 18:48	SN24I21B	CRC
7. Benzo(ghi)perylene (SIM)	**1400**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 18:48	SN24I21B	CRC
8. Benzo(k)fluoranthene (SIM)	**1500**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 18:48	SN24I21B	CRC
9. Chrysene (SIM)	**1500**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 18:48	SN24I21B	CRC
10. Dibenzo(a,h)anthracene (SIM)	**1300**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 18:48	SN24I21B	CRC
11. Fluoranthene (SIM)	**1900**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 18:48	SN24I21B	CRC
12. Fluorene (SIM)	**1200**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 18:48	SN24I21B	CRC
13. Indeno(1,2,3-cd)pyrene (SIM)	**1700**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 18:48	SN24I21B	CRC

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Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-004

Order: A22497
Date: 10/03/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**MS (SB3 (1-3))**	Chain of Custody:	**222244**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	Sample Matrix:	**Soil/Solid**	Collect Time:	**10:50**

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: A22497-004** **Matrix: Soil/Solid**
Method: EPA 3546/EPA 8270E **Description: MS (SB3 (1-3))**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
14. 2-Methylnaphthalene (SIM)	**1100**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 18:48	SN24I21B	CRC
15. Naphthalene (SIM)	**910**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 18:48	SN24I21B	CRC
16. Phenanthrene (SIM)	**1400**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 18:48	SN24I21B	CRC
17. Pyrene (SIM)	**1800**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 18:48	SN24I21B	CRC

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Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-005

Order: A22497
Date: 10/03/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**MSD (SB3 (1-3))**	Chain of Custody:	**222244**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	Sample Matrix:	**Soil/Solid**	Collect Time:	**10:50**

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: A22497-005** **Matrix: Soil/Solid**
Method: ASTM D2216-10 **Description: MSD (SB3 (1-3))**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
‡ 1. Percent Moisture (Water Content)	**7**		%	1	1.0	09/23/24	MC240923	09/24/24	MC240923	LJK

Michigan 10 Elements by ICP/MS **Aliquot ID: A22497-005** **Matrix: Soil/Solid**
Method: EPA 0200.2/EPA 6020B **Description: MSD (SB3 (1-3))**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Arsenic	**14000**		µg/kg	100	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
2. Barium	**63000**		µg/kg	1000	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
3. Cadmium	**10000**		µg/kg	50	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
4. Chromium	**27000**		µg/kg	500	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
5. Copper	**28000**		µg/kg	1000	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
6. Lead	**30000**		µg/kg	1000	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
7. Selenium	**9900**		µg/kg	200	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
8. Silver	**9600**		µg/kg	100	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
9. Zinc	**76000**		µg/kg	1000	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS

Mercury by CVAAS **Aliquot ID: A22497-005** **Matrix: Soil/Solid**
Method: EPA 7471B **Description: MSD (SB3 (1-3))**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Mercury	**200**		µg/kg	50	10	09/27/24	PM24I27C	09/30/24	M724I30A	JLH

Volatile Organic Compounds (VOCs) by GC/MS, 5035 **Aliquot ID: A22497-005A** **Matrix: Soil/Solid**
Method: EPA 5035A/EPA 8260D **Description: MSD (SB3 (1-3))**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Acetone	**2200**	V-	µg/kg	1000	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
‡ 2. Acrylonitrile	**3000**		µg/kg	120	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
3. Benzene	**3000**		µg/kg	58	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
4. Bromobenzene	**2900**		µg/kg	100	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
5. Bromochloromethane	**2800**		µg/kg	100	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
6. Bromodichloromethane	**3300**		µg/kg	100	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
7. Bromoform	**3200**		µg/kg	100	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
8. Bromomethane	**2500**		µg/kg	200	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC

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Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-005

Order: A22497
Date: 10/03/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**MSD (SB3 (1-3))**	Chain of Custody:	**222244**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	Sample Matrix:	**Soil/Solid**	Collect Time:	**10:50**

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: A22497-005A** **Matrix: Soil/Solid**
Method: EPA 5035A/EPA 8260D **Description: MSD (SB3 (1-3))**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
9. 2-Butanone	**2500**		µg/kg	750	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
10. n-Butylbenzene	**3000**		µg/kg	58	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
11. sec-Butylbenzene	**3000**		µg/kg	58	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
12. tert-Butylbenzene	**2600**		µg/kg	58	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
13. Carbon Disulfide	**3400**		µg/kg	250	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
14. Carbon Tetrachloride	**3500**		µg/kg	58	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
15. Chlorobenzene	**3000**		µg/kg	58	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
16. Chloroethane	**3100**		µg/kg	250	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
17. Chloroform	**2800**		µg/kg	58	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
18. Chloromethane	**2800**		µg/kg	250	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
19. 2-Chlorotoluene	**2900**		µg/kg	58	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	**3300**	V+	µg/kg	250	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
21. Dibromochloromethane	**3200**		µg/kg	100	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
22. Dibromomethane	**3000**		µg/kg	250	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
23. 1,2-Dichlorobenzene	**3000**		µg/kg	100	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
24. 1,3-Dichlorobenzene	**3000**		µg/kg	100	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
25. 1,4-Dichlorobenzene	**3000**		µg/kg	100	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
26. Dichlorodifluoromethane	**2800**		µg/kg	250	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
27. 1,1-Dichloroethane	**2800**		µg/kg	58	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
28. 1,2-Dichloroethane	**2800**		µg/kg	58	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
29. 1,1-Dichloroethene	**2900**		µg/kg	50	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
30. cis-1,2-Dichloroethene	**2800**		µg/kg	50	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
31. trans-1,2-Dichloroethene	**2900**		µg/kg	50	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
32. 1,2-Dichloropropane	**3000**		µg/kg	58	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
33. cis-1,3-Dichloropropene	**3300**		µg/kg	58	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
34. trans-1,3-Dichloropropene	**3200**		µg/kg	50	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
35. Ethylbenzene	**3100**		µg/kg	58	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
36. Ethylene Dibromide	**2900**		µg/kg	50	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
37. 2-Hexanone	**2800**		µg/kg	2500	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
38. Isopropylbenzene	**3100**		µg/kg	250	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
39. 4-Methyl-2-pentanone	**3000**		µg/kg	2500	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
40. Methylene Chloride	**2400**		µg/kg	120	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
‡ 41. 2-Methylnaphthalene	**3600**	V+ L+	µg/kg	330	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
42. MTBE	**2900**		µg/kg	250	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
43. Naphthalene	**3000**		µg/kg	330	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
44. n-Propylbenzene	**3100**		µg/kg	100	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC

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Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-005

Order: A22497
Date: 10/03/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**MSD (SB3 (1-3))**	Chain of Custody:	**222244**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	Sample Matrix:	**Soil/Solid**	Collect Time:	**10:50**

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: A22497-005A** **Matrix: Soil/Solid**
Method: EPA 5035A/EPA 8260D **Description: MSD (SB3 (1-3))**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
45. Styrene	**2900**		µg/kg	50	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
46. 1,1,1,2-Tetrachloroethane	**3500**		µg/kg	100	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
47. 1,1,2,2-Tetrachloroethane	**3100**		µg/kg	58	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
48. Tetrachloroethene	**3400**		µg/kg	50	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
49. Toluene	**3000**		µg/kg	58	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
50. 1,2,4-Trichlorobenzene	**3000**		µg/kg	250	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
51. 1,1,1-Trichloroethane	**3400**		µg/kg	58	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
52. 1,1,2-Trichloroethane	**3000**		µg/kg	58	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
53. Trichloroethene	**3200**		µg/kg	50	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
54. Trichlorofluoromethane	**3200**		µg/kg	100	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
55. 1,2,3-Trichloropropane	**3000**		µg/kg	120	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
‡ 56. 1,2,3-Trimethylbenzene	**2800**		µg/kg	100	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
57. 1,2,4-Trimethylbenzene	**3000**		µg/kg	100	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
58. 1,3,5-Trimethylbenzene	**2900**		µg/kg	100	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
59. Vinyl Chloride	**3200**		µg/kg	40	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
60. m&p-Xylene	**6000**		µg/kg	120	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
61. o-Xylene	**2900**		µg/kg	58	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC
‡ 62. Xylenes	**8900**		µg/kg	170	1.0	09/26/24	VP24I26A	09/27/24 00:26	VP24I26A	ELC

Polynuclear Aromatic Hydrocarbons (PNAs) **Aliquot ID: A22497-005** **Matrix: Soil/Solid**
Method: EPA 3546/EPA 8270E **Description: MSD (SB3 (1-3))**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Acenaphthene (SIM)	**1000**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 19:15	SN24I21B	CRC
2. Acenaphthylene (SIM)	**1100**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 19:15	SN24I21B	CRC
3. Anthracene (SIM)	**1100**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 19:15	SN24I21B	CRC
4. Benzo(a)anthracene (SIM)	**1500**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 19:15	SN24I21B	CRC
5. Benzo(a)pyrene (SIM)	**1800**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 19:15	SN24I21B	CRC
6. Benzo(b)fluoranthene (SIM)	**2000**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 19:15	SN24I21B	CRC
7. Benzo(ghi)perylene (SIM)	**1500**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 19:15	SN24I21B	CRC
8. Benzo(k)fluoranthene (SIM)	**1600**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 19:15	SN24I21B	CRC
9. Chrysene (SIM)	**1700**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 19:15	SN24I21B	CRC
10. Dibenzo(a,h)anthracene (SIM)	**1300**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 19:15	SN24I21B	CRC
11. Fluoranthene (SIM)	**2300**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 19:15	SN24I21B	CRC
12. Fluorene (SIM)	**1100**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 19:15	SN24I21B	CRC
13. Indeno(1,2,3-cd)pyrene (SIM)	**1600**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 19:15	SN24I21B	CRC

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Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-005

Order: A22497
Date: 10/03/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**MSD (SB3 (1-3))**	Chain of Custody:	**222244**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	Sample Matrix:	**Soil/Solid**	Collect Time:	**10:50**

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: A22497-005** **Matrix: Soil/Solid**
Method: EPA 3546/EPA 8270E **Description: MSD (SB3 (1-3))**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Analysis Init.
14. 2-Methylnaphthalene (SIM)	**1000**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 19:15	SN24I21B	CRC
15. Naphthalene (SIM)	**920**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 19:15	SN24I21B	CRC
16. Phenanthrene (SIM)	**1600**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 19:15	SN24I21B	CRC
17. Pyrene (SIM)	**2100**		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 19:15	SN24I21B	CRC

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Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-007

Order: A22497
Date: 10/03/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**SB4 (5-7)**	Chain of Custody:	**222244**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	Sample Matrix:	**Soil/Solid**	Collect Time:	**12:50**

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: A22497-007** **Matrix: Soil/Solid**
Method: ASTM D2216-10 **Description: SB4 (5-7)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
‡ 1. Percent Moisture (Water Content)	**10**		%	1	1.0	09/23/24	MC240923	09/24/24	MC240923	LJK

Michigan 10 Elements by ICP/MS **Aliquot ID: A22497-007** **Matrix: Soil/Solid**
Method: EPA 0200.2/EPA 6020B **Description: SB4 (5-7)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Arsenic	**6000**		µg/kg	100	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
2. Barium	**17000**		µg/kg	1000	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
3. Cadmium	**99**		µg/kg	50	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
4. Chromium	**7300**		µg/kg	500	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
5. Copper	**11000**		µg/kg	1000	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
6. Lead	**5100**		µg/kg	1000	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
7. Selenium	U		µg/kg	200	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
8. Silver	U		µg/kg	100	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
9. Zinc	**26000**		µg/kg	1000	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS

Mercury by CVAAS **Aliquot ID: A22497-007** **Matrix: Soil/Solid**
Method: EPA 7471B **Description: SB4 (5-7)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Mercury	U		µg/kg	50	10	09/27/24	PM24I27C	09/30/24	M724I30A	JLH

Volatile Organic Compounds (VOCs) by GC/MS, 5035 **Aliquot ID: A22497-007A** **Matrix: Soil/Solid**
Method: EPA 5035A/EPA 8260D **Description: SB4 (5-7)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Acetone	U	V-	µg/kg	1000	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
‡ 2. Acrylonitrile	U		µg/kg	120	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
3. Benzene	U		µg/kg	60	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
4. Bromobenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
5. Bromochloromethane	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
6. Bromodichloromethane	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
7. Bromoform	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
8. Bromomethane	U		µg/kg	200	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC

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Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-007

Order: A22497
Date: 10/03/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**SB4 (5-7)**	Chain of Custody:	**222244**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	Sample Matrix:	**Soil/Solid**	Collect Time:	**12:50**

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: A22497-007A** **Matrix: Soil/Solid**
Method: EPA 5035A/EPA 8260D **Description: SB4 (5-7)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
9. 2-Butanone	U		µg/kg	750	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
10. n-Butylbenzene	U		µg/kg	60	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
11. sec-Butylbenzene	U		µg/kg	60	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
12. tert-Butylbenzene	U		µg/kg	60	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
13. Carbon Disulfide	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
14. Carbon Tetrachloride	U		µg/kg	60	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
15. Chlorobenzene	U		µg/kg	60	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
16. Chloroethane	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
17. Chloroform	U		µg/kg	60	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
18. Chloromethane	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
19. 2-Chlorotoluene	U		µg/kg	60	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U	V+	µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
21. Dibromochloromethane	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
22. Dibromomethane	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
23. 1,2-Dichlorobenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
24. 1,3-Dichlorobenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
25. 1,4-Dichlorobenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
26. Dichlorodifluoromethane	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
27. 1,1-Dichloroethane	U		µg/kg	60	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
28. 1,2-Dichloroethane	U		µg/kg	60	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
29. 1,1-Dichloroethene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
30. cis-1,2-Dichloroethene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
31. trans-1,2-Dichloroethene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
32. 1,2-Dichloropropane	U		µg/kg	60	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
33. cis-1,3-Dichloropropene	U		µg/kg	60	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
34. trans-1,3-Dichloropropene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
35. Ethylbenzene	U		µg/kg	60	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
36. Ethylene Dibromide	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
37. 2-Hexanone	U		µg/kg	2500	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
38. Isopropylbenzene	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
39. 4-Methyl-2-pentanone	U		µg/kg	2500	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
40. Methylene Chloride	U		µg/kg	120	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
‡ 41. 2-Methylnaphthalene	U	V+ L+	µg/kg	330	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
42. MTBE	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
43. Naphthalene	U		µg/kg	330	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
44. n-Propylbenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC

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Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-007

Order: A22497
Date: 10/03/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**SB4 (5-7)**	Chain of Custody:	**222244**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	Sample Matrix:	**Soil/Solid**	Collect Time:	**12:50**

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: A22497-007A** **Matrix: Soil/Solid**
Method: EPA 5035A/EPA 8260D **Description: SB4 (5-7)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
45. Styrene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
46. 1,1,1,2-Tetrachloroethane	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
47. 1,1,2,2-Tetrachloroethane	U		µg/kg	60	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
48. Tetrachloroethene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
49. Toluene	U		µg/kg	60	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
50. 1,2,4-Trichlorobenzene	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
51. 1,1,1-Trichloroethane	U		µg/kg	60	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
52. 1,1,2-Trichloroethane	U		µg/kg	60	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
53. Trichloroethene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
54. Trichlorofluoromethane	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
55. 1,2,3-Trichloropropane	U		µg/kg	120	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
57. 1,2,4-Trimethylbenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
58. 1,3,5-Trimethylbenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
59. Vinyl Chloride	U		µg/kg	40	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
60. m&p-Xylene	U		µg/kg	120	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
61. o-Xylene	U		µg/kg	60	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC
‡ 62. Xylenes	U		µg/kg	180	1.0	09/26/24	VP24I26A	09/26/24 21:34	VP24I26A	ELC

Polynuclear Aromatic Hydrocarbons (PNAs) **Aliquot ID: A22497-007** **Matrix: Soil/Solid**
Method: EPA 3546/EPA 8270E **Description: SB4 (5-7)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Acenaphthene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 23:19	SN24I21B	CRC
2. Acenaphthylene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 23:19	SN24I21B	CRC
3. Anthracene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 23:19	SN24I21B	CRC
4. Benzo(a)anthracene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 23:19	SN24I21B	CRC
5. Benzo(a)pyrene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 23:19	SN24I21B	CRC
6. Benzo(b)fluoranthene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 23:19	SN24I21B	CRC
7. Benzo(ghi)perylene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 23:19	SN24I21B	CRC
8. Benzo(k)fluoranthene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 23:19	SN24I21B	CRC
9. Chrysene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 23:19	SN24I21B	CRC
10. Dibenzo(a,h)anthracene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 23:19	SN24I21B	CRC
11. Fluoranthene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 23:19	SN24I21B	CRC
12. Fluorene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 23:19	SN24I21B	CRC
13. Indeno(1,2,3-cd)pyrene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 23:19	SN24I21B	CRC

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Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-007

Order: A22497
Date: 10/03/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**SB4 (5-7)**	Chain of Custody:	**222244**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	Sample Matrix:	**Soil/Solid**	Collect Time:	**12:50**

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: A22497-007** **Matrix: Soil/Solid**
Method: EPA 3546/EPA 8270E **Description: SB4 (5-7)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
14. 2-Methylnaphthalene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 23:19	SN24I21B	CRC
15. Naphthalene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 23:19	SN24I21B	CRC
16. Phenanthrene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 23:19	SN24I21B	CRC
17. Pyrene (SIM)	U		µg/kg	330	1.0	09/19/24	PS24I19B	09/21/24 23:19	SN24I21B	CRC

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Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-009

Order: A22497
Date: 10/03/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**SB5 (11-13)**	Chain of Custody:	**222244**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	Sample Matrix:	**Soil/Solid**	Collect Time:	**12:15**

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: A22497-009** **Matrix: Soil/Solid**
Method: ASTM D2216-10 **Description: SB5 (11-13)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
‡ 1. Percent Moisture (Water Content)	**5**		%	1	1.0	09/23/24	MC240923	09/24/24	MC240923	LJK

Michigan 10 Elements by ICP/MS **Aliquot ID: A22497-009** **Matrix: Soil/Solid**
Method: EPA 0200.2/EPA 6020B **Description: SB5 (11-13)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Arsenic	**4600**		µg/kg	100	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
2. Barium	**9800**		µg/kg	1000	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
3. Cadmium	**140**		µg/kg	50	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
4. Chromium	**6100**		µg/kg	500	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
5. Copper	**7600**		µg/kg	1000	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
6. Lead	**4200**		µg/kg	1000	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
7. Selenium	U		µg/kg	200	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
8. Silver	U		µg/kg	100	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
9. Zinc	**29000**		µg/kg	1000	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS

Mercury by CVAAS **Aliquot ID: A22497-009** **Matrix: Soil/Solid**
Method: EPA 7471B **Description: SB5 (11-13)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Mercury	U		µg/kg	50	10	09/27/24	PM24I27C	09/30/24	M724I30A	JLH

Volatile Organic Compounds (VOCs) by GC/MS, 5035 **Aliquot ID: A22497-009A** **Matrix: Soil/Solid**
Method: EPA 5035A/EPA 8260D **Description: SB5 (11-13)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Acetone	U	V-	µg/kg	1000	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
‡ 2. Acrylonitrile	U		µg/kg	110	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
3. Benzene	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
4. Bromobenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
5. Bromochloromethane	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
6. Bromodichloromethane	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
7. Bromoform	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
8. Bromomethane	U		µg/kg	200	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC

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Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-009

Order: A22497
Date: 10/03/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**SB5 (11-13)**	Chain of Custody:	**222244**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	Sample Matrix:	**Soil/Solid**	Collect Time:	**12:15**

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: A22497-009A** **Matrix: Soil/Solid**
Method: EPA 5035A/EPA 8260D **Description: SB5 (11-13)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
9. 2-Butanone	U		µg/kg	750	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
10. n-Butylbenzene	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
11. sec-Butylbenzene	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
12. tert-Butylbenzene	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
13. Carbon Disulfide	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
14. Carbon Tetrachloride	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
15. Chlorobenzene	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
16. Chloroethane	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
17. Chloroform	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
18. Chloromethane	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
19. 2-Chlorotoluene	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U	V+	µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
21. Dibromochloromethane	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
22. Dibromomethane	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
23. 1,2-Dichlorobenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
24. 1,3-Dichlorobenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
25. 1,4-Dichlorobenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
26. Dichlorodifluoromethane	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
27. 1,1-Dichloroethane	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
28. 1,2-Dichloroethane	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
29. 1,1-Dichloroethene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
30. cis-1,2-Dichloroethene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
31. trans-1,2-Dichloroethene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
32. 1,2-Dichloropropane	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
33. cis-1,3-Dichloropropene	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
34. trans-1,3-Dichloropropene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
35. Ethylbenzene	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
36. Ethylene Dibromide	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
37. 2-Hexanone	U		µg/kg	2500	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
38. Isopropylbenzene	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
39. 4-Methyl-2-pentanone	U		µg/kg	2500	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
40. Methylene Chloride	U		µg/kg	110	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
‡ 41. 2-Methylnaphthalene	U	V+ L+	µg/kg	330	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
42. MTBE	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
43. Naphthalene	U		µg/kg	330	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
44. n-Propylbenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC

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Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-009

Order: A22497
Date: 10/03/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**SB5 (11-13)**	Chain of Custody:	**222244**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	Sample Matrix:	**Soil/Solid**	Collect Time:	**12:15**

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: A22497-009A** **Matrix: Soil/Solid**
Method: EPA 5035A/EPA 8260D **Description: SB5 (11-13)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
45. Styrene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
46. 1,1,1,2-Tetrachloroethane	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
47. 1,1,2,2-Tetrachloroethane	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
48. Tetrachloroethene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
49. Toluene	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
50. 1,2,4-Trichlorobenzene	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
51. 1,1,1-Trichloroethane	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
52. 1,1,2-Trichloroethane	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
53. Trichloroethene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
54. Trichlorofluoromethane	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
55. 1,2,3-Trichloropropane	U		µg/kg	110	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
57. 1,2,4-Trimethylbenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
58. 1,3,5-Trimethylbenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
59. Vinyl Chloride	U		µg/kg	40	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
60. m&p-Xylene	U		µg/kg	110	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
61. o-Xylene	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC
‡ 62. Xylenes	U		µg/kg	170	1.0	09/26/24	VP24I26A	09/26/24 22:23	VP24I26A	ELC

Polynuclear Aromatic Hydrocarbons (PNAs) **Aliquot ID: A22497-009** **Matrix: Soil/Solid**
Method: EPA 3546/EPA 8270E **Description: SB5 (11-13)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Acenaphthene (SIM)	U		µg/kg	330	1.0	09/20/24	PS24I20C	09/22/24 08:24	SN24I21C	CRC
2. Acenaphthylene (SIM)	U		µg/kg	330	1.0	09/20/24	PS24I20C	09/22/24 08:24	SN24I21C	CRC
3. Anthracene (SIM)	U		µg/kg	330	1.0	09/20/24	PS24I20C	09/22/24 08:24	SN24I21C	CRC
4. Benzo(a)anthracene (SIM)	U		µg/kg	330	1.0	09/20/24	PS24I20C	09/22/24 08:24	SN24I21C	CRC
5. Benzo(a)pyrene (SIM)	U		µg/kg	330	1.0	09/20/24	PS24I20C	09/22/24 08:24	SN24I21C	CRC
6. Benzo(b)fluoranthene (SIM)	U		µg/kg	330	1.0	09/20/24	PS24I20C	09/22/24 08:24	SN24I21C	CRC
7. Benzo(ghi)perylene (SIM)	U		µg/kg	330	1.0	09/20/24	PS24I20C	09/22/24 08:24	SN24I21C	CRC
8. Benzo(k)fluoranthene (SIM)	U		µg/kg	330	1.0	09/20/24	PS24I20C	09/22/24 08:24	SN24I21C	CRC
9. Chrysene (SIM)	U		µg/kg	330	1.0	09/20/24	PS24I20C	09/22/24 08:24	SN24I21C	CRC
10. Dibenzo(a,h)anthracene (SIM)	U		µg/kg	330	1.0	09/20/24	PS24I20C	09/22/24 08:24	SN24I21C	CRC
11. Fluoranthene (SIM)	U		µg/kg	330	1.0	09/20/24	PS24I20C	09/22/24 08:24	SN24I21C	CRC
12. Fluorene (SIM)	U		µg/kg	330	1.0	09/20/24	PS24I20C	09/22/24 08:24	SN24I21C	CRC
13. Indeno(1,2,3-cd)pyrene (SIM)	U		µg/kg	330	1.0	09/20/24	PS24I20C	09/22/24 08:24	SN24I21C	CRC

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Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-009

Order: A22497
Date: 10/03/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**SB5 (11-13)**	Chain of Custody:	**222244**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	Sample Matrix:	**Soil/Solid**	Collect Time:	**12:15**

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: A22497-009** **Matrix: Soil/Solid**
Method: EPA 3546/EPA 8270E **Description: SB5 (11-13)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
14. 2-Methylnaphthalene (SIM)	U		µg/kg	330	1.0	09/20/24	PS24I20C	09/22/24 08:24	SN24I21C	CRC
15. Naphthalene (SIM)	U		µg/kg	330	1.0	09/20/24	PS24I20C	09/22/24 08:24	SN24I21C	CRC
16. Phenanthrene (SIM)	U		µg/kg	330	1.0	09/20/24	PS24I20C	09/22/24 08:24	SN24I21C	CRC
17. Pyrene (SIM)	U		µg/kg	330	1.0	09/20/24	PS24I20C	09/22/24 08:24	SN24I21C	CRC

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Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-010

Order: A22497
Date: 10/03/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**Soil Dup**	Chain of Custody:	**222244**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	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: A22497-010** **Matrix: Soil/Solid**
Method: ASTM D2216-10 **Description: Soil Dup**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
‡ 1. Percent Moisture (Water Content)	**7**		%	1	1.0	09/23/24	MC240923	09/24/24	MC240923	LJK

Michigan 10 Elements by ICP/MS **Aliquot ID: A22497-010** **Matrix: Soil/Solid**
Method: EPA 0200.2/EPA 6020B **Description: Soil Dup**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Arsenic	**9800**		µg/kg	100	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
2. Barium	**12000**		µg/kg	1000	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
3. Cadmium	**200**		µg/kg	50	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
4. Chromium	**18000**		µg/kg	500	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
5. Copper	**15000**		µg/kg	1000	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
6. Lead	**5700**		µg/kg	1000	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
7. Selenium	U		µg/kg	200	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
8. Silver	U		µg/kg	100	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS
9. Zinc	**40000**		µg/kg	1000	20	09/30/24	PT24I30C	09/30/24	T424I30B	JJS

Mercury by CVAAS **Aliquot ID: A22497-010** **Matrix: Soil/Solid**
Method: EPA 7471B **Description: Soil Dup**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Mercury	U		µg/kg	50	10	09/27/24	PM24I27C	09/30/24	M724I30A	JLH

Volatile Organic Compounds (VOCs) by GC/MS, 5035 **Aliquot ID: A22497-010A** **Matrix: Soil/Solid**
Method: EPA 5035A/EPA 8260D **Description: Soil Dup**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Acetone	U	V-	µg/kg	1000	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
‡ 2. Acrylonitrile	U		µg/kg	110	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
3. Benzene	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
4. Bromobenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
5. Bromochloromethane	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
6. Bromodichloromethane	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
7. Bromoform	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
8. Bromomethane	U		µg/kg	200	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC

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Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-010

Order: A22497
Date: 10/03/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**Soil Dup**	Chain of Custody:	**222244**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	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: A22497-010A** **Matrix: Soil/Solid**
Method: EPA 5035A/EPA 8260D **Description: Soil Dup**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
9. 2-Butanone	U		µg/kg	750	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
10. n-Butylbenzene	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
11. sec-Butylbenzene	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
12. tert-Butylbenzene	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
13. Carbon Disulfide	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
14. Carbon Tetrachloride	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
15. Chlorobenzene	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
16. Chloroethane	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
17. Chloroform	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
18. Chloromethane	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
19. 2-Chlorotoluene	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U	V+	µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
21. Dibromochloromethane	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
22. Dibromomethane	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
23. 1,2-Dichlorobenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
24. 1,3-Dichlorobenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
25. 1,4-Dichlorobenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
26. Dichlorodifluoromethane	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
27. 1,1-Dichloroethane	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
28. 1,2-Dichloroethane	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
29. 1,1-Dichloroethene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
30. cis-1,2-Dichloroethene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
31. trans-1,2-Dichloroethene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
32. 1,2-Dichloropropane	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
33. cis-1,3-Dichloropropene	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
34. trans-1,3-Dichloropropene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
35. Ethylbenzene	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
36. Ethylene Dibromide	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
37. 2-Hexanone	U		µg/kg	2500	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
38. Isopropylbenzene	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
39. 4-Methyl-2-pentanone	U		µg/kg	2500	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
40. Methylene Chloride	U		µg/kg	110	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
‡ 41. 2-Methylnaphthalene	U	V+ L+	µg/kg	330	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
42. MTBE	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
43. Naphthalene	U		µg/kg	330	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
44. n-Propylbenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC

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Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-010

Order: A22497
Date: 10/03/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**Soil Dup**	Chain of Custody:	**222244**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	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: A22497-010A** **Matrix: Soil/Solid**
Method: EPA 5035A/EPA 8260D **Description: Soil Dup**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
45. Styrene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
46. 1,1,1,2-Tetrachloroethane	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
47. 1,1,2,2-Tetrachloroethane	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
48. Tetrachloroethene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
49. Toluene	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
50. 1,2,4-Trichlorobenzene	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
51. 1,1,1-Trichloroethane	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
52. 1,1,2-Trichloroethane	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
53. Trichloroethene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
54. Trichlorofluoromethane	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
55. 1,2,3-Trichloropropane	U		µg/kg	110	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
57. 1,2,4-Trimethylbenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
58. 1,3,5-Trimethylbenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
59. Vinyl Chloride	U		µg/kg	40	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
60. m&p-Xylene	U		µg/kg	110	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
61. o-Xylene	U		µg/kg	57	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC
‡ 62. Xylenes	U		µg/kg	170	1.0	09/26/24	VP24I26A	09/26/24 22:48	VP24I26A	ELC

Polynuclear Aromatic Hydrocarbons (PNAs) **Aliquot ID: A22497-010** **Matrix: Soil/Solid**
Method: EPA 3546/EPA 8270E **Description: Soil Dup**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Acenaphthene (SIM)	U		µg/kg	330	1.0	09/20/24	PS24I20C	09/22/24 08:51	SN24I21C	CRC
2. Acenaphthylene (SIM)	U		µg/kg	330	1.0	09/20/24	PS24I20C	09/22/24 08:51	SN24I21C	CRC
3. Anthracene (SIM)	U		µg/kg	330	1.0	09/20/24	PS24I20C	09/22/24 08:51	SN24I21C	CRC
4. Benzo(a)anthracene (SIM)	U		µg/kg	330	1.0	09/20/24	PS24I20C	09/22/24 08:51	SN24I21C	CRC
5. Benzo(a)pyrene (SIM)	U		µg/kg	330	1.0	09/20/24	PS24I20C	09/22/24 08:51	SN24I21C	CRC
6. Benzo(b)fluoranthene (SIM)	U		µg/kg	330	1.0	09/20/24	PS24I20C	09/22/24 08:51	SN24I21C	CRC
7. Benzo(ghi)perylene (SIM)	U		µg/kg	330	1.0	09/20/24	PS24I20C	09/22/24 08:51	SN24I21C	CRC
8. Benzo(k)fluoranthene (SIM)	U		µg/kg	330	1.0	09/20/24	PS24I20C	09/22/24 08:51	SN24I21C	CRC
9. Chrysene (SIM)	U		µg/kg	330	1.0	09/20/24	PS24I20C	09/22/24 08:51	SN24I21C	CRC
10. Dibenzo(a,h)anthracene (SIM)	U		µg/kg	330	1.0	09/20/24	PS24I20C	09/22/24 08:51	SN24I21C	CRC
11. Fluoranthene (SIM)	U		µg/kg	330	1.0	09/20/24	PS24I20C	09/22/24 08:51	SN24I21C	CRC
12. Fluorene (SIM)	U		µg/kg	330	1.0	09/20/24	PS24I20C	09/22/24 08:51	SN24I21C	CRC
13. Indeno(1,2,3-cd)pyrene (SIM)	U		µg/kg	330	1.0	09/20/24	PS24I20C	09/22/24 08:51	SN24I21C	CRC

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Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-010

Order: A22497
Date: 10/03/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**Soil Dup**	Chain of Custody:	**222244**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	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: A22497-010** **Matrix: Soil/Solid**
Method: EPA 3546/EPA 8270E **Description: Soil Dup**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
14. 2-Methylnaphthalene (SIM)	U		µg/kg	330	1.0	09/20/24	PS24I20C	09/22/24 08:51	SN24I21C	CRC
15. Naphthalene (SIM)	U		µg/kg	330	1.0	09/20/24	PS24I20C	09/22/24 08:51	SN24I21C	CRC
16. Phenanthrene (SIM)	U		µg/kg	330	1.0	09/20/24	PS24I20C	09/22/24 08:51	SN24I21C	CRC
17. Pyrene (SIM)	U		µg/kg	330	1.0	09/20/24	PS24I20C	09/22/24 08:51	SN24I21C	CRC

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Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-011

Order: A22497
Date: 10/03/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**Meth Blank**	Chain of Custody:	**222245**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	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: A22497-011** **Matrix: Blank: Methanol**
Method: EPA 5035A/EPA 8260D **Description: Meth Blank**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Acetone	U	V-	µg/kg	1000	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
‡ 2. Acrylonitrile	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
3. Benzene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
4. Bromobenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
5. Bromochloromethane	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
6. Bromodichloromethane	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
7. Bromoform	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
8. Bromomethane	U		µg/kg	200	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
9. 2-Butanone	U		µg/kg	750	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
10. n-Butylbenzene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
11. sec-Butylbenzene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
12. tert-Butylbenzene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
13. Carbon Disulfide	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
14. Carbon Tetrachloride	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
15. Chlorobenzene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
16. Chloroethane	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
17. Chloroform	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
18. Chloromethane	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
19. 2-Chlorotoluene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U	V+	µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
21. Dibromochloromethane	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
22. Dibromomethane	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
23. 1,2-Dichlorobenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
24. 1,3-Dichlorobenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
25. 1,4-Dichlorobenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
26. Dichlorodifluoromethane	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
27. 1,1-Dichloroethane	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
28. 1,2-Dichloroethane	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
29. 1,1-Dichloroethene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
30. cis-1,2-Dichloroethene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
31. trans-1,2-Dichloroethene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
32. 1,2-Dichloropropane	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
33. cis-1,3-Dichloropropene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
34. trans-1,3-Dichloropropene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
35. Ethylbenzene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
36. Ethylene Dibromide	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC

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Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-011

Order: A22497
Date: 10/03/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**Meth Blank**	Chain of Custody:	**222245**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	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: A22497-011** **Matrix: Blank: Methanol**
Method: EPA 5035A/EPA 8260D **Description: Meth Blank**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
37. 2-Hexanone	U		µg/kg	2500	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
38. Isopropylbenzene	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
39. 4-Methyl-2-pentanone	U		µg/kg	2500	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
40. Methylene Chloride	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
‡ 41. 2-Methylnaphthalene	U	V+ L+	µg/kg	330	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
42. MTBE	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
43. Naphthalene	U		µg/kg	330	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
44. n-Propylbenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
45. Styrene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
46. 1,1,1,2-Tetrachloroethane	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
47. 1,1,2,2-Tetrachloroethane	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
48. Tetrachloroethene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
49. Toluene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
50. 1,2,4-Trichlorobenzene	U		µg/kg	250	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
51. 1,1,1-Trichloroethane	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
52. 1,1,2-Trichloroethane	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
53. Trichloroethene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
54. Trichlorofluoromethane	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
55. 1,2,3-Trichloropropane	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
57. 1,2,4-Trimethylbenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
58. 1,3,5-Trimethylbenzene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
59. Vinyl Chloride	U		µg/kg	40	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
60. m&p-Xylene	U		µg/kg	100	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
61. o-Xylene	U		µg/kg	50	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC
‡ 62. Xylenes	U		µg/kg	150	1.0	09/26/24	VP24I26A	09/26/24 16:40	VP24I26A	ELC

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Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-012

Order: A22497
Date: 10/03/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**Trip Blank**	Chain of Custody:	**222245**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	Sample Matrix:	**Blank: Trip**	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: A22497-012** **Matrix: Blank: Trip**
Method: EPA 5030C/EPA 8260D **Description: Trip Blank**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Acetone	U		µg/L	50	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
3. Benzene	U		µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
4. Bromobenzene	U		µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
5. Bromochloromethane	U		µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
6. Bromodichloromethane	U	V+ L+	µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
‡ 7. Bromoform (SIM)	U	V+ L+	µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
8. Bromomethane	U		µg/L	5.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
9. 2-Butanone	U		µg/L	25	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
10. n-Butylbenzene	U		µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
11. sec-Butylbenzene	U		µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
12. tert-Butylbenzene	U		µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
13. Carbon Disulfide	U	V+ L+	µg/L	5.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
14. Carbon Tetrachloride	U	V+	µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
15. Chlorobenzene	U		µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
16. Chloroethane	U		µg/L	5.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
17. Chloroform	U		µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
18. Chloromethane	U		µg/L	5.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U	V+	µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
21. Dibromochloromethane	U	V+ L+	µg/L	5.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
22. Dibromomethane	U		µg/L	5.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
26. Dichlorodifluoromethane	U	V+	µg/L	5.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
33. cis-1,3-Dichloropropene	U	V+ L+	µg/L	0.50	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ

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Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-012

Order: A22497
Date: 10/03/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**Trip Blank**	Chain of Custody:	**222245**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	Sample Matrix:	**Blank: Trip**	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: A22497-012** **Matrix: Blank: Trip**
Method: EPA 5030C/EPA 8260D **Description: Trip Blank**

						Preparation		Analysis		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	P. Date	P. Batch	A. Date	A. Batch	Init.
34. trans-1,3-Dichloropropene	U	V+ L+	µg/L	0.50	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
35. Ethylbenzene	U		µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
36. Ethylene Dibromide	U	V+	µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
37. 2-Hexanone	U		µg/L	50	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
38. Isopropylbenzene	U		µg/L	5.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
40. Methylene Chloride	U		µg/L	5.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
42. MTBE	U		µg/L	5.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
43. Naphthalene	U		µg/L	5.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
44. n-Propylbenzene	U		µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
45. Styrene	U		µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
46. 1,1,1,2-Tetrachloroethane	U	V+ L+	µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
48. Tetrachloroethene	U		µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
49. Toluene	U		µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
53. Trichloroethene	U		µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
59. Vinyl Chloride	U		µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
60. m&p-Xylene	U		µg/L	2.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
61. o-Xylene	U		µg/L	1.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ
‡ 62. Xylenes	U		µg/L	3.0	1.0	09/19/24	VB24I19A	09/19/24 13:31	VB24I19A	ZSZ

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:

*****	:	Duplicate analysis not within control limits.
F-	:	Recovery from the spiked aliquot exceeds the lower control limit (matrix spike or matrix spike duplicate).
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 lower control limit. Results may be biased low.
V+	:	Recovery in the associated continuing calibration verification sample (CCV) exceeds the upper control limit. Results may be biased high.

Analysis Locations:

All analyses performed in Holt.

NELAP ACCREDITED TNI LABORATORY

Accreditation Number(s):

MI001292024-1 (UT)

A22497-003: Original Sample (OS)/Matrix Spike (MS)/Matrix Spike Duplicate (MSD) — EPA 7471B

Run Time: A22497-003 (OS): 09/30/24 11:03 [M724I30A] A22497-004 (MS): 09/30/24 10:37 [M724I30A] A22497-005 (MSD): 09/30/24 10:38 [M724I30A]

Analyte	Original Result	MS Spike Amount	MS Result	MS Rec.	Rec. Limits	MS Qualifier	MSD Spike Amount	MSD Result	MSD Rec.	MSD Qualifier	RPD	RPD Limits	RPD Qualifier
	µg/kg (dry wt)	µg/kg (dry wt)	µg/kg (dry wt)	%	%		µg/kg (dry wt)	µg/kg (dry wt)	%		%	%	
Mercury	U	179	189	106	70 - 130		188	196	104		1	20	

A22497-003: Original Sample (OS)/Matrix Spike (MS)/Matrix Spike Duplicate (MSD) — EPA 6020B

Run Time: A22497-003 (OS): 09/30/24 15:14 [T424I30B] A22497-004 (MS): 09/30/24 15:08 [T424I30B] A22497-005 (MSD): 09/30/24 15:09 [T424I30B]

Analyte	Original Result	MS Spike Amount	MS Result	MS Rec.	Rec. Limits	MS Qualifier	MSD Spike Amount	MSD Result	MSD Rec.	MSD Qualifier	RPD	RPD Limits	RPD Qualifier
	µg/kg (dry wt)	µg/kg (dry wt)	µg/kg (dry wt)	%	%		µg/kg (dry wt)	µg/kg (dry wt)	%		%	%	
Arsenic	4270	10000	15000	107	70 - 130		10000	14100	98		9	20	
Barium	14500	50000	67900	107	70 - 130		50000	62500	96		11	20	
Cadmium	136	10000	9880	97	70 - 130		10000	10000	99		1	20	
Chromium	5870	20000	29000	116	70 - 130		20000	27200	107		8	20	
Copper	8090	20000	30700	113	70 - 130		20000	28300	101		11	20	
Lead	28000	20000	32200	21	70 - 130	*	20000	30200	11	*	63	20	*
Selenium	U	10000	9790	98	70 - 130		10000	9930	99		1	20	
Silver	U	10000	9550	95	70 - 130		10000	9610	96		1	20	
Zinc	21200	50000	80100	118	70 - 130		50000	75800	109		8	20	

A22497-003: Original Sample (OS)/Matrix Spike (MS)/Matrix Spike Duplicate (MSD) — EPA 8270E

Run Time: A22497-003 (OS): 09/21/24 22:24 [SN24I21B] A22497-004 (MS): 09/21/24 18:48 [SN24I21B] A22497-005 (MSD): 09/21/24 19:15 [SN24I21B]

Analyte	Original Result	MS Spike Amount	MS Result	MS Rec.	Rec. Limits	MS Qualifier	MSD Spike Amount	MSD Result	MSD Rec.	MSD Qualifier	RPD	RPD Limits	RPD Qualifier
	µg/kg (dry wt)	µg/kg (dry wt)	µg/kg (dry wt)	%	%		µg/kg (dry wt)	µg/kg (dry wt)	%		%	%	
Acenaphthene (SIM)	U	1430	1140	77	35 - 93		1430	1010	68		13	30	
Acenaphthylene (SIM)	U	1430	1220	84	33 - 100		1430	1090	75		11	30	
Anthracene (SIM)	U	1430	1210	75	43 - 91		1430	1140	70		7	30	
Benzo(a)anthracene (SIM)	584	1430	1430	59	47 - 102		1430	1530	66		11	30	
Benzo(a)pyrene (SIM)	626	1430	1660	72	45 - 117		1430	1810	83		13	30	
Benzo(b)fluoranthene (SIM)	961	1430	1800	59	48 - 121		1430	2000	73		21	30	
Benzo(ghi)perylene (SIM)	404	1430	1430	72	48 - 111		1430	1520	78		8	30	
Benzo(k)fluoranthene (SIM)	345	1430	1470	79	52 - 117		1430	1610	88		12	30	
Chrysene (SIM)	676	1430	1500	58	51 - 108		1430	1680	70		20	30	

A22497-003: Original Sample (OS)/Matrix Spike (MS)/Matrix Spike Duplicate (MSD)

EPA 8270E

Run Time: A22497-003 (OS): 09/21/24 22:24 [SN24I21B] A22497-004 (MS): 09/21/24 18:48 [SN24I21B] A22497-005 (MSD): 09/21/24 19:15 [SN24I21B]

Analyte	Original Result	MS Spike Amount	MS Result	MS Rec.	Rec. Limits	MS Qualifier	MSD Spike Amount	MSD Result	MSD Rec.	MSD Qualifier	RPD	RPD Limits	RPD Qualifier
	µg/kg (dry wt)	µg/kg (dry wt)	µg/kg (dry wt)	%	%		µg/kg (dry wt)	µg/kg (dry wt)	%		%	%	
Dibenzo(a,h)anthracene (SIM)	U	1430	1320	84	51 - 113		1430	1310	83		1	30	
Fluoranthene (SIM)	1550	1430	1940	27	50 - 101	*	1430	2340	55		68	30	*
Fluorene (SIM)	U	1430	1200	81	40 - 97		1430	1090	73		10	30	
Indeno(1,2,3-cd)pyrene (SIM)	481	1430	1700	85	54 - 122		1430	1610	79		8	30	
2-Methylnaphthalene (SIM)	U	1430	1060	74	30 - 95		1430	1010	71		5	30	
Naphthalene (SIM)	U	1430	905	63	27 - 87		1430	915	64		1	30	
Phenanthrene (SIM)	765	1430	1430	46	41 - 92		1430	1610	59		24	30	
Pyrene (SIM)	1130	1430	1810	47	46 - 109		1430	2070	65		32	30	*

A22497-003A: Original Sample (OS)/Matrix Spike (MS)/Matrix Spike Duplicate (MSD)

EPA 8260D

Run Time: A22497-003A (OS): 09/26/24 23:37 [VP24I26A] A22497-004A (MS): 09/27/24 00:01 [VP24I26A] A22497-005A (MSD): 09/27/24 00:26 [VP24I26A]

Analyte	Original Result	MS Spike Amount	MS Result	MS Rec.	Rec. Limits	MS Qualifier	MSD Spike Amount	MSD Result	MSD Rec.	MSD Qualifier	RPD	RPD Limits	RPD Qualifier
	µg/kg (dry wt)	µg/kg (dry wt)	µg/kg (dry wt)	%	%		µg/kg (dry wt)	µg/kg (dry wt)	%		%	%	
Acetone	U	2920	2180	75	50 - 149		2920	2230	76		2	20	
Acrylonitrile	U	2920	2880	99	70 - 130		2920	2950	101		3	20	
Benzene	U	2920	2970	102	75 - 125		2920	3030	104		2	20	
Bromobenzene	U	2920	2910	100	70 - 120		2920	2940	101		1	20	
Bromochloromethane	U	2920	2810	96	70 - 125		2920	2760	95		2	20	
Bromodichloromethane	U	2920	3250	111	70 - 130		2920	3290	113		1	20	
Bromoform	U	2920	3190	109	70 - 130		2920	3240	111		2	20	
Bromomethane	U	2920	2420	83	66 - 134		2920	2540	87		5	20	
2-Butanone	U	2920	2440	84	67 - 131		2920	2490	85		2	20	
n-Butylbenzene	U	2920	2860	98	70 - 130		2920	2990	103		5	20	
sec-Butylbenzene	U	2920	2980	102	70 - 130		2920	3050	105		2	20	
tert-Butylbenzene	U	2920	2500	86	70 - 130		2920	2560	88		2	20	
Carbon Disulfide	U	2920	3270	112	70 - 130		2920	3350	115		3	20	
Carbon Tetrachloride	U	2920	3410	117	70 - 130		2920	3470	119		2	20	
Chlorobenzene	U	2920	2970	102	75 - 125		2920	2990	103		1	20	
Chloroethane	U	2920	3060	105	70 - 141		2920	3130	107		2	20	
Chloroform	U	2920	2840	97	80 - 120		2920	2820	97		1	20	
Chloromethane	U	2920	2790	96	63 - 130		2920	2820	97		1	20	
2-Chlorotoluene	U	2920	2910	100	70 - 130		2920	2940	101		1	20	
1,2-Dibromo-3-chloropropane (SIM)	U	2920	3160	108	70 - 130		2920	3270	112		4	20	
Dibromochloromethane	U	2920	3190	109	70 - 130		2920	3180	109		0	20	
Dibromomethane	U	2920	3070	105	70 - 130		2920	3050	105		1	20	
1,2-Dichlorobenzene	U	2920	3000	103	75 - 120		2920	2990	103		0	20	
1,3-Dichlorobenzene	U	2920	2970	102	70 - 125		2920	3010	103		1	20	
1,4-Dichlorobenzene	U	2920	2920	100	70 - 125		2920	2960	101		1	20	
Dichlorodifluoromethane	U	2920	2750	94	65 - 135		2920	2810	96		2	20	
1,1-Dichloroethane	U	2920	2840	97	75 - 125		2920	2830	97		0	20	
1,2-Dichloroethane	U	2920	2730	93	70 - 130		2920	2750	94		1	20	
1,1-Dichloroethene	U	2920	2850	98	75 - 120		2920	2890	99		2	20	
cis-1,2-Dichloroethene	U	2920	2830	97	70 - 125		2920	2840	97		0	20	
trans-1,2-Dichloroethene	U	2920	2880	99	70 - 130		2920	2910	100		1	20	

A22497-003A: Original Sample (OS)/Matrix Spike (MSD)/Matrix Spike Duplicate (MSD)

EPA 8260D

Run Time: A22497-003A (OS): 09/26/24 23:37 [VP24I26A] A22497-004A (MS): 09/27/24 00:01 [VP24I26A] A22497-005A (MSD): 09/27/24 00:26 [VP24I26A]

Analyte	Original Result	MS Spike Amount	MS Result	MS Rec.	Rec. Limits	MS Qualifier	MSD Spike Amount	MSD Result	MSD Rec.	MSD Qualifier	RPD	RPD Limits	RPD Qualifier
	µg/kg (dry wt)	µg/kg (dry wt)	µg/kg (dry wt)	%	%		µg/kg (dry wt)	µg/kg (dry wt)	%		%	%	
1,2-Dichloropropane	U	2920	2930	100	80 - 120		2920	2950	101		1	20	
cis-1,3-Dichloropropene	U	2920	3270	112	70 - 125		2920	3300	113		1	20	
trans-1,3-Dichloropropene	U	2920	3180	109	70 - 125		2920	3190	109		0	20	
Ethylbenzene	U	2920	3040	104	80 - 120		2920	3060	105		1	20	
Ethylene Dibromide	U	2920	2940	101	70 - 125		2920	2950	101		0	20	
2-Hexanone	U	2920	2800	96	70 - 130		2920	2830	97		1	20	
Isopropylbenzene	U	2920	3060	105	75 - 130		2920	3090	106		1	20	
4-Methyl-2-pentanone	U	2920	3000	103	70 - 130		2920	3050	105		2	20	
Methylene Chloride	U	2920	2430	83	70 - 130		2920	2440	84		1	20	
2-Methylnaphthalene	U	2920	2600	89	61 - 136		2920	3580	123		32	20	*
MTBE	U	2920	2950	101	70 - 130		2920	2920	100		1	20	
Naphthalene	U	2920	2760	95	70 - 125		2920	2980	102		8	20	
n-Propylbenzene	U	2920	3040	104	70 - 130		2920	3100	106		2	20	
Styrene	U	2920	2920	100	75 - 125		2920	2930	100		0	20	
1,1,1,2-Tetrachloroethane	U	2920	3500	120	75 - 125		2920	3500	120		0	20	
1,1,2,2-Tetrachloroethane	U	2920	3110	107	70 - 130		2920	3130	107		1	20	
Tetrachloroethene	U	2920	3370	115	70 - 130		2920	3450	118		2	20	
Toluene	U	2920	2950	101	80 - 120		2920	3030	104		3	20	
1,2,4-Trichlorobenzene	U	2920	2810	96	70 - 130		2920	2970	102		6	20	
1,1,1-Trichloroethane	U	2920	3350	115	70 - 130		2920	3370	116		1	20	
1,1,2-Trichloroethane	U	2920	3050	104	70 - 125		2920	3000	103		2	20	
Trichloroethene	U	2920	3140	108	75 - 125		2920	3210	110		2	20	
Trichlorofluoromethane	U	2920	3120	107	50 - 150		2920	3200	110		3	20	
1,2,3-Trichloropropane	U	2920	2690	92	70 - 130		2920	2980	102		10	20	
1,2,3-Trimethylbenzene	U	2920	2830	97	70 - 130		2920	2850	98		1	20	
1,2,4-Trimethylbenzene	U	2920	2970	102	70 - 130		2920	3040	104		2	20	
1,3,5-Trimethylbenzene	U	2920	2860	98	70 - 130		2920	2880	99		1	20	
Vinyl Chloride	U	2920	3170	109	69 - 120		2920	3220	110		2	20	
m&p-Xylene	U	5840	5940	102	80 - 125		5830	6010	103		1	20	
o-Xylene	U	2920	2910	100	75 - 125		2920	2930	100		1	20	

A22497-009: Original Sample (OS)/Matrix Spike (MS)/Matrix Spike Duplicate (MSD)

EPA 8270E

Run Time: A22497-009 (OS): 09/22/24 08:24 [SN24I21C] A22497-009 (MS): 09/22/24 06:36 [SN24I21C] A22497-009 (MSD): 09/22/24 07:03 [SN24I21C]

Analyte	Original Result	MS Spike Amount	MS Result	MS Rec.	Rec. Limits	MS Qualifier	MSD Spike Amount	MSD Result	MSD Rec.	MSD Qualifier	RPD	RPD Limits	RPD Qualifier
	µg/kg (dry wt)	µg/kg (dry wt)	µg/kg (dry wt)	%	%		µg/kg (dry wt)	µg/kg (dry wt)	%		%	%	
Acenaphthene (SIM)	U	1400	1030	73	35 - 93		1400	1090	78		6	30	
Acenaphthylene (SIM)	U	1400	1110	80	33 - 100		1400	1170	84		5	30	
Anthracene (SIM)	U	1400	1020	73	43 - 91		1400	1080	77		5	30	
Benzo(a)anthracene (SIM)	U	1400	989	71	47 - 102		1400	1060	76		7	30	
Benzo(a)pyrene (SIM)	U	1400	1150	82	45 - 117		1400	1230	88		7	30	
Benzo(b)fluoranthene (SIM)	U	1400	1140	82	48 - 121		1400	1220	87		7	30	
Benzo(ghi)perylene (SIM)	U	1400	1000	71	48 - 111		1400	1090	78		8	30	
Benzo(k)fluoranthene (SIM)	U	1400	1110	79	52 - 117		1400	1180	84		6	30	
Chrysene (SIM)	U	1400	1010	72	51 - 108		1400	1090	78		8	30	
Dibenzo(a,h)anthracene (SIM)	U	1400	1070	76	51 - 113		1400	1150	82		7	30	
Fluoranthene (SIM)	U	1400	1110	80	50 - 101		1400	1170	84		5	30	
Fluorene (SIM)	U	1400	1060	76	40 - 97		1400	1120	80		6	30	
Indeno(1,2,3-cd)pyrene (SIM)	U	1400	1050	75	54 - 122		1400	1130	81		8	30	
2-Methylnaphthalene (SIM)	U	1400	1090	78	30 - 95		1400	1120	80		3	30	
Naphthalene (SIM)	U	1400	995	71	27 - 87		1400	1020	73		2	30	
Phenanthrene (SIM)	U	1400	1020	73	41 - 92		1400	1080	77		5	30	
Pyrene (SIM)	U	1400	1080	77	46 - 109		1400	1170	84		9	30	

Definitions/ Qualifiers:

U: The analyte was not detected at or above the Reporting Limit (RL).
***:** Value reported is outside QC limits

Exception Summary:

Exceptions have been properly noted on reported results or affected samples have been scheduled for reanalysis when appropriate.

Report Generated By:

By Katherine Jones at 1:02 PM, Oct 03, 2024

PM24I27C: Method Blank (MB) — EPA 7471B

Run Time: PM24I27C.MB 09/30/2024 10:31 [M724I30A]

Analyte	MB Result	MB Qualifier	MB RDL
	µg/kg		µg/kg
Mercury	U		50

PM24I27C: Laboratory Control Sample (LCS) — EPA 7471B

Run Time: PM24I27C.LCS: 09/30/2024 10:32 [M724I30A]

Analyte	LCS Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	µg/kg	µg/kg	%	%	
Mercury	200	184	92	85-115	

PS24I19B: Method Blank (MB)

EPA 8270E

Run Time: PS24I19B.MB 09/21/2024 17:54 [SN24I21B]

Analyte	MB Result	MB Qualifier	MB RDL
	µg/kg		µg/kg
Acenaphthene (SIM)	U		330
Acenaphthylene (SIM)	U		330
Anthracene (SIM)	U		330
Benzo(a)anthracene (SIM)	U		330
Benzo(a)pyrene (SIM)	U		330
Benzo(b)fluoranthene (SIM)	U		330
Benzo(ghi)perylene (SIM)	U		330
Benzo(k)fluoranthene (SIM)	U		330
Chrysene (SIM)	U		330
Dibenzo(a,h)anthracene (SIM)	U		330
Fluoranthene (SIM)	U		330
Fluorene (SIM)	U		330
Indeno(1,2,3-cd)pyrene (SIM)	U		330
2-Methylnaphthalene (SIM)	U		330
Naphthalene (SIM)	U		330
Phenanthrene (SIM)	U		330
Pyrene (SIM)	U		330
2-Fluorobiphenyl(S)	*57*		*49-115*
1-Fluoronaphthalene(S)	*53*		*46-114*
4-Terphenyl-d14(S)	*96*		*48-117*

PS24I19B: Laboratory Control Sample (LCS)

EPA 8270E

Run Time: PS24I19B.LCS: 09/21/2024 18:21 [SN24I21B]

Analyte	LCS Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	µg/kg	µg/kg	%	%	
Acenaphthene (SIM)	1330	761	57	35-93	
Acenaphthylene (SIM)	1330	806	60	33-100	
Anthracene (SIM)	1330	963	72	43-91	
Benzo(a)anthracene (SIM)	1330	1050	79	47-102	
Benzo(a)pyrene (SIM)	1330	1240	93	45-117	
Benzo(b)fluoranthene (SIM)	1330	1230	92	48-121	
Benzo(ghi)perylene (SIM)	1330	1080	81	48-111	
Benzo(k)fluoranthene (SIM)	1330	1200	90	52-117	
Chrysene (SIM)	1330	1090	81	51-108	
Dibenzo(a,h)anthracene (SIM)	1330	1150	86	51-113	
Fluoranthene (SIM)	1330	1090	82	50-101	
Fluorene (SIM)	1330	851	64	40-97	
Indeno(1,2,3-cd)pyrene (SIM)	1330	1130	85	54-122	
2-Methylnaphthalene (SIM)	1330	723	54	30-95	
Naphthalene (SIM)	1330	651	49	27-87	
Phenanthrene (SIM)	1330	945	71	41-92	
Pyrene (SIM)	1330	1110	83	46-109	
2-Fluorobiphenyl(S)			*60*	*49-115*	
1-Fluoronaphthalene(S)			*56*	*46-114*	
4-Terphenyl-d14(S)			*102*	*48-117*	

PS24I20C: Method Blank (MB) — EPA 8270E

Run Time: PS24I20C.MB 09/22/2024 05:42 [SN24I21C]

Analyte	MB Result	MB Qualifier	MB RDL
	µg/kg		µg/kg
Acenaphthene (SIM)	U		330
Acenaphthylene (SIM)	U		330
Anthracene (SIM)	U		330
Benzo(a)anthracene (SIM)	U		330
Benzo(a)pyrene (SIM)	U		330
Benzo(b)fluoranthene (SIM)	U		330
Benzo(ghi)perylene (SIM)	U		330
Benzo(k)fluoranthene (SIM)	U		330
Chrysene (SIM)	U		330
Dibenzo(a,h)anthracene (SIM)	U		330
Fluoranthene (SIM)	U		330
Fluorene (SIM)	U		330
Indeno(1,2,3-cd)pyrene (SIM)	U		330
2-Methylnaphthalene (SIM)	U		330
Naphthalene (SIM)	U		330
Phenanthrene (SIM)	U		330
Pyrene (SIM)	U		330
2-Fluorobiphenyl(S)	*90*		*49-115*
1-Fluoronaphthalene(S)	*89*		*46-114*
4-Terphenyl-d14(S)	*99*		*48-117*

PS24I20C: Laboratory Control Sample (LCS)

EPA 8270E

Run Time: PS24I20C.LCS: 09/22/2024 06:09 [SN24I21C]

Analyte	LCS Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	µg/kg	µg/kg	%	%	
Acenaphthene (SIM)	1330	1050	79	35-93	
Acenaphthylene (SIM)	1330	1130	85	33-100	
Anthracene (SIM)	1330	1040	78	43-91	
Benzo(a)anthracene (SIM)	1330	1040	78	47-102	
Benzo(a)pyrene (SIM)	1330	1200	90	45-117	
Benzo(b)fluoranthene (SIM)	1330	1200	90	48-121	
Benzo(ghi)perylene (SIM)	1330	1090	81	48-111	
Benzo(k)fluoranthene (SIM)	1330	1160	87	52-117	
Chrysene (SIM)	1330	1080	81	51-108	
Dibenzo(a,h)anthracene (SIM)	1330	1130	85	51-113	
Fluoranthene (SIM)	1330	1130	85	50-101	
Fluorene (SIM)	1330	1090	82	40-97	
Indeno(1,2,3-cd)pyrene (SIM)	1330	1120	84	54-122	
2-Methylnaphthalene (SIM)	1330	1090	82	30-95	
Naphthalene (SIM)	1330	994	75	27-87	
Phenanthrene (SIM)	1330	1040	78	41-92	
Pyrene (SIM)	1330	1150	86	46-109	
2-Fluorobiphenyl(S)			*90*	*49-115*	
1-Fluoronaphthalene(S)			*89*	*46-114*	
4-Terphenyl-d14(S)			*99*	*48-117*	

PT24I30C: Method Blank (MB) — EPA 6020B

Run Time: PT24I30C.MB 09/30/2024 15:01 [T424I30B]

Analyte	MB Result µg/kg	MB Qualifier	MB RDL µg/kg
Arsenic	U		100
Barium	U		1000
Cadmium	U		50
Chromium	U		500
Copper	U		1000
Lead	U		1000
Selenium	U		200
Silver	U		100
Zinc	U		1000

PT24I30C: Laboratory Control Sample (LCS) — EPA 6020B

Run Time: PT24I30C.LCS: 09/30/2024 15:06 [T424I30B]

Analyte	LCS Spike Amount µg/kg	LCS Result µg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	10000	9960	100	85-115	
Barium	50000	47600	95	85-115	
Cadmium	10000	9940	99	85-115	
Chromium	20000	20600	103	85-115	
Copper	20000	21600	108	85-115	
Lead	20000	20700	103	85-115	
Selenium	10000	9990	100	85-115	
Silver	10000	9790	98	85-115	
Zinc	50000	53600	107	85-115	

VB24I19A: Method Blank (MB)

EPA 8260D

Run Time: VB24I19A.MB 09/19/2024 12:02 [VB24I19A]

Analyte	MB Result µg/L	MB Qualifier	MB RDL µg/L
Acetone	U		50
Acrylonitrile	U		2.0
Benzene	U		1.0
Bromobenzene	U		1.0
Bromochloromethane	U		1.0
Bromodichloromethane	U		1.0
Bromoform (SIM)	U		1.0
Bromomethane	U		5.0
2-Butanone	U		25
n-Butylbenzene	U		1.0
sec-Butylbenzene	U		1.0
tert-Butylbenzene	U		1.0
Carbon Disulfide	U		5.0
Carbon Tetrachloride	U		1.0
Chlorobenzene	U		1.0
Chloroethane	U		5.0
Chloroform	U		1.0
Chloromethane	U		5.0
2-Chlorotoluene	U		5.0
1,2-Dibromo-3-chloropropane (SIM)	U		1.0
Dibromochloromethane	U		5.0
Dibromomethane	U		5.0
1,2-Dichlorobenzene	U		1.0
1,3-Dichlorobenzene	U		1.0
1,4-Dichlorobenzene	U		1.0
Dichlorodifluoromethane	U		5.0
1,1-Dichloroethane	U		1.0
1,2-Dichloroethane	U		1.0
1,1-Dichloroethene	U		1.0
cis-1,2-Dichloroethene	U		1.0
trans-1,2-Dichloroethene	U		1.0

VB24I19A: Method Blank (MB) — EPA 8260D

Run Time: VB24I19A.MB 09/19/2024 12:02 [VB24I19A]

Analyte	MB Result µg/L	MB Qualifier	MB RDL µg/L
1,2-Dichloropropane	U		1.0
cis-1,3-Dichloropropene	U		0.50
trans-1,3-Dichloropropene	U		0.50
Ethylbenzene	U		1.0
Ethylene Dibromide	U		1.0
2-Hexanone	U		50
Isopropylbenzene	U		5.0
4-Methyl-2-pentanone	U		50
Methylene Chloride	U		5.0
2-Methylnaphthalene	U		5.0
MTBE	U		5.0
Naphthalene	U		5.0
n-Propylbenzene	U		1.0
Styrene	U		1.0
1,1,1,2-Tetrachloroethane	U		1.0
1,1,2,2-Tetrachloroethane	U		1.0
Tetrachloroethene	U		1.0
Toluene	U		1.0
1,2,4-Trichlorobenzene	U		5.0
1,1,1-Trichloroethane	U		1.0
1,1,2-Trichloroethane	U		1.0
Trichloroethene	U		1.0
Trichlorofluoromethane	U		1.0
1,2,3-Trichloropropane	U		1.0
1,2,3-Trimethylbenzene	U		1.0
1,2,4-Trimethylbenzene	U		1.0
1,3,5-Trimethylbenzene	U		1.0
Vinyl Chloride	U		1.0
m&p-Xylene	U		2.0
o-Xylene	U		1.0
4-Bromofluorobenzene(S)	*104*		*80-120*

VB24I19A: Method Blank (MB)

EPA 8260D

Run Time: VB24I19A.MB 09/19/2024 12:02 [VB24I19A]

Analyte	MB Result	MB Qualifier	MB RDL
	µg/L		µg/L
Dibromofluoromethane(S)	*103*		*80-120*
1,2-Dichloroethane-d4(S)	*102*		*80-120*
Toluene-d8(S)	*97*		*80-120*

VB24I19A: Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD) — EPA 8260D

Run Time: VB24I19A.LCS: 09/19/2024 10:32 [VB24I19A] VB24I19A.LCSD: 09/19/2024 11:02 [VB24I19A]

Analyte	LCS Spike Amount µg/L	LCS Result µg/L	LCS Rec. %	Rec. Limits %	LCS Qualifier	LCSD Spike Amount µg/L	LCSD Result µg/L	LCSD Rec. %	LCSD Qualifier	RPD %	RPD Limits %	RPD Qualifier
Acetone	50.0	27.9	56	40-130		50.0	26.5	53		6	20	
Acrylonitrile	50.0	57.6	115	70-130		50.0	54.0	108		6	20	
Benzene	50.0	50.2	100	80-120		50.0	50.9	102		2	20	
Bromobenzene	50.0	47.4	95	75-125		50.0	47.6	95		0	20	
Bromochloromethane	50.0	50.7	101	70-130		50.0	47.1	94		7	20	
Bromodichloromethane	50.0	61.3	123	75-120	*	50.0	62.2	124	*	1	20	
Bromoform (SIM)	50.0	69.7	139	70-130	*	50.0	67.6	135	*	3	20	
Bromomethane	50.0	45.4	91	68-135		50.0	44.6	89		2	20	
2-Butanone	50.0	39.2	78	40-129		50.0	35.8	72		8	20	
n-Butylbenzene	50.0	46.5	93	70-133		50.0	48.1	96		3	20	
sec-Butylbenzene	50.0	47.4	95	70-125		50.0	49.8	100		5	20	
tert-Butylbenzene	50.0	47.8	96	70-130		50.0	49.7	99		3	20	
Carbon Disulfide	50.0	74.3	149	70-130	*	50.0	73.9	148	*	1	20	
Carbon Tetrachloride	50.0	62.3	125	70-130		50.0	63.6	127		2	20	
Chlorobenzene	50.0	49.5	99	80-120		50.0	50.1	100		1	20	
Chloroethane	50.0	54.9	110	61-130		50.0	57.1	114		4	20	
Chloroform	50.0	49.3	99	80-120		50.0	48.0	96		3	20	
Chloromethane	50.0	52.7	105	67-125		50.0	52.8	106		1	20	
2-Chlorotoluene	50.0	44.7	89	75-125		50.0	46.7	93		4	20	
1,2-Dibromo-3-chloropropane (SIM)	50.0	62.8	126	70-130		50.0	59.3	119		6	20	
Dibromochloromethane	50.0	66.4	133	70-130	*	50.0	64.7	129		3	20	
Dibromomethane	50.0	58.4	117	75-125		50.0	56.3	113		3	20	
1,2-Dichlorobenzene	50.0	46.9	94	70-120		50.0	48.3	97		3	20	
1,3-Dichlorobenzene	50.0	47.1	94	75-125		50.0	48.2	96		2	20	
1,4-Dichlorobenzene	50.0	46.1	92	75-125		50.0	47.8	96		4	20	
Dichlorodifluoromethane	50.0	57.0	114	70-136		50.0	57.3	115		1	20	
1,1-Dichloroethane	50.0	50.9	102	70-130		50.0	49.7	99		3	20	
1,2-Dichloroethane	50.0	50.2	100	70-130		50.0	50.1	100		0	20	
1,1-Dichloroethene	50.0	48.6	97	78-120		50.0	48.5	97		0	20	
cis-1,2-Dichloroethene	50.0	50.4	101	70-125		50.0	49.7	99		2	20	
trans-1,2-Dichloroethene	50.0	50.7	101	70-130		50.0	49.7	99		2	20	

VB24I19A: Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD) — EPA 8260D

Run Time: VB24I19A.LCS: 09/19/2024 10:32 [VB24I19A] VB24I19A.LCSD: 09/19/2024 11:02 [VB24I19A]

Analyte	LCS Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier	LCSD Spike Amount	LCSD Result	LCSD Rec.	LCSD Qualifier	RPD	RPD Limits	RPD Qualifier
	µg/L	µg/L	%	%		µg/L	µg/L	%		%	%	
1,2-Dichloropropane	50.0	51.6	103	80-121		50.0	52.9	106		3	20	
cis-1,3-Dichloropropene	50.0	69.5	139	70-130	*	50.0	69.4	139	*	0	20	
trans-1,3-Dichloropropene	50.0	74.6	149	70-132	*	50.0	74.4	149	*	0	20	
Ethylbenzene	50.0	49.0	98	80-120		50.0	49.2	98		0	20	
Ethylene Dibromide	50.0	55.5	111	80-120		50.0	54.6	109		2	20	
2-Hexanone	50.0	49.0	98	50-130		50.0	45.7	91		7	20	
Isopropylbenzene	50.0	50.7	101	75-125		50.0	51.1	102		1	20	
4-Methyl-2-pentanone	50.0	60.5	121	70-130		50.0	58.0	116		4	20	
Methylene Chloride	50.0	46.3	93	70-130		50.0	45.9	92		1	20	
2-Methylnaphthalene	50.0	54.8	110	70-130		50.0	46.8	94		16	20	
MTBE	50.0	56.0	112	70-125		50.0	54.4	109		3	20	
Naphthalene	50.0	51.5	103	70-130		50.0	48.5	97		6	20	
n-Propylbenzene	50.0	48.3	97	70-130		50.0	50.0	100		3	20	
Styrene	50.0	49.3	99	70-130		50.0	49.0	98		1	20	
1,1,1,2-Tetrachloroethane	50.0	65.7	131	80-130	*	50.0	64.7	129		2	20	
1,1,2,2-Tetrachloroethane	50.0	61.7	123	70-130		50.0	61.0	122		1	20	
Tetrachloroethene	50.0	48.3	97	70-130		50.0	48.4	97		0	20	
Toluene	50.0	53.7	107	80-120		50.0	54.3	109		2	20	
1,2,4-Trichlorobenzene	50.0	48.0	96	70-130		50.0	48.5	97		1	20	
1,1,1-Trichloroethane	50.0	52.2	104	70-130		50.0	51.6	103		1	20	
1,1,2-Trichloroethane	50.0	56.1	112	75-125		50.0	54.2	108		4	20	
Trichloroethene	50.0	51.8	104	71-125		50.0	53.0	106		2	20	
Trichlorofluoromethane	50.0	56.4	113	70-133		50.0	57.0	114		1	20	
1,2,3-Trichloropropane	50.0	51.7	103	75-125		50.0	49.6	99		4	20	
1,2,3-Trimethylbenzene	50.0	46.0	92	70-130		50.0	47.7	95		3	20	
1,2,4-Trimethylbenzene	50.0	47.1	94	75-130		50.0	48.1	96		2	20	
1,3,5-Trimethylbenzene	50.0	48.0	96	75-130		50.0	49.8	100		4	20	
Vinyl Chloride	50.0	58.6	117	74-125		50.0	58.2	116		1	20	
m&p-Xylene	100	96.9	97	75-130		100	97.6	98		1	20	
o-Xylene	50.0	46.0	92	80-120		50.0	46.0	92		0	20	
4-Bromofluorobenzene(S)			*100*	*80-120*				*103*				

VB24I19A: Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD) — EPA 8260D

Run Time: VB24I19A.LCS: 09/19/2024 10:32 [VB24I19A] VB24I19A.LCSD: 09/19/2024 11:02 [VB24I19A]

Analyte	LCS Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier	LCSD Spike Amount	LCSD Result	LCSD Rec.	LCSD Qualifier	RPD	RPD Limits	RPD Qualifier
	µg/L	µg/L	%	%		µg/L	µg/L	%		%	%	
Dibromofluoromethane(S)			*95*	*80-120*				*96*				
1,2-Dichloroethane-d4(S)			*92*	*80-120*				*92*				
Toluene-d8(S)			*102*	*80-120*				*101*				

VP24I26A: Method Blank (MB)

EPA 8260D

Run Time: VP24I26A.MB 09/26/2024 16:16 [VP24I26A]

Analyte	MB Result	MB Qualifier	MB RDL
	µg/kg		µg/kg
Acetone	U		1000
Acrylonitrile	U		100
Benzene	U		50
Bromobenzene	U		100
Bromochloromethane	U		100
Bromodichloromethane	U		100
Bromoform	U		100
Bromomethane	U		200
2-Butanone	U		750
n-Butylbenzene	U		50
sec-Butylbenzene	U		50
tert-Butylbenzene	U		50
Carbon Disulfide	U		250
Carbon Tetrachloride	U		50
Chlorobenzene	U		50
Chloroethane	U		250
Chloroform	U		50
Chloromethane	U		250
2-Chlorotoluene	U		50
1,2-Dibromo-3-chloropropane (SIM)	U		250
Dibromochloromethane	U		100
Dibromomethane	U		250
1,2-Dichlorobenzene	U		100
1,3-Dichlorobenzene	U		100
1,4-Dichlorobenzene	U		100
Dichlorodifluoromethane	U		250
1,1-Dichloroethane	U		50
1,2-Dichloroethane	U		50
1,1-Dichloroethene	U		50
cis-1,2-Dichloroethene	U		50
trans-1,2-Dichloroethene	U		50

VP24I26A: Method Blank (MB)

EPA 8260D

Run Time: VP24I26A.MB 09/26/2024 16:16 [VP24I26A]

Analyte	MB Result	MB Qualifier	MB RDL
	µg/kg		µg/kg
1,2-Dichloropropane	U		50
cis-1,3-Dichloropropene	U		50
trans-1,3-Dichloropropene	U		50
Ethylbenzene	U		50
Ethylene Dibromide	U		50
2-Hexanone	U		2500
Isopropylbenzene	U		250
4-Methyl-2-pentanone	U		2500
Methylene Chloride	U		100
2-Methylnaphthalene	U		330
MTBE	U		250
Naphthalene	U		330
n-Propylbenzene	U		100
Styrene	U		50
1,1,1,2-Tetrachloroethane	U		100
1,1,2,2-Tetrachloroethane	U		50
Tetrachloroethene	U		50
Toluene	U		50
1,2,4-Trichlorobenzene	U		250
1,1,1-Trichloroethane	U		50
1,1,2-Trichloroethane	U		50
Trichloroethene	U		50
Trichlorofluoromethane	U		100
1,2,3-Trichloropropane	U		100
1,2,3-Trimethylbenzene	U		100
1,2,4-Trimethylbenzene	U		100
1,3,5-Trimethylbenzene	U		100
Vinyl Chloride	U		40
m&p-Xylene	U		100
o-Xylene	U		50
4-Bromofluorobenzene(S)	*99*		*76-127*

VP24I26A: Method Blank (MB)

EPA 8260D

Run Time: VP24I26A.MB 09/26/2024 16:16 [VP24I26A]

Analyte	MB Result	MB Qualifier	MB RDL
	µg/kg		µg/kg
Dibromofluoromethane(S)	*102*		*76-126*
1,2-Dichloroethane-d4(S)	*101*		*75-120*
Toluene-d8(S)	*98*		*80-120*

VP24I26A: Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD) — EPA 8260D

Run Time: VP24I26A.LCS: 09/26/2024 15:02 [VP24I26A] VP24I26A.LCSD: 09/26/2024 15:27 [VP24I26A]

Analyte	LCS Spike Amount µg/kg	LCS Result µg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier	LCSD Spike Amount µg/kg	LCSD Result µg/kg	LCSD Rec. %	LCSD Qualifier	RPD %	RPD Limits %	RPD Qualifier
Acetone	2500	1810	72	50-149		2500	1720	69		4	20	
Acrylonitrile	2500	2480	99	70-130		2500	2510	100		1	20	
Benzene	2500	2460	98	75-125		2500	2360	94		4	20	
Bromobenzene	2500	2460	99	70-120		2500	2410	96		3	20	
Bromochloromethane	2500	2260	90	70-125		2500	2230	89		1	20	
Bromodichloromethane	2500	2680	107	70-130		2500	2650	106		1	20	
Bromoform	2500	2770	111	70-130		2500	2750	110		1	20	
Bromomethane	2500	2160	86	66-134		2500	2060	82		5	20	
2-Butanone	2500	2140	86	67-131		2500	2160	87		1	20	
n-Butylbenzene	2500	2510	100	70-130		2500	2380	95		5	20	
sec-Butylbenzene	2500	2520	101	70-130		2500	2400	96		5	20	
tert-Butylbenzene	2500	2340	94	70-130		2500	2270	91		3	20	
Carbon Disulfide	2500	2710	108	70-130		2500	2580	103		5	20	
Carbon Tetrachloride	2500	2720	109	70-130		2500	2560	102		7	20	
Chlorobenzene	2500	2490	99	75-125		2500	2420	97		2	20	
Chloroethane	2500	2440	98	70-141		2500	2300	92		6	20	
Chloroform	2500	2310	93	80-120		2500	2230	89		4	20	
Chloromethane	2500	2230	89	63-130		2500	2110	84		6	20	
2-Chlorotoluene	2500	2470	99	70-130		2500	2390	96		3	20	
1,2-Dibromo-3-chloropropane (SIM)	2500	2900	116	70-130		2500	2920	117		1	20	
Dibromochloromethane	2500	2730	109	70-130		2500	2730	109		0	20	
Dibromomethane	2500	2580	103	70-130		2500	2600	104		1	20	
1,2-Dichlorobenzene	2500	2600	104	75-120		2500	2530	101		3	20	
1,3-Dichlorobenzene	2500	2570	103	70-125		2500	2480	99		4	20	
1,4-Dichlorobenzene	2500	2560	102	70-125		2500	2460	98		4	20	
Dichlorodifluoromethane	2500	2130	85	65-135		2500	2010	80		6	20	
1,1-Dichloroethane	2500	2280	91	75-125		2500	2200	88		3	20	
1,2-Dichloroethane	2500	2310	92	70-130		2500	2290	92		0	20	
1,1-Dichloroethene	2500	2270	91	58-104		2500	2130	85		7	20	
cis-1,2-Dichloroethene	2500	2310	92	70-125		2500	2240	89		3	20	
trans-1,2-Dichloroethene	2500	2330	93	70-130		2500	2220	89		4	20	

VP24I26A: Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD) — EPA 8260D

Run Time: VP24I26A.LCS: 09/26/2024 15:02 [VP24I26A] VP24I26A.LCSD: 09/26/2024 15:27 [VP24I26A]

Analyte	LCS Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier	LCSD Spike Amount	LCSD Result	LCSD Rec.	LCSD Qualifier	RPD	RPD Limits	RPD Qualifier
	µg/kg	µg/kg	%	%		µg/kg	µg/kg	%		%	%	
1,2-Dichloropropane	2500	2440	98	80-120		2500	2350	94		4	20	
cis-1,3-Dichloropropene	2500	2840	114	70-125		2500	2810	112		2	20	
trans-1,3-Dichloropropene	2500	2800	112	70-125		2500	2780	111		1	20	
Ethylbenzene	2500	2530	101	80-120		2500	2430	97		4	20	
Ethylene Dibromide	2500	2550	102	70-125		2500	2540	102		0	20	
2-Hexanone	2500	2590	104	70-130		2500	2550	102		2	20	
Isopropylbenzene	2500	2550	102	75-130		2500	2430	97		5	20	
4-Methyl-2-pentanone	2500	2650	106	70-130		2500	2690	108		2	20	
Methylene Chloride	2500	2010	81	70-130		2500	1930	77		5	20	
2-Methylnaphthalene	2500	3640	146	61-136	*	2500	3560	143	*	2	20	
MTBE	2500	2470	99	70-130		2500	2530	101		2	20	
Naphthalene	2500	2670	107	70-125		2500	2670	107		0	20	
n-Propylbenzene	2500	2580	103	70-130		2500	2460	98		5	20	
Styrene	2500	2420	97	75-125		2500	2370	95		2	20	
1,1,1,2-Tetrachloroethane	2500	2910	116	75-125		2500	2850	114		2	20	
1,1,2,2-Tetrachloroethane	2500	2740	110	70-130		2500	2830	113		3	20	
Tetrachloroethene	2500	2830	113	70-130		2500	2690	108		5	20	
Toluene	2500	2450	98	80-120		2500	2370	95		3	20	
1,2,4-Trichlorobenzene	2500	2610	105	70-130		2500	2570	103		2	20	
1,1,1-Trichloroethane	2500	2600	104	70-130		2500	2540	102		2	20	
1,1,2-Trichloroethane	2500	2570	103	70-125		2500	2550	102		1	20	
Trichloroethene	2500	2570	103	75-125		2500	2420	97		6	20	
Trichlorofluoromethane	2500	2420	97	50-150		2500	2300	92		5	20	
1,2,3-Trichloropropane	2500	2670	107	70-130		2500	2710	109		2	20	
1,2,3-Trimethylbenzene	2500	2410	96	70-130		2500	2340	94		2	20	
1,2,4-Trimethylbenzene	2500	2540	102	70-130		2500	2460	98		4	20	
1,3,5-Trimethylbenzene	2500	2570	103	70-130		2500	2410	96		7	20	
Vinyl Chloride	2500	2480	99	69-120		2500	2330	93		6	20	
m&p-Xylene	5000	4980	100	80-125		5000	4750	95		5	20	
o-Xylene	2500	2420	97	75-125		2500	2350	94		3	20	
4-Bromofluorobenzene(S)			*97*	*76-127*				*96*				

VP24I26A: Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD) — EPA 8260D

Run Time: VP24I26A.LCS: 09/26/2024 15:02 [VP24I26A] VP24I26A.LCSD: 09/26/2024 15:27 [VP24I26A]

Analyte	LCS Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier	LCSD Spike Amount	LCSD Result	LCSD Rec.	LCSD Qualifier	RPD	RPD Limits	RPD Qualifier
	µg/kg	µg/kg	%	%		µg/kg	µg/kg	%		%	%	
Dibromofluoromethane(S)			*101*	*76-126*				*100*				
1,2-Dichloroethane-d4(S)			*95*	*75-120*				*95*				
Toluene-d8(S)			*99*	*80-120*				*99*				

Definitions/ Qualifiers:

U: The analyte was not detected at or above the Reporting Limit (RL).
***:** Value reported is outside QC limits

Exception Summary:

Exceptions have been properly noted on reported results or affected samples have been scheduled for reanalysis when appropriate.

Report Generated By:

By Katherine Jones at 12:47 PM, Oct 03, 2024

Fibertec environmental services

Case Narrative

Client: Soil and Materials Engineers, Inc.
Project Name: 095650.00

Twelve soil samples, including blanks, were collected on September 17, 2024 and received by Fibertec, Inc. on September 18, 2024. The shipping cooler temperature was within specifications (0 – 6°C), and the samples arrived without any visible signs of tampering or breakage. The samples were prepared and analyzed within the required hold times. Samples placed on hold were not analyzed.

Exceptions are noted below.

Cross Reference

Lab ID #	Client ID #	Matrix	Requested Tests
A22497-001	SB1 (1-2)	Soil	%Moisture, Trace Metals, VOCs, PNAs
A22497-002	SB2 (12.5-14.5)	Soil	%Moisture, Trace Metals, VOCs, PNAs
A22497-003	SB3 (1-3)	Soil	%Moisture, Trace Metals, VOCs, PNAs
A22497-004	MS (SB3 (1-3))	Soil	%Moisture, Trace Metals, VOCs, PNAs
A22497-005	MSD (SB3 (1-3))	Soil	%Moisture, Trace Metals, VOCs, PNAs
A22497-006	SB4 (1-3)	Soil	On hold
A22497-007	SB4 (5-7)	Soil	%Moisture, Trace Metals, VOCs, PNAs
A22497-008	SB5 (1-3)	Soil	On hold
A22497-009	SB5 (11-13)	Soil	%Moisture, Trace Metals, VOCs, PNAs
A22497-010	Soil Dup	Soil	%Moisture, Trace Metals, VOCs, PNAs
A22497-011	Meth Blank	Soil	VOCs
A22497-012	Trip Blank	Soil	VOCs

Exceptions

Volatile Organic Compounds Method: EPA 5035A/EPA 8260D

Samples -001 through -005, -007, -009 through -011 were qualified as estimated for Acetone due to low Continuing Calibration Verification (70% recovery with criteria being 80-120%). Results may be biased low.

Samples -001 through -005, -007, -009 through -011 were qualified as estimated for 1,2-Dibromo-3-chloropropane (SIM) and 2-Methylnaphthalene due to high Continuing Calibration Verification. Results may be biased high, but were non-detect, except for the MS/MSD.

Samples -001 through -005, -007, -009 through -011 were qualified for 2-Methylnaphthalene due to high Laboratory Control Sample and the Laboratory Control Sample Duplicate. Results may be biased high, but were non-detect, except for the MS/MSD.

1914 Holloway Drive Holt, Michigan 48842 Telephone: (517) 699-0345 Facsimile: (517) 699-0388
11766 E. Grand River Brighton, Michigan 48116 Telephone: (810) 220-3300 Facsimile: (810) 220-3311
8660 S. Mackinaw Trail Cadillac, Michigan 49601 Telephone: (231) 775-8368 Facsimile: (231) 775-8584

Fibertec environmental services

Case Narrative

The Matrix Spike/Matrix Spike Duplicate (MS/MSD) pair exhibited an RPD for 2-Methylnaphthalene (32%) exceeding criteria (RPD ≤20%) associated with sample -003. This indicates increased variability with the results.

Michigan 10 Elements Method: EPA 0200.2/EPA 6020B

Sample -003 was qualified for Lead as the spiked sample recovery was low for the Matrix Spike (21% recovery) and the Matrix Spike Duplicate (11% recovery) with criteria being 70-130%. Results may be biased low.

The Matrix Spike/Matrix Spike Duplicate (MS/MSD) pair exhibited an RPD for Lead (63%) exceeding criteria (RPD ≤20%) associated with sample -003. This indicates increased variability with the results.

Polynuclear Aromatic Hydrocarbons Method: EPA 3546/EPA 8270E

Sample -003 was qualified for Fluoranthene (SIM) as the spiked sample recovery was low for the Matrix Spike (27% recovery) with criteria being 50-101%. The Laboratory Control Sample was acceptable at 82%. Results may be biased low.

The Matrix Spike/Matrix Spike Duplicate (MS/MSD) pair exhibited an RPD for the listed compounds associated with sample -003. This indicates increased variability with the results.

Fluoranthene (SIM) (68%) exceeding criteria (RPD ≤30%)

Pyrene (SIM) (32%) exceeding criteria (RPD ≤30%)

Volatile Organic Compounds Method: EPA 5030C/EPA 8260D

Multiple compounds on sample -012 were qualified as estimated due to high Continuing Calibration Verification (CCV), Laboratory Control Sample (LCS) and/or Laboratory Control Sample Duplicate (LCSD). Results may be biased high, but were non-detect.

No further exceptions were observed.

1914 Holloway Drive Holt, Michigan 48842 Telephone: (517) 699-0345 Facsimile: (517) 699-0388
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8660 S. Mackinaw Trail Cadillac, Michigan 49601 Telephone: (231) 775-8368 Facsimile: (231) 775-8584

Docusign Envelope ID: A9005579-AB7B-4791-A769-01B32C562E08

Fibertec environmental services

Analytical Laboratory
1914 Holloway Drive
Holt, MI 48842
Phone: 517 699 0345
Fax: 517 699 0388
email: lab@fibertec.us

8660 S. Mackinaw Trail
Cadillac, MI 49601
Phone: 231 775 8368
Fax: 231 775 8584

Geoprobe
11766 E. Grand River Rd.
Brighton, MI 48116
Phone: 810 220 3300
Fax: 810 220 3311

Chain of Custody # **222244**
PAGE 1 of 2

Client Name: SME
Contact Person: Troy Helmick
Project Name/ Number: 095C50.00
Email distribution list: Troy Helmick/Brendan Huehn
Quote#
Purchase Order#

Date	Time	Sample #	Client Sample Descriptor	MATRIX (SEE RIGHT CORNER FOR CODE)	# OF CONTAINERS	VOCs	PAHs	MI-10 Metals								HOLD SAMPLE	Remarks:
9/17	9:50		SB1 (1-2)	S	2	x	x	x									
	10:20		SB2 (12.5-14.5)	S	2	x	x	x									
	10:50		SB3 (1-3)	S	2	x	x	x									
	10:50		MS (SB3(1-3))	S	2	x	x	x									
	10:50		MSD (SB3(1-3))	S	2	x	x	x									Received By Lab SEP 18 2024
	12:45		SB4 (1-3)	S	2	x	x	x								X	HOLD
	12:50		SB4 (5-7)	S	2	x	x	x									
	12:10		SB5 (1-3)	S	2	x	x	x								X	HOLD Initials: KW
	12:15		SB5 (11-13)	S	2	x	x	x									
↓			Soil Dup	S	2	x	x	x									

Matrix Code: S Soil; A Air; O Oil; P Wipe; GW Ground Water; SW Surface Water; WW Waste Water; X Other: Specify

Deliverables: Level 2; Level 3; Level 4; EDD

Comments:

Sampled/Relinquished By: Brendan Huehn/SME	Date/ Time 9/17/24 14:04	Received By: SME Cold Storage
Relinquished By: SME Cold Storage	Date/ Time 9/18/24 1020am	Received By: 9/18/24 10:20
Relinquished By:	Date/ Time 9/18/24 14:20	Received By Laboratory:

Turnaround Time ALL RESULTS WILL BE SENT BY THE END OF THE BUSINESS DAY

_____1 bus. day _____2 bus. days _____3 bus. days _____4 bus. days

X 5-7 bus. days (standard) Other (specify time/date requirement): _____

LAB USE ONLY

Fibertec project number: A22497

Temperature upon receipt at Lab: 2.4°C

Received On Ice

Please see back for terms and conditions

Docusign Envelope ID: A9005579-AB7B-4791-A769-01B32C562E08

Fibertec environmental services

Analytical Laboratory
1914 Holloway Drive
Holt, MI 48842
Phone: 517 699 0345
Fax: 517 699 0388
email: lab@fibertec.us

8660 S. Mackinaw Trail
Cadillac, MI 49601
Phone: 231 775 8368
Fax: 231 775 8584

Geoprobe
11766 E. Grand River Rd.
Brighton, MI 48116
Phone: 810 220 3300
Fax: 810 220 3311

Chain of Custody # 222245
PAGE 2 of 2

Client Name: SME
Contact Person: Troy Helmick
Project Name/ Number: 095650.00
Email distribution list: Troy Helmick/Brendan Huehn
Quote#
Purchase Order#

Date	Time	Sample #	Client Sample Descriptor	MATRIX (SEE RIGHT CORNER FOR CODE)	# OF CONTAINERS	PARAMETERS: VOCs	PARAMETERS	HOLD SAMPLE
9/17			Meth Blank	S	1	x		
9/17			Trip Blank	GW	3	x		

Matrix Code: S Soil; A Air; O Oil; P Wipe; GW Ground Water; SW Surface Water; WW Waste Water; X Other: Specify

Deliverables: Level 2; Level 3; Level 4; EDD

Remarks:

Received By Lab
SEP 18 2024
Initials: KW

Comments:

Sampled/Relinquished By: Brendan Huehn/SME	Date/ Time 9/17/24 14:04	Received By: SME Cold Storage
Relinquished By: SME Cold Storage	Date/ Time 9/18/24 1020	Received By: 9/18/24 10:20
Relinquished By:	Date/ Time 9/18/24 1420	Received By Laboratory:

Turnaround Time ALL RESULTS WILL BE SENT BY THE END OF THE BUSINESS DAY

_____1 bus. day _____2 bus. days _____3 bus. days _____4 bus. days

X 5-7 bus. days (standard) Other (specify time/date requirement): _____

LAB USE ONLY

Fibertec project number: A22497 Received On Ice

Temperature upon receipt at Lab: 2.4°C

Please see back for terms and conditions

Fibertec environmental services
A METIRI GROUP COMPANY

Tuesday, October 29, 2024

Fibertec Project Number:	A22497 Supplemental
Project Identification:	095650.00 /095650.00
Submittal Date:	09/18/2024

Mr. Troy Helmick
Soil and Materials Engineers, Inc. - Plymouth
43980 Plymouth Oaks Blvd
Plymouth, MI 48170

Dear Mr. Helmick,

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,

Bailey Welch

By Bailey Welch at 11:39 AM, Oct 29, 2024

For Robert J. Morelli
Director of Laboratory Operations

Enclosures

Fibertec environmental services
A METIRI GROUP COMPANY

Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-001

Order: A22497
Date: 10/29/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**SB1 (1-2)**	Chain of Custody:	**222244**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	Sample Matrix:	**Soil/Solid**	Collect Time:	**09:50**

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: A22497-001** **Matrix: Soil/Solid**
Method: ASTM D2216-10 **Description: SB1 (1-2)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
‡ 1. Percent Moisture (Water Content)	**5**		%	1	1.0	09/23/24	MC240923	09/24/24	MC240923	LJK

Chromium, Hexavalent **Aliquot ID: A22497-001** **Matrix: Soil/Solid**
Method: EPA 3060A/EPA 7196A **Description: SB1 (1-2)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Chromium VI	U	H	µg/kg	420	1.0	NA	NA	10/17/24	W324J17A	ARC

Fibertec environmental services
A METIRI GROUP COMPANY

Analytical Laboratory Report
Laboratory Project Number: A22497
Laboratory Sample Number: A22497-010

Order: A22497
Date: 10/29/24

Client Identification:	**Soil and Materials Engineers, Inc. - Plymouth**	Sample Description:	**Soil Dup**	Chain of Custody:	**222244**
Client Project Name:	**095650.00**	Sample No:		Collect Date:	**09/17/24**
Client Project No:	**095650.00**	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: A22497-010** **Matrix: Soil/Solid**
Method: ASTM D2216-10 **Description: Soil Dup**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
‡ 1. Percent Moisture (Water Content)	**7**		%	1	1.0	09/23/24	MC240923	09/24/24	MC240923	LJK

Chromium, Hexavalent **Aliquot ID: A22497-010** **Matrix: Soil/Solid**
Method: EPA 3060A/EPA 7196A **Description: Soil Dup**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Chromium VI	U	H	µg/kg	430	1.0	NA	NA	10/17/24	W324J17A	ARC

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:

H : Hold time exceeded.

Analysis Locations:

All analyses performed in Holt.

Accreditation Number(s):

MI001292024-1 (UT)

Fibertec environmental services

Case Narrative

Client: Soil and Materials Engineers, Inc.
Project Name: 095650.00

On October 14, 2024 a request for additional analysis was received, as listed below. The samples were prepared and analyzed within the required holding times.

Exceptions are noted below.

Cross Reference

Lab ID #	Client ID #	Matrix	Requested Tests
A22497-001	SB1 (1-2)	Soil	%Moisture, Hexavalent Chromium
A22497-010	Soil Dup	Soil	%Moisture, Hexavalent Chromium

Exceptions

Hexavalent Chromium Method: EPA 3060A/EPA 7196A

Samples -001 and -010 were qualified as having estimated results for Chromium VI due to exceeding the hold time (time from sampling to analysis should be within 28 days and was 30 days.

No further exceptions were observed.

1914 Holloway Drive Holt, Michigan 48842 Telephone: (517) 699-0345 Facsimile: (517) 699-0388
11766 E. Grand River Brighton, Michigan 48116 Telephone: (810) 220-3300 Facsimile: (810) 220-3311
8660 S. Mackinaw Trail Cadillac, Michigan 49601 Telephone: (231) 775-8368 Facsimile: (231) 775-8584

Metiri Group - Holt
1914 Holloway Dr, Holt, MI 48842 - Phone (517) 699-0345 - www.metirigroup.com

October 03, 2024

Troy Helmick
Soil and Materials Engineers, Inc. - Plymouth
43980 Plymouth Oaks Blvd
Plymouth, MI 48170

RE: 095650.00.003.002
24I0107

Thank you for selecting Metiri Group - Holt as your analytical laboratory. The samples submitted have been analyzed in accordance with all method and NELAC standards, as applicable. Any exceptions to compliance are noted in the report.

Please note that 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 us at (517) 699-0345.

Sincerely,

Katherine Jones
Client Services and Login Supervisor
katherine.jones@metirigroup.com
517-273-4926

Table of Contents

Metiri Group - Holt - 1914 Holloway Dr, Holt, MI 48842

Soil and Materials Engineers, Inc. - Plymouth	Project: 095650.00.003.002	
43980 Plymouth Oaks Blvd	Project Number: 095650.00.003.002	
Plymouth, MI 48170	Project Manager: Troy Helmick	Reported: 10/03/2024 14:53

Work Order Case Narrative

Samples -01 through -05 were qualified for the listed compounds due to high Laboratory Control Sample (LCS) and/or Laboratory Control Sample Duplicate (LCSD). and/or Continuing Calibration Verification as listed below. Results may be biased high.

Ethanol: 131% recovery with criteria being 70-130%

Samples in this Report

Lab ID	Sample	Matrix	Date Sampled	Date Received
24I0107-01	SG1	Air	09/19/2024 13:57	09/20/2024
24I0107-02	SG2	Air	09/19/2024 14:10	09/20/2024
24I0107-03	SG3	Air	09/19/2024 12:57	09/20/2024
24I0107-04	SG4	Air	09/19/2024 13:09	09/20/2024
24I0107-05	SGDUP	Air	09/19/2024 14:10	09/20/2024

Metiri Group - Holt - 1914 Holloway Dr, Holt, MI 48842

Soil and Materials Engineers, Inc. - Plymouth
43980 Plymouth Oaks Blvd
Plymouth, MI 48170

Project: 095650.00.003.002
Project Number: 095650.00.003.002
Project Manager: Troy Helmick

Reported: 10/03/2024 14:53

Sample Results

Sample: SG1
24I0107-01 (Air)

	Analyte	Result /Qual	PQL	Units	Date Analyzed	DF	Method	Prep Batch
Volatiles Analysis-GC/MS (TO-15)								
1	1,1,1-Trichloroethane	ND	33	ug/m3	09/25/24	1	EPA TO-15	BDI0088
2	1,1,2,2-Tetrachloroethane	ND	3.3	ug/m3	09/25/24	1	EPA TO-15	BDI0088
3	1,1,2-Trichloroethane	ND	6.5	ug/m3	09/25/24	1	EPA TO-15	BDI0088
4	1,1,2-Trichlorotrifluoroethane	ND	46	ug/m3	09/25/24	1	EPA TO-15	BDI0088
5	1,1-Dichloroethane	ND	24	ug/m3	09/25/24	1	EPA TO-15	BDI0088
6	1,1-Dichloroethene	ND	24	ug/m3	09/25/24	1	EPA TO-15	BDI0088
7	1,2,4-Trichlorobenzene	ND	22	ug/m3	09/25/24	1	EPA TO-15	BDI0088
8	1,2,4-Trimethylbenzene	ND	29	ug/m3	09/25/24	1	EPA TO-15	BDI0088
9	1,2-Dichlorobenzene	ND	36	ug/m3	09/25/24	1	EPA TO-15	BDI0088
10	1,2-Dichloroethane	ND	4.9	ug/m3	09/25/24	1	EPA TO-15	BDI0088
11	1,2-Dichloropropane	ND	28	ug/m3	09/25/24	1	EPA TO-15	BDI0088
12	1,3,5-Trimethylbenzene	ND	29	ug/m3	09/25/24	1	EPA TO-15	BDI0088
13	1,3-Butadiene	ND	2.7	ug/m3	09/25/24	1	EPA TO-15	BDI0088
14	1,3-Dichlorobenzene	ND	36	ug/m3	09/25/24	1	EPA TO-15	BDI0088
15	1,4-Dichlorobenzene	ND	36	ug/m3	09/25/24	1	EPA TO-15	BDI0088
16	1,4-Dioxane	ND	22	ug/m3	09/25/24	1	EPA TO-15	BDI0088
17	2,2,4-Trimethylpentane	ND	56	ug/m3	09/25/24	1	EPA TO-15	BDI0088
18	2-Butanone	ND	35	ug/m3	09/25/24	1	EPA TO-15	BDI0088
19	2-Hexanone	ND	49	ug/m3	09/25/24	1	EPA TO-15	BDI0088
20	4-Methyl-2-pentanone	ND	49	ug/m3	09/25/24	1	EPA TO-15	BDI0088
21	Acetone	ND	57	ug/m3	09/25/24	1	EPA TO-15	BDI0088
22	Benzene	ND	19	ug/m3	09/25/24	1	EPA TO-15	BDI0088
23	Benzyl Chloride	ND	6.2	ug/m3	09/25/24	1	EPA TO-15	BDI0088
24	Bromodichloromethane	ND	8.0	ug/m3	09/25/24	1	EPA TO-15	BDI0088
25	Bromoform	ND	62	ug/m3	09/25/24	1	EPA TO-15	BDI0088
26	Bromomethane	ND	23	ug/m3	09/25/24	1	EPA TO-15	BDI0088
27	Carbon Disulfide	ND	37	ug/m3	09/25/24	1	EPA TO-15	BDI0088
28	Carbon Tetrachloride	ND	7.5	ug/m3	09/25/24	1	EPA TO-15	BDI0088
29	Chlorobenzene	ND	28	ug/m3	09/25/24	1	EPA TO-15	BDI0088
30	Chloroethane	ND	16	ug/m3	09/25/24	1	EPA TO-15	BDI0088
31	Chloroform	ND	5.9	ug/m3	09/25/24	1	EPA TO-15	BDI0088
32	Chloromethane	ND	12	ug/m3	09/25/24	1	EPA TO-15	BDI0088

Metiri Group - Holt - 1914 Holloway Dr, Holt, MI 48842

Soil and Materials Engineers, Inc. - Plymouth
43980 Plymouth Oaks Blvd
Plymouth, MI 48170

Project: 095650.00.003.002
Project Number: 095650.00.003.002
Project Manager: Troy Helmick

Reported: 10/03/2024 14:53

Sample Results
(Continued)

Sample: SG1 (Continued)
24I0107-01 (Air)

Volatiles Analysis-GC/MS (TO-15) (Continued)

		Analyte	Result	Qual	PQL	Units	Date Analyzed	DF	Method	Prep Batch
	33	cis-1,2-Dichloroethene	ND		24	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	34	cis-1,3-Dichloropropene	ND		27	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	35	Cyclohexane	ND		41	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	36	Dibromochloromethane	ND		4.1	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	37	Dichlorodifluoromethane	ND		30	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	38	Ethanol	24	L+, V+	23	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	39	Ethyl Acetate	ND		43	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	40	Ethylbenzene	ND		52	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	41	Ethylene Dibromide	ND		0.92	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	42	Hexachlorobutadiene	ND		5.1	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	43	Isopropanol	ND		29	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	44	m&p-Xylene	ND		52	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	45	Methylene Chloride	ND		83	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	46	MTBE	ND		22	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	47	Naphthalene	ND		19	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	48	n-Heptane	ND		49	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	49	n-Hexane	ND		42	ug/m3	09/25/24	1	EPA TO-15	BDI0088
‡	50	n-Pentane	ND		18	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	51	n-Propylbenzene	ND		29	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	52	o-Xylene	ND		52	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	53	sec-Butylbenzene	ND		6.6	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	54	Styrene	ND		51	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	55	tert-Butylbenzene	ND		6.6	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	56	Tetrachloroethene	ND		41	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	57	Tetrahydrofuran	ND		3.5	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	58	Toluene	ND		23	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	59	trans-1,2-Dichloroethene	ND		24	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	60	trans-1,3-Dichloropropene	ND		27	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	61	Trichloroethene	ND		1.6	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	62	Trichlorofluoromethane	ND		34	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	63	Vinyl Acetate	ND		42	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	64	Vinyl Chloride	ND		15	ug/m3	09/25/24	1	EPA TO-15	BDI0088

Metiri Group - Holt - 1914 Holloway Dr, Holt, MI 48842

Soil and Materials Engineers, Inc. - Plymouth	Project: 095650.00.003.002	
43980 Plymouth Oaks Blvd	Project Number: 095650.00.003.002	
Plymouth, MI 48170	Project Manager: Troy Helmick	Reported: 10/03/2024 14:53

Sample Results

(Continued)

Sample: SG1 (Continued)

24I0107-01 (Air)

Analyte	Result/Qual	PQL	Units	Date Analyzed	DF	Method	Prep Batch
Volatiles Analysis-GC/MS (TO-15) (Continued)							
65 Xylenes	ND	100	ug/m3	09/25/24	1	EPA TO-15	BDI0088
Surrogate: 4-Bromofluorobenzene(S)	*92%*	*80-120*		*09/25/24*	*1*	*EPA TO-15*	

Metiri Group - Holt - 1914 Holloway Dr, Holt, MI 48842

Soil and Materials Engineers, Inc. - Plymouth
43980 Plymouth Oaks Blvd
Plymouth, MI 48170

Project: 095650.00.003.002
Project Number: 095650.00.003.002
Project Manager: Troy Helmick

Reported: 10/03/2024 14:53

Sample Results
(Continued)

Sample: SG2
24I0107-02 (Air)

	Analyte	Result/Qual	PQL	Units	Date Analyzed	DF	Method	Prep Batch
Volatiles Analysis-GC/MS (TO-15)								
1	1,1,1-Trichloroethane	ND	33	ug/m3	09/25/24	1	EPA TO-15	BDI0088
2	1,1,2,2-Tetrachloroethane	ND	3.3	ug/m3	09/25/24	1	EPA TO-15	BDI0088
3	1,1,2-Trichloroethane	ND	6.5	ug/m3	09/25/24	1	EPA TO-15	BDI0088
4	1,1,2-Trichlorotrifluoroethane	ND	46	ug/m3	09/25/24	1	EPA TO-15	BDI0088
5	1,1-Dichloroethane	ND	24	ug/m3	09/25/24	1	EPA TO-15	BDI0088
6	1,1-Dichloroethene	ND	24	ug/m3	09/25/24	1	EPA TO-15	BDI0088
7	1,2,4-Trichlorobenzene	ND	22	ug/m3	09/25/24	1	EPA TO-15	BDI0088
8	1,2,4-Trimethylbenzene	ND	29	ug/m3	09/25/24	1	EPA TO-15	BDI0088
9	1,2-Dichlorobenzene	ND	36	ug/m3	09/25/24	1	EPA TO-15	BDI0088
10	1,2-Dichloroethane	ND	4.9	ug/m3	09/25/24	1	EPA TO-15	BDI0088
11	1,2-Dichloropropane	ND	28	ug/m3	09/25/24	1	EPA TO-15	BDI0088
12	1,3,5-Trimethylbenzene	ND	29	ug/m3	09/25/24	1	EPA TO-15	BDI0088
13	1,3-Butadiene	ND	2.7	ug/m3	09/25/24	1	EPA TO-15	BDI0088
14	1,3-Dichlorobenzene	ND	36	ug/m3	09/25/24	1	EPA TO-15	BDI0088
15	1,4-Dichlorobenzene	ND	36	ug/m3	09/25/24	1	EPA TO-15	BDI0088
16	1,4-Dioxane	ND	22	ug/m3	09/25/24	1	EPA TO-15	BDI0088
17	2,2,4-Trimethylpentane	ND	56	ug/m3	09/25/24	1	EPA TO-15	BDI0088
18	2-Butanone	ND	35	ug/m3	09/25/24	1	EPA TO-15	BDI0088
19	2-Hexanone	ND	49	ug/m3	09/25/24	1	EPA TO-15	BDI0088
20	4-Methyl-2-pentanone	ND	49	ug/m3	09/25/24	1	EPA TO-15	BDI0088
21	Acetone	ND	57	ug/m3	09/25/24	1	EPA TO-15	BDI0088
22	Benzene	ND	19	ug/m3	09/25/24	1	EPA TO-15	BDI0088
23	Benzyl Chloride	ND	6.2	ug/m3	09/25/24	1	EPA TO-15	BDI0088
24	Bromodichloromethane	ND	8.0	ug/m3	09/25/24	1	EPA TO-15	BDI0088
25	Bromoform	ND	62	ug/m3	09/25/24	1	EPA TO-15	BDI0088
26	Bromomethane	ND	23	ug/m3	09/25/24	1	EPA TO-15	BDI0088
27	Carbon Disulfide	ND	37	ug/m3	09/25/24	1	EPA TO-15	BDI0088
28	Carbon Tetrachloride	ND	7.5	ug/m3	09/25/24	1	EPA TO-15	BDI0088
29	Chlorobenzene	ND	28	ug/m3	09/25/24	1	EPA TO-15	BDI0088
30	Chloroethane	ND	16	ug/m3	09/25/24	1	EPA TO-15	BDI0088
31	Chloroform	ND	5.9	ug/m3	09/25/24	1	EPA TO-15	BDI0088
32	Chloromethane	ND	12	ug/m3	09/25/24	1	EPA TO-15	BDI0088

Metiri Group - Holt - 1914 Holloway Dr, Holt, MI 48842

Soil and Materials Engineers, Inc. - Plymouth
43980 Plymouth Oaks Blvd
Plymouth, MI 48170

Project: 095650.00.003.002
Project Number: 095650.00.003.002
Project Manager: Troy Helmick

Reported: 10/03/2024 14:53

Sample Results
(Continued)

Sample: SG2 (Continued)
24I0107-02 (Air)

Volatiles Analysis-GC/MS (TO-15) (Continued)

		Analyte	Result	Qual	PQL	Units	Date Analyzed	DF	Method	Prep Batch
	33	cis-1,2-Dichloroethene	ND		24	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	34	cis-1,3-Dichloropropene	ND		27	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	35	Cyclohexane	ND		41	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	36	Dibromochloromethane	ND		4.1	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	37	Dichlorodifluoromethane	ND		30	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	38	Ethanol	31	L+, V+	23	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	39	Ethyl Acetate	ND		43	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	40	Ethylbenzene	ND		52	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	41	Ethylene Dibromide	ND		0.92	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	42	Hexachlorobutadiene	ND		5.1	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	43	Isopropanol	ND		29	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	44	m&p-Xylene	86		52	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	45	Methylene Chloride	ND		83	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	46	MTBE	ND		22	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	47	Naphthalene	ND		19	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	48	n-Heptane	ND		49	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	49	n-Hexane	ND		42	ug/m3	09/25/24	1	EPA TO-15	BDI0088
‡	50	n-Pentane	ND		18	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	51	n-Propylbenzene	ND		29	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	52	o-Xylene	ND		52	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	53	sec-Butylbenzene	ND		6.6	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	54	Styrene	ND		51	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	55	tert-Butylbenzene	ND		6.6	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	56	Tetrachloroethene	ND		41	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	57	Tetrahydrofuran	ND		3.5	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	58	Toluene	ND		23	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	59	trans-1,2-Dichloroethene	ND		24	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	60	trans-1,3-Dichloropropene	ND		27	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	61	Trichloroethene	ND		1.6	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	62	Trichlorofluoromethane	ND		34	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	63	Vinyl Acetate	ND		42	ug/m3	09/25/24	1	EPA TO-15	BDI0088
	64	Vinyl Chloride	ND		15	ug/m3	09/25/24	1	EPA TO-15	BDI0088

Metiri Group - Holt - 1914 Holloway Dr, Holt, MI 48842

Soil and Materials Engineers, Inc. - Plymouth	Project: 095650.00.003.002	
43980 Plymouth Oaks Blvd	Project Number: 095650.00.003.002	
Plymouth, MI 48170	Project Manager: Troy Helmick	Reported: 10/03/2024 14:53

Sample Results
(Continued)

Sample: SG2 (Continued)
24I0107-02 (Air)

Analyte	Result /Qual	PQL	Units	Date Analyzed	DF	Method	Prep Batch
Volatiles Analysis-GC/MS (TO-15) (Continued)							
65 Xylenes	130	100	ug/m3	09/25/24	1	EPA TO-15	BDI0088
Surrogate: 4-Bromofluorobenzene(S)	*94%*	*80-120*		*09/25/24*	*1*	*EPA TO-15*	

Metiri Group - Holt - 1914 Holloway Dr, Holt, MI 48842

Soil and Materials Engineers, Inc. - Plymouth	Project: 095650.00.003.002	
43980 Plymouth Oaks Blvd	Project Number: 095650.00.003.002	
Plymouth, MI 48170	Project Manager: Troy Helmick	Reported: 10/03/2024 14:53

Sample Results

(Continued)

Sample: SG3

24I0107-03 (Air)

Volatiles Analysis-GC/MS (TO-15)

	Analyte	Result	Qual	PQL	Units	Date Analyzed	DF	Method	Prep Batch
1	1,1,1-Trichloroethane	ND		33	ug/m3	09/26/24	1	EPA TO-15	BDI0088
2	1,1,2,2-Tetrachloroethane	ND		3.3	ug/m3	09/26/24	1	EPA TO-15	BDI0088
3	1,1,2-Trichloroethane	ND		6.5	ug/m3	09/26/24	1	EPA TO-15	BDI0088
4	1,1,2-Trichlorotrifluoroethane	ND		46	ug/m3	09/26/24	1	EPA TO-15	BDI0088
5	1,1-Dichloroethane	ND		24	ug/m3	09/26/24	1	EPA TO-15	BDI0088
6	1,1-Dichloroethene	ND		24	ug/m3	09/26/24	1	EPA TO-15	BDI0088
7	1,2,4-Trichlorobenzene	ND		22	ug/m3	09/26/24	1	EPA TO-15	BDI0088
8	1,2,4-Trimethylbenzene	ND		29	ug/m3	09/26/24	1	EPA TO-15	BDI0088
9	1,2-Dichlorobenzene	ND		36	ug/m3	09/26/24	1	EPA TO-15	BDI0088
10	1,2-Dichloroethane	ND		4.9	ug/m3	09/26/24	1	EPA TO-15	BDI0088
11	1,2-Dichloropropane	ND		28	ug/m3	09/26/24	1	EPA TO-15	BDI0088
12	1,3,5-Trimethylbenzene	ND		29	ug/m3	09/26/24	1	EPA TO-15	BDI0088
13	1,3-Butadiene	ND		2.7	ug/m3	09/26/24	1	EPA TO-15	BDI0088
14	1,3-Dichlorobenzene	ND		36	ug/m3	09/26/24	1	EPA TO-15	BDI0088
15	1,4-Dichlorobenzene	ND		36	ug/m3	09/26/24	1	EPA TO-15	BDI0088
16	1,4-Dioxane	ND		22	ug/m3	09/26/24	1	EPA TO-15	BDI0088
17	2,2,4-Trimethylpentane	ND		56	ug/m3	09/26/24	1	EPA TO-15	BDI0088
18	2-Butanone	ND		35	ug/m3	09/26/24	1	EPA TO-15	BDI0088
19	2-Hexanone	ND		49	ug/m3	09/26/24	1	EPA TO-15	BDI0088
20	4-Methyl-2-pentanone	ND		49	ug/m3	09/26/24	1	EPA TO-15	BDI0088
21	Acetone	ND		57	ug/m3	09/26/24	1	EPA TO-15	BDI0088
22	Benzene	ND		19	ug/m3	09/26/24	1	EPA TO-15	BDI0088
23	Benzyl Chloride	ND		6.2	ug/m3	09/26/24	1	EPA TO-15	BDI0088
24	Bromodichloromethane	ND		8.0	ug/m3	09/26/24	1	EPA TO-15	BDI0088
25	Bromoform	ND		62	ug/m3	09/26/24	1	EPA TO-15	BDI0088
26	Bromomethane	ND		23	ug/m3	09/26/24	1	EPA TO-15	BDI0088
27	Carbon Disulfide	ND		37	ug/m3	09/26/24	1	EPA TO-15	BDI0088
28	Carbon Tetrachloride	ND		7.5	ug/m3	09/26/24	1	EPA TO-15	BDI0088
29	Chlorobenzene	ND		28	ug/m3	09/26/24	1	EPA TO-15	BDI0088
30	Chloroethane	ND		16	ug/m3	09/26/24	1	EPA TO-15	BDI0088
31	Chloroform	ND		5.9	ug/m3	09/26/24	1	EPA TO-15	BDI0088
32	Chloromethane	ND		12	ug/m3	09/26/24	1	EPA TO-15	BDI0088

Metiri Group - Holt - 1914 Holloway Dr, Holt, MI 48842

Soil and Materials Engineers, Inc. - Plymouth
43980 Plymouth Oaks Blvd
Plymouth, MI 48170

Project: 095650.00.003.002
Project Number: 095650.00.003.002
Project Manager: Troy Helmick

Reported: 10/03/2024 14:53

Sample Results
(Continued)

Sample: SG3 (Continued)
24I0107-03 (Air)

Volatiles Analysis-GC/MS (TO-15) (Continued)

		Analyte	Result	Qual	PQL	Units	Date Analyzed	DF	Method	Prep Batch
	33	cis-1,2-Dichloroethene	ND		24	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	34	cis-1,3-Dichloropropene	ND		27	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	35	Cyclohexane	ND		41	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	36	Dibromochloromethane	ND		4.1	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	37	Dichlorodifluoromethane	ND		30	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	38	Ethanol	ND	L+, V+	23	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	39	Ethyl Acetate	ND		43	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	40	Ethylbenzene	ND		52	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	41	Ethylene Dibromide	ND		0.92	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	42	Hexachlorobutadiene	ND		5.1	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	43	Isopropanol	ND		29	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	44	m&p-Xylene	ND		52	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	45	Methylene Chloride	ND		83	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	46	MTBE	ND		22	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	47	Naphthalene	ND		19	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	48	n-Heptane	ND		49	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	49	n-Hexane	ND		42	ug/m3	09/26/24	1	EPA TO-15	BDI0088
‡	50	n-Pentane	ND		18	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	51	n-Propylbenzene	ND		29	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	52	o-Xylene	ND		52	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	53	sec-Butylbenzene	ND		6.6	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	54	Styrene	ND		51	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	55	tert-Butylbenzene	ND		6.6	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	56	Tetrachloroethene	ND		41	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	57	Tetrahydrofuran	ND		3.5	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	58	Toluene	ND		23	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	59	trans-1,2-Dichloroethene	ND		24	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	60	trans-1,3-Dichloropropene	ND		27	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	61	Trichloroethene	ND		1.6	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	62	Trichlorofluoromethane	ND		34	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	63	Vinyl Acetate	ND		42	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	64	Vinyl Chloride	ND		15	ug/m3	09/26/24	1	EPA TO-15	BDI0088

Metiri Group - Holt - 1914 Holloway Dr, Holt, MI 48842

Soil and Materials Engineers, Inc. - Plymouth	Project: 095650.00.003.002	
43980 Plymouth Oaks Blvd	Project Number: 095650.00.003.002	
Plymouth, MI 48170	Project Manager: Troy Helmick	Reported: 10/03/2024 14:53

Sample Results

(Continued)

Sample: SG3 (Continued)

24I0107-03 (Air)

Analyte	Result/Qual	PQL	Units	Date Analyzed	DF	Method	Prep Batch
Volatiles Analysis-GC/MS (TO-15) (Continued)							
65 Xylenes	ND	100	ug/m3	09/26/24	1	EPA TO-15	BDI0088
Surrogate: 4-Bromofluorobenzene(S)	*93%*	*80-120*		*09/26/24*	*1*	*EPA TO-15*	

Metiri Group - Holt - 1914 Holloway Dr, Holt, MI 48842

Soil and Materials Engineers, Inc. - Plymouth	Project: 095650.00.003.002	
43980 Plymouth Oaks Blvd	Project Number: 095650.00.003.002	
Plymouth, MI 48170	Project Manager: Troy Helmick	Reported: 10/03/2024 14:53

Sample Results

(Continued)

Sample: SG4

24I0107-04 (Air)

Volatiles Analysis-GC/MS (TO-15)

	Analyte	Result	Qual	PQL	Units	Date Analyzed	DF	Method	Prep Batch
1	1,1,1-Trichloroethane	ND		33	ug/m3	09/26/24	1	EPA TO-15	BDI0088
2	1,1,2,2-Tetrachloroethane	ND		3.3	ug/m3	09/26/24	1	EPA TO-15	BDI0088
3	1,1,2-Trichloroethane	ND		6.5	ug/m3	09/26/24	1	EPA TO-15	BDI0088
4	1,1,2-Trichlorotrifluoroethane	ND		46	ug/m3	09/26/24	1	EPA TO-15	BDI0088
5	1,1-Dichloroethane	ND		24	ug/m3	09/26/24	1	EPA TO-15	BDI0088
6	1,1-Dichloroethene	ND		24	ug/m3	09/26/24	1	EPA TO-15	BDI0088
7	1,2,4-Trichlorobenzene	ND		22	ug/m3	09/26/24	1	EPA TO-15	BDI0088
8	1,2,4-Trimethylbenzene	ND		29	ug/m3	09/26/24	1	EPA TO-15	BDI0088
9	1,2-Dichlorobenzene	ND		36	ug/m3	09/26/24	1	EPA TO-15	BDI0088
10	1,2-Dichloroethane	ND		4.9	ug/m3	09/26/24	1	EPA TO-15	BDI0088
11	1,2-Dichloropropane	ND		28	ug/m3	09/26/24	1	EPA TO-15	BDI0088
12	1,3,5-Trimethylbenzene	ND		29	ug/m3	09/26/24	1	EPA TO-15	BDI0088
13	1,3-Butadiene	ND		2.7	ug/m3	09/26/24	1	EPA TO-15	BDI0088
14	1,3-Dichlorobenzene	ND		36	ug/m3	09/26/24	1	EPA TO-15	BDI0088
15	1,4-Dichlorobenzene	ND		36	ug/m3	09/26/24	1	EPA TO-15	BDI0088
16	1,4-Dioxane	ND		22	ug/m3	09/26/24	1	EPA TO-15	BDI0088
17	2,2,4-Trimethylpentane	ND		56	ug/m3	09/26/24	1	EPA TO-15	BDI0088
18	2-Butanone	ND		35	ug/m3	09/26/24	1	EPA TO-15	BDI0088
19	2-Hexanone	ND		49	ug/m3	09/26/24	1	EPA TO-15	BDI0088
20	4-Methyl-2-pentanone	ND		49	ug/m3	09/26/24	1	EPA TO-15	BDI0088
21	Acetone	ND		57	ug/m3	09/26/24	1	EPA TO-15	BDI0088
22	Benzene	ND		19	ug/m3	09/26/24	1	EPA TO-15	BDI0088
23	Benzyl Chloride	ND		6.2	ug/m3	09/26/24	1	EPA TO-15	BDI0088
24	Bromodichloromethane	ND		8.0	ug/m3	09/26/24	1	EPA TO-15	BDI0088
25	Bromoform	ND		62	ug/m3	09/26/24	1	EPA TO-15	BDI0088
26	Bromomethane	ND		23	ug/m3	09/26/24	1	EPA TO-15	BDI0088
27	Carbon Disulfide	ND		37	ug/m3	09/26/24	1	EPA TO-15	BDI0088
28	Carbon Tetrachloride	ND		7.5	ug/m3	09/26/24	1	EPA TO-15	BDI0088
29	Chlorobenzene	ND		28	ug/m3	09/26/24	1	EPA TO-15	BDI0088
30	Chloroethane	ND		16	ug/m3	09/26/24	1	EPA TO-15	BDI0088
31	Chloroform	ND		5.9	ug/m3	09/26/24	1	EPA TO-15	BDI0088
32	Chloromethane	ND		12	ug/m3	09/26/24	1	EPA TO-15	BDI0088

Metiri Group - Holt - 1914 Holloway Dr, Holt, MI 48842

Soil and Materials Engineers, Inc. - Plymouth
43980 Plymouth Oaks Blvd
Plymouth, MI 48170

Project: 095650.00.003.002
Project Number: 095650.00.003.002
Project Manager: Troy Helmick

Reported: 10/03/2024 14:53

Sample Results
(Continued)

Sample: SG4 (Continued)
24I0107-04 (Air)

Volatiles Analysis-GC/MS (TO-15) (Continued)

		Analyte	Result	Qual	PQL	Units	Date Analyzed	DF	Method	Prep Batch
	33	cis-1,2-Dichloroethene	ND		24	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	34	cis-1,3-Dichloropropene	ND		27	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	35	Cyclohexane	ND		41	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	36	Dibromochloromethane	ND		4.1	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	37	Dichlorodifluoromethane	ND		30	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	38	Ethanol	89	L+, V+	23	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	39	Ethyl Acetate	ND		43	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	40	Ethylbenzene	ND		52	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	41	Ethylene Dibromide	ND		0.92	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	42	Hexachlorobutadiene	ND		5.1	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	43	Isopropanol	ND		29	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	44	m&p-Xylene	ND		52	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	45	Methylene Chloride	ND		83	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	46	MTBE	ND		22	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	47	Naphthalene	ND		19	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	48	n-Heptane	ND		49	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	49	n-Hexane	ND		42	ug/m3	09/26/24	1	EPA TO-15	BDI0088
‡	50	n-Pentane	ND		18	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	51	n-Propylbenzene	ND		29	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	52	o-Xylene	ND		52	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	53	sec-Butylbenzene	ND		6.6	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	54	Styrene	ND		51	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	55	tert-Butylbenzene	ND		6.6	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	56	Tetrachloroethene	ND		41	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	57	Tetrahydrofuran	ND		3.5	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	58	Toluene	ND		23	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	59	trans-1,2-Dichloroethene	ND		24	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	60	trans-1,3-Dichloropropene	ND		27	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	61	Trichloroethene	ND		1.6	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	62	Trichlorofluoromethane	ND		34	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	63	Vinyl Acetate	ND		42	ug/m3	09/26/24	1	EPA TO-15	BDI0088
	64	Vinyl Chloride	ND		15	ug/m3	09/26/24	1	EPA TO-15	BDI0088

Metiri Group - Holt - 1914 Holloway Dr, Holt, MI 48842

Soil and Materials Engineers, Inc. - Plymouth	Project: 095650.00.003.002	
43980 Plymouth Oaks Blvd	Project Number: 095650.00.003.002	
Plymouth, MI 48170	Project Manager: Troy Helmick	Reported: 10/03/2024 14:53

Sample Results

(Continued)

Sample: SG4 (Continued)

24I0107-04 (Air)

Analyte	Result/Qual	PQL	Units	Date Analyzed	DF	Method	Prep Batch
Volatiles Analysis-GC/MS (TO-15) (Continued)							
65 Xylenes	ND	100	ug/m3	09/26/24	1	EPA TO-15	BDI0088
Surrogate: 4-Bromofluorobenzene(S)	*92%*	*80-120*		*09/26/24*	*1*	*EPA TO-15*	

Metiri Group - Holt - 1914 Holloway Dr, Holt, MI 48842

Soil and Materials Engineers, Inc. - Plymouth	Project: 095650.00.003.002	
43980 Plymouth Oaks Blvd	Project Number: 095650.00.003.002	
Plymouth, MI 48170	Project Manager: Troy Helmick	Reported: 10/03/2024 14:53

Sample Results

(Continued)

Sample: SGDUP

24I0107-05 (Air)

Volatiles Analysis-GC/MS (TO-15)

	Analyte	Result	Qual	PQL	Units	Date Analyzed	DF	Method	Prep Batch
1	1,1,1-Trichloroethane	ND		33	ug/m3	09/26/24	1	EPA TO-15	BDI0088
2	1,1,2,2-Tetrachloroethane	ND		3.3	ug/m3	09/26/24	1	EPA TO-15	BDI0088
3	1,1,2-Trichloroethane	ND		6.5	ug/m3	09/26/24	1	EPA TO-15	BDI0088
4	1,1,2-Trichlorotrifluoroethane	ND		46	ug/m3	09/26/24	1	EPA TO-15	BDI0088
5	1,1-Dichloroethane	ND		24	ug/m3	09/26/24	1	EPA TO-15	BDI0088
6	1,1-Dichloroethene	ND		24	ug/m3	09/26/24	1	EPA TO-15	BDI0088
7	1,2,4-Trichlorobenzene	ND		22	ug/m3	09/26/24	1	EPA TO-15	BDI0088
8	1,2,4-Trimethylbenzene	ND		29	ug/m3	09/26/24	1	EPA TO-15	BDI0088
9	1,2-Dichlorobenzene	ND		36	ug/m3	09/26/24	1	EPA TO-15	BDI0088
10	1,2-Dichloroethane	ND		4.9	ug/m3	09/26/24	1	EPA TO-15	BDI0088
11	1,2-Dichloropropane	ND		28	ug/m3	09/26/24	1	EPA TO-15	BDI0088
12	1,3,5-Trimethylbenzene	ND		29	ug/m3	09/26/24	1	EPA TO-15	BDI0088
13	1,3-Butadiene	ND		2.7	ug/m3	09/26/24	1	EPA TO-15	BDI0088
14	1,3-Dichlorobenzene	ND		36	ug/m3	09/26/24	1	EPA TO-15	BDI0088
15	1,4-Dichlorobenzene	ND		36	ug/m3	09/26/24	1	EPA TO-15	BDI0088
16	1,4-Dioxane	ND		22	ug/m3	09/26/24	1	EPA TO-15	BDI0088
17	2,2,4-Trimethylpentane	ND		56	ug/m3	09/26/24	1	EPA TO-15	BDI0088
18	2-Butanone	ND		35	ug/m3	09/26/24	1	EPA TO-15	BDI0088
19	2-Hexanone	ND		49	ug/m3	09/26/24	1	EPA TO-15	BDI0088
20	4-Methyl-2-pentanone	ND		49	ug/m3	09/26/24	1	EPA TO-15	BDI0088
21	Acetone	ND		57	ug/m3	09/26/24	1	EPA TO-15	BDI0088
22	Benzene	ND		19	ug/m3	09/26/24	1	EPA TO-15	BDI0088
23	Benzyl Chloride	ND		6.2	ug/m3	09/26/24	1	EPA TO-15	BDI0088
24	Bromodichloromethane	ND		8.0	ug/m3	09/26/24	1	EPA TO-15	BDI0088
25	Bromoform	ND		62	ug/m3	09/26/24	1	EPA TO-15	BDI0088
26	Bromomethane	ND		23	ug/m3	09/26/24	1	EPA TO-15	BDI0088
27	Carbon Disulfide	ND		37	ug/m3	09/26/24	1	EPA TO-15	BDI0088
28	Carbon Tetrachloride	ND		7.5	ug/m3	09/26/24	1	EPA TO-15	BDI0088
29	Chlorobenzene	ND		28	ug/m3	09/26/24	1	EPA TO-15	BDI0088
30	Chloroethane	ND		16	ug/m3	09/26/24	1	EPA TO-15	BDI0088
31	Chloroform	ND		5.9	ug/m3	09/26/24	1	EPA TO-15	BDI0088
32	Chloromethane	ND		12	ug/m3	09/26/24	1	EPA TO-15	BDI0088

Metiri Group - Holt - 1914 Holloway Dr, Holt, MI 48842

Soil and Materials Engineers, Inc. - Plymouth	Project: 095650.00.003.002	
43980 Plymouth Oaks Blvd	Project Number: 095650.00.003.002	
Plymouth, MI 48170	Project Manager: Troy Helmick	Reported: 10/03/2024 14:53

Sample Results

(Continued)

Sample: SGDUP (Continued)

24I0107-05 (Air)

	Analyte	Result	/Qual	PQL	Units	Date Analyzed	DF	Method	Prep Batch
Volatiles Analysis-GC/MS (TO-15) (Continued)									
33	cis-1,2-Dichloroethene	ND		24	ug/m3	09/26/24	1	EPA TO-15	BDI0088
34	cis-1,3-Dichloropropene	ND		27	ug/m3	09/26/24	1	EPA TO-15	BDI0088
35	Cyclohexane	ND		41	ug/m3	09/26/24	1	EPA TO-15	BDI0088
36	Dibromochloromethane	ND		4.1	ug/m3	09/26/24	1	EPA TO-15	BDI0088
37	Dichlorodifluoromethane	ND		30	ug/m3	09/26/24	1	EPA TO-15	BDI0088
38	Ethanol	ND	L+, V+	23	ug/m3	09/26/24	1	EPA TO-15	BDI0088
39	Ethyl Acetate	ND		43	ug/m3	09/26/24	1	EPA TO-15	BDI0088
40	Ethylbenzene	ND		52	ug/m3	09/26/24	1	EPA TO-15	BDI0088
41	Ethylene Dibromide	ND		0.92	ug/m3	09/26/24	1	EPA TO-15	BDI0088
42	Hexachlorobutadiene	ND		5.1	ug/m3	09/26/24	1	EPA TO-15	BDI0088
43	Isopropanol	ND		29	ug/m3	09/26/24	1	EPA TO-15	BDI0088
44	m&p-Xylene	78		52	ug/m3	09/26/24	1	EPA TO-15	BDI0088
45	Methylene Chloride	ND		83	ug/m3	09/26/24	1	EPA TO-15	BDI0088
46	MTBE	ND		22	ug/m3	09/26/24	1	EPA TO-15	BDI0088
47	Naphthalene	ND		19	ug/m3	09/26/24	1	EPA TO-15	BDI0088
48	n-Heptane	ND		49	ug/m3	09/26/24	1	EPA TO-15	BDI0088
49	n-Hexane	ND		42	ug/m3	09/26/24	1	EPA TO-15	BDI0088
‡ 50	n-Pentane	ND		18	ug/m3	09/26/24	1	EPA TO-15	BDI0088
51	n-Propylbenzene	ND		29	ug/m3	09/26/24	1	EPA TO-15	BDI0088
52	o-Xylene	ND		52	ug/m3	09/26/24	1	EPA TO-15	BDI0088
53	sec-Butylbenzene	ND		6.6	ug/m3	09/26/24	1	EPA TO-15	BDI0088
54	Styrene	ND		51	ug/m3	09/26/24	1	EPA TO-15	BDI0088
55	tert-Butylbenzene	ND		6.6	ug/m3	09/26/24	1	EPA TO-15	BDI0088
56	Tetrachloroethene	ND		41	ug/m3	09/26/24	1	EPA TO-15	BDI0088
57	Tetrahydrofuran	ND		3.5	ug/m3	09/26/24	1	EPA TO-15	BDI0088
58	Toluene	ND		23	ug/m3	09/26/24	1	EPA TO-15	BDI0088
59	trans-1,2-Dichloroethene	ND		24	ug/m3	09/26/24	1	EPA TO-15	BDI0088
60	trans-1,3-Dichloropropene	ND		27	ug/m3	09/26/24	1	EPA TO-15	BDI0088
61	Trichloroethene	ND		1.6	ug/m3	09/26/24	1	EPA TO-15	BDI0088
62	Trichlorofluoromethane	ND		34	ug/m3	09/26/24	1	EPA TO-15	BDI0088
63	Vinyl Acetate	ND		42	ug/m3	09/26/24	1	EPA TO-15	BDI0088
64	Vinyl Chloride	ND		15	ug/m3	09/26/24	1	EPA TO-15	BDI0088

Metiri Group - Holt - 1914 Holloway Dr, Holt, MI 48842

Soil and Materials Engineers, Inc. - Plymouth	Project: 095650.00.003.002	
43980 Plymouth Oaks Blvd	Project Number: 095650.00.003.002	
Plymouth, MI 48170	Project Manager: Troy Helmick	Reported: 10/03/2024 14:53

Sample Results

(Continued)

Sample: SGDUP (Continued)

24I0107-05 (Air)

Analyte		Result	/Qual	PQL	Units	Date Analyzed	DF	Method	Prep Batch
Volatiles Analysis-GC/MS (TO-15) (Continued)									
65	Xylenes	120		100	ug/m3	09/26/24	1	EPA TO-15	BDI0088
Surrogate: 4-Bromofluorobenzene(S)		*93%*		*80-120*		*09/26/24*	*1*	*EPA TO-15*	

Metiri Group - Holt - 1914 Holloway Dr, Holt, MI 48842

Soil and Materials Engineers, Inc. - Plymouth	Project: 095650.00.003.002	
43980 Plymouth Oaks Blvd	Project Number: 095650.00.003.002	
Plymouth, MI 48170	Project Manager: Troy Helmick	Reported: 10/03/2024 14:53

PREPARATION BATCH SUMMARY

EPA TO-15

Laboratory: Metiri Group - Holt

Client:

Batch: BDI0088 Batch Matrix: Air Preparation: TO-15

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT mL	FINAL VOL. ml
SG1	24I0107-01	09/25/24 09:24	100.0000	400
SG2	24I0107-02	09/25/24 09:24	100.0000	400
SG3	24I0107-03	09/25/24 09:24	100.0000	400
SG4	24I0107-04	09/25/24 09:24	100.0000	400
SGDUP	24I0107-05	09/25/24 09:24	100.0000	400
Blank	BDI0088-BLK1	09/24/24 16:47	400.0000	400
LCS	BDI0088-BS1	09/24/24 16:47	400.0000	400
LCS Dup	BDI0088-BSD1	09/24/24 16:47	400.0000	400

Metiri Group - Holt - 1914 Holloway Dr, Holt, MI 48842

Soil and Materials Engineers, Inc. - Plymouth	Project: 095650.00.003.002	
43980 Plymouth Oaks Blvd	Project Number: 095650.00.003.002	
Plymouth, MI 48170	Project Manager: Troy Helmick	Reported: 10/03/2024 14:53

Quality Control

Volatiles Analysis-GC/MS (TO-15)

Analyte	Result/ Qual	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Method: EPA TO-15									
Batch: BDI0088 - TO-15									
Blank (BDI0088-BLK1)				Prepared: 09/24/24 16:47 Analyzed: 09/25/24 14:44					
1 1,1,1-Trichloroethane	ND	8.2	ug/m3						
2 1,1,2,2-Tetrachloroethane	ND	0.82	ug/m3						
3 1,1,2-Trichloroethane	ND	1.6	ug/m3						
4 1,1,2-Trichlorotrifluoroethane	ND	11	ug/m3						
5 1,1-Dichloroethane	ND	6.1	ug/m3						
6 1,1-Dichloroethene	ND	5.9	ug/m3						
7 1,2,4-Trichlorobenzene	ND	5.6	ug/m3						
8 1,2,4-Trimethylbenzene	ND	7.4	ug/m3						
9 1,2-Dichlorobenzene	ND	9.0	ug/m3						
10 1,2-Dichloroethane	ND	1.2	ug/m3						
11 1,2-Dichloropropane	ND	6.9	ug/m3						
12 1,3,5-Trimethylbenzene	ND	7.4	ug/m3						
13 1,3-Butadiene	ND	0.66	ug/m3						
14 1,3-Dichlorobenzene	ND	9.0	ug/m3						
15 1,4-Dichlorobenzene	ND	9.0	ug/m3						
16 1,4-Dioxane	ND	5.4	ug/m3						
17 2,2,4-Trimethylpentane	ND	14	ug/m3						
18 2-Butanone	ND	8.8	ug/m3						
19 2-Hexanone	ND	12	ug/m3						
20 4-Methyl-2-pentanone	ND	12	ug/m3						
21 Acetone	ND	14	ug/m3						
22 Benzene	ND	4.8	ug/m3						
23 Benzyl Chloride	ND	1.6	ug/m3						
24 Bromodichloromethane	ND	2.0	ug/m3						
25 Bromoform	ND	15	ug/m3						
26 Bromomethane	ND	5.8	ug/m3						
27 Carbon Disulfide	ND	9.3	ug/m3						
28 Carbon Tetrachloride	ND	1.9	ug/m3						
29 Chlorobenzene	ND	6.9	ug/m3						
30 Chloroethane	ND	4.0	ug/m3						
31 Chloroform	ND	1.5	ug/m3						
32 Chloromethane	ND	3.1	ug/m3						
33 cis-1,2-Dichloroethene	ND	5.9	ug/m3						
34 cis-1,3-Dichloropropene	ND	6.8	ug/m3						
35 Cyclohexane	ND	10	ug/m3						
36 Dibromochloromethane	ND	1.0	ug/m3						
37 Dichlorodifluoromethane	ND	7.4	ug/m3						
38 Ethanol	ND	5.7	ug/m3						
39 Ethyl Acetate	ND	11	ug/m3						
40 Ethylbenzene	ND	13	ug/m3						
41 Ethylene Dibromide	ND	0.23	ug/m3						

Metiri Group - Holt - 1914 Holloway Dr, Holt, MI 48842

Soil and Materials Engineers, Inc. - Plymouth	Project: 095650.00.003.002	
43980 Plymouth Oaks Blvd	Project Number: 095650.00.003.002	
Plymouth, MI 48170	Project Manager: Troy Helmick	Reported: 10/03/2024 14:53

Quality Control
(Continued)

Volatiles Analysis-GC/MS (TO-15) (Continued)

Analyte	Result/ Qual	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Blank (BDI0088-BLK1)				Prepared: 09/24/24 16:47 Analyzed: 09/25/24 14:44					
42 Hexachlorobutadiene	ND	1.3	ug/m3						
43 Isopropanol	ND	7.4	ug/m3						
44 m&p-Xylene	ND	13	ug/m3						
45 Methylene Chloride	ND	21	ug/m3						
46 MTBE	ND	5.4	ug/m3						
47 Naphthalene	ND	4.7	ug/m3						
48 n-Heptane	ND	12	ug/m3						
49 n-Hexane	ND	11	ug/m3						
50 n-Pentane	ND	4.4	ug/m3						
51 n-Propylbenzene	ND	7.4	ug/m3						
52 o-Xylene	ND	13	ug/m3						
53 sec-Butylbenzene	ND	1.6	ug/m3						
54 Styrene	ND	13	ug/m3						
55 tert-Butylbenzene	ND	1.6	ug/m3						
56 Tetrachloroethene	ND	10	ug/m3						
57 Tetrahydrofuran	ND	0.88	ug/m3						
58 Toluene	ND	5.7	ug/m3						
59 trans-1,2-Dichloroethene	ND	5.9	ug/m3						
60 trans-1,3-Dichloropropene	ND	6.8	ug/m3						
61 Trichloroethene	ND	0.40	ug/m3						
62 Trichlorofluoromethane	ND	8.4	ug/m3						
63 Vinyl Acetate	ND	11	ug/m3						
64 Vinyl Chloride	ND	3.8	ug/m3						
65 Xylenes	ND	26	ug/m3						
Surrogate: 4-Bromofluorobenzene(S)	*39*		*ug/m3*	*42.0*		*92*	*80-120*		

The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document.
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Metiri Group - Holt - 1914 Holloway Dr, Holt, MI 48842

Soil and Materials Engineers, Inc. - Plymouth	Project: 095650.00.003.002	
43980 Plymouth Oaks Blvd	Project Number: 095650.00.003.002	
Plymouth, MI 48170	Project Manager: Troy Helmick	Reported: 10/03/2024 14:53

Quality Control
(Continued)

Volatiles Analysis-GC/MS (TO-15) (Continued)

Analyte	Result/ Qual	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
LCS (BDI0088-BS1)				Prepared: 09/24/24 16:47		Analyzed: 09/25/24 10:44			
1 1,1,1-Trichloroethane	72	8.2	ug/m3	71.4		101	70-130		
2 1,1,2,2-Tetrachloroethane	82	0.82	ug/m3	89.2		92	70-130		
3 1,1,2-Trichloroethane	66	1.6	ug/m3	71.4		93	70-130		
4 1,1,2-Trichlorotrifluoroethane	110	23	ug/m3	103		103	70-130		
5 1,1-Dichloroethane	58	6.1	ug/m3	53.0		109	70-130		
6 1,1-Dichloroethene	60	5.9	ug/m3	53.1		114	70-133		
7 1,2,4-Trichlorobenzene	100	22	ug/m3	96.4		104	70-140		
8 1,2,4-Trimethylbenzene	63	7.4	ug/m3	64.4		97	70-132		
9 1,2-Dichlorobenzene	67	9.0	ug/m3	78.1		86	70-130		
10 1,2-Dichloroethane	57	1.2	ug/m3	53.0		108	70-130		
11 1,2-Dichloropropane	64	6.9	ug/m3	60.5		105	70-130		
12 1,3,5-Trimethylbenzene	62	7.4	ug/m3	63.4		97	70-131		
13 1,3-Butadiene	35	0.66	ug/m3	29.0		120	70-134		
14 1,3-Dichlorobenzene	68	9.0	ug/m3	78.7		87	70-131		
15 1,4-Dichlorobenzene	70	9.0	ug/m3	78.1		89	70-134		
16 1,4-Dioxane	53	5.4	ug/m3	46.5		114	70-130		
17 2,2,4-Trimethylpentane	68	28	ug/m3	60.2		113	70-130		
18 2-Butanone	45	8.8	ug/m3	38.6		116	70-130		
19 2-Hexanone	62	12	ug/m3	52.8		117	70-139		
20 4-Methyl-2-pentanone	66	12	ug/m3	53.6		122	70-130		
21 Acetone	35	36	ug/m3	30.3		115	70-130		
22 Benzene	41	4.8	ug/m3	42.3		98	70-130		
23 Benzyl Chloride	66	1.6	ug/m3	67.8		97	70-150		
24 Bromodichloromethane	87	2.0	ug/m3	86.4		100	70-130		
25 Bromoform	120	15	ug/m3	134		93	70-138		
26 Bromomethane	56	5.8	ug/m3	49.5		113	70-133		
27 Carbon Disulfide	42	19	ug/m3	41.2		103	70-130		
28 Carbon Tetrachloride	78	1.9	ug/m3	79.2		98	70-131		
29 Chlorobenzene	55	14	ug/m3	60.3		91	70-130		
30 Chloroethane	44	4.0	ug/m3	33.6		130	70-130		
31 Chloroform	67	1.5	ug/m3	63.9		105	70-130		
32 Chloromethane	33	12	ug/m3	26.6		122	70-130		
33 cis-1,2-Dichloroethene	60	5.9	ug/m3	53.1		112	70-130		
34 cis-1,3-Dichloropropene	64	6.8	ug/m3	59.4		108	70-131		
35 Cyclohexane	51	10	ug/m3	45.1		113	70-130		
36 Dibromochloromethane	100	1.0	ug/m3	109		93	70-135		
37 Dichlorodifluoromethane	72	15	ug/m3	61.8		117	70-132		
38 Ethanol	34 L+	11	ug/m3	25.9		131	70-130		
39 Ethyl Acetate	55	11	ug/m3	46.8		116	70-130		
40 Ethylbenzene	57	13	ug/m3	56.4		101	70-130		
41 Ethylene Dibromide	92	0.23	ug/m3	97.9		93	70-130		
42 Hexachlorobutadiene	120	1.3	ug/m3	140		84	70-134		
43 Isopropanol	38	15	ug/m3	31.3		120	54-144		
44 m&p-Xylene	110	13	ug/m3	113		93	70-130		

Metiri Group - Holt - 1914 Holloway Dr, Holt, MI 48842

Soil and Materials Engineers, Inc. - Plymouth	Project: 095650.00.003.002	
43980 Plymouth Oaks Blvd	Project Number: 095650.00.003.002	
Plymouth, MI 48170	Project Manager: Troy Helmick	Reported: 10/03/2024 14:53

Quality Control
(Continued)

Volatiles Analysis-GC/MS (TO-15) (Continued)

Analyte	Result/ Qual	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
LCS (BDI0088-BS1)				Prepared: 09/24/24 16:47		Analyzed: 09/25/24 10:44			
45 Methylene Chloride	51	42	ug/m3	44.8		114	70-132		
46 MTBE	53	5.4	ug/m3	47.2		112	70-130		
47 Naphthalene	74	19	ug/m3	73.9		101	70-148		
48 n-Heptane	62	12	ug/m3	53.3		117	70-132		
49 n-Hexane	55	11	ug/m3	46.7		118	70-130		
50 n-Pentane	49	4.4	ug/m3	38.6		126	70-130		
51 n-Propylbenzene	64	7.4	ug/m3	63.9		100	70-130		
52 o-Xylene	57	13	ug/m3	56.4		100	70-130		
53 sec-Butylbenzene	70	4.9	ug/m3	72.7		96	70-130		
54 Styrene	54	13	ug/m3	55.8		97	70-130		
55 tert-Butylbenzene	69	4.9	ug/m3	71.9		95	70-130		
56 Tetrachloroethene	83	10	ug/m3	88.1		94	70-130		
57 Tetrahydrofuran	43	4.4	ug/m3	35.7		121	70-138		
58 Toluene	47	5.7	ug/m3	49.0		96	70-130		
59 trans-1,2-Dichloroethene	59	5.9	ug/m3	51.9		114	70-130		
60 trans-1,3-Dichloropropene	58	6.8	ug/m3	54.0		107	70-134		
61 Trichloroethene	71	0.40	ug/m3	69.3		103	70-130		
62 Trichlorofluoromethane	75	8.4	ug/m3	72.4		103	70-132		
63 Vinyl Acetate	51	11	ug/m3	47.5		108	70-131		
64 Vinyl Chloride	38	3.8	ug/m3	32.6		117	70-131		
Surrogate: 4-Bromofluorobenzene(S)	*41*		*ug/m3*	*42.0*		*98*	*80-120*		

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Metiri Group - Holt - 1914 Holloway Dr, Holt, MI 48842

Soil and Materials Engineers, Inc. - Plymouth	Project: 095650.00.003.002	
43980 Plymouth Oaks Blvd	Project Number: 095650.00.003.002	
Plymouth, MI 48170	Project Manager: Troy Helmick	Reported: 10/03/2024 14:53

Quality Control
(Continued)

Volatiles Analysis-GC/MS (TO-15) (Continued)

Analyte	Result/ Qual	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
LCS Dup (BDI0088-BSD1)				Prepared: 09/24/24 16:47		Analyzed: 09/25/24 11:42			
1 1,1,1-Trichloroethane	73	8.2	ug/m3	71.4		102	70-130	1	20
2 1,1,2,2-Tetrachloroethane	83	0.82	ug/m3	89.2		93	70-130	0.7	20
3 1,1,2-Trichloroethane	66	1.6	ug/m3	71.4		92	70-130	1	20
4 1,1,2-Trichlorotrifluoroethane	110	23	ug/m3	103		103	70-130	0.2	20
5 1,1-Dichloroethane	57	6.1	ug/m3	53.0		108	70-130	1	20
6 1,1-Dichloroethene	59	5.9	ug/m3	53.1		112	70-133	2	20
7 1,2,4-Trichlorobenzene	99	22	ug/m3	96.4		103	70-140	1	20
8 1,2,4-Trimethylbenzene	62	7.4	ug/m3	64.4		97	70-132	0.2	20
9 1,2-Dichlorobenzene	67	9.0	ug/m3	78.1		85	70-130	0.6	20
10 1,2-Dichloroethane	57	1.2	ug/m3	53.0		107	70-130	1	20
11 1,2-Dichloropropane	64	6.9	ug/m3	60.5		105	70-130	0.07	20
12 1,3,5-Trimethylbenzene	62	7.4	ug/m3	63.4		98	70-131	0.9	20
13 1,3-Butadiene	34	0.66	ug/m3	29.0		119	70-134	0.8	20
14 1,3-Dichlorobenzene	69	9.0	ug/m3	78.7		87	70-131	0.5	20
15 1,4-Dichlorobenzene	68	9.0	ug/m3	78.1		87	70-134	3	20
16 1,4-Dioxane	54	5.4	ug/m3	46.5		117	70-130	3	20
17 2,2,4-Trimethylpentane	68	28	ug/m3	60.2		113	70-130	0.3	20
18 2-Butanone	44	8.8	ug/m3	38.6		114	70-130	2	20
19 2-Hexanone	62	12	ug/m3	52.8		117	70-139	0.5	20
20 4-Methyl-2-pentanone	66	12	ug/m3	53.6		122	70-130	0.1	20
21 Acetone	35	36	ug/m3	30.3		116	70-130	0.9	20
22 Benzene	42	4.8	ug/m3	42.3		99	70-130	0.8	20
23 Benzyl Chloride	65	1.6	ug/m3	67.8		95	70-150	2	20
24 Bromodichloromethane	87	2.0	ug/m3	86.4		101	70-130	0.9	20
25 Bromoform	120	15	ug/m3	134		92	70-138	0.5	20
26 Bromomethane	55	5.8	ug/m3	49.5		111	70-133	2	20
27 Carbon Disulfide	42	19	ug/m3	41.2		102	70-130	1	20
28 Carbon Tetrachloride	79	1.9	ug/m3	79.2		100	70-131	2	20
29 Chlorobenzene	54	14	ug/m3	60.3		90	70-130	1	20
30 Chloroethane	43	4.0	ug/m3	33.6		127	70-130	3	20
31 Chloroform	65	1.5	ug/m3	63.9		102	70-130	2	20
32 Chloromethane	32	12	ug/m3	26.6		121	70-130	2	20
33 cis-1,2-Dichloroethene	59	5.9	ug/m3	53.1		111	70-130	0.9	20
34 cis-1,3-Dichloropropene	65	6.8	ug/m3	59.4		109	70-131	0.4	20
35 Cyclohexane	51	10	ug/m3	45.1		114	70-130	0.2	20
36 Dibromochloromethane	100	1.0	ug/m3	109		93	70-135	0.3	20
37 Dichlorodifluoromethane	69	15	ug/m3	61.8		112	70-132	4	20
38 Ethanol	33	11	ug/m3	25.9		126	70-130	4	20
39 Ethyl Acetate	54	11	ug/m3	46.8		114	70-130	2	20
40 Ethylbenzene	57	13	ug/m3	56.4		102	70-130	0.6	20
41 Ethylene Dibromide	90	0.23	ug/m3	97.9		92	70-130	2	20
42 Hexachlorobutadiene	120	1.3	ug/m3	140		84	70-134	0	20
43 Isopropanol	37	15	ug/m3	31.3		119	54-144	1	20
44 m&p-Xylene	110	13	ug/m3	113		95	70-130	1	20

Metiri Group - Holt - 1914 Holloway Dr, Holt, MI 48842

Soil and Materials Engineers, Inc. - Plymouth	Project: 095650.00.003.002	
43980 Plymouth Oaks Blvd	Project Number: 095650.00.003.002	
Plymouth, MI 48170	Project Manager: Troy Helmick	Reported: 10/03/2024 14:53

Quality Control
(Continued)

Volatiles Analysis-GC/MS (TO-15) (Continued)

Analyte	Result/ Qual	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
LCS Dup (BDI0088-BSD1)				Prepared: 09/24/24 16:47		Analyzed: 09/25/24 11:42			
45 Methylene Chloride	50	42	ug/m3	44.8		112	70-132	2	20
46 MTBE	52	5.4	ug/m3	47.2		111	70-130	1	20
47 Naphthalene	74	19	ug/m3	73.9		100	70-148	0.6	20
48 n-Heptane	62	12	ug/m3	53.3		117	70-132	0.6	20
49 n-Hexane	54	11	ug/m3	46.7		116	70-130	2	20
50 n-Pentane	48	4.4	ug/m3	38.6		124	70-130	1	20
51 n-Propylbenzene	64	7.4	ug/m3	63.9		100	70-130	0.3	20
52 o-Xylene	57	13	ug/m3	56.4		100	70-130	0.2	20
53 sec-Butylbenzene	70	4.9	ug/m3	72.7		96	70-130	0.3	20
54 Styrene	53	13	ug/m3	55.8		96	70-130	0.9	20
55 tert-Butylbenzene	68	4.9	ug/m3	71.9		95	70-130	0.4	20
56 Tetrachloroethene	82	10	ug/m3	88.1		93	70-130	0.8	20
57 Tetrahydrofuran	43	4.4	ug/m3	35.7		120	70-138	0.8	20
58 Toluene	47	5.7	ug/m3	49.0		96	70-130	0.4	20
59 trans-1,2-Dichloroethene	59	5.9	ug/m3	51.9		113	70-130	1	20
60 trans-1,3-Dichloropropene	58	6.8	ug/m3	54.0		107	70-134	0.2	20
61 Trichloroethene	72	0.40	ug/m3	69.3		103	70-130	0.4	20
62 Trichlorofluoromethane	74	8.4	ug/m3	72.4		103	70-132	0.6	20
63 Vinyl Acetate	52	11	ug/m3	47.5		109	70-131	1	20
64 Vinyl Chloride	37	3.8	ug/m3	32.6		115	70-131	2	20
Surrogate: 4-Bromofluorobenzene(S)	*41*		*ug/m3*	*42.0*		*97*	*80-120*		

Metiri Group - Holt - 1914 Holloway Dr, Holt, MI 48842

Soil and Materials Engineers, Inc. - Plymouth	Project: 095650.00.003.002	
43980 Plymouth Oaks Blvd	Project Number: 095650.00.003.002	
Plymouth, MI 48170	Project Manager: Troy Helmick	Reported: 10/03/2024 14:53

Notes and Definitions

Item	Definition
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.
Dry	Sample results reported on a dry weight basis.
MDL	Method Detection Limit (only displays if reported to the MDL)
ND	Analyte NOT DETECTED at or above the reporting limit.
DF	Dilution Factor
DL	Detection Limit
‡	Parameter not included in NELAC Scope of Analysis.
RPD	Relative Percent Difference
%REC	Percent Recovery
Source	Sample that was matrix spiked or duplicated.

PQL, Practical Quantitation Limit = Method Reporting Limit (MRL).

Accreditation Number(s):
MI001292024-1

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Metiri Group - Holt - 1914 Holloway Dr, Holt, MI 48842

Soil and Materials Engineers, Inc. - Plymouth	Project: 095650.00.003.002	
43980 Plymouth Oaks Blvd	Project Number: 095650.00.003.002	
Plymouth, MI 48170	Project Manager: Troy Helmick	Reported: 10/03/2024 14:53

WORK ORDER

24I0107

Printed: 10/03/2024 2:53 pm

Project: **095650.00.003.002**
Project Number: **095650.00.003.002**
Project Manager: **Katherine Jones**
PO Number:

Report To:

Soil and Materials Engineers, Inc. - Plymouth
Troy Helmick
43980 Plymouth Oaks Blvd
Plymouth, MI 48170
Phone: 7344549900
Fax: 7344540629

Invoice To:

Soil and Materials Engineers, Inc. - Plymouth
Troy Helmick
43980 Plymouth Oaks Blvd
Plymouth, MI 48170
Phone: 7344549900
Fax: 7344540629

Date Received: 09/20/2024 02:50 PM
Date Due: 09/27/2024 (5.00 day TAT)

Logged In By: Annette Sweeney
Received By: Sophie Snow

Analysis		Comments
24I0107-01 SG1 [Air] Sampled 9/19/2024 1:57:00PM		
TO-15-MI	Soil Gas/Subslab (65 Compds)	Soil Gas/Subslab (65 Compds)
24I0107-02 SG2 [Air] Sampled 9/19/2024 2:10:00PM		
TO-15-MI	Soil Gas/Subslab (65 Compds)	Soil Gas/Subslab (65 Compds)
24I0107-03 SG3 [Air] Sampled 9/19/2024 12:57:00PM		
TO-15-MI	Soil Gas/Subslab (65 Compds)	Soil Gas/Subslab (65 Compds)
24I0107-04 SG4 [Air] Sampled 9/19/2024 1:09:00PM		
TO-15-MI	Soil Gas/Subslab (65 Compds)	Soil Gas/Subslab (65 Compds)
24I0107-05 SGDUP [Air] Sampled 9/19/2024 2:10:00PM		
TO-15-MI	Soil Gas/Subslab (65 Compds)	Soil Gas/Subslab (65 Compds)

24I0107 **Sample Receipt Log**

Default Cooler

Samples Received at: **20.0°C**

Were Custody Seals present and signed?	No	Container/preservative correct for test requested?	Yes
Received on Ice	No	Sufficient amount sent for tests requested?	Yes
Within proper temp	No	Required containers sealed in separate bags?	No
Were all TO-15 samples received at ambient?	Yes	Were all samples inspected and sampled correctly?	Yes
Was a chain of custody received?	Yes	Were bubbles absent in volatile samples?	No
COCs complete/signed in the appropriate places?	Yes	Sufficient remaining holding time for analyses?	Yes
Were all samples listed on COC received?	Yes	If Applicable pH documented for necessary samples?	No
Did all samples/container labels agree with COCs?	Yes	If applicable, was the chlorine test negative?	No
Did all containers arrive in good condition?	Yes	If applicable, samples free of oxidizers?	No
Containers Intact	Yes	Thermometer # : 10003954 used?	No

Fibertec environmental services

Analytical Laboratory
1914 Holloway Drive
Holt, MI 48842
Phone: 517 699 0345
Fax: 517 699 0388
email: lab@fibertec.us

8660 S. Mackinaw Trail
Cadillac, MI 49601
Phone: 231 775 8368
Fax: 231 775 8584

Geoprobe
11766 E. Grand River Rd.
Brighton, MI 48116
Phone: 810 220 3300
Fax: 810 220 3311

Chain of Custody # 222069
PAGE 1 of 1

Client Name: SME
Contact Person: Troy Helmick
Project Name/ Number: 095650.00.003.002
Email distribution list: Troy Helmick, Julia Mehta
Quote#
Purchase Order#

Date	Time	Sample #	Client Sample Descriptor	MATRIX (SEE RIGHT CORNER FOR CODE)	# OF CONTAINERS	VOCs	HOLD SAMPLE
9/19/24	13:57		SG1	A	1	X	
↓	14:10		SG2	↓	↓	X	
	12:57		SG3			X	
	13:09		SG4			X	
↓	14:10		SG DUP			X	
			SG Equipment Blank	↓	↓	X	

Matrix Code

S	Soil	GW	Ground Water
A	Air	SW	Surface Water
O	Oil	WW	Waste Water
P	Wipe	X	Other: Specify

Deliverables: Level 2, Level 3, Level 4, EDD

Remarks:

Received By Lab
SEP 20 2024
Initials: SS

Comments:

	Date/ Time	
Sampled/Relinquished By:	9/19/24 14:27	Received By: SME Storage
Relinquished By:	Date/ Time	Received By: 9/20/24 12:50
Relinquished By:	Date/ Time 9/20/24 2:50	Received By Laboratory: 6 BVI + 6 Reg

Turnaround Time ALL RESULTS WILL BE SENT BY THE END OF THE BUSINESS DAY

_____1 bus. day _____2 bus. days _____3 bus. days _____4 bus. days

X 5-7 bus. days (standard) Other (specify time/date requirement): _____

LAB USE ONLY
Fibertec project number: 24I 0107
Temperature upon receipt at Lab: Ambient

Please see back for terms and conditions

APPENDIX D
SAMPLING AND ANALYSIS PLAN

SAMPLING AND ANALYSIS PLAN

1510 E. STADIUM BOULEVARD
ANN ARBOR, MICHIGAN 48104

SME Project Number: 095650.00.003.002
September 2, 2024

Prepared for:
Downriver Community Conference Brownfield Consortium Coalition
RLF# BL-00E01001

TABLE OF CONTENTS

FIGURES

TABLE

1. INTRODUCTION

SME's project team prepared this Sampling and Analysis Plan (SAP) as a requirement of the United States Environmental Protection Agency (USEPA) brownfields grant program prior to using assessment grant funds for environmental assessment. The Downriver Community Conference (DCC) Brownfield Consortium Coalition intends to use its hazardous substances revolving loan funds (RLF) to conduct an environmental assessment of the property located at 1510 E. Stadium Boulevard, Ann Arbor, Michigan (the Property). The general location of the Property is shown on Figure 1. The Property was determined to be eligible for the use of hazardous substances RLF on June 12, 2024. The Quality Assurance Project Plan (QAPP) was approved by the USEPA on March 17, 2021.

The objective of the proposed environmental assessment is to evaluate current Property environmental conditions for the purpose of supporting environmental due diligence, due care obligations and liability management for a prospective purchaser. Descriptions of the Property history and current environmental conditions; strategies and procedures for soil, groundwater, and soil gas sampling; chemical analyses of collected soil, groundwater, and soil gas samples; data evaluation and reporting; and the estimated project schedule are presented in the following sections.

2. PROPERTY HISTORY, CURRENT CONDITIONS, ENVIRONMENTAL CONDITIONS, AND PLANNED PROPERTY ASSESSMENT

A summary of the Property history and environmental concerns, current Property conditions, and a summary of the planned Property assessment are presented in the following subsections.

2.1 PROPERTY HISTORY

The Property history was summarized in SME's Phase I Environmental Site Assessment (ESA) dated August 9, 2024. We reported the Property was vacant land from as early as 1902 until at least 1955 when it was developed with a fire station. The Property operated as a fire station until circa 2010 when it was used as an office and storage space for the city police. Multiple underground storage tanks (USTs) were present associated with the fire station operations.

Surrounding areas consisted primarily of vacant or residential land until the 1940s. A gasoline station and automobile repair shop was developed to the west as early as 1940 and operated through the time of the Phase I ESA site reconnaissance. Several former and current USTs were present on the west-adjoining gasoline station. Several of the tanks were considered leaking USTs (LUSTs).

2.2 CURRENT CONDITIONS

At the time of the Phase I ESA, the Property consisted of approximately 0.78 acres of land developed with a two-story former fire station, parking and drive areas and grass covered land. The area north of the Property was East Stadium Boulevard followed by residential developments, to the east and south was residential, and to the west was a residence, a restaurant, and an automobile repair shop. The Huron River was located approximately 1.7 miles to the northeast. However, based on the review of the surface topography, groundwater flow is anticipated to be to the southwest.

2.3 PLANNED PROPERTY ASSESSMENT

We designed the proposed assessment activities to evaluate current Property environmental conditions for the purpose of supporting environmental due diligence, due care obligations and liability management for a prospective purchaser. The proposed assessment activities will not define the extent of potential contamination. The assessment will include collection and chemical analyses of soil, groundwater and soil gas samples to screen for environmental impact.

Upon receipt of analytical testing results, soil and groundwater data will be compared to Part 201[1] Generic Residential Cleanup Criteria (Part 201 criteria) to assess if the Property is a "facility" as defined by Part 201. Soil, groundwater, and soil gas data will also be compared to EGLE's October 12, 2023 Residential and Nonresidential Volatilization to Indoor Air Pathway (VIAP) Screening Levels to evaluate potential vapor intrusion concerns for the on-site structure.

[1] Part 201, Environmental Remediation, of the Michigan Natural Resources and Environmental Protection Act (NREPA), PA 451 of 1994, as amended.

3. SAMPLING PLAN

The sampling plan includes a summary of the planned soil, groundwater, and soil gas sampling locations; rationales for those locations; and descriptions of procedures and methods for field sampling.

3.1 SUMMARY OF SAMPLING LOCATIONS

We will observe Ground Penetrating Radar Systems, LLC (GPRS) as they conduct GPR survey to evaluate if the historical UST's remain at the Property. The GPR survey will be completed in the two areas previously identified along northern and southeastern portions of the Property. The GPR will be completed prior to completion of the sampling activities.

3.2 SUMMARY OF SAMPLING LOCATIONS

We will advance soil borings at six locations (SB1 through SB5, and SG2; Figure 2). Specific sampling objectives, rationales for the sample locations and depths, and target analytes are summarized in Table 1. The rationales for the selection of sample intervals at each soil boring are further discussed in Section 3.2.1. The proposed soil boring locations were selected to focus on areas most likely to have been adversely impacted by onsite activities, historical uses, and the potential migration of offsite impact onto the Property. It should be noted that the actual locations of the borings will be determined at the time of sampling based on access and field conditions. The proposed sample locations are summarized below:

- Five soil borings (SB1 through SB5), including up to two, temporary monitoring wells (SB1 and SB2), will be advanced to evaluate the potential for contamination related to the former use of the Property and migration of contaminants from offsite sources onto the Property.
- Two soil gas monitoring wells (SG1 and SG2) will be installed in bore holes and two sub-slab soil gas points (SG3 and SG4) will be installed below the onsite building floor slab to evaluate potential vapor intrusion concerns associated with the former use of the Property and potential migration of contaminants from off-site sources.

3.3 SAMPLING PROCEDURES AND METHODS

Soil, groundwater, and soil gas sampling, quality control (QC) sampling, and waste management procedures and methods are summarized in this subsection. Sampling activities will be conducted in accordance with the approved project QAPP.

3.3.1 SOIL, GROUNDWATER, AND SOIL GAS SAMPLING

SME's field representative will collect soil, groundwater, and soil gas samples according to the methods described in the following standard operating procedures that are included in the project QAPP:

- SOP 1 – Soil and Groundwater Sampling Using Direct-Push Methods
- SOP 4 – Methanol Preservation
- SOP 7 – Field Measurements Using a Photoionization Detector (PID)
- SOP 9 – Decontamination of Field Equipment
- SOP 10 – Sample Labeling, Sampling Handling and Chain of Custody
- SOP 22 – Soil Gas and Sub-slab Vapor Sampling and Analysis using EPA Method TO-15

Sampling targets proposed soil boring depths, rationales for the sample locations and depths, and target analytes are summarized in Table 1. Our proposed sampling plan and additional details on our sample selection procedure are provided below:

- We will collect continuous soil samples from each soil boring, visually classify them in the field, and note physical indicators of man-made materials and environmental contamination.
- We will screen the soil samples using a portable photoionization detector (PID) to measure volatile organic compounds (VOCs) in the field.
- We will collect soil samples for chemical analyses in accordance with the plan described in Table 1 and summarize as follows:
    - We will collect one soil sample from each soil boring. Samples will be collected where evidence of impact is noted. Sample preference will be based on evidence of impact in the following descending order of importance: 1) elevated PID measurements, 2) olfactory evidence, and 3) visual observation of unnatural coloration or man-made debris.
    - If no evidence of impact is observed, we will collect soil samples from each sampling location from the upper two to three feet of the soil column to evaluate the potential presence of contamination.
    - We may collect additional soil samples if evidence of impact is observed at more than one depth interval.
- We will install temporary, 1-inch diameter, polyvinyl chloride (PVC) well assemblies fitted with 5-foot-long, pre-packed well screens in the open boreholes, at up to two locations, to intersect groundwater, if groundwater is encountered. We will collect one groundwater sample from each of the temporary wells using a peristaltic pump at low-flow sampling rates. The pH, temperature, and conductivity of the purge water will be monitored until judged stable prior to collecting a groundwater sample.
- We will install a soil gas monitoring points in soil bore holes and core the concrete floor slab, install sub-slab vapor pins, and collect soil gas samples at four locations (SG1 through SG4) in the site building. The soil gas sampling will be performed at least 48 hours after installation.

After completion of soil and groundwater sampling at each location, we will place purge water and/or soil cuttings back into their respective boreholes, fill the remaining space with bentonite, and restore the ground surface to match surrounding conditions.

3.3.2 QUALITY CONTROL/QUALITY ASSURANCE

We will minimize the potential for cross-contamination by using new, disposable, nitrile sampling gloves for collection of each soil, groundwater, and soil gas sample; using new acetate liners for direct-push soil sampling; using new polyethylene and/or silicone sample tubing for collection of each groundwater sample; using new Teflon tubing for collection of soil gas samples; decontaminating soil sampling equipment before each use; and calibrating field instruments in accordance with manufacturer's instructions.

SME's field representative will collect QC samples as summarized in Table 1 in accordance with SOP 6, Field Quality Control Samples, in the QAPP. The sample handling and custody requirements, laboratory analytical methods, analysis reporting limits, and reporting protocols will be consistent with those described in the project QAPP.

3.3.3 WASTE MANAGEMENT

We will manage investigation-derived wastes as described in SOP 12, Investigative Derived Wastes, in the QAPP.

4. ANALYSIS PLAN

Fibertec Environmental Services, Inc. (Fibertec) of Michigan will analyze the soil, groundwater, and soil gas samples for one or more of the following analytes or analyte groups to screen for the potential presence of impact associated with the former use of the Property and migration of contamination from off-site sources.

- VOCs
- Polynuclear aromatic hydrocarbons (PAHs)
- Metals (arsenic, barium, cadmium, chromium, copper, lead, mercury, selenium, silver, and zinc)
- Per- and Polyfluoroalkyl Substances (PFAS)

Fibertec will analyze the samples using the following USEPA Methods:

- VOCs – Method 8260 for soil/groundwater and TO-15 for soil gas
- PAHs – Method 8270/8270 SIM for soil/groundwater
- Metals – Method 6020 (arsenic, barium, cadmium, chromium, copper, lead, selenium, silver, and zinc)
- Mercury – Method 7471/7470 for soil/groundwater
- PFAS – Method 537/537.1 for soil/groundwater

If total lead is measured in soil at a concentration above 75,000 µg/kg, the soil sample may also be analyzed for fine/coarse lead fractions. In addition, if total chromium is measured in a soil sample at concentrations above the most restrictive Part 201 criterion, we may submit the soil sample from each soil type with the highest total chromium concentration for chemical analysis of hexavalent chromium using USEPA Method 7196. Laboratory testing, analysis method reporting limits (RLs), QA/QC procedures, and reporting protocols used or performed by Fibertec will be consistent with those described in the project QAPP.

5. DATA EVALUATION AND REPORTING

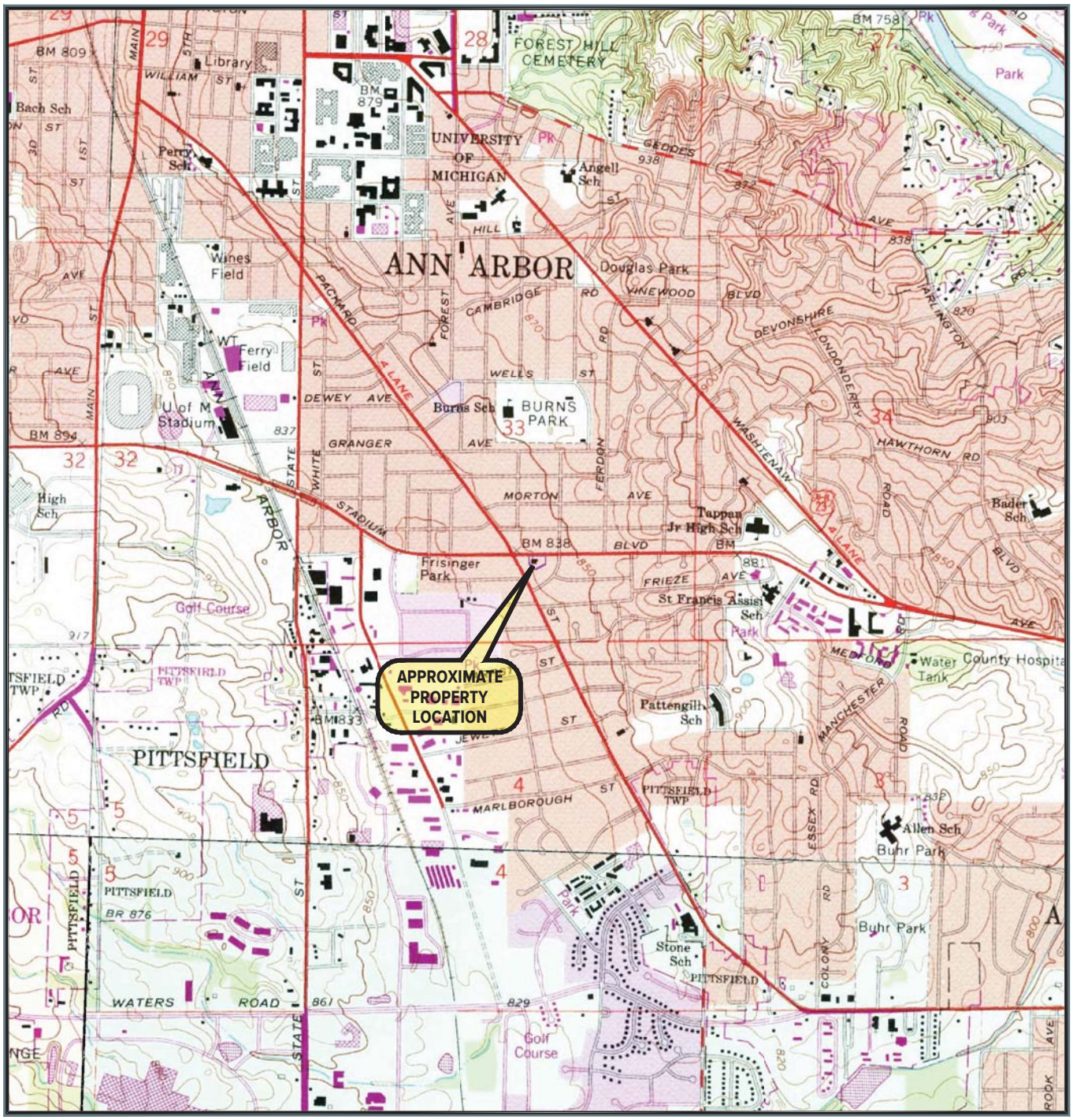
We will review the data collected during this site assessment to verify/validate the data and evaluate if the data can be used for the purpose of the project (i.e., data usability). Following data review, verification, and validation, we will prepare a Baseline Environmental Assessment (BEA) or Phase II ESA Report, as applicable. The report will include details of the activities performed, procedures followed, and results. The report also will include a sampling location diagram, tabulated analytical results, soil boring logs, a copy of the laboratory analytical report for all samples collected, and a copy of the chain-of-custody (COC) records.

6. ESTIMATED SCHEDULE

The environmental activities described in this SAP are to be implemented according to the worst-case scenario schedule presented below. This schedule is in weeks relative to USEPA approval of the SAP.

- Field sampling.....Weeks 2 through 4
- Laboratory analyses .....Weeks 6 through 8
- Data evaluation and tables/figures .....Weeks 9 through 10

FIGURES



SCALE: 1" = 2000'

Base map obtained from ERIS®

USGS QUADRANGLE(s) REFERENCED

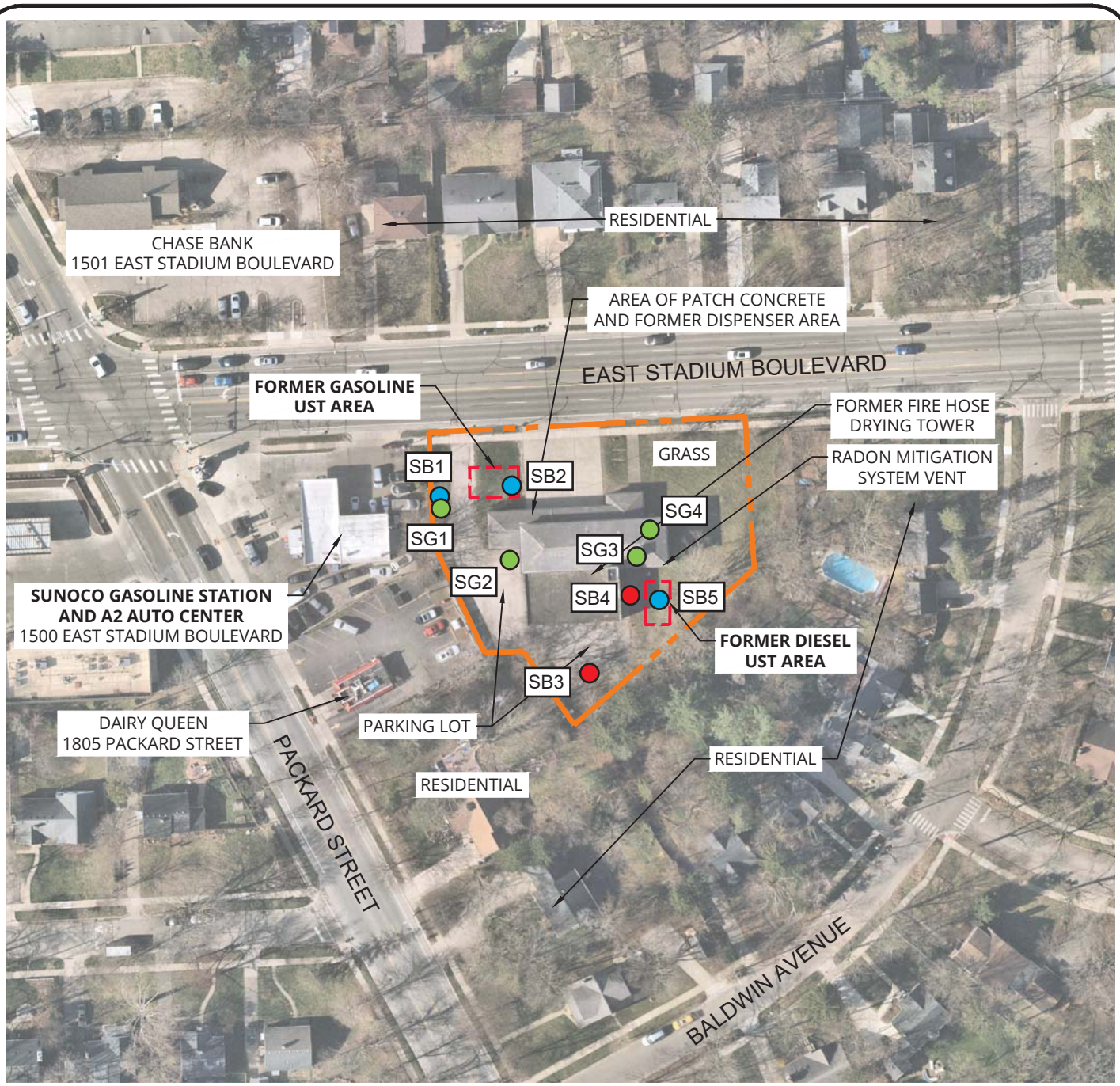
ANN ARBOR EAST (MI) 1983
YPSILANTI WEST (MI) 1983
SALINE (MI) 1983
ANN ARBOR WEST (MI) 1983

No.	Revision Date		
		Date	7-24-2024
		Drawn By	MNR
		Designed By	JLAM
		Scale	1" = 2000'
		Project	095650.00.003.002

PROPERTY LOCATION MAP
FORMER FIRE STATION
1510 EAST STADIUM BOULEVARD
ANN ARBOR, MICHIGAN

SME
www.sme-usa.com

Figure No. 1



LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- **BOLD TEXT** INDICATES RECs
- PROPOSED SOIL BORING LOCATION
- PROPOSED SOIL GAS VAPOR PIN OR SOIL GAS WELL LOCATION
- PROPOSED SOIL BORING WITH TEMPORARY GROUNDWATER WELL LOCATION

NOTE:
1. BASE DRAWING INFORMATION TAKEN FROM NEARMAP WITH AN IMAGE DATE OF 4-8-2024 AND SITE RECONNAISSANCE.

0' 100' 200'

GRAPHIC SCALE: 1" = 100'

N W E S

No.	Revision Date		
		Date	7-24-2024
		Drawn By	MNR
		Designed By	JLAM
		Scale	AS NOTED
		Project	095650.00.003.002

PROPERTY FEATURES DIAGRAM
FORMER FIRE STATION
1510 EAST STADIUM BOULEVARD
ANN ARBOR, MICHIGAN

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Figure No. 2

TABLE
SAMPLE COLLECTION AND ANALYSES SUMMARY TABLE

TABLE
PROPOSED SAMPLE COLLECTION AND ANALYSES
1510 E. Stadium Boulevard
Ann Arbor, Michigan
SME Project No. 095650.00

Sample Target	Sample ID	Maximum Boring Depth (feet bgs)	Target Sample		Media	ANALYTES			
			Sample Depth (feet bgs)	Rationale		VOCs[3]	PAHs[3]	Metals[3]	PFAS[3]
Potential presence of offsite migration	SB1	20'	Evidence of impact[2]	potential releases from adjoining LUST retail gasoline operations	Soil	1	1	1	0
Former onsite operations	SB2 through SB5	20'	Evidence of impact[2]	potential releases from former on-site use	Soil	4	4	4	0
Former onsite operations and potential presence of offsite migration	SB1, SB2, SB5	20/GW[1]	~15' - 20'	anticipated depth to groundwater	Groundwater	3	3	3	3
Vapor intrusion concerns	SG1 though SG4	6'	5.5' or Sub-slab	potential releases from former on-site use, and adjoining LUST gasoline operations	Soil Gas	4	0	0	0
SUBTOTALS					Soil	5	5	5	0
					Soil gas	4	0	0	0
					Groundwater	3	3	3	3
QC SAMPLES	Trip Blank/Methanol				Soil	1	0	0	0
					Soil gas	0	0	0	0
					Groundwater	1	0	0	0
	Equipment Blank				Soil	0	0	0	0
					Soil gas	1	0	0	0
					Groundwater	1	1	1	1
	Field Duplicate				Soil	1	1	1	0
					Soil gas	1	0	0	0
					Groundwater	1	1	1	1
	Matrix Spike/ Matrix Spike Duplicate				Soil	1	1	1	0
					Soil gas	0	0	0	0
					Groundwater	1	1	1	1
	Subtotal QC Samples				Soil	3	2	2	0
					Soil gas	2	0	0	0
					Groundwater	4	3	3	3
	TOTAL SAMPLES				**Soil**	**8**	**7**	**7**	**0**
					Soil gas	**6**	**0**	**0**	**0**
					Groundwater	**7**	**6**	**6**	**6**

NOTES:

1 - The soil boring will be advanced to 20 feet below ground surface (bgs) or to groundwater, whichever is shallower.
2 - Evidence of impact is determined from PID screenings, odors, and staining (see Section 3.2.1). If there is no evidence of impact, up to 1 sample may be collected; one from near the surface.
3 - VOCs - Volatile Organic Compounds; PAHs - Polynuclear Aromatic Hydrocarbons; Metals - arsenic, barium, cadmium, total chromium, lead, mercury, selenium and silver: PFAS - Per- and polyfluoroalkyl substances.

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