



SITE ASSESSMENT REPORT

FourFront Design, Inc.
Fargo VA USTs
2101 Elm Street, Fargo, North Dakota

AET Project No. P-0040293

Date:

April 2, 2025

Prepared for:

FourFront Design, Inc.
517 7th Street
Rapid City, South Dakota 57701

Geotechnical • Materials
Forensic • Environmental
Building Technology
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April 2, 2024

FourFront Design, Inc.
517 7th Street
Rapid City, SD 57701



Attn: Jared Lott, Project Manager
Email: jared.lott@fourfrontdesign.com

Subject: Site Assessment Report
FourFront Design, Inc.
Fargo VA USTs
2101 Elm Street, Fargo, ND 58102
AET Project No. P-0040293

Dear Mr. Lott:

American Engineering Testing, Incorporated (AET) has completed the Site Assessment Report (Report) at the above-referenced site per the AET Proposal dated February 4, 2025, as part of the authorized Professional Subconsultant Agreement dated February 10, 2025.

If you have any questions, comments, or need additional information, please feel welcome to contact us. AET appreciates the opportunity to work with you on this project.

Sincerely,

American Engineering Testing

A handwritten signature in blue ink, appearing to read 'Taylor Roth', with a stylized flourish at the end.

Taylor Roth
Senior Project Manager
troth@teamAET.com
Office: (701) 941-8573

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SITE ASSESSMENT REPORT FARGO VA USTs FARGO, NORTH DAKOTA AET PROJECT No. P-0040293

1.0 INTRODUCTION

1.1 Site Description

The Fargo VA USTs project site (Site) is located at 2102 Elm Street in Fargo, North Dakota (ND). The environmental assessment area of the underground storage tanks (USTs) at the Site are specifically located in the northeast corner of the property. The latitude/longitude of the assessment area is approximately 46.906957°, -96.773023°. The location of the Site is shown on the attached topographic map, labeled as **Figure 1** located in **Appendix A**.

1.2 Background Information

Information obtained from FourFront Design, Inc. (FourFront or client) indicated the current UST systems are being replaced with new infrastructure. As part of the replacement process, an environmental assessment is required by the owner. The USTs being investigated consist of three 20,000-gallon fuel oil tanks (USTs 1-3) located in one tank basin; and two additional 4,000-gallon diesel tanks (USTs 4 and 8), each located in separate tank basins. Site background investigations indicate that impacted soil was discovered and completely removed in 1992 from the area around USTs 2 and 3 which are used for heating/fuel oil storage.

1.3. Previous Studies

Per the "Statement of Work" (SOW) document provided to AET prior to beginning the Site assessment: *"Contaminated soil was discovered and completely removed from the premises in 1992 in the immediate area of construction for USTs 2 and 3."* AET has not been presented with any supporting documentation as it relates to the removal of impacted soil in this area as of the date this Report was written.

1.4 Site Topography

Review of the United States Geologic Survey topographic map, Fargo, ND Quadrangle indicates the elevation of the Site is approximately 906 feet above mean sea level. The surrounding topography of the Site dips to the east-southeast towards the Red River, which is located approximately 375 feet east of the Site (**Figure 1**).

1.5 Geology and Hydrogeology

The ND Geologic Map Viewer ([Geologic Map Viewer | Department of Mineral Resources, North Dakota](#)) indicates the Site lies over the Oahe Formation described as consisting of river sediment, alternating beds of clay, silt, and sand, and a maximum thickness of 33 feet.

Unconfined groundwater flow generally mimics surface topography. Based on the local topography and the location of the Site relative to the Red River, it is anticipated that any shallow groundwater present at the Site would likely flow to the east-southeast.

1.6 Purpose of Work

The purpose of advancing soil borings at the Site was to evaluate subsurface soil conditions around each tank basin to determine the presence of potential petroleum impacts and if there has been petroleum migration through vertical and horizontal features, and at what depth(s) this has occurred. Additionally, the subsurface data collected will be used to aid the client in remediation of any identified petroleum impacts as per the SOW document provided to AET.

As part of the overall environmental assessment, a sensitive receptor survey was also performed following the ND Department of Environmental Quality's (DEQ) Risk-Based Corrective Action (RBCA) Technical Guidance. The purpose of the receptor evaluation is to identify possible environmental receptors and exposure pathways present within and around the Site, and to evaluate risk to the environmental receptors via exposure pathways from potentially impacted soil media at the Site.

1.7 Scope of Work

The scope of work performed on this phase of the project consisted of:

1. contacting local utility companies through ND One Call to identify the locations of underground utility lines and access points on and adjacent to the Site;
2. assisting the property owner with hiring a private utility locating company to locate on-Site private utility lines and access points;
3. researching available information concerning the depths and construction of any water and sewer lines identified on and around the subject Site;
4. mobilizing one environmental professional from AET's Bismarck, ND office and a two-person drill crew from AET's Fargo, ND office;
5. advancing five soil borings up to 20 feet below grade (bg) to assess the presence and degree of potential subsurface petroleum impacts in the soil at the three UST basin locations;
6. screening the soil samples recovered from the borings for the presence and concentration of organic vapors as indications of petroleum hydrocarbon impacts;
7. analyzing select soil samples recovered from the borings for the presence and concentration of total petroleum hydrocarbons as gasoline range organics (TPH-GRO), total petroleum hydrocarbons as diesel range organics (TPH-DRO), benzene, toluene, ethylbenzene and xylenes (BTEX), and naphthalene;
8. collecting and testing one soil boring soil sample from each UST basin location (three samples total) for soil resistivity;
9. record depth of groundwater, if encountered, and record visual and olfactory observations to assess potential petroleum impacts in the saturated zone at each UST basin location; and
10. preparing and submitting a Site assessment report including Site description and history; Site figures showing the potential sources, pathways, and receptors assessed; assessment methods used to evaluate the potential for completed pathways and risk including assessment locations, depths, and parameters analyzed; and evaluating all the data generated during our work on this project along with our conclusions and recommendations based on said data.

2.0 PROJECT RESULTS

2.1 Surface Conditions

The areas surrounding the Site consist predominantly of residential homes to the north and west, while the Red River borders the eastern edge of the property. The surface

cover on the property itself consists of buildings and parking lots made up of concrete and asphalt pavement. Refer to **Figure 2** for an aerial map depicting the surface cover at the Site and adjacent properties.

2.2 Subsurface Conditions

On March 17, 2025, AET personnel advanced five soil borings (B-01 through B-03, B-05, and B-06) at the locations depicted in **Figure 2, Appendix A**, using methods presented in **Appendix B**, to depths ranging from 10 to 20 feet bg. The soil borings were advanced at the specified locations to provide data regarding the presence/absence, and degree of potential petroleum impacts in soil resulting from current and historic UST system operations at the Site. A private utility locate was conducted at the Site on March 6, 2025, and revealed a subsurface utility conflict to the east of USTs 1,2, and 3. Due to safety concerns and proximity to the building to the east, a soil boring was not advanced to the east of USTs 1,2, and 3.

The soil profiles encountered at the soil boring locations are illustrated on the boring logs presented in **Appendix C**. Review of the boring logs indicates the soil profile is generally similar at the boring locations. The predominant soil types encountered consisted of alternating layers of clay, silt, sand, and gravel. Groundwater was encountered at depths ranging from 10 to 16 feet bg.

2.3 Soil Sample Screening Results

Soil samples recovered from the soil borings were screened for the presence and concentration of organic vapors as indications of petroleum impacts, using methods presented in **Appendix B**. One soil sample exhibited a slightly elevated organic reading of 41 parts per million (ppm). All other soil samples screened at the Site were negligible. Soil organic vapor screening results can be found on the soil boring logs presented in **Appendix C**.

2.4 Soil Analytical Results

Select soil samples were collected and submitted for laboratory analysis of TPH-GRO, TPH-DRO, BTEX, and naphthalene. Soil samples selected for analysis were collected at the interval containing the highest recorded organic vapor field reading at each soil boring location. Petroleum analyte concentrations above the ND RBCA Risk-Based Screening Level (RBSL) were detected in soil sample B-06 (0-2) with a TPH-DRO concentration of 1,120 milligrams per kilogram (mg/kg). Based on the analytical data collected, petroleum impacts are present in the surface soil interval of soil boring B-06 from 0-2 feet bg. Field screening data below this interval indicated negligible organic vapor readings, suggesting petroleum impacts have not migrated vertically at soil boring B-06 much beyond 2 feet bg.

All other soil samples collected exhibited petroleum analyte concentrations that are below their respective RBSLs, indicating petroleum impacts are not present in surface or subsurface soil samples where the remaining soil borings were advanced at each respective UST location. As stated previously in this Report, a soil boring was not able to be advanced to the east of USTs 1, 2, and 3 due to subsurface utility conflicts, therefore, soil data was not collected in this area. Analytical results, as well as the RBSLs for each measured petroleum analyte, are provided below in **Table 1**.

TABLE 1 Soil Analytical Results									
Sample ID	Date Collected	Sample Depth (feet bg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	Benzene (µg/kg)	Toluene (µg/kg)	Ethylbenzene (µg/kg)	Xylene (µg/kg)	Naphthalene (µg/kg)
NDDEQ RBCA RBSL			100	100	2.56	692	785	9,900	3.85
B-01 (10-12)	3/17/2025	10-12	ND	ND	ND	ND	ND	ND	ND
B-02 (0-2)	3/17/2025	0-2	ND	ND	ND	ND	ND	ND	ND
B-03 (0-2)	3/17/2025	0-2	ND	15.6	ND	ND	ND	ND	ND
B-05 (2-4)	3/17/2025	2-4	ND	ND	ND	ND	ND	ND	ND
B-06 (0-2)	3/17/2025	0-2	ND	1,120	ND	ND	ND	ND	ND
Legend: µg/kg = micrograms per kilogram mg/kg = milligrams per kilogram ND = non-detect, concentration below laboratory reporting limit BOLD = concentration exceeds NDDEQ RBCA RBSL NDDEQ RBCA RBSL = values established using the "North Dakota Risk-Based Corrective Action Technical Guidance" Risk-Based Screening Levels Table 6-1(a)									

Laboratory analytical reports for data presented in this Report are included in **Appendix D**.

AET analyzed one soil sample at each respective UST basin location for soil resistivity per communication received from the client on January 8, 2025. Soil samples were collected from depths of 7.5 to 12.5 feet bg to better characterize the native soil conditions within the assumed vertical intervals of the UST basin depths. The samples were analyzed under the ASTM G57 Method utilizing an AEMC Resistivity Tester in a 4-Pin “Miller Box”. The soil resistivity test results are provided below in **Table 2**.

TABLE 2 Soil Resistivity Testing Results			
Sample ID	Date Collected	Sample Depth (feet bg)	Soil Resistivity (Ω /cm)
B-01	3/17/2025	7.5 - 10	795
B-02	3/17/2025	10 - 12.5	885
B-06	3/17/2025	7.5 - 10	551
Legend: Ω /cm = ohm per centimeter			

2.5 Groundwater Observations

Groundwater was encountered in all soil borings, with the exception of soil boring B-06. The depth of groundwater encountered ranged from 10 to 16 feet bg, as shown on the soil boring logs presented in **Appendix C**. Groundwater was evaluated using visual and olfactory observations and accompanying organic vapor field screening data collected from the capillary fringe in borings where groundwater was observed. Although hydrocarbon impacts were identified from 0-2 feet bg in soil boring B-06, groundwater was not encountered in soil boring B-06 to a depth of 20 feet bg. Based on soil analytical data, soil organic vapor screening results, and field observations, no petroleum impacts to groundwater around USTs 1, 2, 3, 4, and 8 appear to be present.

2.6 Sensitive Receptors

Information was collected regarding history of the Site, utility and building infrastructure present at and around the Site, and groundwater usage in the area of the Site. Research was also conducted on the ND Department of Water Resources online database, as well as the National Wetlands Inventory database.

2.7 Exposure Pathway Screening

2.7.1 Surface Water Protection Pathway

The nearest surface water identified within the regional vicinity of the Site consists of the Red River, which at its nearest point is located approximately 375 feet east-southeast of the Site. Although surficial petroleum impacts were identified from 0-2 feet bg in soil boring B-06, petroleum impacts were not identified in the downgradient soil boring B-05, suggesting surface soil impacts are confined to the area around soil boring B-06 only. Furthermore, the surface is capped with impermeable pavement at the location of soil boring B-06 to prevent surface water runoff from contacting the underlying impacted surface soil. Therefore, the Surface Water Protection Pathway is considered an incomplete pathway.

2.7.2 Groundwater Protection Pathway

As stated previously in this Report, groundwater was identified at depths ranging from 10 to 16 feet bg. Although petroleum impacts were identified from 0-2 feet bg in soil boring B-06, groundwater was not encountered in this soil boring to a depth of 20 feet bg. Based on soil analytical data, soil organic vapor screening results, and field observations, no petroleum impacts to groundwater around USTs 1, 2, 3, 4, and 8 appear to be present. Therefore, the Groundwater Protection Pathway is considered an incomplete pathway, as well as the Groundwater to Surface Water Pathway.

2.7.3 Impacted Soil in Contact with Underground Utilities

Per utility maps provided by the client, shallow subsurface utility lines do not appear to traverse the area of identified petroleum impacts in soil boring B-06. Soil analytical and organic vapor screening data collected from soil borings B-03 and B-05 suggest impacts

have not traveled towards the identified water line to the east of USTs 1, 2, and 3; however, due to the inability to advance a soil boring in this area, confirmation soil samples were unable to be collected. Also, due to the lack of petroleum analytes and elevated organic vapors measured in soil borings B-01 and B-02, any underground utilities in the areas of USTs 4 and 8 are not likely to be in contact with petroleum impacted subsurface media.

2.7.4 Soil Inhalation, Ingestion, and Dermal Contact

Other than for future construction activities that occur at the Site, the possibility of human receptors coming into physical contact with the identified shallow petroleum impacts at soil boring B-06 is unlikely due to the area being covered with a paved concrete and asphalt parking lot. Additionally, the SOW provided by the client outlines that identified petroleum impacts are to be removed prior to installation of the new UST infrastructure. The Soil Inhalation, Ingestion, and Dermal Contact Pathway should be considered a potentially complete pathway for construction workers until the shallow petroleum impacts are removed from the area around soil boring B-06 during the upcoming UST upgrades.

3.0 DISCUSSION and CONCLUSIONS

Based on information provided by FourFront, and assessment activities completed by AET, the following findings can be presented:

- On March 17, 2025, five soil borings were advanced to depths ranging from 10 to 20 feet bg around USTs 1, 2, 3, 4, and 8.
- Due to subsurface utility conflicts, and proximity to the building to the east, a soil boring was not advanced to the east of USTs 1,2, and 3.
- A total of five soil samples were collected from the subsurface interval containing the highest organic vapor field screening reading and submitted for TPH-GRO, TPH-DRO, BTEX, and naphthalene analyses.
- TPH-DRO concentrations above the ND RBCA RBSL was measured in the soil sample collected from soil boring B-06 with a concentration of 1,120 mg/kg. All other soil samples collected exhibited petroleum analyte concentrations that are below their respective RBSLs.

- Field screening data below the 0-2 feet bg interval of soil boring B-06 indicate negligible organic vapor readings, suggesting impacts are isolated to this soil interval and have not migrated vertically.
- Groundwater was encountered at depths ranging from 10 to 16 feet bg in the soil borings advanced at the Site, except in soil boring B-06 where no groundwater was observed to a depth of 20 feet bg.
- Based on recorded field observations, soil organic vapor screening results, and soil analytical data, no petroleum impacts to groundwater around USTs 1, 2, 3, 4, and 8 appear to exist where drilling occurred at each respective UST location.
- The Soil Inhalation, Ingestion, and Dermal Contact Pathway should be considered a potentially complete pathway for construction workers until the shallow petroleum impacts are removed from the area around soil boring B-06 during the upcoming UST upgrades.
- Soil resistivity tests performed on native soils in the areas of the UST basin locations ranged from 551 to 885 Ω /cm.

4.0 RECOMMENDATIONS

Based on the data presented in this Report, AET recommends source removal excavation to a minimum of two feet bg from the area surrounding soil boring B-06 during the UST system upgrade activities.

As stated previously in this Report, per the client SOW, “*contaminated soil was discovered and completely removed from the premises in 1992 in the immediate area of construction for USTs 2 and 3.*” Therefore, visual and olfactory observation of surface/subsurface soil should be emphasized to the east of USTs 1, 2, and 3 during UST system upgrade activities due to past evidence of petroleum impacts and the inability to advance a soil boring in this area. In the event suspected petroleum impacts are discovered during UST system upgrade activities, it is recommended that work be stopped, and proper evaluation be completed to determine appropriate action.

Typically, petroleum impacted soil excavation activities are guided through on-Site use of a photoionization detector measuring organic vapors to confirm that petroleum impacts have been successfully removed. If FourFront elects to have AET perform this service, a cost estimate and proposal can be provided upon request.

Prior to performing UST system upgrade activities, the ND DEQ UST program should be notified a minimum of 30 days prior to taking the existing UST systems out of service.

5.0 STANDARD OF CARE

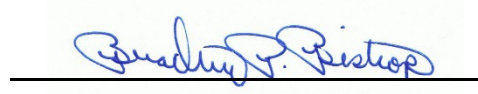
Recommendations contained in this report represent our professional opinions. These opinions were arrived at in accordance with currently accepted hydrogeologic and engineering practices at this time and location. Other than this, no warranty is implied or intended.

This report was prepared by:



Taylor Roth
Environmental Project Manager

This report was reviewed by:



Bradley Bishop, CPRR
Senior Environmental Project Manager

APPENDIX A

FIGURES



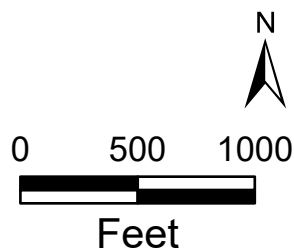
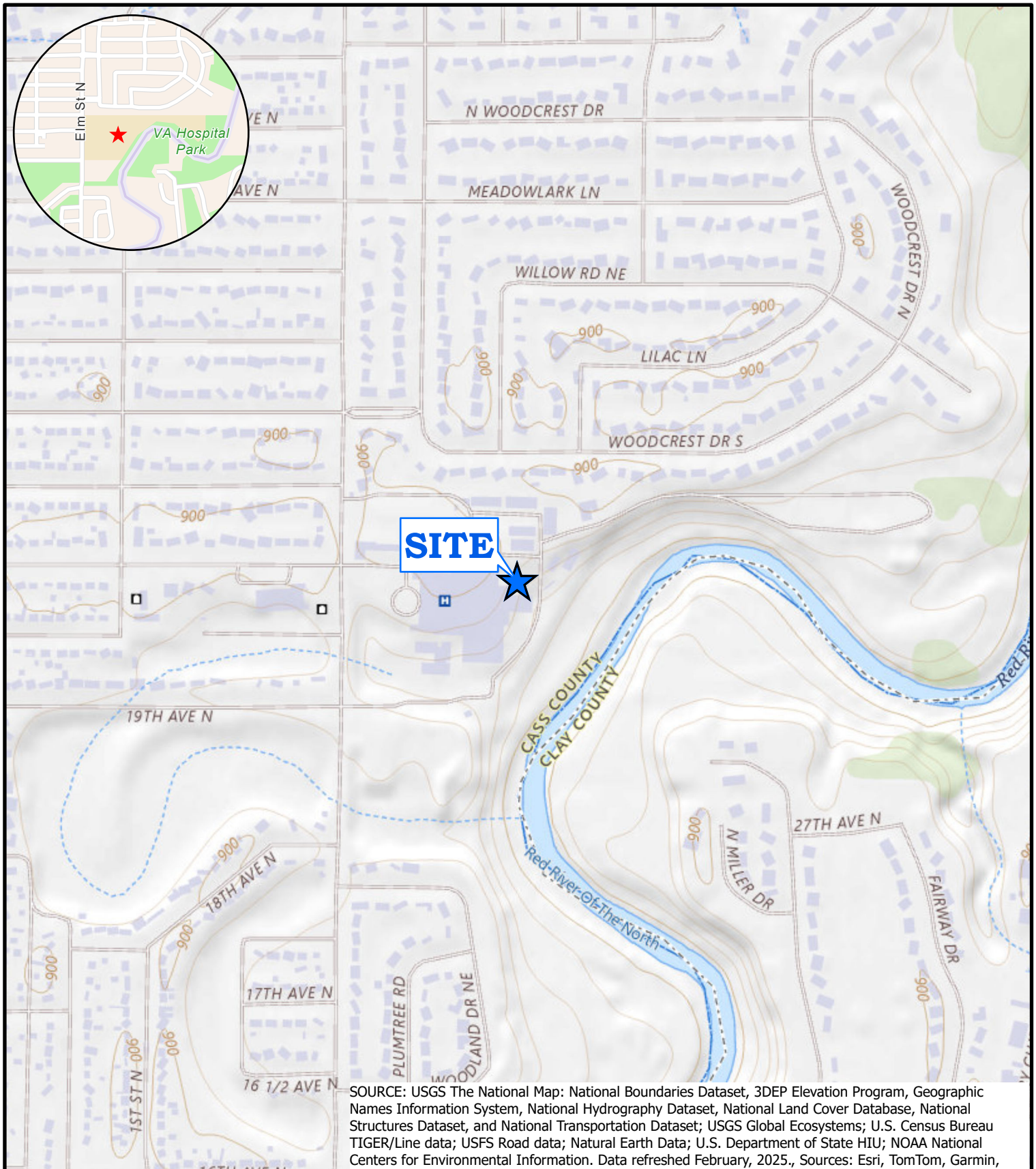


Figure 1

Site Location Map

Fargo VA USTs
FourFront Design, Inc.
Fargo, ND

Date: 3/24/2025

AET Project No. P-0040293

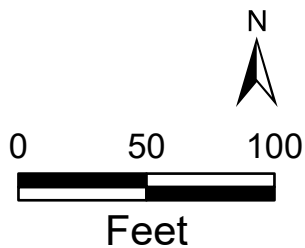
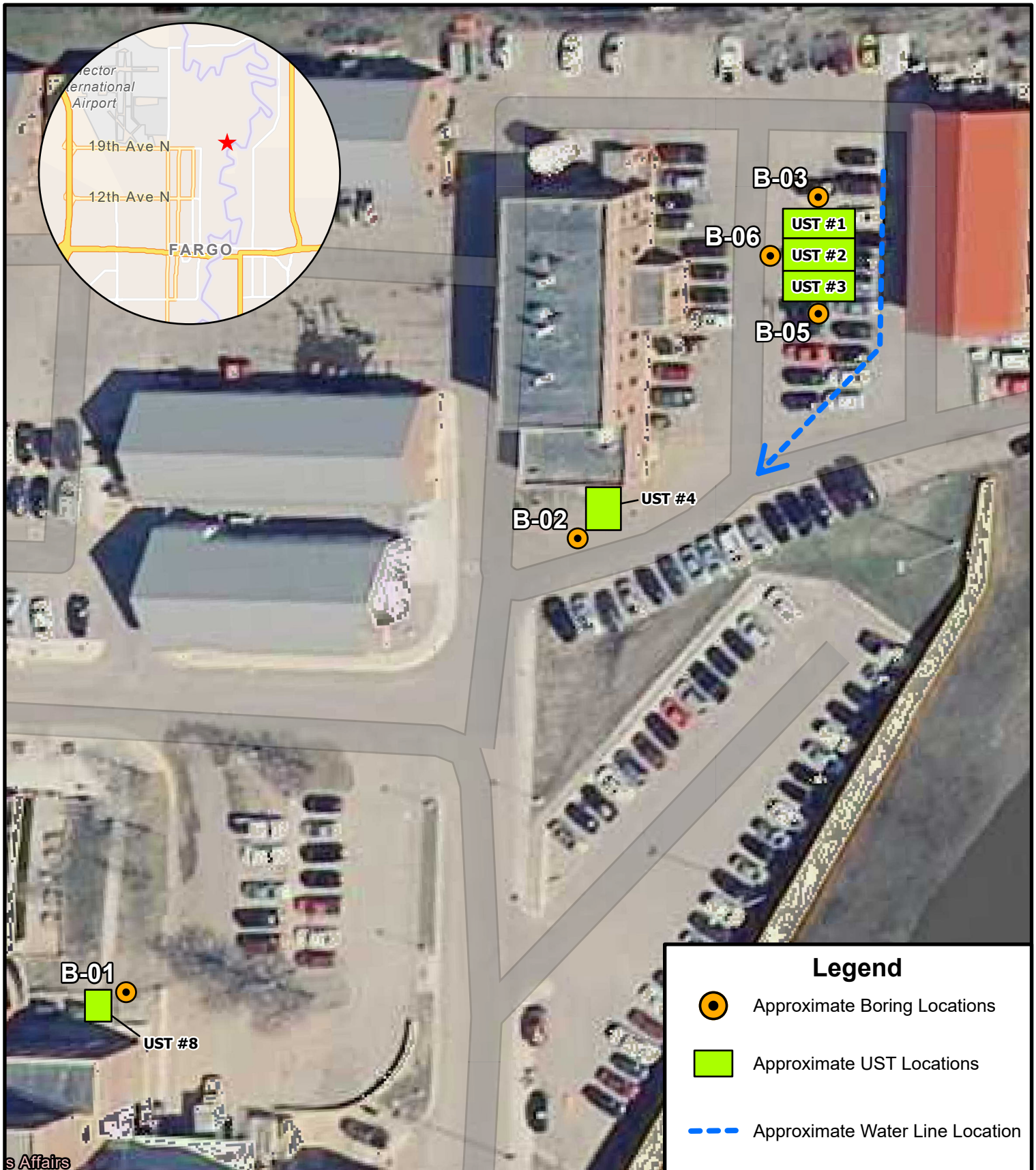


Figure 2

Boring Location Map

Fargo VA USTs
FourFront Design, Inc.
Fargo, ND

Date: 4/1/2025

AET Project No. P-0040293

APPENDIX B

METHODOLOGIES



METHODOLOGIES

The following are brief descriptions of the methodologies which will be used during this study.

Soil Boring/Monitoring Well Locations

Soil borings are placed at locations to determine the degree of potential petroleum impacts to the soil. The locations are verified with the client and placed in conjunction with the private utility locate results.

Soil Boring Advancement and Sampling

The soil borings are advanced using a conventional rotary drill rig with a split spoon soil sampler. The soil boring soil samples are collected in laboratory prepared jar(s), appropriate to the sample procedure.

Soil Sample Screening

The soil samples are screened for the presence of organic vapors as an indication of hydrocarbon impacts using a Photoionization Detector (PID). This instrument provides readings in parts per million (ppm) equivalents of the calibration gas. The lower detectable limit is approximately 1 ppm.

The soil samples are collected in Whirl-pak® or Ziploc® baggies and taken to a well-ventilated area. The samples are allowed to equilibrate to room temperature. The samples are vigorously agitated for at least thirty seconds over a ten-minute headspace development period. In turn, each soil jar/bag is opened/punctured as appropriate; the PID probe is quickly inserted through the aluminum foil or plastic bag and the maximum meter response (should be within 2-5 seconds) is recorded. Erratic responses are discounted as a result of high organic vapor concentrations or conditions of elevated headspace moisture.

Contamination Reduction

The drill rig and sampler are steam cleaned prior to mobilization and in between soil boring locations if evidence of impacts is identified during field screening of soils.

Soil Boring Abandonment

Following completion of field investigation activities, any soil borings not completed as permanent monitoring wells are abandoned in accordance with North Dakota Administrative Code Chapter 33-18-02 regulations.

Chemical Analysis – soil

The soil samples are analyzed for the presence and concentration of TPH-GRO, TPH-DRO, BTEX, and naphthalene according to the appropriate NDDEQ Site investigation requirements.

Soil Resistivity Testing

Soil resistivity testing will be performed by AET through use of a "Miller Box" which utilizes the AASHTO-T288 Standard Method of Test for Determining Minimum Laboratory Soil Resistivity.

Chain of Custody

Upon collection of a sample to be analyzed in the laboratory, a chain of custody log is initiated. The chain of custody log includes the following information: project, work order number, shipped by, shipped to, project manager, sampling point, location, field identification number, date taken, sample type, number of containers, analysis required, and sampler's signature.

The chain of custody log is delivered with the samples to the laboratory. Upon arrival at the laboratory, the samples are checked in and custody of the samples signed over to the appropriate laboratory personnel. A copy of the chain of custody log is submitted to the project manager.

Quality Assurance/Quality Control (QA/QC)

QA/QC manuals are available at AET offices for review.

Reporting

Complete a Site assessment report in accordance with the NDDEQ Guidelines for Environmental Site Assessment Reports based on the NDDEQ Investigation of Contaminated Release Sites guidance document. Reports are prepared that 1) present and summarize the results of the work conducted, 2) include Site location and study area maps, 3) give our opinion regarding the presence of petroleum hydrocarbons and the necessity for additional work, and 4) if the results of the study warrant additional work, recommend the scope of additional work.

Staffing

Taylor Roth is the Project Manager for this project. The Project Manager is assisted by the balance of the North Dakota office staff as needed.

APPENDIX C

SOIL BORING LOGS





SUBSURFACE BORING LOG

AET JOB NO: **P-0040293** LOG OF BORING NO. **B-01 (p. 1 of 1)**

PROJECT: **Fargo Veterans Affairs Healthcare System; Fargo, North Dakota**

SURFACE ELEVATION: _____ LATITUDE: _____ LONGITUDE: _____

DEPTH IN FEET	MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS				
							WC	DEN	LL	PL	PID (ppm)
1	CONCRETE, 8-inches										0
2	LEAN CLAY, dark brown, moist										0.1
3											0.1
4											-
5											0.2
6											0.3
7											0.1
8	No Sample - Soil Resistivity Test										
9											
10	SILTY LEAN CLAY, light grey, moist										
11											
12											
13	SILT, light brown, saturated										
14	LEAN CLAY, grey, moist										
14	Total Depth- 14 feet										

DEPTH: DRILLING METHOD		WATER LEVEL MEASUREMENTS							NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG
14.0	3.25" HSA	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL	
		3/17/25	11:45	10-12	NA	NA	NA	14 ft	
BORING COMPLETED: 3/17/25									
DR: AL LG: Rig:									

AET CORP W-LAT-LONG P-0040293 BORING LOGS.GPJ AET+CPT+WELL.GDT 3/26/25



SUBSURFACE BORING LOG

AET JOB NO: **P-0040293** LOG OF BORING NO. **B-02 (p. 1 of 1)**

PROJECT: **Fargo Veterans Affairs Healthcare System; Fargo, North Dakota**

SURFACE ELEVATION: _____ LATITUDE: _____ LONGITUDE: _____

DEPTH IN FEET	MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS				
							WC	DEN	LL	PL	PID (ppm)
1	ASPHALT, 6-inches No Recovery										1.7
2	LEAN CLAY, dark brown, moist,										0.2
3											0.6
4											0.3
5											0.2
6											-
7	trace gravel at 7 feet										0.2
8											-
9											0.2
10	No Sample - Soil Resistivity Test										-
11											0.2
12											-
13	LEAN CLAY, grey, moist										0.2
14	SANDY SILT, light brown, moist										0.2
	Total Depth- 14 feet										

DEPTH: DRILLING METHOD		WATER LEVEL MEASUREMENTS							NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG
		DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL	
14.0	3.25" HSA	3/17/25	12:45	0-2	NA	NA	NA	14 ft	
BORING COMPLETED: 3/17/25									
DR: AL LG: Rig:									

AET CORP W-LAT-LONG P-0040293 BORING LOGS.GPJ AET+CPT+WELL.GDT 3/26/25



SUBSURFACE BORING LOG

AET JOB NO: **P-0040293** LOG OF BORING NO. **B-03 (p. 1 of 1)**

PROJECT: **Fargo Veterans Affairs Healthcare System; Fargo, North Dakota**

SURFACE ELEVATION: _____ LATITUDE: _____ LONGITUDE: _____

DEPTH IN FEET	MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS				
							WC	DEN	LL	PL	PID (ppm)
	ASPHALT , 8-inches										
1	LEAN CLAY , trace coarse sand, brown, moist										0.7
	WELL GRADED SAND , brown, moist										
2	LEAN CLAY , trace coarse sand, brown, moist										
3	POORLY GRADED SAND , trace silt and clay, brown, moist										0.4
4											
5											0.2
6											
7											0.3
8	GRAVEL , saturated										0.2
9											
10	Total Depth- 10 feet										

DEPTH: DRILLING METHOD		WATER LEVEL MEASUREMENTS							NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG
10.0	3.25" HSA	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL	
		3/17/25	10:00	0-2	NA	NA	NA	10 ft	
BORING COMPLETED: 3/17/25									
DR: AL LG: Rig:									

AET CORP W-LAT-LONG P-0040293 BORING LOGS.GPJ AET+CPT+WELL.GDT 3/26/25



SUBSURFACE BORING LOG

AET JOB NO: **P-0040293** LOG OF BORING NO. **B-05 (p. 1 of 1)**

PROJECT: **Fargo Veterans Affairs Healthcare System; Fargo, North Dakota**

SURFACE ELEVATION: _____ LATITUDE: _____ LONGITUDE: _____

DEPTH IN FEET	MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS				
							WC	DEN	LL	PL	PID (ppm)
	ASPHALT, 6.5-inches										
1	SILTY LEAN CLAY, light grey, moist										2.3
2											
3											2.4
4	trace sand at 4 feet										
5	POORLY GRADED SAND, light brown, moist										1.6
6	CLAYEY SILT, trace sand, brown, moist										
7	LEAN CLAY, trace silt and lignite, grey to brown, moist, saturated at 16 feet										0.6
8											
9											0.3
10											
11											1.5
12											
13											0.5
14											
15											0.1
16	Total Depth- 16 feet										

DEPTH: DRILLING METHOD		WATER LEVEL MEASUREMENTS							NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG
		DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL	
16.0	3.25" HSA	3/17/25	9:00	2-4	NA	NA	NA	16 ft	
BORING COMPLETED: 3/17/25									
DR: AL LG: Rig:									

AET CORP W-LAT-LONG P-0040293 BORING LOGS.GPJ AET+CPT+WELL.GDT 3/26/25



SUBSURFACE BORING LOG

AET JOB NO: **P-0040293** LOG OF BORING NO. **B-06 (p. 1 of 1)**

PROJECT: **Fargo Veterans Affairs Healthcare System; Fargo, North Dakota**

SURFACE ELEVATION: _____ LATITUDE: _____ LONGITUDE: _____

DEPTH IN FEET	MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS				
							WC	DEN	LL	PL	PID (ppm)
1	ASPHALT, 6-inches No Recovery										41.1
2	POORLY GRADED SAND, brown, dry										
3	LEAN CLAY, trace coarse sand, dark brown, moist										6.4
4											
5											4.2
6											
7											-
8	No Sample - Soil Resistivity Test										
9											0
10	LEAN CLAY, grey and brown, moist										
11											0.1
12											
13											0.1
14											
15											0
16	with silt below 16 feet										
17	SILT, trace clay, light brown, moist										0.1
18	Saturated at 17.5 feet										
19	SILTY SAND, fine-grained, light brown, moist										0
20	Total Depth- 20 feet										

DEPTH: DRILLING METHOD		WATER LEVEL MEASUREMENTS							NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG
		DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL	
20.0	3.25" HSA	3/17/25	10:45	0-2	NA	NA	NA	None	
BORING COMPLETED: 3/17/25									
DR: AL LG: Rlg:									

AET CORP W-LAT-LONG P-0040293 BORING LOGS.GPJ AET+CPT+WELL.GDT 3/26/25

APPENDIX D

LABORATORY ANALYTICAL REPORTS



ANALYTICAL REPORT

REVIEWED*By Taylor Roth at 3:57 pm, Apr 01, 2025*

PREPARED FOR

Attn: Anthony Ligutom
American Engineering Testing Inc.
2110 Lovett Ave #5
Bismarck, North Dakota 58504

Generated 3/27/2025 3:48:49 PM

JOB DESCRIPTION

Fargo VA UST
P-0040293

JOB NUMBER

310-302221-1

Eurofins Cedar Falls

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



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3/27/2025 3:48:49 PM

Authorized for release by
Zach Bindert, Senior Project Manager
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Case Narrative

Client: American Engineering Testing Inc.
Project: Fargo VA UST

Job ID: 310-302221-1

Job ID: 310-302221-1

Eurofins Cedar Falls

Job Narrative 310-302221-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 3/18/2025 9:20 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.8°C.

GC/MS VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Gasoline Range Organics

Method 8015C_GRO: The surrogate recovery for the LCS associated with preparation batch 310-449282 and analytical batch 310-449286 was outside the upper control limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Diesel Range Organics

Method 8015C_DRO: Due to the matrix, the initial volume(s) used for the following sample deviated from the standard procedure: B-01 (10-12) (310-302221-1). The reporting limits (RLs) have been adjusted proportionately.

Method 8015C_DRO: Surrogate recovery for the following sample was outside control limits: B-06 (0-2) (310-302221-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015C_DRO: Surrogate recovery for the following sample was outside control limits: B-01 (10-12) (310-302221-1). Evidence of matrix interference is present as the sample was re-prepped and rerun to confirm results.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Eurofins Cedar Falls

Sample Summary

Client: American Engineering Testing Inc.
Project/Site: Fargo VA UST

Job ID: 310-302221-1
SDG: P-0040293

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-302221-1	B-01 (10-12)	Solid	03/17/25 11:25	03/18/25 09:20
310-302221-2	B-02 (0-2)	Solid	03/17/25 13:18	03/18/25 09:20
310-302221-3	B-03 (0-2)	Solid	03/17/25 10:25	03/18/25 09:20
310-302221-4	B-05 (2-4)	Solid	03/17/25 09:40	03/18/25 09:20
310-302221-5	B-06 (0-2)	Solid	03/17/25 11:25	03/18/25 09:20

Detection Summary

Client: American Engineering Testing Inc.
Project/Site: Fargo VA UST

Job ID: 310-302221-1
SDG: P-0040293

Client Sample ID: B-01 (10-12)

Lab Sample ID: 310-302221-1

No Detections.

Client Sample ID: B-02 (0-2)

Lab Sample ID: 310-302221-2

No Detections.

Client Sample ID: B-03 (0-2)

Lab Sample ID: 310-302221-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	15.6		11.2		mg/Kg	1	✱	8015C	Total/NA

Client Sample ID: B-05 (2-4)

Lab Sample ID: 310-302221-4

No Detections.

Client Sample ID: B-06 (0-2)

Lab Sample ID: 310-302221-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	1120		66.6		mg/Kg	1	✱	8015C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample Results

Client: American Engineering Testing Inc.
Project/Site: Fargo VA UST

Job ID: 310-302221-1
SDG: P-0040293

Client Sample ID: B-01 (10-12)

Lab Sample ID: 310-302221-1

Date Collected: 03/17/25 11:25

Matrix: Solid

Date Received: 03/18/25 09:20

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0145		0.0145		mg/Kg	✱	03/27/25 07:47	03/27/25 09:05	1
Ethylbenzene	<0.0145		0.0145		mg/Kg	✱	03/27/25 07:47	03/27/25 09:05	1
Methyl tert-butyl ether	<0.0145		0.0145		mg/Kg	✱	03/27/25 07:47	03/27/25 09:05	1
Naphthalene	<0.0727		0.0727		mg/Kg	✱	03/27/25 07:47	03/27/25 09:05	1
Toluene	<0.0145		0.0145		mg/Kg	✱	03/27/25 07:47	03/27/25 09:05	1
Xylenes, Total	<0.0291		0.0291		mg/Kg	✱	03/27/25 07:47	03/27/25 09:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		80 - 120	03/27/25 07:47	03/27/25 09:05	1
Dibromofluoromethane (Surr)	100		80 - 127	03/27/25 07:47	03/27/25 09:05	1
Toluene-d8 (Surr)	101		80 - 120	03/27/25 07:47	03/27/25 09:05	1

Method: SW846 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C12	<16.6		16.6		mg/Kg	✱	03/19/25 14:26	03/19/25 20:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		47 - 150	03/19/25 14:26	03/19/25 20:38	1

Method: SW846 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	<50.4		50.4		mg/Kg	✱	03/25/25 08:01	03/25/25 10:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane	10	S1-	12 - 150	03/25/25 08:01	03/25/25 10:59	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	25.8		0.1		%			03/19/25 14:35	1
Percent Solids (EPA Moisture)	74.2		0.1		%			03/19/25 14:35	1

Client Sample Results

Client: American Engineering Testing Inc.
Project/Site: Fargo VA UST

Job ID: 310-302221-1
SDG: P-0040293

Client Sample ID: B-02 (0-2)

Lab Sample ID: 310-302221-2

Date Collected: 03/17/25 13:18

Matrix: Solid

Date Received: 03/18/25 09:20

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0123		0.0123		mg/Kg	✱	03/27/25 07:47	03/27/25 09:29	1
Ethylbenzene	<0.0123		0.0123		mg/Kg	✱	03/27/25 07:47	03/27/25 09:29	1
Methyl tert-butyl ether	<0.0123		0.0123		mg/Kg	✱	03/27/25 07:47	03/27/25 09:29	1
Naphthalene	<0.0613		0.0613		mg/Kg	✱	03/27/25 07:47	03/27/25 09:29	1
Toluene	<0.0123		0.0123		mg/Kg	✱	03/27/25 07:47	03/27/25 09:29	1
Xylenes, Total	<0.0245		0.0245		mg/Kg	✱	03/27/25 07:47	03/27/25 09:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		80 - 120	03/27/25 07:47	03/27/25 09:29	1
Dibromofluoromethane (Surr)	102		80 - 127	03/27/25 07:47	03/27/25 09:29	1
Toluene-d8 (Surr)	97		80 - 120	03/27/25 07:47	03/27/25 09:29	1

Method: SW846 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C12	<9.99		9.99		mg/Kg	✱	03/19/25 14:26	03/19/25 21:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		47 - 150	03/19/25 14:26	03/19/25 21:04	1

Method: SW846 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	<10.2		10.2		mg/Kg	✱	03/21/25 08:01	03/24/25 13:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane	24		12 - 150	03/21/25 08:01	03/24/25 13:46	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	3.9		0.1		%			03/19/25 14:35	1
Percent Solids (EPA Moisture)	96.1		0.1		%			03/19/25 14:35	1

Client Sample Results

Client: American Engineering Testing Inc.
Project/Site: Fargo VA UST

Job ID: 310-302221-1
SDG: P-0040293

Client Sample ID: B-03 (0-2)

Lab Sample ID: 310-302221-3

Date Collected: 03/17/25 10:25

Matrix: Solid

Date Received: 03/18/25 09:20

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0119		0.0119		mg/Kg	☼	03/27/25 07:47	03/27/25 09:53	1
Ethylbenzene	<0.0119		0.0119		mg/Kg	☼	03/27/25 07:47	03/27/25 09:53	1
Methyl tert-butyl ether	<0.0119		0.0119		mg/Kg	☼	03/27/25 07:47	03/27/25 09:53	1
Naphthalene	<0.0596		0.0596		mg/Kg	☼	03/27/25 07:47	03/27/25 09:53	1
Toluene	<0.0119		0.0119		mg/Kg	☼	03/27/25 07:47	03/27/25 09:53	1
Xylenes, Total	<0.0238		0.0238		mg/Kg	☼	03/27/25 07:47	03/27/25 09:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		80 - 120	03/27/25 07:47	03/27/25 09:53	1
Dibromofluoromethane (Surr)	98		80 - 127	03/27/25 07:47	03/27/25 09:53	1
Toluene-d8 (Surr)	97		80 - 120	03/27/25 07:47	03/27/25 09:53	1

Method: SW846 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C12	<12.8		12.8		mg/Kg	☼	03/19/25 14:26	03/19/25 21:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		47 - 150	03/19/25 14:26	03/19/25 21:30	1

Method: SW846 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	15.6		11.2		mg/Kg	☼	03/21/25 08:01	03/24/25 14:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane	80		12 - 150	03/21/25 08:01	03/24/25 14:02	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	13.2		0.1		%			03/19/25 14:35	1
Percent Solids (EPA Moisture)	86.8		0.1		%			03/19/25 14:35	1

Client Sample Results

Client: American Engineering Testing Inc.
Project/Site: Fargo VA UST

Job ID: 310-302221-1
SDG: P-0040293

Client Sample ID: B-05 (2-4)

Lab Sample ID: 310-302221-4

Date Collected: 03/17/25 09:40

Matrix: Solid

Date Received: 03/18/25 09:20

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0118		0.0118		mg/Kg	☼	03/27/25 07:47	03/27/25 10:17	1
Ethylbenzene	<0.0118		0.0118		mg/Kg	☼	03/27/25 07:47	03/27/25 10:17	1
Methyl tert-butyl ether	<0.0118		0.0118		mg/Kg	☼	03/27/25 07:47	03/27/25 10:17	1
Naphthalene	<0.0592		0.0592		mg/Kg	☼	03/27/25 07:47	03/27/25 10:17	1
Toluene	<0.0118		0.0118		mg/Kg	☼	03/27/25 07:47	03/27/25 10:17	1
Xylenes, Total	<0.0237		0.0237		mg/Kg	☼	03/27/25 07:47	03/27/25 10:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		80 - 120	03/27/25 07:47	03/27/25 10:17	1
Dibromofluoromethane (Surr)	101		80 - 127	03/27/25 07:47	03/27/25 10:17	1
Toluene-d8 (Surr)	99		80 - 120	03/27/25 07:47	03/27/25 10:17	1

Method: SW846 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C12	<13.7		13.7		mg/Kg	☼	03/19/25 14:26	03/19/25 21:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		47 - 150	03/19/25 14:26	03/19/25 21:55	1

Method: SW846 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	<11.9		11.9		mg/Kg	☼	03/21/25 08:01	03/24/25 14:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane	58		12 - 150	03/21/25 08:01	03/24/25 14:17	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	18.0		0.1		%			03/19/25 14:35	1
Percent Solids (EPA Moisture)	82.0		0.1		%			03/19/25 14:35	1

Client Sample Results

Client: American Engineering Testing Inc.
Project/Site: Fargo VA UST

Job ID: 310-302221-1
SDG: P-0040293

Client Sample ID: B-06 (0-2)

Lab Sample ID: 310-302221-5

Date Collected: 03/17/25 11:25

Matrix: Solid

Date Received: 03/18/25 09:20

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0122		0.0122		mg/Kg	☼	03/27/25 07:47	03/27/25 10:41	1
Ethylbenzene	<0.0122		0.0122		mg/Kg	☼	03/27/25 07:47	03/27/25 10:41	1
Methyl tert-butyl ether	<0.0122		0.0122		mg/Kg	☼	03/27/25 07:47	03/27/25 10:41	1
Naphthalene	<0.0610		0.0610		mg/Kg	☼	03/27/25 07:47	03/27/25 10:41	1
Toluene	<0.0122		0.0122		mg/Kg	☼	03/27/25 07:47	03/27/25 10:41	1
Xylenes, Total	<0.0244		0.0244		mg/Kg	☼	03/27/25 07:47	03/27/25 10:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		80 - 120	03/27/25 07:47	03/27/25 10:41	1
Dibromofluoromethane (Surr)	103		80 - 127	03/27/25 07:47	03/27/25 10:41	1
Toluene-d8 (Surr)	100		80 - 120	03/27/25 07:47	03/27/25 10:41	1

Method: SW846 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C12	<9.98		9.98		mg/Kg	☼	03/19/25 14:26	03/19/25 22:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		47 - 150	03/19/25 14:26	03/19/25 22:21	1

Method: SW846 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	1120		66.6		mg/Kg	☼	03/21/25 08:01	03/24/25 16:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane	272	S1+	12 - 150	03/21/25 08:01	03/24/25 16:04	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	2.3		0.1		%			03/19/25 14:35	1
Percent Solids (EPA Moisture)	97.7		0.1		%			03/19/25 14:35	1

Definitions/Glossary

Client: American Engineering Testing Inc.
Project/Site: Fargo VA UST

Job ID: 310-302221-1
SDG: P-0040293

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.

GC Semi VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
SQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Surrogate Summary

Client: American Engineering Testing Inc.
Project/Site: Fargo VA UST

Job ID: 310-302221-1
SDG: P-0040293

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		BFB (80-120)	DBFM (80-127)	TOL (80-120)
310-302221-1	B-01 (10-12)	103	100	101
310-302221-2	B-02 (0-2)	103	102	97
310-302221-3	B-03 (0-2)	100	98	97
310-302221-4	B-05 (2-4)	105	101	99
310-302221-5	B-06 (0-2)	102	103	100
LCS 310-449885/2-A	Lab Control Sample	103	101	101
MB 310-449885/1-A	Method Blank	103	100	98
Surrogate Legend				
BFB = 4-Bromofluorobenzene (Surr)				
DBFM = Dibromofluoromethane (Surr)				
TOL = Toluene-d8 (Surr)				

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		BFB1 (47-150)		
310-302221-1	B-01 (10-12)	109		
310-302221-1 MS	B-01 (10-12)	105		
310-302221-1 MSD	B-01 (10-12)	105		
310-302221-2	B-02 (0-2)	106		
310-302221-3	B-03 (0-2)	108		
310-302221-4	B-05 (2-4)	105		
310-302221-5	B-06 (0-2)	108		
LCS 310-449282/3-A	Lab Control Sample	264 S1+		
MB 310-449282/1-A	Method Blank	107		
Surrogate Legend				
BFB = 4-Bromofluorobenzene (Surr)				

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		OTCN1 (12-150)		
310-302221-1	B-01 (10-12)	10 S1-		
310-302221-2	B-02 (0-2)	24		
310-302221-3	B-03 (0-2)	80		
310-302221-4	B-05 (2-4)	58		
310-302221-5	B-06 (0-2)	272 S1+		
LCS 310-449459/2-A	Lab Control Sample	65		
LCS 310-449681/2-A	Lab Control Sample	118		
MB 310-449459/1-A	Method Blank	73		
MB 310-449681/1-A	Method Blank	109		
Surrogate Legend				
OTCN = n-Octacosane				

Eurofins Cedar Falls

QC Sample Results

Client: American Engineering Testing Inc.
Project/Site: Fargo VA UST

Job ID: 310-302221-1
SDG: P-0040293

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 310-449885/1-A

Matrix: Solid

Analysis Batch: 449882

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 449885

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00931		0.00931		mg/Kg		03/27/25 07:47	03/27/25 08:16	1
Ethylbenzene	<0.00931		0.00931		mg/Kg		03/27/25 07:47	03/27/25 08:16	1
Methyl tert-butyl ether	<0.00931		0.00931		mg/Kg		03/27/25 07:47	03/27/25 08:16	1
Naphthalene	<0.0465		0.0465		mg/Kg		03/27/25 07:47	03/27/25 08:16	1
Toluene	<0.00931		0.00931		mg/Kg		03/27/25 07:47	03/27/25 08:16	1
Xylenes, Total	<0.0186		0.0186		mg/Kg		03/27/25 07:47	03/27/25 08:16	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		80 - 120	03/27/25 07:47	03/27/25 08:16	1
Dibromofluoromethane (Surr)	100		80 - 127	03/27/25 07:47	03/27/25 08:16	1
Toluene-d8 (Surr)	98		80 - 120	03/27/25 07:47	03/27/25 08:16	1

Lab Sample ID: LCS 310-449885/2-A

Matrix: Solid

Analysis Batch: 449882

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 449885

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.0764	0.07502		mg/Kg		98	75 - 137
Ethylbenzene	0.0764	0.07065		mg/Kg		92	73 - 126
Methyl tert-butyl ether	0.0764	0.07896		mg/Kg		103	71 - 144
Naphthalene	0.0764	0.07239		mg/Kg		95	50 - 150
Toluene	0.0764	0.07238		mg/Kg		95	72 - 126
Xylenes, Total	0.153	0.1427		mg/Kg		93	70 - 129

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		80 - 120
Dibromofluoromethane (Surr)	101		80 - 127
Toluene-d8 (Surr)	101		80 - 120

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Lab Sample ID: MB 310-449282/1-A

Matrix: Solid

Analysis Batch: 449286

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 449282

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C12	<9.30		9.30		mg/Kg		03/19/25 14:26	03/19/25 17:11	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		47 - 150	03/19/25 14:26	03/19/25 17:11	1

Eurofins Cedar Falls

QC Sample Results

Client: American Engineering Testing Inc.
Project/Site: Fargo VA UST

Job ID: 310-302221-1
SDG: P-0040293

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics) (Continued)

Lab Sample ID: LCS 310-449282/3-A

Matrix: Solid

Analysis Batch: 449286

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 449282

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C12	96.2	92.69		mg/Kg		96	69 - 125
Surrogate	%Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	264	S1+	47 - 150				

Lab Sample ID: 310-302221-1 MS

Matrix: Solid

Analysis Batch: 449286

Client Sample ID: B-01 (10-12)

Prep Type: Total/NA

Prep Batch: 449282

Surrogate	%Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		47 - 150

Lab Sample ID: 310-302221-1 MSD

Matrix: Solid

Analysis Batch: 449286

Client Sample ID: B-01 (10-12)

Prep Type: Total/NA

Prep Batch: 449282

Surrogate	%Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		47 - 150

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Lab Sample ID: MB 310-449459/1-A

Matrix: Solid

Analysis Batch: 449567

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 449459

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Diesel Range Organics [C10-C28]	<9.79		9.79		mg/Kg		03/21/25 08:01	03/24/25 12:45	1
Surrogate	MB	MB	Limits				Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier							
n-Octacosane	73		12 - 150				03/21/25 08:01	03/24/25 12:45	1

Lab Sample ID: LCS 310-449459/2-A

Matrix: Solid

Analysis Batch: 449567

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 449459

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]	133	114.3		mg/Kg		86	54 - 121
Surrogate	%Recovery	LCS Qualifier	Limits				
n-Octacosane	65		12 - 150				

Eurofins Cedar Falls

QC Sample Results

Client: American Engineering Testing Inc.
Project/Site: Fargo VA UST

Job ID: 310-302221-1
SDG: P-0040293

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) (Continued)

Lab Sample ID: MB 310-449681/1-A
Matrix: Solid
Analysis Batch: 449673

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 449681

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	<9.88		9.88		mg/Kg		03/25/25 08:01	03/25/25 10:30	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
n-Octacosane	109		12 - 150				03/25/25 08:01	03/25/25 10:30	1

Lab Sample ID: LCS 310-449681/2-A
Matrix: Solid
Analysis Batch: 449673

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 449681

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]	125	126.4		mg/Kg		101	54 - 121
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
n-Octacosane	118		12 - 150				

QC Association Summary

Client: American Engineering Testing Inc.
Project/Site: Fargo VA UST

Job ID: 310-302221-1
SDG: P-0040293

GC/MS VOA

Analysis Batch: 449882

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302221-1	B-01 (10-12)	Total/NA	Solid	8260D	449885
310-302221-2	B-02 (0-2)	Total/NA	Solid	8260D	449885
310-302221-3	B-03 (0-2)	Total/NA	Solid	8260D	449885
310-302221-4	B-05 (2-4)	Total/NA	Solid	8260D	449885
310-302221-5	B-06 (0-2)	Total/NA	Solid	8260D	449885
MB 310-449885/1-A	Method Blank	Total/NA	Solid	8260D	449885
LCS 310-449885/2-A	Lab Control Sample	Total/NA	Solid	8260D	449885

Prep Batch: 449885

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302221-1	B-01 (10-12)	Total/NA	Solid	5035	
310-302221-2	B-02 (0-2)	Total/NA	Solid	5035	
310-302221-3	B-03 (0-2)	Total/NA	Solid	5035	
310-302221-4	B-05 (2-4)	Total/NA	Solid	5035	
310-302221-5	B-06 (0-2)	Total/NA	Solid	5035	
MB 310-449885/1-A	Method Blank	Total/NA	Solid	5035	
LCS 310-449885/2-A	Lab Control Sample	Total/NA	Solid	5035	

GC VOA

Prep Batch: 449282

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302221-1	B-01 (10-12)	Total/NA	Solid	5035	
310-302221-2	B-02 (0-2)	Total/NA	Solid	5035	
310-302221-3	B-03 (0-2)	Total/NA	Solid	5035	
310-302221-4	B-05 (2-4)	Total/NA	Solid	5035	
310-302221-5	B-06 (0-2)	Total/NA	Solid	5035	
MB 310-449282/1-A	Method Blank	Total/NA	Solid	5035	
LCS 310-449282/3-A	Lab Control Sample	Total/NA	Solid	5035	
310-302221-1 MS	B-01 (10-12)	Total/NA	Solid	5035	
310-302221-1 MSD	B-01 (10-12)	Total/NA	Solid	5035	

Analysis Batch: 449286

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302221-1	B-01 (10-12)	Total/NA	Solid	8015C	449282
310-302221-2	B-02 (0-2)	Total/NA	Solid	8015C	449282
310-302221-3	B-03 (0-2)	Total/NA	Solid	8015C	449282
310-302221-4	B-05 (2-4)	Total/NA	Solid	8015C	449282
310-302221-5	B-06 (0-2)	Total/NA	Solid	8015C	449282
MB 310-449282/1-A	Method Blank	Total/NA	Solid	8015C	449282
LCS 310-449282/3-A	Lab Control Sample	Total/NA	Solid	8015C	449282
310-302221-1 MS	B-01 (10-12)	Total/NA	Solid	8015C	449282
310-302221-1 MSD	B-01 (10-12)	Total/NA	Solid	8015C	449282

GC Semi VOA

Prep Batch: 449459

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302221-2	B-02 (0-2)	Total/NA	Solid	3546	
310-302221-3	B-03 (0-2)	Total/NA	Solid	3546	
310-302221-4	B-05 (2-4)	Total/NA	Solid	3546	
310-302221-5	B-06 (0-2)	Total/NA	Solid	3546	

Eurofins Cedar Falls

QC Association Summary

Client: American Engineering Testing Inc.
Project/Site: Fargo VA UST

Job ID: 310-302221-1
SDG: P-0040293

GC Semi VOA (Continued)

Prep Batch: 449459 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 310-449459/1-A	Method Blank	Total/NA	Solid	3546	
LCS 310-449459/2-A	Lab Control Sample	Total/NA	Solid	3546	

Analysis Batch: 449567

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302221-2	B-02 (0-2)	Total/NA	Solid	8015C	449459
310-302221-3	B-03 (0-2)	Total/NA	Solid	8015C	449459
310-302221-4	B-05 (2-4)	Total/NA	Solid	8015C	449459
310-302221-5	B-06 (0-2)	Total/NA	Solid	8015C	449459
MB 310-449459/1-A	Method Blank	Total/NA	Solid	8015C	449459
LCS 310-449459/2-A	Lab Control Sample	Total/NA	Solid	8015C	449459

Analysis Batch: 449673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302221-1	B-01 (10-12)	Total/NA	Solid	8015C	449681
MB 310-449681/1-A	Method Blank	Total/NA	Solid	8015C	449681
LCS 310-449681/2-A	Lab Control Sample	Total/NA	Solid	8015C	449681

Prep Batch: 449681

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302221-1	B-01 (10-12)	Total/NA	Solid	3546	
MB 310-449681/1-A	Method Blank	Total/NA	Solid	3546	
LCS 310-449681/2-A	Lab Control Sample	Total/NA	Solid	3546	

General Chemistry

Analysis Batch: 449288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302221-1	B-01 (10-12)	Total/NA	Solid	Moisture	
310-302221-2	B-02 (0-2)	Total/NA	Solid	Moisture	
310-302221-3	B-03 (0-2)	Total/NA	Solid	Moisture	
310-302221-4	B-05 (2-4)	Total/NA	Solid	Moisture	
310-302221-5	B-06 (0-2)	Total/NA	Solid	Moisture	

Lab Chronicle

Client: American Engineering Testing Inc.
Project/Site: Fargo VA UST

Job ID: 310-302221-1
SDG: P-0040293

Client Sample ID: B-01 (10-12)

Lab Sample ID: 310-302221-1

Date Collected: 03/17/25 11:25

Matrix: Solid

Date Received: 03/18/25 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			449885	MZR8	EET CF	03/27/25 07:47
Total/NA	Analysis	8260D		1	449882	MZR8	EET CF	03/27/25 09:05
Total/NA	Prep	5035			449282	P5ZC	EET CF	03/19/25 14:26
Total/NA	Analysis	8015C		1	449286	P5ZC	EET CF	03/19/25 20:38
Total/NA	Prep	3546			449681	BDJ4	EET CF	03/25/25 08:01
Total/NA	Analysis	8015C		1	449673	C3AA	EET CF	03/25/25 10:59
Total/NA	Analysis	Moisture		1	449288	XJ7V	EET CF	03/19/25 14:35

Client Sample ID: B-02 (0-2)

Lab Sample ID: 310-302221-2

Date Collected: 03/17/25 13:18

Matrix: Solid

Date Received: 03/18/25 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			449885	MZR8	EET CF	03/27/25 07:47
Total/NA	Analysis	8260D		1	449882	MZR8	EET CF	03/27/25 09:29
Total/NA	Prep	5035			449282	P5ZC	EET CF	03/19/25 14:26
Total/NA	Analysis	8015C		1	449286	P5ZC	EET CF	03/19/25 21:04
Total/NA	Prep	3546			449459	J7XK	EET CF	03/21/25 08:01
Total/NA	Analysis	8015C		1	449567	C3AA	EET CF	03/24/25 13:46
Total/NA	Analysis	Moisture		1	449288	XJ7V	EET CF	03/19/25 14:35

Client Sample ID: B-03 (0-2)

Lab Sample ID: 310-302221-3

Date Collected: 03/17/25 10:25

Matrix: Solid

Date Received: 03/18/25 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			449885	MZR8	EET CF	03/27/25 07:47
Total/NA	Analysis	8260D		1	449882	MZR8	EET CF	03/27/25 09:53
Total/NA	Prep	5035			449282	P5ZC	EET CF	03/19/25 14:26
Total/NA	Analysis	8015C		1	449286	P5ZC	EET CF	03/19/25 21:30
Total/NA	Prep	3546			449459	J7XK	EET CF	03/21/25 08:01
Total/NA	Analysis	8015C		1	449567	C3AA	EET CF	03/24/25 14:02
Total/NA	Analysis	Moisture		1	449288	XJ7V	EET CF	03/19/25 14:35

Client Sample ID: B-05 (2-4)

Lab Sample ID: 310-302221-4

Date Collected: 03/17/25 09:40

Matrix: Solid

Date Received: 03/18/25 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			449885	MZR8	EET CF	03/27/25 07:47
Total/NA	Analysis	8260D		1	449882	MZR8	EET CF	03/27/25 10:17
Total/NA	Prep	5035			449282	P5ZC	EET CF	03/19/25 14:26
Total/NA	Analysis	8015C		1	449286	P5ZC	EET CF	03/19/25 21:55
Total/NA	Prep	3546			449459	J7XK	EET CF	03/21/25 08:01
Total/NA	Analysis	8015C		1	449567	C3AA	EET CF	03/24/25 14:17

Eurofins Cedar Falls

Lab Chronicle

Client: American Engineering Testing Inc.
Project/Site: Fargo VA UST

Job ID: 310-302221-1
SDG: P-0040293

Client Sample ID: B-05 (2-4)
Date Collected: 03/17/25 09:40
Date Received: 03/18/25 09:20

Lab Sample ID: 310-302221-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	449288	XJ7V	EET CF	03/19/25 14:35

Client Sample ID: B-06 (0-2)
Date Collected: 03/17/25 11:25
Date Received: 03/18/25 09:20

Lab Sample ID: 310-302221-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			449885	MZR8	EET CF	03/27/25 07:47
Total/NA	Analysis	8260D		1	449882	MZR8	EET CF	03/27/25 10:41
Total/NA	Prep	5035			449282	P5ZC	EET CF	03/19/25 14:26
Total/NA	Analysis	8015C		1	449286	P5ZC	EET CF	03/19/25 22:21
Total/NA	Prep	3546			449459	J7XK	EET CF	03/21/25 08:01
Total/NA	Analysis	8015C		1	449567	C3AA	EET CF	03/24/25 16:04
Total/NA	Analysis	Moisture		1	449288	XJ7V	EET CF	03/19/25 14:35

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

Accreditation/Certification Summary

Client: American Engineering Testing Inc.
Project/Site: Fargo VA UST

Job ID: 310-302221-1
SDG: P-0040293

Laboratory: Eurofins Cedar Falls

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
North Dakota	State	R-186	09-29-24 *
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: American Engineering Testing Inc.
Project/Site: Fargo VA UST

Job ID: 310-302221-1
SDG: P-0040293

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET CF
8015C	Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)	SW846	EET CF
8015C	Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)	SW846	EET CF
Moisture	Percent Moisture	EPA	EET CF
3546	Microwave Extraction	SW846	EET CF
5035	Purge and Trap for Methanol Extractions	SW846	EET CF
5035	Purge and Trap for Solids	SW846	EET CF

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401



Environment Testing
America



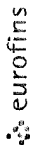
310-302221 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>AET</u>			
City/State:	CITY <u>Bismarck</u>	STATE <u>ND</u>	Project:
Receipt Information			
Date/Time Received:	DATE <u>3-14-25</u>	TIME <u>9:20</u>	Received By: <u>PH</u>
Delivery Type ☐ UPS ☒ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler? ☒ Yes ☐ No If yes: Cooler ID: _____			
Multiple Coolers? ☐ Yes ☒ No If yes: Cooler # _____ of _____			
Cooler Custody Seals Present? ☒ Yes ☐ No If yes: Cooler custody seals intact? ☒ Yes ☐ No			
Sample Custody Seals Present? ☐ Yes ☒ No If yes: Sample custody seals intact? ☐ Yes ☐ No			
Trip Blank Present? ☐ Yes ☒ No If yes: Which VOA samples are in cooler? ↓			
Temperature Record			
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE			
Thermometer ID: <u>P</u>		Correction Factor (°C): <u>0</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>1.8</u>		Corrected Temp (°C): <u>1.8</u>	
• Sample Container Temperature			
Container(s) used:	CONTAINER 1	CONTAINER 2	
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No			
NOTE If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			

Phone (319) 277-2401 Phone (319) 277-2425

Chain of Custody Record



Client Information		Carrier Tracking No(s):		COC No:	
Anthony Ligotom		Bindert, Zach T		310-104307-27769.1	
Phone: 701-202-9179		State of Origin: N.D.		Page: Page 1 of 1	
Company: American Engineering Testing Inc.		E-Mail: Zach.Bindert@et.eurofinsus.com		Job #:	
Address: 12110 Lovett Ave #5		Analysis Requested		Preservation Codes: S - H2SO4 N - None	
City: Bismarck		Due Date Requested		Total Number of Containers	
State, Zip: ND 58504		TAT Requested (days): 5		Other:	
Phone: 701-941-8570(Tel)		Compliance Project: ☐ Yes ☒ No		Special Instructions/Note:	
Email: aligotom@teamAET.com		Purchase Order Requested			
Project Name: FARGO VA 051		WO #:			
Site: FARGO VA 051		Project #:			
		SSOW#:			
Sample Identification		Sample Date		Sample Time	
B-01 (10-12)		3/17/25		1125	
B-02 (10-12)		3/17/25		1125	
B-03 (10-12)		1318		1025	
B-05 (2-4)		1440		1125	
B-06 (6-23)		1125			
Matrix (Water, Soil, Sludge, Other)		Sample Type (C=comp, G=grab)		Preservation Code:	
Water					
Soil					
Sludge					
Other					
Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		pH - 9.040C, TSS - 1.3765, 85	
☒		☒		☒	
Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		pH - 9.040C, TSS - 1.3765, 85	
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Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		pH - 9.040C, TSS - 1.3765, 85	

Login Sample Receipt Checklist

Client: American Engineering Testing Inc.

Job Number: 310-302221-1

SDG Number: P-0040293

Login Number: 302221

List Number: 1

Creator: Homolar, Dana J

List Source: Eurofins Cedar Falls

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	