LIMITED PHASE II ENVIRONMENTAL ASSESSMENT 519 HAGAN AVENUE NEW ORLEANS, LOUISIANA PROJECT #8425

BY ENVIRONMENTAL AUDITORS OF AMERICA 205 Avenue G Belle Chasse, Louisiana 70037 (504) 391-1185/Fax: (504) 391-1193

September 22, 2023



LIMITED PHASE II ENVIRONMENTAL ASSESSMENT 519 HAGAN AVENUE NEW ORLEANS, LOUISIANA PROJECT # 8425

BY ENVIRONMENTAL AUDITORS OF AMERICA

September 22, 2023

<u>Section</u>		Page
1.0	Project Background	
1.1	Scope of Work	1
1.2	Level of Investigative Effort	1
1.3	Time Frame	1
2.0	Soil Quantitative Findings	1
2.1	Sampling Methodology	1
2.2	Sample Locations	2
2.3	Sample Collection Observations	3
2.4	Testing Methodology	3
2.5	Analytical Results	4
3.0	Summary, Conclusions and Recommendations	5
3.1	Summary	
3.2	Conclusions	5
3.3	Recommendations	6
	Annandiy	
	Appendix	
	A – Soil Sample Locations Map	
	B – Analytical Results/Chain of Custody	
	C – Boring Logs	



1.0 PROJECT BACKGROUND

Environmental Auditors of America (EAA) was retained by Mr. Michael Carter with Gulf Coast Bank to investigate the subsurface integrity of the property located at 519 Hagan Avenue in New Orleans, Louisiana within Orleans Parish. The purpose of the project was to determine if the subsurface of the subject site has been adversely impacted by current or past activities at the subject property.

1.1 Scope of Work

The agreed upon scope of work for the project included:

- Extract four (4) subsurface soil samples from selected locations at the project site.
- Analyze the samples extracted for Total Petroleum Hydrocarbons (TPH) quantified as Gasoline (TPH-GRO), Diesel (TPH-DRO), Oil (TPH-ORO), Benzene, Toluene, Ethylbenzene, Xylene (BTEX), Methyl Tertiary Butyl Ether (MTBE) and Resource Conservation Recover Act (RCRA) Metals through appropriate testing methodologies and report these results.

1.2 Level of Investigative Effort

The client was interested in the substantiation through test results of the condition of the subsurface soil integrity of the subject property. The project was conducted by Mr. Tim Hicks, Environmental Geologist and Mr. Joel Snodgrass, Environmental Professional.

1.3 Time Frame

The complete time frame from the date of the client's request to submitting the written report was approximately twenty five working days.



2.0 SOIL QUANTITATIVE FINDINGS

2.1 Sampling Methodology

EAA subcontracted Crescent Geotechnical Services, Inc., a Louisiana Department of Natural Resources (DNR) licensed drilling contractor, to install four (4) Geoprobe soil borings on August 25, 2023. Soil Borings B-1 through B-4 were installed with a Geoprobe Sampling System.

Boring B-1 was drilled to a maximum of sixteen feet (16') below the ground surface (BGS) because initial groundwater was encountered at approximately thirteen feet (13') BGS. Because initial groundwater was encountered between seven and nine feet (7-9') BGS in borings B-2 through B-4, these borings were drilled to a maximum of twelve feet (12') BGS. The borings were sampled continuously utilizing four foot plastic Geoprobe tubes.

Field samples were collected in two foot increments and containerized, allowed to volatile for approximately fifteen minutes and then field screened using a Photoionization Detector (PID) for volatile content. One laboratory sample was collected from each boring location at the most likely interval of contamination, either the highest PID reading or the soil/groundwater interface.

The samples were placed in clean laboratory supplied containers and labeled with the date, sample identification, time of extraction and type of analysis requested. The samples were preserved on ice and delivered to the testing laboratory after the completion of the sampling activities.

Between each boring location, the Geoprobe drilling equipment was decontaminated utilizing Alconox soap and flushed with deionized water. The bore holes were filled with cement and bentonite to the ground surface and hydrated following completion of the soil sampling activities.

2.2 Sample Locations

Four (4) subsurface soil borings were completed on site. Boring B-1 was completed in the grass covered parking area on the north side of the subject property building. Historically, this area has been utilized as storage for vehicles to be repaired and with that, potentially a storage area for hydrocarbon materials.

Boring B-2 was completed near the southeastern corner of the former UST bed and dispenser island, which was visible from indications of cuts in the concrete and UST Closure report. Boring B-3 was completed near the northeastern corner of the UST bed.

Boring B-4 was completed inside of the workshop near the former in-ground hydraulic lift. The latitude and longitude of the exterior boring locations were recorded with a handheld GPS device. The following table shows the latitude and longitude of each of the exterior boring locations and a boring location map is included at the end of this report.

	ring Locations GPS
	tude/Longitude
Sample	Latitude
ID	Longitude
D 4	N 29° 58' 25.10"
B-1	W 90° 05' 26.59"
D 2	N 29° 58' 24.10"
B-2	W 90° 05' 26.98"
D 2	N 29° 58' 24.56"
B-3	W 90° 05' 26.67"
B-4	Interior of building

2.3 Sample Collection Observation

The lithologic descriptions of the subsurface soils observed during the sampling on site were similar. In general, firm gray silty clay was encountered to the initial groundwater depth, which exhibited a soft gray silty clay. Boring B-1 had shell fragments and organic material from the zero to two feet (0-2') BGS and borings B-2 through B-4 had approximately three to four inches (3-4") of concrete. Mild hydrocarbon odors were encountered in the near surface samples of Boring B-2.

Initial groundwater was encountered at approximately thirteen feet (13') below ground surface (BGS) in Boring B-1, seven to eight feet (7-8') in Boring B-2 and eight to nine feet (8-9') in Borings B-3 and B-4. A sample was extracted from immediately above the soil/groundwater interface in Boring B-1 (12-13' BGS), highest PID result in Boring B-2 (110 parts per million) and immediately above the soil/groundwater interface (7-8' BGS) in Borings B-3 and B-4. Boring logs describing the soils encountered, soil/groundwater interface, sample collected depth and PID results is included at the end of this report.

2.4 Testing Methodology

The samples were delivered to Environmental Analytical Solutions, Inc. (EASI) under chain of custody. The samples were analyzed for Total Petroleum Hydrocarbons (TPH) quantified as Gasoline (TPH-GRO), Diesel (TPH-DRO), Oil (TPH-ORO), Benzene, Toluene, Ethylbenzene, Xylene (BTEX), Methyl Tertiary Butyl Ether (MTBE) and RCRA Metals.

Total Petroleum Hydrocarbon (TPH) scans were performed utilizing the *Test Methods for Evaluating Solid Wastes*, Physical Chemical Methods, USEPA, SW-846, utilizing Method Number 8015B Mod. BTEX and MTBE scans utilized Method Number 8260B, Arsenic, Barium, Cadmium, Chromium, Lead, Selenium and Silver utilized Method Number 6010 and Mercury utilized Method Number 7471.

2.5 Analytical Results

Analytical results revealed that all of the samples from Borings B-1, B-3 and B-4 were either below the quantitation limit (BQL) of detection or well below the Louisiana DEQ's Risk Evaluation Corrective Action Program (RECAP) most restrictive screening standards. With exception to TPH-GRO and Lead concentration, constituents from Boring B-2 were also found to be either BQL or below the most restrictive screening standards. The following table summarizes the analytical results and compares them to the Louisiana DEQ's RECAP most restrictive screening standard.

So TPH, BTE	EX, MTB	tical Res E and Ro g/kg)		als	
Sample ID	B-1	B-2	B-3	B-4	
Date Sampled August 23, 2023					
Time Sampled	0928	0943	1024	1133	SS
Depth Sampled (ft BGS)	12-14	2-4	6-8	6-8	
Total	Petroleum	Hydrocarb	ons/VPH		
TPH-GRO	<25	505	<25	<25	65
TPH-DRO	<50	<50	<50	<50	65
TPH-ORO	<100	<100	<100	<100	180
	BTE	X/MTBE			
Benzene	<0.005	<0.005	<0.005	<0.005	0.051
Toluene	<0.005	<0.005	<0.005	<0.005	20
Ethylbenzene	<0.005	<0.005	<0.005	<0.005	19
Xylene	<0.005	<0.005	<0.005	<0.005	18
Methyl Tertiary Butyl Ether	<0.005	<0.005	<0.005	<0.005	0.077
	RCR	A Metals			
Arsenic	2.0	5.3	10.1	6.1	12
Barium	143	116	60	134	550
Cadmium	<0.36	0.49	<0.45	<0.37	3.9
Chromium	15.3	10.2	6.2	14.8	23
Lead	27.6	120	25.3	10.9	100
Selenium	<1.4	<1.6	<1.8	<1.5	20
Silver	<0.72	0.78	<0.89	<0.74	39
Mercury	0.036	0.92	0.067	<0.019	2.3

TPH = Total Petroleum Hydrocarbons
VPH = Volatile Petroleum Hydrocarbons
BTEX = Benzene, Toluene, Ethylbenzene and Xylene
MTBE = Methyl Tertiary Butyl Ether
RCRA = Resource Conservation Recovery Act
TPH-GRO = TPH Gasoline Range Organics
TPH-DRO = TPH Diesel Range Organics
TPH-ORO = TPH Oil Range Organics
TPH-ORO = TPH Oil Range Organics
mg/kg = milligrams per kilogram
SS = most restrictive screening standard
Bold = Result is above the SS



Due to the TPH-GRO results of Sample B-2, additional analysis of Volatile Petroleum Hydrocarbons (VPH) was conducted on this sample. According to the Louisiana DEQ RECAP guidelines, VPH analysis supersedes the results of TPH analysis. The following table summarizes the results of the VPH analysis and compares them to the RECAP most restrictive screening standards.

	alytical Results oleum Hydrocarl (mg/kg)	bons
Sample ID	B-2	
Date Sampled	August 25, 2023	SS
Time Sampled	0943	33
Depth Sampled	2-4	
	VPH	
Aliphatic C6-C8	9.6	1,200
Aliphatic C8-C10	38.4	120
Aromatic C8-C10	8.3	65

mg/kg = milligrams per kilogram SS = most restrictive screening standard Bold = Result is above the SS

Volatile Petroleum Hydrocarbon analysis reveals that each of the TPH fractions are well below their respective most restrictive screening standards. Because these results are below their SS and VPH analysis supersedes the TPH results, these findings are within the Louisiana DEQ standards.

Due to the Lead concentration of 120 mg/kg exceeding the most restrictive screening standard of 100 mg/kg in Sample B-2, additional analysis of Synthetic Precipitation Leaching Procedure (SPLP) Lead was conducted on Sample B-2. According to RECAP guidelines, the SPLP Lead results are then compared to Groundwater 1 (GW₁) screening standard multiplied by a factor of 20 (GW₁ x 20). If the SPLP results are below the GW₁ x 20 standard, then the sample is protective of groundwater and the less restrictive soil nonindustrial (Soil_{ni}) standard may be used. The following table summarizes the SPLP analysis and compares it to the GW₁ x 20 standard.

SPLP A	nalytical Results	3
	Lead (mg/L)	
Sample ID	B-2	GW ₁ x 20
Lead	0.053	0.30

SPLP = Synthetic Precipitation Leaching Procedure mg/L = milligrams per liter GW₁ x 20 = GW₁ Standard (0.015 mg/L) multiplied by a factor of 20



Because the SPLP Analysis results are below the $GW_1 \times 20$ standard, the Lead in soil from B-2 is protective of groundwater and the $Soil_{ni}$ standard may be used to screen the Lead concentration results. The following table compares the B-2 Lead soil analytical results and compares them to the $Soil_{ni}$ standard for Lead.

Soil An	alytical Results	
	Lead	
	(mg/kg)	
Sample ID	B-2	
Date Sampled	August 25, 2023	Soilni
Time Sampled	0943	Solini
Depth Sampled	2-4	
Lead	120	400

mg/kg = milligrams per kilogram Soil_{ni} = Nonindustrial Soil screening standard

Based on the SPLP results and because the Lead result is below the Soilni standard, these findings are within the Louisiana DEQ standards.

The analytical results and chain of custody can be found in Appendix B.

3.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

3.1 Summary

A Phase II Environmental Site Assessment was performed on the subject property. Four subsurface borings were completed on site. Boring B-1 was completed to a depth of sixteen feet (16') and Borings B-2 through B-4 were completed to a maximum depth of twelve feet (12') BGS. The initial soil/groundwater interface was encountered at approximately thirteen to fourteen feet (13-14') BGS in Boring B-1, seven to eight feet (7-8') BGS in Boring B-2 and eight to nine feet (8-9') BGS in Borings B-3 and B-4. The soil samples were field screened in two foot increments and one soil sample was collected from the soil/groundwater interface in Borings B-1, B-3 and B-4. One soil sample was collected from Boring B-2 in the interval (2-4' BGS) of the highest field screening result.

Based on the historic usage of the site as a filling station and automotive repair facility, all samples were analyzed for Total Petroleum Hydrocarbons quantified as Gasoline (TPH-GRO), Diesel (TPH-DRO), Oil (TPH-ORO), Benzene, Toluene, Ethylbenzene, Xylene (BTEX), Methyl Tertiary Butyl Ether (MTBE) and Resource Conservation Recovery Act (RCRA Metals). Based on slightly elevated analytical results of TPH-GRO and Lead in Sample B-2, additional analyses of Volatile Petroleum Hydrocarbon (VPH) and Synthetic Precipitation Leaching Procedure (SPLP) Lead was conducted on this sample.

Results revealed that all constituents were below either the detection limit or below the most restrictive screening standards in Samples B-1, B-3 and B-4. Results revealed that than in Sample B-2, TPH-GRO and Lead concentrations were found to be above their most restrictive standards. Based on these findings, additional analysis of VPH and SPLP Lead were conducted on Sample B-2. The results of these additional analyses reveal that the VPH fractions are below their most restrictive screening standards and that Lead is below the Soilni screening standard.

3.2 Conclusions

Analytical results of the samples extracted from the subject property during this investigation suggest that subsurface soils in the area of Sample B-2 are above the current Louisiana Department of Environmental Quality (DEQ) Risk Evaluation and Corrective Action Program (RECAP) most restrictive screening standards for Total Petroleum Hydrocarbons quantified as Gasoline (TPH-GRO) and Lead. However, further analyses of VPH and SPLP reveal that these levels are below the nonindustrial (residential) standard for soils established by the DEQ. All other target analyses were below the DEQ RECAP screening standards.

3.3 Recommendations

It is the professional judgement of EAA that the following recommendations are considered to ensure the environmental integrity of the site and to become or remain in environmental compliance.

No further subsurface investigations are recommended for this site at this time.

SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

Services performed under this contract were conducted in a manner consistent with the level of

care and skill ordinarily exercised by members of the profession currently practicing under similar

conditions.

In preparing this report, Environmental Auditors of America (EAA) has relied on information derived

from secondary sources and personal interviews. Except as set forth in this report, EAA has made

no independent investigation as to the accuracy or completeness of the information derived from

the secondary sources and personal interviews and has assumed that such information was

accurate and complete.

The undersigned declare that, to the best of our knowledge professional knowledge and belief, we

meet the definition of Environmental Professional as defined in Section 312.10 of 40 CFR Part 312.

The undersigned have the specific qualifications based on education, training and experience to

assess a property of the nature, history and setting of the subject property. We have developed

and performed all of the appropriate inquiries in conformance with the standards and practices set

forth in 40 CFR Part 312.

This report prepared by and all data accumulated from all sources by:

Timothy Hicks

Environmental Geologist

Environmental Auditors of America

Tencothy C. Auch

Joel Snodgrass

Environmental Professional

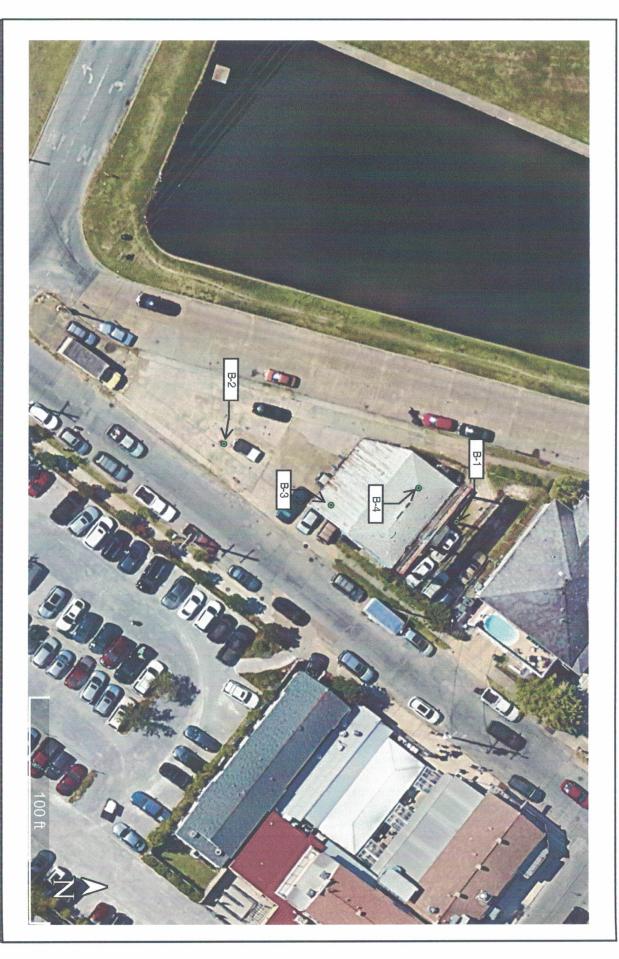
Environmental Auditors of America

Environmental Auditors of America

10

APPENDIX A SOIL SAMPLE LOCATIONS MAP







= Boring Location

Map Title:

Boring Location Map

September 15, 2023

Prepared for:

519 Hagan Avenue New Orleans, Louisiana Project # 8425

ENVIRONMENTAL AUDITORS
OF AMERICA

APPENDIX B ANALYTICAL RESULTS / CHAIN OF CUSTODY





EASI Job Number: 66166

Laboratory Report prepared for:

ENVIRONMENTAL AUDITORS, LLC

205 Avenue G Belle Chasse, LA 70037

Attention: Mr. Joel Snodgrass

RE: Hagan Avenue

Report Narrative

On August 25, 2023 four (4) sample was received for analytical characterization. On September 8, 2023, the client requested additional analysis for SPLP Lead on sample labeled "B2". Sample results are shown on the following pages. The quality assurance / quality control data are attached to the report. If you have any questions regarding this report, please contact me at your convenience.

APPROVED BY:	Cul	DATE:	09/22/23	
-	Mike Antoine			

Laboratory Director

The results contained within this report relate only to the analyses conducted and to the samples received by the laboratory. The results also conform to current requirements of LAC 33:1, and NELAC unless noted. This report shall not be reproduced, except in full, without written approval of EASI, LLC. EASI, LLC New Orleans is accredited by the Louisiana Department of Environmental Quality, **LELAP Certificate number**

NOTE: This report is intended only for the use of the individual to whom it is addressed and may contain information that is privileged and/or confidential. If this report was received via facsimile or e-mail and the reader is not the intended recipient or the employee responsible for delivering the report to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this document is strictly prohibited. If you received this in error, please contact EASI, LLC at (504)-469-3685.

Sample Identification: B-1

Sample Date: August 25, 2023

Sample Time: 0928 Laboratory Number: 6616601

Matrix: Soil

				8		
Vola	atile	CAS	Analysis	Analysis		
Param	neters	RN	Result	Units	PQL	Analysis Date/Time/Analyst
Benz	zene	71-43-2	BQL	mg/kg	0.005	090823/1217/JP
Tolu	iene	108-88-3	BQL	mg/kg	0.005	090823/1217/JP
Ethyl b	enzene	100-41-4	BQL	mg/kg	0.005	090823/1217/JP
Xyl	ene	1330-20-7	BQL	mg/kg	0.005	090823/1217/JP
MT	BE	1634-04-4	BQL	mg/kg	0.005	090823/1217/JP
Surrogates	% Rec					
Dibromofluoromethane	100					
Toluene, d8	99					
4-Bromofluorobenzene	101					
Total Pe	etroleum	Ana	lysis	Analysis		
Hydrocarb	ons (TPH)	Res	sult	Units	PQL	Analysis Date/Time/Analyst
TPH-	GRO	BC	ΩL	mg/kg	25.0	090323/1828/MA
TPH-	-DRO	ВС	ΣL	mg/kg	50.0	090323/1828/MA
TPH-	ORO	ВС	ΩL	mg/kg	100	090323/1828/MA
Total	Metal	Ana	lysis	Analysis		
Paran	neters	Res	sult	Units	PQL	Analysis Date/Time/Analyst
Ars	enic	2.	.0	mg/kg	0.72	083023/1839/AS
Bar	ium	14	13	mg/kg	14.5	083023/1839/AS
Cadr	mium	ВС	ΣL	mg/kg	0.36	083023/1839/AS
Chro	mium	15	5.3	mg/kg	0.72	083023/1839/AS
Le	ad	27	7.6	mg/kg	0.36	083023/1839/AS
Sele	nium	ВС	ΩL	mg/kg	1.4	083023/1839/AS
Sil	ver	ВС	QL	mg/kg	0.72	083023/1839/AS
Mer	cury	0.0	36	mg/kg	0.013	083023/1541/AW

Sample Identification: B-2

Sample Date: August 25, 2023

Sample Time: 0943 Laboratory Number: 6616602

Matrix: Soil

	atile	CAS	Analysis	Analysis		
Paran	neters	RN	Result	Units	PQL	Analysis Date/Time/Analyst
Ben	zene	71-43-2	BQL	mg/kg	0.005	090823/1320/JP
Tole	uene	108-88-3	BQL	mg/kg	0.005	090823/1320/JP
Ethyl b	enzene	100-41-4	BQL	mg/kg	0.005	090823/1320/JP
	ene	1330-20-7	BQL	mg/kg	0.005	090823/1320/JP
M	ГВЕ	1634-04-4	BQL	mg/kg	0.005	090823/1320/JP
Surrogates	% Rec					
Dibromofluoromethane	100					
Toluene, d8	100					
I-Bromofluorobenzene	101					
	etroleum	Ana		Analysis		
Hydrocark	ons (TPH)	Res	ult	Units	PQL	Analysis Date/Time/Analyst
TPH-	-GRO	50	5	mg/kg	50.0	090323/2109/MA
TPH-	DRO	BQL		mg/kg	50.0	090323/2109/MA
TPH-	ORO	ВС	ìL.	mg/kg	100	090323/2109/MA
Total	Metal	Anal	ysis	Analysis		
Paran	neters	Res	ult	Units	PQL	Analysis Date/Time/Analyst
Ars	enic	5.	3	mg/kg	0.78	083023/1843/AS
Bari	ium	11	6	mg/kg	15.6	083023/1843/AS
Cadr	nium	0.4	19	mg/kg	0.39	083023/1843/AS
Chron	mium	10	.2	mg/kg	0.78	083023/1843/AS
Le	ad	12	0	mg/kg	0.39	083023/1843/AS
Seler	nium	BC	L	mg/kg	1.6	083023/1843/AS
Silv	ver .	BC	L	mg/kg	0.78	083023/1843/AS
Mer	cury	0.9	12	mg/kg	0.033	083023/1648/AW
SP	LP	Anal	ysis	Analysis		
Param	neters	Res	ult	Units	PQL	Analysis Date/Time/Analyst
SPLP	Lead	0.0	53	mg/l	0.0050	091923/1839/AS
VF	Н	Anal	/sis	Analysis		
Paran		Res		Units	PQL	Analysis Date/Time/Analyst
Aliphatic (9.		mg/kg	4.2	090623/1511/SK
Aliphatic (>		38.		mg/kg	3.5	090623/1511/SK
Aromatic (>		8.	3	mg/kg	3.5	090623/1511/SK
Surrogates	% Rec					Prepped Date

117

4-Bromofluorobenzene

090623

Sample Identification: B-3

Sample Date: August 25, 2023

Sample Time: 1024 Laboratory Number: 6616603

Matrix: Soil

Vo	latile	CAS	Analysis	Analysis		
Para	meters	RN	Result	Units	PQL	Analysis Date/Time/Analyst
Ber	nzene	71-43-2	BQL	mg/kg	0.005	090823/1238/JP
Tol	luene	108-88-3	BQL	mg/kg	0.005	090823/1238/JP
Ethyl	benzene	100-41-4	BQL	mg/kg	0.005	090823/1238/JP
,	lene	1330-20-7	BQL	mg/kg	0.005	090823/1238/JP
,	TBE	1634-04-4	BQL	mg/kg	0.005	090823/1238/JP
Surrogates	% Rec					
Dibromofluoromethane	103					
Toluene, d8	98					
4-Bromofluorobenzene	120					
Total F	Petroleum	Ana	lysis	Analysis		
Hydrocar	rbons (TPH)	Re	sult	Units	PQL	Analysis Date/Time/Analyst
TPH	H-GRO	В	QL	mg/kg	25.0	090323/1908/MA
TPH	H-DRO	В	QL	mg/kg	50.0	090323/1908/MA
TPI	H-ORO	В	QL	mg/kg	100	090323/1908/MA
Tota	al Metal	Ana	lysis	Analysis		
Para	meters	Re	sult	Units	PQL	Analysis Date/Time/Analyst
Ar	senic	10	0.1	mg/kg	0.89	083023/1847/AS
Ba	arium	60	0.0	mg/kg	17.9	083023/1847/AS
Cad	dmium	В	QL	mg/kg	0.45	083023/1847/AS
Chr	omium	6	.2	mg/kg	0.89	083023/1847/AS
L	ead	2!	5.3	mg/kg	0.45	083023/1847/AS
Sel	enium	В	QL	mg/kg	1.8	083023/1847/AS
S	ilver	В	QL	mg/kg	0.89	083023/1847/AS
Me	ercury	0.0	067	mg/kg	0.019	083023/1545/AW

Sample Identification: B-4

Sample Date: August 25, 2023

Sample Time: 1133 Laboratory Number: 6616604

Matrix: Soil

Vola	ntile	CAS	Analysis	Analysis		
Param	eters	RN	Result	Units	PQL	Analysis Date/Time/Analyst
Benz	tene	71-43-2	BQL	mg/kg	0.005	090823/1259/JP
Tolu	ene	108-88-3	BQL	mg/kg	0.005	090823/1259/JP
Ethyl be	enzene	100-41-4	BQL	mg/kg	0.005	090823/1259/JP
Xyle	ene	1330-20-7	BQL	mg/kg	0.005	090823/1259/JP
MT	BE	1634-04-4	BQL	mg/kg	0.005	090823/1259/JP
Surrogates	% Rec					
Dibromofluoromethane	102					
Toluene, d8	101					
4-Bromofluorobenzene	101					
Total Pe	troleum	Anal	ysis	Analysis		
Hydrocarb	ons (TPH)	Res	ult	Units	PQL	Analysis Date/Time/Analyst
TPH-	GRO	ВС	ΣL	mg/kg	25.0	090323/1948/MA
TPH-	DRO	ВС	ΣL	mg/kg	50.0	090323/1948/MA
TPH-	ORO	ВС	1L	mg/kg	100	090323/1948/MA

Total Metal	Analysis Analysis			
Parameters	Result	Units	PQL	Analysis Date/Time/Analyst
Arsenic	6.1	mg/kg	0.74	083023/1851/AS
Barium	134	mg/kg	14.7	083023/1851/AS
Cadmium	BQL	mg/kg	0.37	083023/1851/AS
Chromium	14.8	mg/kg	0.74	083023/1851/AS
Lead	10.9	mg/kg	0.37	083023/1851/AS
Selenium	BQL	mg/kg	1.5	083023/1851/AS
Silver	BQL	mg/kg	0.74	083023/1851/AS
Mercury	BQL	mg/kg	0.019	083023/1553/AW

Methodology

Job Number: 66166

Reference:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,

USEPA, SW-846.

Parameter	Method						
SPLP	1312						
BTEX/MTBE	8260B						
TPH-GRO/DRO/ORO	8015B Mod						
Arsenic*	6010						
Barium *	6010						
Cadmium*	6010						
Chromium*	6010						
Lead*	6010						
Selenium*	6010						
Silver*	6010						
Mercury*	7471						

Reference:

Massachusetts Department of Environmental Protection.

"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods",

Third Edition, November 1986 and its updates.

Parameter	Method							
VPH*	Modified LA RECAP							

^{*} Subcontracted to Pace Analytical Services, LLC, LELAP Certification #02006

Quality Assurance/ Quality Control

Job Number: 66166								
Parameter	QC Batch ID	Method Blank Result	Spike Added	LCS % Rec.				
		ppb	ppb	70 1100				
Benzene	1427904	BQL	50.0	92				
Toluene	1427904	BQL	50.0	95				
Ethylbenzene	1427904	BQL	50.0	100				
Xylene	1427904	BQL	50.0	101				
MTBE	1427904	BQL	50.0	97				
		Method Blank	Spike					
Parameter		Result	Added					
		ppm	ppm					
TPH-GRO	090323	BQL	500	96				
	QC	Method Blank	Spike	LCS				
Parameter	Batch ID	Result	Added	% Rec.				
		ppm	ppm					
Mercury	1421193	BQL	0.1	82				
Arsenic	1421189	BQL	100	91				
Barium	1421189	BQL	100	93				
Cadmium	1421189	BQL	100	96				
Chromium	1421189	BQL	100	100				
Lead	1421189	BQL	100	94				
Lead	1434585	BQL	1	96				
Selenium	1421189	BQL	100	94				
Silver	1421189	BQL	50	96				
	QC	Method Blank	Spike	LCS				
Parameter	Batch ID	Result	Added	% Rec.				
		ppm	ppm	70 11301				
Aliphatic (>C08-C10)	1426335	BQL	14	89				
Aliphatic (>C06-C08)	1426335	BQL	14	93				
Aromatic (>C08-C10)	Aromatic (>C08-C10) 1426335 BQL 14 93							



Chain of Custody and Analysis Request Company Confidential and Proprietary

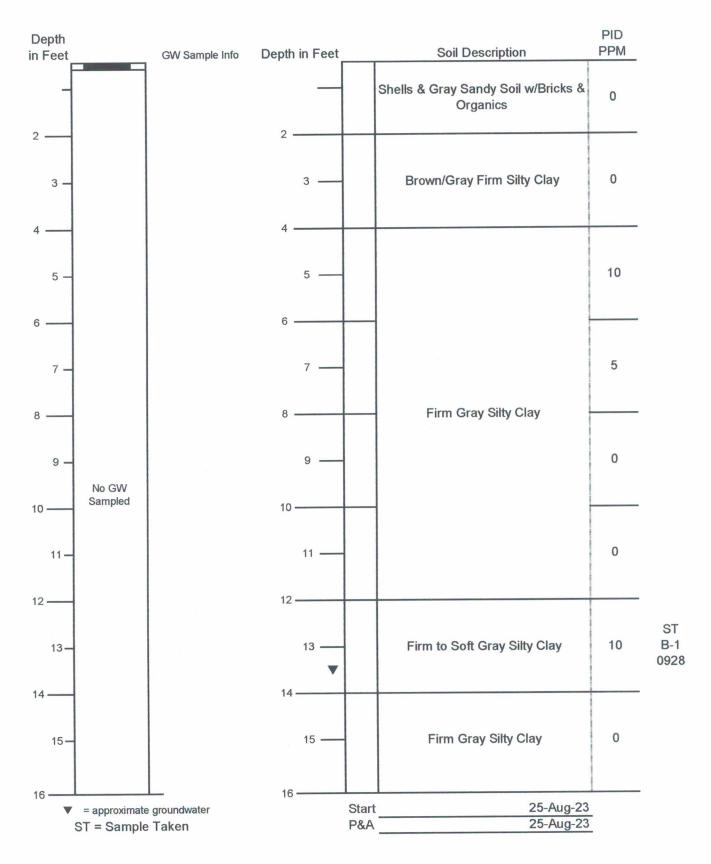
	1	1			
	1	(
Page	of	1			

EASI Job Number	Project Reference/Client PO Num	ber			prince	T		Sai	mnle D	/OSOPA	abues		Page of
601010	T S I			Sample Preservatives (use preservative code)							Preservatives:		
Client/Billing Information	00100												A - <6°C
Cheffer John Ing Hill Hacilon								Ana	alyses	Requ	ested		B - H ₂ SO ₄ , <6°C
	EAA Ref: Hagan Aver	nue											C - HCI, ≤6°C D - HNO ₃ , ≤6°C E - NaOH, <6°C F - Na ₂ S ₂ O ₃ , ≤6°C G - NaOH/C ₄ H ₅ O ₄ Zn, ≤6°C H - Encore Sampler, <6°C
	at apply) Non-Regul Stormwater Groundwa UST RECAP		ers	(Cor G)	(apoo			0			etals		Matrices: AQ- Aqueous/Water S- Soil/Sediment SL- Sludge SD- Solid/Bulk OL- Oil/Organic
Requested Turnaround Standard Turnaround Lab Collected	Rush (surcharges may apply)	Due Date	Number of Containers	Composite or Grab (C or	Matrix (use matrix	9-HC	O. Hd	M- Hd	EX	TBE	124 M.		A- Air (Tube, OVM, Bag) P- Paint Chips MF- Multiphase *
ID Date Time	Client Samp	le ID	Num	Comp	Matri	1	7.4	76	13	X	180		Comments
01 8/25/22 9:28	B-1		1	6	5	-	-	_	-	-			
62 8/25/23 9:43	8-2		1	G	5	-	4	-	4	4	4		
03 8/25/23 10 24	B-3		1	G	5	4	4	-	-	~	-		
04 45/13 11-73	B-4		1	G	5	V	~	-	-	4	-		
						_							
					_		_						
					_		_						
						_	4						
				_	1	_	1		1	1			
lote: This document is a legal and	Dinding agreement to transfer cust	adv and norform Ab											
elinquished by	his document to pay for services on to Date/Time Date/Time Date/Time	erms of NET 30 days or oth Received by Received by	sted a er agr	nalysi	es, le tern	ns.	pecial	Instr	uction	s, QC	Requir	rements, F	Possible Hazard ID
elinquished by	Date/Time	Received by											
ampler(s) IIM Hick	s/Jee/ Snols nas												
ed to record notes and/or resolut	ion to non-compliant (compromised)	receipt of final lab report to	o ensu	ire Do	ta Qu	ality (Object	ives o	f proje	ct/pe	rmit ar	e achieved	d. Separate sheet may be
	Sample Receipt	Information (To be comple	mple.	Accel	rance	Polic	v. ava	ilahle	unan	reque	st.		
How samples received? Client/courier delivery, Iced? Yes No Field pick-up, Iced? Yes No If no, Iced upon receipt? Yes No Collected by EASI, Iced? Yes No Placement and condition of custody seals if present. No Field pick-up, Iced? Yes No If no, Iced upon receipt? Yes No Collected by EASI, Iced? Yes No Placement and condition of custody seals if present.													
Placement and condition of custo	27 2010/11 01 202110	19 11		20.03		ur ur e	. uccej	JUDIE	ŋ ten	rp (5 >	U to 6	Corarri	ve iced on day of collection.
COC properly completed, received in good condition and signed? Yes No. 8. Samples within holding times? Yes No.							Ves No						
COC and labels/IDs agreed? Yes No 9. Samples requiring chemical preservation appropriately preserved? Yes					erved? Yes No								
Appropriate containers used and sufficient quantity received? Yes No 10. VOA vials free of bubbles >1/4" (6 mm)? Yes No Completed By/Date/Time													
DTES:							/		1		-	1	province and the Park Table Table Table to the second seco

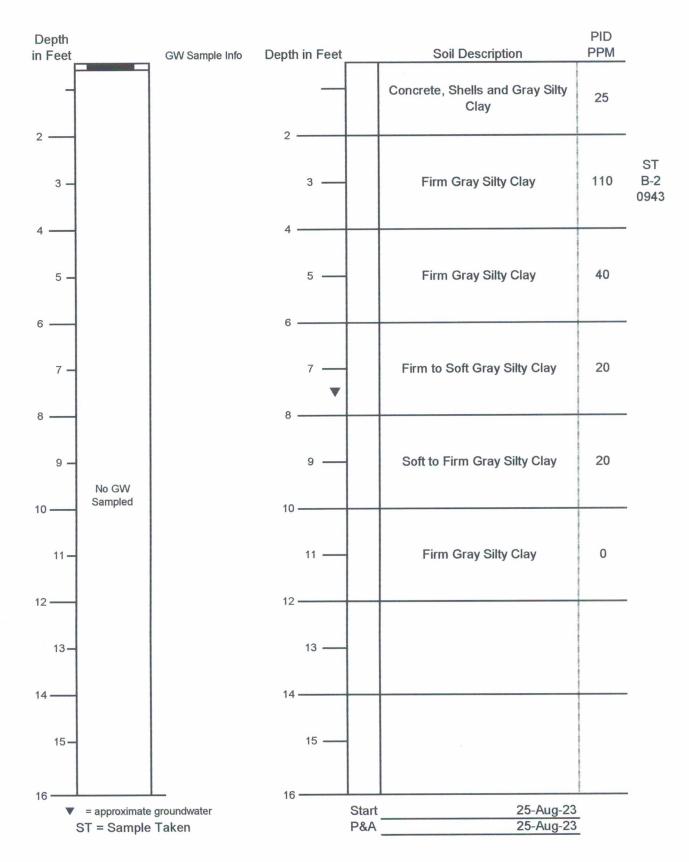
APPENDIX C BORING LOGS



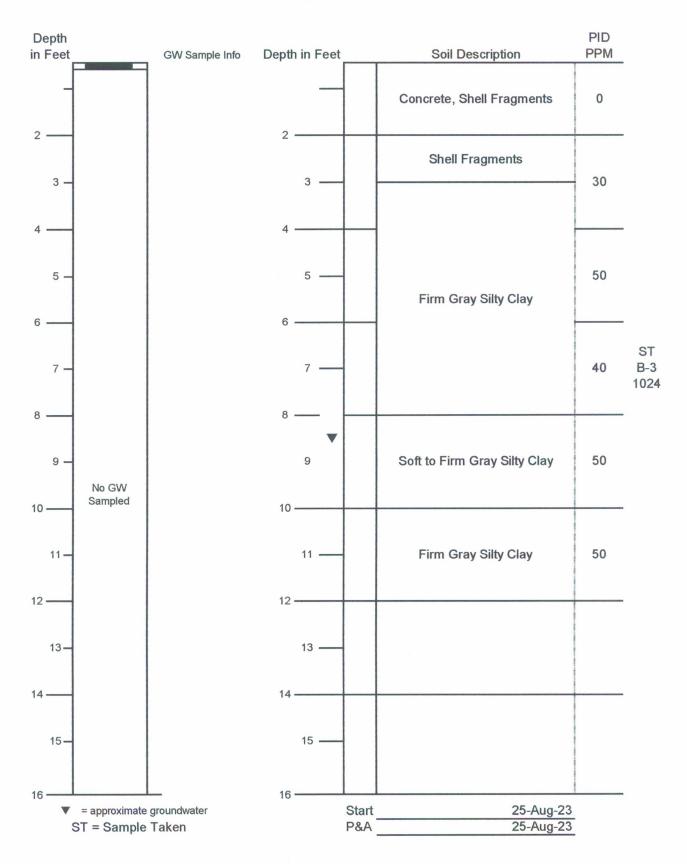
Boring Log
B-1



Boring Log
B-2



Boring Log
B-3



Boring Log
B-4

