

BENNETT ENVIRONMENTAL ASSOCIATES, LLC.

A NATURAL SYSTEMS UTILITIES COMPANY

LICENSED SITE PROFESSIONALS ENVIRONMENTAL SCIENTISTS GEOLOGISTS ENGINEERS

1573 Main Street, Brewster, MA 02631 508-896-1706 Fax 508-896-5109 www.bennett-ea.com

Job #K11482

August 31, 2023

Town of Barnstable
C/o Mr. David Anthony, Director of Asset Management
367 Main St.
Hyannis, MA 02601

RE: UNDERGROUND STORAGE TANK (UST) CLOSURE ASSESSMENT
Former Cotuit Elementary/Former Waldorf School
140 Old Oyster Rd, Cotuit MA

Dear Mr. Anthony,

Pursuant to our agreement dated March 29, 2023, Bennett Environmental Associates, LLC (BEA) has prepared the following UST Closure Assessment Report to document the removal and disposal of the 10,000-gallon underground storage tank (UST) formerly located at the above referenced property. The report and associated enclosures, document the removal and proper disposal of the tank and associated piping, proper disposal of the wastes generated, and presents the assessment of soil conditions subsequent to removing the tank, as required by the governing regulations. This work was conducted in accordance with the regulations for UST Systems pursuant to 310 CMR 80.00, as well as the Board of Fire Prevention Regulations regarding tanks and containers pursuant to 527 CMR 9.00, and as related to the MA Contingency Plan (MCP) pursuant to 310 CMR 40.0000.

BACKGROUND

The site, located at 140 Old Oyster Road in the village of Cotuit, in the town of Barnstable, Massachusetts, and is formerly the home of the Cotuit Elementary School (1955-2009) and the Waldorf School (2009-2019). The 13.5 acre property contains an approximate 20,000 square foot, single-story, brick, school building, originally constructed in 1955. The property also contains tennis courts and a baseball field northeast of the school building. The subject 10,000-gallon, double-walled, fiberglass, fuel oil UST is located north of the school building. The tank was reportedly installed in the late 1980s and was used to store fuel for the building's heating system. The tank reportedly contained #4 heating fuel up until 2009, when the fuel was changed over to #2 heating fuel. The building is slated to be demolished and removing the UST is part of the site redevelopment.



Photo 1: Former location of UST behind school building, prior to removal.

REMOVAL OF TANK CONTENTS

The fuel remaining in the tank was initially proposed to be reused off-site. However, it was later discovered that the tank also contained a significant volume of water, making reusing the fuel impractical, and disposal the next best option. On May 15, 2023 Boston Green Company, Inc. personnel used a vac-truck to pump 2,600 gallons of oily-water from the tank, before the vac-truck became full, leaving an estimated 500-600 gallons of oily water in the tank. The 2,600 gallons of oily-water were transported off-site, to Tradebe Treatment and Recycling of Stoughton, in Stoughton, MA, under a Uniform Hazardous Waste Manifest. A copy of the manifest is enclosed for reference.



Photo 2: Boston Green pumping out majority of tank contents on May 15, 2023.

TANK/PIPING REMOVAL

Prior to removing the tank, the contractor, Dowling Corporation, Inc. (Dowling), obtained the necessary permit from the Cotuit Fire District. On July 24, 2023, BEA personnel met Dowling personnel on-site to oversee and document tank removal activities. The asphalt and the clean overburden soils on top of the tank were removed in preparation to remove the tank from the ground. The tank measured 31' long and 8' in diameter and was buried approximately 6' below grade.



Photo 3: View of feed/return lines from tank to building.

Dowling personnel used a mini-excavator to uncover the feed and return lines for inspection and assessment. The feed/return lines, constructed of double walled fiberglass were inspected and noted to be in good condition, with no obvious leaks noted. Dowling personnel then cut and removed the lines, and BEA personnel collected composite soil samples in 10' intervals from beneath the lines, and beneath the two pipe joints observed in the piping runs. The vent piping was then uncovered for removal and inspection. The majority of the vent piping was run beneath the feed/return pipes, with a portion of the vent pipe run in a separate trench as it got closer to the building. The vent piping, which was also constructed of double-walled fiberglass, was then inspected, and appeared in good condition with no staining observed. BEA personnel again collected composite soil samples in 10' intervals from beneath the piping, and beneath the two 90 degree elbows along the piping run. Each of the soil samples were placed in 8-ounce glass jars and covered with aluminum septa. The samples were then screened using a

photoionization detector (PID) for evidence of petroleum impact. PID screening results reported concentrations of organic vapors ranging from non-detect (ND) to 5.5 parts per million/volume (ppmv). Selected soil samples were further screened for total petroleum hydrocarbons (TPH) using a Dextsil® PetroFlag® test kit, with results ranging from 32 ppm to 105 ppm TPH. A summary of field-screening results for the feed/return and vent lines is presented below in Table 1.

Table 1: Field Screening Results of Soil Samples From Tank Piping		
Former Cotuit Elementary School - 140 Old Oyster Rd., Cotuit, MA		
Sample Description	PID Reading (ppm/vol)	Dextsil PetroFlag Result (ppm)
Clean Overburden	1.8	-
Feed/Return 1 (0-10')	0.5	32
Feed/Return 2 (10-20')	3.0	
Feed/Return 3 (20-30')	5.5	
Feed/Return 4 (30-40')	3.3	50
Feed/Return 5 (40-50')	1.6	
Feed/Return 6 (50'-Building)	0.2	-
Feed/Return Joint #1	0.8	-
Feed/Return Joint #2	0.5	-
Vent 1 (0-10')	ND (<0.1)	-
Vent 2 (10-20')	ND (<0.1)	-
Vent 3 (20-30')	0.2	-
Vent 4 (90 to 90)	ND (<0.1)	-
Vent 5 (Building to 90)	ND (<0.1)	
Vent 90deg Joint #1	1.8	-
Vent 90deg Joint #2	4.4	105
PID readings reported in parts per million/volume (ppmv)		
Dextsil PetroFlag readings reported in parts per million (ppm)		
Highlighted cells indicate samples submitted for laboratory analysis, ND = Non Detect		

That afternoon, Western Oil, Inc. personnel arrived on-site with a vac-truck to remove the remaining contents of the tank. After the tank was pumped down, Dowling personnel entered the tank for cleaning. A total of 591 gallons of oily-water and sludge were pumped out of the tank, including the remaining contents and the water used during cleaning operations. The material was then transported off-site to Western Oil, Inc., in Lincoln, RI, under a Uniform Hazardous Waste Manifest. A copy of the manifest is enclosed for reference.

Dowling personnel prepared the tank for removal from the ground and contacted the Cotuit Fire Department to witness the removal. Deputy Chief Shane Clark arrived on-site and the tank was removed from the ground for inspection. The tank appeared to be in good shape with no evidence of leakage. The tank was placed onto a trailer for later off-site disposal at Allied Recycling Center, Inc., in Walpole, MA. BEA personnel then instructed the operator to collect representative sidewall and bottom-of-hole samples using the excavator bucket. Soil samples were again placed in 8-ounce glass jars, covered with aluminum septa, and screened

with a PID for evidence of petroleum impact. PID screening results reported concentrations of organic vapors ranging from ND to 1.0 ppmv. A composite “bottom of hole” soil sample was also screened for TPH using a Dexsil ® PetroFlag® test kit, with a result of 37 ppm. A summary of field-screening results for the tank grave is presented below in Table 2.

Table 2: Field Screening Results of Soil Samples From Tank Grave		
Former Cotuit Elementary School - 140 Old Oyster Rd., Cotuit, MA		
Sample Location	PID Reading (ppm/vol)	Dexsil PetroFlag Result (ppm)
Sidewall Northeast (SW-NE:6-14')	ND (<0.1)	-
Sidewall East (SW-E:6-14')	ND (<0.1)	-
Sidewall Southeast (SW-SE:6-14')	ND (<0.1)	-
Sidewall Southwest (SW-SW:6-14')	ND (<0.1)	-
Sidewall West (SW-W:6-14')	ND (<0.1)	-
Sidewall Northwest (SW-NW:6-14')	ND (<0.1)	-
Bottom of Hole East (BOH-E@14')	ND (<0.1)	37
Bottom of Hole West (BOH-W@14')	1.0	
PID readings reported in parts per million/volume (ppmv)		
Dexsil PetroFlag readings reported in parts per million (ppm)		
Highlighted cells indicate samples submitted for laboratory analysis. ND = Non Detect		



Photo 4: UST after being removed from the ground.

Selected soil samples were later submitted to a MA Certified laboratory for extractable petroleum hydrocarbons (EPH) and related polycyclic aromatic hydrocarbons (PAHs), as well as volatile petroleum hydrocarbons (VPH) and target benzene, toluene, ethylbenzene, and xylenes (BTEX) analysis. These analyses are considered appropriate for the contaminants of concern, which are #2 and #4 fuel oils.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for the soil samples submitted were received on August 1,

Table 3: Laboratory Analytical Results Compared to MassDEP RCS-1 Reportable Concentrations

NETLAB Case Number: 3G26052	Feed/Return 2/3 Comp	Feed/Return 4/5 Comp	Vent @ 90 #2	BOH @ 14' Comp	Units	MassDEP Reportable Concentrations
Lab Sample Number:	3G26052-01	3G26052-02	3G26052-03	3G26052-04		
Date Sampled:	7/24/2023	7/24/2023	7/24/2023	7/24/2023		RCS-1
Extractable Petroleum Hydrocarbons (MADEP-EPH)						
Unadjusted C11-C22 Aromatic Hydrocarbons	ND (<6.8)	ND (<6.86)	ND (<7.17)	ND (<6.88)	mg/kg	NS
Naphthalene	ND (<0.34)	ND (<0.34)	ND (<0.35)	ND (<0.34)	mg/kg	4
2-Methylnaphthalene	ND (<0.34)	ND (<0.34)	ND (<0.35)	ND (<0.34)	mg/kg	0.7
Phenanthrene	ND (<0.34)	ND (<0.34)	ND (<0.35)	ND (<0.34)	mg/kg	10
Acenaphthene	ND (<0.34)	ND (<0.34)	ND (<0.35)	ND (<0.34)	mg/kg	4
Acenaphthylene	ND (<0.34)	ND (<0.34)	ND (<0.35)	ND (<0.34)	mg/kg	1
Fluorene	ND (<0.34)	ND (<0.34)	ND (<0.35)	ND (<0.34)	mg/kg	1000
Anthracene	ND (<0.34)	ND (<0.34)	ND (<0.35)	ND (<0.34)	mg/kg	1000
Fluoranthene	ND (<0.34)	ND (<0.34)	ND (<0.35)	ND (<0.34)	mg/kg	1000
Pyrene	ND (<0.34)	ND (<0.34)	ND (<0.35)	ND (<0.34)	mg/kg	1000
Benzo(a)anthracene	ND (<0.34)	ND (<0.34)	ND (<0.35)	ND (<0.34)	mg/kg	7
Chrysene	ND (<0.34)	ND (<0.34)	ND (<0.35)	ND (<0.34)	mg/kg	70
Benzo(b)fluoranthene	ND (<0.34)	ND (<0.34)	ND (<0.35)	ND (<0.34)	mg/kg	7
Benzo(k)fluoranthene	ND (<0.34)	ND (<0.34)	ND (<0.35)	ND (<0.34)	mg/kg	70
Benzo(a)pyrene	ND (<0.34)	ND (<0.34)	ND (<0.35)	ND (<0.34)	mg/kg	2
Indeno(1,2,3-cd)pyrene	ND (<0.34)	ND (<0.34)	ND (<0.35)	ND (<0.34)	mg/kg	7
Dibenz(a,h)anthracene	ND (<0.34)	ND (<0.34)	ND (<0.35)	ND (<0.34)	mg/kg	0.7
Benzo(g,h,i)perylene	ND (<0.34)	ND (<0.34)	ND (<0.35)	ND (<0.34)	mg/kg	1000
C9-C18 Aliphatic Hydrocarbons	ND (<13.6)	ND (<13.7)	ND (<14.3)	ND (13.7)	mg/kg	1000
C19-C36 Aliphatic Hydrocarbons	ND (<13.6)	ND (<13.7)	ND (<14.3)	ND (13.7)	mg/kg	3000
C11-C22 Aromatic Hydrocarbons	ND (<6.8)	ND (<6.86)	ND (<7.17)	ND (<6.88)	mg/kg	1000
Volatile Petroleum Hydrocarbons (MADEP-VPH)						
Unadjusted C5-C8 Aliphatic Hydrocarbons	9.1	ND (<5.8)	ND (<5.7)	ND (<5.6)	mg/kg	NS
Unadjusted C9-C12 Aliphatic Hydrocarbons	14.3	ND (<11.6)	ND (<11.3)	ND (<11.2)	mg/kg	NS
Benzene	ND (<0.3)	ND (<0.3)	ND (<0.3)	ND (<0.3)	mg/kg	2
Ethylbenzene	ND (<0.3)	ND (<0.3)	ND (<0.3)	ND (<0.3)	mg/kg	40
Methyl t-butyl ether (MTBE)	ND (<0.06)	ND (<0.06)	ND (<0.06)	ND (<0.06)	mg/kg	0.1
Naphthalene	ND (<0.6)	ND (<0.6)	ND (<0.6)	ND (<0.6)	mg/kg	4
Toluene	ND (<0.3)	ND (<0.03)	ND (<0.3)	ND (<0.3)	mg/kg	30
m&p-Xylene	ND (<0.6)	ND (<0.6)	ND (<0.6)	ND (<0.6)	mg/kg	see Total xylenes
o-Xylene	ND (<0.6)	ND (<0.6)	ND (<0.6)	ND (<0.6)	mg/kg	see Total xylenes
Total xylenes	ND (<0.6)	ND (<0.6)	ND (<0.6)	ND (<0.6)	mg/kg	100
C5-C8 Aliphatic Hydrocarbons	9.1	ND (<5.8)	ND (<5.7)	ND (<5.6)	mg/kg	100
C9-C12 Aliphatic Hydrocarbons	14.3	ND (<11.6)	ND (<11.3)	ND (<11.2)	mg/kg	1000
C9-C10 Aromatic Hydrocarbons	ND (<5.8)	ND (<5.8)	ND (<5.7)	ND (<5.6)	mg/kg	100

Blue highlighted cells indicate analytes reported above laboratory reporting limits. ND = Not detected above laboratory reporting limits (in parentheses).
Purple highlighted cells indicate analytes reported above RCS-1 Reportable Concentrations. NS = No Standard

FINDINGS/CONCLUSIONS

The subject 10,000-gallon, double-walled, fiberglass UST, and associated piping, was removed from the ground in accordance with the governing regulations. The tank and a total of 3,191 gallons of oily-water were subsequently transported off-site for proper disposal. As required by 310 CMR 80.43(4), an assessment was conducted, to evaluate soil conditions for potential contamination related to bulk fuel storage. The assessment included a visual inspection of the tank and associated piping and collecting representative soil samples for field screening and laboratory analysis. Based on BEA personnel observations, the results of field screening, and the qualifying laboratory analyses, there is no evidence of contamination above the applicable regulatory standards, associated with the subject UST, as specific to the area of testing. Therefore, there is no environmental liability associated with the requirements for Release Notification or remediation activities as framed within the MCP, as regulated under 310 CMR 40.0000. This report with enclosures documents regulatory performance for UST Facility Closure in accordance with the governing regulations and policies under 310 CMR 80.00, specific to 80.43(4). Should you have any questions, or need additional information, please contact me directly at your earliest convenience.

Sincerely,
BENNETT ENVIRONMENTAL ASSOCIATES, LLC



John Tadema-Wielandt, LSP
Manager of Environmental Services

Encl.

- Site Plan entitled "UST Closure Assessment", Prepared by Bennett Environmental Associates, LLC, Dated August 2, 2023.
- Uniform Hazardous Waste Manifest [023971612 JJK – 2,600 gallons oily/water (5/15/23)]
- Uniform Hazardous Waste Manifest [024175429 JJK – 591 gallons oily-water (7/24/23)]
- Tank Removal Application/Permit (FP-292)
- Tank Disposal Receipt (FP-291)
- Laboratory Analytical Report – NetLab Work Order #3G26052 [8/1/23]
- MA DEP UST Program Transmittal Form - UST-1 Coversheet/Certification
- MA DEP UST Program Transmittal Form – UST-6 System Removal/Closure In-Place

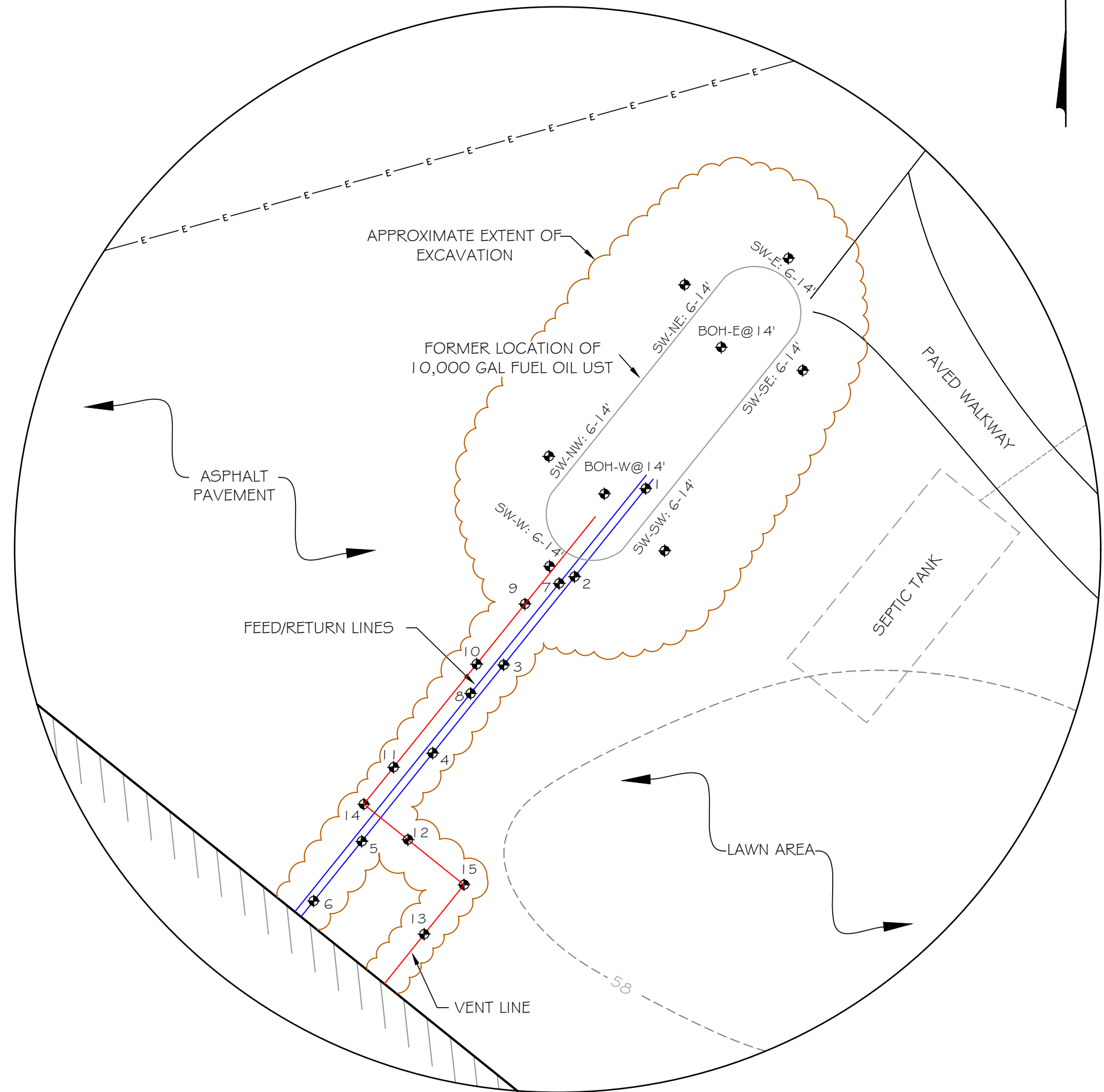
Cc

MassDEP UST Program
Chief Sean Brown – Cotuit Fire District
Thomas McKean, Director of Public Health – Town of Barnstable

REFERENCE

- PLAN TITLED "TITLE 5 SITE PLAN", PREPARED BY DOWN
CAPE ENGINEERING, DATED FEBRUARY 5, 2010
- GOOGLE MAPS IMAGERY © 2023

NOTE: THIS SITE PLAN WAS NOT PREPARED FROM ANY
INSTRUMENT SURVEY AND UNDER NO
CIRCUMSTANCES SHOULD THE DISTANCES, BEARING
AND/OR OTHER FEATURES SHOWN BE USED TO
ESTABLISH PROPERTY LINES. ALL LOCATIONS ARE
APPROXIMATE.

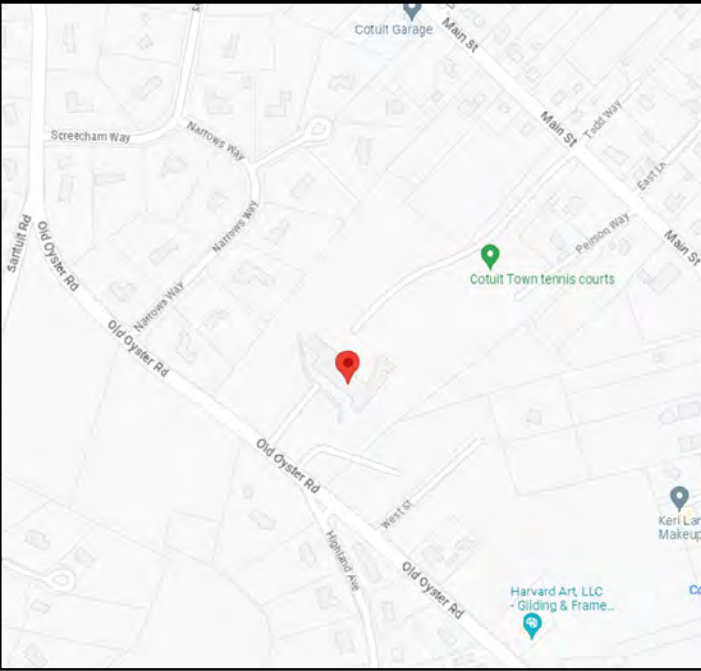


SOIL SAMPLE LEGEND - FEED/RETURN/VENT LINES

- 1. FEED/RETURN 1 (0-10')
- 2. FEED/RETURN 2 (10-20')
- 3. FEED-RETURN 3 (20-30')
- 4. FEED/RETURN 4 (30-40')
- 5. FEED/RETURN 5 (40-50')
- 6. FEED/RETURN 6 (50' - BUILDING)
- 7. FEED/RETURN JOINT #1
- 8. FEED/RETURN JOINT #2
- 9. VENT 1 (0-10')
- 10. VENT 2 (10-20')
- 11. VENT 3 (20-30')
- 12. VENT 4 (30 TO 90)
- 13. VENT 5 (BUILDING TO 90)
- 14. VENT 90deg JOINT #1
- 15. VENT 90deg JOINT #2

DETAIL

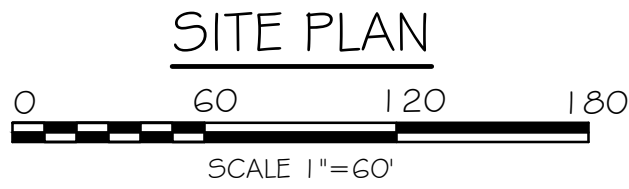
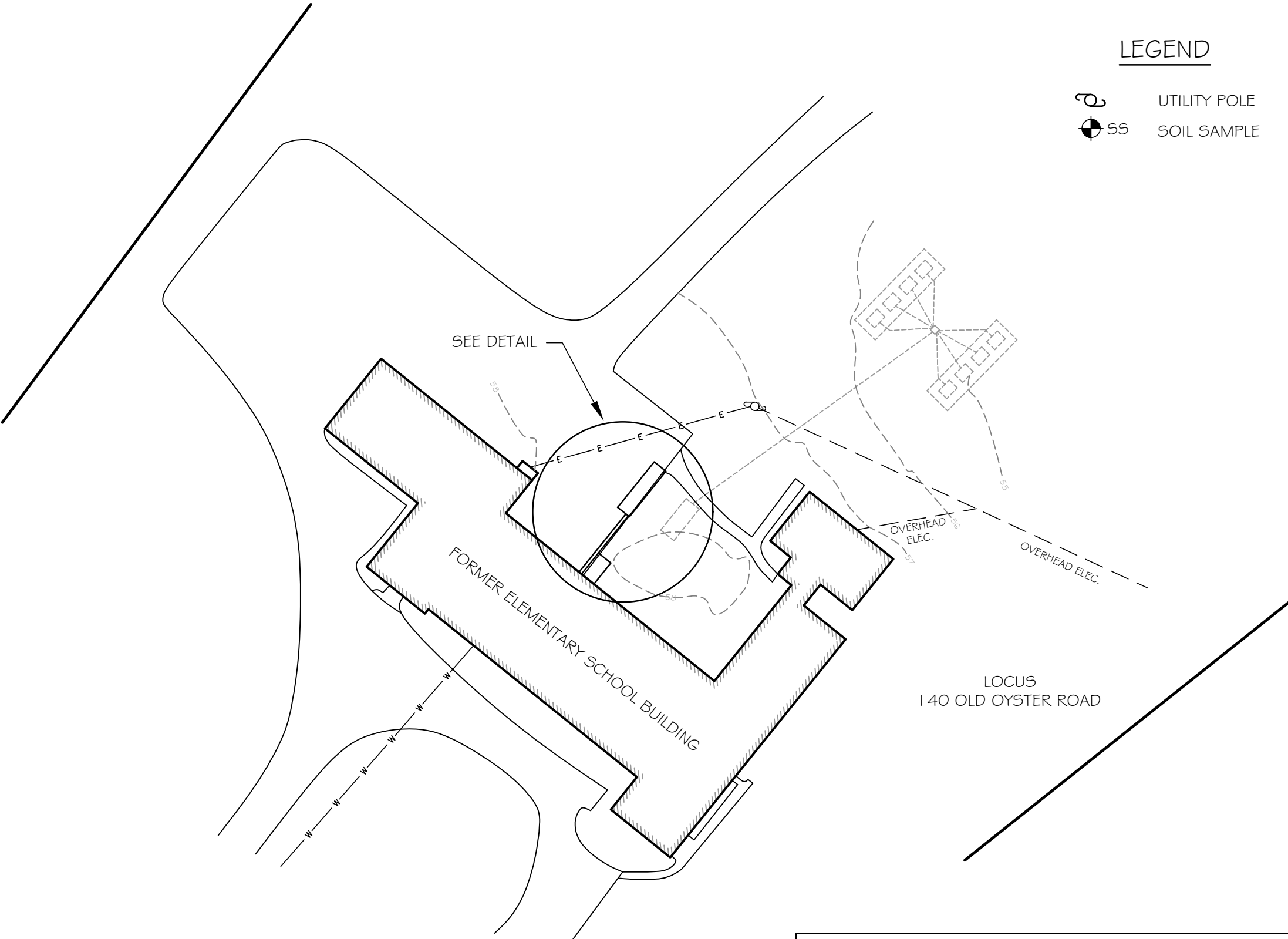
SCALE 1"=10'



BARNSTABLE, MA
KEY MAP

LEGEND

- UTILITY POLE
- SS SOIL SAMPLE



Project:				
TOWN OF BARNSTABLE c/o DAVID W. ANTHONY, DIRECTOR OF ASSET MANAGEMENT 367 MAIN STREET - HYANNIS, MA 02601				
Title:				
UST CLOSURE ASSESSMENT FORMER COTUIT ELEMENTARY SCHOOL 140 OLD OYSTER ROAD - COTUIT, MA				
 BENNETT ENVIRONMENTAL ASSOCIATES, LLC. A NATURAL SYSTEMS UTILITIES COMPANY LICENSED SITE PROFESSIONALS, ENVIRONMENTAL SCIENTISTS, GEOLOGISTS, ENGINEERS 1573 MAIN STREET, BREWSTER, MA 02631 PHONE: (508) 896-1706 www.bennett-ea.com FAX: (508) 896-5109				
DATE 8/2/23	SCALE As Noted	BY SRF	CHECK JTW	JOB NUMBER K11482DA.X.EV.910

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number <i>MAC 300098189</i>		2. Page 1 of <i>1</i>		3. Emergency Response Phone		4. Manifest Tracking Number <i>023971612 JJK</i>			
		5. Generator's Name and Mailing Address <i>Town of Barnstable 230 South St Barnstable MA 02601</i>		Generator's Site Address (if different than mailing address) <i>Cotuit Elementary School 140 Cotuit Ave Cotuit, MA</i>							
Generator's Phone:		6. Transporter 1 Company Name <i>BOSTON GREEN FUEL COMPANY</i>						U.S. EPA ID Number <i>MAC300098599</i>			
		7. Transporter 2 Company Name						U.S. EPA ID Number			
8. Designated Facility Name and Site Address <i>TRADEBE TREATMENT RECYCLING OF STOUGHTON 441-R CANTON STREET STOUGHTON MA 02072</i>								U.S. EPA ID Number <i>MAD0062170000</i>			
Facility's Phone: <i>981-297-3530</i>											
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))				10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes	
						No.	Type				
		1. <i>STATE REGULATED LIQUID WASTE NOT DOT REGULATED (OIL WATER)(MA98)</i>				<i>001</i>	<i>TT</i>	<i>1</i>	<i>G</i>	<i>1402</i>	
		2.									
		3.									
	4.										
14. Special Handling Instructions and Additional Information <i>1(L) PROFILE P092908004LHLM ERG#129</i> <i>Tankerman@comcast.net</i>											
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.											
Generator's/Offor's Printed/Typed Name						Signature			Month	Day	Year
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:											
Transporter signature (for exports only):											
TRANSPORTER	17. Transporter Acknowledgment of Receipt of Materials										
	Transporter 1 Printed/Typed Name					Signature			Month	Day	Year
	Transporter 2 Printed/Typed Name					Signature			Month	Day	Year
DESIGNATED FACILITY	18. Discrepancy										
	18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection										
	Manifest Reference Number:										
	18b. Alternate Facility (or Generator)						U.S. EPA ID Number				
	Facility's Phone:										
	18c. Signature of Alternate Facility (or Generator)						Month	Day	Year		
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)											
1.			2.			3.			4.		
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a											
Printed/Typed Name						Signature			Month	Day	Year

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number <i>WV508420/005</i>		2. Page 1 of <i>1</i>		3. Emergency Response Phone <i>800-240-5540</i>		4. Manifest Tracking Number 024175429 JJK			
		5. Generator's Name and Mailing Address <i>Western Oil Inc 713 Ocean ST Wentham MA 02093</i>						Generator's Site Address (if different than mailing address) <i>140 020 045 1st Row Cohasset, MA 02635</i>			
		6. Transporter 1 Company Name <i>WESTERN OIL, INC.</i>						U.S. EPA ID Number <i>R1R000500025</i>			
		7. Transporter 2 Company Name						U.S. EPA ID Number			
		8. Designated Facility Name and Site Address <i>WESTERN OIL INC ONE DUCHESS WAY LINCOLN RI 02865</i>						U.S. EPA ID Number <i>R1R000500025</i>			
		Facility's Phone: <i>401 727-8600</i>									
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))				10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes	
						No.	Type				
	<i>X</i>	<i>1. NA 1993 COMBUSTIBLE LIQUIDS, N.O.S. (OIL/WATER) COMB LIQ. PG III</i>				<i>001</i>	<i>TT</i>	<i>591</i>	<i>G</i>	<i>MA98</i>	<i>R014</i>
14. Special Handling Instructions and Additional Information <i>1) ERGW128</i>											
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.											
Generator's/Officer's Printed/Typed Name <i>X</i>											
Signature <i>X</i>											
Month <i>7</i> Day <i>24</i> Year <i>13</i>											
INT'L	16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____										
	Transporter signature (for exports only): _____										
TRANSPORTER	17. Transporter Acknowledgment of Receipt of Materials										
	Transporter 1 Printed/Typed Name <i>Bob Baskin</i>										
DESIGNATED FACILITY	Signature <i>Bob Baskin</i>										
	Month <i>7</i> Day <i>24</i> Year <i>13</i>										
18. Discrepancy											
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection											
18b. Alternate Facility (or Generator) Manifest Reference Number: _____ U.S. EPA ID Number _____											
Facility's Phone: _____											
18c. Signature of Alternate Facility (or Generator) _____ Month _____ Day _____ Year _____											
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)											
1. <i>H061</i> 2. _____ 3. _____ 4. _____											
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a											
Printed/Typed Name _____ Signature _____ Month _____ Day _____ Year _____											



Make application to local fire department.
Fire department retains original application and issues duplicate as permit.

The Commonwealth of Massachusetts
Department of Fire Services - Office of the State Fire Marshal

APPLICATION and PERMIT

Fee: \$25.00

for steel underground storage tank removal and transportation to approved tank disposal yard in accordance with the provisions of M.G.L. Chapter 148, Section 38, 827 CMR 1.00 Section 1.12.8.40, application is hereby made by:

Tank Owner

Tank Owner Name (please print) Town of Barnstable x
Address 307 Main St. Hyannis City MA 02601 State Zip
Signature (if applying for permit)

Removal Contractor

Company Name Dowling Corporation
Address 713 Dedham Street Wrentham,
Signature (if applying for permit) MA 02093
Signature [Signature]
DI IFCI* Certified Other

Contamination Assessment

Co. or Individual John Tadema-Wielandt
Address 1573 Main St. Brewster, MA
Signature (if applying for permit)
DI IFCI* Certified DI LSP # 1707 Other

Tank Information

Tank Location 140 Old Oyster Rd. Cotuit, MA 02635
Tank Capacity (gallons) 10,000-gallons Substance Last Stored Fuel oil
Tank Dimensions (diameter x length)
Remarks: We are requesting permission to empty, clean, and unearth
(1) 10,000-gallon UST located at the above address (140 Old Oyster Rd. Cotuit)

Disposal Information

Firm Transporting Waste Western Oil State Lic. # MA-052
Hazardous Waste Manifest# E.P.A. # R1R000500025
Approved Tank Disposal Yard Allied Recycling Tank Yard # 0015
Type of Inert Gas Forced Air Tank Yard Address 1901 Main St. Walpole, MA 02081

Approvals

City or Town Cotuit FDID# 01921 Permit#
Date of Issue 6/22/2023 Date of Expiration 12/31/2023
Dig Safe approval number: Trenching Permit #
Signature / Title of Officer granting permit [Signature]

*International Fire Code Institute

FP-292 (Revised 1.2018)



The Commonwealth of Massachusetts
Department of Fire Services - Office of the State Fire Marshal



**RECEIPT OF DISPOSAL OF UNDERGROUND STEEL STORAGE TANK
FORMERLY CONTAINING FLAMMABLE LIQUIDS**

NAME AND ADDRESS OF APPROVED TANK YARD:

Allied Recycling Center, Inc.
1901 Main Street
Walpole, MA 02081

Approved Tank Yard Number: 0015

Tank Yard Ledger Number (527 CMR 1.00:88.21.7.8.2): 2023 0114

I certify under penalty of law that I have personally examined the underground steel storage tank delivered to this "approved tank yard" by (firm, corporation or partnership) Dowling Co. Inc. and accepted same in conformance with 527 CMR 1.00:88.21.7.7 Provisions for Approving Underground Steel Storage Tank Dismantling Yards. A valid permit was issued by the head of the LOCAL fire department FDID# 01921 to transport this tank to this yard.

Name and official title of approved tank yard owner or owners authorized representative:

Signature: Melby E Title: Scale Date signed: 7/27/2023

TANK DATA: Gallons: <u>10,000</u> Previous contents: <u>Fuel oil</u> Diameter: _____ Length: _____ Date Received: <u>7/27/2023</u> Serial # (if available): _____ Tank I.D. # (Form FP-200): _____	TANK REMOVED FROM: No. and Street: <u>140 Old Oyster Rd</u> City and Town: <u>Cohasset, MA</u> Fire Dept. Permit #: <u>01921</u> Notes: _____ _____ _____
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EACH TANK MUST HAVE A RECEIPT OF DISPOSAL

Owner/Operator is responsible for notifying the Department of Environmental Protection:

Department of Environmental Protection
Bureau of Waste Prevention - UST Program
Boston, MA 02112

This signed receipt of disposal must be returned to the head of the local fire department.



New England Testing Laboratory, Inc.
(401) 353-3420

REPORT OF ANALYTICAL RESULTS

NETLAB Work Order Number: 3G26052
Client Project: K11482 - 140 Old Oyster Rd, Cotuit, MA

Report Date: 01-August-2023

Prepared for:

John Tadema-Wielandt
Bennett Environmental Association (NSU)
1573 Main Street
Brewster, MA 02631

Richard Warila, Laboratory Director
New England Testing Laboratory, Inc.
59 Greenhill Street
West Warwick, RI 02893
rich.warila@newenglandtesting.com

Samples Submitted :

The samples listed below were submitted to New England Testing Laboratory on 07/26/23. The group of samples appearing in this report was assigned an internal identification number (case number) for laboratory information management purposes. The client's designations for the individual samples, along with our case numbers, are used to identify the samples in this report. This report of analytical results pertains only to the sample(s) provided to us by the client which are indicated on the custody record. The case number for this sample submission is 3G26052. Custody records are included in this report.

Lab ID	Sample	Matrix	Date Sampled	Date Received
3G26052-01	Feed/Return 2/3 Comp	Soil	07/24/2023	07/26/2023
3G26052-02	Feed/Return 4/5 Comp	Soil	07/24/2023	07/26/2023
3G26052-03	Vent @ 90 #2	Soil	07/24/2023	07/26/2023
3G26052-04	BOH @ 14' Comp	Soil	07/24/2023	07/26/2023

Request for Analysis

At the client's request, the analyses presented in the following table were performed on the samples submitted.

BOH @ 14' Comp (Lab Number: 3G26052-04)

Analysis

MADEP EPH
MADEP VPH

Method

MADEP EPH
MADEP VPH

Feed/Return 2/3 Comp (Lab Number: 3G26052-01)

Analysis

MADEP EPH
MADEP VPH

Method

MADEP EPH
MADEP VPH

Feed/Return 4/5 Comp (Lab Number: 3G26052-02)

Analysis

MADEP EPH
MADEP VPH

Method

MADEP EPH
MADEP VPH

Vent @ 90 #2 (Lab Number: 3G26052-03)

Analysis

MADEP EPH
MADEP VPH

Method

MADEP EPH
MADEP VPH

Method References

Method for the Determination of Extractable Petroleum Hydrocarbons, Rev. 2.1, Massachusetts Department of Environmental Protection, 2004

Method for the Determination of Volatile Petroleum Hydrocarbons, Rev. 2.1, Massachusetts Department of Environmental Protection, 2018

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, USEPA

Case Narrative

Sample Receipt:

The samples associated with this work order were received in appropriately cooled and preserved containers. The chain of custody was adequately completed and corresponded to the samples submitted.

Exceptions: None

Analysis:

All samples were prepared and analyzed within method specified holding times and according to NETLAB's documented standard operating procedures. The results for the associated calibration, method blank and laboratory control sample (LCS) were within method specified quality control requirements and allowances. Results for all soil samples, unless otherwise indicated, are reported on a dry weight basis.

Exceptions: None

Volatile Petroleum Hydrocarbons
Sample: Feed/Return 2/3 Comp (3G26052-01)

SAMPLE INFORMATION

SAMPLE INFORMATION				
Matrix	Soil			
Containers	Satisfactory			
Sample Preservation	Aqueous	NA		
	Soil or Sediment	Preserved with methanol and/or in an air-tight container		ml methanol per gram soil: 1:1 +/- 25%
		Methanol preserved (covering sample)		
		Received in air-tight container		
Temperature	Received on Ice	Received at: 4+/-2 C°		

VPH ANALYTICAL RESULTS

Method for Ranges: MADEP VPH-18-2.1	Client ID			Feed/Return 2/3 Comp		
Method for Target Analytes: MADEP VPH-18-2.1	Lab ID			3G26052-01		
VPH Surrogate Standards: PID: 2,5-Dibromotoluene FID: 2,5-Dibromotoluene	Date Collected			07/24/23		
	Date Received			07/26/23		
	% Moisture			2.50		
RANGE/TARGET ANALYTE	Elution Range	Dilution	RL	Units	Result	Analyzed
Unadjusted C5-C8 Aliphatic Hydrocarbons [1]	NA	50X	5.8	mg/kg	9.1	07/27/23 12:33
Unadjusted C9-C12 Aliphatic Hydrocarbons [1]	NA	50X	11.7	mg/kg	14.3	07/27/23 12:33
Benzene	C5-C8	50X	0.3	mg/kg	<0.3	07/27/23 12:33
Ethylbenzene	C9-C12	50X	0.3	mg/kg	<0.3	07/27/23 12:33
Methyl t-butyl ether (MTBE)	C5-C8	50X	0.06	mg/kg	<0.06	07/27/23 12:33
Naphthalene	NA	50X	0.6	mg/kg	<0.6	07/27/23 12:33
Toluene	C5-C8	50X	0.3	mg/kg	<0.3	07/27/23 12:33
m&p-Xylene	C9-C12	50X	0.6	mg/kg	<0.6	07/27/23 12:33
o-Xylene	C9-C12	50X	0.6	mg/kg	<0.6	07/27/23 12:33
Total xylenes		50X	0.6	mg/kg	<0.6	07/27/23 12:33
C5-C8 Aliphatic Hydrocarbons [1,2]	NA	50X	5.8	mg/kg	9.1	07/27/23 12:33
C9-C12 Aliphatic Hydrocarbons [1,3]	NA	50X	11.7	mg/kg	14.3	07/27/23 12:33
C9-C10 Aromatic Hydrocarbons [1]	NA	50X	5.8	mg/kg	<5.8	07/27/23 12:33
2,5-Dibromotoluene-PID				%	102	07/27/23 12:33
2,5-Dibromotoluene-FID				%	106	07/27/23 12:33
Surrogate Acceptance Range				%	70-130	

[1] Hydrocarbon Range data excludes concentrations of any surrogate(s) and/or internal standards eluting in that range

[2] C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range

[3] C9-C12 Aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons

Volatile Petroleum Hydrocarbons
Sample: Feed/Return 4/5 Comp (3G26052-02)

SAMPLE INFORMATION

SAMPLE INFORMATION				
Matrix	Soil			
Containers	Satisfactory			
Sample Preservation	Aqueous	NA		
	Soil or Sediment	Preserved with methanol and/or in an air-tight container		ml methanol per gram soil: 1:1 +/- 25%
		Methanol preserved (covering sample)		
		Received in air-tight container		
Temperature	Received on Ice Received at: 4+/-2 C°			

VPH ANALYTICAL RESULTS

Method for Ranges: MADEP VPH-18-2.1	Client ID			Feed/Return 4/5 Comp		
Method for Target Analytes: MADEP VPH-18-2.1	Lab ID			3G26052-02		
VPH Surrogate Standards: PID: 2,5-Dibromotoluene FID: 2,5-Dibromotoluene	Date Collected			07/24/23		
	Date Received			07/26/23		
	% Moisture			3.50		
RANGE/TARGET ANALYTE	Elution Range	Dilution	RL	Units	Result	Analyzed
Unadjusted C5-C8 Aliphatic Hydrocarbons [1]	NA	50X	5.8	mg/kg	<5.8	07/27/23 13:05
Unadjusted C9-C12 Aliphatic Hydrocarbons [1]	NA	50X	11.6	mg/kg	<11.6	07/27/23 13:05
Benzene	C5-C8	50X	0.3	mg/kg	<0.3	07/27/23 13:05
Ethylbenzene	C9-C12	50X	0.3	mg/kg	<0.3	07/27/23 13:05
Methyl t-butyl ether (MTBE)	C5-C8	50X	0.06	mg/kg	<0.06	07/27/23 13:05
Naphthalene	NA	50X	0.6	mg/kg	<0.6	07/27/23 13:05
Toluene	C5-C8	50X	0.3	mg/kg	<0.3	07/27/23 13:05
m&p-Xylene	C9-C12	50X	0.6	mg/kg	<0.6	07/27/23 13:05
o-Xylene	C9-C12	50X	0.6	mg/kg	<0.6	07/27/23 13:05
Total xylenes		50X	0.6	mg/kg	<0.6	07/27/23 13:05
C5-C8 Aliphatic Hydrocarbons [1,2]	NA	50X	5.8	mg/kg	<5.8	07/27/23 13:05
C9-C12 Aliphatic Hydrocarbons [1,3]	NA	50X	11.6	mg/kg	<11.6	07/27/23 13:05
C9-C10 Aromatic Hydrocarbons [1]	NA	50X	5.8	mg/kg	<5.8	07/27/23 13:05
2,5-Dibromotoluene-PID				%	104	07/27/23 13:05
2,5-Dibromotoluene-FID				%	104	07/27/23 13:05
Surrogate Acceptance Range				%	70-130	

[1] Hydrocarbon Range data excludes concentrations of any surrogate(s) and/or internal standards eluting in that range

[2] C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range

[3] C9-C12 Aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons

Volatile Petroleum Hydrocarbons
Sample: Vent @ 90 #2 (3G26052-03)

SAMPLE INFORMATION

SAMPLE INFORMATION				
Matrix	Soil			
Containers	Satisfactory			
Sample Preservation	Aqueous	NA		
	Soil or Sediment	Preserved with methanol and/or in an air-tight container		ml methanol per gram soil: 1:1 +/- 25%
		Methanol preserved (covering sample)		
		Received in air-tight container		
Temperature	Received on Ice Received at: 4+/-2 C°			

VPH ANALYTICAL RESULTS

Method for Ranges: MADEP VPH-18-2.1	Client ID			Vent @ 90 #2		
Method for Target Analytes: MADEP VPH-18-2.1	Lab ID			3G26052-03		
VPH Surrogate Standards: PID: 2,5-Dibromotoluene FID: 2,5-Dibromotoluene	Date Collected			07/24/23		
	Date Received			07/26/23		
	% Moisture			7.60		
RANGE/TARGET ANALYTE	Elution Range	Dilution	RL	Units	Result	Analyzed
Unadjusted C5-C8 Aliphatic Hydrocarbons [1]	NA	50X	5.7	mg/kg	<5.7	07/27/23 13:38
Unadjusted C9-C12 Aliphatic Hydrocarbons [1]	NA	50X	11.3	mg/kg	<11.3	07/27/23 13:38
Benzene	C5-C8	50X	0.3	mg/kg	<0.3	07/27/23 13:38
Ethylbenzene	C9-C12	50X	0.3	mg/kg	<0.3	07/27/23 13:38
Methyl t-butyl ether (MTBE)	C5-C8	50X	0.06	mg/kg	<0.06	07/27/23 13:38
Naphthalene	NA	50X	0.6	mg/kg	<0.6	07/27/23 13:38
Toluene	C5-C8	50X	0.3	mg/kg	<0.3	07/27/23 13:38
m&p-Xylene	C9-C12	50X	0.6	mg/kg	<0.6	07/27/23 13:38
o-Xylene	C9-C12	50X	0.6	mg/kg	<0.6	07/27/23 13:38
Total xylenes		50X	0.6	mg/kg	<0.6	07/27/23 13:38
C5-C8 Aliphatic Hydrocarbons [1,2]	NA	50X	5.7	mg/kg	<5.7	07/27/23 13:38
C9-C12 Aliphatic Hydrocarbons [1,3]	NA	50X	11.3	mg/kg	<11.3	07/27/23 13:38
C9-C10 Aromatic Hydrocarbons [1]	NA	50X	5.7	mg/kg	<5.7	07/27/23 13:38
2,5-Dibromotoluene-PID				%	105	07/27/23 13:38
2,5-Dibromotoluene-FID				%	104	07/27/23 13:38
Surrogate Acceptance Range				%	70-130	

[1] Hydrocarbon Range data excludes concentrations of any surrogate(s) and/or internal standards eluting in that range

[2] C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range

[3] C9-C12 Aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons

Volatile Petroleum Hydrocarbons
Sample: BOH @ 14' Comp (3G26052-04)

SAMPLE INFORMATION

SAMPLE INFORMATION				
Matrix	Soil			
Containers	Satisfactory			
Sample Preservation	Aqueous	NA		
	Soil or Sediment	Preserved with methanol and/or in an air-tight container		ml methanol per gram soil: 1:1 +/- 25%
		Methanol preserved (covering sample)		
		Received in air-tight container		
Temperature	Received on Ice	Received at: 4+/-2 C°		

VPH ANALYTICAL RESULTS

Method for Ranges: MADEP VPH-18-2.1	Client ID			BOH @ 14' Comp		
Method for Target Analytes: MADEP VPH-18-2.1	Lab ID			3G26052-04		
VPH Surrogate Standards: PID: 2,5-Dibromotoluene FID: 2,5-Dibromotoluene	Date Collected			07/24/23		
	Date Received			07/26/23		
	% Moisture			3.70		
RANGE/TARGET ANALYTE	Elution Range	Dilution	RL	Units	Result	Analyzed
Unadjusted C5-C8 Aliphatic Hydrocarbons [1]	NA	50X	5.6	mg/kg	<5.6	07/27/23 14:11
Unadjusted C9-C12 Aliphatic Hydrocarbons [1]	NA	50X	11.2	mg/kg	<11.2	07/27/23 14:11
Benzene	C5-C8	50X	0.3	mg/kg	<0.3	07/27/23 14:11
Ethylbenzene	C9-C12	50X	0.3	mg/kg	<0.3	07/27/23 14:11
Methyl t-butyl ether (MTBE)	C5-C8	50X	0.06	mg/kg	<0.06	07/27/23 14:11
Naphthalene	NA	50X	0.6	mg/kg	<0.6	07/27/23 14:11
Toluene	C5-C8	50X	0.3	mg/kg	<0.3	07/27/23 14:11
m&p-Xylene	C9-C12	50X	0.6	mg/kg	<0.6	07/27/23 14:11
o-Xylene	C9-C12	50X	0.6	mg/kg	<0.6	07/27/23 14:11
Total xylenes		50X	0.6	mg/kg	<0.6	07/27/23 14:11
C5-C8 Aliphatic Hydrocarbons [1,2]	NA	50X	5.6	mg/kg	<5.6	07/27/23 14:11
C9-C12 Aliphatic Hydrocarbons [1,3]	NA	50X	11.2	mg/kg	<11.2	07/27/23 14:11
C9-C10 Aromatic Hydrocarbons [1]	NA	50X	5.6	mg/kg	<5.6	07/27/23 14:11
2,5-Dibromotoluene-PID				%	101	07/27/23 14:11
2,5-Dibromotoluene-FID				%	106	07/27/23 14:11
Surrogate Acceptance Range				%	70-130	

[1] Hydrocarbon Range data excludes concentrations of any surrogate(s) and/or internal standards eluting in that range

[2] C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range

[3] C9-C12 Aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons

Extractable Petroleum Hydrocarbons
Sample: Feed/Return 2/3 Comp (3G26052-01)

SAMPLE INFORMATION

Matrix	Soil
Containers	Satisfactory
Aqueous Preservatives	NA
Temperature	Received on Ice Received at: 4+/-2 C°
Extraction Method	EPA Method 3546

EPH ANALYTICAL RESULTS

Method for Ranges: MADEP EPH 4-1.1		Client ID			Feed/Return 2/3 Comp	
Method for Target Analytes: MADEP EPH 4-1.1		Lab ID			3G26052-01	
EPH Surrogate Standards: Aliphatic: Chlorooctadecane Aromatic: o-Terphenyl		Date Collected			07/24/23	
		Date Received			07/26/23	
		Date Thawed			NA	
		Date Extracted			07/27/23	
EPH Fractionation Surrogates: (1) 2-Fluorobiphenyl (2) 2-Bromonaphthalene		Percent Moisture			2.50	
RANGE/TARGET ANALYTE		Dilution	RL	Units	Result	Analyzed
Unadjusted C11-C22 Aromatic Hydrocarbons [1]		1X	6.80	mg/kg	<6.80	07/31/23 15:33
Diesel PAH Analytes	Naphthalene	1X	0.34	mg/kg	<0.34	07/31/23 15:33
	2-Methylnaphthalene	1X	0.34	mg/kg	<0.34	07/31/23 15:33
	Phenanthrene	1X	0.34	mg/kg	<0.34	07/31/23 15:33
	Acenaphthene	1X	0.34	mg/kg	<0.34	07/31/23 15:33
Other Target PAH Analytes	Acenaphthylene	1X	0.34	mg/kg	<0.34	07/31/23 15:33
	Fluorene	1X	0.34	mg/kg	<0.34	07/31/23 15:33
	Anthracene	1X	0.34	mg/kg	<0.34	07/31/23 15:33
	Fluoranthene	1X	0.34	mg/kg	<0.34	07/31/23 15:33
	Pyrene	1X	0.34	mg/kg	<0.34	07/31/23 15:33
	Benzo(a)anthracene	1X	0.34	mg/kg	<0.34	07/31/23 15:33
	Chrysene	1X	0.34	mg/kg	<0.34	07/31/23 15:33
	Benzo(b)fluoranthene	1X	0.34	mg/kg	<0.34	07/31/23 15:33
	Benzo(k)fluoranthene	1X	0.34	mg/kg	<0.34	07/31/23 15:33
	Benzo(a)pyrene	1X	0.34	mg/kg	<0.34	07/31/23 15:33
	Indeno(1,2,3-cd)pyrene	1X	0.34	mg/kg	<0.34	07/31/23 15:33
	Dibenz(a,h)anthracene	1X	0.34	mg/kg	<0.34	07/31/23 15:33
	Benzo(g,h,i)perylene	1X	0.34	mg/kg	<0.34	07/31/23 15:33
C9-C18 Aliphatic Hydrocarbons [1]		1X	13.6	mg/kg	<13.6	07/31/23 14:44
C19-C36 Aliphatic Hydrocarbons [1]		1X	13.6	mg/kg	<13.6	07/31/23 14:44
C11-C22 Aromatic Hydrocarbons [1,2]		1X	6.80	mg/kg	<6.80	07/31/23 15:33
Chlorooctadecane (Sample Surrogate)				%	74.1	07/31/23 14:44
o-Terphenyl (Sample Surrogate)				%	75.8	07/31/23 15:33
2-Fluorobiphenyl (Fractionation Surrogate)				%	108	07/31/23 15:33
2-Bromonaphthalene (Fractionation Surrogate)				%	109	07/31/23 15:33
Surrogate Acceptance Range [3]				%	40 - 140	

[1] Hydrocarbon range data excludes area counts of any surrogate(s) and/or internal standards eluting in that range.

[2] C11-C22 Aromatic Hydrocarbons excludes the concentration of Target PAH Analytes.

[3] See the case narrative in cases where a dash (-) is entered in the surrogate recovery block.

Extractable Petroleum Hydrocarbons
Sample: Feed/Return 4/5 Comp (3G26052-02)

SAMPLE INFORMATION

Matrix	Soil
Containers	Satisfactory
Aqueous Preservatives	NA
Temperature	Received on Ice Received at: 4+/-2 C°
Extraction Method	EPA Method 3546

EPH ANALYTICAL RESULTS

Method for Ranges: MADEP EPH 4-1.1		Client ID			Feed/Return 4/5 Comp	
Method for Target Analytes: MADEP EPH 4-1.1		Lab ID			3G26052-02	
EPH Surrogate Standards: Aliphatic: Chlorooctadecane Aromatic: o-Terphenyl		Date Collected			07/24/23	
		Date Received			07/26/23	
		Date Thawed			NA	
		Date Extracted			07/27/23	
EPH Fractionation Surrogates: (1) 2-Fluorobiphenyl (2) 2-Bromonaphthalene		Percent Moisture			3.50	
RANGE/TARGET ANALYTE		Dilution	RL	Units	Result	Analyzed
Unadjusted C11-C22 Aromatic Hydrocarbons [1]		1X	6.86	mg/kg	<6.86	07/31/23 14:10
Diesel PAH Analytes	Naphthalene	1X	0.34	mg/kg	<0.34	07/31/23 14:10
	2-Methylnaphthalene	1X	0.34	mg/kg	<0.34	07/31/23 14:10
	Phenanthrene	1X	0.34	mg/kg	<0.34	07/31/23 14:10
	Acenaphthene	1X	0.34	mg/kg	<0.34	07/31/23 14:10
Other Target PAH Analytes	Acenaphthylene	1X	0.34	mg/kg	<0.34	07/31/23 14:10
	Fluorene	1X	0.34	mg/kg	<0.34	07/31/23 14:10
	Anthracene	1X	0.34	mg/kg	<0.34	07/31/23 14:10
	Fluoranthene	1X	0.34	mg/kg	<0.34	07/31/23 14:10
	Pyrene	1X	0.34	mg/kg	<0.34	07/31/23 14:10
	Benzo(a)anthracene	1X	0.34	mg/kg	<0.34	07/31/23 14:10
	Chrysene	1X	0.34	mg/kg	<0.34	07/31/23 14:10
	Benzo(b)fluoranthene	1X	0.34	mg/kg	<0.34	07/31/23 14:10
	Benzo(k)fluoranthene	1X	0.34	mg/kg	<0.34	07/31/23 14:10
	Benzo(a)pyrene	1X	0.34	mg/kg	<0.34	07/31/23 14:10
	Indeno(1,2,3-cd)pyrene	1X	0.34	mg/kg	<0.34	07/31/23 14:10
	Dibenz(a,h)anthracene	1X	0.34	mg/kg	<0.34	07/31/23 14:10
	Benzo(g,h,i)perylene	1X	0.34	mg/kg	<0.34	07/31/23 14:10
	C9-C18 Aliphatic Hydrocarbons [1]		1X	13.7	mg/kg	<13.7
C19-C36 Aliphatic Hydrocarbons [1]		1X	13.7	mg/kg	<13.7	07/31/23 15:08
C11-C22 Aromatic Hydrocarbons [1,2]		1X	6.86	mg/kg	<6.86	07/31/23 14:10
Chlorooctadecane (Sample Surrogate)				%	60.5	07/31/23 15:08
o-Terphenyl (Sample Surrogate)				%	52.0	07/31/23 14:10
2-Fluorobiphenyl (Fractionation Surrogate)				%	79.5	07/31/23 14:10
2-Bromonaphthalene (Fractionation Surrogate)				%	80.6	07/31/23 14:10
Surrogate Acceptance Range [3]				%	40 - 140	

[1] Hydrocarbon range data excludes area counts of any surrogate(s) and/or internal standards eluting in that range.

[2] C11-C22 Aromatic Hydrocarbons excludes the concentration of Target PAH Analytes.

[3] See the case narrative in cases where a dash (-) is entered in the surrogate recovery block.

Extractable Petroleum Hydrocarbons
Sample: Vent @ 90 #2 (3G26052-03)

SAMPLE INFORMATION

Matrix	Soil
Containers	Satisfactory
Aqueous Preservatives	NA
Temperature	Received on Ice Received at: 4+/-2 C°
Extraction Method	EPA Method 3546

EPH ANALYTICAL RESULTS

Method for Ranges: MADEP EPH 4-1.1		Client ID			Vent @ 90 #2	
Method for Target Analytes: MADEP EPH 4-1.1		Lab ID			3G26052-03	
EPH Surrogate Standards: Aliphatic: Chlorooctadecane Aromatic: o-Terphenyl		Date Collected			07/24/23	
		Date Received			07/26/23	
		Date Thawed			NA	
		Date Extracted			07/27/23	
EPH Fractionation Surrogates: (1) 2-Fluorobiphenyl (2) 2-Bromonaphthalene		Percent Moisture			7.60	
RANGE/TARGET ANALYTE		Dilution	RL	Units	Result	Analyzed
Unadjusted C11-C22 Aromatic Hydrocarbons [1]		1X	7.17	mg/kg	<7.17	07/31/23 16:01
Diesel PAH Analytes	Naphthalene	1X	0.35	mg/kg	<0.35	07/31/23 16:01
	2-Methylnaphthalene	1X	0.35	mg/kg	<0.35	07/31/23 16:01
	Phenanthrene	1X	0.35	mg/kg	<0.35	07/31/23 16:01
	Acenaphthene	1X	0.35	mg/kg	<0.35	07/31/23 16:01
Other Target PAH Analytes	Acenaphthylene	1X	0.35	mg/kg	<0.35	07/31/23 16:01
	Fluorene	1X	0.35	mg/kg	<0.35	07/31/23 16:01
	Anthracene	1X	0.35	mg/kg	<0.35	07/31/23 16:01
	Fluoranthene	1X	0.35	mg/kg	<0.35	07/31/23 16:01
	Pyrene	1X	0.35	mg/kg	<0.35	07/31/23 16:01
	Benzo(a)anthracene	1X	0.35	mg/kg	<0.35	07/31/23 16:01
	Chrysene	1X	0.35	mg/kg	<0.35	07/31/23 16:01
	Benzo(b)fluoranthene	1X	0.35	mg/kg	<0.35	07/31/23 16:01
	Benzo(k)fluoranthene	1X	0.35	mg/kg	<0.35	07/31/23 16:01
	Benzo(a)pyrene	1X	0.35	mg/kg	<0.35	07/31/23 16:01
	Indeno(1,2,3-cd)pyrene	1X	0.35	mg/kg	<0.35	07/31/23 16:01
	Dibenz(a,h)anthracene	1X	0.35	mg/kg	<0.35	07/31/23 16:01
	Benzo(g,h,i)perylene	1X	0.35	mg/kg	<0.35	07/31/23 16:01
C9-C18 Aliphatic Hydrocarbons [1]		1X	14.3	mg/kg	<14.3	07/31/23 15:33
C19-C36 Aliphatic Hydrocarbons [1]		1X	14.3	mg/kg	<14.3	07/31/23 15:33
C11-C22 Aromatic Hydrocarbons [1,2]		1X	7.17	mg/kg	<7.17	07/31/23 16:01
Chlorooctadecane (Sample Surrogate)				%	67.4	07/31/23 15:33
o-Terphenyl (Sample Surrogate)				%	61.9	07/31/23 16:01
2-Fluorobiphenyl (Fractionation Surrogate)				%	82.5	07/31/23 16:01
2-Bromonaphthalene (Fractionation Surrogate)				%	82.9	07/31/23 16:01
Surrogate Acceptance Range [3]				%	40 - 140	

[1] Hydrocarbon range data excludes area counts of any surrogate(s) and/or internal standards eluting in that range.

[2] C11-C22 Aromatic Hydrocarbons excludes the concentration of Target PAH Analytes.

[3] See the case narrative in cases where a dash (-) is entered in the surrogate recovery block.

Extractable Petroleum Hydrocarbons
Sample: BOH @ 14' Comp (3G26052-04)

SAMPLE INFORMATION

Matrix	Soil
Containers	Satisfactory
Aqueous Preservatives	NA
Temperature	Received on Ice Received at: 4+/-2 C°
Extraction Method	EPA Method 3546

EPH ANALYTICAL RESULTS

Method for Ranges: MADEP EPH 4-1.1		Client ID			BOH @ 14' Comp	
Method for Target Analytes: MADEP EPH 4-1.1		Lab ID			3G26052-04	
EPH Surrogate Standards: Aliphatic: Chlorooctadecane Aromatic: o-Terphenyl		Date Collected			07/24/23	
		Date Received			07/26/23	
		Date Thawed			NA	
		Date Extracted			07/27/23	
EPH Fractionation Surrogates: (1) 2-Fluorobiphenyl (2) 2-Bromonaphthalene		Percent Moisture			3.70	
RANGE/TARGET ANALYTE		Dilution	RL	Units	Result	Analyzed
Unadjusted C11-C22 Aromatic Hydrocarbons [1]		1X	6.88	mg/kg	<6.88	07/31/23 14:38
Diesel PAH Analytes	Naphthalene	1X	0.34	mg/kg	<0.34	07/31/23 14:38
	2-Methylnaphthalene	1X	0.34	mg/kg	<0.34	07/31/23 14:38
	Phenanthrene	1X	0.34	mg/kg	<0.34	07/31/23 14:38
	Acenaphthene	1X	0.34	mg/kg	<0.34	07/31/23 14:38
Other Target PAH Analytes	Acenaphthylene	1X	0.34	mg/kg	<0.34	07/31/23 14:38
	Fluorene	1X	0.34	mg/kg	<0.34	07/31/23 14:38
	Anthracene	1X	0.34	mg/kg	<0.34	07/31/23 14:38
	Fluoranthene	1X	0.34	mg/kg	<0.34	07/31/23 14:38
	Pyrene	1X	0.34	mg/kg	<0.34	07/31/23 14:38
	Benzo(a)anthracene	1X	0.34	mg/kg	<0.34	07/31/23 14:38
	Chrysene	1X	0.34	mg/kg	<0.34	07/31/23 14:38
	Benzo(b)fluoranthene	1X	0.34	mg/kg	<0.34	07/31/23 14:38
	Benzo(k)fluoranthene	1X	0.34	mg/kg	<0.34	07/31/23 14:38
	Benzo(a)pyrene	1X	0.34	mg/kg	<0.34	07/31/23 14:38
	Indeno(1,2,3-cd)pyrene	1X	0.34	mg/kg	<0.34	07/31/23 14:38
	Dibenz(a,h)anthracene	1X	0.34	mg/kg	<0.34	07/31/23 14:38
	Benzo(g,h,i)perylene	1X	0.34	mg/kg	<0.34	07/31/23 14:38
C9-C18 Aliphatic Hydrocarbons [1]		1X	13.7	mg/kg	<13.7	07/31/23 15:57
C19-C36 Aliphatic Hydrocarbons [1]		1X	13.7	mg/kg	<13.7	07/31/23 15:57
C11-C22 Aromatic Hydrocarbons [1,2]		1X	6.88	mg/kg	<6.88	07/31/23 14:38
Chlorooctadecane (Sample Surrogate)				%	70.5	07/31/23 15:57
o-Terphenyl (Sample Surrogate)				%	81.7	07/31/23 14:38
2-Fluorobiphenyl (Fractionation Surrogate)				%	105	07/31/23 14:38
2-Bromonaphthalene (Fractionation Surrogate)				%	103	07/31/23 14:38
Surrogate Acceptance Range [3]				%	40 - 140	

[1] Hydrocarbon range data excludes area counts of any surrogate(s) and/or internal standards eluting in that range.

[2] C11-C22 Aromatic Hydrocarbons excludes the concentration of Target PAH Analytes.

[3] See the case narrative in cases where a dash (-) is entered in the surrogate recovery block.

Quality Control

Volatile Petroleum Hydrocarbons (MADEP-VPH)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B3G1105 - MADEP VPH										
Blank (B3G1105-BLK1)					Prepared & Analyzed: 07/27/23					
Unadjusted C5-C8 Aliphatic Hydrocarbons	ND		5.0	mg/kg						
Unadjusted C9-C12 Aliphatic Hydrocarbons	ND		10.0	mg/kg						
Benzene	ND		0.2	mg/kg						
Ethylbenzene	ND		0.2	mg/kg						
Methyl t-butyl ether (MTBE)	ND		0.05	mg/kg						
Naphthalene	ND		0.5	mg/kg						
Toluene	ND		0.2	mg/kg						
m&p-Xylene	ND		0.5	mg/kg						
o-Xylene	ND		0.5	mg/kg						
Total xylenes	ND		0.5	mg/kg						
C5-C8 Aliphatic Hydrocarbons	ND		5.0	mg/kg						
C9-C12 Aliphatic Hydrocarbons	ND		10.0	mg/kg						
C9-C10 Aromatic Hydrocarbons	ND		5.0	mg/kg						
Surrogate: 2,5- Dibromotoluene-PID			51.4	ug/l	50.0		103	70-130		
Surrogate: 2,5- Dibromotoluene-FID			54.8	ug/l	50.0		110	70-130		
LCS (B3G1105-BS1)					Prepared & Analyzed: 07/27/23					
Benzene	2.5		0.2	mg/kg	2.50		98.5	70-130		
Ethylbenzene	2.3		0.2	mg/kg	2.50		93.9	70-130		
Methyl t-butyl ether (MTBE)	2.5		0.05	mg/kg	2.50		100	70-130		
Naphthalene	2.3		0.5	mg/kg	2.50		92.0	70-130		
Toluene	2.4		0.2	mg/kg	2.50		94.7	70-130		
m&p-Xylene	4.5		0.5	mg/kg	5.00		89.5	70-130		
2-Methylpentane	2.4		250	mg/kg	2.50		97.3	70-130		
n-Nonane	2.0		250	mg/kg	2.50		80.8	70-130		
o-Xylene	2.0		0.5	mg/kg	2.50		80.5	70-130		
Decane	2.3		250	mg/kg	2.50		90.2	70-130		
n-Butylcyclohexane	2.0		250	mg/kg	2.50		81.8	70-130		
n-Pentane	2.5		250	mg/kg	2.50		98.2	70-130		
1,2,4-Trimethylbenzene	2.2		0.5	mg/kg	2.50		89.1	70-130		
VPH_LCS_Aliphatic_C5-C8	7.4		0.5	mg/kg	7.50		98.1	70-130		
VPH_LCS_Aliphatic_C9-C12	4.3		0.5	mg/kg	5.00		86.0	70-130		
2,2,4-Trimethylpentane	2.5		0.2	mg/kg	2.50		98.8	70-130		
VPH_LCS_Aromatic_C9-C10	2.2		0.5	mg/kg	2.50		89.1	70-130		
Surrogate: 2,5- Dibromotoluene-PID			50.4	ug/l	50.0		101	70-130		
Surrogate: 2,5- Dibromotoluene-FID			51.4	ug/l	50.0		103	70-130		

Quality Control
(Continued)

Volatile Petroleum Hydrocarbons (MADEP-VPH) (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B3G1105 - MADEP VPH (Continued)										
LCS Dup (B3G1105-BSD1)					Prepared & Analyzed: 07/27/23					
Benzene	2.5		0.2	mg/kg	2.50		101	70-130	2.37	25
Ethylbenzene	2.4		0.2	mg/kg	2.50		97.4	70-130	3.64	25
Methyl t-butyl ether (MTBE)	2.5		0.05	mg/kg	2.50		100	70-130	0.219	25
Naphthalene	2.4		0.5	mg/kg	2.50		96.7	70-130	4.94	25
Toluene	2.4		0.2	mg/kg	2.50		97.2	70-130	2.65	25
m&p-Xylene	4.7		0.5	mg/kg	5.00		93.2	70-130	4.09	25
2-Methylpentane	2.5		250	mg/kg	2.50		99.1	70-130	1.81	25
n-Nonane	2.0		250	mg/kg	2.50		78.5	70-130	2.96	25
o-Xylene	2.1		0.5	mg/kg	2.50		83.6	70-130	3.75	25
Decane	2.4		250	mg/kg	2.50		94.4	70-130	4.55	25
n-Butylcyclohexane	2.1		250	mg/kg	2.50		84.2	70-130	2.91	25
n-Pentane	2.5		250	mg/kg	2.50		99.4	70-130	1.23	25
1,2,4-Trimethylbenzene	2.3		0.5	mg/kg	2.50		91.6	70-130	2.81	25
VPH_LCS_Aliphatic_C5-C8	7.6		0.5	mg/kg	7.50		101	70-130	2.70	25
VPH_LCS_Aliphatic_C9-C12	4.5		0.5	mg/kg	5.00		89.3	70-130	3.78	25
2,2,4-Trimethylpentane	2.6		0.2	mg/kg	2.50		104	70-130	4.98	25
VPH_LCS_Aromatic_C9-C10	2.3		0.5	mg/kg	2.50		91.6	70-130	2.81	25
Surrogate: 2,5- Dibromotoluene-PID			50.0	ug/l	50.0		99.9	70-130		
Surrogate: 2,5- Dibromotoluene-FID			54.0	ug/l	50.0		108	70-130		

Notes and Definitions

Item	Definition
Wet	Sample results reported on a wet weight basis.
ND	Analyte NOT DETECTED at or above the reporting limit.

59 Greenhill Street
West Warwick, RI 02893

Chain of Custody Record



Project No. K11482		Project Name/Location: Town of Barnstable UST Closure (140 Old Oyster Rd, Cotuit MA)									Tests**													
Client: Bennett Environmental Associates, LLC					Matrix				Preservative		EPH w/ PAHs	VPH w/ BTEX												
Report To: John Tadema-Wielandt jtadema-wielandt@nsuwater.com					Aqueous	Soil	Other	No. of Containers																
Invoice To: Kara Risk - krisk@nsuwater.com; Denise Agans - dagans@nsuwater.com																								
Date Sampled	Time Sampled	Comp	Grab	Sample I.D.																				
7/24/2023	11:05am	X		Feed/Return 2/3 Comp		X		2	•	•	Ice	X	X											
7/24/2023	11:10am	X		Feed/Return 4/5 Comp		X		2	•	•	Ice	X	X											
7/24/2023	1:00pm		X	Vent @ 90 #2		X		2	•	•	Ice	X	X											
7/24/2023	5:45pm	X		BOH @ 14' Comp		X		2	•	•	Ice	X	X											
Sampled By: <i>Jack Fule</i>		Date/Time: 7/25/23 4:00pm	Received By: <i>F. dgc</i>		Date/Time: 7/25/23 4:00pm	Laboratory Remarks:					Special Instructions: 3-Day Rush													
Relinquished By:		Date/Time:	Received By: <i>Jack Fule</i>		Date/Time: 7/26/23 1:50	Temp. Received: 4																		
											Turnaround Time [Business Days]: 3													

John Rader 7/26 1948 [Signature] 7/26 1948

MassDEP Analytical Protocol Certification Form

Laboratory Name: New England Testing Laboratory, Inc.

Project #: K11482

Project Location: Cotuit, MA

RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):
3G26052

Matrices: ☐ Groundwater/Surface Water ☒ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A ☐	7470/7471 Hg CAM III B ☐	MassDEP VPH (GC/PID/FID) CAM IV A ☒	8082 PCB CAM V A ☐	9014 Total Cyanide/PAC CAM VI A ☐	6860 Perchlorate CAM VIII B ☐
8270 SVOC CAM II B ☐	7010 Metals CAM III C ☐	MassDEP VPH (GC/MS) CAM IV C ☐	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
6010 Metals CAM III A ☐	6020 Metals CAM III D ☐	MassDEP EPH CAM IV B ☒	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☒ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☒ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☒ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☒ Yes ☐ No
E	VPH, EPH, APH, and TO-15 only a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☒ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☒ Yes ☐ No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☒ Yes ☐ No ¹
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Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40.1056 (2)(k) and WSC-07-350.

H	Were all QC performance standards specified in the CAM protocol(s) achieved?	☒ Yes ☐ No ¹
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☒ Yes ☐ No ¹

¹All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, is accurate and complete.

Signature: Richard Warila

Position: Laboratory Director

Printed Name: Richard Warila

Date: 8/1/2023

NETLAB Case Number: 3G26052		Feed/Return 2/3 Comp		Feed/Return 4/5 Comp		Vent @ 90 #2		BOH @ 14' Comp			
Lab Sample Number:		3G26052-01		3G26052-02		3G26052-03		3G26052-04			
Date Sampled:		7/24/2023 11:05		7/24/2023 11:10		7/24/2023 13:00		7/24/2023 17:45			
Date Received:		7/26/2023 15:19		7/26/2023 15:19		7/26/2023 15:19		7/26/2023 15:19			
Parameter	CAS Number	Sample Result	Reporting Limit	Sample Result	Reporting Limit	Sample Result	Reporting Limit	Sample Result	Reporting Limit	Units	MassDEP Reportable Concentration S-1
Extractable Petroleum Hydrocarbons (MADEP-EPH)											
Unadjusted C11-C22 Aromatic Hydrocarbons		ND	6.8	ND	6.86	ND	7.17	ND	6.88	mg/kg	
Naphthalene	91-20-3	ND	0.34	ND	0.34	ND	0.35	ND	0.34	mg/kg	4
2-Methylnaphthalene	91-57-6	ND	0.34	ND	0.34	ND	0.35	ND	0.34	mg/kg	0.7
Phenanthrene	85-01-8	ND	0.34	ND	0.34	ND	0.35	ND	0.34	mg/kg	10
Acenaphthene	83-32-9	ND	0.34	ND	0.34	ND	0.35	ND	0.34	mg/kg	4
Acenaphthylene	208-96-8	ND	0.34	ND	0.34	ND	0.35	ND	0.34	mg/kg	1
Fluorene	86-73-7	ND	0.34	ND	0.34	ND	0.35	ND	0.34	mg/kg	1000
Anthracene	120-12-7	ND	0.34	ND	0.34	ND	0.35	ND	0.34	mg/kg	1000
Fluoranthene	206-44-0	ND	0.34	ND	0.34	ND	0.35	ND	0.34	mg/kg	1000
Pyrene	129-00-0	ND	0.34	ND	0.34	ND	0.35	ND	0.34	mg/kg	1000
Benzo(a)anthracene	56-55-3	ND	0.34	ND	0.34	ND	0.35	ND	0.34	mg/kg	7
Chrysene	218-01-9	ND	0.34	ND	0.34	ND	0.35	ND	0.34	mg/kg	70
Benzo(b)fluoranthene	205-99-2	ND	0.34	ND	0.34	ND	0.35	ND	0.34	mg/kg	7
Benzo(k)fluoranthene	207-08-9	ND	0.34	ND	0.34	ND	0.35	ND	0.34	mg/kg	70
Benzo(a)pyrene	50-32-8	ND	0.34	ND	0.34	ND	0.35	ND	0.34	mg/kg	2
Indeno(1,2,3-cd)pyrene	193-39-5	ND	0.34	ND	0.34	ND	0.35	ND	0.34	mg/kg	7
Dibenz(a,h)anthracene	53-70-3	ND	0.34	ND	0.34	ND	0.35	ND	0.34	mg/kg	0.7
Benzo(g,h,i)perylene	191-24-2	ND	0.34	ND	0.34	ND	0.35	ND	0.34	mg/kg	1000
C9-C18 Aliphatic Hydrocarbons	C9-C18-Ali	ND	13.6	ND	13.7	ND	14.3	ND	13.7	mg/kg	1000
C19-C36 Aliphatic Hydrocarbons	C19-C36-Ali	ND	13.6	ND	13.7	ND	14.3	ND	13.7	mg/kg	3000
C11-C22 Aromatic Hydrocarbons	C11-C22-Aro	ND	6.8	ND	6.86	ND	7.17	ND	6.88	mg/kg	1000
Volatile Petroleum Hydrocarbons (MADEP-VPH)											
Unadjusted C5-C8 Aliphatic Hydrocarbons		9.1	5.8	ND	5.8	ND	5.7	ND	5.6	mg/kg	
Unadjusted C9-C12 Aliphatic Hydrocarbons		14.3	11.7	ND	11.6	ND	11.3	ND	11.2	mg/kg	
Benzene	71-43-2	ND	0.3	ND	0.3	ND	0.3	ND	0.3	mg/kg	2
Ethylbenzene	100-41-4	ND	0.3	ND	0.3	ND	0.3	ND	0.3	mg/kg	40
Methyl t-butyl ether (MTBE)	1634-04-4	ND	0.06	ND	0.06	ND	0.06	ND	0.06	mg/kg	0.1
Naphthalene	91-20-3	ND	0.6	ND	0.6	ND	0.6	ND	0.6	mg/kg	4
Toluene	108-88-3	ND	0.3	ND	0.3	ND	0.3	ND	0.3	mg/kg	30
m&p-Xylene	1330-20-7	ND	0.6	ND	0.6	ND	0.6	ND	0.6	mg/kg	see Total xylenes
o-Xylene	95-47-6	ND	0.6	ND	0.6	ND	0.6	ND	0.6	mg/kg	see Total xylenes
Total xylenes	1330-20-7	ND	0.6	ND	0.6	ND	0.6	ND	0.6	mg/kg	100
C5-C8 Aliphatic Hydrocarbons	C5-C8-Ali	9.1	5.8	ND	5.8	ND	5.7	ND	5.6	mg/kg	100
C9-C12 Aliphatic Hydrocarbons	C9-C1-Ali	14.3	11.7	ND	11.6	ND	11.3	ND	11.2	mg/kg	1000
C9-C10 Aromatic Hydrocarbons	C9-C10-Aro	ND	5.8	ND	5.8	ND	5.7	ND	5.6	mg/kg	100



Massachusetts Department of Environmental Protection
Bureau of Air & Waste
Underground Storage Tank (UST) Program
UST1 – Cover Sheet/Certification

Former Cotuit Elementary
UST Facility

UST Facility ID #

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Notes:

- If this is a new facility registration, MassDEP will provide you with a Facility Account Number

- A New Facility must be registered within 30 days of the tank(s) receiving regulated product.

- A New Owner must be registered within 30 days of taking ownership.

Check the appropriate category(s). Complete and attach ONLY the required forms.

Register a New Facility and/or Owner

- ☐ UST2–Owner/Operator & Facility Registration Attached
- ☐ UST3–Financial Responsibility Registration Attached
- ☐ UST4–Tank, Piping & Component Registration Attached

Register a UST System Removal/Closure & Assessment

- ☒ UST 6–UST System Removal/Closure in Place Attached

Update Existing Owner/Operator/Facility Information
(Not a New Owner)

- ☐ UST2–Owner/Operator/Facility Registration Attached

Register a New UST System & Components

- ☐ UST4–Tank, Piping & Component Registration Attached

Update Financial Responsibility Information

- ☐ UST3–Financial Responsibility Registration Attached

Register a Change of Tank Status/Product

- ☐ UST5–Change of Tank Status/Product Attached

Update Existing UST System/Component Information

- ☐ UST4–Tank, Piping & Component Registration Attached

A. Legal Owner Of UST(s)

Town of Barnstable

a. Individual/Entity Name

Mark S. Ells

mark.ells@town.barnstable.ma.us

b. Contact Name

c. Contact Email Address

367 Main St.

d. Address 1 – Note: Enter Mailing Address of the Owner Contact

e. Address 2

Hyannis (Barnstable)

MA

02601

f. City/Town

g. State

h. Zip Code

B. UST Facility Information

Former Cotuit Elementary School / Waldorf School

a. Facility Name

140 Old Oyster Road

b. Address 1 – Note: Enter Physical Street Address (No P.O. Boxes).

c. Address 2

Cotuit (Barnstable)

MA

02635

d. City/Town

e. State

f. Zip Code

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Massachusetts Department of Environmental Protection
Bureau of Air & Waste
Underground Storage Tank (UST) Program
UST1 – Cover Sheet/Certification

Former Cotuit Elementary
UST Facility

UST Facility ID #

Notes:

- The Owner must retain a copy of the registration until the UST system is removed or permanently closed in accordance with 310 CMR 80.43(2) or (3).

- Forms may be scanned and submitted electronically to dep.ust@state.ma.us or mailed to:

MassDEP
UST Program
P.O. Box 120-165
Boston, MA 02112-0165

C. Certification Statement

Important: A new Facility registration and new Owner registration must be certified only by the Owner.
The Owner may designate the Operator to certify updated registration submittals.

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including possible fines and imprisonment."

I am the Facility's ☒ Owner ☒ Operator

Mark S. Ells

1. Print Name

For Town of Barnstable

2. Owner/Operator Entity Name

M.A. S. Ells

3. Signature

09/15/2023

4. Date Signed (MM/DD/YYYY)

5. Source of Signatory Authority (check only one box below):

If a Corporation or Non-Profit Corporation:

- a. ☐ President
- b. ☐ Secretary
- c. ☐ Treasurer
- d. ☐ Vice President (if authorized to bind the corporation)
- e. ☐ Employee of the Corporation (if authorized to bind the corporation)

If a Limited Liability Company (LLC):

- f. ☐ Person authorized to bind the company

If a Partnership:

- g. ☐ General Partner (if authorized to bind the partnership)

If a Sole Proprietorship:

- h. ☐ Proprietor

If a Municipality or Public Agency:

- i. ☒ Principal Executive Officer
- j. ☐ Ranking Elected Official (if authorized to bind the municipality or public agency)

If a Trust:

- k. ☐ Trustee or Other Person authorized to bind the trust



Massachusetts Department of Environmental Protection
Bureau of Air & Waste
Underground Storage Tank (UST) Program
UST6 – System Removal/Closure in Place

Former Cotuit Elementary
UST Facility Name

UST Facility ID #

Important:
When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Notes:

• Make additional copies as needed.

• If you are replacing a removed tank with a new tank in the same location at the facility, you must register the new tank with MassDEP.

• For unregistered tanks, answer the questions in the appropriate sections. There will be no UST Facility Number assigned to tank systems found at unregistered facilities.

Check the appropriate action(s) below. Complete ONLY the appropriate section(s) and submit with the UST1-Cover Sheet/Certification Form.

- | | |
|--|--|
| ☐ UST System Removal/Closure
Sections A.1. & B. | ☐ UST System Permanent Closure in Place
Sections A.2. & B |
| ☒ Removal of Unregistered UST System
Sections A.1., A.3. & B. | ☐ Permanent Closure of Unregistered UST System
Sections A.2., A.3. & B |

A. UST System Removal/Closure

1. UST System Removal				
	Tank #1 Tank ID	Tank ID	Tank ID	Tank ID
a. Date of tank removal:	07/24/23 MM/DD/YYYY	MM/DD/YYYY	MM/DD/YYYY	MM/DD/YYYY
b. Were all regulated substances removed from the tank managed per applicable requirements?	☒ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
c. Was the tank system rendered inert per 310 CMR 80.47?	☒ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
d. Were all openings secured?	☒ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
e. Was all piping removed?	☒ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
f. Capacity of Tank:	10,000 Gallons	Gallons	Gallons	Gallons

2. UST System Permanent Closure in Place				
	Tank ID	Tank ID	Tank ID	Tank ID
a. Date of closure in place:	MM/DD/YYYY	MM/DD/YYYY	MM/DD/YYYY	MM/DD/YYYY
b. Has a registered professional civil or structural engineer determined that the tank cannot be removed without endangering the structural integrity of another UST system, structure, underground piping or underground utilities, per 310 CMR 80.43(3)(a)(1)?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
c. Were all regulated substances removed from the tank managed per applicable requirements?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
d. Was the tank system rendered inert per 310 CMR 80.47?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
e. Was the tank filled with appropriate material (e.g. concrete slurry mix or approved inert material)?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
f. Capacity of Tank:	Gallons	Gallons	Gallons	Gallons



Massachusetts Department of Environmental Protection
Bureau of Air & Waste
Underground Storage Tank (UST) Program
UST6 – System Removal/Closure in Place

Former Cotuit Elementary
UST Facility Name

UST Facility ID #

A. UST Removal/Closure (continued)

Notes:

• Make additional copies as needed.

• Removal/closure of a **consumptive use** tank with a capacity of greater than 1,100 gallons must comply with the requirements of 310 CMR 80.43 & 80.47

3. Removal/Permanent Closure of Unregistered UST System				
	Tank 1	Tank 2	Tank 3	Tank 4
If unregistered, where was this tank located?	-70.44085			
	Longitude	Longitude	Longitude	Longitude
	41.62390			
	Latitude	Latitude	Latitude	Latitude

B. Assessment of Release at Removal or Closure

	Tank #1 Tank ID	Tank ID	Tank ID	Tank ID
Was an assessment conducted in accordance with 310 CMR 80.43(4) within 24 hours of the removal or before the closure in place was completed?	☒ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No