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

REPORT OF ANALYTICAL RESULTS

NETLAB Work Order Number: 1I01020
Client Project: 023-162 - Leicester

Report Date: 09-September-2021

Prepared for:

Cedwyn Morgan
Hydro Environmental Technologies
54 Nonset Path
Acton, MA 01720

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 09/01/21. 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 1I01020. Custody records are included in this report.

Lab ID	Sample	Matrix	Date Sampled	Date Received
1I01020-01	Gym	Air	08/31/2021	09/01/2021

Request for Analysis

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

Gym (Lab Number: 1I01020-01)

Analysis	**Method**
Air-phase Petroleum Hydrocarbons	MADEP APH

Method References

Method for the Determination of Air-Phase Petroleum Hydrocarbons, Rev. 1, Massachusetts Department of Environmental Protection, 2009

Case Narrative

CASE NARRATIVE:

Sample Receipt:

The samples were received in the appropriate containers. The chain of custody was adequately completed and corresponded to the samples submitted.

APH:

All samples were 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 samples were within method specified quality control criteria.

Sample Canister Summary:

Sample ID: Gym
Canister ID 0050
Flow Controller ID #6/ 8 Hours
Flow Controller RPD <20% Yes
Collection Time 8 Hours 4 Minutes
Initial Laboratory Vacuum <-28"Hg
Initial Field Vacuum -26"Hg
Final Field Vacuum -3"Hg
Final Laboratory Vacuum -7.0"Hg

SAMPLE INFORMATION

Sample Type	Grab ■ Time-Integrated: 2 hour 4 hour ■ 8 hour 24 hour Other:
Sample Container	Canister(s) size: ■ 6L Other
Sampling Flow Controller	Mechanical ■ Fixed-Orifice Electronic Other
Sampling Flow Meter	RPD of pre & post-sampling calibration check(s): ■ ≤ 20% >20%

APH ANALYTICAL RESULTS

Internal Standards:
Pentafluorobenzene
1,4 Difluorobenzene
Chlorobenzene-d5

MS Tuning Standard:
Bromofluorobenzene

Client ID	**Gym**
Lab ID	**1I01020-01**
Date Collected	**08/31/21**
Date Received	**09/01/21**
Date Analyzed	**09/03/21**
Pre-sample vacuum (field)	**-26 in. Hg**
Post-sample vacuum (field)	**-3 in. Hg**
Lab Receipt vacuum	**-7.0 in. Hg**
Dilution Factor	1

Target APH Analytes & Hydrocarbon Ranges	**Reporting Limit**		**Sample Results**	
	ug/m³	**ppb v/v**	**ug/m³**	**ppb v/v**
1,3-Butadiene	2.0	0.9	ND	ND
Methyl t-butyl ether (MTBE)	2.0	0.6	ND	ND
Benzene	2.0	0.6	ND	ND
Toluene	2.0	0.5	3.4	0.9
Ethylbenzene	2.0	0.5	ND	ND
m&p-Xylene	2.0	0.5	3.5	0.8
o-Xylene	2.0	0.5	ND	ND
Total xylenes	2.0	0.5	3.5	0.8
Naphthalene	0.63	0.1	ND	ND
C5-C8 Aliphatic Hydrocarbons [1, 2]	12.0	NA	460	NA
C9-C12 Aliphatic Hydrocarbons [1, 3]	12.0	NA	420	NA
C9-C10 Aromatic Hydrocarbons	10.0	NA	ND	NA

1: Hydrocarbon range data from total ion chromatogram excluding any internal/tuning standards eluting in that range
2: C5-C8 aliphatic hydrocarbons exclude the concentration of Target APH Analytes eluting in that range
3: C9-C12 aliphatic hydrocarbons exclude concentration of Target APH Analytes eluting in that range AND concentration of C9-C10 aromatic hydrocarbons
Abbreviations: ND=*Not Detected*, NA=*Not applicable*, NP=*Not Provided*

CERTIFICATION

Were all QA/QC procedures REQUIRED by the APH Method followed?	■ Yes	No - Details Attached
Were all performance/acceptance standards for required QA/QC procedures achieved?	■ Yes	No - Details Attached
Were any significant modifications made to the APH method, as specified in Sect 11.1.2	■ No	Yes - Details Attached

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

Signature: 

Position: Laboratory Director

Printed Name: Richard Warila

Date: 09/09/21

Quality Control

Air-Phase Petroleum Hydrocarbons (MADEP-APH)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B1I0139 - MADEP-APH-Preparation										
Blank (B1I0139-BLK1)					Prepared & Analyzed: 09/03/21					
1,3-Butadiene	ND		0.9	ppb (v/v)						
Methyl t-butyl ether (MTBE)	ND		0.6	ppb (v/v)						
Benzene	ND		0.6	ppb (v/v)						
Toluene	ND		0.5	ppb (v/v)						
Ethylbenzene	ND		0.5	ppb (v/v)						
m&p-Xylene	ND		0.5	ppb (v/v)						
o-Xylene	ND		0.5	ppb (v/v)						
Total xylenes	ND		0.5	ppb (v/v)						
Naphthalene	ND		0.1	ppb (v/v)						
C5-C8 Aliphatic Hydrocarbons	ND		12.0	ppb (v/v)						
C9-C12 Aliphatic Hydrocarbons	ND		12.0	ppb (v/v)						
C9-C10 Aromatic Hydrocarbons	ND		10.0	ppb (v/v)						
LCS (B1I0139-BS1)					Prepared & Analyzed: 09/03/21					
1,3-Butadiene	14.8			ppb (v/v)	13.2		112	70-130		
Methyl t-butyl ether (MTBE)	13.9			ppb (v/v)	13.2		106	70-130		
Benzene	12.9			ppb (v/v)	13.2		97.6	70-130		
Toluene	11.9			ppb (v/v)	13.2		90.4	70-130		
Ethylbenzene	13.9			ppb (v/v)	13.2		105	70-130		
m&p-Xylene	31.0			ppb (v/v)	26.4		117	70-130		
o-Xylene	14.9			ppb (v/v)	13.2		113	70-130		
Naphthalene	15.2			ppb (v/v)	13.2		115	50-150		

Notes and Definitions

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

NEW ENGLAND TESTING LABORATORY, INC.
59 Greenhill Street
West Warwick, RI 02893
1-888-863-8522

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CHAIN OF CUSTODY RECORD

PROJ. NO	PROJECT NAME/LOCATION
023-162	Leicester, MA

CLIENT: HETI
REPORT TO: cmorgan@hetiservices.com
INVOICE TO: jmcneil@hetiservices.com

DATE	TIME	COMP	GRAB	SAMPLE I.D.	AQUEOUS	SOIL	OTHER	NO. OF CONTAINERS	PRESERVATIVE	TESTS** APH	REMARKS
8/31/21	4:06 PM	X		GYM			X	1 summa		X	start time: 8:02 AM start pressure: -26 in. Hg end time: 4:06 PM end pressure: -3 in. Hg

Sampled by (Signature)	Date/Time	Received by (Signature)	Date/Time
Lisa Luchford	8/31/21 5:06 PM	HETI Storage	8/31/21 5:06 PM
Relinquished by (Signature)	Date/Time	Received by (Signature)	Date/Time
		B Parker	9/1/21 1140
Relinquished by: (Signature)	Date/Time	Received for Laboratory by (Signature)	Date/Time
B Parker	9/1/21 1420		9/1/21 1420

Laboratory Remarks:
Temp. received: _____
Cooled ☐

Special Instructions:
List Specific Detection Limit Requirements:

R

Turnaround (Business Days)_____

**Netlab subcontracts the following tests: Radiologicals, Radon, Asbestos, UCMRs, Perchlorate, Bromate, Bromide, Sieve, Salmonella, Carbamates, CT ETPH

MassDEP Analytical Protocol Certification Form

Laboratory Name: New England Testing Laboratory, Inc. Project #: 023-162

Project Location: Leicester, MA RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s): 1I01020

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]

***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]

[1] *All 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: _____ **Position:** Laboratory Director

Printed Name: Richard Warila **Date**: 9/9/2021