



ANALYTICAL REPORT

Lab Number:	L2307415
Client:	White Water Inc. 41 Central St Auburn, MA 01501
ATTN:	Robert Wittenzellner
Phone:	(508) 888-3540
Project Name:	REGION 18 SCHOOLS
Project Number:	Not Specified
Report Date:	02/14/23

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Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: REGION 18 SCHOOLS
Project Number: Not Specified

Lab Number: L2307415
Report Date: 02/14/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2307415-01	P.O.E.	WATER	Not Specified	02/10/23 09:00	02/10/23

Project Name: REGION 18 SCHOOLS
Project Number: Not Specified

Lab Number: L2307415
Report Date: 02/14/23

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: REGION 18 SCHOOLS
Project Number: Not Specified

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Case Narrative (continued)

Volatile Organics by Method 524.2

L2307415-01: The required Trip Blank for EPA Method 524.2 was not submitted with the sample upon return to the laboratory. It could not be determined if analytes detected were the result of exposure to contaminants during trip from laboratory to field and back to the laboratory. Analytes detected in this sample are to be considered qualified.

Semivolatile Organics by SIM

L2307415-01, WG1743458-1, and WG1743458-2/-3: The initial calibration utilized a quadratic fit for Benzo(a)anthracene.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Melissa Sturgis

Title: Technical Director/Representative

Date: 02/14/23

ORGANICS

VOLATILES

Project Name: REGION 18 SCHOOLS
Project Number: Not Specified

Lab Number: L2307415
Report Date: 02/14/23

SAMPLE RESULTS

Lab ID: L2307415-01
 Client ID: P.O.E.
 Sample Location: Not Specified

Date Collected: 02/10/23 09:00
 Date Received: 02/10/23
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 16,524.2
 Analytical Date: 02/13/23 13:46
 Analyst: GMT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	0.50	--	1
Chloromethane	ND		ug/l	0.50	--	1
Vinyl chloride	ND		ug/l	0.50	--	1
Bromomethane	ND		ug/l	0.50	--	1
Chloroethane	ND		ug/l	0.50	--	1
Trichlorofluoromethane	ND		ug/l	0.50	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
Methylene chloride	ND		ug/l	0.50	--	1
Methyl tert butyl ether	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	0.50	--	1
1,1-Dichloroethane	ND		ug/l	0.50	--	1
2,2-Dichloropropane	ND		ug/l	0.50	--	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	--	1
Chloroform	1.0		ug/l	0.50	--	1
Bromochloromethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	0.50	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Trichloroethene	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	0.50	--	1
Bromodichloromethane	2.0		ug/l	0.50	--	1
Dibromomethane	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	0.50	--	1

Project Name: REGION 18 SCHOOLS**Lab Number:** L2307415**Project Number:** Not Specified**Report Date:** 02/14/23**SAMPLE RESULTS**

Lab ID: L2307415-01

Date Collected: 02/10/23 09:00

Client ID: P.O.E.

Date Received: 02/10/23

Sample Location: Not Specified

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichloropropane	ND		ug/l	0.50	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1
Dibromochloromethane	2.0		ug/l	0.50	--	1
1,2-Dibromoethane	ND		ug/l	0.50	--	1
Chlorobenzene	ND		ug/l	0.50	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Ethylbenzene	ND		ug/l	0.50	--	1
p/m-Xylene	ND		ug/l	0.50	--	1
o-Xylene	ND		ug/l	0.50	--	1
Styrene	ND		ug/l	0.50	--	1
Isopropylbenzene	ND		ug/l	0.50	--	1
Bromoform	0.67		ug/l	0.50	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Xylenes, Total ¹	ND		ug/l	0.50	--	1
1,2,3-Trichloropropane	ND		ug/l	0.50	--	1
n-Propylbenzene	ND		ug/l	0.50	--	1
Bromobenzene	ND		ug/l	0.50	--	1
1,3,5-Trimethylbenzene	ND		ug/l	0.50	--	1
o-Chlorotoluene	ND		ug/l	0.50	--	1
p-Chlorotoluene	ND		ug/l	0.50	--	1
tert-Butylbenzene	ND		ug/l	0.50	--	1
1,2,4-Trimethylbenzene	ND		ug/l	0.50	--	1
sec-Butylbenzene	ND		ug/l	0.50	--	1
p-Isopropyltoluene	ND		ug/l	0.50	--	1
1,3-Dichlorobenzene	ND		ug/l	0.50	--	1
1,4-Dichlorobenzene	ND		ug/l	0.50	--	1
n-Butylbenzene	ND		ug/l	0.50	--	1
1,2-Dichlorobenzene	ND		ug/l	0.50	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	0.50	--	1
1,2,4-Trichlorobenzene	ND		ug/l	0.50	--	1
Hexachlorobutadiene	ND		ug/l	0.50	--	1
Naphthalene	ND		ug/l	0.50	--	1
1,2,3-Trichlorobenzene	ND		ug/l	0.50	--	1

Project Name: REGION 18 SCHOOLS
Project Number: Not Specified

Lab Number: L2307415
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SAMPLE RESULTS

Lab ID: L2307415-01
 Client ID: P.O.E.
 Sample Location: Not Specified

Date Collected: 02/10/23 09:00
 Date Received: 02/10/23
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichlorobenzene-d4	107		80-120
4-Bromofluorobenzene	96		80-120

Project Name: REGION 18 SCHOOLS
Project Number: Not Specified

Lab Number: L2307415
Report Date: 02/14/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 16,524.2
Analytical Date: 02/13/23 11:52
Analyst: GMT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1744297-4					
Dichlorodifluoromethane	ND		ug/l	0.50	--
Chloromethane	ND		ug/l	0.50	--
Vinyl chloride	ND		ug/l	0.50	--
Bromomethane	ND		ug/l	0.50	--
Chloroethane	ND		ug/l	0.50	--
Trichlorofluoromethane	ND		ug/l	0.50	--
1,1-Dichloroethene	ND		ug/l	0.50	--
Methylene chloride	ND		ug/l	0.50	--
Methyl tert butyl ether	ND		ug/l	0.50	--
trans-1,2-Dichloroethene	ND		ug/l	0.50	--
1,1-Dichloroethane	ND		ug/l	0.50	--
2,2-Dichloropropane	ND		ug/l	0.50	--
cis-1,2-Dichloroethene	ND		ug/l	0.50	--
Chloroform	ND		ug/l	0.50	--
Bromochloromethane	ND		ug/l	0.50	--
1,1,1-Trichloroethane	ND		ug/l	0.50	--
1,1-Dichloropropene	ND		ug/l	0.50	--
Carbon tetrachloride	ND		ug/l	0.50	--
1,2-Dichloroethane	ND		ug/l	0.50	--
Benzene	ND		ug/l	0.50	--
Trichloroethene	ND		ug/l	0.50	--
1,2-Dichloropropane	ND		ug/l	0.50	--
Bromodichloromethane	ND		ug/l	0.50	--
Dibromomethane	ND		ug/l	0.50	--
cis-1,3-Dichloropropene	ND		ug/l	0.50	--
Toluene	ND		ug/l	0.50	--
trans-1,3-Dichloropropene	ND		ug/l	0.50	--
1,1,2-Trichloroethane	ND		ug/l	0.50	--
1,3-Dichloropropane	ND		ug/l	0.50	--

Project Name: REGION 18 SCHOOLS
Project Number: Not Specified

Lab Number: L2307415
Report Date: 02/14/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 16,524.2
Analytical Date: 02/13/23 11:52
Analyst: GMT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1744297-4					
Tetrachloroethene	ND		ug/l	0.50	--
Dibromochloromethane	ND		ug/l	0.50	--
1,2-Dibromoethane	ND		ug/l	0.50	--
Chlorobenzene	ND		ug/l	0.50	--
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	--
Ethylbenzene	ND		ug/l	0.50	--
p/m-Xylene	ND		ug/l	0.50	--
o-Xylene	ND		ug/l	0.50	--
Styrene	ND		ug/l	0.50	--
Isopropylbenzene	ND		ug/l	0.50	--
Bromoform	ND		ug/l	0.50	--
Xylenes, Total ¹	ND		ug/l	0.50	--
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--
1,2,3-Trichloropropane	ND		ug/l	0.50	--
n-Propylbenzene	ND		ug/l	0.50	--
Bromobenzene	ND		ug/l	0.50	--
1,3,5-Trimethylbenzene	ND		ug/l	0.50	--
o-Chlorotoluene	ND		ug/l	0.50	--
p-Chlorotoluene	ND		ug/l	0.50	--
tert-Butylbenzene	ND		ug/l	0.50	--
1,2,4-Trimethylbenzene	ND		ug/l	0.50	--
sec-Butylbenzene	ND		ug/l	0.50	--
p-Isopropyltoluene	ND		ug/l	0.50	--
1,3-Dichlorobenzene	ND		ug/l	0.50	--
1,4-Dichlorobenzene	ND		ug/l	0.50	--
n-Butylbenzene	ND		ug/l	0.50	--
1,2-Dichlorobenzene	ND		ug/l	0.50	--
1,2-Dibromo-3-chloropropane	ND		ug/l	0.50	--
1,2,4-Trichlorobenzene	ND		ug/l	0.50	--

Project Name: REGION 18 SCHOOLS
Project Number: Not Specified

Lab Number: L2307415
Report Date: 02/14/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 16,524.2
Analytical Date: 02/13/23 11:52
Analyst: GMT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1744297-4					
Hexachlorobutadiene	ND		ug/l	0.50	--
Naphthalene	ND		ug/l	0.50	--
1,2,3-Trichlorobenzene	ND		ug/l	0.50	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichlorobenzene-d4	107		80-120
4-Bromofluorobenzene	101		80-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: REGION 18 SCHOOLS

Lab Number: L2307415

Project Number: Not Specified

Report Date: 02/14/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1744297-3								
Dichlorodifluoromethane	115		-		70-130	-		20
Chloromethane	102		-		70-130	-		20
Vinyl chloride	88		-		70-130	-		20
Bromomethane	70		-		70-130	-		20
Chloroethane	90		-		70-130	-		20
Trichlorofluoromethane	75		-		70-130	-		20
1,1-Dichloroethene	78		-		70-130	-		20
Methylene chloride	95		-		70-130	-		20
Methyl tert butyl ether	92		-		70-130	-		20
trans-1,2-Dichloroethene	105		-		70-130	-		20
1,1-Dichloroethane	112		-		70-130	-		20
2,2-Dichloropropane	100		-		70-130	-		20
cis-1,2-Dichloroethene	108		-		70-130	-		20
Chloroform	108		-		70-130	-		20
Bromochloromethane	112		-		70-130	-		20
1,1,1-Trichloroethane	98		-		70-130	-		20
1,1-Dichloropropene	100		-		70-130	-		20
Carbon tetrachloride	98		-		70-130	-		20
1,2-Dichloroethane	105		-		70-130	-		20
Benzene	105		-		70-130	-		20
Trichloroethene	100		-		70-130	-		20
1,2-Dichloropropane	100		-		70-130	-		20
Bromodichloromethane	100		-		70-130	-		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: REGION 18 SCHOOLS

Lab Number: L2307415

Project Number: Not Specified

Report Date: 02/14/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1744297-3								
Dibromomethane	108		-		70-130	-		20
cis-1,3-Dichloropropene	95		-		70-130	-		20
Toluene	100		-		70-130	-		20
trans-1,3-Dichloropropene	92		-		70-130	-		20
1,1,2-Trichloroethane	102		-		70-130	-		20
1,3-Dichloropropane	102		-		70-130	-		20
Tetrachloroethene	102		-		70-130	-		20
Dibromochloromethane	95		-		70-130	-		20
1,2-Dibromoethane	98		-		70-130	-		20
Chlorobenzene	102		-		70-130	-		20
1,1,1,2-Tetrachloroethane	98		-		70-130	-		20
Ethylbenzene	100		-		70-130	-		20
p/m-Xylene	102		-		70-130	-		20
o-Xylene	100		-		70-130	-		20
Styrene	102		-		70-130	-		20
Isopropylbenzene	100		-		70-130	-		20
Bromoform	98		-		70-130	-		20
1,1,2,2-Tetrachloroethane	108		-		70-130	-		20
1,2,3-Trichloropropane	110		-		70-130	-		20
n-Propylbenzene	100		-		70-130	-		20
Bromobenzene	102		-		70-130	-		20
1,3,5-Trimethylbenzene	100		-		70-130	-		20
o-Chlorotoluene	105		-		70-130	-		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: REGION 18 SCHOOLS

Lab Number: L2307415

Project Number: Not Specified

Report Date: 02/14/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1744297-3								
p-Chlorotoluene	105		-		70-130	-		20
tert-Butylbenzene	102		-		70-130	-		20
1,2,4-Trimethylbenzene	102		-		70-130	-		20
sec-Butylbenzene	100		-		70-130	-		20
p-Isopropyltoluene	100		-		70-130	-		20
1,3-Dichlorobenzene	102		-		70-130	-		20
1,4-Dichlorobenzene	95		-		70-130	-		20
n-Butylbenzene	98		-		70-130	-		20
1,2-Dichlorobenzene	95		-		70-130	-		20
1,2-Dibromo-3-chloropropane	100		-		70-130	-		20
1,2,4-Trichlorobenzene	90		-		70-130	-		20
Hexachlorobutadiene	95		-		70-130	-		20
Naphthalene	92		-		70-130	-		20
1,2,3-Trichlorobenzene	95		-		70-130	-		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichlorobenzene-d4	105				80-120
4-Bromofluorobenzene	102				80-120

Matrix Spike Analysis

Batch Quality Control

Project Name: REGION 18 SCHOOLS

Lab Number: L2307415

Project Number: Not Specified

Report Date: 02/14/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1744297-6 QC Sample: L2307213-01 Client ID: MS Sample												
Chloroform	0.95	4	5.6	116		-	-		70-130	-		20
Bromodichloromethane	1.4	4	5.9	113		-	-		70-130	-		20
Dibromochloromethane	1.9	4	6.5	115		-	-		70-130	-		20
Bromoform	1.0	4	5.3	108		-	-		70-130	-		20

Surrogate	MS % Recovery	Qualifier	MSD % Recovery	Qualifier	Acceptance Criteria
1,2-Dichlorobenzene-d4	104				80-120
4-Bromofluorobenzene	104				80-120

Lab Duplicate Analysis

Batch Quality Control

Project Name: REGION 18 SCHOOLS

Project Number: Not Specified

Lab Number: L2307415

Report Date: 02/14/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1744297-5 QC Sample: L2307213-02 Client ID: DUP Sample						
Chloroform	ND	ND	ug/l	NC		20
Bromodichloromethane	0.82	0.85	ug/l	4		20
Dibromochloromethane	0.73	0.78	ug/l	7		20
Bromoform	ND	ND	ug/l	NC		20
Trihalomethanes, Total	1.6	1.6	ug/l	200		20

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichlorobenzene-d4	106		105		80-120
4-Bromofluorobenzene	100		97		80-120

SEMIVOLATILES

Project Name: REGION 18 SCHOOLS
Project Number: Not Specified

Lab Number: L2307415
Report Date: 02/14/23

SAMPLE RESULTS

Lab ID: L2307415-01
 Client ID: P.O.E.
 Sample Location: Not Specified

Date Collected: 02/10/23 09:00
 Date Received: 02/10/23
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 79,8270E-SIM
 Analytical Date: 02/12/23 13:04
 Analyst: JJW

Extraction Method: EPA 3510C
 Extraction Date: 02/11/23 11:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
CT RCP PAHs by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	--	1
Fluoranthene	ND		ug/l	0.10	--	1
Naphthalene	ND		ug/l	0.10	--	1
Benzo(a)anthracene	ND		ug/l	0.05	--	1
Benzo(a)pyrene	ND		ug/l	0.10	--	1
Benzo(b)fluoranthene	ND		ug/l	0.05	--	1
Benzo(k)fluoranthene	ND		ug/l	0.10	--	1
Chrysene	ND		ug/l	0.10	--	1
Acenaphthylene	ND		ug/l	0.10	--	1
Anthracene	ND		ug/l	0.10	--	1
Benzo(ghi)perylene	ND		ug/l	0.10	--	1
Fluorene	ND		ug/l	0.10	--	1
Phenanthrene	ND		ug/l	0.05	--	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	--	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	--	1
Pyrene	ND		ug/l	0.10	--	1
2-Methylnaphthalene	ND		ug/l	0.10	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	86		30-130
2-Fluorobiphenyl	74		30-130
4-Terphenyl-d14	82		30-130

Project Name: REGION 18 SCHOOLS
Project Number: Not Specified

Lab Number: L2307415
Report Date: 02/14/23

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 79,8270E-SIM
Analytical Date: 02/12/23 12:48
Analyst: JJW

Extraction Method: EPA 3510C
Extraction Date: 02/11/23 11:50

Parameter	Result	Qualifier	Units	RL	MDL
CT RCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 01 Batch: WG1743458-1					
Acenaphthene	ND		ug/l	0.10	--
Fluoranthene	ND		ug/l	0.10	--
Naphthalene	ND		ug/l	0.10	--
Benzo(a)anthracene	ND		ug/l	0.05	--
Benzo(a)pyrene	ND		ug/l	0.10	--
Benzo(b)fluoranthene	ND		ug/l	0.05	--
Benzo(k)fluoranthene	ND		ug/l	0.10	--
Chrysene	ND		ug/l	0.10	--
Acenaphthylene	ND		ug/l	0.10	--
Anthracene	ND		ug/l	0.10	--
Benzo(ghi)perylene	ND		ug/l	0.10	--
Fluorene	ND		ug/l	0.10	--
Phenanthrene	ND		ug/l	0.05	--
Dibenzo(a,h)anthracene	ND		ug/l	0.10	--
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	--
Pyrene	ND		ug/l	0.10	--
2-Methylnaphthalene	ND		ug/l	0.10	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	83		30-130
2-Fluorobiphenyl	72		30-130
4-Terphenyl-d14	83		30-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: REGION 18 SCHOOLS

Lab Number: L2307415

Project Number: Not Specified

Report Date: 02/14/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
CT RCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 01 Batch: WG1743458-2 WG1743458-3								
Acenaphthene	69		59		40-140	16		20
Fluoranthene	83		70		40-140	17		20
Naphthalene	67		59		40-140	13		20
Benzo(a)anthracene	80		71		40-140	12		20
Benzo(a)pyrene	86		74		40-140	15		20
Benzo(b)fluoranthene	82		70		40-140	16		20
Benzo(k)fluoranthene	79		68		40-140	15		20
Chrysene	75		63		40-140	17		20
Acenaphthylene	86		74		40-140	15		20
Anthracene	80		68		40-140	16		20
Benzo(ghi)perylene	82		72		40-140	13		20
Fluorene	76		65		40-140	16		20
Phenanthrene	71		62		40-140	14		20
Dibenzo(a,h)anthracene	90		78		40-140	14		20
Indeno(1,2,3-cd)pyrene	96		84		40-140	13		20
Pyrene	82		70		40-140	16		20
2-Methylnaphthalene	72		62		40-140	15		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: REGION 18 SCHOOLS

Lab Number: L2307415

Project Number: Not Specified

Report Date: 02/14/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
CT RCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 01 Batch: WG1743458-2 WG1743458-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Nitrobenzene-d5	87		74		30-130
2-Fluorobiphenyl	72		62		30-130
4-Terphenyl-d14	84		71		30-130

PETROLEUM HYDROCARBONS

Project Name: REGION 18 SCHOOLS
Project Number: Not Specified

Lab Number: L2307415
Report Date: 02/14/23

SAMPLE RESULTS

Lab ID: L2307415-01
 Client ID: P.O.E.
 Sample Location: Not Specified

Date Collected: 02/10/23 09:00
 Date Received: 02/10/23
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 11,3-99
 Analytical Date: 02/13/23 13:46
 Analyst: SR

Extraction Method: EPA 3510C
 Extraction Date: 02/11/23 20:40

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Extractable Petroleum Hydrocarbons - Westborough Lab						
ETPH-CT	ND		ug/l	200	--	1
Surrogate			% Recovery	Qualifier	Acceptance Criteria	
o-Terphenyl			75		50-150	

Project Name: REGION 18 SCHOOLS
Project Number: Not Specified

Lab Number: L2307415
Report Date: 02/14/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 11,3-99
Analytical Date: 02/13/23 09:39
Analyst: SR

Extraction Method: EPA 3510C
Extraction Date: 02/11/23 19:07

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01 Batch: WG1743512-1					
ETPH-CT	ND		ug/l	200	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	80		50-150

Lab Control Sample Analysis Batch Quality Control

Project Name: REGION 18 SCHOOLS
Project Number: Not Specified

Lab Number: L2307415
Report Date: 02/14/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01 Batch: WG1743512-2								
ETPH-CT	61		-		60-120	-		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
o-Terphenyl	61				50-150

Project Name: REGION 18 SCHOOLS**Lab Number:** L2307415**Project Number:** Not Specified**Report Date:** 02/14/23**Sample Receipt and Container Information**

Were project specific reporting limits specified?

NO

Cooler Information**Cooler** **Custody Seal**

A Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2307415-01A	Vial Ascorbic Acid/HCl preserved	A	NA		5.8	Y	Absent		524.2(14)
L2307415-01B	Vial Ascorbic Acid/HCl preserved	A	NA		5.8	Y	Absent		524.2(14)
L2307415-01C	Amber 250ml unpreserved	A	7	7	5.8	Y	Absent		CT-PAHSIM-LVI(7)
L2307415-01D	Amber 250ml unpreserved	A	7	7	5.8	Y	Absent		CT-PAHSIM-LVI(7)
L2307415-01E	Amber 1000ml unpreserved	A	7	7	5.8	Y	Absent		ETPH(7)
L2307415-01F	Amber 1000ml unpreserved	A	7	7	5.8	Y	Absent		ETPH(7)

Project Name: REGION 18 SCHOOLS
Project Number: Not Specified

Lab Number: L2307415
Report Date: 02/14/23

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report



Project Name: REGION 18 SCHOOLS
Project Number: Not Specified

Lab Number: L2307415
Report Date: 02/14/23

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

Report Format: Data Usability Report



Project Name: REGION 18 SCHOOLS**Lab Number:** L2307415**Project Number:** Not Specified**Report Date:** 02/14/23**Data Qualifiers**

- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: REGION 18 SCHOOLS
Project Number: Not Specified

Lab Number: L2307415
Report Date: 02/14/23

REFERENCES

- 11 Analysis of Extractable Petroleum Hydrocarbons (ETPH) Using Methylene Chloride Gas Chromatograph/Flame Ionization Detection. Environmental Research Institute, University of Connecticut. March 1999.
- 16 Methods for the Determination of Organic Compounds in Drinking Water - Supplement II. EPA/600/R-92/129, August 1992.
- 79 Connecticut DEP Quality Assurance and Quality Control Requirements for SW-846 Methods. CTDEP Reasonable Confidence Protocols (RCPs). Versions 2.0 and 3.0, July and December 2006.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility

EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene

EPA 625/625.1: alpha-Terpineol

EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D/8270E: NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.

Mansfield Facility

SM 2540D: TSS

EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,**

EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B

EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.**

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1:**

Ammonia-N, **LCHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,**

SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.

EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.**

EPA 522, EPA 537.1.

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

EPA 245.1 Hg.

SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

ETPH Mass Discrimination Check Form

Instrument ID: Petro 20
Lab File Path: I:\PETRO\Petro20\230213\
Lab File ID: P2023021302.D
Injection date: 2/13/2023 8:19

	RF	%D
ETPH (C9-C36)	27.47	-
Nonane	28.04	2.07
Decane	27.46	-0.04
Dodecane	27.98	1.84
Tetradecane	26.87	-2.20
Hexadecane	28.52	3.82
Octadecane	28.10	2.26
Eicosane	28.68	4.40
Docosane	27.79	1.15
Tetracosane	27.76	1.05
Hexacosane	27.61	0.50
Octacosane	27.35	-0.45
triacontane	27.01	-1.69
Dotriacontane	27.10	-1.37
Tetratriacontane	26.68	-2.89
Hexatriacontane	25.14	-8.48

Associated Samples: wg1743512-2
wg1743512-1
wg1743512-3
wg1743512-4
I2200080-07
I2307415-01