Summit
Environmental Consultants, Inc

PN: 10390.001

December 19, 2014

Mr. Paul MacQuinn
Harold MacQuinn, Inc.
P.O. Box 789
Ellsworth, ME 04605

Re: Groundwater Sampling – Higgins and Kittridge Gravel Pits

Dear Mr. MacQuinn:

Summit Environmental Consultants (Summit) completed groundwater sampling at the Higgins and Kittridge gravel pits owned by Harold MacQuinn, Inc. Site Plans depicting the pits, monitoring well locations and ground water contours based on December 2014 data are attached. The scope of work included collecting groundwater samples from 3 wells at the Kittridge Pit and 3 wells at the Higgins Pit for analysis of Volatile Petroleum Hydrocarbons (VPH), Extractable Petroleum Hydrocarbons (EPH), iron, and manganese as required by the by the Lamoine Gravel Ordinance. Note that due to low ground water table elevations, well OW-1 in the Kittridge Pit was dry during 2 visits in December.

GROUNDWATER SAMPLING

Sample Collection

On December 4 and 8, 2014, Summit collected groundwater samples from the following locations and monitoring wells:

- Kittridge Pit – OW-2 and MW-4
- Higgins Pit – OW-1, OW-3 and OW-4

Depending on depth to water, a peristaltic pump or PVC bailer was used to purge water from the well and collect a sample for laboratory analysis. During purging, field parameters including temperature, pH, conductivity, dissolved oxygen and turbidity were measured using a Hanna HI8929 field portable water quality instrument and recorded on a groundwater sampling log. These parameters were monitored until they were determined to be stable. After the parameters stabilized, groundwater samples were collected in laboratory provided containers.

After collection, the samples were placed on wet ice and delivered to Maine Environmental Laboratory in Yarmouth, Maine under chain of custody protocol for analysis of Volatile Petroleum Hydrocarbons (VPH), Extractable Petroleum Hydrocarbons (EPH), iron, and manganese. All samples were received by the laboratory in acceptable condition within the appropriate holding times.

Analytical Results

EPH and VPH compounds were not detected in any of the groundwater samples collected during the December 2014 sampling events. Iron and manganese concentrations reported by the laboratory are considered consistent with background conditions. Table 1 summarizes current and historical analytical results and field parameters. The laboratory analytical reports and Field Sampling Data Sheets are included as Attachment A.

If you have any questions regarding this letter report, please feel free to contact us at (207) 795-6009.

Sincerely;
Summit Environmental Consultants

Michael A. Deyling, CG, PHg
Senior Project Manager

STATE OF MAINE
MICHAEL DEYLING
No. 270
CERTIFIED GEOLOGIST

MAD/WEH/jna

Enc.

TABLE 1

Table 1: Groundwater Analaytical Summary

		Laboratory Analytical Results				Field Sampling Parameters					
		Iron (mg/L)	Manganese (mg/L)	All EPH Compounds (µg/L)	All VPH Compounds (µg/L)	Temperature (°C)	pH	Specific Conductivity (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbudity (NTU)
Location	Date										
OW-1 KITRIDGE	05/07/14	0.03 J	ND	ND	ND	8.83	8.07	161	12.18	188.2	5
	12/04/14	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
OW-2 Kittridge	05/07/14	0.10	ND	ND	ND	10.82	7.60	111	10.42	198.5	11.8
	12/08/14	0.02J	0.02J	ND	ND	6.30	6.13	138	6-8	--	115.0
MW-4 KITRIDGE	05/29/14	0.25	0.04 J	ND	ND	19.70	5.90	552	7.70	--	938
	12/08/14	0.11	ND	ND	ND	6.10	5.48	40	6-8	--	>999
OW1 Higgins	05/07/14	0.42	0.02 J	ND	ND	8.40	6.45	19	11.30	186.0	8
	12/04/14	0.38	0.02J	ND	ND	7.50	5.90	26	6-8	-	7
OW-3 Higgins	05/07/14	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
	12/04/14	0.47	0.1400	ND	ND	4.20	5.95	90	6-8	-	>999
OW-4 Higgins	05/07/14	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
	12/04/14	ND	0.06	ND	ND	4.40	5.83	141	4-5	-	528

Notes:

ND - Not detected above the laboratory detection limit

J - Estimated concentration below laboratory detection limit

NS = Not Sampled - well was dry

NI = Not Installed - wells installed in November 2014

FIGURES

HIGGINS PIT

GPS Coordinates for Proposed Gravel Operations 2013–2016 (Section 7.4.a.)

westerly of MacQuinn Road

POINT	NORTHING	EASTING
1	310897.9941	1000133.5693
2	310988.6954	1000537.3978
3	310937.9338	1000707.6118
4	310165.0413	1000975.0610
5	310071.6496	1000936.5768
6	310099.7980	1000143.1483
7	310979.3487	1000188.9973

Bearing–distance westerly of MacQuinn Road

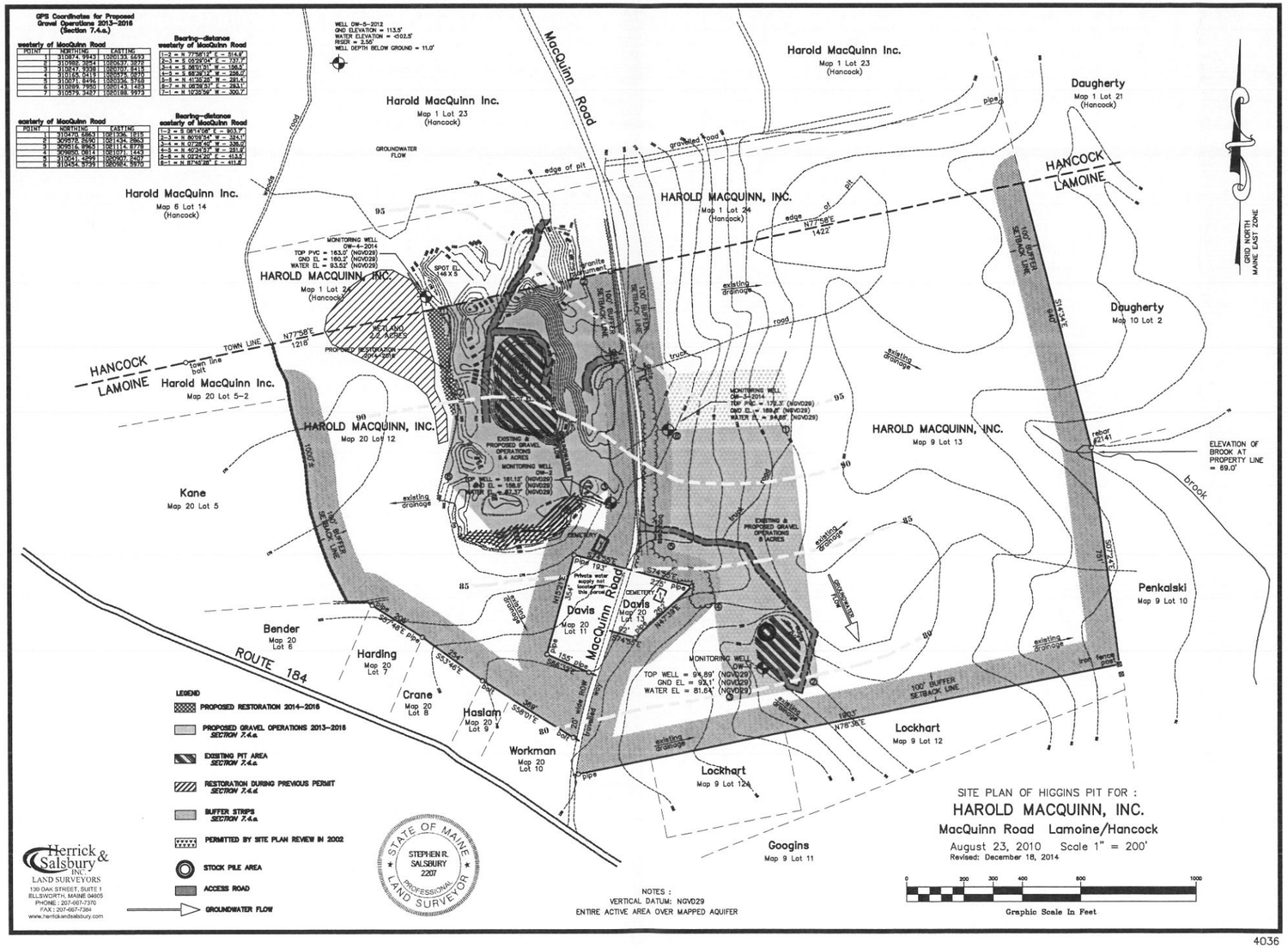
1–2 = S 07°51'12" E – 614.9'
2–3 = S 05°20'04" E – 393.7'
3–4 = S 26°01'21" W – 196.9'
4–5 = S 66°36'14" W – 298.0'
5–6 = N 41°36'25" W – 281.4'
6–7 = N 06°18'37" E – 283.1'
7–1 = N 10°25'39" W – 300.7'

easterly of MacQuinn Road

POINT	NORTHING	EASTING
1	310470.5863	1001206.1815
2	309976.5901	1001434.8963
3	309816.9963	1001114.8778
4	309850.0814	1001071.1443
5	310041.2499	1000907.5407
6	310454.9791	1000824.5979

Bearing–distance easterly of MacQuinn Road

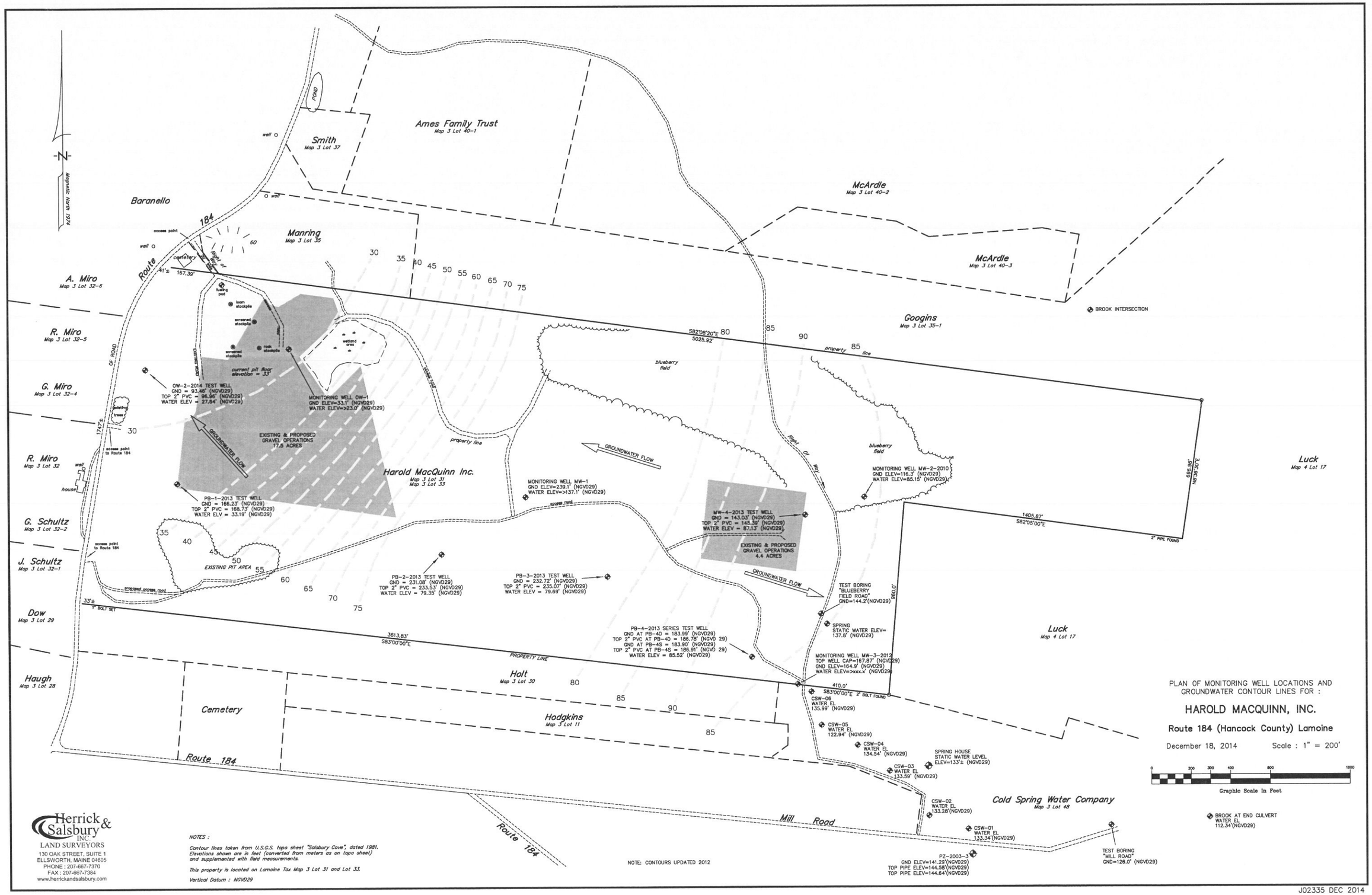
1–2 = S 08°43'06" E – 303.7'
2–3 = N 80°02'54" W – 324.1'
3–4 = N 07°28'40" W – 338.0'
4–5 = N 40°45'37" W – 281.6'
5–6 = N 07°41'20" E – 413.5'
6–1 = N 87°52'28" E – 411.8'



4036

M:\Carlson Projects\04036 July 2013\DWG\04036 December 2014.dwg, 12/19/2014 11:30:04 AM, 1:200

KITTRIDGE



PLAN OF MONITORING WELL LOCATIONS AND GROUNDWATER CONTOUR LINES FOR :

HAROLD MACQUINN, INC.

Route 184 (Hancock County) Lamoine

December 18, 2014 Scale : 1" = 200'

Herrick & Salsbury INC.
LAND SURVEYORS
130 OAK STREET, SUITE 1
ELLSWORTH, MAINE 04605
PHONE : 207-667-7370
FAX : 207-667-7384
www.herrickandsalsbury.com

NOTES :

Contour lines taken from U.S.G.S. topo sheet "Salsbury Cove", dated 1981. Elevations shown are in feet (converted from meters as on topo sheet) and supplemented with field measurements.

This property is located on Lamoine Tax Map 3 Lot 31 and Lot 33.

Vertical Datum : NGVD29

NOTE: CONTOURS UPDATED 2012

J02335 DEC 2014

M:\Carlton Projects\J02335 OCT 2013\DWG\J02335 GW Rev December 2014.dwg, 12/19/2014 10:47:03 AM, 1:200

ATTACHMENT A

ANALYTICAL LABORATORY REPORTS AND FIELD SAMPLING SHEETS

HIGGINS PIT

Maine Environmental Laboratory

Report of Analyses

One Main Street Yarmouth, Maine 04096 Tel.: (207) 846-6569 Fax: (207) 846-9066 Email: melab@maine.rr.com

John Pond
CES, Inc.
465 S. Main St.
Brewer, ME 04412

Report Date: December 17, 2014

Report No.: CES116-14

Enclosed are the results of the analyses requested for your samples as received by the laboratory. Samples were received in acceptable condition and analyzed within method holding times. All quality control data was within laboratory acceptance limits unless noted. The Limit of Quantitation (LOQ) is the minimum level for reporting quantitative data. The Limit of Detection (LOD) is the minimum level for reporting estimated data. Data reported between the Limit of Quantitation and Limit of Detection are J flagged as estimated. Maine Environmental Laboratory is certified by Maine (cert. #2012035) and New Hampshire NELAP (NH ELAP) (cert. #2031). A list of certified parameters is available on request. The results reported herein conform to the most current NELAP standards where applicable unless otherwise narrated in this report. This report shall not be reproduced except in full without the written consent of the laboratory.

The complete report consists of the following sections:

Maine Environmental Laboratory report
Chain of Custody form
Eastern Analytical Inc. report

Project Name/ID: MacQuinn-Higgins Pit

Date Received: 12/05/14

Sampler Name: J. Patterson

References

EPA - EPA600/4-79-020, Methods for Chemical Analysis of Water and Wastes, USEPA, Cincinnati, Ohio, March 1983.
EPA1 - EPA/600/R-93/100 Methods for the Determination of Inorganic Substances in Environmental Samples, Aug. 1993.
EPA2 - EPA600/R-94/111 Methods for the Determination of Metals in Environmental Samples, Supplement 1, May 1994
EPA3-EPA/600/R-06/115,Determination of Trace Elements in DW by Axially Viewed ICP-Atomic Emission Spectrometry,Rev 4.2 Oct. 2003
CLP - USEPA CLP Statement of Work for Inorganic Superfund Methods, ISM01.2, Exh. D, Sec. 1.6, Jan. 2010.
HEX - EPA-821-R-98-002, Method 1664, Rev. A: N-Hexane Extractable Material by Extraction and Gravimetry, Feb. 1999.
HACH - Chemical Oxygen Demand, Method 8000, Hach Handbook of Water Analysis, Hach Chemical Company, 1979.
STM - Standard Methods for the Examination of Water and Wastewater, 18th edition, APHA,AWWA,WPCF, 1992.
SW8- SW846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, USEPA, third edition. Updates I-IV, 2007.

Authorized signature

Jacquelyn R. Villinski

Jacquelyn R. Villinski, Laboratory Director

PROJECT/SITE	SAMPLE_POINT_ID	LAB_SAMPLE_ID	DEP_SAMPLE_ID	ANALYSIS_LAB	SAMPLE_DATE	SAMPLE_TYPE	SAMPLE_TYPE_QUA	PARAMETER_NAME	CONCENTRATION	LAB_QUALIFIERS	PARAMETER_UNITS	MDL	REPORTING_LIMIT	TEST	ANALYSIS_DATE	PREP_DATE	PREP_METHOD	DILUTION_FACTOR	RESULT_TYPE_COD	CAS_NO	SAMPLE_COLLECTIO	SAMPLE_FILTER	SAMPLED_BY
MACQUINN-HIGGINS PIT		CES11614-01	OW-3	ME	12/04/14	GW	N	IRON	0.47		MG/L	0.02	0.05	SW6010B	12/16/14			1	TRG	7439896	GS	FM	PATTERSON
MACQUINN-HIGGINS PIT		CES11614-01	OW-3	ME	12/04/14	GW	N	MANGANESE	0.14		MG/L	0.02	0.05	SW6010B	12/16/14			1	TRG	7439965	GS	FM	PATTERSON
MACQUINN-HIGGINS PIT		CES11614-02	OW-4	ME	12/04/14	GW	N	IRON		U	MG/L	0.02	0.05	SW6010B	12/16/14			1	TRG	7439896	GS	FM	PATTERSON
MACQUINN-HIGGINS PIT		CES11614-02	OW-4	ME	12/04/14	GW	N	MANGANESE	0.06		MG/L	0.02	0.05	SW6010B	12/16/14			1	TRG	7439965	GS	FM	PATTERSON
MACQUINN-HIGGINS PIT		CES11614-03	MW-1	ME	12/04/14	GW	N	IRON	0.38		MG/L	0.02	0.05	SW6010B	12/16/14	12/15/14	SW3010A	1	TRG	7439896	GS		PATTERSON
MACQUINN-HIGGINS PIT		CES11614-03	MW-1	ME	12/04/14	GW	N	MANGANESE	0.02	J	MG/L	0.02	0.05	SW6010B	12/16/14	12/15/14	SW3010A	1	TRG	7439965	GS		PATTERSON
	QC	LCS01	LAB QC	ME	12/16/14	LCS	QC	IRON	96		%R			SW6010B	12/16/14	12/15/14	SW3010A	1	SC	7439896			
	QC	LCS01	LAB QC	ME	12/16/14	LCS	QC	IRON	101		%R			SW6010B	12/16/14			1	SC	7439896			
	QC	LCS01	LAB QC	ME	12/16/14	LCS	QC	MANGANESE	98		%R			SW6010B	12/16/14	12/15/14	SW3010A	1	SC	7439965			
	QC	LCS01	LAB QC	ME	12/16/14	LCS	QC	MANGANESE	102		%R			SW6010B	12/16/14			1	SC	7439965			
	QC	BLANK	LAB QC	ME	12/16/14	LB	QC	IRON		U	MG/L	0.02	0.05	SW6010B	12/16/14	12/15/14	SW3010A	1	TRG	7439896			
	QC	BLANK	LAB QC	ME	12/16/14	LB	QC	IRON		U	MG/L	0.02	0.05	SW6010B	12/16/14			1	TRG	7439896			
	QC	BLANK	LAB QC	ME	12/16/14	LB	QC	MANGANESE		U	MG/L	0.02	0.05	SW6010B	12/16/14	12/15/14	SW3010A	1	TRG	7439965			
	QC	BLANK	LAB QC	ME	12/16/14	LB	QC	MANGANESE		U	MG/L	0.02	0.05	SW6010B	12/16/14			1	TRG	7439965			
		CES11614-03	MW-1	ME	12/04/14	GW	L	IRON	0.40		MG/L	0.02	0.05	SW6010B	12/16/14	12/15/14	SW3010A	1	TRG	7439896			
		CES11614-03	MW-1	ME	12/04/14	GW	L	MANGANESE	0.02	J	MG/L	0.02	0.05	SW6010B	12/16/14	12/15/14	SW3010A	1	TRG	7439965			

Maine Environmental Laboratory - QC Acceptance Limits						
Analyte	**Method**	**Sample Matrix**	**LCS % Recovery**	**Method Blanks**	**Duplicate % RPD**	**Matrix Spike % Recovery**
Metals	200.7	aqueous	85% - 115%	<(2.2xMDL)	±10% [1]	70% - 130%
Metals	6010B	aqueous	80% - 120%	< RDL	±20%	75% - 125%
Metals	6010B	solids	80% - 120%[3]	< RDL	±20%	75% - 125%
Mercury	3112B	aqueous	80% - 120%	< RDL	±10% [1]	80% - 120%
Mercury	7470A	aqueous	80% - 120%	< RDL	±10% [1]	80% - 120%
Mercury	7471A/B	solids	80% - 120%[3]	< RDL	±20% [2]	80% - 120%
Alkalinity	2320B	aqueous	80% - 120%	< RDL	±10% [1]	80% - 120%
BOD_5	5210B	aqueous	198 ±30.5 mg/L	<0.2 mg/L	±10% [1]	80% - 120%
COD	8000	aqueous	80% - 120%	< RDL	±10% [1]	80% - 120%
pH	4500H	aqueous	±0.1 pH units	NA	±0.1 pH units	NA
pH	9040C	aqueous	±0.1 pH units	NA	<0.1 pH units	NA
pH	9045D	solids	±0.1 pH units	NA	<0.1 pH units	NA
Phosphorus	365.3	aqueous	80% - 120%	< RDL	±10% [1]	80% - 120%
Phosphorus	4500P (M)	solids	80% - 120%[3]	< RDL	±20% [2]	80% - 120%
Br, Cl, F, NO_2, NO_3, SO_4	300.0	aqueous	90% - 110%	< MDL	±10% [1]	90% - 110%
Br, Cl, F, NO_2, NO_3, SO_4	9056	aqueous	90% - 110%	< MDL	±10% [1]	80% - 120%
Br, Cl, F, NO_2, NO_3, SO_4	9056	solids	90% - 110%	< MDL	±20% [2]	80% - 120%
Cyanide	4500BCEG	aqueous	80% - 120%	< RDL	±10% [1]	80% - 120%
Cyanide	9010C/9014	aqueous	85% - 115%	< RDL	±20% [2]	80% - 120%
Cyanide	9010C/9014	solids	85% - 115%	< RDL	±20% [2]	80% - 120%
TOC	5310B	aqueous	80% - 120%	< RDL	±10% [1]	80% - 120%
TOC	9060A	aqueous	80% - 120%	< RDL	±10% [1]	80% - 120%
Ammonia	4500NH3BE	aqueous	80% - 120%	< RDL	±10% [1]	80% - 120%
TDS	2540C	aqueous	80% - 120%	< RDL	±10% [1]	NA
TSS	2540D	aqueous	80% - 120%	< RDL	±10% [1]	NA
Oil&Grease	1664A	aqueous	78% - 114%	< MDL	±18%	78% - 114%

[1] duplicate RPD is ±10% @ >20X MDL, ±25% @<20X MDL for aqueous samples.

[2] duplicate RPD is ±20% @ >20X MDL, ±35% @<20X MDL for solid samples.

[3] LCS % Recovery for spike into silica is ±20% of true value, LCS % Recovery for natural materials is ±30% of mean

LCS: Laboratory Control Sample, RPD: relative percent difference, RDL: is reporting detection limit, MDL: method detection limit

MAINE ENVIRONMENTAL LABORATORY- Chain of Custody

One Main Street Yarmouth, Maine 04096-6716 (207) 846-6569 fax: (207) 846-9066
e-mail: melab@maine.rr.com

LABORATORY REPORT # CES116-14

Delivered by UPS

PROJECT MANAGER: John Pond
TELEPHONE: 207-989-4824
FAX # / E-MAIL:
COMPANY: CES, INC.
PURCHASE ORDER # / BILL TO:
ADDRESS: 465 S. MAIN ST, Brewer, ME 04412
PROJECT NAME: MACQUINN-HIGGINS PIT
SAMPLER NAME: JASON PATTERSON

TURNAROUND REQUEST
- ☐ Standard
- ☐ Priority (SURCHARGE)

Quote #

SAMPLE IDENTIFICATION	# CONTAINERS	TYPE OF CONTAINERS	FIELD FILTRATION YES	FIELD FILTRATION NO	SAMPLE MATRIX	GRAB	COMP.	METHOD PRESERVED	SAMPLING DATE	SAMPLING TIME	EPH	VPH	Iron + Manganese *							LABORATORY IDENTIFICATION/SUB-CONTRACTOR
OW-3	6			X		X		—	12/4/14	1408	X	X	X							-01/EAI
OW-4	6			X		X			↓	1544	X	X	X							-02/EAI
MW-1	6			X		X			↓	847	X	X	X							-03/EAI

FOR LAB USE ONLY

Received within hold time	☒ yes	☐ no	☐ N/A
Received in good condition	☒ yes	~~☐ no~~	~~☐ N/A~~
Samples received preserved	☒ yes	☐ no	☐ N/A
Temp. °C 2.0 /Frozen ice packs	☐ N/A		
Custody seal present	~~☒ yes~~	☐ no	

COMMENTS

→ 2 out of 3 VPH vials for OW-4 were received broken - KAB 12-5-14

* Dissolved metals for OW-3 & OW-4 (filter at lab) total metals for MW-1 as per Chris Bagley - KB 12-5-14

Method: (circle one) NPDES RCRA DW

Report Format: (circle one) Standard ME DEP EDD

RELINQUISHED BY SAMPLER: Jason Patterson - CES	DATE 12/4/14	TIME 1635	RECEIVED BY:
RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
RELINQUISHED BY:	DATE 12/5/14	TIME 0930	RECEIVED BY/LABORATORY:

COC 7912

It is the client's responsibility to check for accuracy prior to relinquishing samples.

Eastern Analytical, Inc.

professional laboratory & drilling services

Jackie Villinski
Maine Environmental Laboratory
One Main Street
Yarmouth , ME 04096

ACCREDITED IN ACCORDANCE WITH nelac

Subject: Laboratory Report

Eastern Analytical, Inc. ID: 138814
Client Identification: CES116-14
Date Received: 12/5/2014

Dear Ms. Villinski :

Enclosed please find the laboratory report for the above identified project. All analyses were performed in accordance with our QA/QC Program. Unless otherwise stated, holding times, preservation techniques, container types, and sample conditions adhered to EPA Protocol. Samples which were collected by Eastern Analytical, Inc. (EAI) were collected in accordance with approved EPA procedures. Eastern Analytical, Inc. certifies that the enclosed test results meet all requirements of NELAP and other applicable state certifications. Please refer to our website at www.eailabs.com for a copy of our NELAP certificate and accredited parameters.

The following standard abbreviations and conventions apply to all EAI reports:

Solid samples are reported on a dry weight basis, unless otherwise noted
< : "less than" followed by the reporting limit
> : "greater than" followed by the reporting limit
%R : % Recovery

Eastern Analytical Inc. maintains certification in the following states: Connecticut (PH-0492), Maine (NH005), Massachusetts (M-NH005), New Hampshire/NELAP (1012), Rhode Island (269) and Vermont (VT1012).

The following information is contained within this report: Sample Conditions summary, Analytical Results/Data, Quality Control data (if requested) and copies of the Chain of Custody. This report may not be reproduced except in full, without the the written approval of the laboratory.

If you have any questions regarding the results contained within, please feel free to directly contact me or the chemist(s) who performed the testing in question. Unless otherwise requested, we will dispose of the sample(s) 30 days from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

Lorraine Olashaw, Lab Director

12.18.14
Date

10
# of pages (excluding cover letter)

SAMPLE CONDITIONS PAGE

EAI ID#: **138814**

Client: **Maine Environmental Laboratory**

Client Designation: **CES116-14**

Temperature upon receipt (°C): 4

Acceptable temperature range (°C): 0-6

Received on ice or cold packs (Yes/No): Y

Lab ID	Sample ID	Date Received	Date Sampled	Sample Matrix	% Dry Weight	Exceptions/Comments (other than thermal preservation)
138814.01	OW-3	12/5/14	12/4/14	aqueous		Adheres to Sample Acceptance Policy
138814.02	OW-4	12/5/14	12/4/14	aqueous		Adheres to Sample Acceptance Policy
138814.03	MW-1	12/5/14	12/4/14	aqueous		Adheres to Sample Acceptance Policy

Samples were properly preserved and the pH measured when applicable unless otherwise noted. Analysis of solids for pH, Flashpoint, Ignitibility, Paint Filter, Corrosivity, Conductivity and Specific Gravity are reported on an "as received" basis.

Immediate analyses, pH, Total Residual Chlorine, Dissolved Oxygen and Sulfite, performed at the laboratory were run outside of the recommended 15 minute hold time.

All results contained in this report relate only to the above listed samples.

References include:

1) EPA 600/4-79-020, 1983

2) Standard Methods for Examination of Water and Wastewater,20th Edition, 1998 and 22nd Edition, 2012

3) Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB

4) Hach Water Analysis Handbook, 2nd edition, 1992

Eastern Analytical, Inc. www.eailabs.com | 800.287.0525 | customerservice@eailabs.com

LABORATORY REPORT

EAI ID#: **138814**

Client: **Maine Environmental Laboratory**

Client Designation: **CES116-14**

Client Sample ID:	OW-3
Lab Sample ID:	138814.01
Matrix:	aqueous
Date Sampled:	12/4/14
Date Received:	12/5/14
Date Prepared:	

	Result	RL	Dilution Factor	Units	Date Analyzed	Method	Analyst
Methyl-t-butyl ether(MTBE)	< 5	5	1.0	ug/l	12/15/14	MA VPH	VG
Benzene	< 1	1	1.0	ug/l	12/15/14	MA VPH	VG
Toluene	< 1	1	1.0	ug/l	12/15/14	MA VPH	VG
Ethylbenzene	< 1	1	1.0	ug/l	12/15/14	MA VPH	VG
mp-Xylene	< 1	1	1.0	ug/l	12/15/14	MA VPH	VG
o-Xylene	< 1	1	1.0	ug/l	12/15/14	MA VPH	VG
Naphthalene	< 5	5	1.0	ug/l	12/15/14	MA VPH	VG
C5-C8 Aliphatics Hydrocarbons 1,2	< 100	100	1.0	ug/l	12/15/14	MA VPH	VG
C9-C12 Aliphatic Hydrocarbons 1,3	< 100	100	1.0	ug/l	12/15/14	MA VPH	VG
C9-C10 Aromatic Hydrocarbons 1	< 100	100	1.0	ug/l	12/15/14	MA VPH	VG
PID 2,5-Dibromotoluene (surr)	**79 %R**			%	12/15/14	MA VPH	VG
FID 2,5-Dibromotoluene (surr)	**76 %R**			%	12/15/14	MA VPH	VG

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2 C5-C8 Aliphatic Hydrocarbons exclude the concentration of MTBE, benzene and toluene eluting in that range.
3 C9-C12 Aliphatic Hydrocarbons exclude the concentration of ethylbenzene and xylenes eluting in that range and the concentration of C9-C10 Aromatic Hydrocarbons.

LABORATORY REPORT

EAI ID#: **138814**

Client: **Maine Environmental Laboratory**

Client Designation: **CES116-14**

Client Sample ID:	OW-4
Lab Sample ID:	138814.02
Matrix:	aqueous
Date Sampled:	12/4/14
Date Received:	12/5/14
Date Prepared:	

	Result	RL	Dilution Factor	Units	Date Analyzed	Method	Analyst
Methyl-t-butyl ether(MTBE)	< 5	5	1.0	ug/l	12/15/14	MA VPH	VG
Benzene	< 1	1	1.0	ug/l	12/15/14	MA VPH	VG
Toluene	< 1	1	1.0	ug/l	12/15/14	MA VPH	VG
Ethylbenzene	< 1	1	1.0	ug/l	12/15/14	MA VPH	VG
mp-Xylene	< 1	1	1.0	ug/l	12/15/14	MA VPH	VG
o-Xylene	< 1	1	1.0	ug/l	12/15/14	MA VPH	VG
Naphthalene	< 5	5	1.0	ug/l	12/15/14	MA VPH	VG
C5-C8 Aliphatics Hydrocarbons 1,2	< 100	100	1.0	ug/l	12/15/14	MA VPH	VG
C9-C12 Aliphatic Hydrocarbons 1,3	< 100	100	1.0	ug/l	12/15/14	MA VPH	VG
C9-C10 Aromatic Hydrocarbons 1	< 100	100	1.0	ug/l	12/15/14	MA VPH	VG
PID 2,5-Dibromotoluene (surr)	**85 %R**			%	12/15/14	MA VPH	VG
FID 2,5-Dibromotoluene (surr)	**80 %R**			%	12/15/14	MA VPH	VG

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2 C5-C8 Aliphatic Hydrocarbons exclude the concentration of MTBE, benzene and toluene eluting in that range.
3 C9-C12 Aliphatic Hydrocarbons exclude the concentration of ethylbenzene and xylenes eluting in that range and the concentration of C9-C10 Aromatic Hydrocarbons.

LABORATORY REPORT

EAI ID#: **138814**

Client: **Maine Environmental Laboratory**

Client Designation: **CES116-14**

Client Sample ID:	MW-1
Lab Sample ID:	138814.03
Matrix:	aqueous
Date Sampled:	12/4/14
Date Received:	12/5/14
Date Prepared:	

	Result	RL	Dilution Factor	Units	Date Analyzed	Method	Analyst
Methyl-t-butyl ether(MTBE)	< 5	5	1.0	ug/l	12/15/14	MA VPH	VG
Benzene	< 1	1	1.0	ug/l	12/15/14	MA VPH	VG
Toluene	< 1	1	1.0	ug/l	12/15/14	MA VPH	VG
Ethylbenzene	< 1	1	1.0	ug/l	12/15/14	MA VPH	VG
mp-Xylene	< 1	1	1.0	ug/l	12/15/14	MA VPH	VG
o-Xylene	< 1	1	1.0	ug/l	12/15/14	MA VPH	VG
Naphthalene	< 5	5	1.0	ug/l	12/15/14	MA VPH	VG
C5-C8 Aliphatics Hydrocarbons 1,2	< 100	100	1.0	ug/l	12/15/14	MA VPH	VG
C9-C12 Aliphatic Hydrocarbons 1,3	< 100	100	1.0	ug/l	12/15/14	MA VPH	VG
C9-C10 Aromatic Hydrocarbons 1	< 100	100	1.0	ug/l	12/15/14	MA VPH	VG
PID 2,5-Dibromotoluene (surr)	**82 %R**			%	12/15/14	MA VPH	VG
FID 2,5-Dibromotoluene (surr)	**77 %R**			%	12/15/14	MA VPH	VG

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2 C5-C8 Aliphatic Hydrocarbons exclude the concentration of MTBE, benzene and toluene eluting in that range.
3 C9-C12 Aliphatic Hydrocarbons exclude the concentration of ethylbenzene and xylenes eluting in that range and the concentration of C9-C10 Aromatic Hydrocarbons.

QC REPORT

EAI ID#: **138814**

Client: **Maine Environmental Laboratory**

Client Designation: **CES116-14**

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Methyl-t-butyl ether(MTBE)	< 5	38 (95 %R)	37 (92 %R) (3 RPD)	12/15/2014	ug/l	70 - 130	25	MA VPH
Benzene	< 1	44 (109 %R)	43 (107 %R) (2 RPD)	12/15/2014	ug/l	70 - 130	25	MA VPH
Toluene	< 1	45 (112 %R)	43 (108 %R) (4 RPD)	12/15/2014	ug/l	70 - 130	25	MA VPH
Ethylbenzene	< 1	47 (117 %R)	45 (112 %R) (4 RPD)	12/15/2014	ug/l	70 - 130	25	MA VPH
mp-Xylene	< 1	80 (100 %R)	78 (97 %R) (3 RPD)	12/15/2014	ug/l	70 - 130	25	MA VPH
o-Xylene	< 1	41 (103 %R)	40 (100 %R) (3 RPD)	12/15/2014	ug/l	70 - 130	25	MA VPH
Naphthalene	< 5	31 (78 %R)	30 (76 %R) (3 RPD)	12/15/2014	ug/l	70 - 130	25	MA VPH
Unadjusted C5-C8 Aliphatics 1	< 100	110 (92 %R)	100 (85 %R) (8 RPD)	12/15/2014	ug/l	70 - 130	25	MA VPH
Unadjusted C9-C12 Aliphatics 1	< 100	< 100 (77 %R)	< 100 (72 %R) (7 RPD)	12/15/2014	ug/l	70 - 130	25	MA VPH
C5-C8 Aliphatics Hydrocarbons	< 100	< 100 (%R N/A)	< 100 (%R N/A) (RPD N/A)	12/15/2014	ug/l	70 - 130	25	MA VPH
C9-C12 Aliphatic Hydrocarbons	< 100	< 100 (%R N/A)	< 100 (%R N/A) (RPD N/A)	12/15/2014	ug/l	70 - 130	25	MA VPH
C9-C10 Aromatic Hydrocarbons	< 100	< 100 (98 %R)	< 100 (95 %R) (3 RPD)	12/15/2014	ug/l	70 - 130	25	MA VPH
PID 2,5-Dibromotoluene (surr)	84 %R	83 %R	83 %R	12/15/2014	% Rec	70 - 130	25	MA VPH
FID 2,5-Dibromotoluene (surr)	79 %R	74 %R	75 %R	12/15/2014	% Rec	70 - 130	25	MA VPH

Samples were extracted and analyzed within holding time limits.
Instrumentation was calibrated in accordance with the method requirements.
The method blanks were free of contamination at the reporting limits.
Sample surrogate recoveries met the above stated criteria.
The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.
There were no exceptions in the analyses, unless noted.
*/! Flagged analyte recoveries deviated from the QA/QC limits. Unless noted below, flagged analytes that exceed acceptance limits in the Quality Control sample were not detected in the field samples.

LABORATORY REPORT

EAI ID#: **138814**

Client: **Maine Environmental Laboratory**

Client Designation: **CES116-14**

Client Sample ID:	OW-3
Lab Sample ID:	138814.01
Matrix:	aqueous
Date Sampled:	12/4/14
Date Received:	12/5/14
Date Prepared:	12/8/14

	Result	RL	Dilution Factor	Units	Date Analyzed	Method	Analyst
Naphthalene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
2-Methylnaphthalene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Acenaphthylene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Acenaphthene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Fluorene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Phenanthrene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Anthracene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Fluoranthene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Pyrene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Benzo[a]anthracene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Chrysene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Benzo[b]fluoranthene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Benzo[k]fluoranthene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Benzo[a]pyrene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Indeno[1,2,3-cd]pyrene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Dibenz[a,h]anthracene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Benzo[g,h,i]perylene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
C9-C18 Aliphatic Hydrocarbons	< 100	100	1	ug/l	12/10/14	MA EPH	AR
C19-C36 Aliphatic Hydrocarbons	< 100	100	1	ug/l	12/10/14	MA EPH	AR
C11-C22 Aromatic Hydrocarbons	< 100	100	1	ug/l		MA EPH	AR
1-Chlorooctadecane (surr)	**24 %R**			%	12/10/14	MA EPH	AR
o-Terphenyl (surr)	**72 %R**			%	12/10/14	MA EPH	AR
2-Fluorobiphenyl (surr)	**76 %R**			%	12/10/14	MA EPH	AR
2-Bromonaphthalene (surr)	**70 %R**			%	12/10/14	MA EPH	AR

EPH Surrogate Acceptance Range: 40-140%
Hydrocarbon range data exclude concentrations of any surrogate(s) and internal standards eluting in that range.
C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes.
Solid samples prepared in accordance with EPA Method 3545A.
Aqueous samples prepared in accordance with EPA Method 3510C.

The extraction surrogate 1-Chlorooctadecane exhibited recovery below acceptance limits. The sample was re-analyzed to confirm results.

LABORATORY REPORT

EAI ID#: **138814**

Client: **Maine Environmental Laboratory**

Client Designation: **CES116-14**

Client Sample ID:	OW-4
Lab Sample ID:	138814.02
Matrix:	aqueous
Date Sampled:	12/4/14
Date Received:	12/5/14
Date Prepared:	12/8/14

	Result	RL	Dilution Factor	Units	Date Analyzed	Method	Analyst
Naphthalene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
2-Methylnaphthalene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Acenaphthylene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Acenaphthene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Fluorene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Phenanthrene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Anthracene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Fluoranthene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Pyrene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Benzo[a]anthracene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Chrysene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Benzo[b]fluoranthene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Benzo[k]fluoranthene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Benzo[a]pyrene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Indeno[1,2,3-cd]pyrene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Dibenz[a,h]anthracene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Benzo[g,h,i]perylene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
C9-C18 Aliphatic Hydrocarbons	< 100	100	1	ug/l	12/10/14	MA EPH	AR
C19-C36 Aliphatic Hydrocarbons	< 100	100	1	ug/l	12/10/14	MA EPH	AR
C11-C22 Aromatic Hydrocarbons	< 100	100	1	ug/l		MA EPH	AR
1-Chlorooctadecane (surr)	**48 %R**			%	12/10/14	MA EPH	AR
o-Terphenyl (surr)	**72 %R**			%	12/10/14	MA EPH	AR
2-Fluorobiphenyl (surr)	**77 %R**			%	12/10/14	MA EPH	AR
2-Bromonaphthalene (surr)	**75 %R**			%	12/10/14	MA EPH	AR

EPH Surrogate Acceptance Range: 40-140%
Hydrocarbon range data exclude concentrations of any surrogate(s) and internal standards eluting in that range.
C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes.
Solid samples prepared in accordance with EPA Method 3545A.
Aqueous samples prepared in accordance with EPA Method 3510C.

LABORATORY REPORT

EAI ID#: **138814**

Client: **Maine Environmental Laboratory**

Client Designation: **CES116-14**

Client Sample ID:	MW-1
Lab Sample ID:	138814.03
Matrix:	aqueous
Date Sampled:	12/4/14
Date Received:	12/5/14
Date Prepared:	12/8/14

	Result	RL	Dilution Factor	Units	Date Analyzed	Method	Analyst
Naphthalene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
2-Methylnaphthalene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Acenaphthylene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Acenaphthene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Fluorene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Phenanthrene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Anthracene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Fluoranthene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Pyrene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Benzo[a]anthracene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Chrysene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Benzo[b]fluoranthene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Benzo[k]fluoranthene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Benzo[a]pyrene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Indeno[1,2,3-cd]pyrene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Dibenz[a,h]anthracene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
Benzo[g,h,i]perylene	< 2	2	1	ug/l	12/10/14	MA EPH	AR
C9-C18 Aliphatic Hydrocarbons	< 100	100	1	ug/l	12/10/14	MA EPH	AR
C19-C36 Aliphatic Hydrocarbons	< 100	100	1	ug/l	12/10/14	MA EPH	AR
C11-C22 Aromatic Hydrocarbons	< 100	100	1	ug/l		MA EPH	AR
1-Chlorooctadecane (surr)	**51 %R**			%	12/10/14	MA EPH	AR
o-Terphenyl (surr)	**75 %R**			%	12/10/14	MA EPH	AR
2-Fluorobiphenyl (surr)	**80 %R**			%	12/10/14	MA EPH	AR
2-Bromonaphthalene (surr)	**75 %R**			%	12/10/14	MA EPH	AR

EPH Surrogate Acceptance Range: 40-140%
Hydrocarbon range data exclude concentrations of any surrogate(s) and internal standards eluting in that range.
C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes.
Solid samples prepared in accordance with EPA Method 3545A.
Aqueous samples prepared in accordance with EPA Method 3510C.

QC REPORT

EAI ID#: **138814**

Client: **Maine Environmental Laboratory**

Batch ID: 63553640100/A120814MAEPH1

Client Designation: **CES116-14**

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Naphthalene	< 2	22 (54 %R)	21 (53 %R) (2 RPD)	12/10/2014	ug/l	40 - 140	25	MA EPH
2-Methylnaphthalene	< 2	25 (62 %R)	24 (61 %R) (2 RPD)	12/10/2014	ug/l	40 - 140	25	MA EPH
Acenaphthylene	< 2	26 (64 %R)	27 (68 %R) (6 RPD)	12/10/2014	ug/l	40 - 140	25	MA EPH
Acenaphthene	< 2	26 (64 %R)	27 (68 %R) (6 RPD)	12/10/2014	ug/l	40 - 140	25	MA EPH
Fluorene	< 2	26 (65 %R)	28 (71 %R) (9 RPD)	12/10/2014	ug/l	40 - 140	25	MA EPH
Phenanthrene	< 2	28 (71 %R)	30 (75 %R) (5 RPD)	12/10/2014	ug/l	40 - 140	25	MA EPH
Anthracene	< 2	28 (69 %R)	29 (73 %R) (6 RPD)	12/10/2014	ug/l	40 - 140	25	MA EPH
Fluoranthene	< 2	30 (74 %R)	29 (73 %R) (1 RPD)	12/10/2014	ug/l	40 - 140	25	MA EPH
Pyrene	< 2	30 (74 %R)	29 (71 %R) (4 RPD)	12/10/2014	ug/l	40 - 140	25	MA EPH
Benzo[a]anthracene	< 2	30 (76 %R)	26 (66 %R) (14 RPD)	12/10/2014	ug/l	40 - 140	25	MA EPH
Chrysene	< 2	28 (70 %R)	26 (66 %R) (6 RPD)	12/10/2014	ug/l	40 - 140	25	MA EPH
Benzo[b]fluoranthene	< 2	32 (80 %R)	27 (68 %R) (16 RPD)	12/10/2014	ug/l	40 - 140	25	MA EPH
Benzo[k]fluoranthene	< 2	30 (76 %R)	27 (67 %R) (13 RPD)	12/10/2014	ug/l	40 - 140	25	MA EPH
Benzo[a]pyrene	< 2	32 (81 %R)	28 (69 %R) (16 RPD)	12/10/2014	ug/l	40 - 140	25	MA EPH
Indeno[1,2,3-cd]pyrene	< 2	33 (83 %R)	30 (76 %R) (9 RPD)	12/10/2014	ug/l	40 - 140	25	MA EPH
Dibenz[a,h]anthracene	< 2	33 (83 %R)	30 (75 %R) (10 RPD)	12/10/2014	ug/l	40 - 140	25	MA EPH
Benzo[g,h,i]perylene	< 2	32 (80 %R)	30 (75 %R) (6 RPD)	12/10/2014	ug/l	40 - 140	25	MA EPH
C9-C18 Aliphatic Hydrocarbons	< 100	100 (42 %R)	100 (47 %R) (11 RPD)	12/10/2014	ug/l	40 - 140	25	MA EPH
C19-C36 Aliphatic Hydrocarbons	< 100	220 (69 %R)	200 (61 %R) (12 RPD)	12/10/2014	ug/l	40 - 140	25	MA EPH
C11-C22 Aromatic Hydrocarbons	< 100	< 100 (%R N/A)	< 100 (%R N/A) (RPD		ug/l			MA EPH
C11-C22 Aromatic (Unadjusted)	< 100	500 (74 %R)	500 (71 %R) (4 RPD)	12/10/2014	ug/l	40 - 140	25	MA EPH
1-Chlorooctadecane (surr)	65 %R	57 %R	62 %R	12/10/2014	% Rec	40 - 140		MA EPH
o-Terphenyl (surr)	76 %R	72 %R	74 %R	12/10/2014	% Rec	40 - 140		MA EPH
2-Fluorobiphenyl (surr)	79 %R	76 %R	76 %R	12/10/2014	% Rec	40 - 140		MA EPH
2-Bromonaphthalene (surr)	78 %R	73 %R	72 %R	12/10/2014	% Rec	40 - 140		MA EPH

Samples were extracted and analyzed within holding time limits.
Instrumentation was calibrated in accordance with the method requirements.
The method blanks were free of contamination at the reporting limits.
Sample surrogate recoveries met the above stated criteria.
The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.
There were no exceptions in the analyses, unless noted.
*/! Flagged analyte recoveries deviated from the QA/QC limits. Unless noted below, flagged analytes that exceed acceptance limits in the Quality Control sample were not detected in the field samples.

Percent (%) breakthrough of Naphthalene in the LCS/LCSD: < 5/< 5%.
Percent (%) breakthrough of 2-Methylnaphthalene in the LCS/LCSD: < 5/< 5%.

EAT

138814 10

MAINE ENVIRONMENTAL LABORATORY- Chain of Custody

One Main Street Yarmouth, ME 04096-6716 Tel: (207) 846-6569 Fax: (207) 846-9066
Email: melab@maine.rr.com Web: MaineEnvironmentalLaboratory.com

REPORT TO: J. Villinski
TELEPHONE:
EMAIL:
COMPANY:
BILL TO / PURCHASE ORDER #:
ADDRESS:
PROJECT NAME: CES 116-14
SAMPLER NAME:

ANALYSES (Specify Method: RCRA, NPDES, DW, etc)

SAMPLE IDENTIFICATION	# CONTAINERS	TYPE OF CONTAINERS	FIELD FILTRATION YES	FIELD FILTRATION NO	SAMPLE TYPE	GRAB	COMP.	METHOD PRESERVED	SAMPLING DATE	SAMPLING TIME	EPH	VPH	LAB ID/SUBCONTRACTOR
OW-3	2	amb L		X	GW	X		HCl, 4°C	12-4-14	1408	X		
↓	3	vials		X	↓	X		↓	↓	↓		X	
OW-4	2	amb L		X	↓	X		↓	↓	1544	X		
↓	1	vials		X	↓	X		↓	↓	↓		X	
MW-1	2	amb L		X	↓	X		↓	↓	0847	X		
↓	3	vials		X	↓	X		↓	↓			X	

SAMPLE RECEIVING
Within Hold Time? ☐ Yes ☐ No ☐ N/A
Good Condition? ☐ Yes ☐ No ☐ N/A
Preserved? ☐ Yes ☐ No ☐ N/A
Custody Seal? ☐ Yes ☐ No ☐ N/A
Del. by:
Temp. °C

TURNAROUND REQUEST
☒ Standard 12/17
☐ Priority (SURCHARGE)
MEL3120101-40

REPORTING REQUIREMENTS?
☐ Standard Report
☒ ME DEP EDD MacQuinn-Higgins Pit
☐ DW Compliance (sent to State)
☐ CC Results to

COMMENTS only 1 vial for OW-4 VPH
4°C on ice

	DATE	TIME		
RELINQUISHED BY SAMPLER:			RECEIVED BY:	
RELINQUISHED BY: X. Balya	12-5-14	1100	RECEIVED BY: Norman Cain	
RELINQUISHED BY: Norman Cain	12/5/14	1550	RECEIVED BY LABORATORY: U. Zurk	

COC 4414 It is the client's responsibility to check for accuracy prior to relinquishing samples. By executing this COC, the client has read and agrees to be bound by MEL's Terms & Conditions.

CES INC

FIELD DATA INFORMATION
GROUNDWATER SAMPLING LOG

Job #: 10390.001.2014	Well #: ~~MW-1~~ OW-1 Should be OW-1	Date: 12/4/19	
Project: Harold MacQuinn - Higgins Pit		Site: Lamoine/~~Kittridge~~ Higgins	
Well Depth:	Screen Length: Unknown	Well Diameter: 2"	Casing Type: PVC
Sampling Device: ~~Submersible~~ Peristaltic		Tubing Type: Ded. Poly	
Water Level (before sampling): 13.25		Water Level (after sampling): 13.80	
Pump Rate: 180 mL/min (PG 5.0)		Measuring Point: Top PVC	
Start Time: 827	End Time: 904	Total Pumping Time: 41 min	
Elevation Reference Datum: /		Weather: Sunny, 35°	
CES, Inc. Sampling Personnel: SP			

SLOW PURGE DATA

Time	Depth (ft)	Time	Depth (ft)	Time	Depth (ft)	Time	Depth (ft)
827	13.25						
829	13.30						
831	13.69						
833	13.80						
835	13.80						

FIELD PARAMETER READINGS

Time	pH (S.U.)	Sp. Cond. (uS/CM)	Turb. (NTU)	D.O. (MG/L)	Temp. (°C)	ORP (mv)	Water Level (Ft.)	Notes
835	6.19	9	6	6-8	7.3		13.80	clear colorless
838	6.00	10	11	↓	7.7		13.80	↓
841	5.91	25	9	↓	7.8		↓	↓
844	5.85	26	5	↓	7.5		↓	↓
847	5.90	26	7	↓	7.5		↓	↓

NOTES

Calibration Record	Date:	Type of Meter:
See Pg 1	Time:	Comments:

CES INC

GROUNDWATER SAMPLING LOG

Job #: 10390.001.2014	Well #: P OW-2	Date: 12/4/14	
Project: Harold MacQuinn		Site: Higgins Pit	
Well Depth: N/A	Screen Length: Unknown	Well Diameter: ~~N/A~~ 1"	Casing Type: ~~N/a~~ PVC
Sampling Device: ~~Submersible~~		Tubing Type: N/A	
Water Level (before sampling):		Water Level (after sampling): N/A	
Pump Rate: N/A		Measuring Point: See Below	
Start Time: N/A	End Time: N/A	Total Pumping Time: N/A	
Elevation Reference Datum: N/A		Weather: Sunny, 35°	
CES, Inc. Sampling Personnel: JP			

Well Depths

Location	Time	Measuring Point	Depth
OW-2	811	Top PVC	73.75

NOTES

Calibration Record	Date:	Type of Meter:
	Time:	Comments:

FIELD DATA INFORMATION
GROUNDWATER SAMPLING LOG

CES INC

FIELD DATA INFORMATION
GROUNDWATER SAMPLING LOG

Job #: 10390.001.2014	Well #: OW-3	Date: 12/4/14	
Project: Harold MacQuinn - Higgins Pit		Site: Lamoine/~~Kittridge~~	
Well Depth: 87.10	Screen Length: Unknown	Well Diameter: 2"	Casing Type: PVC
Sampling Device: ~~Submersible~~ WATERA		Tubing Type: Ded. Poly	
Water Level (before sampling): 77.62		Water Level (after sampling):	
Pump Rate: 300 ml/min		Measuring Point: Top of PVC	
Start Time: 718	End Time: 803	Total Pumping Time: 45 min	
Elevation Reference Datum:		Weather: Sunny, 30°	
CES, Inc. Sampling Personnel: JP			

SLOW PURGE DATA

Time	Depth (ft)	Time	Depth (ft)	Time	Depth (ft)	Time	Depth (ft)
718	77.62				77.5		
720	78.35						
722	78.32						
724	78.32						
726	78.32						

FIELD PARAMETER READINGS

Time	pH (S.U.)	Sp. Cond. (uS/CM)	Turb. (NTU)	D.O. (MG/L)	Temp. (°C)	ORP (mv)	Water Level (Ft.)	Notes
726	6.00	134	944	6-8	6.0		78.32	Very Turbid
729	6.18	120	738		5.2			Brown, cloudy
732	6.26	116	521		4.0			
735	6.21	114	631		3.9			
738	6.20	99	>999		4.0			
741	6.10	88	7999		3.9			
744	6.03	82	7999		3.9			
747	5.99	88	7999		4.0			
750	5.95	90	7999		4.2		78.32	
# 1408	6.42	108	7999	6-8	7.5		77.80	

NOTES

Took Sample @ 1401, still Turbid, well recharge good.

Calibration Record	Date: 12/4/14	Type of Meter: Horiba
	Time: 700	Comments: Auto-cal 5 Min

JN:

CES INC

FIELD DATA INFORMATION
GROUNDWATER SAMPLING LOG

Job #: 10390.001.2014	Well #: OW-4	Date: 12/4/14	
Project: Harold MacQuinn - Higgins		Site: Lamoine/~~Kittridge~~ Higgins	
Well Depth: 82.38	Screen Length: Unknown	Well Diameter:	Casing Type: PVC
Sampling Device: ~~Submersible~~		Tubing Type: Ded. Poly	
Water Level (before sampling): 66.48		Water Level (after sampling): 67.56	
Pump Rate: 480 ml/min		Measuring Point: Top PVC	
Start Time: 240	End Time: 344	Total Pumping Time: 64 min	
Elevation Reference Datum:		Weather: Sunny, 35°	
CES, Inc. Sampling Personnel: SP			

SLOW PURGE DATA

Time	Depth (ft)	Time	Depth (ft)	Time	Depth (ft)	Time	Depth (ft)
240	66.48						
242	67.40						
244	67.52						
246	67.55						
248	67.56						

FIELD PARAMETER READINGS

Time	pH (S.U.)	Sp. Cond. (uS/CM)	Turb. (NTU)	D.O. (MG/L)	Temp. (°C)	ORP (mv)	Water Level (Ft.)	Notes
248	6.01	143	7999	4.5	4.1		67.56	"E5 1" message on meter
251	5.94	143	7999		4.0			
254	5.87	142	7999		4.3			
257	5.87	142	7999		4.2			
300	5.85	142	938		4.5			
303	5.85	142	713		4.5			
306	5.83	141	526		4.4			Battery Died
344								Sample Taken. odorless, lt yellow, slightly cloudy

NOTES

Meter Turbidity reading >999. H2O looks slt clear - replace batteries & check calibration

Calibration Record	Date:	Type of Meter:
	Time:	Comments:

JN:

KITTRIDGE PIT

Maine Environmental Laboratory

Report of Analyses

One Main Street Yarmouth, Maine 04096 Tel.: (207) 846-6569 Fax: (207) 846-9066 Email: melab@maine.rr.com

John Pond
CES, Inc.
465 S. Main St.
Brewer, ME 04412

Report Date: December 17, 2014

Report No.: CES118-14

Enclosed are the results of the analyses requested for your samples as received by the laboratory. Samples were received in acceptable condition and analyzed within method holding times. All quality control data was within laboratory acceptance limits unless noted. The Limit of Quantitation (LOQ) is the minimum level for reporting quantitative data. The Limit of Detection (LOD) is the minimum level for reporting estimated data. Data reported between the Limit of Quantitation and Limit of Detection are J flagged as estimated. Maine Environmental Laboratory is certified by Maine (cert. #2012035) and New Hampshire NELAP (NH ELAP) (cert. #2031). A list of certified parameters is available on request. The results reported herein conform to the most current NELAP standards where applicable unless otherwise narrated in this report. This report shall not be reproduced except in full without the written consent of the laboratory.

The complete report consists of the following sections:

Maine Environmental Laboratory report
Chain of Custody form
Eastern Analytical Inc. report

Project Name/ID: MacQuinn Quarry (10390.001)

Date Received: 12/09/14

Sampler Name: J. Patterson

References

EPA - EPA600/4-79-020, Methods for Chemical Analysis of Water and Wastes, USEPA, Cincinnati, Ohio, March 1983.
EPA1 - EPA/600/R-93/100 Methods for the Determination of Inorganic Substances in Environmental Samples, Aug. 1993.
EPA2 - EPA600/R-94/111 Methods for the Determination of Metals in Environmental Samples, Supplement 1, May 1994
EPA3-EPA/600/R-06/115,Determination of Trace Elements in DW by Axially Viewed ICP-Atomic Emission Spectrometry,Rev 4.2 Oct. 2003
CLP - USEPA CLP Statement of Work for Inorganic Superfund Methods, ISM01.2, Exh. D, Sec. 1.6, Jan. 2010.
HEX - EPA-821-R-98-002, Method 1664, Rev. A: N-Hexane Extractable Material by Extraction and Gravimetry, Feb. 1999.
HACH - Chemical Oxygen Demand, Method 8000, Hach Handbook of Water Analysis, Hach Chemical Company, 1979.
STM - Standard Methods for the Examination of Water and Wastewater, 18th edition, APHA,AWWA,WPCF, 1992.
SW8- SW846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, USEPA, third edition. Updates I-IV, 2007.

Authorized signature

Jacquelyn R. Villinski

Jacquelyn R. Villinski, Laboratory Director

PROJECT/SITE	SAMPLE_POINT_ID	LAB_SAMPLE_ID	DEP_SAMPLE_ID	ANALYSIS_LAB	SAMPLE_DATE	SAMPLE_TYPE	SAMPLE_TYPE_QUA	PARAMETER_NAME	CONCENTRATION	LAB_QUALIFIERS	PARAMETER_UNITS	MDL	REPORTING_LIMIT	TEST	ANALYSIS_DATE	DILUTION_FACTOR	RESULT_TYPE_COD	CAS_NO	SAMPLE_COLLECTIO	SAMPLE_FILTER	SAMPLED_BY
MACQUINN QUARRY (10390.001)		CES11814-01	OW-2	ME	12/08/14	GW	N	IRON	0.02	J	MG/L	0.02	0.05	SW6010B	12/17/14	1	TRG	7439896	GS	FM	PATTERSON
MACQUINN QUARRY (10390.001)		CES11814-01	OW-2	ME	12/08/14	GW	N	MANGANESE	0.02	J	MG/L	0.02	0.05	SW6010B	12/17/14	1	TRG	7439965	GS	FM	PATTERSON
MACQUINN QUARRY (10390.001)		CES11814-02	MW-4	ME	12/08/14	GW	N	IRON	0.11		MG/L	0.02	0.05	SW6010B	12/17/14	1	TRG	7439896	GS	FM	PATTERSON
MACQUINN QUARRY (10390.001)		CES11814-02	MW-4	ME	12/08/14	GW	N	MANGANESE		U	MG/L	0.02	0.05	SW6010B	12/17/14	1	TRG	7439965	GS	FM	PATTERSON
	QC	LCS01	LAB QC	ME	12/17/14	LCS	QC	IRON	92		%R			SW6010B	12/17/14	1	SC	7439896			
	QC	LCS01	LAB QC	ME	12/17/14	LCS	QC	MANGANESE	93		%R			SW6010B	12/17/14	1	SC	7439965			
	QC	BLANK	LAB QC	ME	12/17/14	LB	QC	IRON		U	MG/L	0.02	0.05	SW6010B	12/17/14	1	TRG	7439896			
	QC	BLANK	LAB QC	ME	12/17/14	LB	QC	MANGANESE		U	MG/L	0.02	0.05	SW6010B	12/17/14	1	TRG	7439965			
		CES11814-02	MW-4	ME	12/08/14	GW	L	IRON	0.12		MG/L	0.02	0.05	SW6010B	12/17/14	1	TRG	7439896		FM	
		CES11814-02	MW-4	ME	12/08/14	GW	L	MANGANESE		U	MG/L	0.02	0.05	SW6010B	12/17/14	1	TRG	7439965		FM	
		CES11814-01	OW-2	ME	12/08/14	GW	MS	IRON	96		%R			SW6010B	12/17/14	1	SC	7439896		FM	
		CES11814-01	OW-2	ME	12/08/14	GW	MS	MANGANESE	104		%R			SW6010B	12/17/14	1	SC	7439965		FM	

Maine Environmental Laboratory - QC Acceptance Limits

Analyte	Method	Sample Matrix	LCS % Recovery	Method Blanks	Duplicate % RPD	Matrix Spike % Recovery
Metals	200.7	aqueous	85% - 115%	<(2.2xMDL)	±10% [1]	70% - 130%
Metals	6010B	aqueous	80% - 120%	< RDL	±20%	75% - 125%
Metals	6010B	solids	80% - 120% [3]	< RDL	±20%	75% - 125%
Mercury	3112B	aqueous	80% - 120%	< RDL	±10% [1]	80% - 120%
Mercury	7470A	aqueous	80% - 120%	< RDL	±10% [1]	80% - 120%
Mercury	7471A/B	solids	80% - 120% [3]	< RDL	±20% [2]	80% - 120%
Alkalinity	2320B	aqueous	80% - 120%	< RDL	±10% [1]	80% - 120%
BOD_5	5210B	aqueous	198 ±30.5 mg/L	<0.2 mg/L	±10% [1]	80% - 120%
COD	8000	aqueous	80% - 120%	< RDL	±10% [1]	80% - 120%
pH	4500H	aqueous	±0.1 pH units	NA	±0.1 pH units	NA
pH	9040C	aqueous	±0.1 pH units	NA	<0.1 pH units	NA
pH	9045D	solids	±0.1 pH units	NA	<0.1 pH units	NA
Phosphorus	365.3	aqueous	80% - 120%	< RDL	±10% [1]	80% - 120%
Phosphorus	4500P (M)	solids	80% - 120% [3]	< RDL	±20% [2]	80% - 120%
Br, Cl, F, NO_2, NO_3, SO_4	300.0	aqueous	90% - 110%	< MDL	±10% [1]	90% - 110%
Br, Cl, F, NO_2, NO_3, SO_4	9056	aqueous	90% - 110%	< MDL	±10% [1]	80% - 120%
Br, Cl, F, NO_2, NO_3, SO_4	9056	solids	90% - 110%	< MDL	±20% [2]	80% - 120%
Cyanide	4500BCEG	aqueous	80% - 120%	< RDL	±10% [1]	80% - 120%
Cyanide	9010C/9014	aqueous	85% - 115%	< RDL	±20% [2]	80% - 120%
Cyanide	9010C/9014	solids	85% - 115%	< RDL	±20% [2]	80% - 120%
TOC	5310B	aqueous	80% - 120%	< RDL	±10% [1]	80% - 120%
TOC	9060A	aqueous	80% - 120%	< RDL	±10% [1]	80% - 120%
Ammonia	4500NH3BE	aqueous	80% - 120%	< RDL	±10% [1]	80% - 120%
TDS	2540C	aqueous	80% - 120%	< RDL	±10% [1]	NA
TSS	2540D	aqueous	80% - 120%	< RDL	±10% [1]	NA
Oil&Grease	1664A	aqueous	78% - 114%	< MDL	±18%	78% - 114%

[1] duplicate RPD is ±10% @ >20X MDL, ±25% @<20X MDL for aqueous samples.

[2] duplicate RPD is ±20% @ >20X MDL, ±35% @<20X MDL for solid samples.

[3] LCS % Recovery for spike into silica is ±20% of true value, LCS % Recovery for natural materials is ±30% of mean

LCS: Laboratory Control Sample, RPD: relative percent difference, RDL: is reporting detection limit, MDL: method detection limit

MAINE ENVIRONMENTAL LABORATORY- Chain of Custody

One Main Street Yarmouth, Maine 04096-6716 (207) 846-6569 fax: (207) 846-9066
e-mail: melab@maine.rr.com

LABORATORY REPORT # CES118-14

Delivered by CDS

PROJECT MANAGER: John Pond
TELEPHONE: 207-989-4824
FAX # / E-MAIL:
COMPANY: CES, INC.
PURCHASE ORDER # / BILL TO:
ADDRESS: 465 S. MAIN ST, Brewer ME 04412
PROJECT NAME: MacQUINN Quarry (10390.001)
SAMPLER NAME: JASON PATTERSON

TURNAROUND REQUEST
- ☐ Standard
- ☐ Priority (SURCHARGE)

Quote #

ANALYSES

SAMPLE IDENTIFICATION	# CONTAINERS	TYPE OF CONTAINERS	FIELD FILTRATION YES	FIELD FILTRATION NO	SAMPLE MATRIX	GRAB	COMP.	METHOD PRESERVED	SAMPLING DATE	SAMPLING TIME	EPH (HCl per bottles) 12/12/14	VPH (HCl per bottles)	Iron & Manganese								LABORATORY IDENTIFICATION/SUB-CONTRACTOR
OW-1	Ø			X	G.W	X															
OW-2	6			X	↓	X			12/8/14	1208	X	X	X								01/EAI
MW-4	6			X	↓	X			12/8/14	1106	X	X	X								02/EAI

FOR LAB USE ONLY

Received within hold time	☒ yes	☐ no	☐ N/A
Received in good condition	☒ yes	☐ no	☐ N/A
Samples received preserved	☒ yes	☐ no	☐ N/A
Temp. °C 2.7 /Frozen ice packs	☐ N/A		
Custody seal present	☐ yes	☒ no	

COMMENTS: Please Filter Both metals samples

EDD per historical KH 12/9/14

Method: (circle one) NPDES RCRA DW

Report Format: (circle one) Standard ME DEP EDD

	DATE	TIME	RECEIVED BY:
RELINQUISHED BY SAMPLER: Jason Patterson -CES	12/8/14	1430	
RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
RELINQUISHED BY:	12/9/14	10:05	RECEIVED BY LABORATORY:

COC 7912

It is the client's responsibility to check for accuracy prior to relinquishing samples.

Eastern Analytical, Inc.

professional laboratory & drilling services

Jackie Villinski
Maine Environmental Laboratory
One Main Street
Yarmouth , ME 04096

ACCREDITED IN ACCORDANCE WITH nelac

Subject: Laboratory Report

Eastern Analytical, Inc. ID: 138928
Client Identification: CES118-14
Date Received: 12/10/2014

Dear Ms. Villinski :

Enclosed please find the laboratory report for the above identified project. All analyses were performed in accordance with our QA/QC Program. Unless otherwise stated, holding times, preservation techniques, container types, and sample conditions adhered to EPA Protocol. Samples which were collected by Eastern Analytical, Inc. (EAI) were collected in accordance with approved EPA procedures. Eastern Analytical, Inc. certifies that the enclosed test results meet all requirements of NELAP and other applicable state certifications. Please refer to our website at www.eailabs.com for a copy of our NELAP certificate and accredited parameters.

The following standard abbreviations and conventions apply to all EAI reports:

Solid samples are reported on a dry weight basis, unless otherwise noted
< : "less than" followed by the reporting limit
> : "greater than" followed by the reporting limit
%R : % Recovery

Eastern Analytical Inc. maintains certification in the following states: Connecticut (PH-0492), Maine (NH005), Massachusetts (M-NH005), New Hampshire/NELAP (1012), Rhode Island (269) and Vermont (VT1012).

The following information is contained within this report: Sample Conditions summary, Analytical Results/Data, Quality Control data (if requested) and copies of the Chain of Custody. This report may not be reproduced except in full, without the the written approval of the laboratory.

If you have any questions regarding the results contained within, please feel free to directly contact me or the chemist(s) who performed the testing in question. Unless otherwise requested, we will dispose of the sample(s) 30 days from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

Lorraine Olashaw — Lorraine Olashaw, Lab Director

12.19.14 — Date

8 — # of pages (excluding cover letter)

SAMPLE CONDITIONS PAGE

EAI ID#: **138928**

Client: **Maine Environmental Laboratory**

Client Designation: **CES118-14**

Temperature upon receipt (°C): 2.8 **Received on ice or cold packs (Yes/No): Y**

Acceptable temperature range (°C): 0-6

Lab ID	Sample ID	Date Received	Date Sampled	Sample Matrix	% Dry Weight	Exceptions/Comments (other than thermal preservation)
138928.01	OW-2	12/10/14	12/8/14	aqueous		Adheres to Sample Acceptance Policy
138928.02	MW-4	12/10/14	12/8/14	aqueous		Adheres to Sample Acceptance Policy

Samples were properly preserved and the pH measured when applicable unless otherwise noted. Analysis of solids for pH, Flashpoint, Ignitibility, Paint Filter, Corrosivity, Conductivity and Specific Gravity are reported on an "as received" basis.
Immediate analyses, pH, Total Residual Chlorine, Dissolved Oxygen and Sulfite, performed at the laboratory were run outside of the recommended 15 minute hold time.
All results contained in this report relate only to the above listed samples.
References include:
1) EPA 600/4-79-020, 1983
2) Standard Methods for Examination of Water and Wastewater,20th Edition, 1998 and 22nd Edition, 2012
3) Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB
4) Hach Water Analysis Handbook, 2nd edition, 1992

Eastern Analytical, Inc. www.eailabs.com | 800.287.0525 | customerservice@eailabs.com

LABORATORY REPORT

EAI ID#: **138928**

Client: **Maine Environmental Laboratory**

Client Designation: **CES118-14**

Client Sample ID:	OW-2
Lab Sample ID:	138928.01
Matrix:	aqueous
Date Sampled:	12/8/14
Date Received:	12/10/14
Date Prepared:	

	Result	RL	Dilution Factor	Units	Date Analyzed	Method	Analyst
Methyl-t-butyl ether(MTBE)	< 5	5	1.0	ug/l	12/15/14	MA VPH	VG
Benzene	< 1	1	1.0	ug/l	12/15/14	MA VPH	VG
Toluene	< 1	1	1.0	ug/l	12/15/14	MA VPH	VG
Ethylbenzene	< 1	1	1.0	ug/l	12/15/14	MA VPH	VG
mp-Xylene	< 1	1	1.0	ug/l	12/15/14	MA VPH	VG
o-Xylene	< 1	1	1.0	ug/l	12/15/14	MA VPH	VG
Naphthalene	< 5	5	1.0	ug/l	12/15/14	MA VPH	VG
C5-C8 Aliphatics Hydrocarbons 1,2	< 100	100	1.0	ug/l	12/15/14	MA VPH	VG
C9-C12 Aliphatic Hydrocarbons 1,3	< 100	100	1.0	ug/l	12/15/14	MA VPH	VG
C9-C10 Aromatic Hydrocarbons 1	< 100	100	1.0	ug/l	12/15/14	MA VPH	VG
PID 2,5-Dibromotoluene (surr)	**84 %R**			%	12/15/14	MA VPH	VG
FID 2,5-Dibromotoluene (surr)	**81 %R**			%	12/15/14	MA VPH	VG

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2 C5-C8 Aliphatic Hydrocarbons exclude the concentration of MTBE, benzene and toluene eluting in that range.
3 C9-C12 Aliphatic Hydrocarbons exclude the concentration of ethylbenzene and xylenes eluting in that range and the concentration of C9-C10 Aromatic Hydrocarbons.

LABORATORY REPORT

EAI ID#: **138928**

Client: **Maine Environmental Laboratory**

Client Designation: **CES118-14**

Client Sample ID:	MW-4
Lab Sample ID:	138928.02
Matrix:	aqueous
Date Sampled:	12/8/14
Date Received:	12/10/14
Date Prepared:	

	Result	RL	Dilution Factor	Units	Date Analyzed	Method	Analyst
Methyl-t-butyl ether(MTBE)	< 5	5	1.0	ug/l	12/15/14	MA VPH	VG
Benzene	< 1	1	1.0	ug/l	12/15/14	MA VPH	VG
Toluene	< 1	1	1.0	ug/l	12/15/14	MA VPH	VG
Ethylbenzene	< 1	1	1.0	ug/l	12/15/14	MA VPH	VG
mp-Xylene	< 1	1	1.0	ug/l	12/15/14	MA VPH	VG
o-Xylene	< 1	1	1.0	ug/l	12/15/14	MA VPH	VG
Naphthalene	< 5	5	1.0	ug/l	12/15/14	MA VPH	VG
C5-C8 Aliphatics Hydrocarbons 1,2	< 100	100	1.0	ug/l	12/15/14	MA VPH	VG
C9-C12 Aliphatic Hydrocarbons 1,3	< 100	100	1.0	ug/l	12/15/14	MA VPH	VG
C9-C10 Aromatic Hydrocarbons 1	< 100	100	1.0	ug/l	12/15/14	MA VPH	VG
PID 2,5-Dibromotoluene (surr)	**83 %R**			%	12/15/14	MA VPH	VG
FID 2,5-Dibromotoluene (surr)	**78 %R**			%	12/15/14	MA VPH	VG

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2 C5-C8 Aliphatic Hydrocarbons exclude the concentration of MTBE, benzene and toluene eluting in that range.
3 C9-C12 Aliphatic Hydrocarbons exclude the concentration of ethylbenzene and xylenes eluting in that range and the concentration of C9-C10 Aromatic Hydrocarbons.

QC REPORT

EAI ID#: **138928**

Client: **Maine Environmental Laboratory**

Client Designation: **CES118-14**

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Methyl-t-butyl ether(MTBE)	< 5	38 (95 %R)	37 (92 %R) (3 RPD)	12/15/2014	ug/l	70 - 130	25	MA VPH
Benzene	< 1	44 (109 %R)	43 (107 %R) (2 RPD)	12/15/2014	ug/l	70 - 130	25	MA VPH
Toluene	< 1	45 (112 %R)	43 (108 %R) (4 RPD)	12/15/2014	ug/l	70 - 130	25	MA VPH
Ethylbenzene	< 1	47 (117 %R)	45 (112 %R) (4 RPD)	12/15/2014	ug/l	70 - 130	25	MA VPH
mp-Xylene	< 1	80 (100 %R)	78 (97 %R) (3 RPD)	12/15/2014	ug/l	70 - 130	25	MA VPH
o-Xylene	< 1	41 (103 %R)	40 (100 %R) (3 RPD)	12/15/2014	ug/l	70 - 130	25	MA VPH
Naphthalene	< 5	31 (78 %R)	30 (76 %R) (3 RPD)	12/15/2014	ug/l	70 - 130	25	MA VPH
Unadjusted C5-C8 Aliphatics 1	< 100	110 (92 %R)	100 (85 %R) (8 RPD)	12/15/2014	ug/l	70 - 130	25	MA VPH
Unadjusted C9-C12 Aliphatics 1	< 100	< 100 (77 %R)	< 100 (72 %R) (7 RPD)	12/15/2014	ug/l	70 - 130	25	MA VPH
C5-C8 Aliphatics Hydrocarbons	< 100	< 100 (%R N/A)	< 100 (%R N/A) (RPD N/A)	12/15/2014	ug/l	70 - 130	25	MA VPH
C9-C12 Aliphatic Hydrocarbons	< 100	< 100 (%R N/A)	< 100 (%R N/A) (RPD N/A)	12/15/2014	ug/l	70 - 130	25	MA VPH
C9-C10 Aromatic Hydrocarbons	< 100	< 100 (98 %R)	< 100 (95 %R) (3 RPD)	12/15/2014	ug/l	70 - 130	25	MA VPH
PID 2,5-Dibromotoluene (surr)	84 %R	83 %R	83 %R	12/15/2014	% Rec	70 - 130	25	MA VPH
FID 2,5-Dibromotoluene (surr)	79 %R	74 %R	75 %R	12/15/2014	% Rec	70 - 130	25	MA VPH

Samples were extracted and analyzed within holding time limits.
Instrumentation was calibrated in accordance with the method requirements.
The method blanks were free of contamination at the reporting limits.
Sample surrogate recoveries met the above stated criteria.
The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.
There were no exceptions in the analyses, unless noted.
*/! Flagged analyte recoveries deviated from the QA/QC limits. Unless noted below, flagged analytes that exceed acceptance limits in the Quality Control sample were not detected in the field samples.

LABORATORY REPORT

EAI ID#: **138928**

Client: **Maine Environmental Laboratory**

Client Designation: **CES118-14**

Client Sample ID:	OW-2
Lab Sample ID:	138928.01
Matrix:	aqueous
Date Sampled:	12/8/14
Date Received:	12/10/14
Date Prepared:	12/11/14

	Result	RL	Dilution Factor	Units	Date Analyzed	Method	Analyst
Naphthalene	< 2	2	1	ug/l	12/18/14	MA EPH	JMR
2-Methylnaphthalene	< 2	2	1	ug/l	12/18/14	MA EPH	JMR
Acenaphthylene	< 2	2	1	ug/l	12/18/14	MA EPH	JMR
Acenaphthene	< 2	2	1	ug/l	12/18/14	MA EPH	JMR
Fluorene	< 2	2	1	ug/l	12/18/14	MA EPH	JMR
Phenanthrene	< 2	2	1	ug/l	12/18/14	MA EPH	JMR
Anthracene	< 2	2	1	ug/l	12/18/14	MA EPH	JMR
Fluoranthene	< 2	2	1	ug/l	12/18/14	MA EPH	JMR
Pyrene	< 2	2	1	ug/l	12/18/14	MA EPH	JMR
Benzo[a]anthracene	< 2	2	1	ug/l	12/18/14	MA EPH	JMR
Chrysene	< 2	2	1	ug/l	12/18/14	MA EPH	JMR
Benzo[b]fluoranthene	< 2	2	1	ug/l	12/18/14	MA EPH	JMR
Benzo[k]fluoranthene	< 2	2	1	ug/l	12/18/14	MA EPH	JMR
Benzo[a]pyrene	< 2	2	1	ug/l	12/18/14	MA EPH	JMR
Indeno[1,2,3-cd]pyrene	< 4	4	1	ug/l	12/18/14	MA EPH	JMR
Dibenz[a,h]anthracene	< 4	4	1	ug/l	12/18/14	MA EPH	JMR
Benzo[g,h,i]perylene	< 2	2	1	ug/l	12/18/14	MA EPH	JMR
C9-C18 Aliphatic Hydrocarbons	< 100	100	1	ug/l	12/19/14	MA EPH	JMR
C19-C36 Aliphatic Hydrocarbons	< 100	100	1	ug/l	12/19/14	MA EPH	JMR
C11-C22 Aromatic Hydrocarbons	< 100	100	1	ug/l		MA EPH	JMR
1-Chlorooctadecane (surr)	**45 %R**			%	12/19/14	MA EPH	JMR
o-Terphenyl (surr)	**68 %R**			%	12/18/14	MA EPH	JMR
2-Fluorobiphenyl (surr)	**79 %R**			%	12/18/14	MA EPH	JMR
2-Bromonaphthalene (surr)	**78 %R**			%	12/18/14	MA EPH	JMR

EPH Surrogate Acceptance Range: 40-140%
Hydrocarbon range data exclude concentrations of any surrogate(s) and internal standards eluting in that range.
C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes.
Solid samples prepared in accordance with EPA Method 3545A.
Aqueous samples prepared in accordance with EPA Method 3510C.

LABORATORY REPORT

EAI ID#: **138928**

Client: **Maine Environmental Laboratory**

Client Designation: **CES118-14**

Client Sample ID:	MW-4
Lab Sample ID:	138928.02
Matrix:	aqueous
Date Sampled:	12/8/14
Date Received:	12/10/14
Date Prepared:	12/11/14

	Result	RL	Dilution Factor	Units	Date Analyzed	Method	Analyst
Naphthalene	< 2	2	1	ug/l	12/18/14	MA EPH	JMR
2-Methylnaphthalene	< 2	2	1	ug/l	12/18/14	MA EPH	JMR
Acenaphthylene	< 2	2	1	ug/l	12/18/14	MA EPH	JMR
Acenaphthene	< 2	2	1	ug/l	12/18/14	MA EPH	JMR
Fluorene	< 2	2	1	ug/l	12/18/14	MA EPH	JMR
Phenanthrene	< 2	2	1	ug/l	12/18/14	MA EPH	JMR
Anthracene	< 2	2	1	ug/l	12/18/14	MA EPH	JMR
Fluoranthene	< 2	2	1	ug/l	12/18/14	MA EPH	JMR
Pyrene	< 2	2	1	ug/l	12/18/14	MA EPH	JMR
Benzo[a]anthracene	< 2	2	1	ug/l	12/18/14	MA EPH	JMR
Chrysene	< 2	2	1	ug/l	12/18/14	MA EPH	JMR
Benzo[b]fluoranthene	< 2	2	1	ug/l	12/18/14	MA EPH	JMR
Benzo[k]fluoranthene	< 2	2	1	ug/l	12/18/14	MA EPH	JMR
Benzo[a]pyrene	< 2	2	1	ug/l	12/18/14	MA EPH	JMR
Indeno[1,2,3-cd]pyrene	< 4	4	1	ug/l	12/18/14	MA EPH	JMR
Dibenz[a,h]anthracene	< 4	4	1	ug/l	12/18/14	MA EPH	JMR
Benzo[g,h,i]perylene	< 2	2	1	ug/l	12/18/14	MA EPH	JMR
C9-C18 Aliphatic Hydrocarbons	< 100	100	1	ug/l	12/19/14	MA EPH	JMR
C19-C36 Aliphatic Hydrocarbons	< 100	100	1	ug/l	12/19/14	MA EPH	JMR
C11-C22 Aromatic Hydrocarbons	< 100	100	1	ug/l		MA EPH	JMR
1-Chlorooctadecane (surr)	**28 %R**			%	12/19/14	MA EPH	JMR
o-Terphenyl (surr)	**69 %R**			%	12/18/14	MA EPH	JMR
2-Fluorobiphenyl (surr)	**78 %R**			%	12/18/14	MA EPH	JMR
2-Bromonaphthalene (surr)	**77 %R**			%	12/18/14	MA EPH	JMR

EPH Surrogate Acceptance Range: 40-140%
Hydrocarbon range data exclude concentrations of any surrogate(s) and internal standards eluting in that range.
C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes.
Solid samples prepared in accordance with EPA Method 3545A.
Aqueous samples prepared in accordance with EPA Method 3510C.

The extraction surrogate 1-Chlorooctadecane exhibited recovery below acceptance limits. The result was confirmed by re-analysis.

QC REPORT

EAI ID#: **138928**

Client: **Maine Environmental Laboratory**

Batch ID: 63553819887/A121014MAEPH1

Client Designation: **CES118-14**

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Naphthalene	< 2	23 (57 %R)	20 (49 %R) (15 RPD)	12/11/2014	ug/l	40 - 140	25	MA EPH
2-Methylnaphthalene	< 2	27 (68 %R)	26 (66 %R) (3 RPD)	12/11/2014	ug/l	40 - 140	25	MA EPH
Acenaphthylene	< 2	27 (68 %R)	27 (67 %R) (1 RPD)	12/11/2014	ug/l	40 - 140	25	MA EPH
Acenaphthene	< 2	27 (67 %R)	27 (69 %R) (3 RPD)	12/11/2014	ug/l	40 - 140	25	MA EPH
Fluorene	< 2	28 (70 %R)	28 (70 %R) (0 RPD)	12/11/2014	ug/l	40 - 140	25	MA EPH
Phenanthrene	< 2	29 (74 %R)	28 (70 %R) (6 RPD)	12/11/2014	ug/l	40 - 140	25	MA EPH
Anthracene	< 2	28 (71 %R)	28 (70 %R) (1 RPD)	12/11/2014	ug/l	40 - 140	25	MA EPH
Fluoranthene	< 2	32 (79 %R)	31 (77 %R) (3 RPD)	12/11/2014	ug/l	40 - 140	25	MA EPH
Pyrene	< 2	30 (74 %R)	30 (76 %R) (3 RPD)	12/11/2014	ug/l	40 - 140	25	MA EPH
Benzo[a]anthracene	< 2	32 (79 %R)	29 (73 %R) (8 RPD)	12/11/2014	ug/l	40 - 140	25	MA EPH
Chrysene	< 2	29 (73 %R)	29 (72 %R) (1 RPD)	12/11/2014	ug/l	40 - 140	25	MA EPH
Benzo[b]fluoranthene	< 2	34 (85 %R)	33 (83 %R) (2 RPD)	12/11/2014	ug/l	40 - 140	25	MA EPH
Benzo[k]fluoranthene	< 2	32 (80 %R)	34 (84 %R) (5 RPD)	12/11/2014	ug/l	40 - 140	25	MA EPH
Benzo[a]pyrene	< 2	34 (86 %R)	35 (88 %R) (2 RPD)	12/11/2014	ug/l	40 - 140	25	MA EPH
Indeno[1,2,3-cd]pyrene	< 2	35 (87 %R)	39 (96 %R) (10 RPD)	12/11/2014	ug/l	40 - 140	25	MA EPH
Dibenz[a,h]anthracene	< 2	34 (86 %R)	38 (96 %R) (11 RPD)	12/11/2014	ug/l	40 - 140	25	MA EPH
Benzo[g,h,i]perylene	< 2	31 (77 %R)	37 (93 %R) (19 RPD)	12/11/2014	ug/l	40 - 140	25	MA EPH
C9-C18 Aliphatic Hydrocarbons	< 100	130 (54 %R)	140 (60 %R) (11 RPD)	12/11/2014	ug/l	40 - 140	25	MA EPH
C19-C36 Aliphatic Hydrocarbons	< 100	280 (86 %R)	250 (77 %R) (11 RPD)	12/11/2014	ug/l	40 - 140	25	MA EPH
C11-C22 Aromatic Hydrocarbons	< 100	< 100 (%R N/A)	< 100 (%R N/A) (RPD		ug/l			MA EPH
C11-C22 Aromatic (Unadjusted)	< 100	520 (77 %R)	530 (78 %R) (1 RPD)	12/11/2014	ug/l	40 - 140	25	MA EPH
1-Chlorooctadecane (surr)	65 %R	62 %R	70 %R	12/11/2014	% Rec	40 - 140		MA EPH
o-Terphenyl (surr)	81 %R	80 %R	74 %R	12/11/2014	% Rec	40 - 140		MA EPH
2-Fluorobiphenyl (surr)	81 %R	76 %R	75 %R	12/11/2014	% Rec	40 - 140		MA EPH
2-Bromonaphthalene (surr)	77 %R	79 %R	76 %R	12/11/2014	% Rec	40 - 140		MA EPH

Samples were extracted and analyzed within holding time limits.
Instrumentation was calibrated in accordance with the method requirements.
The method blanks were free of contamination at the reporting limits.
Sample surrogate recoveries met the above stated criteria.
The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.
There were no exceptions in the analyses, unless noted.
*/! Flagged analyte recoveries deviated from the QA/QC limits. Unless noted below, flagged analytes that exceed acceptance limits in the Quality Control sample were not detected in the field samples.

Percent (%) breakthrough of Naphthalene in the LCS/LCSD: < 5/< 5%.
Percent (%) breakthrough of 2-Methylnaphthalene in the LCS/LCSD: < 5/< 5%.

EAI

MAINE ENVIRONMENTAL LABORATORY- Chain of Custody

One Main Street Yarmouth, ME 04096-6716 Tel: (207) 846-6569 Fax: (207) 846-9066
Email: melab@maine.rr.com Web: MaineEnvironmentalLaboratory.com

138928 8

REPORT TO: J. Villinski
TELEPHONE:
EMAIL:
COMPANY:
BILL TO / PURCHASE ORDER #:
ADDRESS:
PROJECT NAME: CES118-14
SAMPLER NAME:

ANALYSES (Specify Method: RCRA, NPDES, DW, e

SAMPLE RECEIVING
Within Hold Time? ☐ Yes ☐ No ☐ N/A
Good Condition? ☐ Yes ☐ No ☐ N/A
Preserved? ☐ Yes ☐ No ☐ N/A
Custody Seal? ☐ Yes ☐ No ☐ N/A
Del. by: _____
Temp. °C _____

SAMPLE IDENTIFICATION	# CONTAINERS	TYPE OF CONTAINERS	FIELD FILTRATION YES	FIELD FILTRATION NO	SAMPLE TYPE	GRAB	COMP.	METHOD PRESERVED	SAMPLING DATE	SAMPLING TIME	EPH	VPH	LAB ID/SUBCONTRACTOR
OW-2	3 2	Vial AMBR		X	GW	X		HCl/4°C	12/8/14	1208	X	X	
MW-4	3 2	Vial AMBR		X	↓	X		↓	↓	1106	X	X	

TURNAROUND REQUEST
☒ Standard 12/19
☐ Priority (SURCHARGE)
MEL3120101-40

REPORTING REQUIREMENTS?
☐ Standard Report
☒ ME DEP EDD (MacQuinn Quarry (10390.001))
☐ DW Compliance (sent to State)
☐ CC Results to _____

COMMENTS
2.8°C ice

	DATE	TIME	
RELINQUISHED BY SAMPLER:			RECEIVED BY:
RELINQUISHED BY: J. Balyer	12-10-14	1115	RECEIVED BY: Norman Cain
RELINQUISHED BY: Norman Cain	12/10/14	1335	RECEIVED BY LABORATORY:

COC 4414 It is the client's responsibility to check for accuracy prior to relinquishing samples. By executing this COC, the client has read and agrees to be bound by MEL's Terms & Conditions.

CES INC

FIELD DATA INFORMATION
GROUNDWATER SAMPLING LOG

Job #: 10390.001.2014	Well #: OW-1	Date: 12/4/14	
Project: Harold MacQuinn - Kittredge Pit		Site: Lamoine/Kittridge	
Well Depth: 13.06	Screen Length: Unknown	Well Diameter:	Casing Type: PVC
Sampling Device: ~~Submersible~~ Peristaltic		Tubing Type: Ded. Poly ✓	
Water Level (before sampling): Dry		Water Level (after sampling):	
Pump Rate:		Measuring Point:	
Start Time:	End Time:	Total Pumping Time:	
Elevation Reference Datum:		Weather: Sunny, 35°	
CES, Inc. Sampling Personnel: JP			

SLOW PURGE DATA

Time	Depth (ft)	Time	Depth (ft)	Time	Depth (ft)	Time	Depth (ft)

FIELD PARAMETER READINGS

Time	pH (S.U.)	Sp. Cond. (uS/CM)	Turb. (NTU)	D.O. (MG/L)	Temp. (°C)	ORP (mv)	Water Level (Ft.)	Notes

NOTES

Calibration Record	Date:	Type of Meter:
	Time:	Comments:

CES INC

FIELD DATA INFORMATION

GROUNDWATER SAMPLING LOG

Job #: 10390.001.2014	Well #: OW-1	Date: 12/8/14	
Project: Harold MacQuinn		Site: Kittridge Pit	
Well Depth:	Screen Length: Unknown	Well Diameter:	Casing Type: PVC
Sampling Device: Submersible		Tubing Type: Ded. Poly	
Water Level (before sampling): Dry		Water Level (after sampling):	
Pump Rate:		Measuring Point:	
Start Time:	End Time:	Total Pumping Time:	
Elevation Reference Datum:		Weather: Sunny, 20°	
CES, Inc. Sampling Personnel: J.P.			

SLOW PURGE DATA

Time	Depth (ft)	Time	Depth (ft)	Time	Depth (ft)	Time	Depth (ft)

FIELD PARAMETER READINGS

Time	pH (S.U.)	Sp. Cond. (uS/CM)	Turb. (NTU)	D.O. (MG/L)	Temp. (°C)	ORP (mv)	Water Level (Ft.)	Notes

NOTES

Calibration Record	Date:	Type of Meter:
	Time:	Comments:

CES INC

FIELD DATA INFORMATION

GROUNDWATER SAMPLING LOG

Job #: 10390.001.2014	Well #: OW-2	Date: 12/8/14	
Project: Harold MacQuinn		Site: Kittridge Pit	
Well Depth:	Screen Length: Unknown	Well Diameter: 2"	Casing Type: PVC
Sampling Device: Submersible Bailer		Tubing Type: Ded. Poly	
Water Level (before sampling): 69.18		Water Level (after sampling): 69.18	
Pump Rate: N/A		Measuring Point: Top of PVC	
Start Time: 1208	End Time: 1248	Total Pumping Time: 40 mins	
Elevation Reference Datum:		Weather: Sunny, 20°	
CES, Inc. Sampling Personnel: JC			

SLOW PURGE DATA

Time	Depth (ft)	Time	Depth (ft)	Time	Depth (ft)	Time	Depth (ft)

FIELD PARAMETER READINGS

Time	pH (S.U.)	Sp. Cond. (uS/CM)	Turb. (NTU)	D.O. (MG/L)	Temp. (°C)	ORP (mv)	Water Level (Ft.)	Notes
1227	6.13	138	115	6-8	6.3		69.18	Lt Yellow, odorless

NOTES

Casing 5" Below PVC

Calibration Record	Date:	Type of Meter:
See Pg 1	Time:	Comments:

CES INC

FIELD DATA INFORMATION
GROUNDWATER SAMPLING LOG

Job #: 10390.001.2014	Well #: OW-2	Date: 12/4/19	
Project: Harold MacQuinn - Kittredge Pit		Site: Lamoine/Kittridge	
Well Depth: 100.05	Screen Length: Unknown	Well Diameter: 2"	Casing Type: PVC
Sampling Device: ~~Submersible~~ Waterra		Tubing Type: Ded. Poly	
Water Level (before sampling): 69.30		Water Level (after sampling):	
Pump Rate:		Measuring Point: Top PVC	
Start Time: 1228	End Time:	Total Pumping Time:	
Elevation Reference Datum:		Weather:	
CES, Inc. Sampling Personnel:			

SLOW PURGE DATA

Time	Depth (ft)	Time	Depth (ft)	Time	Depth (ft)	Time	Depth (ft)
1228	69.30						
1230	68.82						
1232	69.82						
1234	69.80						
1236	69.82						

FIELD PARAMETER READINGS

Time	pH (S.U.)	Sp. Cond. (uS/CM)	Turb. (NTU)	D.O. (MG/L)	Temp. (°C)	ORP (mv)	Water Level (Ft.)	Notes
1256	6.00	142	>999	4.5	8.2		69.82	
1259	6.03	141	>999	↓	8.3		↓	
1302	6.20	142	>999	↓	7.7		↓	
1305	6.18	141	>999	↓	7.6		↓	
1308								* see pg 3

NOTES

Casing Sunk ~7" Below well Riser. This caused the waterra to stop operating. Tried lifting casing, but it just kept sinking. - unable to sample

Calibration Record	Date:	Type of Meter:
see pg 1	Time:	Comments:

CES INC

FIELD DATA INFORMATION

GROUNDWATER SAMPLING LOG

Job #: 10390.001.2014	Well #: ~~OW-4~~ MW-4	Date: 12/8/14	
Project: Harold MacQuinn		Site: ~~Higgings Pit~~ Kittridge	
Well Depth:	Screen Length: Unknown	Well Diameter: 2"	Casing Type: PVC
Sampling Device: Submersible Bailer		Tubing Type: Ded. Poly	
Water Level (before sampling): 58.31		Water Level (after sampling): 60.84	
Pump Rate: N/A		Measuring Point: Top PVC	
Start Time: 1106	End Time: 1140	Total Pumping Time: 34 min	
Elevation Reference Datum:		Weather: Sunny 20°	
CES, Inc. Sampling Personnel: JP			

SLOW PURGE DATA

Time	Depth (ft)	Time	Depth (ft)	Time	Depth (ft)	Time	Depth (ft)

FIELD PARAMETER READINGS

Time	pH (S.U.)	Sp. Cond. (uS/CM)	Turb. (NTU)	D.O. (MG/L)	Temp. (°C)	ORP (mv)	Water Level (Ft.)	Notes
1237	5.48	40	7779	6.8	6.1		60.84	Brown, cloudy, odorless

NOTES

Calibration Record	Date: 12/8/14	Type of Meter: Horiba
	Time: 917	Comments: Lab-Cal Std

CES INC

FIELD DATA INFORMATION
GROUNDWATER SAMPLING LOG

Job #: 10390.001.2014	Well #: MW-4	Date: 12/4/14	
Project: Harold MacQuinn - Kittredge Pit		Site: Lamoine/Kittridge	
Well Depth: 65.15	Screen Length: Unknown	Well Diameter:	Casing Type: PVC
Sampling Device: ~~Submersible~~		Tubing Type: Ded. Poly	
Water Level (before sampling): 58.26		Water Level (after sampling):	
Pump Rate:		Measuring Point: TOP PVC	
Start Time: 1035	End Time:	Total Pumping Time:	
Elevation Reference Datum:		Weather: Sunny, 35°	
CES, Inc. Sampling Personnel: JP			

SLOW PURGE DATA

Time	Depth (ft)	Time	Depth (ft)	Time	Depth (ft)	Time	Depth (ft)
1035	58.26						
1037	58.38						
1039	58.38						
1041	58.45						
1043	58.45						

FIELD PARAMETER READINGS

Time	pH (S.U.)	Sp. Cond. (uS/CM)	Turb. (NTU)	D.O. (MG/L)	Temp. (°C)	ORP (mv)	Water Level (Ft.)	Notes
10								

NOTES

Too Dry to Sample - WATERA Tubing getting Plugged
distance to well bottom to Short

Calibration Record	Date: 12/4/14	Type of Meter: Horiba
	Time: 7am	Comments: Auto-cal Std

JN

CES INC

Job #: 10390.001.2014	Well #: PB-1;PB-4/MW-2, (2	Date: 12/4/14	
Project: Harold MacQuinn		Site: Kittredge PA	
Well Depth: N/A	Screen Length: Unknown	Well Diameter: N/A	Casing Type: N/a
Sampling Device: ~~Submersible~~		Tubing Type: N/A	
Water Level (before sampling):		Water Level (after sampling): N/A	
Pump Rate: N/A		Measuring Point: See Below	
Start Time: N/A	End Time: N/A	Total Pumping Time: N/A	
Elevation Reference Datum: N/A		Weather: Sunny, 35°	
CES, Inc. Sampling Personnel: JP			

Well Depths

Location	Time	Measuring Point	Depth
PB-1	1047	PVC-Top	~~87.64~~ 135.54
PB-2	954	PVC-Top	154.18
PB-3	1002	PVC-Top	155.38
PB-4-D	1011	PVC-Top	101.26
MW-2	1123	PVC-Top	31.15
PB-4-S	1014	PVC-Top	35.28

NOTES

Calibration Record	Date:	Type of Meter:
	Time:	Comments: