One Main Street, Yarmouth, ME 04096 Tel.: 207-846-6569 FAX: 207-846-9066 Email: melab@mel-lab.com

# **Report of Analyses**

## **Report Prepared for:**

Bud Brown ECO-Analysts, Inc. P.O. Box 224 Bath, ME 04530

### Report Information:

Batch ID: ONE 7771 Report ID: 7771-200723-1156 Date of Issue: July 23, 2020

The complete report consists of the following parts:

Maine Environmental Laboratory report

Chain of Custody form Alpha Analytical report Eastern Analytical, Inc. report Pace Analytical report

#### **REPORT NARRATIVE:**

Enclosed are results of the analyses for your samples as received by the laboratory. Results are for the exclusive use of the client named on the report and will not be released to a third party without written consent. This report shall not be reproduced except in full without the written consent of the laboratory.

Maine Environmental Laboratory is accredited by the States of Maine (Cert. #ME00028) and New Hampshire (NH ELAP) (Cert. #2031) and is TNI/NELAP accredited. Please refer to our website www.maineenvironmentallaboratory.com for a copy of our Maine and NH ELAP certificates and accredited parameters. When a subcontracted laboratory is listed above, the data produced is by a Maine accredited laboratory accredited for the fields of testing performed.

#### Unless otherwise noted:

- Samples were received in acceptable condition and analyzed within method hold times.
- Soils, sediments, solids and tissues are reported on dry weight basis. Wipes are reported on an "as received" basis.
- All quality control data demonstrated acceptable limits
- The results reported herein conform to the most current NELAP standards where applicable.
- Analysis of solids for pH, flash point, ignitability, paint filter, corrosivity, conductivity and specific gravity are report ed on an "as received" basis.
- Results for "immediate" field parameters tested at the lab such as pH were run outside of the EPA-recommended hold time.

#### **DEFINITIONS**

LOQ / RL - The Limit of Quantitation / Reporting Limit is the minimum level for reporting quantitative data.

LOD / MDL - The Limit of Detection / Method Detection Limit is the minimum level for reporting estimated data.

J - Data reported between the Limit of Quantitation and Limit of Detection is J-flagged as "estimated."

ND or U - Not detected below the LOD / MDL

- B Detected in QC blank
- S Detection Limits increased due to sample matrix
- D1 Relative Percent Difference (RPD) cannot be calculated because the sample result was below the LOQ.
- D2 Native sample concentration was less than 5 times the LOQ. RPD acceptance range is  $\pm$  LOQ.
- 4X Native sample concentration was greater than 4 times the spike concentration so the spike added could not be distinguished from the native concentration.
- % Rec Percent Recovery; RPD Relative Percent Difference
- D Duplicate sample
- R Reanalysis

#### METHOD REFERENCES:

SM2540G: Standard Methods for the Examination of Water and Wastewater, 18th edition, APHA, AWWA, WPCF, 1992.

SW3050B: SW846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, USEPA, third edition. Updates I-IV, 2007.

SW6010B: SW846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, USEPA, third edition. Updates I-IV, 2007.

SW7471B: SW846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, USEPA, third edition. Updates I-IV, 2007.

This report has been reviewed and authorized by Jacquelyn R. Villinski, Laboratory Director:

Jacquelyn R. Vileinski

Report of Analyses

One Main Street, Yarmouth, ME 04096 Tel.: 207-846-6569 FAX: 207-846-9066 Email: melab@mel-lab.com

Bud Brown ECO-Analysts, Inc. P.O. Box 224 Bath, ME 04530

July 23, 2020

Report ID: 7771-200723-1156

Batch ID: ONE 7771 Sample date: 07/14/20 9:30

Sample ID: A1

Date received: 07/15/20 Sample matrix: SD - grab
Project ID: Yachting Solutions Laboratory ID: 200715J001

Date Time Parameter Results Units Analyzed Analyzed LOD LOQ Method Tech 74.22 DJC **Total Solids** % 07/16/20 16:00 0.01 SM2540G Arsenic, total 20 mg/kg 07/21/20 7:55 0.41 1.4 SW3050B/SW6010B **DWS** 0.81 J 07/21/20 **DWS** Cadmium, total mg/kg 7:55 0.41 SW3050B/SW6010B 1.4 Chromium, total 63 mg/kg 07/21/20 7:55 1.4 4.1 SW3050B/SW6010B **DWS** Lead, total 12 07/21/20 7:55 **DWS** mg/kg 1.4 4.1 SW3050B/SW6010B Mercury, total 0.10 mg/kg 07/15/20 14:55 0.027 0.068 SW7471B **DWS** 

Report of Analyses

One Main Street, Yarmouth, ME 04096 Tel.: 207-846-6569 FAX: 207-846-9066 Email: melab@mel-lab.com

Sample ID: A2

Bud Brown ECO-Analysts, Inc. P.O. Box 224 Bath, ME 04530

July 23, 2020

10:15

Report ID: 7771-200723-1156

Batch ID: ONE 7771 Sample date: 07/14/20

Date received: 07/15/20 Sample matrix: SD - grab
Project ID: Yachting Solutions Laboratory ID: 200715J002

Date Time Parameter Results Units Analyzed Analyzed LOD LOQ Method Tech 77.33 DJC **Total Solids** % 07/16/20 16:00 0.01 SM2540G Arsenic, total 28 mg/kg 07/21/20 7:55 0.39 1.3 SW3050B/SW6010B **DWS** 07/21/20 **DWS** Cadmium, total 1.1 J mg/kg 7:55 0.39 SW3050B/SW6010B 1.3 Chromium, total 70 mg/kg 07/21/20 7:55 1.3 3.9 SW3050B/SW6010B **DWS** Lead, total 6.6 07/21/20 7:55 **DWS** mg/kg 1.3 3.9 SW3050B/SW6010B Mercury, total ND mg/kg 07/15/20 14:55 0.026 0.065 SW7471B **DWS** 

Report of Analyses

One Main Street, Yarmouth, ME 04096 Tel.: 207-846-6569 FAX: 207-846-9066 Email: melab@mel-lab.com

Sample ID: B1

Bud Brown ECO-Analysts, Inc. P.O. Box 224 Bath, ME 04530

July 23, 2020

10:45

Report ID: 7771-200723-1156

Batch ID: ONE 7771 Sample date: 07/14/20

Date received: 07/15/20 Sample matrix: SD - grab
Project ID: Yachting Solutions Laboratory ID: 200715J003

Date Time Parameter Results Units Analyzed Analyzed LOD LOQ Method Tech 77.42 DJC **Total Solids** % 07/16/20 16:00 0.01 SM2540G Arsenic, total 17 mg/kg 07/21/20 7:55 0.39 1.3 SW3050B/SW6010B **DWS** 07/21/20 **DWS** Cadmium, total 1.0 J mg/kg 7:55 0.39 SW3050B/SW6010B 1.3 Chromium, total 60 mg/kg 07/21/20 7:55 1.3 3.9 SW3050B/SW6010B **DWS** Lead, total 4.8 07/21/20 7:55 **DWS** mg/kg 1.3 3.9 SW3050B/SW6010B Mercury, total 0.027 J mg/kg 07/15/20 14:55 0.026 0.065 SW7471B **DWS** 

Report of Analyses

One Main Street, Yarmouth, ME 04096 Tel.: 207-846-6569 FAX: 207-846-9066 Email: melab@mel-lab.com

Bud Brown ECO-Analysts, Inc. P.O. Box 224

Bath, ME 04530

July 23, 2020

Report ID: 7771-200723-1156

Batch ID: ONE 7771 Sample date: 07/14/20 11:30

Sample ID: B2

Date received: 07/15/20 Sample matrix: SD - grab
Project ID: Yachting Solutions Laboratory ID: 200715J004

Date Time Parameter Results Units Analyzed Analyzed LOD LOQ Method Tech 74.49 DJC **Total Solids** % 07/16/20 16:00 0.01 SM2540G Arsenic, total 20 mg/kg 07/21/20 7:55 0.4 1.3 SW3050B/SW6010B **DWS** 07/21/20 **DWS** Cadmium, total 1.1 J mg/kg 7:55 0.4 SW3050B/SW6010B 1.3 Chromium, total 59 mg/kg 07/21/20 7:55 1.3 4 SW3050B/SW6010B **DWS** Lead, total 6.7 07/21/20 7:55 4 **DWS** mg/kg 1.3 SW3050B/SW6010B Mercury, total ND mg/kg 07/15/20 14:55 0.027 0.067 SW7471B **DWS** 

ND

mg/kg

Report of Analyses

One Main Street, Yarmouth, ME 04096 Tel.: 207-846-6569 FAX: 207-846-9066 Email: melab@mel-lab.com

Bud Brown ECO-Analysts, Inc. P.O. Box 224

Bath, ME 04530

July 23, 2020

SW7471B

**DWS** 

Report ID: 7771-200723-1156

Batch ID: ONE 7771 Sample date: 07/14/20 12:00

Sample ID: B3

0.066

Date received: 07/15/20 Sample matrix: SD - grab
Project ID: Yachting Solutions Laboratory ID: 200715J005

Date Time Parameter Results Units Analyzed Analyzed LOD LOQ Method Tech 75.71 DJC **Total Solids** % 07/16/20 16:00 0.01 SM2540G Arsenic, total 17 mg/kg 07/21/20 7:55 0.4 1.3 SW3050B/SW6010B **DWS** 1.2 J 07/21/20 **DWS** Cadmium, total mg/kg 7:55 0.4 SW3050B/SW6010B 1.3 Chromium, total 59 mg/kg 07/21/20 7:55 1.3 4 SW3050B/SW6010B **DWS** Lead, total 5.3 07/21/20 7:55 4 **DWS** mg/kg 1.3 SW3050B/SW6010B

14:55

0.026

07/15/20

Notes:

Mercury, total

Report of Analyses

One Main Street, Yarmouth, ME 04096 Tel.: 207-846-6569 FAX: 207-846-9066 Email: melab@mel-lab.com

Bud Brown ECO-Analysts, Inc. P.O. Box 224 Bath, ME 04530

July 23, 2020

Report ID: 7771-200723-1156

Batch ID: ONE 7771 Sample date: 07/14/20 12:30

Sample ID: B4

Date received: 07/15/20 Sample matrix: SD - composite Project ID: Yachting Solutions Laboratory ID: 200715J006

			Date	Time				
Parameter	Results	Units	Analyzed	Analyzed	LOD	LOQ	Method	Tech
Total Solids	76.87	%	07/16/20	16:00		0.01	SM2540G	DJC
Arsenic, total	19	mg/kg	07/21/20	7:55	0.39	1.3	SW3050B/SW6010B	DWS
Cadmium, total	0.79 J	mg/kg	07/21/20	7:55	0.39	1.3	SW3050B/SW6010B	DWS
Chromium, total	60	mg/kg	07/21/20	7:55	1.3	3.9	SW3050B/SW6010B	DWS
Lead, total	6.0	mg/kg	07/21/20	7:55	1.3	3.9	SW3050B/SW6010B	DWS
Mercury, total	ND	mg/kg	07/15/20	14:55	0.026	0.065	SW7471B	DWS

Bath, ME 04530

## **Maine Environmental Laboratory**

One Main Street, Yarmouth, ME 04096 Tel: 207-846-6569 FAX: 207-846-9066 Email: melab@mel-lab.com

Bud Brown Date of Issue: 7/23/2020 ECO-Analysts, Inc.

P.O. Box 224 Report ID: 7771-200723-1156

Report of Analyses

# QC Data Method Blanks, Laboratory Control Samples, Sample QC

Analyte	QCType	Result	Value	Units	Max	Min	Reference	Ref. Value	Units	Lab SampleID
Arsenic, total	Duplicate - S	RPD	1.0	%	31		Concentration	17	mg/kg	200715J005
Arsenic, total	LCS - S	Recovery	94	%	131	69	Concentration	24.26	mg/kg	
Arsenic, total	LCS - S	Recovery	95	%	131	69	Concentration	24.57	mg/kg	
Arsenic, total	Matrix Spike - S	Recovery	93	%	126	74			0 0	200715J001
Arsenic, total	Method Blank - S	Concentration	0 U	mg/kg	1.4					
Arsenic, total	Method Blank - S	Concentration	0 U	mg/kg	1.4					
Cadmium, total	Duplicate - S	RPD	D1	%	31		Concentration	1.1	mg/kg	200715J005
Cadmium, total	LCS - S	Recovery	92	%	131	69	Concentration	93.62	mg/kg	
Cadmium, total	LCS - S	Recovery	96	%	131	69	Concentration	97.22	mg/kg	
Cadmium, total	Matrix Spike - S	Recovery	77	%	126	74			0 0	200715J001
Cadmium, total	Method Blank - S	Concentration	0.010 U	mg/kg	1.4					
Cadmium, total	Method Blank - S	Concentration	0.19 U	mg/kg	1.4					
Chromium, total	Duplicate - S	RPD	0.0	%	31		Concentration	59	mg/kg	200715J005
Chromium, total	LCS - S	Recovery	97	%	131	69	Concentration	66.86	mg/kg	
Chromium, total	LCS - S	Recovery	102	%	131	69	Concentration	70.35	mg/kg	
Chromium, total	Matrix Spike - S	Recovery	98	%	126	74				200715J001
Chromium, total	Method Blank - S	Concentration	0.070 U	mg/kg	3.4					
Chromium, total	Method Blank - S	Concentration	0 U	mg/kg	3.4					
Lead, total	Duplicate - S	RPD	D2	%	31		Concentration	5.2	mg/kg	200715J005
Lead, total	LCS - S	Recovery	100	%	131	69	Concentration	106.6	mg/kg	
Lead, total	LCS - S	Recovery	101	%	131	69	Concentration	107.8	mg/kg	
Lead, total	Matrix Spike - S	Recovery	82	%	126	74				200715J001
Lead, total	Method Blank - S	Concentration	0.050 U	mg/kg	3.4					
Lead, total	Method Blank - S	Concentration	0 U	mg/kg	3.4					
Mercury, total	Duplicate - S	RPD	D1	%	31		Concentration	0.047	mg/kg	200715J003
Mercury, total	LCS - S	Recovery	109	%	131	69	Concentration	1.63	mg/kg	
Mercury, total	LCS - S	Recovery	108	%	131	69	Concentration	1.08	mg/kg	
Mercury, total	LCS - S	Recovery	90	%	131	69	Concentration	0.451	mg/kg	

Bath, ME 04530

**Maine Environmental Laboratory** 

Report of Analyses

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Email: melab@mel-lab.com

Bud Brown Date of Issue: 7/23/2020 ECO-Analysts, Inc.

P.O. Box 224 Report ID: 7771-200723-1156

# QC Data Method Blanks, Laboratory Control Samples, Sample QC

Analyte	QCType	Result	Value	Units	Max	Min	Reference	Ref. Value	Units	Lab SampleID
Mercury, total	Matrix Spike - S	Recovery	99	%	121	79				200715J001
Mercury, total	Method Blank - S	Concentration	0 U	mg/kg	0.054					
Total Solids	Duplicate - S %	RPD	1.0	%	6		Concentration	73.66	%	200715J001
Total Solids	LCS - S	Recovery	100	%	121	79	Concentration	50	mg/kg	
Total Solids	Method Blank - S	Concentration	0 U	mg/kg	0.014			0.01		

nditions. pageOT	s read and agrees to be bound by MEL's Terms & Con	cuting this COC, the client ha	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.
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Within Hold Time?  ☐ NO ☐ N/A			
SAMPLE RECEIVING		oratory.com	One Main Street Yarmouth, ME 04050-0/10 IEI: (20/) 040-0/07 Fax: (20/)  Email: melab@mel-lab.com Web: MaineEnvironmentalLaboratory.com
ONE 7771	Specify Required Method	Chain of Custody  (560 Fav. (207) 846-9066	VIRONMENTAL LABORATORY-
I ABORATORY REPORT #	ANALYSES		- 1

& Conditions. Page	s read and agrees to be bound by MEL's lerms	uting this COC, the client h	uishing samples. By exec	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.	M is the client's
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Del. by: <u>615</u> Temp. °C <u>4 ⋅ 0</u>	CA alama (1A	QUOTE #		SAMPLER NAME	Vachtus S
Custody Seal? ☐ Yes ☐ N/A	TE		o a	24, Buth, ME O453	P.O. Box 224
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SAMPLE RECEIVING		ratory.com	Web: MaineEnvironmentalLaboratory.com	One Main Street Yarmouth, ME 04096-0/10 16  Email: melab@mel-lab.com Web: Maine	One Main Stu Ema
LABORATORY REPORT #	ANALYSES Specify Required Method	ain of Custody	Chi	$\omega$	MAINE I



#### ANALYTICAL REPORT

Lab Number: L2029811

Client: Maine Environmental Labs

> One Main Street Yarmouth, ME 04096

ATTN: Jackie Villinski Phone: (207) 846-6569

Project Name: YACHTING SOLUTIONS

Project Number: ONE 7771 Report Date: 08/06/20

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

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



Project Name: YACHTING SOLUTIONS

**Project Number:** ONE 7771

 Lab Number:
 L2029811

 Report Date:
 08/06/20

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2029811-01	A1	SEDIMENT	Not Specified	07/14/20 09:30	07/15/20
L2029811-02	A2	SEDIMENT	Not Specified	07/14/20 10:15	07/15/20
L2029811-03	B1	SEDIMENT	Not Specified	07/14/20 10:45	07/15/20
L2029811-04	B2	SEDIMENT	Not Specified	07/14/20 11:30	07/15/20
L2029811-05	B3	SEDIMENT	Not Specified	07/14/20 12:00	07/15/20
L2029811-06	B4	SEDIMENT	Not Specified	07/14/20 12:30	07/15/20



L2029811

Lab Number:

Project Name: YACHTING SOLUTIONS

Project Number: ONE 7771 Report Date: 08/06/20

#### **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.	



L2029811

Lab Number:

Project Name: YACHTING SOLUTIONS

Project Number: ONE 7771 Report Date: 08/06/20

#### **Case Narrative (continued)**

Hexavalent Chromium

The WG1393615-4 Insoluble MS recovery for chromium, hexavalent (73%), performed on L2029811-01, is outside the acceptance criteria. The Soluble MS recovery (42%) was also outside criteria. This has been attributed to matrix interference. A post-spike was performed with a recovery of 76%.

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:

Title: Technical Director/Representative Date: 08/06/20

600, Shawor Kelly Stenstrom

# INORGANICS & MISCELLANEOUS



MEL Combined Report Page 17 of 66

**Project Name:** YACHTING SOLUTIONS

Project Number: ONE 7771

Lab Number:

L2029811

Report Date:

08/06/20

**SAMPLE RESULTS** 

Lab ID: L2029811-01

Client ID: Α1

Sample Location: Not Specified

Date Collected: 07/14/20 09:30

Date Received: 07/15/20

Not Specified Field Prep:

Sample Depth:

Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - We	estborough La	b								
Solids, Total	71.1		%	0.100	NA	1	-	07/16/20 13:44	121,2540G	RI
Chromium, Hexavalent	ND		mg/kg	1.12		1	07/18/20 08:40	07/19/20 12:12	1,7196A	MA



MEL Combined Report Page 18 of 66

**Project Name:** YACHTING SOLUTIONS

Project Number: ONE 7771

Lab Number:

L2029811

Report Date: 08/06/20

**SAMPLE RESULTS** 

Lab ID: L2029811-02

Client ID: A2

Sample Location: Not Specified

Date Collected: Date Received:

07/14/20 10:15 07/15/20

Field Prep:

Not Specified

Sample Depth:

Matrix:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - We	estborough Lal	)								
Solids, Total	74.1		%	0.100	NA	1	-	07/16/20 13:44	121,2540G	RI
Chromium, Hexavalent	ND		mg/kg	1.08		1	07/18/20 08:40	07/19/20 12:12	1,7196A	MA



MEL Combined Report Page 19 of 66

Project Name: YACHTING SOLUTIONS

Project Number: ONE 7771

Lab Number:

L2029811

Report Date:

08/06/20

### **SAMPLE RESULTS**

Lab ID: L2029811-03

Client ID: B1

Sample Location: Not Specified

Date Collected:

07/14/20 10:45

Date Received: Field Prep:

07/15/20 Not Specified

Sample Depth:

Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - We	stborough Lal	)								
Solids, Total	76.8		%	0.100	NA	1	-	07/16/20 13:44	121,2540G	RI
Chromium, Hexavalent	ND		mg/kg	1.04		1	07/18/20 08:40	07/19/20 12:13	1,7196A	MA



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Project Name: YACHTING SOLUTIONS

Project Number: ONE 7771

Lab Number:

L2029811

**Report Date:** 08/06/20

**SAMPLE RESULTS** 

Lab ID: L2029811-04

Client ID: B2

Sample Location: Not Specified

Date Collected:

07/14/20 11:30

Date Received:

07/15/20

Field Prep:

Not Specified

Sample Depth:

Matrix:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - We	estborough Lal	)								
Solids, Total	74.6		%	0.100	NA	1	-	07/16/20 13:44	121,2540G	RI
Chromium, Hexavalent	ND		mg/kg	1.07		1	07/18/20 08:40	07/19/20 12:13	1,7196A	MA



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Project Name: YACHTING SOLUTIONS

Project Number: ONE 7771

Lab Number:

L2029811

**Report Date:** 08/06/20

**SAMPLE RESULTS** 

Lab ID: L2029811-05

Client ID: B3

Sample Location: Not Specified

Date Collected:

07/14/20 12:00

Date Received:

07/15/20

Field Prep:

Not Specified

Sample Depth:

Matrix:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - W	estborough Lab	)								
Solids, Total	73.2		%	0.100	NA	1	-	07/16/20 13:44	121,2540G	RI
Chromium, Hexavalent	ND		mg/kg	1.09		1	07/18/20 08:40	07/19/20 12:13	1,7196A	MA



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**Project Name:** YACHTING SOLUTIONS

Project Number: ONE 7771

Lab Number:

L2029811

Report Date:

08/06/20

**SAMPLE RESULTS** 

Lab ID: L2029811-06

Client ID: В4

Sample Location: Not Specified

Date Collected: 07/14/20 12:30 Date Received:

07/15/20

Not Specified Field Prep:

Sample Depth:

Matrix:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - We	stborough Lal	)								
Solids, Total	74.0		%	0.100	NA	1	-	07/16/20 13:44	121,2540G	RI
Chromium, Hexavalent	ND		mg/kg	1.08		1	07/18/20 08:40	07/19/20 12:14	1,7196A	MA



Serial\_No:08062017:37

L2029811

Lab Number:

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**Project Name:** YACHTING SOLUTIONS

**Project Number:** ONE 7771 **Report Date:** 08/06/20

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Factor Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - W	estborough Lab for sam	ple(s): 01	-06 Ba	tch: Wo	G1393615-1				
Chromium, Hexavalent	ND	mg/kg	0.800		1	07/18/20 08:40	07/19/20 12:03	1,7196A	MA



Serial\_No:08062017:37

**Project Name:** 

# Lab Control Sample Analysis Batch Quality Control

YACHTING SOLUTIONS

Lab Number: L2029811

Proje

roject Number:	ONE 7771	Report Date:	08/06/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	
General Chemistry - Westborough Lab Asso	ciated sample(s)	: 01-06	Batch: WG13936	615-2					
Chromium, Hexavalent	95		-		80-120	-		20	



## Matrix Spike Analysis Batch Quality Control

Project Name: YACHTING SOLUTIONS

**Project Number:** ONE 7771

Lab Number:

L2029811

Report Date:

08/06/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Qual Found	MSD %Recovery Qu	Recovery ual Limits	RPD Qu	RPD al Limits
General Chemistry - Westborou	ugh Lab Asso	ciated samp	ole(s): 01-06	QC Batch II	D: WG1393615	4 QC Sample: L20	)29811-01 Cli	ent ID: A1	
Chromium, Hexavalent	ND	1170	856	73	Q -	-	75-125	-	20



L2029811

Lab Number:

**Project Name:** 

Lab Duplicate Analysis

Batch Quality Control

YACHTING SOLUTIONS Batch Quality Co

Project Number: ONE 7771 Report Date: 08/06/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated	d sample(s): 01-06 QC	Batch ID: WG1393615-6	QC Sample:	L2029811-01	Client ID:	A1
Chromium, Hexavalent	ND	ND	mg/kg	NC		20



MEL Combined Report Page 27 of 66 **Project Name:** YACHTING SOLUTIONS

Project Number: ONE 7771

Serial\_No:08062017:37

Lab Number: L2029811 Report Date: 08/06/20

## Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

**Cooler Information** 

**Custody Seal** Cooler

Α Absent

Container Information			Initial	Final	Temp			Frozen	
Container ID	Container Type	Cooler	рН	pН	pH deg C P		Seal	Date/Time	Analysis(*)
L2029811-01A	Bag	А	NA		2.3	Υ	Absent		ME-TS-2540(7),HEXCR-7196(30)
L2029811-02A	Bag	Α	NA		2.3	Υ	Absent		ME-TS-2540(7),HEXCR-7196(30)
L2029811-03A	Bag	Α	NA		2.3	Υ	Absent		ME-TS-2540(7),HEXCR-7196(30)
L2029811-04A	Bag	Α	NA		2.3	Υ	Absent		ME-TS-2540(7),HEXCR-7196(30)
L2029811-05A	Bag	Α	NA		2.3	Υ	Absent		ME-TS-2540(7),HEXCR-7196(30)
L2029811-06A	Bag	Α	NA		2.3	Υ	Absent		ME-TS-2540(7),HEXCR-7196(30)



Project Name: YACHTING SOLUTIONS Lab Number: L2029811

Project Number: ONE 7771 Report Date: 08/06/20

#### **GLOSSARY**

#### **Acronyms**

**EPA** 

MS

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)

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.

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.

Environmental Protection Agency.

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

oniy.)

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.

- 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.

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.

#### Footnotes

Report Format: Data Usability Report



Project Name:YACHTING SOLUTIONSLab Number:L2029811Project Number:ONE 7771Report Date:08/06/20

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

#### **Terms**

1

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.

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'.

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, Benza(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. If a 'Total' result is requested, the results of its individual components will also be reported.

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.)

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.
- 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).
- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- 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. (DoD and NYSDEC Part 375 PFAS only.)
- 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.
- **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

Report Format: Data Usability Report



Project Name:YACHTING SOLUTIONSLab Number:L2029811Project Number:ONE 7771Report Date:08/06/20

#### **Data Qualifiers**

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.

Report Format: Data Usability Report



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Project Name: YACHTING SOLUTIONS Lab Number: L2029811
Project Number: ONE 7771 Report Date: 08/06/20

#### REFERENCES

Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

#### **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.



Serial\_No:08062017:37

MEL Combined Report Page 32 of 66 **Alpha Analytical, Inc.** 

Facility: Company-wide
Department: Quality Assurance

Title: Certificate/Approval Program Summary

ID No.:**17873** Revision 17

Published Date: 4/28/2020 9:42:21 AM

Page 1 of 1

#### **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 8260C:** <u>NPW</u>: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; <u>SCM</u>: lodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; 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.

EPA TO-12 Non-methane organics

EPA 3C Fixed gases

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; SM4500CN-CE, SM4

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, LACHAT 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 II, 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.

#### 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.

#### 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.

Document Type: Form Pre-Qualtrax Document ID: 08-113

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

Subject: Laboratory Report

Eastern Analytical, Inc. ID: 212976

Client Identification: ONE 7771

Date Received: 7/15/2020



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.easternanalytical.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), Vermont (VT1012) and New York (12072).

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

7.22.20

Date

# of pages (excluding cover letter)





EAI ID#: 212976

Client: Maine Environmental Laboratory

Client Designation: ONE 7771

### Temperature upon receipt (°C): 1.4

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	•	Exceptions/Comments (other than thermal preservation)
212976.01	A1	7/15/20	7/14/20	solid	65.9	Adheres to Sample Acceptance Policy
212976.02	A2	7/15/20	7/14/20	solid	75.7	Adheres to Sample Acceptance Policy
212976.03	B1	7/15/20	7/14/20	solid	76.0	Adheres to Sample Acceptance Policy
212976.04	B2	7/15/20	7/14/20	solid	75.1	Adheres to Sample Acceptance Policy
212976.05	B3	7/15/20	7/14/20	solid	74.1	Adheres to Sample Acceptance Policy
212976.06	B4	7/15/20	7/14/20	solid	73.1	Adheres to Sample Acceptance Policy

Samples were properly preserved and the pH measured when applicable unless otherwise noted. Analysis of solids for pH, Flashpoint, Ignitability, 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, 21st, 22nd & 23rd Edition or noted Revision year.
- 3) Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB
- 4) Hach Water Analysis Handbook, 4th edition, 1992

## LABORATORY REPORT

EAI ID#: 212976

Client: Maine Environmental Laboratory

Client Designation: ONE 7771

Client Sample ID: A1

**Lab Sample ID:** 212976.01

Matrix: solid
Date Sampled: 7/14/20

Date Received: 7/15/20

Date Neceiveu.								
	Result	RL	Dilution Factor	Units	Date / Analy		Method	Analyst
Benzo[a]anthracene	0.31	0.3	4	mg/kg	7/16/20	18:52	8270D	JMR
Chrysene	0.30	0.3	4	mg/kg	7/16/20	18:52	8270D	JMR
Benzo[b]fluoranthene	0.34	0.3	4	mg/kg	7/16/20	18:52	8270D	JMR
Benzo[k]fluoranthene	< 0.3	0.3	4	mg/kg	7/16/20	18:52	8270D	JMR
Benzo[a]pyrene	0.31	0.3	4	mg/kg	7/16/20	18:52	8270D	JMR
Indeno[1,2,3-cd]pyrene	< 0.3	0.3	4	mg/kg	7/16/20	18:52	8270D	JMR
Dibenz[a,h]anthracene	< 0.3	0.3	4	mg/kg	7/16/20	18:52	8270D	JMR
p-Terphenyl-D14 (surr)	55 %R			%	7/16/20	18:52	8270D	JMR

Detection limits elevated due to low solids content and in response to the lower initial mass used for analysis.

EAI ID#: 212976

Client: Maine Environmental Laboratory

Client Designation: ONE 7771

Client Sample ID: A2

Lab Sample ID: 212976.02

Matrix: solid

Matrix: solid

Date Sampled: 7/14/20

Date Received: 7/15/20

	Result	RL	Dilution Factor	Units	Date / Analy		Method	Analyst
Benzo[a]anthracene	< 0.3	0.3	4	mg/kg	7/16/20	19:15	8270D	JMR
Chrysene	< 0.3	0.3	4	mg/kg	7/16/20	19:15	8270D	JMR
Benzo[b]fluoranthene	< 0.3	0.3	4	mg/kg	7/16/20	19:15	8270D	JMR
Benzo[k]fluoranthene	< 0.3	0.3	4	mg/kg	7/16/20	19:15	8270D	JMR
Benzo[a]pyrene	< 0.3	0.3	4	mg/kg	7/16/20	19:15	8270D	JMR
Indeno[1,2,3-cd]pyrene	< 0.3	0.3	4	mg/kg	7/16/20	19:15	8270D	JMR
Dibenz[a,h]anthracene	< 0.3	0.3	4	mg/kg	7/16/20	19:15	8270D	JMR
p-Terphenyl-D14 (surr)	61 %R			%	7/16/20	19:15	8270D	JMR

EAI ID#: 212976

Client: Maine Environmental Laboratory

Client Designation: ONE 7771

Client Sample ID: B1

**Lab Sample ID:** 212976.03

Matrix: solid

Date Sampled: 7/14/20

Date Sampled: 7/14/20
Date Received: 7/15/20

	Result	RL	Dilution Factor	Units	Date / Analy		Method	Analyst
Benzo[a]anthracene	< 0.3	0.3	4	mg/kg	7/16/20	19:37	8270D	JMR
Chrysene	< 0.3	0.3	4	mg/kg	7/16/20	19:37	8270D	JMR
Benzo[b]fluoranthene	< 0.3	0.3	4	mg/kg	7/16/20	19:37	8270D	JMR
Benzo[k]fluoranthene	< 0.3	0.3	4	mg/kg	7/16/20	19:37	8270D	JMR
Benzo[a]pyrene	< 0.3	0.3	4	mg/kg	7/16/20	19:37	8270D	JMR
Indeno[1,2,3-cd]pyrene	< 0.3	0.3	4	mg/kg	7/16/20	19:37	8270D	JMR
Dibenz[a,h]anthracene	< 0.3	0.3	4	mg/kg	7/16/20	19:37	8270D	JMR
p-Terphenyl-D14 (surr)	58 %R			%	7/16/20	19:37	8270D	JMR

Date Sampled:

### LABORATORY REPORT

EAI ID#: 212976

Client: Maine Environmental Laboratory

Client Designation: ONE 7771

Client Sample ID: B2

**Lab Sample ID:** 212976.04

Matrix: solid

7/14/20

Date Received: 7/15/20

Date Received.								
	Result	RL	Dilution Factor	Units	Date / Analy		Method	Analyst
Benzo[a]anthracene	< 0.3	0.3	4	mg/kg	7/16/20	20:00	8270D	JMR
Chrysene	< 0.3	0.3	4	mg/kg	7/16/20	20:00	8270D	JMR
Benzo[b]fluoranthene	< 0.3	0.3	4	mg/kg	7/16/20	20:00	8270D	JMR
Benzo[k]fluoranthene	< 0.3	0.3	4	mg/kg	7/16/20	20:00	8270D	JMR
Benzo[a]pyrene	< 0.3	0.3	4	mg/kg	7/16/20	20:00	8270D	JMR
Indeno[1,2,3-cd]pyrene	< 0.3	0.3	4	mg/kg	7/16/20	20:00	8270D	JMR
Dibenz[a,h]anthracene	< 0.3	0.3	4	mg/kg	7/16/20	20:00	8270D	JMR
p-Terphenyl-D14 (surr)	59 %R			%	7/16/20	20:00	8270D	JMR

EAI ID#: 212976

Client: Maine Environmental Laboratory

Client Designation: ONE 7771

B3

Client Sample ID:

212976.05 Lab Sample ID: solid

Matrix: 7/14/20 Date Sampled:

7/15/20 Date Received:

Date Neceived.								
	Result	RL	Dilution Factor	Units	Date / Analy		Method	Analyst
Benzo[a]anthracene	< 0.3	0.3	4	mg/kg	7/16/20	20:22	8270D	JMR
Chrysene	< 0.3	0.3	4	mg/kg	7/16/20	20:22	8270D	JMR
Benzo[b]fluoranthene	< 0.3	0.3	4	mg/kg	7/16/20	20:22	8270D	JMR
Benzo[k]fluoranthene	< 0.3	0.3	4	mg/kg	7/16/20	20:22	8270D	JMR
Benzo[a]pyrene	< 0.3	0.3	4	mg/kg	7/16/20	20:22	8270D	JMR
Indeno[1,2,3-cd]pyrene	< 0.3	0.3	4	mg/kg	7/16/20	20:22	8270D	JMR
Dibenz[a,h]anthracene	< 0.3	0.3	4	mg/kg	7/16/20	20:22	8270D	JMR
p-Terphenyl-D14 (surr)	60 %R			%	7/16/20	20:22	8270D	JMR
Benzo[b]fluoranthene Benzo[k]fluoranthene Benzo[a]pyrene Indeno[1,2,3-cd]pyrene Dibenz[a,h]anthracene	< 0.3 < 0.3 < 0.3 < 0.3 < 0.3	0.3 0.3 0.3 0.3	4 4 4 4	mg/kg mg/kg mg/kg mg/kg mg/kg	7/16/20 7/16/20 7/16/20 7/16/20 7/16/20	20:22 20:22 20:22 20:22 20:22	8270D 8270D 8270D 8270D 8270D	JMR JMR JMR JMR JMR

EAI ID#: 212976

Client: Maine Environmental Laboratory

Client Designation: ONE 7771

Client Sample ID: B4

Lab Sample ID: 212976.06

Matrix: solid

Matrix: solid
Date Sampled: 7/14/20

Date Received: 7/15/20

Result	RL	Dilution Factor	Units				Analyst
< 0.3	0.3	4	mg/kg	7/16/20	20:45	8270D	JMR
< 0.3	0.3	4	mg/kg	7/16/20	20:45	8270D	JMR
< 0.3	0.3	4	mg/kg	7/16/20	20:45	8270D	JMR
< 0.3	0.3	4	mg/kg	7/16/20	20:45	8270D	JMR
< 0.3	0.3	4	mg/kg	7/16/20	20:45	8270D	JMR
< 0.3	0.3	4	mg/kg	7/16/20	20:45	8270D	JMR
< 0.3	0.3	4	mg/kg	7/16/20	20:45	8270D	JMR
71 %R			%	7/16/20	20:45	8270D	JMR
	< 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3	<ul> <li>&lt; 0.3</li> </ul>	Result         RL         Factor           < 0.3	Result         RL         Factor         Units           < 0.3	Result         RL         Factor         Units         Analyst           < 0.3	Result         RL         Factor         Units         Analyzed           < 0.3	Result         RL         Factor         Units         Analyzed         Method           < 0.3

Client: Maine Environmental Laboratory

Client Designation: ONE 7771

EAI ID#: 212976

Batch ID: 637304-83041/S071620PAH1

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Naphthalene	< 0.07	1.2 (71 %R)	1.2 (74 %R) (3 RPD	) 7/16/2020	mg/kg	40 - 140	30	8270D
2-Methylnaphthalene	< 0.07	1.2 (74 %R)	1.3 (77 %R) (3 RPD	) 7/16/2020	mg/kg	40 - 140	30	8270D
1-Methylnaphthalene	< 0.07	1.2 (73 %R)	1.3 (76 %R) (3 RPD	) 7/16/2020	mg/kg	40 - 140	30	8270D
Acenaphthylene	< 0.07	1.3 (76 %R)	1.3 (79 %R) (4 RPD	) 7/16/2020	mg/kg	40 - 140	30	8270D
Acenaphthene	< 0.07	1.2 (72 %R)	1.2 (75 %R) (4 RPD	) 7/16/2020	mg/kg	40 - 140	30	8270D
Fluorene	< 0.07	1.3 (78 %R)	1.3 (81 %R) (4 RPD	) 7/16/2020	mg/kg	40 - 140	30	8270D
Phenanthrene	< 0.07	1.3 (80 %R)	1.4 (83 %R) (4 RPD	) 7/16/2020	mg/kg	40 - 140	30	8270D
Anthracene	< 0.07	1.3 (80 %R)	1.4 (83 %R) (4 RPD	) 7/16/2020	mg/kg	40 - 140	30	8270D
Fluoranthene	< 0.07	1.4 (85 %R)	1.4 (86 %R) (2 RPD	) 7/16/2020	mg/kg	40 - 140	30	8270D
Pyrene	< 0.07	1.3 (80 %R)	1.4 (84 %R) (5 RPD	) 7/16/2020	mg/kg	40 - 140	30	8270D
Benzo[a]anthracene	< 0.07	1.4 (84 %R)	1.4 (85 %R) (1 RPD	) 7/16/2020	mg/kg	40 - 140	30	8270D
Chrysene	< 0.07	1.4 (83 %R)	1.4 (85 %R) (2 RPD	) 7/16/2020	mg/kg	40 - 140	30	8270D
Benzo[b]fluoranthene	< 0.07	1.4 (85 %R)	1.4 (86 %R) (1 RPD	) 7/16/2020	mg/kg	40 - 140	30	8270D
Benzo[k]fluoranthene	< 0.07	1.4 (86 %R)	1.5 (87 %R) (1 RPD	) 7/16/2020	mg/kg	40 - 140	30	8270D
Benzo[a]pyrene	< 0.07	1.5 (88 %R)	1.5 (90 %R) (1 RPD	) 7/16/2020	mg/kg	40 - 140	30	8270D
Indeno[1,2,3-cd]pyrene	< 0.07	1.6 (95 %R)	1.6 (97 %R) (3 RPD	) 7/16/2020	mg/kg	40 - 140	30	8270D
Dibenz[a,h]anthracene	< 0.07	1.6 (97 %R)	1.7 (100 %R) (3 RPD	) 7/16/2020	mg/kg	40 - 140	30	8270D
Benzo[g,h,i]perylene	< 0.07	1.5 (91 %R)	1.6 (94 %R) (3 RPD	) 7/16/2020	mg/kg	40 - 140	30	8270D
p-Terphenyl-D14 (surr)	89 %R	83 %R	87 %F	R 7/16/2020	mg/kg	30 - 130		8270D

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 on the sample page, flagged analytes that exceed acceptance limits in the Quality Control sample do not impact the data.

# MEL Combined Report Page 43 of 66

# LABORATORY REPORT

EAI ID#: 212976

**Client: Maine Environmental Laboratory** 

Client Designation: ONE 7771

Client Sample ID: A1

**Lab Sample ID:** 212976.01

Matrix: solid

Date Sampled: 7/14/20

Date Received: 7/15/20

Date Neceiveu.								
	Result	RL	Dilution Factor	Units	Date / Analy		Method	Analyst
PCB-1016	< 0.03	0.03	2	mg/kg	7/20/20	11:10	8082A	MA
PCB-1221	< 0.03	0.03	2	mg/kg	7/20/20	11:10	8082A	MA
PCB-1232	< 0.03	0.03	2	mg/kg	7/20/20	11:10	8082A	MA
PCB-1242	< 0.03	0.03	2	mg/kg	7/20/20	11:10	8082A	MA
PCB-1248	< 0.03	0.03	2	mg/kg	7/20/20	11:10	8082A	MA
PCB-1254	< 0.03	0.03	2	mg/kg	7/20/20	11:10	8082A	MA
PCB-1260	< 0.03	0.03	2	mg/kg	7/20/20	11:10	8082A	MA
PCB-1262	< 0.03	0.03	2	mg/kg	7/20/20	11:10	8082A	MA
PCB-1268	< 0.03	0.03	2	mg/kg	7/20/20	11:10	8082A	MA
TMX (surr)	60 %R			%	7/20/20	11:10	8082A	MA
DCB (surr)	59 %R			%	7/20/20	11:10	8082A	MA

Acid clean-up was performed on the samples and associated batch QC. Detection limits elevated due to low solids content.

EAI ID#: 212976

Client: Maine Environmental Laboratory

Client Designation: ONE 7771

Client Sample ID: A2

**Lab Sample ID:** 212976.02

Matrix: solid

Date Sampled: 7/14/20

Date Sampled: 7/14/20
Date Received: 7/15/20

Date Received.								
	Result	RL	Dilution Factor	Units	Date / Analy		Method	Analyst
PCB-1016	< 0.02	0.02	1	mg/kg	7/20/20	11:19	8082A	MA
PCB-1221	< 0.02	0.02	1	mg/kg	7/20/20	11:19	8082A	MA
PCB-1232	< 0.02	0.02	1	mg/kg	7/20/20	11:19	8082A	MA
PCB-1242	< 0.02	0.02	1	mg/kg	7/20/20	11:19	8082A	MA
PCB-1248	< 0.02	0.02	1	mg/kg	7/20/20	11:19	8082A	MA
PCB-1254	< 0.02	0.02	1	mg/kg	7/20/20	11:19	8082A	MA
PCB-1260	< 0.02	0.02	1	mg/kg	7/20/20	11:19	8082A	MA
PCB-1262	< 0.02	0.02	1	mg/kg	7/20/20	11:19	8082A	MA
PCB-1268	< 0.02	0.02	1	mg/kg	7/20/20	11:19	8082A	MA
TMX (surr)	87 %R			%	7/20/20	11:19	8082A	MA
DCB (surr)	91 %R			%	7/20/20	11:19	8082A	MA

EAI ID#: 212976

**Client: Maine Environmental Laboratory** 

Client Designation: ONE 7771

Client Sample ID: B1

Lab Sample ID: 212976.03

Matrix: solid

Date Sampled: 7/14/20
Pate Paceived: 7/15/20

Date Received:	7710720							
	Result	RL	Dilution Factor	Units	Date / Analy		Method	Analyst
PCB-1016	< 0.02	0.02	1	mg/kg	7/20/20	11:29	8082A	MA
PCB-1221	< 0.02	0.02	1	mg/kg	7/20/20	11:29	8082A	MA
PCB-1232	< 0.02	0.02	1	mg/kg	7/20/20	11:29	8082A	MA
PCB-1242	< 0.02	0.02	1	mg/kg	7/20/20	11:29	8082A	MA
PCB-1248	< 0.02	0.02	1	mg/kg	7/20/20	11:29	8082A	MA
PCB-1254	< 0.02	0.02	1	mg/kg	7/20/20	11:29	8082A	MA
PCB-1260	< 0.02	0.02	1	mg/kg	7/20/20	11:29	8082A	MA
PCB-1262	< 0.02	0.02	1	mg/kg	7/20/20	11:29	8082A	MA
PCB-1268	< 0.02	0.02	1	mg/kg	7/20/20	11:29	8082A	MA
TMX (surr)	99 %R			%	7/20/20	11:29	8082A	MA
DCB (surr)	89 %R			%	7/20/20	11:29	8082A	MA

EAI ID#: 212976

**Client: Maine Environmental Laboratory** 

Client Designation: ONE 7771

Client Sample ID: B2

**Lab Sample ID:** 212976.04

Matrix: solid

Date Sampled: 7/14/20

Date Received: 7/15/20

Date Received:	7710720							
DOD 4040	Result	RL	Dilution Factor	Units	Date / Analy		Method	Analyst
PCB-1016	< 0.02	0.02	1	mg/kg	7/20/20	11:39	8082A	MA
PCB-1221	< 0.02	0.02	1	mg/kg	7/20/20	11:39	8082A	MA
PCB-1232	< 0.02	0.02	1	mg/kg	7/20/20	11:39	8082A	MA
PCB-1242	< 0.02	0.02	1	mg/kg	7/20/20	11:39	8082A	MA
PCB-1248	< 0.02	0.02	1	mg/kg	7/20/20	11:39	8082A	MA
PCB-1254	< 0.02	0.02	1	mg/kg	7/20/20	11:39	8082A	MA
PCB-1260	< 0.02	0.02	1	mg/kg	7/20/20	11:39	8082A	MA
PCB-1262	< 0.02	0.02	1	mg/kg	7/20/20	11:39	8082A	MA
PCB-1268	< 0.02	0.02	1	mg/kg	7/20/20	11:39	8082A	MA
TMX (surr)	95 %R			%	7/20/20	11:39	8082A	MA
DCB (surr)	87 %R			%	7/20/20	11:39	8082A	MA

B3

212976.05

EAI ID#: 212976

Client: Maine Environmental Laboratory

Client Designation: ONE 7771

Client Sample ID:

Lab Sample ID: solid

Matrix: 7/14/20 Date Sampled:

7/15/20

Date Received:	7/15/20							
	Result	RL	Dilution Factor	Units	Date / <sup>·</sup> Analy		Method	Analyst
PCB-1016	< 0.02	0.02	1	mg/kg	7/20/20	11:49	8082A	MA
PCB-1221	< 0.02	0.02	1	mg/kg	7/20/20	11:49	8082A	MA
PCB-1232	< 0.02	0.02	1	mg/kg	7/20/20	11:49	8082A	MA
PCB-1242	< 0.02	0.02	1	mg/kg	7/20/20	11:49	8082A	MA
PCB-1248	< 0.02	0.02	1	mg/kg	7/20/20	11:49	8082A	MA
PCB-1254	< 0.02	0.02	1	mg/kg	7/20/20	11:49	8082A	MA
PCB-1260	< 0.02	0.02	1	mg/kg	7/20/20	11:49	8082A	MA
PCB-1262	< 0.02	0.02	1	mg/kg	7/20/20	11:49	8082A	MA
PCB-1268	< 0.02	0.02	1	mg/kg	7/20/20	11:49	8082A	MA
TMX (surr)	92 %R			%	7/20/20	11:49	8082A	MA
DCB (surr)	88 %R			%	7/20/20	11:49	8082A	MA

EAI ID#: 212976

**Client: Maine Environmental Laboratory** 

Client Designation: ONE 7771

Client Sample ID:

В4

Lab Sample ID:

212976.06

\_\_\_\_

Matrix:

solid

Date Sampled:

7/14/20

Date Received:

7/15/20

	Result	RL	Dilution Factor	Units	Date / Analy		Method	Analyst
PCB-1016	< 0.02	0.02	1	mg/kg	7/20/20	11:58	8082A	MA
PCB-1221	< 0.02	0.02	1	mg/kg	7/20/20	11:58	8082A	MA
PCB-1232	< 0.02	0.02	1	mg/kg	7/20/20	11:58	8082A	MA
PCB-1242	< 0.02	0.02	1	mg/kg	7/20/20	11:58	8082A	MA
PCB-1248	< 0.02	0.02	1	mg/kg	7/20/20	11:58	8082A	MA
PCB-1254	< 0.02	0.02	1	mg/kg	7/20/20	11:58	8082A	MA
PCB-1260	< 0.02	0.02	1	mg/kg	7/20/20	11:58	8082A	MA
PCB-1262	< 0.02	0.02	1	mg/kg	7/20/20	11:58	8082A	MA
PCB-1268	< 0.02	0.02	1	mg/kg	7/20/20	11:58	8082A	MA
TMX (surr)	91 %R			%	7/20/20	11:58	8082A	MA
DCB (surr)	89 %R			%	7/20/20	11:58	8082A	MA

EAI ID#: 212976

Batch ID: 637304-17272/S071520PCB1

Client: Maine Environmental Laboratory

Client Designation: ONE 7771

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
PCB-1016	< 0.02	0.12 (90 %R)	0.12 (93 %R) (3 RPD)	) 7/20/2020	mg/kg	40 - 140	30	8082A
PCB-1221	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD N/A)	7/20/2020	mg/kg			8082A
PCB-1232	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD N/A)	7/20/2020	mg/kg			8082A
PCB-1242	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD N/A)	7/20/2020	mg/kg			8082A
PCB-1248	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD N/A)	7/20/2020	mg/kg			8082A
PCB-1254	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD N/A)	7/20/2020	mg/kg			8082A
PCB-1260	< 0.02	0.11 (83 %R)	0.11 (85 %R) (2 RPD)	7/20/2020	mg/kg	40 - 140	30	8082A
PCB-1262	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD N/A)	7/20/2020	mg/kg			8082A
PCB-1268	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD N/A)	7/20/2020	mg/kg			8082A
TMX (surr)	88 %R	89 %R	90 %F	7/20/2020	% Rec	30 - 150	30	8082A
DCB (surr)	85 %R	83 %R	84 %F	R 7/20/2020	% Rec	30 - 150	30	8082A

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 on the sample page, flagged analytes that exceed acceptance limits in the Quality Control sample do not impact the data.

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	all n	1200	Ben Z(4) dハthracene, 4ハthene, Benzo(4) p deno(1,2,3 ~c,d)py serves the right to subcontract analyses s										LAB II		: Custo	Prese	Within Good	INC	, 2
page_/of			で ご Ben Z (す) dn+hracene, 'いoran thene, Ben Zo Ca) py パピロピ, , indeno C1, 2, 3 で, d ) py パピロピ MEL reserves the right to subcontract analyses at MEL's discretion			-							LAB ID/SUBCONTRACTOR	by:		☐Yes ☐No ☐N/A Preserved? ☐Yes ☐No ☐N/A	Within Hold Time?  ☐ Yes ☐ No ☐ N/A  Good Condition?	DAMIL FF LIFOFIANA	212976



Pace Analytical Services, LLC.

1700 Elm Street Minneapolis, MN 55414 Phone: 612.607.1700

Fax: 612.607.1700

### **Report Prepared for:**

Jackie Villinski Maine Environmental Laboratory One Main Street Yarmouth ME 04096-6716

www.pacelabs.com

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

# **Report Information:**

**Pace Project #: 10525089** 

Sample Receipt Date: 07/16/2020

Client Project #: ONE 7771

Client Sub PO #: N/A State Cert #: MN00064

### **Invoicing & Reporting Options:**

The report provided has been invoiced as a Level 2 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Kirsten Hogberg, your Pace Project Manager.

This report has been reviewed by:

July 24, 2020

Kirsten Hogberg, Project Manager (612) 607-6407

(612) 607-6444 (fax)

kirsten.hogberg@pacelabs.com



### **Report of Laboratory Analysis**

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The results relate only to the samples included in this report.

**Report Prepared Date:** 

July 24, 2020



Pace Analytical Services, LLC.

1700 Elm Street Minneapolis, MN 55414 Phone: 612.607.1700

Fax: 612.607.6444

### DISCUSSION

This report presents the results from the analyses performed on six samples submitted by a representative of Maine Environmental Laboratory. The samples were analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using USEPA Method 1613B. The reporting limits were set to correspond to the lowest calibration points and a nominal 10-gram sample amount, and the sensitivity was verified by signal-to-noise measurements. The quantitation limits, adjusted for sample extraction amount, may be somewhat higher or lower than the reporting limits provided in this report. Estimated maximum possible concentration (EMPC) values were treated as positives in the toxic equivalence calculations.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extracts ranged from 45-90%. All of the labeled standard recoveries obtained for this project were within the target ranges specified in Method 1613B. Also, since the quantification of the native 2,3,7,8-substituted congeners was based on isotope dilution, the data were automatically corrected for variation in recovery and accurate values were obtained.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show the blank to be free of PCDDs and PCDFs at the reporting limits. These results indicate that the sample processing steps did not significantly impact the results of the field sample determinations.

A laboratory spike sample was also prepared with the sample batch using clean reference matrix that had been fortified with native standard materials. The results show that the spiked native compounds were recovered at 105-130%. These results were within the target ranges for the method. Matrix spikes were prepared with the sample batch using sample material from a separate project; results from these analyses will be provided upon request.

### REPORT OF LABORATORY ANALYSIS

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# Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
		Mississippi	MN00064
A2LA	2926.01	Missouri	10100
Alabama	40770	Montana	CERT0092
Alaska-DW	MN00064	Nebraska	NE-OS-18-06
Alaska-UST	17-009	Nevada	MN00064
Arizona	AZ0014	New Hampshire	2081
Arkansas - WW	88-0680	New Jersey	MN002
Arkansas-DW	MN00064	New York	11647
California	2929	North Carolina-	27700
Colorado	MN00064	North Carolina-	530
Connecticut	PH-0256	North Dakota	R-036
Florida	E87605	Ohio - VAP	CL101
Georgia	959	Ohio-DW	41244
Hawaii	MN00064	Oklahoma	9507
Idaho	MN00064	Oregon- rimary	MN300001
Illinois	200011	Oregon-Second	MN200001
Indiana	C-MN-01	Pennsylvania	68-00563
Iowa	368	Puerto Rico	MN00064
Kansas	E-10167	South Carolina	74003
Kentucky-DW	90062	Tennessee	TN02818
Kentucky-WW	90062	Texas	T104704192
Louisiana-DEQ	AI-84596	Utah	MN00064
Louisiana-DW	MN00064	Vermont	VT-027053137
Maine	MN00064	Virginia	460163
Maryland	322	Washington	C486
Massachusetts-	via MN 027-053	West Virginia-D	382
Michigan	9909	West Virginia-D	9952C
Minnesota	027-053-137	Wisconsin	999407970
Minnesota-Ag	via MN 027-053	Wyoming-UST	via A2LA 2926.
Minnesota-Petr	1240		

# **REPORT OF LABORATORY ANALYSIS**

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# Appendix A

Sample Management

Email: melab@mel-lab.com Web: Maleb@mel-lab.com Web: Maleb@mel-lab.c	ا تن		ト ウノエノ ノンウ	CONTRACTOR TO CONTRACTOR THE CONTRAC	7700	Specify Beginned Method	
		ineEnviron	6-6/16 1ei: (20/) 846-6569 Fax: (20/) Web: MaineEnvironmentalLaboratory.com	1el: (20/) 846-6569 Fax: (20/) 846-9066 aineEnvironmentalLaboratory.com	9906-0		SAMPLE RECEIVING
DDRESS HOJECT NAME	EMAIL		TELEPHONE	ONE	1		Within Hold Time?
NDRESS ROJECT NAME A 1 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7		BILL TO / PU	BILL TO / PURCHASE ORDER#	e E		MO#:10525089	
ROJECT NAME							
ニーリミの	SAMPLER NAME	АМЕ		QUOTE #		10525089	Del. by:
VINERS	FIELD SAMPI	ЯА	METHOD	SAMPLING		νιχο	Temp. °C
IDENTIFICATION # COUTTYPE COUTTY	S NO	RĐ IOO	PRESERVED	DATE	TIME	210	LAB ID/SUBCONTRACTOR
A1 140	XSC	×	7,9	J-14-20 C	C930		<u>,</u> 3
A2 1	X	×		<u>×</u>	5101	\(\times\)	25
B1 1	×	×				\ \tag{\tau}	53
B3 1	×.	×			Ė	\(\times\)	73
83	/ X	×			1,200	\(\times \)	88
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SAMPLEF			DATE	TIME		RECEIVED BY: 70 P. 71/	20 KRS 1.26
RELINQUISHED BY: T. B. L. L.			DAT 7	5.20	TIMECS	RECEIVED BY:	1
RELINQUISHED BY:			DATE	TE TIME		RECEIVED BY LABORATORY:	

MEL Combined Report Page 56 of 66

ace Analytical®

#### **Document Name:**

### Sample Condition Upon Receipt (SCUR) - MN

**Document No.:** 

Document Revised: 27Mar2020 Page 1 of 1

Pace Analytical Services -

Page 6 of 16

ENV-FRM-MIN4-0150 Rev.00

**Minneapolis** 

Sample Condition Upon Receipt  Client Name:  Mane Env l	٦l.		Pro	oject #:	WO	#:10		25089	
	<u>977</u>				PM:			e Date: 07/	30/20
Courier: Fed Ex QUPS Pace SpeeDee	Us □Co		Cli See Exe	16	CLIE	NT: MAIN	E ENV		
Tracking Number: 17 031 92	E 01	501	12965						
Custody Seal on Cooler/Box Present?	]No	Sea	ls Intact	? \\\Yes	□N	lo <b>Biolo</b>	gical Ti	ssue Frozen? 🔲	Yes □No \\\\
Packing Material: 🗀 Bubble Wrap 🗀 Bubble Ba	igs 🗀	None	□Oth	er:			Т	emp Blank? 🛚 🖔	Yes No
Thermometer: T1(0461) T2(1336) T3(0459)		Type of i	ce: 🖺	Wet [	Blue	□None	□Dr	y	•
Did Samples Originate in West Virginia? Yes	We	re All Co	ntainer 1	Temps Tak	en? ∐Y∈	es 🗌 No 🖊	]n/a		
Temp should be above freezing to 6°C Cooler Temp Rea	ad w/ten	np blank	:		λ	o€		ge Corrected Ten	•
Correction Factor: 100 Cooler Temp Correcte	d w/tom	n hlank		1.3		°C	(no	temp blank only) <sup>0</sup> C	): See Exceptions  1 Container
USDA Regulated Soil: ( N/A, water sample/Other:	u w/ telli	p blatik	•	Date/in	itials of		nining (	Contents: +	17/62e
Did samples originate in a quarantine zone within the Unit	ed States		CA, FL, GA				_	source (internation	
ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check ma	aps)? [	Yes	□No	Hawai	i and Pue	erto Rico)?		]Yes □No	,
If Yes to either question, fill out a F	Regulated	d Soil Ch	ecklist (F	-MN-Q-33	8) and ir	nclude with			
					•		COMN	MENTS:	
Chain of Custody Present and Filled Out?	Yes	□No	···	1.					
Chain of Custody Relinquished?	Yes	□No		2.					
Sampler Name and/or Signature on COC?	☐Yes	□No	N/A	3.					
Samples Arrived within Hold Time?	Yes	□No		4.					
Short Hold Time Analysis (<72 hr)?	∐Yes	ДNо						form/E coliBOD/c rthophosOther	BOD Hex Chrome
Rush Turn Around Time Requested?	Yes	□No		6.				44-4-4	
Sufficient Volume?	Yes	□No		7.					
Correct Containers Used?	Yes	∏No		8.					
-Pace Containers Used?	Yes	□No							·
Containers Intact?	Yes	□No		9.					
Field Filtered Volume Received for Dissolved Tests?	Yes	□No	Ĭ\N/A						es No
Is sufficient information available to reconcile the samples to the COC?	∑Yes	□No		11. If no,	write ID/	Date/Time or	n Contain	er Below:	See Exception
Matrix: Water Soil Oil Other									· 
All containers needing acid/base preservation have been checked?	∐Yes	□No	Ĭ <b>\</b> N/A	12. Samp	le#				
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO₃, H₂SO₄, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	∐Yes	□No	□N/A		] NaOH	□ни	NO₃	∏H₂SO₄	Zinc Acetate
	Шv	□N <sub>2</sub>	K-las/a	Positive f	_	Yes			See Exception
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	∐Yes	∐No	N/A	Chlorine?		No	рН Рар		<u> </u>
DRO/8015 (Water) and Dioxin/PFAS				Res. Chlo	rine	0-6 Roll		0-6 Strip	0-14 Strip
Extra labels present on soil VOA or WIDRO containers?	Yes	□No	N/A	13.				i	See Exception
Headspace in VOA Vials (greater than 6mm)?	Yes	□No	M/A						
Trip Blank Present? Trip Blank Custody Seals Present?	☐Yes ☐Yes	□No □No	M/A □N/A	14. Pac	e Trip Bla	ank Lot # (if p	ourchase	d):	
CLIENT NOTIFICATION/RESOLUTION			(			Fiel	d Data	Required? Ye	es No
Person Contacted:				Date/Ti	me:				
Comments/Resolution:									
A	2-1-		117 1/2 1						
Project Manager Review:	Ucha	udso	~	-£41 ¢	Date:			- Brillian o	
Note: Whenever there is a discrepancy affecting North Carolina hold, incorrect preservative, out of temp, incorrect containers).	compliand	e sample	s, a copy	or this form	will be se	ent to the Nor	tn Caroli	na DEHNR Certificat	ion Office ( i.e out of



# **Reporting Flags**

- A = Reporting Limit based on signal to noise
- B = Less than 10x higher than method blank level
- C = Result obtained from confirmation analysis
- D = Result obtained from analysis of diluted sample
- E = Exceeds calibration range
- Interferencepresent
- Estimated value

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MEL Combined Report Page 1

- Suppressive interference, analyte may be biased low
- Nn = Value obtained from additional analysis
- P = PCDEInterference
- R = Recovery outside target range
- S = Peak saturated
- U = Analyte not detected
- V = Result verified by confirmation analysis
- X =%D Exceeds limits
- Y = Calculated using average of daily RFs
- SeeDiscussion

# **Appendix B**

Sample Analysis Summary

07/24/2020 11:19



Method Blank ID

Tel: 612-607-1700 Fax: 612-607-6444

### Method 1613B Sample Analysis Results

Client - Maine Environmental Laboratory

Analyzed

Client's Sample ID ONE 7771 A1 Lab Sample ID 10525089001-R Filename F200724A\_05 Injected By JRH **Total Amount Extracted** 15.7 g Matrix Solid % Moisture Dilution NA 33.7 Dry Weight Extracted 10.4 g Collected 07/14/2020 09:30 ICAL ID F200714 Received 07/16/2020 10:18 CCal Filename(s) F200723B 11 Extracted 07/22/2020 15:06

**BLANK-81187** 

Native Isomers	<b>Conc</b> ng/Kg	<b>EMPC</b> ng/Kg	<b>RL</b> ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF Total TCDF	ND 2.3		1.0 1.0	2,3,7,8-TCDF-13C 2,3,7,8-TCDD-13C 1,2,3,7,8-PeCDF-13C	2.00 2.00 2.00	73 79 75
2,3,7,8-TCDD Total TCDD	ND ND		1.0 1.0	2,3,4,7,8-PeCDF-13C 1,2,3,7,8-PeCDD-13C	2.00 2.00	76 90
1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF Total PeCDF	ND ND 7.0		5.0 5.0 5.0	1,2,3,4,7,8-HxCDF-13C 1,2,3,6,7,8-HxCDF-13C 2,3,4,6,7,8-HxCDF-13C 1,2,3,7,8,9-HxCDF-13C	2.00 2.00 2.00 2.00	64 69 66 74
1,2,3,7,8-PeCDD Total PeCDD	ND ND		5.0 5.0	1,2,3,4,7,8-HxCDD-13C 1,2,3,6,7,8-HxCDD-13C 1,2,3,4,6,7,8-HpCDF-13C	2.00 2.00 2.00 2.00	75 71 65
1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF	ND ND		5.0 5.0	1,2,3,4,7,8,9-HpCDF-13C 1,2,3,4,6,7,8-HpCDD-13C OCDD-13C	2.00 2.00 4.00	74 82 67
2,3,4,6,7,8-HxCDF 1,2,3,7,8,9-HxCDF Total HxCDF	ND ND 16		5.0 5.0 5.0	1,2,3,4-TCDD-13C 1,2,3,7,8,9-HxCDD-13C	2.00 2.00	NA NA
1,2,3,4,7,8-HxCDD 1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD Total HxCDD	ND ND ND 45	 	5.0 5.0 5.0 5.0	2,3,7,8-TCDD-37Cl4	0.20	77
1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF Total HpCDF	29 ND 98		5.0 5.0 5.0	Total 2,3,7,8-TCDD Equivalence: 0.17 ng/Kg (Lower-bound - Using MEDI	EP Factors)	
1,2,3,4,6,7,8-HpCDD Total HpCDD	66 140		5.0 5.0	·	,	
OCDF OCDD	48 510		10 10			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).

ND = Not Detected

EMPC = Estimated Maximum Possible Concentration

NA = Not Applicable

RL = Reporting Limit

NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.



### Method 1613B Sample Analysis Results

Client - Maine Environmental Laboratory

Client's Sample ID

Lab Sample ID

10525089002-R

Filename
F200724A\_06

Injected By
Total Amount Extracted
Moisture

13.6 g
25.5

Pro Mainte Faterated

10525089002-R

F200724A\_06

JRH

13.6 g
25.5

Dry Weight Extracted 10.2 g
ICAL ID F200714
CCal Filename(s) F200723B\_11
Method Blank ID BLANK-81187

 Matrix
 Solid

 Dilution
 NA

 Collected
 07/14/2020 10:15

 Received
 07/16/2020 10:18

 Extracted
 07/22/2020 15:06

07/24/2020 12:03

Analyzed

Native Isomers	Conc ng/Kg	<b>EMPC</b> ng/Kg	<b>RL</b> ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF Total TCDF	ND ND		1.0 1.0	2,3,7,8-TCDF-13C 2,3,7,8-TCDD-13C 1,2,3,7,8-PeCDF-13C	2.00 2.00 2.00	68 71 71
2,3,7,8-TCDD Total TCDD	ND ND		1.0 1.0	2,3,4,7,8-PeCDF-13C 1,2,3,7,8-PeCDD-13C 1,2,3,4,7,8-HxCDF-13C	2.00 2.00 2.00 2.00	75 84 67
1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF Total PeCDF	ND ND ND		5.0 5.0 5.0	1,2,3,6,7,8-HxCDF-13C 1,2,3,6,7,8-HxCDF-13C 2,3,4,6,7,8-HxCDF-13C 1,2,3,7,8,9-HxCDF-13C	2.00 2.00 2.00 2.00	72 72 72 68
1,2,3,7,8-PeCDD Total PeCDD	ND ND		5.0 5.0	1,2,3,4,7,8-HxCDD-13C 1,2,3,6,7,8-HxCDD-13C 1,2,3,4,6,7,8-HpCDF-13C	2.00 2.00 2.00	76 74 64
1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF	ND ND ND		5.0 5.0 5.0	1,2,3,4,7,8,9-HpCDF-13C 1,2,3,4,6,7,8-HpCDD-13C OCDD-13C	2.00 2.00 4.00	68 81 63
1,2,3,7,8,9-HxCDF Total HxCDF	ND ND		5.0 5.0 5.0	1,2,3,4-TCDD-13C 1,2,3,7,8,9-HxCDD-13C	2.00 2.00	NA NA
1,2,3,4,7,8-HxCDD 1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD Total HxCDD	ND ND ND ND		5.0 5.0 5.0 5.0	2,3,7,8-TCDD-37Cl4	0.20	64
1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF Total HpCDF	ND ND ND		5.0 5.0 5.0	Total 2,3,7,8-TCDD Equivalence: 0.000060 ng/k (Lower-bound - Using MEDE		
1,2,3,4,6,7,8-HpCDD Total HpCDD	ND 6.0		5.0 5.0			
OCDF OCDD	ND 15		10 10			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers). EMPC = Estimated Maximum Possible Concentration ND = Not Detected NA = Not Applicable NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.

### **REPORT OF LABORATORY ANALYSIS**

RL = Reporting Limit



### Method 1613B Sample Analysis Results

Client - Maine Environmental Laboratory

Matrix

Client's Sample ID

Lab Sample ID

10525089003-R

Filename

F200724A\_07

Injected By

Total Amount Extracted
% Moisture

Dry Weight Extracted

ONE 7771 B1

10525089003-R

F200724A\_07

Injected By

JRH

13.7 g

24.0

10.4 g

 ICAL ID
 F200714

 CCal Filename(s)
 F200723B\_11

 Method Blank ID
 BLANK-81187

 Dilution
 NA

 Collected
 07/14/2020 10:45

 Received
 07/16/2020 10:18

 Extracted
 07/22/2020 15:06

 Analyzed
 07/24/2020 12:47

Solid

Native Isomers	<b>Conc</b> ng/Kg	<b>EMPC</b> ng/Kg	<b>RL</b> ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF Total TCDF	ND ND		1.0 1.0	2,3,7,8-TCDF-13C 2,3,7,8-TCDD-13C 1,2,3,7,8-PeCDF-13C	2.00 2.00 2.00	53 55 56
2,3,7,8-TCDD Total TCDD	ND ND		1.0 1.0	2,3,4,7,8-PeCDF-13C 1,2,3,7,8-PeCDD-13C 1,2,3,4,7,8-HxCDF-13C	2.00 2.00 2.00 2.00	54 66 50
1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF Total PeCDF	ND ND ND		5.0 5.0 5.0	1,2,3,6,7,8-HxCDF-13C 2,3,4,6,7,8-HxCDF-13C 1,2,3,7,8,9-HxCDF-13C	2.00 2.00 2.00 2.00	55 55 49
1,2,3,7,8-PeCDD Total PeCDD	ND ND		5.0 5.0	1,2,3,4,7,8-HxCDD-13C 1,2,3,6,7,8-HxCDD-13C 1,2,3,4,6,7,8-HpCDF-13C	2.00 2.00 2.00	59 53 48
1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF	ND ND ND		5.0 5.0	1,2,3,4,7,8,9-HpCDF-13C 1,2,3,4,6,7,8-HpCDD-13C OCDD-13C	2.00 2.00 4.00	46 60 45
2,3,4,6,7,6-FXCDF 1,2,3,7,8,9-HxCDF Total HxCDF	ND ND		5.0 5.0 5.0	1,2,3,4-TCDD-13C 1,2,3,7,8,9-HxCDD-13C	2.00 2.00	NA NA
1,2,3,4,7,8-HxCDD 1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD Total HxCDD	ND ND ND ND	 	5.0 5.0 5.0 5.0	2,3,7,8-TCDD-37Cl4	0.20	50
1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF Total HpCDF	ND ND ND		5.0 5.0 5.0	Total 2,3,7,8-TCDD Equivalence: 0.00 ng/Kg (Lower-bound - Using MEDB	EP Factors)	
1,2,3,4,6,7,8-HpCDD Total HpCDD	ND ND		5.0 5.0			
OCDF OCDD	ND ND		10 10			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).

EMPC = Estimated Maximum Possible Concentration

RL = Reporting Limit

ND = Not Detected NA = Not Applicable NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.



### Method 1613B Sample Analysis Results

Client - Maine Environmental Laboratory

Client's Sample ID ONE 7771 B2 Lab Sample ID 10525089004-R Filename F200724A\_08 Injected By JRH **Total Amount Extracted** 13.9 g Matrix Solid % Moisture 27.4 Dilution NA Dry Weight Extracted Collected 07/14/2020 11:30 10.1 g ICAL ID F200714 Received 07/16/2020 10:18 CCal Filename(s) F200723B 11 Extracted 07/22/2020 15:06 Method Blank ID **BLANK-81187** Analyzed 07/24/2020 13:32

Native Isomers	<b>Conc</b> ng/Kg	<b>EMPC</b> ng/Kg	<b>RL</b> ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND		1.0	2,3,7,8-TCDF-13C	2.00	72
Total TCDF	ND		1.0	2,3,7,8-TCDD-13C	2.00	74
				1,2,3,7,8-PeCDF-13C	2.00	76
2,3,7,8-TCDD	ND		1.0	2,3,4,7,8-PeCDF-13C	2.00	69
Total TCDD	ND		1.0	1,2,3,7,8-PeCDD-13C	2.00	81
				1,2,3,4,7,8-HxCDF-13C	2.00	73
1,2,3,7,8-PeCDF	ND		5.0	1,2,3,6,7,8-HxCDF-13C	2.00	78
2,3,4,7,8-PeCDF	ND		5.0	2,3,4,6,7,8-HxCDF-13C	2.00	78
Total PeCDF	ND		5.0	1,2,3,7,8,9-HxCDF-13C	2.00	70
				1,2,3,4,7,8-HxCDD-13C	2.00	75
1,2,3,7,8-PeCDD	ND		5.0	1,2,3,6,7,8-HxCDD-13C	2.00	77
Total PeCDD	ND		5.0	1,2,3,4,6,7,8-HpCDF-13C	2.00	64
				1,2,3,4,7,8,9-HpCDF-13C	2.00	65
1,2,3,4,7,8-HxCDF	ND		5.0	1,2,3,4,6,7,8-HpCDD-13C	2.00	77
1,2,3,6,7,8-HxCDF	ND		5.0	OCDD-13C	4.00	60
2,3,4,6,7,8-HxCDF	ND		5.0			
1,2,3,7,8,9-HxCDF	ND		5.0	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND		5.0	1,2,3,7,8,9-HxCDD-13C	2.00	NA
				, , -, , -, -		
1,2,3,4,7,8-HxCDD	ND		5.0	2,3,7,8-TCDD-37Cl4	0.20	67
1,2,3,6,7,8-HxCDD	ND		5.0	,-, ,		
1,2,3,7,8,9-HxCDD	ND		5.0			
Total HxCDD	ND		5.0			
1,2,3,4,6,7,8-HpCDF	ND		5.0	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND		5.0	Equivalence: 0.00 ng/Kg		
Total HpCDF	ND		5.0	(Lower-bound - Using MEDI	EP Factors)	
·				,	·	
1,2,3,4,6,7,8-HpCDD	ND		5.0			
Total HpCDD	ND		5.0			
OCDE	ND		10			
OCDF	ND		10			
OCDD	24		10			

 $\label{eq:concentration} \mbox{Conc} = \mbox{Concentration (Totals include 2,3,7,8-substituted isomers)}. \\ \mbox{EMPC} = \mbox{Estimated Maximum Possible Concentration}$ 

ND = Not Detected NA = Not Applicable

RL = Reporting Limit NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.



### Method 1613B Sample Analysis Results

Client - Maine Environmental Laboratory

Client's Sample ID ONE 7771 B3 Lab Sample ID 10525089005-R Filename F200724A\_09 Injected By JRH **Total Amount Extracted** 13.8 g Matrix Solid % Moisture Dilution NA 24.9 Dry Weight Extracted Collected 07/14/2020 12:00 10.3 g ICAL ID F200714 Received 07/16/2020 10:18

 CCal Filename(s)
 F200723B\_11
 Extracted
 07/22/2020
 15:06

 Method Blank ID
 BLANK-81187
 Analyzed
 07/24/2020
 14:16

Native Isomers	<b>Conc</b> ng/Kg	<b>EMPC</b> ng/Kg	<b>RL</b> ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF Total TCDF	ND ND		1.0 1.0	2,3,7,8-TCDF-13C 2,3,7,8-TCDD-13C 1,2,3,7,8-PeCDF-13C	2.00 2.00 2.00	60 61 65
2,3,7,8-TCDD Total TCDD	ND ND		1.0 1.0	2,3,4,7,8-PeCDF-13C 1,2,3,7,8-PeCDD-13C 1,2,3,4,7,8-HxCDF-13C	2.00 2.00 2.00 2.00	61 72 62
1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF Total PeCDF	ND ND ND	 	5.0 5.0 5.0	1,2,3,4,7,0-11XCDF-13C 1,2,3,6,7,8-HxCDF-13C 2,3,4,6,7,8-HxCDF-13C 1,2,3,7,8,9-HxCDF-13C 1,2,3,4,7,8-HxCDD-13C	2.00 2.00 2.00 2.00 2.00	67 69 59 66
1,2,3,7,8-PeCDD Total PeCDD	ND ND		5.0 5.0	1,2,3,4,7,6-11XCDD-13C 1,2,3,6,7,8-HxCDD-13C 1,2,3,4,6,7,8-HpCDF-13C 1,2,3,4,7,8,9-HpCDF-13C	2.00 2.00 2.00 2.00	67 58 58
1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,7,8,9-HxCDF	ND ND ND ND	 	5.0 5.0 5.0 5.0	1,2,3,4,6,7,8-HpCDD-13C OCDD-13C 1,2,3,4-TCDD-13C	2.00 4.00 2.00	69 55 NA
Total HxCDF	ND		5.0	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD 1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD Total HxCDD	ND ND ND ND	 	5.0 5.0 5.0 5.0	2,3,7,8-TCDD-37Cl4	0.20	56
1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF Total HpCDF	ND ND ND		5.0 5.0 5.0	Total 2,3,7,8-TCDD Equivalence: 0.00 ng/Kg (Lower-bound - Using MEDE	EP Factors)	
1,2,3,4,6,7,8-HpCDD Total HpCDD	ND ND		5.0 5.0			
OCDF OCDD	ND ND		10 10			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).

ND = Not Detected EMPC = Estimated Maximum Possible Concentration

NA = Not Applicable RL = Reporting Limit

NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.



Method Blank ID

Tel: 612-607-1700 Fax: 612-607-6444

### Method 1613B Sample Analysis Results

Client - Maine Environmental Laboratory

Client's Sample ID ONE 7771 B4
Lab Sample ID 10525089006-R
Filename F200724A\_10
Injected By JRH
Total Amount Extracted 13.3 g

Total Amount Extracted 13.3 g
% Moisture 25.1

Dry Weight Extracted 10.00 g
ICAL ID F200714

CCal Filename(s) F200723B\_11

**BLANK-81187** 

 Matrix
 Solid

 Dilution
 NA

 Collected
 07/14/2020 12:30

 Received
 07/16/2020 10:18

 Extracted
 07/22/2020 15:06

 Analyzed
 07/24/2020 15:00

Native Isomers	<b>Conc</b> ng/Kg	<b>EMPC</b> ng/Kg	<b>RL</b> ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND		1.0	2,3,7,8-TCDF-13C	2.00	70
Total TCDF	ND		1.0	2,3,7,8-TCDD-13C 1,2,3,7,8-PeCDF-13C	2.00 2.00	73 75
2,3,7,8-TCDD	ND		1.0	2,3,4,7,8-PeCDF-13C	2.00	75
Total TCDD	ND		1.0	1,2,3,7,8-PeCDD-13C	2.00	87
1,2,3,7,8-PeCDF	ND		5.0	1,2,3,4,7,8-HxCDF-13C 1,2,3,6,7,8-HxCDF-13C	2.00 2.00	66 75
2,3,4,7,8-PeCDF	ND ND		5.0 5.0	2,3,4,6,7,8-HxCDF-13C	2.00	73 74
Z,3,4,7,6-FeCDF Total PeCDF	ND ND		5.0	1,2,3,7,8,9-HxCDF-13C	2.00	74 71
Total T CODI	ND		5.0	1,2,3,4,7,8-HxCDD-13C	2.00	77
1,2,3,7,8-PeCDD	ND		5.0	1,2,3,6,7,8-HxCDD-13C	2.00	72
Total PeCDD	ND		5.0	1,2,3,4,6,7,8-HpCDF-13C	2.00	64
			0.0	1,2,3,4,7,8,9-HpCDF-13C	2.00	70
1,2,3,4,7,8-HxCDF	ND		5.0	1,2,3,4,6,7,8-HpCDD-13C	2.00	78
1,2,3,6,7,8-HxCDF	ND		5.0	OCDD-13C	4.00	66
2,3,4,6,7,8-HxCDF	ND		5.0			
1,2,3,7,8,9-HxCDF	ND		5.0	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND		5.0	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND		5.0	2,3,7,8-TCDD-37Cl4	0.20	63
1,2,3,6,7,8-HxCDD	ND		5.0			
1,2,3,7,8,9-HxCDD	ND		5.0			
Total HxCDD	ND		5.0			
1,2,3,4,6,7,8-HpCDF	ND		5.0	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND		5.0	Equivalence: 0.00 ng/Kg		
Total HpCDF	ND		5.0	(Lower-bound - Using MEDE	EP Factors)	
1,2,3,4,6,7,8-HpCDD	ND		5.0			
Total HpCDD	ND		5.0			
OCDF	ND		10			
OCDD	ND		10			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers). EMPC = Estimated Maximum Possible Concentration ND = Not Detected NA = Not Applicable NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.

#### **REPORT OF LABORATORY ANALYSIS**

RL = Reporting Limit



### Method 1613B Blank Analysis Results

Lab Sample Name Lab Sample ID Filename **Total Amount Extracted** 

**ICAL ID** 

CCal Filename(s)

**DFBLKUA** 10.2 g

**BLANK-81187** U200724A\_03 U200720 U200723C\_08 Matrix Solid Dilution NA

Extracted 07/22/2020 15:06 Analyzed 07/24/2020 09:44

Injected By JRH

Native Isomers	Conc ng/Kg	<b>EMPC</b> ng/Kg	<b>RL</b> ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF Total TCDF	ND ND		1.0 1.0	2,3,7,8-TCDF-13C 2,3,7,8-TCDD-13C 1,2,3,7,8-PeCDF-13C	2.00 2.00 2.00	79 74 79
2,3,7,8-TCDD Total TCDD	ND ND		1.0 1.0	2,3,4,7,8-PeCDF-13C 1,2,3,7,8-PeCDD-13C 1,2,3,4,7,8-HxCDF-13C	2.00 2.00 2.00 2.00	84 83 64
1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF Total PeCDF	ND ND ND		5.0 5.0 5.0	1,2,3,6,7,8-HxCDF-13C 2,3,4,6,7,8-HxCDF-13C 1,2,3,7,8,9-HxCDF-13C	2.00 2.00 2.00	86 81 76
1,2,3,7,8-PeCDD Total PeCDD	ND ND		5.0 5.0	1,2,3,4,7,8-HxCDD-13C 1,2,3,6,7,8-HxCDD-13C 1,2,3,4,6,7,8-HpCDF-13C 1,2,3,4,7,8,9-HpCDF-13C	2.00 2.00 2.00 2.00	63 79 69 66
1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF	ND ND ND		5.0 5.0 5.0	1,2,3,4,6,7,8-HpCDD-13C OCDD-13C	2.00 4.00	72 55
1,2,3,7,8,9-HxCDF Total HxCDF	ND ND		5.0 5.0	1,2,3,4-TCDD-13C 1,2,3,7,8,9-HxCDD-13C	2.00 2.00	NA NA
1,2,3,4,7,8-HxCDD 1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD Total HxCDD	ND ND ND ND	 	5.0 5.0 5.0 5.0	2,3,7,8-TCDD-37Cl4	0.20	70
1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF Total HpCDF	ND ND ND		5.0 5.0 5.0	Total 2,3,7,8-TCDD Equivalence: 0.00 ng/Kg (Lower-bound - Using MEDE	P Factors)	
1,2,3,4,6,7,8-HpCDD Total HpCDD	ND ND		5.0 5.0			
OCDF OCDD	ND ND		10 10			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).

EMPC = Estimated Maximum Possible Concentration

RL = Reporting Limit

Results reported on a total weight basis and are valid to no more than 2 significant figures.



### Method 1613B Laboratory Control Spike Results

Lab Sample ID LCS-81188 Filename U200724A 04 **Total Amount Extracted** 10.5 g **ICAL ID** U200720

CCal Filename U200723C\_08

Method Blank ID **BLANK-81187** 

Solid Matrix Dilution NA

Extracted 07/22/2020 15:06 Analyzed 07/24/2020 10:25

Injected By **JRH** 

	_	_	Lower	Upper	_%
Compound	Cs	Cr	Limit	Limit	Rec.
2,3,7,8-TCDF	10	11	7.5	15.8	113
2,3,7,8-TCDD	10	11	6.7	15.8	111
1,2,3,7,8-PeCDF	50	53	40.0	67.0	105
2,3,4,7,8-PeCDF	50	53	34.0	80.0	105
1,2,3,7,8-PeCDD	50	53	35.0	71.0	106
1,2,3,4,7,8-HxCDF	50	58	36.0	67.0	115
1,2,3,6,7,8-HxCDF	50	56	42.0	65.0	113
2,3,4,6,7,8-HxCDF	50	56	35.0	78.0	111
1,2,3,7,8,9-HxCDF	50	53	39.0	65.0	106
1,2,3,4,7,8-HxCDD	50	54	35.0	82.0	108
1,2,3,6,7,8-HxCDD	50	65	38.0	67.0	130
1,2,3,7,8,9-HxCDD	50	65	32.0	81.0	129
1,2,3,4,6,7,8-HpCDF	50	58	41.0	61.0	116
1,2,3,4,7,8,9-HpCDF	50	56	39.0	69.0	112
1,2,3,4,6,7,8-HpCDD	50	54	35.0	70.0	109
OCDF	100	120	63.0	170.0	116
OCDD	100	120	78.0	144.0	117
2,3,7,8-TCDD-37Cl4	10	7.1	3.1	19.1	71
2,3,7,8-TCDF-13C	100	75	22.0	152.0	75
2,3,7,8-TCDD-13C	100	71	20.0	175.0	71
1,2,3,7,8-PeCDF-13C	100	72	21.0	192.0	72
2,3,4,7,8-PeCDF-13C	100	80	13.0	328.0	80
1,2,3,7,8-PeCDD-13C	100	78	21.0	227.0	78
1,2,3,4,7,8-HxCDF-13C	100	67	19.0	202.0	67
1,2,3,6,7,8-HxCDF-13C	100	83	21.0	159.0	83
2,3,4,6,7,8-HxCDF-13C	100	78	22.0	176.0	78
1,2,3,7,8,9-HxCDF-13C	100	73	17.0	205.0	73
1,2,3,4,7,8-HxCDD-13C	100	65	21.0	193.0	65
1,2,3,6,7,8-HxCDD-13C	100	73	25.0	163.0	73
1,2,3,4,6,7,8-HpCDF-13C	100	69	21.0	158.0	69
1,2,3,4,7,8,9-HpCDF-13C	100	64	20.0	186.0	64
1,2,3,4,6,7,8-HpCDD-13C	100	70	26.0	166.0	70
OCDD-13C	200	110	26.0	397.0	55

Cs = Concentration Spiked (ng/mL)

Cr = Concentration Recovered (ng/mL)

Rec. = Recovery (Expressed as Percent)

Control Limit Reference: Method 1613, Table 6, 10/94 Revision

R = Recovery outside of control limits

Nn = Value obtained from additional analysis

\* = See Discussion