

CANDLEWOOD SHORES DETAIL
EXHIBIT C

Candlewood Lake Water Supplies - Drinking Water Analysis						
Water Source / Utility			Candlewood Shores	Arrowhead	Aquarion Western	Lake
Sampling Date			15-Aug-19	22-Aug-19		
	Units	RL				
Alkalinity	mg/L as CaCO ₃	2	166	180		
Chloride	mg/L	10	94	93		
pH	SU		7.1	7.5		
Nitrate-N	mg/L	0.100	6.99	6.85		
TP	mg/L	0.010	0.015	0.017		
ortho-P	mg/L	0.005	0.016	0.018		
Boron ⁽¹⁾	mg/L	0.030	0.054	0.038	ND	ND
Acesulfame K ⁽²⁾	ppt-ng/L	100	532	1,040	204	102
Sucralose ⁽³⁾	ppt-ng/L	1,000			1,900	ND
Saccharin ⁽³⁾	ppt-ng/L	100			ND	ND
PFOA	ppt-ng/L	1.72	24.6	8.14		
PFOS	ppt-ng/L	1.72	28.3	5.73		
PFOA/PFOS Total	ppt-ng/L	1.72	52.9	13.87		
			04-Sep-19	04-Sep-19	04-Sep-19	04-Sep-19
PFOA	ppt-ng/L	1.72	20.3	8.69	10.7	3.71
PFOS	ppt-ng/L	1.72	24.7	7.5	13.1	2.14
PFOA/PFOS Total	ppt-ng/L	1.72	45.0	16.19	23.8	5.85
⁽¹⁾ Sampled 4 Sept 2019 ⁽²⁾ Level of Quantification (LOQ) ⁽³⁾ Sampled 16 Sept 2019 ND=Non Detect						

RL = Reportable Limit for the test procedure, which is the Limit of Detection

**EMSL Analytical, Inc.**

200 Rt. 130 N, Cinnaminson, NJ 08077

Phone/Fax: 800-220-3675/ 856-786-0392

www.emsl.com www.foodtestinglab.com www.shelflifestudy.com

EMSL Order: 211901429

Customer ID: LMBA75

Customer PO:

Attn: **Pio Lombardo**
Lombardo Associates
188 Church St.
Newton, MA 02458Phone: **617-964-2924**
Fax: **617-332-5470**Collected: **8/14/2019**
Received: **8/15/2019**
Reported: **9/12/2019**Project: **Candlewood - Brookfield****Food Chemistry Analytical Report**

EMSL ID:	211901429-0001	
Sample Description:	Candlewood Shores	
Analyte	Result	Units
Acesulfame K	532	ng/L

Ryan McKenna – Food Chemistry Supervisor

LOQ – Limit of Quantitation

ND – Indicates that the analyte was not detected at the Limit of Quantitation

Methods used: Bikram Subedi, Kurunthachalam Kannan. "Fate of Artificial Sweeteners in Wastewater Treatment Plants in New York State, USA." Environmental Science & Technology. Modified

Sabine Junginger. "Analyzing Synthetic Sweeteners in Waste Water with Robust Sample Preparation. Agilent Technologies. Modified.

Report Revision **0**: Initial issue



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Project: **Candlewood - Brookfield**

NOTES: All samples were collected by and all sampling data was provided by the client. The results are valid only for those samples analyzed, and only for those samples collected in accordance with appropriate methodology as determined by the client. This report is not intended for FDA Import Detention Reporting, and has not been prepared in compliance with FDA import / Export regulations. The results herein do not denote or represent a medical or clinical diagnosis or conclusion. In the even that samples(s) were submitted in opened, used, non-sterile or otherwise adulterated condition EMSL shall not be responsible or liable.

Unless otherwise noted or requested, all analysis was done in accordance with EMSL Analytical, Inc. default methodology for the reported analytes. Method selection is based on customer request, provided ingredient declarations, known matrix interferences or considerations, and applicable regulatory requirements. In the absence of this information, EMSL Analytical, Inc. will select the most appropriate methods based on the sample information available.

**Environmental Chemistry
Chain of Custody**

EMSL Order Number (Lab Use Only):

211901429

PHONE:
FAX:



EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS TRAINING

Report To Contact Name: Pio Lombardo		Bill To Company: SAHE								
Company Name: Lombardo Associates		Attention To:								
Street: 188 Church St		Street:								
City: Newton		City:								
State/Province: MA		State/Province:								
Zip/Postal Code: 02458		Zip/Postal Code:								
Phone: 617-964-2924		Phone:								
Fax: 617-332-5470		Fax:								
Project Name: ANDREW DOD - BROOKFIELD		Email Results To: Pio@LombardoAssociates.com								
U.S. State where Samples Collected:		Purchase Order:								
Number of Samples in Shipment:		Date of Shipment:								
Sample for Compliance? Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, NPDES? <input type="checkbox"/> Other (Specify):										
Samples Collected by: EMSL <input type="checkbox"/> Client <input type="checkbox"/> check one		Sampled By (Signature):								
Standard Turnaround Time: <input type="checkbox"/> 2 Weeks		The following TATs are subject to lab approval: <input type="checkbox"/> 1 Week <input type="checkbox"/> 4 Days <input type="checkbox"/> 3 Days <input type="checkbox"/> 2 Days <input type="checkbox"/> 1 Day								
Failure to complete will hinder processing of samples										
Client Sample ID	Comp	Grab	Collect Date/Time	Matrix	Preservative	Field pH	Field pH	Field Temp. Deg C	Field Temp.	Comments
ANDREW DOD	<input type="checkbox"/>	<input checked="" type="checkbox"/>	8-14-19	W	1=HCL 2=HNO3 3=H2SO4 4=ICE 5=Other					
SMORES	<input type="checkbox"/>	<input type="checkbox"/>								
	<input type="checkbox"/>	<input type="checkbox"/>								
	<input type="checkbox"/>	<input type="checkbox"/>								
	<input type="checkbox"/>	<input type="checkbox"/>								
Released By (Signature): <i>[Signature]</i>		Date & Time: 8-14-19 4:00 PM		Received By: FX		Date & Time: 8/15/19 9:15				

Please indicate reporting requirements: Results Only Results and QC Reduced Deliverables Disk Deliverable Other _____

Note: Field pH and Field Temperature are tested on the same day as the date of sample collection.

(Lab) Received Temperature: **9.1** °C

From: [Silverman, Josh](#)
To: [Pio Lombardo](#)
Subject: RE: EMSL report, COC for order(s) 211901429 (211901429 - Candlewood - Brookfield)
Date: Thursday, September 12, 2019 1:10:03 PM
Attachments: [image002.png](#)

Hi Pio,

We only focused on Acesulfame for the last week and the LOQ for what was just reported was 100 ng/L. Both samples had concentrations above that.

Josh Silverman | *Sales Account Representative*

EMSL Analytical, Inc. | 200 Route 130 North | Cinnaminson, NJ 08077

Phone: 856-303-2531 Cell: 609-519-0143 | Fax: 856-786-5974 | Toll Free: 800-220-3675

Some of the resources EMSL Analytical, Inc. offers to our clients:

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From: Pio Lombardo [mailto:pio@lombardoassociates.com]
Sent: Thursday, September 12, 2019 1:02 PM
To: Silverman, Josh
Subject: FW: EMSL report, COC for order(s) 211901429 (211901429 - Candlewood - Brookfield)

[EXTERNAL E-MAIL]

Great !

What are the detection limits and/or Limits of Quantification?

Pio

From: EMSL (Cinnaminson) <foodchemlab@EMSL.com>
Sent: Thursday, September 12, 2019 11:57 AM
To: Pio Lombardo <pio@lombardoassociates.com>
Subject: EMSL report, COC for order(s) 211901429 (211901429 - Candlewood - Brookfield)

Report, COC for order(s):
211901429 - Candlewood - Brookfield

Please tell us how we are doing.

JOB: L1936644 REPORT STYLE: Data Usability Report
0010: Alpha Analytical Report Cover Page - OK
0015: Sample Cross Reference Summary - OK
0060: Case Narrative - OK
1180: Inorganics Cover Page - OK
1200: Wet Chemistry Sample Results - OK
1210: Wet Chemistry Method Blank Report - OK
1220: Wet Chemistry LCS Report - OK
1240: Wet Chemistry Matrix Spike Report - OK
1250: Wet Chemistry Duplicate Report - OK
5100: Sample Receipt & Container Information Report - OK
5200: Glossary - OK
5400: References - OK

No results found for sample L1936644-01 for product A2-537



ANALYTICAL REPORT

Lab Number:	L1936644
Client:	Lombardo Associates, Inc. 188 Church Street Newton, MA 02458
ATTN:	Pio Lombardo
Phone:	(617) 964-2924
Project Name:	BROOKFIELD CT
Project Number:	Not Specified
Report Date:	08/22/19

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: BROOKFIELD CT
Project Number: Not Specified

Lab Number: L1936644
Report Date: 08/22/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1936644-01	CANDLEWOOD SHORES	WATER	CANDLEWOOD SHORES	08/14/19 12:30	08/14/19
L1936644-02	FIELD BLANK	WATER	CANDLEWOOD SHORES	08/14/19 00:00	08/14/19

Project Name: BROOKFIELD CT
Project Number: Not Specified

Lab Number: L1936644
Report Date: 08/22/19

Case Narrative

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

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

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

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

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

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

Project Name: BROOKFIELD CT
Project Number: Not Specified

Lab Number: L1936644
Report Date: 08/22/19

Case Narrative (continued)

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: 08/22/19

INORGANICS & MISCELLANEOUS

Project Name: BROOKFIELD CT
Project Number: Not Specified

Lab Number: L1936644
Report Date: 08/22/19

SAMPLE RESULTS

Lab ID: L1936644-01
Client ID: CANDLEWOOD SHORES
Sample Location: CANDLEWOOD SHORES

Date Collected: 08/14/19 12:30
Date Received: 08/14/19
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Total	166.		mg CaCO3/L	2.00	NA	1	-	08/15/19 03:52	121,2320B	BR
Chloride	94.		mg/l	10	--	10	-	08/15/19 22:05	121,4500CL-E	TL
pH (H)	7.1		SU	-	NA	1	-	08/15/19 03:15	121,4500H+-B	DS
Nitrogen, Nitrate	6.99		mg/l	0.100	--	1	-	08/15/19 07:00	121,4500NO3-F	MR
Phosphorus, Total	0.015		mg/l	0.010	--	1	08/16/19 10:00	08/19/19 09:40	121,4500P-E	SD
Phosphorus, Orthophosphate	0.016		mg/l	0.005	--	1	-	08/14/19 23:53	121,4500P-E	JW

Project Name: BROOKFIELD CT
Project Number: Not Specified

Lab Number: L1936644
Report Date: 08/22/19

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1272542-1										
Phosphorus, Orthophosphate	ND		mg/l	0.005	--	1	-	08/14/19 23:48	121,4500P-E	JW
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1272583-1										
Alkalinity, Total	ND		mg CaCO3/L	2.00	NA	1	-	08/15/19 03:52	121,2320B	BR
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1272607-1										
Nitrogen, Nitrate	ND		mg/l	0.100	--	1	-	08/15/19 06:56	121,4500NO3-F	MR
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1272951-1										
Chloride	ND		mg/l	1.0	--	1	-	08/15/19 21:25	121,4500CL-E	TL
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1273253-1										
Phosphorus, Total	ND		mg/l	0.010	--	1	08/16/19 10:00	08/19/19 09:14	121,4500P-E	SD

Lab Control Sample Analysis

Batch Quality Control

Project Name: BROOKFIELD CT

Project Number: Not Specified

Lab Number: L1936644

Report Date: 08/22/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1272542-2								
Phosphorus, Orthophosphate	103		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1272570-1								
pH	100		-		99-101	-		5
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1272583-2								
Alkalinity, Total	102		-		90-110	-		10
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1272607-2								
Nitrogen, Nitrate	98		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1272951-2								
Chloride	97		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1273253-2								
Phosphorus, Total	95		-		80-120	-		

Matrix Spike Analysis

Batch Quality Control

Project Name: BROOKFIELD CT
Project Number: Not Specified

Lab Number: L1936644
Report Date: 08/22/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Qual	MSD Found	MSD %Recovery	MSD Qual	Recovery Limits	RPD	RPD Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1272542-4 QC Sample: L1936644-01 Client ID: CANDLEWOOD SHORES												
Phosphorus, Orthophosphate	0.016	0.5	0.527	102	-	-	-	-	80-120	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1272583-4 QC Sample: L1936464-02 Client ID: MS Sample												
Alkalinity, Total	79.4	100	179	100	-	-	-	-	86-116	-	-	10
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1272607-4 QC Sample: L1936644-01 Client ID: CANDLEWOOD SHORES												
Nitrogen, Nitrate	6.99	4	10.9	100	-	-	-	-	83-113	-	-	17
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1272951-4 QC Sample: L1936702-02 Client ID: MS Sample												
Chloride	3.5	20	23	98	-	-	-	-	58-140	-	-	7
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1273253-3 QC Sample: L1935788-01 Client ID: MS Sample												
Phosphorus, Total	0.012	0.5	0.465	91	-	-	-	-	75-125	-	-	20

Lab Duplicate Analysis

Batch Quality Control

Project Name: BROOKFIELD CT

Project Number: Not Specified

Lab Number: L1936644

Report Date: 08/22/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1272542-3 QC Sample: L1936644-01 Client ID: CANDLEWOOD SHORES						
Phosphorus, Orthophosphate	0.016	0.017	mg/l	6		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1272570-2 QC Sample: L1936308-01 Client ID: DUP Sample						
pH	8.1	8.1	SU	0		5
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1272583-3 QC Sample: L1936464-01 Client ID: DUP Sample						
Alkalinity, Total	79.5	79.7	mg CaCO3/L	0		10
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1272607-3 QC Sample: L1936644-01 Client ID: CANDLEWOOD SHORES						
Nitrogen, Nitrate	6.99	7.00	mg/l	0		17
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1272951-3 QC Sample: L1936702-02 Client ID: DUP Sample						
Chloride	3.5	7.3	mg/l	70	Q	7
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1273253-4 QC Sample: L1935788-01 Client ID: DUP Sample						
Phosphorus, Total	0.012	0.013	mg/l	8		20

Project Name: BROOKFIELD CT**Lab Number:** L1936644**Project Number:** Not Specified**Report Date:** 08/22/19**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1936644-01A	Plastic 250ml Trizma preserved	A	NA		2.1	Y	Absent		A2-537(14)
L1936644-01B	Plastic 250ml Trizma preserved	A	NA		2.1	Y	Absent		A2-537(14)
L1936644-01C	Plastic 120ml unpreserved	A	7	7	2.1	Y	Absent		OPHOS-4500(2)
L1936644-01D	Plastic 250ml unpreserved/No Headspace	A	NA		2.1	Y	Absent		ALK-T-2320(14)
L1936644-01E	Plastic 250ml unpreserved	A	7	7	2.1	Y	Absent		CL-4500(28),NO3-4500(2),PH-4500(.01)
L1936644-01F	Plastic 250ml H2SO4 preserved	A	<2	<2	2.1	Y	Absent		TPHOS-4500(28)
L1936644-02A	Plastic 250ml unpreserved	A	NA		2.1	Y	Absent		ARCHIVE()

*Values in parentheses indicate holding time in days

Project Name: BROOKFIELD CT
Project Number: Not Specified

Lab Number: L1936644
Report Date: 08/22/19

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
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: BROOKFIELD CT
Project Number: Not Specified

Lab Number: L1936644
Report Date: 08/22/19

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

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1.8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

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.

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.

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 using acetone as a solvent.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- 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 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.

Project Name: BROOKFIELD CT
Project Number: Not Specified

Lab Number: L1936644
Report Date: 08/22/19

REFERENCES

- 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.

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

EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (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.

Biological Tissue Matrix: EPA 3050B

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

Westborough Facility:

Drinking Water

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

EPA 180.1, SM2130B, SM4500Cl-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 I, Endosulfan II,

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

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

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

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.



CHAIN OF CUSTODY

PAGE _____ OF _____

Date Rec'd in Lab: 8/14/19

ALPHA Job #: L1936644

8 Walkup Drive
Westboro, MA 01581
Tel: 508-998-9220

320 Forbes Blvd
Mansfield, MA 02048
Tel: 508-822-9300

Project Information

Project Name: BROOKFIELD CT

Project Location: CANDLEWOOD SHORES

Project Manager: PLO LOMBARDO

ALPHA Quote #: DAVE SANFORD

Turn-Around Time

Standard RUSH (only confirmed if pre-approved)

Date Due: AUG. 21, 2019

Report Information - Data Deliverables

ADEX EMAIL

Billing Information

Same as Client info PO #:

Client Information

Client: LOMBARDO ASSOCIATES INC.

Address: 188 CHURCH ST
NEWTON, MA 02458

Phone: 617-964-2924

Email: PIO@LOMBARDOASSOCIATES.COM

Additional Project Information:

Regulatory Requirements & Project Information Requirements

- Yes No MA MCP Analytical Methods
- Yes No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
- Yes No GW1 Standards (Info Required for Metals & EPH with Targets)
- Yes No NPDES RGP
- Other State /Fed Program _____

ANALYSIS	VOC: <input type="checkbox"/> 8260 <input type="checkbox"/> 624 <input type="checkbox"/> 524.2
	SVOC: <input type="checkbox"/> ABN <input type="checkbox"/> PAH
	METALS: <input type="checkbox"/> MCP 13 <input type="checkbox"/> MCP 14 <input type="checkbox"/> RCP 15
	METALS: <input type="checkbox"/> RCRA5 <input type="checkbox"/> RCRA8
	EPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only
	VPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only
	EPH <input type="checkbox"/> Quant Only <input type="checkbox"/> Fingerprint
	TPH: <input type="checkbox"/> Quant Only <input type="checkbox"/> Fingerprint
	PH
	CHLORIDE
	NITRATE - N
	TOTAL PHOSPHORUS
	ALKALINITY
	ORTHOPHOSPHATE

SAMPLE INFO

- Filtration
- Field
- Lab to do
- Preservation
- Lab to do

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler Initials
		Date	Time		
36644-01	CANDLEWOOD SHORES	8/14/19	12:30	WATER	PL

- Container Type**
- P= Plastic
 - A= Amber glass
 - V= Vial
 - G= Glass
 - B= Bacteria cup
 - C= Cube
 - O= Other
 - E= Encore
 - D= BOD Bottle
- Preservative**
- A= None
 - B= HCl
 - C= HNO₃
 - D= H₂SO₄
 - E= NaOH
 - F= MeOH
 - G= NaHSO₄
 - H= Na₂S₂O₃
 - I= Ascorbic Acid
 - J= NH₄Cl
 - K= Zn Acetate
 - O= Other

Relinquished By:	Date/Time: 8-14-19 4:00 PM	Received By:	Date/Time: 8/14/19 1637
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All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.
FORM NO: 01-01 (rev. 12-Mar-2012)

TOTAL # BOTTLES

QUESTIONS

Bottle Order Request

CALL PIO LOMBARDO 017-529-4191

Acctnum : LOMBARDO
Contact Name : Nelson Malwitz
Projectnum :
Company : Lombardo Associates, Inc.
Client PM :
Projectname : Brookfield, CT
Request date : 08/08/19
Status : NEED
Sample delivery date :
Order taken by : Cindy Rogers
Linked Call :
Projected TAT :
Completed by :
Delivery method : Courier
Date Completed :

Matrix :	Drinking Water	# Samples :	1	Client IDs :	1
Analytes :	Total Alkalinity - SM 2320				
	Chloride by IC - EPA 300.0				
	Nitrate Nitrogen, IC - EPA 300.0				
	pH-Hydrogen ion concentration - SM 4500				
	Total Phosphorus - SM 4500				
Container	Quantity	Analyte Label			
Plastic 250ml unpreserved	1	pH, Cl, NO3			
Plastic 250ml H2SO4 preserved	1	TPhos			
Plastic 250ml unpreserved/No Headspace		ALK-T-2320 (Fill to Top)			

Bottle Quantity Summary:

- Plastic 250ml H2SO4 preserved 1
- Plastic 250ml unpreserved 1
- Plastic 250ml unpreserved/No Headspace 1

PLASTIC 120 ml unpreserved OARS

Trip Blanks and Miscellaneous Field Blanks:

Cooler
 Dangerous
 Certified
 NJ Courier Pickup Label
 Return Shipping Labels

Pending Shipping Date(s)
08/09/19

If you have questions on this Bottle Order, need to order additional bottles or schedule a Sample Pickup, please call a member of our Alpha team at 508-898-9220.

NJ SERVICE CENTER
201-847-9100
508-439-5193



PLEASE PUT SAMPLES ON ICE
EXCEPT CANISTER OR BAG SAMPLES

JOB: L1940301 REPORT STYLE: Data Usability Report
0010: Alpha Analytical Report Cover Page - OK
0015: Sample Cross Reference Summary - OK
0040: CT DEP RCP QA/QC Certification Form - OK
0060: Case Narrative - OK
0070: QC Outlier Summary Report - OK
1005: Metals Sample Results - OK
1010: Metals Method Blank Report - OK
1020: Metals LCS Report - OK
5100: Sample Receipt & Container Information Report - OK
5200: Glossary - OK
5400: References - OK

No results found for sample L1940301-01 for product A2-537
No results found for sample L1940301-02 for product A2-537
No results found for sample L1940301-03 for product A2-537
No results found for sample L1940301-04 for product A2-537



ANALYTICAL REPORT

Lab Number:	L1940301
Client:	Lombardo Associates, Inc. 188 Church Street Newton, MA 02458
ATTN:	Pio Lombardo
Phone:	(617) 964-2924
Project Name:	CANDLEWOOD LAKE-BROOKFIELD
Project Number:	6681
Report Date:	09/11/19

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: CANDLEWOOD LAKE-BROOKFIELD
Project Number: 6681

Lab Number: L1940301
Report Date: 09/11/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1940301-01	ARROWHEAD-LEVINE	WATER	BROOKFIELD, CT	09/04/19 08:30	09/04/19
L1940301-02	CANDLEWOOD SHORES	WATER	BROOKFIELD, CT	09/04/19 15:15	09/04/19
L1940301-03	CANDLEWOOD LAKE	WATER	BROOKFIELD, CT	09/04/19 12:00	09/04/19
L1940301-04	JOHN	WATER	BROOKFIELD, CT	09/04/19 15:00	09/04/19

Project Name: CANDLEWOOD LAKE-BROOKFIELD
Project Number: 6681

Lab Number: L1940301
Report Date: 09/11/19

**CT DEP Reasonable Confidence Protocols
 Laboratory Analysis
 QA/QC Certification Form**

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed (including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CT DEP method-specific Reasonable Confidence Protocol documents)?	YES
1a	Were the method specified preservation and holding time requirements met?	YES
1b	VPH & EPH Methods Only: Was the VPH or EPH Method conducted without significant modifications (see Section 11.3 of respective Methods)?	N/A
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	YES
3	Were all samples received at an appropriate temperature (<6°C)?	YES
4	Were all QA/QC performance criteria specified in the CT DEP Reasonable Confidence Protocol documents achieved?	YES
5a	Were reporting limits specified or referenced on the chain-of-custody?	NO
5b	Were these reporting limits met?	N/A
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	NO
7	Are project-specific matrix spikes and laboratory duplicates included in this data set?	NO

Note: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A or question B is "No", the data package does not meet the requirements for "Reasonable Confidence".

Project Name: CANDLEWOOD LAKE-BROOKFIELD
Project Number: 6681

Lab Number: L1940301
Report Date: 09/11/19

Case Narrative

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

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

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

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

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

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

Project Name: CANDLEWOOD LAKE-BROOKFIELD
Project Number: 6681

Lab Number: L1940301
Report Date: 09/11/19

Case Narrative (continued)

Report Submission

September 11, 2019: This is a preliminary report.

RCP Related Narratives

Report Submission

In reference to question 5a:

Reporting limits were not specified.

Sample Receipt

L1940301-04: The sample was received above the appropriate pH for the Total Metals analysis. The laboratory added additional HNO₃ to a pH <2.

Metals

In reference to question 6:

At the client's request, all submitted samples were not analyzed for the full RCP list of constituents identified in the method specific analyte list presented in the RCP documents.

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:

 Cristin Walker

Title: Technical Director/Representative

Date: 09/11/19

QC OUTLIER SUMMARY REPORT**Project Name:** CANDLEWOOD LAKE-BROOKFIELD**Lab Number:** L1940301**Project Number:** 6681**Report Date:** 09/11/19

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
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There are no QC Outliers associated with this report.

METALS

Project Name: CANDLEWOOD LAKE-BROOKFIELD
Project Number: 6681

Lab Number: L1940301
Report Date: 09/11/19

SAMPLE RESULTS

Lab ID: L1940301-02
 Client ID: CANDLEWOOD SHORES
 Sample Location: BROOKFIELD, CT

Date Collected: 09/04/19 15:15
 Date Received: 09/04/19
 Field Prep: Not Specified

Sample Depth:
 Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
CT RCP Total Metals - Mansfield Lab											
Boron, Total	0.054		mg/l	0.030	--	1	09/10/19 12:45	09/11/19 00:22	EPA 3005A	79,6010D	MC



Project Name: CANDLEWOOD LAKE-BROOKFIELD

Lab Number: L1940301

Project Number: 6681

Report Date: 09/11/19

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
CT RCP Total Metals - Mansfield Lab for sample(s): 01-04 Batch: WG1282294-1									
Boron, Total	ND	mg/l	0.030	--	1	09/10/19 12:45	09/10/19 22:59	79,6010D	MC

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: CANDLEWOOD LAKE-BROOKFIELD

Project Number: 6681

Lab Number: L1940301

Report Date: 09/11/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
CT RCP Total Metals - Mansfield Lab Associated sample(s): 01-04 Batch: WG1282294-2								
Boron, Total	102		-		80-120	-		20

Project Name: CANDLEWOOD LAKE-BROOKFIELD**Lab Number:** L1940301**Project Number:** 6681**Report Date:** 09/11/19**Sample Receipt and Container Information**

Were project specific reporting limits specified?

NO

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1940301-01A	Plastic 250ml HNO3 preserved	A	<2	<2	4.6	Y	Absent		CT-B-6010T(180)
L1940301-01B	Plastic 250ml Trizma preserved	A	NA		4.6	Y	Absent		A2-537(14)
L1940301-01C	Plastic 250ml Trizma preserved	A	NA		4.6	Y	Absent		A2-537(14)
L1940301-02A	Plastic 250ml HNO3 preserved	A	<2	<2	4.6	Y	Absent		CT-B-6010T(180)
L1940301-02B	Plastic 250ml Trizma preserved	A	NA		4.6	Y	Absent		A2-537(14)
L1940301-02C	Plastic 250ml Trizma preserved	A	NA		4.6	Y	Absent		A2-537(14)
L1940301-03A	Plastic 250ml HNO3 preserved	A	<2	<2	4.6	Y	Absent		CT-B-6010T(180)
L1940301-03B	Plastic 250ml Trizma preserved	A	NA		4.6	Y	Absent		A2-537(14)
L1940301-03C	Plastic 250ml Trizma preserved	A	NA		4.6	Y	Absent		A2-537(14)
L1940301-04A	Plastic 250ml HNO3 preserved	A	7	<2	4.6	N	Absent		CT-B-6010T(180)
L1940301-04B	Plastic 250ml Trizma preserved	A	NA		4.6	Y	Absent		A2-537(14)
L1940301-04C	Plastic 250ml Trizma preserved	A	NA		4.6	Y	Absent		A2-537(14)

Project Name: CANDLEWOOD LAKE-BROOKFIELD
Project Number: 6681

Lab Number: L1940301
Report Date: 09/11/19

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
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: CANDLEWOOD LAKE-BROOKFIELD**Lab Number:** L1940301**Project Number:** 6681**Report Date:** 09/11/19

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

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1.8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

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.

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.

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

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- 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 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



Project Name: CANDLEWOOD LAKE-BROOKFIELD
Project Number: 6681

Lab Number: L1940301
Report Date: 09/11/19

REFERENCES

- 79 Connecticut DEP Quality Assurance and Quality Control Requirements for SW-846 Methods. CTDEP Reasonable Confidence Protocols (RCPs). Versions 2.0 and 3.0, July and December 2006.

LIMITATION OF LIABILITIES

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

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



Certification Information

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

Westborough Facility

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

EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (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.

Biological Tissue Matrix: EPA 3050B

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

Westborough Facility:

Drinking Water

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

EPA 180.1, SM2130B, SM4500Cl-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 I, Endosulfan II,

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

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

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

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.



CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 9/4/19

ALPHA Job #: L1940301

8 Walkup Drive
Westboro, MA 01581
Tel: 508-898-9220

320 Forbes Blvd
Mansfield, MA 02048
Tel: 508-822-9300

Project Information

Project Name: Candlewood ^{lake-} Brookfield

Project Location: Brookfield, CT

Project #: 6681

Project Manager: Dave Sanford

ALPHA Quote #:

Report Information - Data Deliverables

ADEx EMAIL

Billing Information

Same as Client info PO #:

Client Information

Client: Lombardo Associates

Address: 188 Church St.
Newton, MA 02458

Phone: (617) 964-2924

Email: pio@lombardoassociates.com

Turn-Around Time

Standard RUSH (only confirmed if pre-approved!)

Date Due:

Regulatory Requirements & Project Information Requirements

Yes No MA MCP Analytical Methods Yes No CT RCP Analytical Methods

Yes No Matrix Spike Required on this SDG? (Required for MCP Inorganics)

Yes No GW1 Standards (Info Required for Metals & EPH with Targets)

Yes No NPDES RGP

Other State /Fed Program _____ Criteria _____

Additional Project Information:

ANALYSIS	VOC: <input type="checkbox"/> 8260 <input type="checkbox"/> 624 <input type="checkbox"/> 524.2	SVOC: <input type="checkbox"/> ABN <input type="checkbox"/> PAH	METALS: <input type="checkbox"/> MCP 13 <input type="checkbox"/> MCP 14 <input type="checkbox"/> RCP 15	METALS: <input type="checkbox"/> RCRA5 <input type="checkbox"/> RCRA8	EPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only	VPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only	PCB: <input type="checkbox"/> PEST	TPH: <input type="checkbox"/> Quant Only <input type="checkbox"/> Fingerprint	SAMPLE INFO Filtration <input type="checkbox"/> Field <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do	TOTAL # BOTTLES
	PFOS / PFOA PERON									

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler Initials
		Date	Time		
40301-01	ARROWHEAD - LEVINE	9-4-19	8:30AM	WATER	PSL
-02	CANDLEWOOD SHORES	9-4-19	3:15PM	WATER	PSL
-03	CANDLEWOOD LAKE	9-4-19	NOON	WATER	PSL
-04	JOHN	9-4-19	3:00AM	WATER	PSL

- Container Type**
- P= Plastic
 - A= Amber glass
 - V= Vial
 - G= Glass
 - B= Bacteria cup
 - C= Cube
 - O= Other
 - E= Encore
 - D= BOD Bottle
- Preservative**
- A= None
 - B= HCl
 - C= HNO₃
 - D= H₂SO₄
 - E= NaOH
 - F= MeOH
 - G= NaHSO₄
 - H= Na₂S₂O₅
 - I= Ascorbic Acid
 - J= NH₄Cl
 - K= Zn Acetate
 - O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
<i>[Signature]</i>	9-4-19	<i>[Signature]</i> RAL	9/4/19 1802

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

Project Name: CANDLEWOOD LAKE-BROOKFIELD
Project Number: 6681

Lab Number: L1940301
Report Date: 09/23/19

SAMPLE RESULTS

Lab ID: L1940301-02
 Client ID: CANDLEWOOD SHORES
 Sample Location: BROOKFIELD, CT

Date Collected: 09/04/19 15:15
 Date Received: 09/04/19
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 122,537
 Analytical Date: 09/21/19 08:48
 Analyst: RS

Extraction Method: EPA 537
 Extraction Date: 09/18/19 23:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537 - Mansfield Lab						
Perfluorooctanoic Acid (PFOA)	20.3		ng/l	1.74	--	1
Perfluorooctanesulfonic Acid (PFOS)	24.7		ng/l	1.74	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	83		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	72		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	64	Q	70-130