

Town of Swampscott Department of Public Works

22 Monument Avenue Swampscott, Massachusetts 01907 Tel: 781-596-8860 Fax: 781-596-8828

Gino A. Cresta Jr., Director gcresta@swampscottma.gov

Kelly Stevens, Assistant Engineer kstevens@swampscottma.gov

September 1, 2019

Mr. Neil Handler Senior Enforcement Officer Water Technical Unit U.S. Environmental Protection Agency, Region 1 5 Post Office Square, Suite 100 Mail Code OES04-4 Boston, MA 02109-3912

SUBJECT: Consent Decree Compliance Report Period 2/1/2019 to 7/31/2019

Dear Mr. Handler:

Pursuant to Paragraph 66 of the Consent Decree between the U.S. EPA and the Town of Swampscott, MA, I am providing the following certification statement with regard to the preparation and submittal of: Compliance Reporting – 2/1/2019 to 7/31/2019

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel property gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Gino A. Crestal, Jr. Director of Public Works



MEMORANDUM

TO: Neil Handler | US EPA

- CC: Gino Cresta, Kelly Stevens | Town of Swampscott Mark Thompson, Cecilia Carmona, Dan Scott | Kleinfelder
- FROM: David Peterson | Kleinfelder

DATE: September 1, 2019

SUBJECT: COMPLIANCE REPORTING - CASE 1:15-CV-13388-DJC SWAMPSCOTT, MASSACHUSETTS

Purpose:

This Compliance Report is provided pursuant to Paragraph 33 of the subject Consent Decree between the United States of America and the Town of Swampscott, MA. This report covers the reporting period noted below:

Reporting Period: February 1, 2019 through July 31, 2019

Through this reporting period, activities primarily included the construction of the Phase 1B sewer rehabilitation within the Stacey's Brook area and the start of an Illicit Discharge Detection and Elimination (IDDE) program in areas outside of Stacey's Brook (Article 19 of Consent Decree). The following report summarizes the activities performed during the Reporting Period.

Phase 1B Status Summary

The Phase 1B construction contract includes comprehensive sewer rehabilitation in specific neighborhoods in the Stacey's Brook catchment area consisting of cured in place pipe (CIPP) lining of sewer mainlines and laterals, sewer manhole rehabilitation, and split-wall sewer manhole rehabilitation (Type 2 underdrain manholes). The majority of the project scope is the comprehensive rehabilitation of the sewer collection system within the drain catchment that converges at the intersection of Stetson Avenue and Norfolk Avenue. Following the completion of Phase 1B construction, two rounds of wet weather and two rounds of dry weather post construction water quality monitoring will be performed consistent with the IDDE procedure detailed in the Consent Decree between the Town and the US EPA. The wet and dry weather samples will be tested for enterococcus, surfactants, ammonia and chlorine concentrations. The post construction monitoring will be completed in the drainage manhole immediately upstream of the intersection of Stetson Avenue and Norfolk Avenue and the King's Beach outfall.

Swampscott Compliance Report PERIOD ENDING July 31, 2019

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As of July 31, 2019, the General Contractor for the Phase 1B construction project, Rapid Flow, completed approximately 530 vertical feet of sewer manhole lining (46% complete) and CIPP lining of approximately 16,918 linear feet of mainline sewer pipeline (99% complete) and 94 sewer service laterals (44% complete). The current schedule submitted by Rapid Flow estimates that construction will be complete on or around October 15, 2019 (see Attachment A).

Design of Improvements Beyond Stacey's Brook

The original deadline for the Town to design improvements to remove non-stormwater discharges to the MS4 within areas not tributary to Stacey's Brook was April 1, 2019. On November 29, 2018, the Town Administrator, Sean R. Fitzgerald, submitted a written request to Neil Handler for the US EPA to provide written approval to extend the schedule presented in Paragraph 19 of the Town's Consent Decree to April 1, 2020. US EPA approved this schedule extension request in a letter dated February 20, 2019 (See Attachment B).

In May of 2019, Kleinfelder and the Town began planning an IDDE program to inform a design to remove non-stormwater discharges to the MS4 within areas not tributary to Stacey's Brook. On July 16, 2019, Dan Scott of Kleinfelder submitted to Neil Handler, a memorandum outlining the specific details of the IDDE program. This memorandum is a detailed follow up to the September 29, 2017 memorandum from Kleinfelder to Neil Handler required by paragraph 18 of the Consent Decree.

The IDDE program consists of sewer, drain and underdrain investigations, water quality testing of drain manholes/outfalls, targeted drain manhole inspections and stormwater quality testing, smoke testing of the drainage system, building inspections/dye testing, and CCTV of sewer and drain mainline CCTV. As of July 31, 2019, Kleinfelder completed the sewer, drain and underdrain investigations and began the water quality testing of drain manholes/outfalls.

The following is the anticipated schedule for completing the requirements of paragraph 19 of the Consent Decree:

- Complete IDDE Field Work September 2019
- Start final design Winter 2019
- Submit final design to EPA Prior to April 1, 2020



Tracking Data Tables:

In accordance with Paragraph 33 of the Consent Decree, a series of tracking tables are presented furnishing the information requested.

- a) Chronology of SSO Events Occurring during Reporting Period
- b) Catchment Area Inspections completed during Reporting Period
- c) Percentage of Catchment Area Investigated and Addressed
- d) Listing of Illicit Discharges Verified during Reporting Period
 - i) Illicit Connections
 - ii) Sanitary Sewer Defects
- e) Map of Location of Each Illicit Discharge Verified during Reporting Period
- f) Chart of Inspections Completed and Enforcement Actions Taken during Reporting Period
- g) List of Plans, Reports and other Submissions Required by this Consent Decree made during the Reporting Period
- h) Copies of Sampling Results Received during Reporting Period
- i) Planned Activities during the 6 Months Following the Reporting Period
- j) Summary of Non-Compliance with this Consent Decree during the Reporting Period



a) Chronology of SSO Events Occurring during Reporting Period

Paragraph # -->

i.	i.	х.	ii.	iii.	iii.	iii.	iv.	iv.	٧.	vi.	vii.	vii.	viii.	ix.	ix.	xi.	xii.
Date/Time	Date/Time	Date	Location	Final	Property	Receiving	Receiving	Location	Source of	Cause(s)	Cause =	Cause =	Measures	Volume	Basis of	Measures	Date of
Reported	Event	Reported		Disposition	Backup	Drainage	Surface	Release	Notification	of	Blockage	Capacity	Taken to	of	Estimate	Taken to	Last
	Stopped	to EPA			(address)	Structure	Water	Reached		Release	_	Issue	Stop	Release		Prevent	SSO at
		and DEP			, ,			Surface					Discharge	(Gallons)		Future	this
								Water								SSOs	Location
	No SSOs were reported during this period																

xiii. GIS Map Locating each Illicit Discharge and SSO Event No illicit discharges or SSO events were reported during this reporting period and therefore, a GIS map is not provided.

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b) Catchment Area Inspections completed during Reporting Period

c) Percentage of Catchment Area Investigated and Addressed

Note that this reporting is in relation to meeting the Remedial Measures stipulated in Section VII of the consent decree. In order to meet the objectives of the consent decree, the Town's scope of work is not specifically following an IDDE Plan, but rather, is directly following the Remedial Measures themselves, and the Scope of Work for the Stacey's Brook drainage area that was submitted to the EPA on 10/26/2015.

		Normalisen of	N	umber o	f Drain M	lanholes	Inspected	ł	Νι	umber of	Drain M	anholes	Address	ed
	Sub-	Number of Drain Manholes in	Repo	Previous Reporting R Periods		nis orting riod	To-D	ate	Previous Reporting Periods		This Reporting Period		To-Date	
33.b.i, ii	Catchment Area ID	Sub- Catchment	QTY	%	QTY	%	QTY	%	QTY	%	QTY	%	QTY	%
1	Stacey's Brook	236	21	9%	0	0%	21	9%	6	3%	0	0%	6	3%
2	Other	372	47	13%	22	6%	69	19%	0	0%	0	0	0	0
		TOTAL	68		0		68		6		0		6	

			Length of Drain Inspected							Leng	th of Dra	in Addre	essed	
	Sub-	Sub- Length of		ous rting ods	This Reporting Period		To-Date		Previous Reporting Periods		This Reporting Period		To-Date	
33.b.iii, 33.c	Catchment Area ID	Drain in Sub- Catchment	FT	%	FT	%	FT	%	FT	%	FT	%	FT	%
1	Stacey's Brook	55,600	21,000	38%	0	0%	21,000	38%	650	1%	0	0%	650	1%
2	Other	95,000	0	0	0	0	0	0	0	0%	0	0	0	0
		TOTAL	21,000		0		21,000		650		0		650	

Swampscott Compliance Report PERIOD ENDING Jul 31, 2019

September	2019
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d) Listing of Illicit Discharges Verified during Reporting Period

							Prior Rep	orting Periods	Total Volume Removed (Gallons) 181,416						
							Re	porting Period	Not quantified						
							Cumu	lative To Date	181,416						
Discharge Type	Date Verified	Location / Address	SOURCE: Building Type	SOURCE: Sewer Exfiltration	Estimated Flow (GPM)	Actions Taken to Remove	Date Removed	Cost to Remove	Volume Removed (Reporting Period)	Actively Discharging > 60 Days	Explanation	Schedule for Removal	Private Discharges Persisting > 90 days	Town's Legal Enforcement Actions	Reasons for Delay
Paragraph->	i.	i.	i.	i.	ii.	iii.	iv.	٧.	vi.	vii.	vii.	viii.	ix.	ix.	х.
Sewer Defect	2/6/2019	7 Rockland Street	Residential	Sewer Service Repair	not estimated	Private contractor performed repair	2/6/2019	unknown	unknown	No	n/a	completed	No	None	n/a
Sewer Defect	2/19/2019	64 Franklin Ave	Residential	Sewer Service Repair	not estimated	Private contractor performed repair	2/25/2019	unknown	unknown	No	n/a	completed	No	None	n/a
Sewer Defect	5/1/2019	20 Nichols Street	Residential	Sewer Service Repair	not estimated	Private contractor performed repair	5/1/2019	unknown	unknown	No	n/a	completed	No	None	n/a
Sewer Defect	7/2/2019	27 Lewis Road	Residential	Sewer Service Repair	not estimated	Private contractor performed repair	7/2/2019	unknown	unknown	No	n/a	completed	No	None	n/a



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e) Map of Location of Each Illicit Discharge Verified during Reporting Period

Illicit discharges reported in Section d) are illustrated on the map in Attachment C.

f) Chart of Inspections Completed and Enforcement Actions Taken during Reporting Period

Number of Routine Inspections	Number of Complaint- Response Related Inspections	Number of Total Construction Inspections
308	3	5

Enforcement Actions Taken (Type)	Enforcement Actions Taken (Number)
Notifications to Property Owner	0
Entry To Perform Duties	0
Penalty (Fines)	0
Orders	0
Civil Relief	0
Town Resolved using own means (no enforcement)	0



g) List of Plans, Reports and other Submissions Required by this Consent Decree made during the Reporting Period

Submission Description	Date Completed	Consent Decree Paragraph Reference
Bi-Annual Progress Report	3/1/2019	33

h) Copies of Sampling Results Received during Reporting Period

Stormwater water quality sampling from the Phase 1B project area and the ABSB project area are provided in Attachment D.

i) Planned Activities during the 6 Months Following the Reporting Period

During the period August 1, 2019 through January 31, 2020 the following activities are anticipated:

- Complete the construction of Phase 1B improvements. The Contractor has until October 2019 to complete the construction of the Phase 1B Contract.
- Complete post construction Phase 1B wet weather and dry weather water quality sampling for enterococcus concentrations to evaluate measurable changes in stormwater water quality to baseline data in the Stacey's Book drainage catchment.
- Complete the IDDE in areas outside of Stacey's Brook to inform the design required by Paragraph 19 of the Town's Consent Decree. The findings of the IDDE program will be summarized in a preliminary design report.

The final design will be submitted to the EPA during the February 1, 2020 – July 31, 2020 report

j) Summary of Non-Compliance with this Consent Decree during the Reporting Period

There has been no non-compliance during this report period.

Attachment A Stacey's Brook Phase 1B Schedule

		Duration	Start	Finish	Qtr 3, 2018 Qtr 4, 2018 Qtr 1, 2019 Qtr 2, 2019 Qtr 3, 2019	Qtr 4, 2019	
	Status: Complete	242d	Fri 8/17/18	Sat 7/20/19	Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Status: Cor	Sep Oct mplete	Nov Dec
	1 Bid Awarded	0d	Fri 8/17/18	Fri 8/17/18	1 Bid Awarded		
\checkmark		0 days	Fri 8/17/18	Fri 8/17/18	♦ 8/17		
		3d	Fri 8/31/18	Tue 9/4/18	H 2 Project Planing		
~							
~		3 days	Fri 8/31/18	Tue 9/4/18	3 Pre-Bid Meeting		
	3 Pre-Bid Meeting	0d	Tue 9/4/18	Tue 9/4/18			
	-	0 days	Tue 9/4/18	Tue 9/4/18	• 9/4		
	4 Notice To Proceed	0d	Tue 9/4/18	Tue 9/4/18	4 Notice To Proceed		
	Notice To Proceed	0 days	Tue 9/4/18	Tue 9/4/18	♦ 9/4		
	5 Mobilization	2d	Fri 11/16/18	Mon 11/19/18	H 5 Mobilization		
	Mobilization	2 days	Fri 11/16/18	Mon 11/19/18			
	6 Clean & Tv Prep For Lining	110d	Mon 11/19/1	8 Fri 4/19/19	6 Clean & Tv Prep For Lining		
		110 days	Mon 11/19/18				
		11d	Fri 2/1/19	Fri 2/15/19	7 Heavy Cleaning 6"- 12"		
				Fri 2/15/19			
		11 days	Fri 2/1/19		8 Mainline	o Lining	
	8 Mainline Lining	140d		Sat 7/20/19		e Lining	
	-	140 days		Sat 7/20/19			
S	Status: On Schedule	147d	Mon 3/25/19	Tue 10/15/19			In Schedule
	9 T-Liners	143d	Mon 3/25/19	Wed 10/9/19		9 T-Liners	
	T-Liners	143 days	Mon 3/25/19	Wed 10/9/19			
		135d		Fri 10/11/19		10 Manh	ole Rehab
		135 days		Fri 10/11/19			
	11 Chimney Seals	118d	Fri 5/3/19	Tue 10/15/19		11 Chin	ney Seals
	•						
_		118 days		Tue 10/15/19			<i></i>
S		23d		Thu 11/14/19			Status: Futu
		23d		Thu 11/14/19			📲 12 Project C
	Project Completation	23 days	Tue 10/15/19	Thu 11/14/19			
	13 Project Deliverable	1d	Thu 10/17/19	Thu 10/17/19		🛚 13 Pro	ect Deliverable
trojec i 8/15	tt Schedule 5/19 Task Spit Wilestone	•	Proj	nmary iect Summary titve Task	Inactive Milestone Ouration-only Start-only External Milestone Imactive Milestone <td>Manual Progress</td> <td></td>	Manual Progress	
8/15	t Schedule 5/19 Split Milestone	•	Proj	ect Summary ctive Task	Inactive Summary Manual Summary Rollup Finish-only Deadline		- ect

Attachment B EPA Letter to the Town



Main Reception: (617) 748-3100

U.S. Department of Justice

Andrew E. Lelling United States Attorney District of Massachusetts

John Joseph Moakley United States Courthouse 1 Courthouse Way Suite 9200 Boston, Massachusetts 02210

February 20, 2019

CERTIFIED MAIL RETURN RECEIPT REQUESTED

Mr. Sean R. Fitzgerald, Town Administrator The Town of Swampscott 22 Monument Avenue Swampscott, MA 01907

> Re: <u>Request by the Town of Swampscott to Modify the Schedule Relating to</u> <u>Paragraph 19 in the Consent Decree entered into between the United States of</u> <u>America and the Town of Swampscott (Case 1:15-cv-13388-DJC)</u>

Dear Mr. Fitzgerald:

The Environmental Protection Agency ("EPA") is in receipt of your letter dated November 29, 2018, requesting an extension to the deadline for completing Paragraph 19 of the 2015 Consent Decree entered into between the United States of America and the Town of Swampscott ("CD").

Paragraph 19 requires the Town of Swampscott (the "Town") to complete the design of infrastructure improvements necessary to eliminate non-stormwater flows from the Town's storm drain system in areas outside of the Stacey Brook stormwater catchment area by April 1, 2019. The Town has requested additional time to complete this task in order to focus its efforts and resources on completing the Phase 1 Sewer Rehabilitation project. Work under the Phase 1 Sewer Rehabilitation project will begin in early 2019 and will include the lining of portions of the wastewater collection system in the Stacey Brook stormwater catchment area. The Stacey Brook area is known to contain high levels of bacteria and other pollutants in the stormwater being discharged through the King's Beach outfall into the Nahant or Massachusetts Bay.

Mr. Sean R. Fitzgerald Town Administrator Page Two February 20, 2019

By this letter, EPA is approving an extension of the deadline for completing the work described in Paragraph 19 until April 1, 2020, pursuant to Section XIX of the CD. Please feel free to contact Neil Handler of the EPA at (617) 918-1334 if you have any questions, or the undersigned at (617) 748-3103.

Sincerely,

Susan M. Poswistilo Susan M. Poswistilo Assistant U.S. Attorney by ess

cc:

Gino Cresta, Town of Swampscott Jeff Kopf, EPA (electronic copy) Neil Handler, EPA (electronic copy) Attachment C Stormwater Water Quality Testing Results

Stacey's Brook Water Quality Testing 3/27/19



✤ Water Analysis

✤ Food/Seafood Analysis ✤ Metals/Chemical Analysis

Microbiological Testing

246 Arlington Street, Quincy, MA 02170

Tel: (617) 328-3663

Fax: (617) 472-0706

Report Date: 4/2/19

Total Pages: 2

REPORT

Lab. ID #: 88675

Attn: Mr. David Peterson Kleinfelder One Beacon St., Suite 8100 Boston, MA 02108

Sample Received Date/Time: Sample Received Temperature: Sample Collected By: Sample Analyzed Date/Time: Sample Analyzed By: Sample Identification:

3/27/19, 2:05 PM N/A N.A. (Client) 3/27/19, 3:20 PM M-MA-1100 Five (5) water samples labeled: 1) KLF1 (Collected Date/Time: 3/27/19, 10:31 AM) 2) KLF2 (Collected Date/Time: 3/27/19, 11:05 AM) 3) KLF3 (Collected Date/Time: 3/27/19, 11:38 AM) 4) KLF4 (Collected Date/Time: 3/27/19, 11:59 AM) 5) KLF5 (Collected Date/Time: 3/27/19, 12:28 PM)

TEST RESULTS: Sample

1.	
2.	
1. 2. 3. 4. 5.	
4.	
5.	

Method Reference

MCL: Maximum Contaminant Level Mod: Modified Method *: Exceed MCL †: Analyzed by Sub. Partner 1: Not in a scope of M-MA-1100

Mass. Cert. No.: M-MA-1100

cc: Eddison Minotta, Peer Consultants

Enterococci

EPA 1600, 2006

Report reviewed and approved by:

Siano

Lab. Director

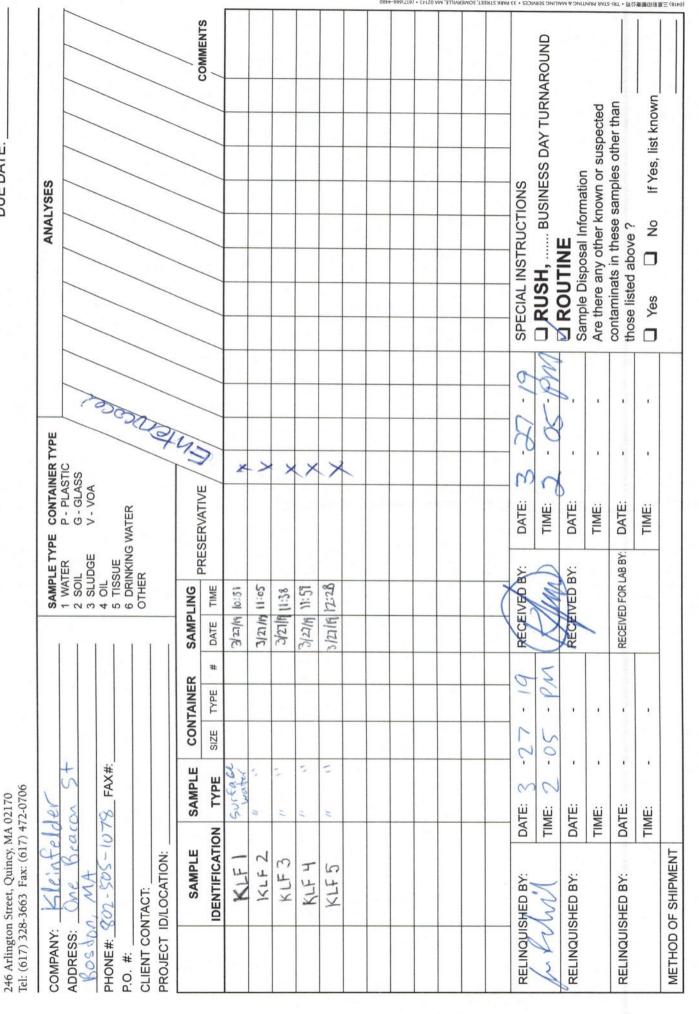
Signed Date

Ч	ories
3	orati
5	Lab
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CHAIN OF CUSTODY RECORD

LAB I.D. #: BSG

DUE DATE:



0046-000//10) - C-170 MR "TTTUNING" (1751) - C-100 - C

ABSB Dry Weather Testing - Day 1 - 7/9/19 Morning Results



ANALYTICAL REPORT

Lab Number:	L1929630
Client:	Kleinfelder
	One Beacon Street
	Suite 8100
	Boston, MA 02108
ATTN:	Dan Scott
Phone:	(617) 498-4722
Project Name:	Not Specified
Project Number:	Not Specified
Report Date:	07/11/19

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



Serial_No:07111920:10

Project Name:	Not Specified
Project Number:	Not Specified

 Lab Number:
 L1929630

 Report Date:
 07/11/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1929630-01	KLF-2AB-ABSB	WATER	Not Specified	07/09/19 09:04	07/09/19
L1929630-02	KLF-3AB-ABSB	WATER	Not Specified	07/09/19 10:36	07/09/19
L1929630-03	KLF-4AB-ABSB	WATER	Not Specified	07/09/19 11:14	07/09/19
L1929630-04	KLF-5AB-ABSB	WATER	Not Specified	07/09/19 11:40	07/09/19



Project Name:Not SpecifiedProject Number:Not Specified

Lab Number: L1929630 Report Date: 07/11/19

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:Not SpecifiedProject Number:Not Specified

 Lab Number:
 L1929630

 Report Date:
 07/11/19

Case Narrative (continued)

Enterococcus

L1929630-03: The result is estimated due to the elevated concentration in the sample. Due to the expiration of the method required holding time, re-analysis could not be performed.

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.

604 Stendor Kelly Stenstrom

Authorized Signature:

Title: Technical Director/Representative

Date: 07/11/19



INORGANICS & MISCELLANEOUS



								Serial_No:0	7111920:10	
Project Name:	Not Specifie	d					Lab N	lumber:	L1929630	
Project Number:	Not Specifie	d					Repo	rt Date:	07/11/19	
			ę	SAMPLE	RESUL	rs				
Lab ID:	L1929630-0	1					Date	Collected:	07/09/19 09:0	4
Client ID:	KLF-2AB-AB	BSB					Date I	Received:	07/09/19	
Sample Location:	Not Specifie	d					Field	Prep:	Not Specified	
Sample Depth: Matrix:	Water									
Parameter	Result	Qualifie	r Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Microbiological Analysis	- Westboroug	h Lab								
ENTEROCOCCUS	5200		-col/100ml	100		100		07/09/19 16:	35 23,1600	<u>AJ</u>
∖ Sar	regard Res mple Taken									
a C	atchbasin									



							:	Serial_No:07	111920:10	
Project Name:	Not Specifie	ed					Lab N	umber:	L1929630	
Project Number:	Not Specifie	ed					Repo	rt Date:	07/11/19	
				SAMPLE	RESUL	rs				
Lab ID:	L1929630-0	2					Date (Collected:	07/09/19 10:36	6
Client ID:	KLF-3AB-AB	BSB					Date F	Received:	07/09/19	
Sample Location:	Not Specifie	ed					Field I	Prep:	Not Specified	
Sample Depth:										
Matrix:	Water									
Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analy
crobiological Analysis	- Westboroug	jh Lab								
TEROCOCCUS	3200		col/100ml	100		100	-	07/09/19 16:3	5 23,1600	AJ



							:	Serial_No:07	111920:10	
Project Name:	Not Specifie	d					Lab N	umber:	L1929630	
Project Number:	Not Specifie	d					Repo	rt Date:	07/11/19	
			:	SAMPLE	RESUL	ſS				
Lab ID:	L1929630-0	3					Date (Collected:	07/09/19 11:14	1
Client ID:	KLF-4AB-AB	BSB					Date F	Received:	07/09/19	
Sample Location:	Not Specifie	d					Field I	Prep:	Not Specified	
Sample Depth:										
Matrix:	Water									
Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analy
icrobiological Analysis	- Westboroug	h Lab								
ITEROCOCCUS	78000		col/100ml	100		100	-	07/09/19 16:3	5 23,1600	AJ



Serial	_No:07111920:10
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Project Name:	Not Specifie	d					Lab N	lumber:	L1929630	
Project Number:	Not Specifie	d					Repo	rt Date:	07/11/19	
			:	SAMPLE	RESUL	rs				
Lab ID:	L1929630-0	4					Date	Collected:	07/09/19 11:40)
Client ID:	KLF-5AB-AB	BSB					Date	Received:	07/09/19	
Sample Location:	Not Specifie	d					Field	Prep:	Not Specified	
Sample Depth:										
Matrix:	Water									
Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Microbiological Analysis	- Westboroug	h Lab								
ENTEROCOCCUS	180		col/100ml	2.0		2	-	07/09/19 16:3	5 23,1600	AJ



Project Name:

Project Number: Not Specified

 Lab Number:
 L1929630

 Report Date:
 07/11/19

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Microbiological Analysis -	Westborough Lab for	sample(s):	01-04	Batch:	WG12577	713-1			
ENTEROCOCCUS	ND	col/100ml	1.0		1	-	07/09/19 16:35	23,1600	AJ



Project Name:Not SpecifiedProject Number:Not Specified

Serial_No:07111920:10 *Lab Number:* L1929630 *Report Date:* 07/11/19

Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information Final Temp Initial Frozen pН deg C Pres Seal Date/Time Container ID **Container Type** Cooler pH Analysis(*) L1929630-01A Bacteria Cup Na2S2O3 preserved А NA 3.5 Υ Absent ENTRO-MF(.33) Bacteria Cup Na2S2O3 preserved L1929630-01B А NA 3.5 Υ Absent ENTRO-MF(.33) L1929630-02A Bacteria Cup Na2S2O3 preserved А NA 3.5 Υ Absent ENTRO-MF(.33) Bacteria Cup Na2S2O3 preserved L1929630-02B А NA 3.5 Υ Absent ENTRO-MF(.33) Bacteria Cup Na2S2O3 preserved А Υ L1929630-03A NA 3.5 ENTRO-MF(.33) Absent L1929630-03B Bacteria Cup Na2S2O3 preserved А ENTRO-MF(.33) NA 3.5 Υ Absent Bacteria Cup Na2S2O3 preserved А ENTRO-MF(.33) L1929630-04A NA 3.5 Υ Absent L1929630-04B Bacteria Cup Na2S2O3 preserved А 3.5 Υ ENTRO-MF(.33) NA Absent



Serial_No:07111920:10

Project Name: Not Specified

Project Number: Not Specified

Lab Number: L1929630

Report Date: 07/11/19

GLOSSARY

Acronyms

Acronyins	
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:	Not Specified	Lab Number:	L1929630
Project Number:	Not Specified	Report Date:	07/11/19

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 Waterpreserved 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 Condensation Product".
- 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 concentrations of the analyte at less than ten times (10x) the concentrations of the analyte at less than ten times (10x) the concentrations of the analyte at less than ten times (10x) the concentrations of the analyte at less than ten times (10x) the 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 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:	Not Specified	Lab Numb
Project Number:	Not Specified	Report Da

Lab Number: L1929630 Report Date: 07/11/19

REFERENCES

23 Method 1600: Membrane Filter Test Method for Enterococci in Water, EPA-821-R-97-004a, May 1997.

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:** <u>NPW</u>: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; <u>SCM</u>: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene. **EPA 8270D:** <u>NPW</u>: Dimethylnaphthalene,1,4-Diphenylhydrazine; <u>SCM</u>: Dimethylnaphthalene,1,4-Diphenylhydrazine.

EPA 6860: SCM: Perchlorate

SM4500: <u>NPW</u>: Amenable Cyanide; <u>SCM</u>: 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, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

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

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; EPA 353.2: Nitrate-N, Nitrite-N; SM4500NO3-F: Nitrate-N, Nitrite-N; SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B 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.

Serial_No:07111920:10

705																			
	CHAIN O	F CU	STO	ОҮ ра	GE	OF	Date Re	ec'd in	Lab:	7/9	1/19	1		AL	PHA	Job #:	L19296	3	
AWAUNTICAL		Project	Informati	ion			Repor	t Infor	mati	on - Da	ta Del	livera	bles		A1200 00000	nformat	the second s		
8 Walkup Drive Westboro, MA 0 Tel: 508-898-90		Project Name:					ADEx GEMAIL								Same as Client info PO #:				
Client Informatio	COLUMN THE REAL PROPERTY OF A DESCRIPTION OF A DESCRIPTIO	Project Location:					Regulatory Requirements & Project Information Requirements												
Client: Klein	Project #: Project Manager:					□ 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)													
Address:																			
		ALPHA C	Quote #:				Ves								C	iteria			
Phone:	Turn-Around Time																		
Email:		- desired as a						/ /	/ /	RCP	Only	(ino	1	/	/ /	1	/ / /		
Additional P	roject Information:	Date Du		RUSH (mty o	onlimed if pro-ap	proved1)	18260 D 624	DABN DE24.2	METALS: CIMCP 13 DMCP .	EPH: DRanges & Tan- UNICRAS DRCRAS DRCP 15	D PCP 1 PCP & Targets C Ranges Only	TPH: DOUGH DEST DE Range	Only DFingerprint				SAMPLE Filtration Field Lab to Preserva Lab to	o do ation	
ALPHA Lab ID (Lab Use Only)	Sample ID	-	Collection Sample Sampler Date Time Matrix Initials				Voc:	VOC: L SVOC: L METALS. SVOC: L METALS. EPH: DA TPH: DA							Sample Com	10			
29620-01	KLF- 2A-ABSE	2 -	1/9/19			DJ		1		1	1	\square	1	1	\square	-	oumple com	THOTAS .	
	KLF - 2B -ABSB		119/19			DJ				-				-				-	
	KLF- 3A - ABSB		7/9/19	A CONTRACT OF A CONTRACT		DJ		-		-	+			+					
14				10:36				-			-		-	-		-			
2.000	KLF-3B-ABST		and the second s			DJ		-		_			_	-					
D-450/5	KLF - 4A - ABSI		7/9/19			DJ		-		-	-		_	_		_			
V	KLF-4B-ABSB		7/9/19			DJ													
-04	KLF - 5A - ABSB		7/9/19			DJ			-										
V	KLF - 5B- ABSB	>	7/9/19	11:44		DJ								-					
Container Type P= Piastic <= Amber glass == Glass == Bacteria cup == Cube == Other	Preservative A= None B= HCI C= HNO ₃ D= H ₂ SO ₄ E= NaOH F= MeOH G= NaHSO ₄ H = Na ₂ S ₂ O ₃	Relinqui	shed By:		Pre	ainer Type eservative e/Time	I.		gcefve	d By:	hm		Da	te/Tim	e iluo		ples submitted are Terms and Condit		

ABSB Dry Weather Testing - Day 1 - 7/9/19 Afternoon Results



ANALYTICAL REPORT

Lab Number:	L1929802
Client:	Kleinfelder
	One Beacon Street
	Suite 8100
	Boston, MA 02108
ATTN:	Dan Scott
Phone:	(617) 498-4722
Project Name:	SWAMPSCOTT-ABSB
Project Number:	Not Specified
Report Date:	07/12/19

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



Serial_No:07121920:11

Project Name:SWAMPSCOTT-ABSBProject Number:Not Specified

 Lab Number:
 L1929802

 Report Date:
 07/12/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1929802-01	KLF-6-ABSB	WATER	SWAMPSCOTT, MA	07/09/19 13:18	07/09/19
L1929802-02	KLF-7-ABSB	WATER	SWAMPSCOTT, MA	07/09/19 13:44	07/09/19
L1929802-03	KLF-8-ABSB	WATER	SWAMPSCOTT, MA	07/09/19 15:35	07/09/19
L1929802-04	KLF-1-ABSB	WATER	SWAMPSCOTT, MA	07/09/19 14:36	07/09/19



Lab Number: L1929802 Report Date: 07/12/19

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.

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.

604 Stendow Kelly Stenstrom

Authorized Signature:

Title: Technical Director/Representative

Date: 07/12/19



INORGANICS & MISCELLANEOUS



							S	Serial_No:07	7121920:11	
Project Name:	SWAMPSCC	OTT-ABS	B				Lab N	umber:	L1929802	
Project Number:	Not Specified	b					Repor	t Date:	07/12/19	
				SAMPLE	RESUL	ГS				
Lab ID:	L1929802-01	1					Date 0	Collected:	07/09/19 13:18	3
Client ID:	KLF-6-ABSB	5					Date F	Received:	07/09/19	
Sample Location:	SWAMPSCC	DTT, MA					Field F	Prep:	Not Specified	
Sample Depth: Matrix:	Water									
Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Microbiological Analysis	- Westborough	h Lab								
ENTEROCOCCUS	26000		col/100ml	100		100		- 07/09/19 19: (30 23,1600 -	AJ
∖ Sa	regard Resi mple Taken Catchbasin									



Serial	No:07121920:11
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Project Name: Project Number:	SWAMPSCO Not Specifie		SB						L1929802 07/12/19	
			Ś	SAMPLE	RESUL	rs				
Lab ID:	L1929802-0	2					Date (Collected:	07/09/19 13:44	4
Client ID:	KLF-7-ABSE	3					Date I	Received:	07/09/19	
Sample Location:	SWAMPSCO	OTT, MA	١				Field	Prep:	Not Specified	
Sample Depth: Matrix:	Water									
Parameter	Result	Qualifie	r Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analys
crobiological Analysis	- Westboroug	h Lab								
NTEROCOCCUS	370		col/100ml	10		10	_	07/09/19 19:3	0 23,1600	AJ



					:	Serial_No:07	7121920:11	
Project Name:	SWAMPSCOTT-ABSB				Lab N	umber:	L1929802	
Project Number:	Not Specified				Repor	t Date:	07/12/19	
		SAMPL	E RESUL	TS				
Lab ID:	L1929802-03				Date 0	Collected:	07/09/19 15:35	;
Client ID:	KLF-8-ABSB				Date F	Received:	07/09/19	
Sample Location:	SWAMPSCOTT, MA				Field F	Prep:	Not Specified	
Sample Depth: Matrix:	Water							
Parameter	Result Qualifier Unit	ts RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Microbiological Analysis	- Westborough Lab							
ENTEROCOCCUS	9400 col/10	0ml 100		100		07/09/19 19::	30 23,1600	AJ
\ Sa	sregard Results - mple Taken from Catchbasin							



Serial	No:07121920:11
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Project Name: Project Number:	SWAMPSCO Not Specifie		SB						L1929802 07/12/19	
			Ś	SAMPLE	RESUL	rs				
Lab ID:	L1929802-04	4					Date	Collected:	07/09/19 14:30	6
Client ID:	KLF-1-ABSE	3					Date	Received:	07/09/19	
Sample Location:	SWAMPSCO	OTT, MA	١				Field	Prep:	Not Specified	
Sample Depth:										
Matrix:	Water									
Parameter	Result	Qualifier	r Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analys
crobiological Analysis	- Westboroug	h Lab								
NTEROCOCCUS	330		col/100ml	10		10	-	07/09/19 19:3	0 23,1600	AJ



 Lab Number:
 L1929802

 Report Date:
 07/12/19

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Microbiological Analysis	- Westborough Lab fo	r sample(s):	01-04	Batch:	WG12577	770-1			
ENTEROCOCCUS	ND	col/100ml	1.0		1	-	07/09/19 19:30	23,1600	AJ



Serial_No:07121920:11 Lab Number: L1929802 *Report Date:* 07/12/19

Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container Information				Initial	Final	Temp			Frozen		
	Container ID	Container Type	Cooler		pН	deg C Pres		Seal	Date/Time	Analysis(*)	
	L1929802-01A	Bacteria Cup Na2S2O3 preserved	А	NA		3.6	Y	Absent		ENTRO-MF(.33)	
	L1929802-01B	Bacteria Cup Na2S2O3 preserved	А	NA		3.6	Y	Absent		ENTRO-MF(.33)	
	L1929802-02A	Bacteria Cup Na2S2O3 preserved	А	NA		3.6	Y	Absent		ENTRO-MF(.33)	
	L1929802-02B	Bacteria Cup Na2S2O3 preserved	А	NA		3.6	Y	Absent		ENTRO-MF(.33)	
	L1929802-03A	Bacteria Cup Na2S2O3 preserved	А	NA		3.6	Y	Absent		ENTRO-MF(.33)	
	L1929802-03B	Bacteria Cup Na2S2O3 preserved	А	NA		3.6	Y	Absent		ENTRO-MF(.33)	
	L1929802-04A	Bacteria Cup Na2S2O3 preserved	А	NA		3.6	Y	Absent		ENTRO-MF(.33)	
	L1929802-04B	Bacteria Cup Na2S2O3 preserved	А	NA		3.6	Y	Absent		ENTRO-MF(.33)	



Project Name: SWAMPSCOTT-ABSB

Project Number: Not Specified

Lab Number: L1929802

Report Date: 07/12/19

GLOSSARY

Acronyms

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.
	- 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	

Footnotes

Report Format: Data Usability Report



Project Name: SWAMPSCOTT-ABSB

Project Number: Not Specified

Lab Number: L1929802 Report Date: 07/12/19

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 Waterpreserved 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 Condensation Product".
- 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 concentrations of the analyte at less than ten times (10x) the concentrations of the analyte at less than ten times (10x) the concentrations of the analyte at less than ten times (10x) the concentrations of the analyte at less than ten times (10x) the 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 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.



 Lab Number:
 L1929802

 Report Date:
 07/12/19

REFERENCES

23 Method 1600: Membrane Filter Test Method for Enterococci in Water, EPA-821-R-97-004a, May 1997.

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:** <u>NPW</u>: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; <u>SCM</u>: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene. **EPA 8270D:** <u>NPW</u>: Dimethylnaphthalene,1,4-Diphenylhydrazine; <u>SCM</u>: Dimethylnaphthalene,1,4-Diphenylhydrazine.

EPA 6860: SCM: Perchlorate

SM4500: <u>NPW</u>: Amenable Cyanide; <u>SCM</u>: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility

SM 2540D: TSS EPA 8082A: <u>NPW</u>: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187. EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene. Biological Tissue Matrix: EPA 3050B

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

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; EPA 353.2: Nitrate-N, Nitrite-N; SM4500NO3-F: Nitrate-N, Nitrite-N; SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B 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.

Serial_No:07121920:11

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Sample ID	Da	Collection ate Time	Sample Sampler Matrix Initials	VOC: D. SVOC: D. METALS: MET.	EPH: DRa VPH: DRa	Ente Ente	////	Preservation
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K4F-7 - AB3B	719	1/19 1:44	DFS			~		
KLF-8- KBSB	710	11 3:35	DES			~		
KLF-1 - AB58	76	1/19 2:36	তার্চচ			~		
Preservative A= None B= HCI C= HNO, D= H,SO, E= NaOH F= MeOH G= NaHSO,	Relipquished I	By:	Container Type Preservative Date/Time	Receiv	ved By:	Date	/Time	
	320 Forbes Blvd Mansfield, MA 02048 Tel: 508-822-9300 ON Felder Beacon St Fon, MAT 7 - 2.06 - 4365 Strees Block Project Information: Sample ID ISLE-6 - ABSB KLE-7 - ABSB KLE-8 - KBSB ISLE-8 - ABSB KLE-1 - ABSB ISLE-1 - ABSB	Beacon St Project Info Project Name: Project Name: Palder Project Location Palder Project Manage Project Manage Project Manage Project Manage Project Manage Project Information: Project Manage Sample ID Date Due: Sample ID Date Due: KLF-6 - ABSB 7/4 KLF-7 - ABSB 7/4 KLF-8 - ABSB 7/4 KLF-1 - ABSB 7/4 KLF-1 - ABSB 7/4 Proservative Project Hill Proservative Project Manage Proservative Project Manage Project Information: Date Due: Project Information: Date Due: Project Information: Date Due: Project Name: Project Manage KLF-7 - ABSB 7/4 KLF-8 - KBSB 7/4 KLF-1 - ABSB 7/4 Project Hill Project Manage Project Information: Project Manage Project Information: Project Manage Project Information	320 Forber Blvd Project Information 0181 Mansfield, MA 02048 Project Name: SumMPSC 0n Project Location: Suram Folder Project Manager: Dan Beacon St Project Manager: Dan Con, MA ALPHA Quote #: 1 - 2.06 - 43.65 Turn-Around Time String K & Lein Felder: Massian data Project Information: Date Due: N / A Project Information: Date Time KLF-6 - AB5.B 1/9/171 KLF-7 - AB5.B T/9/17 1: 18 KLF-8 - KB5.B T/9/19 2: 35 KLF-1 - AB558 T/9/19 2: 35 KLF-1 - AB558 T/9/19 2: 35 KLF-1 - AB58 T/9/19 2: 35 KLF-1 - Relipquished By:	Project Information Project Information Project Name: Survey PScott - ABSB ON Project Name: Survey PScott - ABSB Project Information: Survey PScott, MA Pedder Project Manager: Dan Beacen St Project Manager: Dan Scott, MA Project Information: Durn-Around Time Matrix Image: Image Interpretation Sample ID Collection Sample Note approved Description Sample ID Collection Sample Natrix Sample Interpretation Superstand Project Information: Collection Sample Sample Interpretation Sample Interpretation Sample ID Collection Sample Natrix Sample Interpretation Sample Interpretation Superstand Initial Initial DFS Superstand DFS KLF-7 ABSB 7/9/11 1:44 DFS KLF-8 ABSB 7/9/11 3:35 DFS KLF-1 ABSB 7/9/11 2:36 DFS KLF-1 ABSB 7/9/11 2:36 DFS <	220 Foldes Bind Tel: 508-9229300 Project Information Report Information 01 Project Name: SuswifpScht - 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ABSB Dry Weather Testing - Day 2 - 7/16/19 Morning Testing and Stacey's Brook Sampling



ANALYTICAL REPORT

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Lab Numb	er: L1	931096
Client:	Kl	einfelder
	Or	ne Beacon Street
	Su	lite 8100
	Bo	oston, MA 02108
ATTN:	Da	an Scott
Phone:	(6	17) 498-4722
Project Na	me: SV	VAMPSCOTT-ABSB
Project Nu	mber: No	ot Specified
Report Dat	te: 07	/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



Serial_No:07221916:05

Project Name:SWAMPSCOTT-ABSBProject Number:Not Specified

 Lab Number:
 L1931096

 Report Date:
 07/22/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1931096-01	KLF-03-ABSB	WATER	Not Specified	07/16/19 11:12	07/16/19
L1931096-02	KLF-04-ABSB	WATER	Not Specified	07/16/19 07:09	07/16/19
L1931096-03	KLF-01-ABSB	WATER	Not Specified	07/16/19 08:39	07/16/19
L1931096-04	KLF-05-ABSB	WATER	Not Specified	07/16/19 11:47	07/16/19
L1931096-05	KLF-01-SB	WATER	Not Specified	07/16/19 09:14	07/16/19
L1931096-06	KLF-02-SB	WATER	Not Specified	07/16/19 08:25	07/16/19
L1931096-07	KLF-04-SB	WATER	Not Specified	07/16/19 09:39	07/16/19
L1931096-08	KLF-05-SB	WATER	Not Specified	07/16/19 10:11	07/16/19



 Lab Number:
 L1931096

 Report Date:
 07/22/19

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.

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.

604 Stendow Kelly Stenstrom

Authorized Signature:

Title: Technical Director/Representative

Date: 07/22/19



INORGANICS & MISCELLANEOUS



Project Name: Project Number:	SWAMPSCOTT-ABSB Not Specified								L1931096 07/22/19	
				SAMPLE	RESUL	ſS				
Lab ID:	L1931096-01						Date (Collected:	07/16/19 11:1:	2
Client ID:	KLF-03-ABSB						Date Received: 07		07/16/19	
Sample Location:	Not Specified	ł					Field I	Prep:	Not Specified	
Sample Depth: Matrix:	Water									
Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
licrobiological Analysis	- Westborough	n Lab								
NTEROCOCCUS	20000		col/100ml	100		100	-	07/16/19 15:5	0 23,1600	AJ



Project Name: Project Number:	SWAMPSCOTT-ABSB Not Specified								L1931096 07/22/19	
				SAMPLE	RESUL	rs				
Lab ID:	L1931096-02	2					Date	Collected:	07/16/19 07:09	9
Client ID:	KLF-04-ABS	В					Date	Received:	07/16/19	
Sample Location:	Not Specified	b					Field	Prep:	Not Specified	
Sample Depth: Matrix:	Water									
Parameter	Result	Qualifier	r Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analys
icrobiological Analysis	- Westborougł	n Lab								
NTEROCOCCUS	54000		col/100ml	100		100	-	07/16/19 14:5	5 23,1600	AJ



Project Name: Project Number:	SWAMPSCOTT-ABSB Not Specified								L1931096 07/22/19	
				SAMPLE	RESUL	ſS				
Lab ID:	L1931096-03	3					Date (Collected:	07/16/19 08:39	9
Client ID:	KLF-01-ABS	В					Date I	Received:	07/16/19	
Sample Location:	Not Specified	ł					Field I	Prep:	Not Specified	
Sample Depth: Matrix:	Water									
Parameter	Result	Qualifie	r Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
licrobiological Analysis	- Westborough	n Lab								
NTEROCOCCUS	34		col/100ml	2.0		2	-	07/16/19 15:5	0 23,1600	AJ



Project Name: Project Number:	SWAMPSCOTT-ABSB Not Specified							lumber: rt Date:	L1931096 07/22/19	
				SAMPLE	RESUL	rs				
Lab ID:	L1931096-04	4					Date (Collected:	07/16/19 11:4	7
Client ID:	KLF-05-ABSB						Date I	Received:	07/16/19	
Sample Location:	Not Specifie	d					Field	Prep:	Not Specified	
Sample Depth:										
Matrix:	Water									
Parameter	Result	Qualifie	r Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
icrobiological Analysis	- Westboroug	h Lab								
NTEROCOCCUS	210		col/100ml	10		10	-	07/16/19 15:	50 23,1600	AJ



Serial	No:07221916:05
oona.	

Project Name: Project Number:	SWAMPSCOTT-ABSB Not Specified							L1931096 07/22/19		
				SAMPLE	RESULI	ſS				
Lab ID: Client ID: Sample Location:	L1931096-05 KLF-01-SB Not Specified						2 0.10	Received:	07/16/19 09:1 07/16/19 Not Specified	4
Sample Depth: Matrix: Parameter	Water Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Microbiological Analysis	- Westborough	Lab								
ENTEROCOCCUS	14000		col/100ml	100		100	-	07/16/19 15:5	0 23,1600	AJ



Project Name: Project Number:	SWAMPSCOTT-ABSB Not Specified							L1931096 07/22/19		
				SAMPLE	RESUL	ſS				
Lab ID:	L1931096-06	6					Date (Collected:	07/16/19 08:2:	5
Client ID:	KLF-02-SB						Date I	Received:	07/16/19	
Sample Location:	Not Specified	t					Field I	Prep:	Not Specified	
Sample Depth: Matrix:	Water									
Parameter	Result	Qualifier	· Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Microbiological Analysis	- Westborough	n Lab								
ENTEROCOCCUS	28		col/100ml	2.0		2	-	07/16/19 15:5	0 23,1600	AJ



Serial	No:07221916:05
oona.	

Project Name: Project Number:	SWAMPSCO Not Specifie		SB						L1931096 07/22/19	
				SAMPLE	RESUL	ſS				
Lab ID:	L1931096-0	7					Date	Collected:	07/16/19 09:39	9
Client ID:	KLF-04-SB						Date I	Received:	07/16/19	
Sample Location:	Not Specifie	d					Field	Prep:	Not Specified	
Sample Depth: Matrix:	Water									
Parameter	Result	Qualifie	r Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analys
licrobiological Analysis	- Westboroug	h Lab								
NTEROCOCCUS	12000		col/100ml	100		100	-	07/16/19 15:5	23,1600	AJ



Serial	No:07221916:05
oona.	

Project Name: Project Number:	SWAMPSCOTT-ABSB Not Specified							L1931096 07/22/19		
				SAMPLE	RESUL	rs				
Lab ID:	L1931096-08						Date	Collected:	07/16/19 10:1 <i>°</i>	1
Client ID:	KLF-05-SB						Date I	Received:	07/16/19	
Sample Location:	Not Specified	l					Field	Prep:	Not Specified	
Sample Depth: Matrix:	Water									
Parameter	Result	Qualifier	· Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Microbiological Analysis	- Westborough	Lab								
ENTEROCOCCUS	150000		col/100ml	100		100	-	07/16/19 15:5	0 23,1600	AJ



 Lab Number:
 L1931096

 Report Date:
 07/22/19

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Microbiological Analysis	s - Westborough Lab fo	r sample(s):	02	Batch: V	VG1260567	-1			
ENTEROCOCCUS	ND	col/100ml	1.0		1	-	07/16/19 14:55	23,1600	AJ
Microbiological Analysis	s - Westborough Lab fo	r sample(s):	01,0	03-08 Ba	atch: WG12	60569-1			
ENTEROCOCCUS	ND	col/100ml	1.0		1	-	07/16/19 15:50	23,1600	AJ



Serial_No:07221916:05 *Lab Number:* L1931096 *Report Date:* 07/22/19

Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information			Initial	Final	Temp			Frozen		
Container ID	Container Type	Cooler	рН	pН	deg C	Pres	Seal	Date/Time	Analysis(*)	
L1931096-01A	Bacteria Cup Na2S2O3 preserved	А	NA		4.2	Y	Absent		ENTRO-MF(.33)	
L1931096-01B	Bacteria Cup Na2S2O3 preserved	А	NA		4.2	Y	Absent		ENTRO-MF(.33)	
L1931096-02A	Bacteria Cup Na2S2O3 preserved	А	NA		4.2	Y	Absent		ENTRO-MF(.33)	
L1931096-02B	Bacteria Cup Na2S2O3 preserved	А	NA		4.2	Y	Absent		ENTRO-MF(.33)	
L1931096-03A	Bacteria Cup Na2S2O3 preserved	А	NA		4.2	Y	Absent		ENTRO-MF(.33)	
L1931096-03B	Bacteria Cup Na2S2O3 preserved	А	NA		4.2	Y	Absent		ENTRO-MF(.33)	
L1931096-04A	Bacteria Cup Na2S2O3 preserved	А	NA		4.2	Y	Absent		ENTRO-MF(.33)	
L1931096-04B	Bacteria Cup Na2S2O3 preserved	А	NA		4.2	Y	Absent		ENTRO-MF(.33)	
L1931096-05A	Bacteria Cup Na2S2O3 preserved	А	NA		4.2	Y	Absent		ENTRO-MF(.33)	
L1931096-05B	Bacteria Cup Na2S2O3 preserved	А	NA		4.2	Y	Absent		ENTRO-MF(.33)	
L1931096-06A	Bacteria Cup Na2S2O3 preserved	А	NA		4.2	Y	Absent		ENTRO-MF(.33)	
L1931096-06B	Bacteria Cup Na2S2O3 preserved	А	NA		4.2	Y	Absent		ENTRO-MF(.33)	
L1931096-07A	Bacteria Cup Na2S2O3 preserved	А	NA		4.2	Y	Absent		ENTRO-MF(.33)	
L1931096-07B	Bacteria Cup Na2S2O3 preserved	А	NA		4.2	Y	Absent		ENTRO-MF(.33)	
L1931096-08A	Bacteria Cup Na2S2O3 preserved	А	NA		4.2	Y	Absent		ENTRO-MF(.33)	
L1931096-08B	Bacteria Cup Na2S2O3 preserved	А	NA		4.2	Y	Absent		ENTRO-MF(.33)	



Project Name: SWAMPSCOTT-ABSB

Project Number: Not Specified

Lab Number: L1931096

Report Date: 07/22/19

GLOSSARY

Acronyms

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	

Footnotes

Report Format: Data Usability Report



Project Name: SWAMPSCOTT-ABSB

Project Number: Not Specified

Lab Number: L1931096 Report Date: 07/22/19

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 Waterpreserved 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 Condensation Product".
- 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 concentrations of the analyte at less than ten times (10x) the concentrations of the analyte at less than ten times (10x) the concentrations of the analyte at less than ten times (10x) the concentrations of the analyte at less than ten times (10x) the 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 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.



 Lab Number:
 L1931096

 Report Date:
 07/22/19

REFERENCES

23 Method 1600: Membrane Filter Test Method for Enterococci in Water, EPA-821-R-97-004a, May 1997.

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:** <u>NPW</u>: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; <u>SCM</u>: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene. **EPA 8270D:** <u>NPW</u>: Dimethylnaphthalene,1,4-Diphenylhydrazine; <u>SCM</u>: Dimethylnaphthalene,1,4-Diphenylhydrazine.

EPA 6860: SCM: Perchlorate

SM4500: <u>NPW</u>: Amenable Cyanide; <u>SCM</u>: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility

SM 2540D: TSS
EPA 8082A: <u>NPW</u>: 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, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

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

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; EPA 353.2: Nitrate-N, Nitrite-N; SM4500NO3-F: Nitrate-N, Nitrite-N; SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B 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.

Serial_No:07221916:05

	CHAIN O	F CUSTODY	NGE OF	Date Rec'd in Lab:	7/16/19	ALPHA Job #: 61931096
8 Walkup Drive	320 Forbes Blvd	Project Information		Report Informatio	n - Data Deliverables	Billing Information
Westboro, MA 0 Tel: 508-898-92	1581 Mansfield, MA 02048	Project Name:		D ADEx D	EMAIL	Same as Client info PO #:
Client Information	n	Project Location:		Regulatory Requir	ements & Project I	Information Requirements
Client:		Project #:		Yes No MA MCF No Matrix Si		Yes I No CT RCP Analytical Methods (Required for MCP Inorganics)
Address:		Project Manager:		I Yes I No GW1 Sta	indards (Info Required for	Metals & EPH with Targets)
		ALPHA Quote #:		Yes I No NPDES Other State /Fed P		Criteria
Phone:		Turn-Around Time			2/0/2/2/	
Email: Additional Pr	oject Information:	□ Standard □ RUSH (enty o Date Due:	onfirmed if pro-approved!)	VOC: D 8260 D 624 D SLYSIS SVOC: D ABN D 624 D 5242 METALS: D MCP 13 D MCP 14 D METALS: D RCP 13 D MCP 14 D	EPH: LRanges & Targets DRCRAB DPP13 VPH: DRanges & Targets D Ranges Only TPH: DQuant Only DFingerprint	SAMPLE INFO Filtration Field Lab to do Preservation Lab to do
ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date Time	Sample Sampler Matrix Initials	VOC: L SVOC: METALS	VPH: D PCB TPH: D	Sample Comments
31096 - 01	KLF-03-ABSB	7/16/19 11:12	DJ		1	
02	KLF-04-ABSB	7/16/19 7:09	DJ		1	
03	KLF- ABSB	7/16/19 8:39	DJ		1	
ov	KLF - OS - ABSE	and the second sec	DJ		1	
05	KLF -01 - 58	7/16/19 9:14	DJ		1	
06	KLF-02-SB	7116/19 8:25	DU		/	
	KX++ 831	1110/1) 0100				
07	KLF-04-SB	7/16/19 9:39	DJ		/	
08	KLF - 05 - 5B	7/16/19 10:11	ЪJ		1	
Container Type P= Plastic A= Amber glass V= Vial G= Glass B= Bacteria cup C= Cube O= Other E= Encore D= BOD Bottle age 19 of 19	Preservative A = None B = HCI $C = HNO_3$ $D = H_2SO_4$ E = NaOH F = MeOH $G = NaHSO_4$ $H = Na_2S_2O_3$ I = Ascorbic Acid $J = NH_4CI$ K = Zn Acotate O = Other	Relinquished By: The fund Mun	Container Type Preservative Date/Time 7/16/19 1155 7/16/19 1305	THulle	By: pat AAA 7/16 Am 7/16	Time 19 //55 Alpha's Terms and Conditions. 19 1340 See reverse side. FORM NO: 01-01 (rev. 12-Mar-2012)

ABSB Dry Weather Testing - Day 2 - 7/16/19 Afternoon Testing



ANALYTICAL REPORT

Lab Number:	L1931201
Client:	Kleinfelder
	One Beacon Street
	Suite 8100
	Boston, MA 02108
ATTN:	Dan Scott
Phone:	(617) 498-4722
Project Name:	SWAMPSCOTT ABSB
Project Number:	Not Specified
Report Date:	07/22/19

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



Serial_No:07221915:56

Project Name:SWAMPSCOTT ABSBProject Number:Not Specified

 Lab Number:
 L1931201

 Report Date:
 07/22/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1931201-01	KLF-06-ABSB	WATER	Not Specified	07/16/19 13:09	07/16/19
L1931201-02	KLF-07-ABSB	WATER	Not Specified	07/16/19 13:40	07/16/19
L1931201-03	KLF-08-ABSB	WATER	Not Specified	07/16/19 15:04	07/16/19
L1931201-04	KLF-09-ABSB	WATER	Not Specified	07/16/19 15:12	07/16/19
L1931201-05	KLF-02-ABSB	WATER	Not Specified	07/16/19 14:38	07/16/19

Project Name:SWAMPSCOTT ABSBProject Number:Not Specified

 Lab Number:
 L1931201

 Report Date:
 07/22/19

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.

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.

604 Stendow Kelly Stenstrom

Authorized Signature:

Title: Technical Director/Representative

Date: 07/22/19



INORGANICS & MISCELLANEOUS



							:	Serial_No:07	7221915:56	
Project Name:	SWAMPSC	OTT ABS	SB				Lab N	lumber:	L1931201	
Project Number:	Not Specifie	d					Repo	rt Date:	07/22/19	
				SAMPLE	RESUL	rs				
Lab ID:	L1931201-0	1					Date (Collected:	07/16/19 13:09	Э
Client ID:	KLF-06-ABS	KLF-06-ABSB						Received:	07/16/19	
Sample Location:	Not Specified						Field I	Prep:	Not Specified	
Sample Depth: Matrix:	Water									
Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Microbiological Analysis	- Westboroug	h Lab								
ENTEROCOCCUS	15000		col/100ml	100		100		- 07/16/19 19: -	40 23,1600	<u> </u>
∖ Sai	regard Res									
ac	atchbasin									



Project Name: Project Number:	SWAMPSCOTT ABSB Not Specified							lumber: rt Date:	L1931201 07/22/19		
				SAMPLE	RESUL	rs					
Lab ID:	L1931201-0	2					Date	Collected:	07/16/19 13:4	0	
Client ID:	KLF-07-ABSB						Date I	Received:	07/16/19		
Sample Location:	Not Specifie	d					Field	Prep:	Not Specified		
Sample Depth:											
Matrix:	Water										
Parameter	Result	Qualifie	r Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst	
icrobiological Analysis	- Westboroug	h Lab									
NTEROCOCCUS	3500		col/100ml	100		100	-	07/16/19 19:4	40 23,1600	AJ	



							Serial_No:07221915:56		
SWAMPSCO	OTT AB	SB				Lab N	lumber:	L1931201	
Not Specifie	d					Repo	rt Date:	07/22/19	
			SAMPLE	RESUL	S				
L1931201-0	3					Date (Collected:	07/16/19 15:04	4
KLF-08-ABS	BB			Date I	Received:	07/16/19			
Not Specified						Field I	Prep:	Not Specified	
Water									
Result	Qualifier	r Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
- Westboroug	h Lab								
540		col/100ml	10		10	-	- 07/16/19 19: •	40 23,1600	AJ
nple Taken									
	Not Specifie L1931201-0 KLF-08-ABS Not Specifie Water Result - Westboroug 540	Not Specified L1931201-03 KLF-08-ABSB Not Specified Water <u>Result Qualifier</u> - Westborough Lab 540	L1931201-03 KLF-08-ABSB Not Specified Water Result Qualifier Units - Westborough Lab 540 col/100ml	Not Specified SAMPLE L1931201-03 KLF-08-ABSB Not Specified Water Water Result Qualifier Units RL - Westborough Lab 540 col/100ml 10 regard Results - mple Taken from	Not Specified SAMPLE RESULT L1931201-03 KLF-08-ABSB Not Specified Water Water Result Qualifier Units RL MDL -Westborough Lab 540 col/100ml 10 regard Results mple Taken from	Not Specified SAMPLE RESULTS L1931201-03 KLF-08-ABSB Not Specified Water Result Qualifier Units RL MDL Dilution Factor -Westborough Lab 540 col/100ml 10 10 regard Results	SWAMPSCOTT ABSB Lab N Not Specified Report SAMPLE RESULTS L1931201-03 Date O KLF-08-ABSB Date I Not Specified Field I Water Result Qualifier Units RL MDL Dilution Date Result Qualifier Units RL MDL Pactor Prepared - Westborough Lab 540 col/100ml 10 - 10 -	SWAMPSCOTT ABSB Lab Number: Not Specified Report Date: SAMPLE RESULTS Date Collected: L1931201-03 Date Collected: KLF-08-ABSB Date Received: Not Specified Date Received: Water Field Prep: Water Date MDL Date Prepared Analyzed - Westborough Lab - 07/16/19 19: 540 col/100ml 10 - 10 07/16/19 19:	SWAMPSCOTT ABSB Lab Number: L1931201 Not Specified Report Date: 07/22/19 SAMPLE RESULTS Date Collected: 07/16/19 15:04 L1931201-03 Date Collected: 07/16/19 15:04 KLF-08-ABSB Date Received: 07/16/19 Not Specified Date Received: 07/16/19 Water Vater Date Date Result Qualifier Units RL MDL Date Date Analytical 540 col/100ml 10 10 07/16/19 19:40 23,1600



Project Name: Project Number:	SWAMPSCOTT ABSB Not Specified							lumber: rt Date:	L1931201 07/22/19	
				SAMPLE	RESUL	rs				
Lab ID:	L1931201-04	4					Date (Collected:	07/16/19 15:12	2
Client ID:	KLF-09-ABSB						Date I	Received:	07/16/19	
Sample Location:	Not Specified						Field I	Prep:	Not Specified	
Sample Depth:										
Matrix:	Water									
Parameter	Result	Qualifie	r Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Aicrobiological Analysis	- Westboroug	h Lab								
ENTEROCOCCUS	660		col/100ml	9.0		9	-	07/16/19 19:4	0 23,1600	AJ



									Serial_No:07221915:56				
Project Name:	SWAMPSC	OTT ABS	BB				Lab N	lumber:	L1931201				
Project Number:	Not Specifie	d					Repo	rt Date:	07/22/19				
			:	SAMPLE	RESUL	rs							
Lab ID:	L1931201-0	5					Date (Collected:	07/16/19 14:3	8			
Client ID:	KLF-02-ABS	KLF-02-ABSB						Received:	07/16/19				
Sample Location:	Not Specified						Field I	Prep:	Not Specified				
Sample Depth: Matrix:	Water												
Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst			
Microbiological Analysis	- Westboroug	h Lab											
ENTEROCOCCUS	8000		col/100ml	100		100		07/16/19 19:	40 <u>23,1600</u>	<u>AJ</u>			
\ Sa	sregard Res imple Taker Catchbasin												



Project Name:SWAMPSCOTT ABSBProject Number:Not Specified

 Lab Number:
 L1931201

 Report Date:
 07/22/19

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Microbiological Analysis	- Westborough Lab for	or sample(s):	01-05	Batch:	WG12606	641-1			
ENTEROCOCCUS	ND	col/100ml	1.0		1	-	07/16/19 19:40	23,1600	AJ



Project Name: SWAMPSCOTT ABSB Project Number: Not Specified

Serial_No:07221915:56 Lab Number: L1931201 *Report Date:* 07/22/19

Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container Info	ormation	Initial	Final	Temp			Frozen		
Container ID	Container Type	Cooler	рН	pН	deg C	Pres	Seal	Date/Time	Analysis(*)
L1931201-01A	Bacteria Cup Na2S2O3 preserved	А	NA		4.5	Y	Absent		ENTRO-MF(.33)
L1931201-01B	Bacteria Cup Na2S2O3 preserved	А	NA		4.5	Y	Absent		ENTRO-MF(.33)
L1931201-02A	Bacteria Cup Na2S2O3 preserved	А	NA		4.5	Y	Absent		ENTRO-MF(.33)
L1931201-02B	Bacteria Cup Na2S2O3 preserved	А	NA		4.5	Υ	Absent		ENTRO-MF(.33)
L1931201-03A	Bacteria Cup Na2S2O3 preserved	А	NA		4.5	Υ	Absent		ENTRO-MF(.33)
L1931201-03B	Bacteria Cup Na2S2O3 preserved	А	NA		4.5	Υ	Absent		ENTRO-MF(.33)
L1931201-04A	Bacteria Cup Na2S2O3 preserved	А	NA		4.5	Υ	Absent		ENTRO-MF(.33)
L1931201-04B	Bacteria Cup Na2S2O3 preserved	А	NA		4.5	Y	Absent		ENTRO-MF(.33)
L1931201-05A	Bacteria Cup Na2S2O3 preserved	А	NA		4.5	Y	Absent		ENTRO-MF(.33)
L1931201-05B	Bacteria Cup Na2S2O3 preserved	А	NA		4.5	Y	Absent		ENTRO-MF(.33)



Project Name: SWAMPSCOTT ABSB

Project Number: Not Specified

Lab Number: L1931201

Report Date: 07/22/19

GLOSSARY

Acronyms

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	

Footnotes

Report Format: Data Usability Report



Project Name: SWAMPSCOTT ABSB

Project Number: Not Specified

Lab Number: L1931201 Report Date: 07/22/19

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 Waterpreserved 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 Condensation Product".
- 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 concentrations of the analyte at less than ten times (10x) the concentrations of the analyte at less than ten times (10x) the concentrations of the analyte at less than ten times (10x) the concentrations of the analyte at less than ten times (10x) the 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 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:SWAMPSCOTT ABSBProject Number:Not Specified

 Lab Number:
 L1931201

 Report Date:
 07/22/19

REFERENCES

23 Method 1600: Membrane Filter Test Method for Enterococci in Water, EPA-821-R-97-004a, May 1997.

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:** <u>NPW</u>: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; <u>SCM</u>: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene. **EPA 8270D:** <u>NPW</u>: Dimethylnaphthalene,1,4-Diphenylhydrazine; <u>SCM</u>: Dimethylnaphthalene,1,4-Diphenylhydrazine.

EPA 6860: SCM: Perchlorate

SM4500: <u>NPW</u>: Amenable Cyanide; <u>SCM</u>: 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, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

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

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; EPA 353.2: Nitrate-N, Nitrite-N; SM4500NO3-F: Nitrate-N, Nitrite-N; SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B 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.

Serial_No:07221915:56

											_			-	_	-		
ALPHA	CHAIN O	F CUS	STOE	РАС РАС	BE		Date R	lec'd in	Lab:	71	6	19		AL	PHA	Job #	193	1901
AMAL STICAL		Project I	Informatio	on			Repo	rt Info	ormati	on - Da	ta De	livera	bles	Bi	lling l	nforma	ition	
8 Walkup Drive Westboro, MA 01 Tel: 508-898-922		Project Na	ame: Swa	mpscot	SA H	SL		Ex			4				iame a	s Client	info PO #:	
Client Information Project Location:						Regu	latory	Requ	iremer	its 8	& Pr	oject				irements		
Client: Kleinfelder Project #:							□ Yes □ No MA MCP Analytical Methods □ Yes □ No CT RCP Analytical Methods □ Yes □ No CT RCP Analytical Yes □ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)							lytical Methods				
Address: Be	Project Ma	anager:				C Yes	No I	GW1 S	tandard						H with T			
Bos	ALPHA Q	ALPHA Quote #:					No No No No No		s RGP Progran	ı				C	riteria			
Phone:		Turn-Ar	round Tim	ie				/	1	12	0/1	1	[]	1	1	11	111	/
	AS Okleinfelder.com roject Information:	Date Du		RUSH (only co	unfirmed if pre-app	provedl)	38260	D ABN D 524,2	METALS: DMCP 13 DMCP	EPH. DRanges & T. DRCRAB COCP 15	VPH: DRanges & Targes D Ranges Only	D PEST arts D Ranges O	Entern DFingerprint	SUCOCOUS			Fii 0 0 Pr	MPLE INFO tration Field Lab to do eservation Lab to do
ALPHA Lab ID (Lab Use Only)	Sample ID	-	Colle Date	ction Time	Sample Matrix	Sampler Initials	VOC:	SVOC:	METALS	EPH: D	D PCA	IPH: D	E			/ /		e Comments
31201-01	KLF-06-ABSB	7	7/16/19	1:09		ÞJ							1					
	KLF - 07 - ABSB		7/16/19	1:40		DJ							-					
	KLF - OS - ABS		7/16/19			DJ							-					_
	KLE - 09 - ABS		7/16/19	A.C		DJ							1					
	KLF - 02 - ABS	P	North Co			DJ				-	+		1	+				
-00	ALL OUT HOT	-	7/16/19	2:30		200		-						1				_
						-		-	-		-		-	-		-		
								+	-	-	+			-		-		
								-			-		-					
									-		-	-	_					
Container Type P= Plastic	Preservative A= None				Conta	ainer Type												
A= Amber glass B= HCl V= Vial C= HNO3 G= Glass D= H3SO4 B= Bacteria cup E= NaOH C= Cube F= MeOH O= Other G= NaHSO4					1.000	eservative											1	
		Relinqui	ished By:			e/Time	no	11	Receiv	By:				ate/Tim	1830	All sar		ted are subjec
E= Encore D= BOD Bottle ge 16 of 16	H = Na ₂ S ₂ O ₃ I= Ascorbic Acid J = NH ₄ Cl K= Zn Acetate O= Other	MAD	te		7/16/ 7-10-1	9 1836	al	and	R	aign	AP	r	7/16	19	1836	See re	's Terms and everse side. NO: 01-01 (rev. 1)	

Wet Weather Testing - Day 1 - 7/23/19



ANALYTICAL REPORT

Lab Number:	L1932436
Client:	Kleinfelder
	One Beacon Street
	Suite 8100
	Boston, MA 02108
ATTN:	Doris Jenkins
Phone:	(617) 497-7800
Project Name:	ABSB
Project Number:	Not Specified
Report Date:	07/30/19

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



Serial_No:07301912:00

Project Name:ABSBProject Number:Not Specified

 Lab Number:
 L1932436

 Report Date:
 07/30/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1932436-01	KLF-1-ABSB	WATER	SWAMPSCOTT	07/23/19 08:12	07/23/19
L1932436-02	KLF-2-ABSB	WATER	SWAMPSCOTT	07/23/19 08:49	07/23/19
L1932436-03	KLF-3-ABSB	WATER	SWAMPSCOTT	07/23/19 10:50	07/23/19
L1932436-04	KLF-4-ABSB	WATER	SWAMPSCOTT	07/23/19 10:24	07/23/19
L1932436-05	KLF-5-ABSB	WATER	SWAMPSCOTT	07/23/19 11:26	07/23/19
L1932436-06	KLF-6-ABSB	WATER	SWAMPSCOTT	07/23/19 11:50	07/23/19
L1932436-07	KLF-7-ABSB	WATER	SWAMPSCOTT	07/23/19 10:02	07/23/19
L1932436-08	KLF-8-ABSB	WATER	SWAMPSCOTT	07/23/19 09:30	07/23/19

Project Name: ABSB Project Number: Not Specified

 Lab Number:
 L1932436

 Report Date:
 07/30/19

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.

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.

604 Stendow Kelly Stenstrom

Authorized Signature:

Title: Technical Director/Representative

Date: 07/30/19



INORGANICS & MISCELLANEOUS



Lab Number:	L1932436
Report Date:	07/30/19

Lab ID: Client ID: Sample Location:	L1932436-01 KLF-1-ABSB SWAMPSCOTT						Received: (07/23/19 08:12 07/23/19 Not Specified	2
Sample Depth: Matrix:	Water								
Parameter	Result Qua	alifier Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
licrobiological Analysis	- Westborough La	ıb							
ENTEROCOCCUS	19000	col/100ml	100		100	-	07/23/19 15:50	23,1600	AJ



Project Name:

ABSB

Serial_No:07301912:00

Lab Number:	L1932436
Report Date:	07/30/19

SAMPLE RESULTS

Lab ID: Client ID: Sample Location:	L1932436-02 KLF-2-ABSB SWAMPSCOTT						Received:	07/23/19 08:49 07/23/19 Not Specified	9
Sample Depth: Matrix:	Water								
Parameter	Result Qua	ifier Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
crobiological Analysis	- Westborough Lal)							
NTEROCOCCUS	57000	col/100ml	100		100	-	07/23/19 15:50	0 23,1600	AJ



Project Name:

ABSB

Serial_No:07301912:00

 Lab Number:
 L1932436

 Report Date:
 07/30/19

SAMPL	E RE	SULTS
O / (1011 E		

Lab ID: Client ID: Sample Location:	L1932436-03 KLF-3-ABSB SWAMPSCOT	т					Received:	07/23/19 10:50 07/23/19 Not Specified	0		
Sample Depth: Matrix:	Water										
Parameter	Result Q	ualifier Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst		
Microbiological Analysis - Westborough Lab											
ENTEROCOCCUS	8100	col/100ml	100		100	-	07/23/19 15:50	23,1600	AJ		



Project Name:

ABSB

Serial No:07301912:00

07/23/19 15:50

Analyst

AJ

23,1600

Project Name: Project Number:	ABSB Not Specified		Lab Nu Report		L1932436 07/30/19			
	Not Opechied	SAM	PLE RESULT	S			01,00,10	
Lab ID: Client ID: Sample Location:	L1932436-04 KLF-4-ABSB SWAMPSCOTT				Date Co Date Re Field Pre	ceived:	07/23/19 10:24 07/23/19 Not Specified	
Sample Depth: Matrix:	Water			Dilution	Date	Date	Analytical	
Parameter	Result Qualifier	Units RI	_ MDL	Factor	Prepared	Analyzed	Method	A

100

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100

-

col/100ml

1	ALPHA	
4	ANALYTICA	

Microbiological Analysis - Westborough Lab

12000

ENTEROCOCCUS

Serial_No:07301912:00

	Lab Number:	L1932436
	Report Date:	07/30/19
SAMPLE RESULTS		

Lab ID: Client ID: Sample Location:	L1932436-05 KLF-5-ABSB SWAMPSCOTT	KLF-5-ABSB					Date Collected: 0 [°] Date Received: 0 [°] Field Prep: N		6
Sample Depth: Matrix:	Water								
Parameter	Result Qua	alifier Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
licrobiological Analysis	- Westborough La	ab							
NTEROCOCCUS	7800	col/100ml	100		100	-	07/23/19 15:50	23,1600	AJ



Project Name:

ABSB

Serial_No:	07301912:00
Lab Number:	L1932436

Project Name:	ABSB						Lab N	umber:	L1932436		
Project Number:	Not Specifie	d					Repor	rt Date:	07/30/19		
				SAMPLE	RESUL	rs					
Lab ID:	L1932436-0	6					Date (Collected:	07/23/19 11:50)	
Client ID:	KLF-6-ABSE	KLF-6-ABSB					Date F	Received:	07/23/19	7/23/19	
Sample Location:	SWAMPSCO	TTC					Field F	Prep:	Not Specified		
Sample Depth:											
Matrix:	Water										
Parameter	Result	Qualifie	r Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst	
Microbiological Analysis	- Westboroug	h Lab									
ENTEROCOCCUS	15000		col/100ml	100		100	-	07/23/19 15:5	60 23,1600	AJ	



					Serial_No:07301912:0					
Project Name: Project Number:	ABSB Not Specified				Lab Nu Report	umber: t Date:	L1932436 07/30/19			
		SAMPLE	RESUL	TS	•					
Lab ID: Client ID: Sample Location:	L1932436-07 KLF-7-ABSB SWAMPSCOTT					ollected: eceived: rep:	07/23/19 10:02 07/23/19 Not Specified			
Sample Depth: Matrix:	Water			Dilution Factor	Date	Date	Analytical			

Parameter	Result Q	ualifier Units	RL	MDL	Factor	Prepared	Analyzed	Method	Analyst
Microbiological Analysis	- Westborough L	_ab							
ENTEROCOCCUS	15000	col/100ml	100		100	-	07/23/19 15:50	23,1600	AJ



Serial No:07301912:00	
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Project Name:	ABSB	Lab Number:	L1932436
Project Number:	Not Specified	Report Date:	07/30/19
	SAMPLE RESULTS		
Lab ID: Client ID: Sample Location:	L1932436-08 KLF-8-ABSB SWAMPSCOTT	Date Collected: Date Received: Field Prep:	07/23/19 09:30 07/23/19 Not Specified

Sample Depth: Matrix:	Water								
Parameter	Result	Qualifier Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Vicrobiological Analysi	s - Westborough	ı Lab							
ENTEROCOCCUS	12000	col/100ml	100		100	-	07/23/19 15:50	23,1600	AJ



Project Name:ABSBProject Number:Not Specified

 Lab Number:
 L1932436

 Report Date:
 07/30/19

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Microbiological Analysis	- Westborough Lab fo	r sample(s):	01-08	Batch:	WG12634	461-1			
ENTEROCOCCUS	ND	col/100ml	1.0		1	-	07/23/19 15:50	23,1600	AJ



Project Name:ABSBProject Number:Not Specified

Serial_No:07301912:00 Lab Number: L1932436 Report Date: 07/30/19

Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Info	Container Information		Initial	Final	Temp			Frozen			
Container ID	Container Type	Cooler	oler pH		deg C	Pres	Seal	Date/Time	Analysis(*)		
L1932436-01A	Bacteria Cup Na2S2O3 preserved	А	NA		4.7	Y	Absent		ENTRO-MF(.33)		
L1932436-01B	Bacteria Cup Na2S2O3 preserved	А	NA		4.7	Y	Absent		ENTRO-MF(.33)		
L1932436-02A	Bacteria Cup Na2S2O3 preserved	А	NA		4.7	Y	Absent		ENTRO-MF(.33)		
L1932436-02B	Bacteria Cup Na2S2O3 preserved	А	NA		4.7	Y	Absent		ENTRO-MF(.33)		
L1932436-03A	Bacteria Cup Na2S2O3 preserved	А	NA		4.7	Y	Absent		ENTRO-MF(.33)		
L1932436-03B	Bacteria Cup Na2S2O3 preserved	А	NA		4.7	Y	Absent		ENTRO-MF(.33)		
L1932436-04A	Bacteria Cup Na2S2O3 preserved	А	NA		4.7	Y	Absent		ENTRO-MF(.33)		
L1932436-04B	Bacteria Cup Na2S2O3 preserved	А	NA		4.7	Y	Absent		ENTRO-MF(.33)		
L1932436-05A	Bacteria Cup Na2S2O3 preserved	А	NA		4.7	Y	Absent		ENTRO-MF(.33)		
L1932436-05B	Bacteria Cup Na2S2O3 preserved	А	NA		4.7	Y	Absent		ENTRO-MF(.33)		
L1932436-06A	Bacteria Cup Na2S2O3 preserved	А	NA		4.7	Y	Absent		ENTRO-MF(.33)		
L1932436-06B	Bacteria Cup Na2S2O3 preserved	А	NA		4.7	Y	Absent		ENTRO-MF(.33)		
L1932436-07A	Bacteria Cup Na2S2O3 preserved	А	NA		4.7	Y	Absent		ENTRO-MF(.33)		
L1932436-07B	Bacteria Cup Na2S2O3 preserved	А	NA		4.7	Y	Absent		ENTRO-MF(.33)		
L1932436-08A	Bacteria Cup Na2S2O3 preserved	А	NA		4.7	Y	Absent		ENTRO-MF(.33)		
L1932436-08B	Bacteria Cup Na2S2O3 preserved	А	NA		4.7	Y	Absent		ENTRO-MF(.33)		



Project Name: ABSB

Project Number: Not Specified

Serial_No:07301912:00

Lab Number: L1932436

Report Date: 07/30/19

Acronyms

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.
	- 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.

GLOSSARY

Footnotes

Report Format: Data Usability Report



Project Name:	ABSB	Lab Number:	L1932436
Project Number:	Not Specified	Report Date:	07/30/19

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 Waterpreserved 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 Condensation Product".
- 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 concentrations of the analyte at less than ten times (10x) the concentrations of the analyte at less than ten times (10x) the concentrations of the analyte at less than ten times (10x) the concentrations of the analyte at less than ten times (10x) the 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. For NJ-related projects, flag only applies to associated field samples that have detectable concentrations of 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: ABSB Project Number: Not Specified

 Lab Number:
 L1932436

 Report Date:
 07/30/19

REFERENCES

23 Method 1600: Membrane Filter Test Method for Enterococci in Water, EPA-821-R-97-004a, May 1997.

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:** <u>NPW</u>: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; <u>SCM</u>: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene. **EPA 8270D:** <u>NPW</u>: Dimethylnaphthalene,1,4-Diphenylhydrazine; <u>SCM</u>: Dimethylnaphthalene,1,4-Diphenylhydrazine.

EPA 6860: SCM: Perchlorate

SM4500: <u>NPW</u>: Amenable Cyanide; <u>SCM</u>: 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, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

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

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; EPA 353.2: Nitrate-N, Nitrite-N; SM4500NO3-F: Nitrate-N, Nitrite-N; SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B 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.

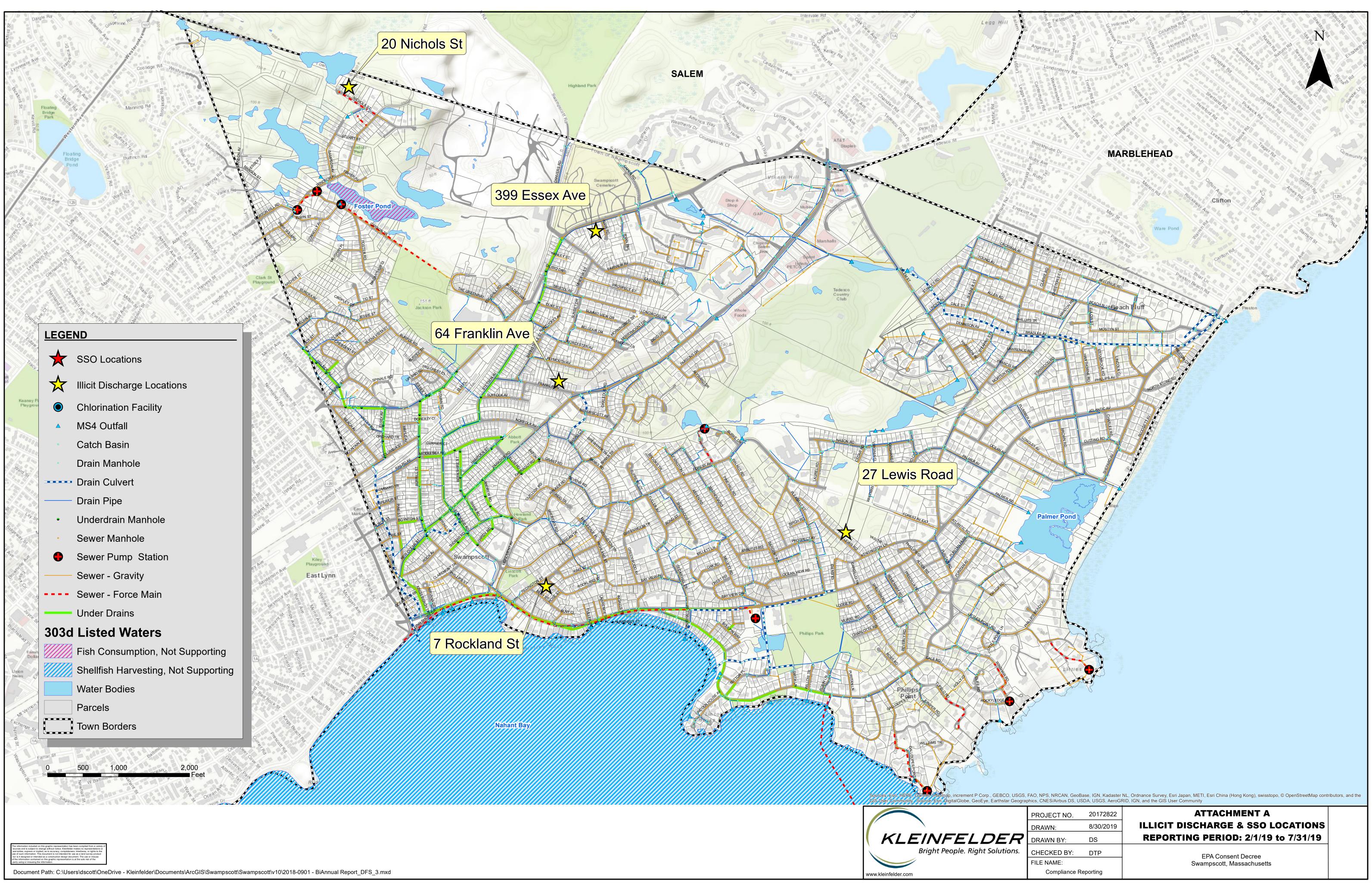
Non-Potable Water EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn. EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn. EPA 245.1 Hg. SM2340B

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

Serial_No:07301912:00

	CHAIN O	FCU	STO	DY P	AGE	_OF	- Date F	Rec'd in	Lab:	7/2	23/1	7	ALF	PHA Job	o#:/_	1932436	
8 Walkup Drive	320 Forbes Blvd	Project	Informa	tion	1 Canto		Repo	ort Infor	mation	- Data	Delive	rables		ling Infor			
Westboro, MA 0 Tel: 508-898-92	1581 Mansfield, MA 02048	Project N	lame:	ABSB				Ex	DE	MAIL			🗆 Sa	ame as Cli	ent info	PO #:	
Client Informatio	n	Project L	ocation: S	Swamps	scott		Regu	latory I	Require	ments	&	Projec	t Inform	ation Re	quirem	ents	
Client: Kleinfe	lder	Project #					Q Yes		A MCP A	Analytic	al Metho	ds	C2 (Bog	Yes 🗆 N uired for M	O CTR	CP Analytical Metho	ds
	icon st	Project M	lanager:				C Yes	No G	W1 Stan	dards (Info Red	uns SD juired fo	r Metals	& EPH with	h Targets	janics) 5)	
Bosto	on, MA	ALPHA	Quote #:						PDES R					Criteria	4		
Phone:		Turn-A	round Ti	me				7		1	1.1	. /	11	11	1 1	11	1
~	s@kleinfelder.com	Date D] RUSH (anly a	continned if pre-a	sproved)	38260 D. C.	D ABN D 524.2	MEFALS: DRCRAS DMCP 14 DRC	VPH: URanges & Targets U P. 13	D PCB DPEST Targets D Ranges Only TPH. D PEST	EAL Only DFINgerprise	en coccus			SAMPLE INFO Filtration Field Lab to do Preservation	ALL ST
ALPHA Lab ID (Lab Use Only)	Sample ID		Coll Date	ection Time	Sample Matrix	Sampler Initials		METALS	METALS	NPH: D	D PCB	E S	11	/ / /	1 –	Lab to do Sample Comments	BOTTLES
32436-01	KLF-1-ABSB		7/23/19	8:12		PJ		ÍÍ				X	11	11	1	comple comments	
02	KLF-2-ABSB		7123/19	8:49		DJ						X					t
03	KLF-3- ABSB		7/23/19	10:50		DJ						X					-
04	KLF-4-ABSB		7/23/19	10:24		DJ						X					+
05	KLF-5-ABSB		and the second se	11:26		DJ		++			-	X	++				+
06	KLF-G-ABSB		7/23/19			DJ			-		-						+
07	KLF-7-ABSB			10:02		DJ		+ +	-			×	++	_	_		+
08	KLF-8-ABSB		7/23/19			DV						X			_		+
Container Type P= Plastic A= Amber glass V= Vial G= Glass B= Bacteria cup C= Cube O= Other	Preservative A= None B= HCI C= HNO3 D= H2SO4 E= NAOH F= MeOH C= H4900	Relinqui	shed By:		Pre	iner Type eservative e/Time		Rec	eived By	/:		Da	te/Time				
E= Encore D= BOD Bottle	G= NaHSOA H = Na ₂ S ₂ O ₃ I= Ascorbic Acid J = NH ₄ CI K= Zn Acotate O= Other	Sily	p	AAL .	7/23/1	9 13:0	5-beli	263	Sa		AA	7/23	19 13:	Alph (8 See	a's Terms reverse s	ubmitted are subjects and Conditions. side. (rev. 12-Mar-2012)	t to

Attachment D Illicit Discharge and SSO Overview Map



	PROJECT NO.	20172822						
	DRAWN:	8/30/2019						
R	DRAWN BY:	DS						
ns.	CHECKED BY:	DTP						
	FILE NAME:							
	Compliance Reporting							