

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, 2021

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 2/1/2021 to 7/31/2021

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 – Period 2/1/2021 to 7/31/2021**

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.

bac

Gino A. Cresta, Jr. Director of Public Works

MEMORANDUM

- TO: Neil Handler | US EPA
- FROM: David Peterson | Kleinfelder
- DATE: September 1, 2021
- CC: Gino Cresta | Town of Swampscott Mark Thompson, Cecilia Carmona, Dan Scott | Kleinfelder

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, 2021 through July 31, 2021

Through this reporting period, activities primarily included:

- Construction of Phase 1C sewer rehabilitation improvements in Stacy's Brook.
- Phase 1C pre-construction stormwater sampling in Stacy's Brook.
- Post-construction warranty inspections of all mainlines and laterals in the Phase 1B project area construction scope.
- House dye testing in targeted areas of the Phase 1B project area, and Humphrey Street.

The following report summarizes the activities performed during the Reporting Period.

Phase 1C Construction Update

The Stacy's Brook Sewer System Rehabilitation Project Phase 1C includes comprehensive sewer rehabilitation in specific neighborhoods in the Stacy's Brook catchment, 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 Phase 1C project scope includes the comprehensive rehabilitation of the sewer collection system in the remaining Phase 1 areas that were not completed in Phases 1A or 1B. These areas are primarily in the southern part of the Stacy's Brook catchment that converge at the intersection of Paradise Road and Norfolk Avenue.

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In addition to the Phase 1 area, the Phase 1C project scope includes CIPP lining of sewer mainlines on Puritan Road, adjacent to Fisherman's Beach. These mainlines were included as an additive bid item and were part of the original Areas Beyond Stacy's Brook (ABSB) design scope. The lining of these ABSB mainlines on Puritan Road is the first step in implementing a similar rehabilitation approach to the Phase 1 area, by sealing the sewer in the Fishman's Beach catchment that are in similar depth and proximity to the drainage system.

Kleinfelder awarded the Phase 1C contract to National Water Main Cleaning Co. on December 28, 2020 for a total contract price of \$1,762,773. The Town issued the Notice to Proceed on February 9, 2021, and construction activities began shortly after in March 2021.

During the current reporting period, National Water Main Cleaning Co. completed CCTV inspections and cleaning of all 14,000 LF of mainlines and 255 laterals within the Phase 1C project scope. In addition, their subcontractor N&M Excavating completed open-cut repairs of 11 mainline and 53 lateral defects. Open-cut repairs were completed at locations on sewer mainline and laterals where structural defects would prohibit the proper installation of a CIPP liner. The open-cut repairs included lateral chimney connections in which there was a 90-degree bend just before the connection to the crown of the mainline. In July 2021, National Water Main Cleaning Co. began mainline CIPP in the Phase 1C project area.

In addition to the construction efforts, Kleinfelder completed one round of dry weather sampling of stormwater within the Phase 1C project area in May 2021. The water quality monitoring performed was consistent with the Illicit Discharge and Elimination (IDDE) procedure detailed in the Consent Decree between the Town and the US EPA. The sampling was conducted at ten (10) locations, including the drainage manhole near the southern extent of the Stacy's Brook Phase 1 project area, immediately upstream of the intersection of Paradise Road and Burrill Street and at the Stacy's Brook outfall during low tide. A map showing the water quality monitoring locations and the lab results from the one round of dry weather preconstruction water quality monitoring are included in **Appendix A**. After the completion of Phase 1C construction, two rounds of wet weather and two rounds of dry weather post construction water quality monitoring will be performed consistent with the IDDE procedures detailed in the Consent Decree between the Town and the US EPA.

Phase 1B Post-Construction Updates

During the current reporting period, Rapid Flow completed warranty CCTV inspections of all mainlines and laterals that were included in the Phase 1B project scope. Per the contract specifications, the warranty inspections were completed at least 1 year after construction. Kleinfelder is working with Rapid Flow to review the warranty inspection videos and ensure all mainlines and laterals are in acceptable condition.

In addition, during the current reporting period, Kleinfelder began to complete IDDE dye testing investigations at seven (7) properties within the Phase 1B project area on Banks Road and Stetson Avenue, and six (6) properties on Humphrey Street/Eastern Ave near the Stacy's Brook outfall. A map of the properties included in the IDDE dye testing scope are included in **Appendix B**.

The properties on Banks Road were targeted for dye testing due to high concentrations of enterococcus found during Phase 1B post-construction water quality sampling. The properties on

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September 2021 © 2021 Kleinfelder Stetson Avenue were included in the scope based on drain smoke testing results that required a follow up investigation.

The dye testing investigations are conducted over several days due to the availability of homeowners. The first set of investigations occurred on July 29. Kleinfelder completed tracer dye testing and building inspections at seven (7) of the thirteen (13) selected properties. This included five (5) of the seven (7) properties within the Phase 1B project area, and two (2) of the six (6) properties on Humphrey Street. The Humphrey Street investigations were conducted during low tide conditions due to the proximity to the outfall. Results from the first round of investigations exhibited no evidence of illicit connections to the storm drain. The tracer dye was identified in the sewer in all cases. The results of the investigations will be included in the next bi-annual report.

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

A map displaying the location of the SSO event that occurred during the current reporting period is included in **Appendix C**.

| | i. | i. | i. | ii. | iii. | iii. | iii. | iv. | iv. | ٧. | vi. | vii. | vii. | viii. | ix. | ix. | xi. | xii. |
|---|------------------|--------------------|-----------|---|--|-----------|-----------|---------|------------------|--------------|--|----------|---------|---|-----------|--------------------|-------------------|---------------|
| | ate/Time | Date/Time | Date | Location | Final | Property | Receiving | - | Location | Source of | Cause(s) | Cause = | Cause = | Measures | Volume | Basis of | Measures | Date of |
| R | eported | Event | Reported | | Disposition | Backup | Drainage | Surface | Release | Notification | of | Blockage | | Take to | of | Estimate | Taken to | Last SSO |
| | | Stopped | to EPA | | | (address) | Structure | Water | Reached | | Release | | Issue | Stop | Release | | Prevent | at this |
| | | | and DEP | | | | | | Surface Water | | | | | Discharge | (Gallons) | | Future SSOs | Location |
| | 17/2021 14:00 | 3/18/2021 13:30 | 3/18/2021 | Manhole in property at 44-66 Humphrey St | Blockage in private side of sewer. Owner worked with private contractor to clear blockage. | None | None | None | None | Resident | Blockage in Private side of sewer. | ~ | N/A | Town tried to divert flow to remain in private driveway and washed public way again after SSO stopped. | 200 | Visual Estimate | None required. | None Known |

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 Stacy's Brook drainage area that was submitted to the EPA on 10/26/2015.

| | | | I | Number o | of Drain N | f Drain Manholes Inspected | | | | Number of Drain Manholes Addressed | | | | | |
|------------|----------------------|-----------------------------|------|--------------------------------------|------------|----------------------------|-----|---------|-----|------------------------------------|--------------------------|----|---------|----|--|
| | Sub- | Number of Drain Manholes | Repo | Previous Reporting Thi Periods | | This Reporting Period | | To-Date | | ious rting ods | This Reporting Period | | To-Date | | |
| 33.b.i, ii | Catchment Area ID | in 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 | 69 | 19% | 9 | 2% | 78 | 21% | 0 | 0% | 0 | 0% | 0 | 0% | |
| | | TOTAL | 90 | 15% | 9 | 0% | 99 | 15% | 6 | 1% | 0 | 0% | 6 | 1% | |

| | | | | Len | gth of Dra | ain Inspe | cted | | Length of Drain Addressed | | | | | |
|-----------|-------------------|----------------------------|--------|-------------------------------------|------------|--------------------------|--------|---------|---------------------------|-------------------------|--------------------------|----|---------|----|
| 33.b.iii, | Sub- Catchment | Length of Drain in Sub- | Repo | Previous Reporting TI Periods | | This Reporting Period | | To-Date | | rious orting iods | This Reporting Period | | To-Date | |
| 33.c | Area ID | 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 | 2,263 | 2% | 1,000 | 1% | 3,263 | 3% | 0 | 0% | 0 | 0% | 0 | 0% |
| | | TOTAL | 23,263 | 15% | 1,000 | 0% | 24,263 | 15% | 650 | 0% | 0 | 0% | 650 | 0% |

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One Beacon Street, Suite 8100, Boston, MA 02108 p | 617.497.7800 f | 617.498.4630

d) Listing of Illicit Discharges Verified during Reporting Period

| | | | | | | | | Prior Reporting | Total Volume Removed (Gallons) | | | | | | |
|-------------------|------------------|------------------------|--------------------------------|-------------------------------------|----------------------------|--|-----------------|--------------------------|---|--------------------------------------|-------------|----------------------------|--|--|----------------------|
| | | | | | | | | Periods | 269,176 | | | | | | |
| | | | | | | | | This Reporting Period | 200 | | | | | | |
| | | | | | | | | Cumulative To Date | 269,376 | | | | | | |
| Discharge Type | Date Verified | Location / Address | SOURCE if: Building Type | SOURCE if: Sewer Exfiltration | Estimated Flow (GPM) | Actions Taken to Remove | Date Removed | Cost to Remove | Volume Removed (Gallons) (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. | v. | vi. | vii. | vii. | viii. | ix. | ix. | х. |
| Sewer Defect | 7/6/2021 | 57 Plymouth Ave | Residential | Sewer Service Repair | not estimated | Private contractor performed repair | 7/6/2021 | unknown | unknown | No | n/a | completed | No | None | n/a |
| Sewer Defect | 6/23/2021 | 53 Fuller Ave | Residential | Sewer Service Repair | not estimated | Private contractor performed repair | 6/23/2021 | unknown | unknown | No | n/a | completed | No | None | n/a |
| Sewer Defect | 6/1/2021 | 167 Redington St | Residential | Sewer Service Repair | not estimated | Private contractor performed repair | 6/1/2021 | unknown | unknown | No | n/a | completed | No | None | n/a |
| Sewer Defect | 6/1/2021 | 55 The Greenway | Residential | Sewer Service Repair | not estimated | Private contractor performed repair | 6/1/2021 | unknown | unknown | No | n/a | completed | No | None | n/a |
| Sewer Defect | 4/6/2021 | 60 Andrew Road | Residential | Sewer Service Repair | not estimated | Private contractor performed repair | 4/6/2021 | unknown | unknown | No | n/a | completed | No | None | n/a |

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| Discharge Type Paragraph - | Date Verified | Location / Address | SOURCE if: Building Type | SOURCE if: Sewer Exfiltration | Estimated Flow (GPM) | Actions Taken to Remove | Date Removed | Cost to Remove | Volume Removed (Gallons) (Reporting Period) | Actively Discharging > 60 Days | Explanation | Schedule for Removal | Private Discharges Persisting > 90 days | Town's Legal Enforcement Actions | Reasons for Delay |
|----------------------------------|------------------|-------------------------|--------------------------------|--|----------------------------|--|-----------------|-------------------|---|--------------------------------------|-------------|----------------------------|--|--|----------------------|
| -> | i. | i. | i. | i. | ii. | iii. | iv. | ۷. | vi. | vii. | vii. | viii. | ix. | ix. | Х. |
| Sewer Defect | 3/30/2021 | 6 Puritan Ave | Residential | Sewer Service Repair | not estimated | Private contractor performed repair | 3/30/2021 | unknown | unknown | No | n/a | completed | No | None | n/a |
| Sewer Defect | 3/22/2021 | 13 Cutting Road | Residential | Sewer Service Repair | not estimated | Private contractor performed repair | 3/22/2021 | unknown | unknown | No | n/a | completed | No | None | n/a |
| Sewer Defect | 3/17/2021 | 133 Aspen Road | Residential | Sewer Service Repair | not estimated | Private contractor performed repair | 3/17/2021 | unknown | unknown | No | n/a | completed | No | None | n/a |
| Sewer Defect | 3/17/2021 | 44-66 Humphrey St | Residential | Blockage in Private side of sewer. | not estimated | Town tried to divert flow to remain in private driveway and washed public way again after SSO stopped. | 3/17/2021 | unknown | 200 | No | n/a | completed | No | None | n/a |

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

A map showing the locations of all illicit discharges and SSOs is included in **Appendix C**.

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

| Number of | Number of | Number of Total |
|-------------|----------------------------|-----------------|
| Routine | Complaint-Response | Construction |
| Inspections | Related Inspections | Inspections |
| 285 | 1 | 8 |

| 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 |

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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 | 3/1/2021 | 18 |

h) Copies of Sampling Results Received during Reporting Period

Results from one dry weather round of Phase 1C pre-construction water quality monitoring are provided in **Appendix A**.

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

During the period August 1, 2021 through January 31, 2022 the following activities are anticipated:

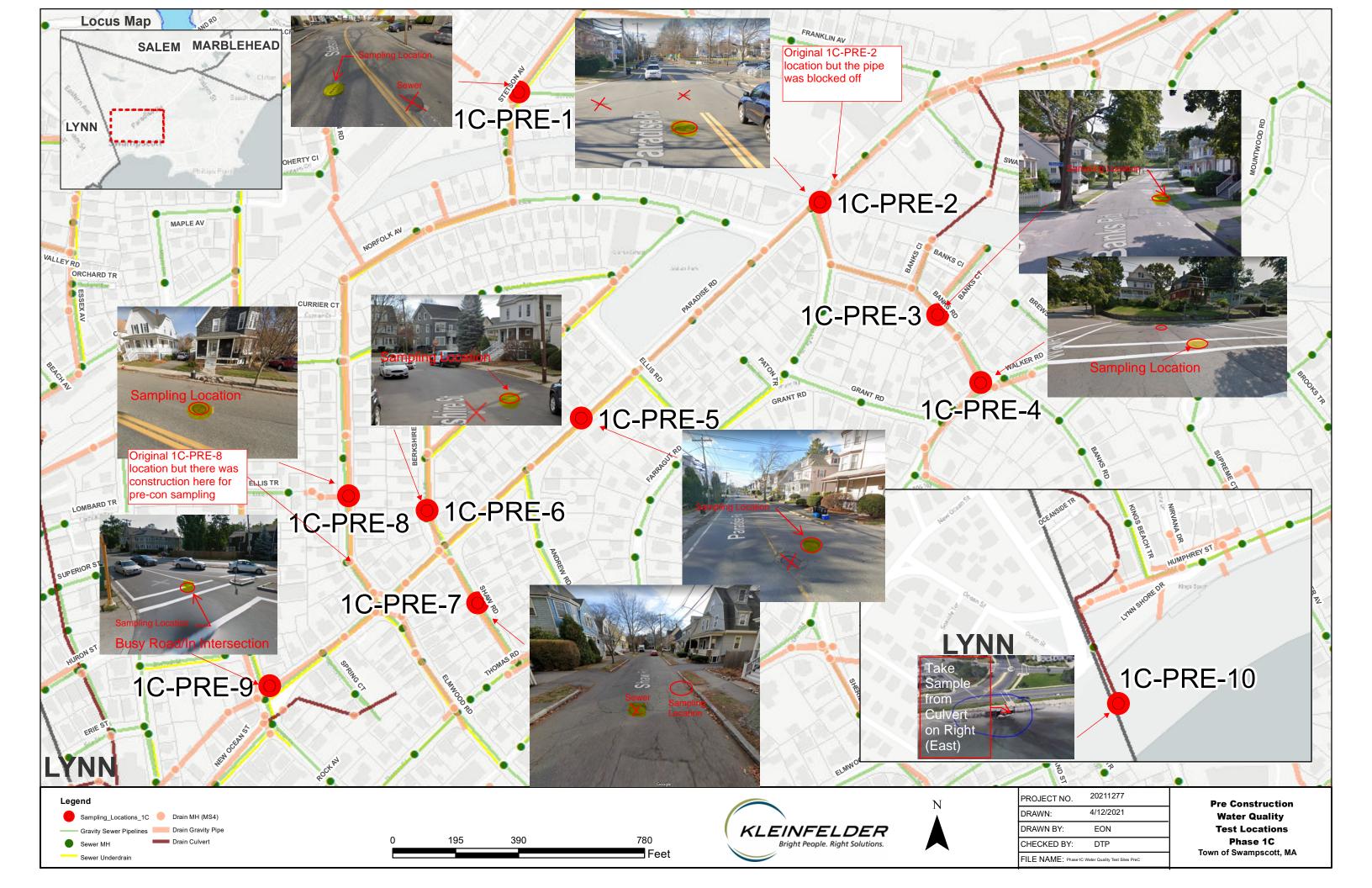
- Complete the construction of Phase 1C sewer rehabilitation improvements in the Stacy's Brook area.
- Complete review of Phase 1B warranty inspections and issue retainage to Rapid Flow to finalize contract.
- Complete Phase 1B house dye testing investigations and submit memorandum of findings to the Town.

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

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

Appendix A

Laboratory Results for Phase 1C Pre-Construction Dry Weather Monitoring





ANALYTICAL REPORT

| Lab Number: | L2125191 |
|-----------------|---------------------|
| Client: | Kleinfelder |
| | One Beacon Street |
| | Suite 8100 |
| | Boston, MA 02108 |
| ATTN: | Elyse Noll |
| Phone: | (617) 498-4681 |
| Project Name: | SWAMPSCOTT PHASE 1C |
| Project Number: | Not Specified |
| Report Date: | 06/01/21 |
| | |

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:06012118:13

Project Name:SWAMPSCOTT PHASE 1CProject Number:Not Specified

 Lab Number:
 L2125191

 Report Date:
 06/01/21

| Alpha Sample ID | Client ID | Matrix | Sample Location | Collection Date/Time | Receive Date |
|--------------------|-----------|--------|--------------------|-------------------------|--------------|
| L2125191-01 | 1C-PRE-06 | WATER | SWAMPSCOTT, MA | 05/13/21 12:00 | 05/13/21 |
| L2125191-02 | 1C-PRE-07 | WATER | SWAMPSCOTT, MA | 05/13/21 12:25 | 05/13/21 |
| L2125191-03 | 1C-PRE-08 | WATER | SWAMPSCOTT, MA | 05/13/21 12:55 | 05/13/21 |
| L2125191-04 | 1C-PRE-09 | WATER | SWAMPSCOTT, MA | 05/13/21 13:30 | 05/13/21 |
| L2125191-05 | 1C-PRE-11 | WATER | SWAMPSCOTT, MA | 05/13/21 14:00 | 05/13/21 |



Lab Number: L2125191 Report Date: 06/01/21

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.



 Lab Number:
 L2125191

 Report Date:
 06/01/21

Case Narrative (continued)

Enterococcus

L2125191-01 through -03 were analyzed with the method required holding time exceeded.

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.

total. Sebastian Corbin

Authorized Signature:

Title: Technical Director/Representative

Date: 06/01/21



INORGANICS & MISCELLANEOUS



| Serial No:06012118:13 |
|-----------------------|
|-----------------------|

| Project Name: Project Number: | SWAMPSCO Not Specifie | | ASE 1C | | | | | | L2125191 06/01/21 | |
|----------------------------------|--------------------------|----------|--|--------|-------|--------------------|------------------|------------------|----------------------|--------|
| | | | 5 | SAMPLE | RESUL | rs | | | | |
| Lab ID: | L2125191-0 | 1 | | | | | Date | Collected: | 05/13/21 12:00 | 0 |
| Client ID: | 1C-PRE-06 | | | | | | Date | Received: | 05/13/21 | |
| Sample Location: | | | N Contraction of the second se | | | | 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 | | | | | | | | |
| TEROCOCCUS | 23 | | col/100ml | 2.0 | | 2 | _ | 05/13/21 21:0 | 0 23,1600 | JT |



| Serial No:06012118:13 |
|-----------------------|
|-----------------------|

| Project Name: Project Number: | SWAMPSCC Not Specified | | ASE 1C | | | | | | L2125191 06/01/21 | |
|----------------------------------|---------------------------|-----------|-----------|--------|-------|--------------------|------------------|------------------|----------------------|--------|
| | | | 5 | SAMPLE | RESUL | rs | | | | |
| Lab ID: | L2125191-02 | 2 | | | | | Date | Collected: | 05/13/21 12:2 | 5 |
| Client ID: | 1C-PRE-07 | | | | | | Date | Received: | 05/13/21 | |
| Sample Location: | SWAMPSCC | DTT, MA | ١ | | | | Field | Prep: | Not Specified | |
| Sample Depth: Matrix: | Water | | | | | | | | | |
| Parameter | | Qualifier | · Units | RL | MDL | Dilution Factor | Date Prepared | Date Analyzed | Analytical Method | Analys |
| crobiological Analysis | - Westborough | n Lab | | | | | | | | |
| TEROCOCCUS | 2.0 | | col/100ml | 2.0 | | 2 | - | 05/13/21 21:0 | 0 23,1600 | JT |



| Serial No:06012118:13 |
|-----------------------|
|-----------------------|

| Project Name: Project Number: | SWAMPSCO Not Specifie | | ASE 1C | | | | | lumber: rt Date: | L2125191 06/01/21 | |
|----------------------------------|--------------------------|-----------|-----------|--------|-------|--------------------|------------------|---------------------|----------------------|--------|
| | | | ę | SAMPLE | RESUL | rs | | | | |
| Lab ID: | L2125191-0 | 3 | | | | | Date | Collected: | 05/13/21 12:5 | 5 |
| Client ID: | 1C-PRE-08 | | | | | | Date | Received: | 05/13/21 | |
| 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 | | | | | | | | |
| TEROCOCCUS | 4900 | | col/100ml | 100 | | 100 | - | 05/13/21 21:0 | 0 23,1600 | JT |



| Serial No:06012118:13 |
|-----------------------|
|-----------------------|

| Project Name: Project Number: | SWAMPSCO Not Specifie | | ASE 1C | | | | | lumber: rt Date: | L2125191 06/01/21 | |
|----------------------------------|--------------------------|----------|-----------|--------|-------|--------------------|------------------|---------------------|----------------------|--------|
| | | | ę | SAMPLE | RESUL | rs | | | | |
| Lab ID: | L2125191-0 | 4 | | | | | Date | Collected: | 05/13/21 13:30 | C |
| Client ID: | 1C-PRE-09 | | | | | | Date | Received: | 05/13/21 | |
| Sample Location: | SWAMPSCO | OTT, MA | A | | | | 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 | | | | | | | | |
| TEROCOCCUS | 170 | | col/100ml | 2.0 | | 2 | - | 05/13/21 21:0 | 0 23,1600 | JT |



| Project Name: Project Number: | SWAMPSCO Not Specifie | | ASE 1C | | | | | lumber: rt Date: | L2125191 06/01/21 | |
|----------------------------------|--------------------------|-----------|-----------|--------|-------|--------------------|------------------|---------------------|----------------------|--------|
| | | | ę | SAMPLE | RESUL | ſS | | | | |
| Lab ID: | L2125191-0 | 5 | | | | | Date | Collected: | 05/13/21 14:00 | 0 |
| Client ID: | 1C-PRE-11 | | | | | | Date | Received: | 05/13/21 | |
| 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 | | | | | | | | |
| TEROCOCCUS | 350 | | col/100ml | 10 | | 10 | - | 05/13/21 21:0 | 0 23,1600 | JT |



 Lab Number:
 L2125191

 Report Date:
 06/01/21

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: | WG14986 | 67-1 | | | |
| ENTEROCOCCUS | ND | col/100ml | 1.0 | | 1 | - | 05/13/21 21:00 | 23,1600 | JT |



Serial_No:06012118:13 Lab Number: L2125191 Report Date: 06/01/21

Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

Cooler Information

| Cooler | Custody Seal |
|--------|--------------|
| A | Absent |

Container Information

| Container Information | | | | Final | Temp | | | Frozen | |
|-----------------------|--------------------------------|--------|----|-------|-------|------|--------|-----------|---------------|
| Container ID | Container Type | Cooler | рН | pН | deg C | Pres | Seal | Date/Time | Analysis(*) |
| L2125191-01A | Bacteria Cup Na2S2O3 preserved | А | NA | | 3.2 | Y | Absent | | ENTRO-MF(.33) |
| L2125191-01B | Bacteria Cup Na2S2O3 preserved | А | NA | | 3.2 | Y | Absent | | ENTRO-MF(.33) |
| L2125191-02A | Bacteria Cup Na2S2O3 preserved | А | NA | | 3.2 | Y | Absent | | ENTRO-MF(.33) |
| L2125191-02B | Bacteria Cup Na2S2O3 preserved | А | NA | | 3.2 | Y | Absent | | ENTRO-MF(.33) |
| L2125191-03A | Bacteria Cup Na2S2O3 preserved | А | NA | | 3.2 | Y | Absent | | ENTRO-MF(.33) |
| L2125191-03B | Bacteria Cup Na2S2O3 preserved | А | NA | | 3.2 | Y | Absent | | ENTRO-MF(.33) |
| L2125191-04A | Bacteria Cup Na2S2O3 preserved | А | NA | | 3.2 | Y | Absent | | ENTRO-MF(.33) |
| L2125191-04B | Bacteria Cup Na2S2O3 preserved | А | NA | | 3.2 | Y | Absent | | ENTRO-MF(.33) |
| L2125191-05A | Bacteria Cup Na2S2O3 preserved | А | NA | | 3.2 | Y | Absent | | ENTRO-MF(.33) |
| L2125191-05B | Bacteria Cup Na2S2O3 preserved | А | NA | | 3.2 | Y | Absent | | ENTRO-MF(.33) |



Serial_No:06012118:13

Project Name: SWAMPSCOTT PHASE 1C

Project Number: Not Specified

Lab Number: L2125191

Report Date: 06/01/21

GLOSSARY

Acronyms

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

Report Format: Data Usability Report



Project Name: SWAMPSCOTT PHASE 1C

Project Number: Not Specified

Lab Number: L2125191

Report Date: 06/01/21

Footnotes

1

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

Terms

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

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.

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

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

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

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

Data Qualifiers

- A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- С - 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.
- Е - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
- н - 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).
- Μ - 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

Report Format: Data Usability Report



Serial_No:06012118:13

Project Name: SWAMPSCOTT PHASE 1C

Project Number: Not Specified

Lab Number: L2125191

Report Date: 06/01/21

Data Qualifiers

the identification is based on a mass spectral library search.

- P The RPD between the results for the two columns exceeds the method-specified criteria.
- Q The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- **R** Analytical results are from sample re-analysis.
- **RE** Analytical results are from sample re-extraction.
- **S** Analytical results are from modified screening analysis.

Report Format: Data Usability Report



 Lab Number:
 L2125191

 Report Date:
 06/01/21

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, Naphthalene

EPA 625/625.1: alpha-Terpineol

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

EPA 8270D/8270E: <u>NPW:</u> Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; <u>SCM</u>: Dimethylnaphthalene,1,4-Diphenylhydrazine. **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, SM4500NO2-B EPA 332: Perchlorate; EPA 524.2: THMs and VOCs; EPA 504.1: EDB, DBCP. Microbiology: SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D.

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, EPA 350.1: Ammonia-N, LACHAT 10-107-06-1-B: Ammonia-N, EPA 351.1, SM4500NO3-F, EPA 353.2: Nitrate-N, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate. EPA 624.1: Volatile Halocarbons & Aromatics, EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II.

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs **EPA 625.1**: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.

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

Mansfield Facility:

Drinking Water

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. EPA 200.8: Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. EPA 245.1 Hg. EPA 522, EPA 537.1.

Non-Potable Water

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

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

Serial_No:06012118:13

| | CHAIN O | F CU | STO | ру Ра | GE | OF | Dat | e Rec | c'd in | Lab: | | 4 | 5/1 | 312 | 21 | A | LPH | A Jo | ob #: | L | 212519 | ! |
|--|--|--------------------------------|---|---------------|--------------------|---------------------|-----------|---|-----------|-----------------|--------------------------|---------------|----------------------|---------------|-------------------------|----------|---|--------|---------------------|--------------|--------------------------------------|------|
| | 320 Forbes Blvd | Project | Informati | on | Sich n | | Re | port | Info | rmati | ion - I | Data | Deli | vera | bles | E | Billin | g Inf | ormat | | | |
| 8 Walkup Drive Westboro, MA Tel: 508-898-9 | 01581 Mansfield, MA 02048 | Project N | lame: SNO | umpscott | Phaz. | 1C | | ADEx | ć | | D EM | AIL | | | | | Same | e as (| Client in | fo P | 0 #: | |
| Client Information | n | | ocation: 5 | | | | | - | - | | _ | _ | _ | _ | | Info | - | | Requir | - | | |
| Client: Kkinfet | Scr-Elye Noll | Project # | | 4.5 | | | | □ Yes □ No MA MCP Analytical Methods □ Yes □ No CT RCP Analytical Methods □ Yes □ No Matrix Spike Required on this SDG? (Required for MCP Inorganics) | | | | | | | | | | | | | | |
| | con St. Suite 8100 | Project N | lanager: | | | | DY | Yes No GW1 Standards (Info Required for Metals & EPH with Targets) | | | | | | | | | | | | | | |
| | 1A 02108 | ALPHA | Quote #: | (# | | | 1.127.120 | Yes INO NPDES RGP Other State /Fed Program Criteria | | | | | | | | | | | | | | |
| | -975-911/ | Turn-A | round Tin | ie | | | | | | | | | | | | | | | | | | |
| | Voll @ Kikin & Hr. com Project Information: | Stand Date D | | RUSH (only co | onfirmed if pre-ap | provedlj | ANALVO | 28260 D 624 Dec | D PAH | DMC | EPH: DRANS DRCRAS DRCPAS | "Bets D P. | D PCB C Targets D P. | no sagues out | Etter Only OFingerprise | Bact- | // | | | | SAMPLE | INFO |
| | 8 | | | | | | | U 8260 D 6 | ABN 41.8. | METALS. DMCP 13 | EPH: DRang DRCRAS DRCRAS | DRa. 4 Ta | CB Dar & Ta | DQuanu C | time | Carlos I | // | 1 | | | Field Lab to o Preservati Lab to o | ion |
| ALPHA Lab ID (Lab Use Only) | Sample ID | | Colle Date | ction Time | Sample Matrix | Sampler Initials | koc; | \$10 | MET | MET | EPH | Han | 0 | Her | W | / | / | / | 1 | Sa | mple Comm | |
| 25191-01 | 1C-PRE-06 | | 5/13/2001 | 12:00 | | | | | | | | | | | X | | | T | | | | |
| 02 | 1C-PRE-07 | | 5/13/21 | 12:25 | | | | | | | | | | | X | | | | | | | |
| 03 | 1C - PRE-08 | | 5/13/21 | 12:55 | | | | | | | | | | | X | | 1 | 1 | | | | |
| 64 | 1C-PRE-09 | | 5/13/21 | 13:30 | | | | | | | - | + | - | | X | - | + | + | | | | - |
| 65 | 1C-PRE-11 | | 5/13/21 | 14:00 | | | | | - | | - | - | - | | X | - | - | + | | | | - |
| 0) | _LL-FAL-TI | | 5/10/61 | 1-1.0- | | | | _ | _ | | - | + | - | - | | + | - | +- | + | | | -+ |
| | | | | | | | | _ | _ | _ | - | - | - | - | - | + | + | +- | + | _ | | - |
| | | | | | | | | - | - | _ | - | + | - | + | + | + | +- | +- | + | - | | |
| | | | | | | | | | | | | + | + | - | | + | + | + | | | | |
| | | | | | | | | | | | _ | + | - | _ | - | | - | - | | | | |
| | | | | | | | | _ | | _ | _ | - | - | _ | - | - | - | +- | | | | |
| Container Type P= Plastic A= Amber glass | Preservative A= None B= HCl | None | | | | | | | | | _ | \rightarrow | _ | | _ | - | | | | | | |
| V= Vial G= Glass B= Bacteria cup | C= HNO3 D= H2SO4 E= NaOH | Della | Preservative | | | | | | | | | | | | | | | 1 | | 10. No. 1 | | |
| C= Cube O= Other E= Encore D= BOD Bottle Page 18 of 18 | E= NaOH F= MeOH G= NaHSO ₄ H = Na ₂ S ₂ O ₃ I= Ascorbic Acid J = NH ₄ CI K= Zn Accetate Q= Other | Relingu yn Acul angle C. | Relinquished By: Da Market S/17 5//3/ | | | | Ha | Received By: | | | | | | | | | e/Time 2/ 1555 All samples All samples All samples See reverse FORM NO. 01/ | | Terms a erse sid | and Conditio | ons. | |



ANALYTICAL REPORT

| Lab Number: | L2124991 |
|-----------------|---------------------|
| Client: | Kleinfelder |
| | One Beacon Street |
| | Suite 8100 |
| | Boston, MA 02108 |
| ATTN: | Elyse Noll |
| Phone: | (617) 498-4681 |
| Project Name: | SWAMPSCOTT PHASE 1C |
| Project Number: | Not Specified |
| Report Date: | 06/01/21 |
| · | |

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:06012116:33

Project Name:SWAMPSCOTT PHASE 1CProject Number:Not Specified

 Lab Number:
 L2124991

 Report Date:
 06/01/21

| Alpha Sample ID | Client ID | Matrix | Sample Location | Collection Date/Time | Receive Date |
|--------------------|-----------|--------|--------------------|-------------------------|--------------|
| L2124991-01 | 1C-PRE-04 | WATER | SWAMPSCOTT, MA | 05/13/21 08:55 | 05/13/21 |
| L2124991-02 | 1C-PRE-03 | WATER | SWAMPSCOTT, MA | 05/13/21 09:20 | 05/13/21 |
| L2124991-03 | 1C-PRE-01 | WATER | SWAMPSCOTT, MA | 05/13/21 08:20 | 05/13/21 |
| L2124991-04 | 1C-PRE-10 | WATER | SWAMPSCOTT, MA | 05/13/21 07:45 | 05/13/21 |
| L2124991-05 | 1C-PRE-02 | WATER | SWAMPSCOTT, MA | 05/13/21 09:45 | 05/13/21 |
| L2124991-06 | 1C-PRE-05 | WATER | SWAMPSCOTT, MA | 05/13/21 10:20 | 05/13/21 |

Lab Number: L2124991 Report Date: 06/01/21

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.



 Lab Number:
 L2124991

 Report Date:
 06/01/21

Case Narrative (continued)

Enterococcus

L2124991-04 was analyzed with the method required holding time exceeded.

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.

to Sebastian Corbin

Authorized Signature:

Title: Technical Director/Representative

Date: 06/01/21



INORGANICS & MISCELLANEOUS



| Serial No:06012116:33 | 3 |
|-----------------------|---|
|-----------------------|---|

| Project Name: Project Number: | SWAMPSCO Not Specifie | | ASE 1C | | | | | | L2124991 06/01/21 | |
|----------------------------------|--------------------------|----------|-----------|--------|-------|--------------------|------------------|------------------|----------------------|--------|
| | | | S | SAMPLE | RESUL | rs | | | | |
| Lab ID: | L2124991-0 ⁻ | 1 | | | | | Date | Collected: | 05/13/21 08:5 | 5 |
| Client ID: | 1C-PRE-04 | | | | | | Date | Received: | 05/13/21 | |
| Sample Location: | SWAMPSCO | OTT, MA | ١ | | | | Field | Prep: | Not Specified | |
| Sample Depth: Matrix: | Water | | | | | | | | | |
| Parameter | Result | Qualifie | - Units | RL | MDL | Dilution Factor | Date Prepared | Date Analyzed | Analytical Method | Analys |
| crobiological Analysis | - Westboroug | h Lab | | | | | | | | |
| ITEROCOCCUS | 28 | | col/100ml | 2.0 | | 2 | _ | 05/13/21 16:00 | 23,1600 | JT |



| Serial No:06012116:33 | 12116:33 |
|-----------------------|----------|
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| Project Name: Project Number: | SWAMPSCO Not Specifie | | ASE 1C | | | | | | L2124991 06/01/21 | |
|----------------------------------|--------------------------|-----------|-----------|--------|-------|--------------------|------------------|------------------|----------------------|-------|
| | | | ę | SAMPLE | RESUL | rs | | | | |
| Lab ID: | L2124991-0 | 2 | | | | | Date | Collected: | 05/13/21 09:20 | C |
| Client ID: | 1C-PRE-03 | | | | | | Date | Received: | 05/13/21 | |
| Sample Location: | SWAMPSCO | OTT, MA | ١ | | | | Field | 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 | h Lab | | | | | | | | |
| ITEROCOCCUS | 490 | | col/100ml | 10 | | 10 | - | 05/13/21 16:0 | 0 23,1600 | JT |



| Serial No:06012116:33 | 12116:33 |
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| Project Name: Project Number: | SWAMPSCO Not Specifie | | ASE 1C | | | | | lumber: rt Date: | L2124991 06/01/21 | |
|----------------------------------|--------------------------|-----------|-----------|--------|-------|----------|----------|---------------------|----------------------|--------|
| | | | 5 | SAMPLE | RESUL | rs | | | | |
| Lab ID: | L2124991-0 | 3 | | | | | Date | Collected: | 05/13/21 08:20 |) |
| Client ID: | 1C-PRE-01 | | | | | | Date | Received: | 05/13/21 | |
| Sample Location: | SWAMPSCO | OTT, MA | ١ | | | | Field | Prep: | Not Specified | |
| Sample Depth: Matrix: | Water | | | | | | | | | |
| Mallix. | valer | | | | | Dilution | Date | Data | Anchetical | |
| Parameter | Result | Qualifier | r Units | RL | MDL | Factor | Prepared | Date Analyzed | Analytical Method | Analys |
| crobiological Analysis | - Westboroug | h Lab | | | | | | | | |
| TEROCOCCUS | 5.0 | | col/100ml | 2.0 | | 2 | - | 05/13/21 16:0 | 0 23,1600 | JT |



| Serial No:06012116:33 | 12116:33 |
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| Project Name: Project Number: | SWAMPSCO Not Specifie | | ASE 1C | | | | | | L2124991 06/01/21 | |
|----------------------------------|--------------------------|----------|-----------|--------|-------|--------------------|------------------|------------------|----------------------|--------|
| | | | \$ | SAMPLE | RESUL | ſS | | | | |
| Lab ID: | L2124991-04 | 4 | | | | | Date | Collected: | 05/13/21 07:4 | 5 |
| Client ID: | 1C-PRE-10 | | | | | | Date | Received: | 05/13/21 | |
| 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 | | | | | | | | |
| ITEROCOCCUS | 130 | | col/100ml | 2.0 | | 2 | - | 05/13/21 16:0 | 0 23,1600 | JT |



| Serial No:06012116:33 | 12116:33 |
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| Project Name: Project Number: | SWAMPSCO Not Specifie | | ASE 1C | | | | | _ | _2124991)6/01/21 | |
|----------------------------------|--------------------------|----------|-----------|--------|-------|--------------------|------------------|------------------|----------------------|--------|
| | | | : | SAMPLE | RESUL | rs | | | | |
| Lab ID: | L2124991-0 | 5 | | | | | Date | Collected: (| 05/13/21 09:4 | 5 |
| Client ID: | 1C-PRE-02 | | | | | | Date | Received: (| 05/13/21 | |
| Sample Location: | SWAMPSCO | OTT, MA | ١ | | | | Field | Prep: N | 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 | | | | | | | | |
| TEROCOCCUS | 140 | | col/100ml | 2.0 | | 2 | - | 05/13/21 16:00 |) 23,1600 | JT |



| Serial No:06012116:33 | 12116:33 |
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| Project Name: Project Number: | SWAMPSCO Not Specifie | | ASE 1C | | | | | Number: rt Date: | L2124991 06/01/21 | |
|----------------------------------|--------------------------|----------|-----------|--------|-------|--------------------|------------------|---------------------|----------------------|--------|
| | | | 5 | SAMPLE | RESUL | ſS | | | | |
| Lab ID: | L2124991-0 | 6 | | | | | Date | Collected: | 05/13/21 10:20 | 0 |
| Client ID: | 1C-PRE-05 | | | | | | Date | Received: | 05/13/21 | |
| 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 | | | | | | | | |
| TEROCOCCUS | 220 | | col/100ml | 10 | | 10 | - | 05/13/21 16:0 | 00 23,1600 | JT |



Project Name:SWAMPSCOTT PHASE 1CProject Number:Not Specified

 Lab Number:
 L2124991

 Report Date:
 06/01/21

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): | 01-06 | Batch: | WG14986 | 607-1 | | | |
| ENTEROCOCCUS | ND | col/100ml | 1.0 | | 1 | - | 05/13/21 16:00 | 23,1600 | JT |



Project Name:SWAMPSCOTT PHASE 1CProject Number:Not Specified

Serial_No:06012116:33 *Lab Number:* L2124991 *Report Date:* 06/01/21

Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

Cooler Information

| Cooler | Custody Seal |
|--------|--------------|
| A | Absent |

| Container Info | rmation | | Initial | Final | Temp | | | Frozen | |
|----------------|--|--|--|--|--|---|---|---|--|
| Container ID | Container Type | Cooler | pН | рН | deg C | Pres | Seal | Date/Time | Analysis(*) |
| L2124991-01A | Bacteria Cup Na2S2O3 preserved | А | NA | | 2.7 | Y | Absent | | ENTRO-MF(.33) |
| L2124991-01B | Bacteria Cup Na2S2O3 preserved | А | NA | | 2.7 | Υ | Absent | | ENTRO-MF(.33) |
| L2124991-02A | Bacteria Cup Na2S2O3 preserved | А | NA | | 2.7 | Υ | Absent | | ENTRO-MF(.33) |
| L2124991-02B | Bacteria Cup Na2S2O3 preserved | А | NA | | 2.7 | Υ | Absent | | ENTRO-MF(.33) |
| L2124991-03A | Bacteria Cup Na2S2O3 preserved | А | NA | | 2.7 | Υ | Absent | | ENTRO-MF(.33) |
| L2124991-03B | Bacteria Cup Na2S2O3 preserved | А | NA | | 2.7 | Υ | Absent | | ENTRO-MF(.33) |
| L2124991-04A | Bacteria Cup Na2S2O3 preserved | А | NA | | 2.7 | Υ | Absent | | ENTRO-MF(.33) |
| L2124991-04B | Bacteria Cup Na2S2O3 preserved | А | NA | | 2.7 | Υ | Absent | | ENTRO-MF(.33) |
| L2124991-05A | Bacteria Cup Na2S2O3 preserved | А | NA | | 2.7 | Υ | Absent | | ENTRO-MF(.33) |
| L2124991-05B | Bacteria Cup Na2S2O3 preserved | А | NA | | 2.7 | Υ | Absent | | ENTRO-MF(.33) |
| L2124991-06A | Bacteria Cup Na2S2O3 preserved | А | NA | | 2.7 | Υ | Absent | | ENTRO-MF(.33) |
| L2124991-06B | Bacteria Cup Na2S2O3 preserved | А | NA | | 2.7 | Y | Absent | | ENTRO-MF(.33) |
| | Container ID L2124991-01A L2124991-01B L2124991-02A L2124991-02B L2124991-03A L2124991-03B L2124991-04A L2124991-04B L2124991-05B L2124991-05B L2124991-06A | L2124991-01ABacteria Cup Na2S2O3 preservedL2124991-01BBacteria Cup Na2S2O3 preservedL2124991-02ABacteria Cup Na2S2O3 preservedL2124991-02BBacteria Cup Na2S2O3 preservedL2124991-03ABacteria Cup Na2S2O3 preservedL2124991-03BBacteria Cup Na2S2O3 preservedL2124991-04ABacteria Cup Na2S2O3 preservedL2124991-04BBacteria Cup Na2S2O3 preservedL2124991-05ABacteria Cup Na2S2O3 preservedL2124991-05BBacteria Cup Na2S2O3 preservedL2124991-06ABacteria Cup Na2S2O3 preserved | Container IDContainer TypeCoolerL2124991-01ABacteria Cup Na2S2O3 preservedAL2124991-01BBacteria Cup Na2S2O3 preservedAL2124991-02ABacteria Cup Na2S2O3 preservedAL2124991-02BBacteria Cup Na2S2O3 preservedAL2124991-03ABacteria Cup Na2S2O3 preservedAL2124991-03BBacteria Cup Na2S2O3 preservedAL2124991-03BBacteria Cup Na2S2O3 preservedAL2124991-04ABacteria Cup Na2S2O3 preservedAL2124991-04BBacteria Cup Na2S2O3 preservedAL2124991-05BBacteria Cup Na2S2O3 preservedAL2124991-05BBacteria Cup Na2S2O3 preservedAL2124991-06ABacteria Cup Na2S2O3 preservedA | Container IDContainer TypeCoolerpHL2124991-01ABacteria Cup Na2S2O3 preservedANAL2124991-01BBacteria Cup Na2S2O3 preservedANAL2124991-02ABacteria Cup Na2S2O3 preservedANAL2124991-02BBacteria Cup Na2S2O3 preservedANAL2124991-03BBacteria Cup Na2S2O3 preservedANAL2124991-03BBacteria Cup Na2S2O3 preservedANAL2124991-03BBacteria Cup Na2S2O3 preservedANAL2124991-04ABacteria Cup Na2S2O3 preservedANAL2124991-04BBacteria Cup Na2S2O3 preservedANAL2124991-05BBacteria Cup Na2S2O3 preservedANAL2124991-05BBacteria Cup Na2S2O3 preservedANAL2124991-05ABacteria Cup Na2S2O3 preservedANAL2124991-05BBacteria Cup Na2S2O3 preservedANAL2124991-05ABacteria Cup Na2S2O3 preservedANAL2124991-05ABacteria Cup Na2S2O3 preservedANAL2124991-05BBacteria Cup Na2S2O3 preservedANAL2124991-06ABacteria Cup Na2S2O3 preservedANAL2124991-06ABacteria Cup Na2S2O3 preservedANA | Container IDContainer TypeCoolerInitial pHInitial pHL2124991-01ABacteria Cup Na2S2O3 preservedANAL2124991-01BBacteria Cup Na2S2O3 preservedANAL2124991-02ABacteria Cup Na2S2O3 preservedANAL2124991-02BBacteria Cup Na2S2O3 preservedANAL2124991-03BBacteria Cup Na2S2O3 preservedANAL2124991-03BBacteria Cup Na2S2O3 preservedANAL2124991-03BBacteria Cup Na2S2O3 preservedANAL2124991-04ABacteria Cup Na2S2O3 preservedANAL2124991-05ABacteria Cup Na2S2O3 preservedANAL2124991-05BBacteria Cup Na2S2O3 preservedANAL2124991-05BBacteria Cup Na2S2O3 preservedANAL2124991-05ABacteria Cup Na2S2O3 preservedANAL2124991-05BBacteria Cup Na2S2O3 preservedANAL2124991-06ABacteria Cup Na2S2O3 preservedANA | Container IDContainer TypeCoolerInitialInitialInitialL2124991-01ABacteria Cup Na2S2O3 preservedANA2.7L2124991-01BBacteria Cup Na2S2O3 preservedANA2.7L2124991-02ABacteria Cup Na2S2O3 preservedANA2.7L2124991-02BBacteria Cup Na2S2O3 preservedANA2.7L2124991-03BBacteria Cup Na2S2O3 preservedANA2.7L2124991-03BBacteria Cup Na2S2O3 preservedANA2.7L2124991-04ABacteria Cup Na2S2O3 preservedANA2.7L2124991-04BBacteria Cup Na2S2O3 preservedANA2.7L2124991-04BBacteria Cup Na2S2O3 preservedANA2.7L2124991-05ABacteria Cup Na2S2O3 preservedANA2.7L2124991-05BBacteria Cup Na2S2O3 preservedANA2.7L2124991-05ABacteria Cup Na2S2O3 preservedANA2.7L2124991-05ABacteria Cup Na2S2O3 preservedANA2.7L2124991-05ABacteria Cup Na2S2O3 preservedANA2.7L2124991-05ABacteria Cup Na2S2O3 preservedANA< | Container IDContainer TypeCoolerPHPHdeg CPresL2124991-01ABacteria Cup Na2S2O3 preservedANA2.7YL2124991-01BBacteria Cup Na2S2O3 preservedANA2.7YL2124991-02ABacteria Cup Na2S2O3 preservedANA2.7YL2124991-02BBacteria Cup Na2S2O3 preservedANA2.7YL2124991-03BBacteria Cup Na2S2O3 preservedANA2.7YL2124991-03BBacteria Cup Na2S2O3 preservedANA2.7YL2124991-03BBacteria Cup Na2S2O3 preservedANA2.7YL2124991-03BBacteria Cup Na2S2O3 preservedANA2.7YL2124991-04BBacteria Cup Na2S2O3 preservedANA2.7YL2124991-05BBacteria Cup Na2S2O3 preservedANA2.7YL2124991-05ABacteria Cup Na2S2O3 preservedANA2.7YL2124991-05ABacteria Cup Na2S2O3 preservedANA2.7YL2124991- | Container IDContainer TypeCoolerPHPHdeg CPresSealL2124991-01ABacteria Cup Na2S2O3 preservedANA2.7YAbsentL2124991-01BBacteria Cup Na2S2O3 preservedANA2.7YAbsentL2124991-02ABacteria Cup Na2S2O3 preservedANA2.7YAbsentL2124991-02BBacteria Cup Na2S2O3 preservedANA2.7YAbsentL2124991-03BBacteria Cup Na2S2O3 preservedANA2.7YAbsentL2124991-03BBacteria Cup Na2S2O3 preservedANA2.7YAbsentL2124991-04ABacteria Cup Na2S2O3 preservedANA2.7YAbsentL2124991-04BBacteria Cup Na2S2O3 preservedANA2.7YAbsentL2124991-04BBacteria Cup Na2S2O3 preservedANA2.7YAbsentL2124991-05ABacteria Cup Na2S2O3 preservedANA2.7YAbsentL2124991-05BBacteria Cup Na2S2O3 preservedANA2.7YAbsent <tr< td=""><td>Container IDContainer TypeCoolerPH</td></tr<> | Container IDContainer TypeCoolerPH |



Serial_No:06012116:33

Project Name: SWAMPSCOTT PHASE 1C

Project Number: Not Specified

Lab Number: L2124991

Report Date: 06/01/21

GLOSSARY

Acronyms

| DL | Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) |
|-----|---|
| EDL | - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME). |
| EMF | C - 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. |
| LCS | 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.) |
| MDI | - 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. |
| MSE | - 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. |
| NDP | A/DPA - N-Nitrosodiphenylamine/Diphenylamine. |
| NI | - Not Ignitable. |
| NP | - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil. |
| NR | No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests. |
| RL | - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable. |
| RPD | - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report. |
| SRM | - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples. |
| STL | - Semi-dynamic Tank Leaching Procedure per EPA Method 1315. |
| TEF | - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD. |
| TEQ | - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values. |
| TIC | - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations. |
| | |

Report Format: Data Usability Report



Project Name: SWAMPSCOTT PHASE 1C

Project Number: Not Specified

Lab Number: L2124991

Report Date: 06/01/21

Footnotes

1

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

Terms

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

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.

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

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

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

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

Data Qualifiers

- A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- С - 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.
- Е - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
- н - 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).
- Μ - 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

Report Format: Data Usability Report



Serial_No:06012116:33

Project Name: SWAMPSCOTT PHASE 1C

Project Number: Not Specified

Lab Number: L2124991

Report Date: 06/01/21

Data Qualifiers

the identification is based on a mass spectral library search.

- **P** The RPD between the results for the two columns exceeds the method-specified criteria.
- Q The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- **R** Analytical results are from sample re-analysis.
- **RE** Analytical results are from sample re-extraction.
- **S** Analytical results are from modified screening analysis.

Report Format: Data Usability Report



Project Name:SWAMPSCOTT PHASE 1CProject Number:Not Specified

 Lab Number:
 L2124991

 Report Date:
 06/01/21

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, Naphthalene

EPA 625/625.1: alpha-Terpineol

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

EPA 8270D/8270E: <u>NPW:</u> Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; <u>SCM</u>: Dimethylnaphthalene,1,4-Diphenylhydrazine. **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, SM4500NO2-B EPA 332: Perchlorate; EPA 524.2: THMs and VOCs; EPA 504.1: EDB, DBCP. Microbiology: SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D.

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, EPA 350.1: Ammonia-N, LACHAT 10-107-06-1-B: Ammonia-N, EPA 351.1, SM4500NO3-F, EPA 353.2: Nitrate-N, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate. EPA 624.1: Volatile Halocarbons & Aromatics, EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II.

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs **EPA 625.1**: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.

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

Mansfield Facility:

Drinking Water

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. EPA 200.8: Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. EPA 245.1 Hg. EPA 522, EPA 537.1.

Non-Potable Water

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

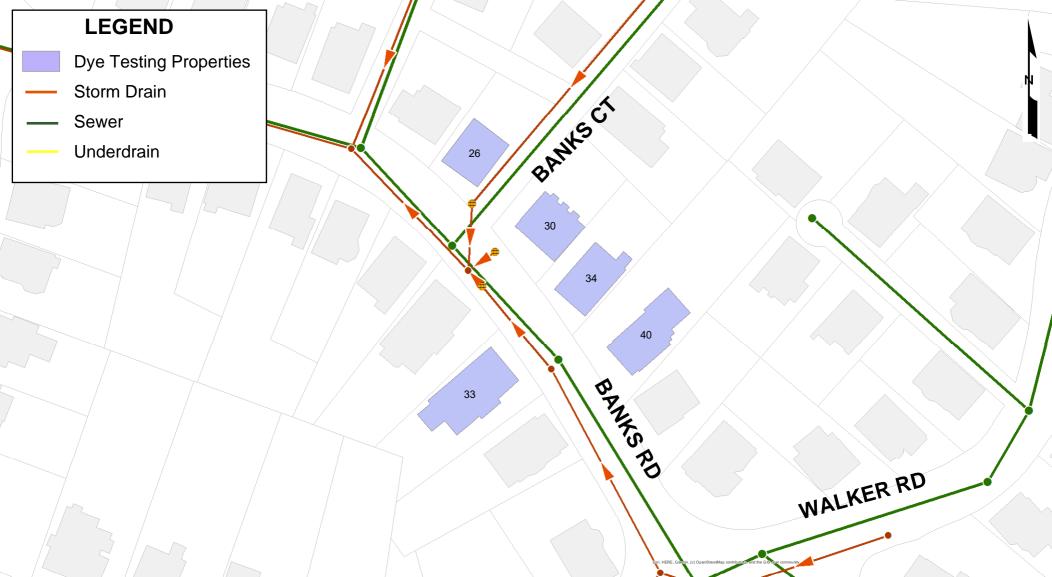
For a complete listing of analytes and methods, please contact your Alpha Project Manager.

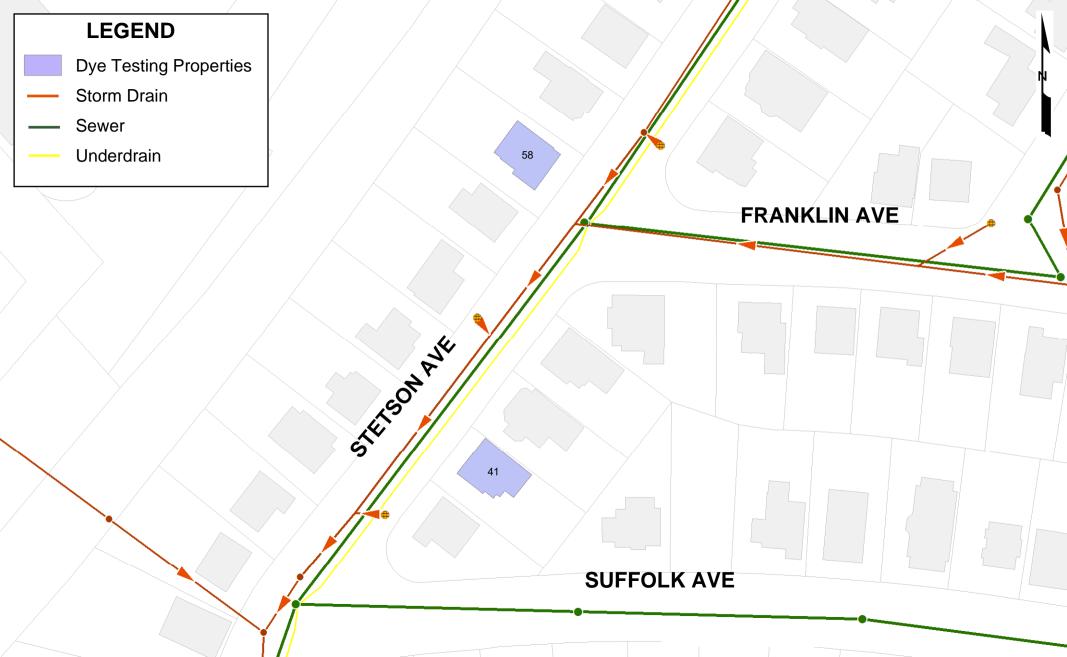
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| Container Type P= Plastic A= Amber glass V= Viel | Preservative A= None B= HCt C= HNO ₃ | | Container 1 Preserva | | | ainer Type eservative | | | | - | | | | | | _ | | | | _ |
| G= Glass B= Bacteria cup C= Cube | D= H ₂ SO ₄ E= NaOH | | | | Date/Time | | | R | eceive | ed By: | | | Da | te/Tim | e | | | | | |
| O= Other E= Encore D= BOD Bottle Page 19 of 19 | G= NaHSO4 H = Na ₂ S ₂ O3 I= Ascorbic Acid J = NH ₄ Cl K= Zn Acctate O= Other | | | | | | -7 | | Plum HAL | | | 142112 | | | All samples submitted are subject to Alpha's Terms and Conditions. See reverse side. FORM NO: 01-01 (rev. 12-Mar-2012) | | | | | |

Appendix B

Stacy's Brook Phase 1B House Dye Testing Locations

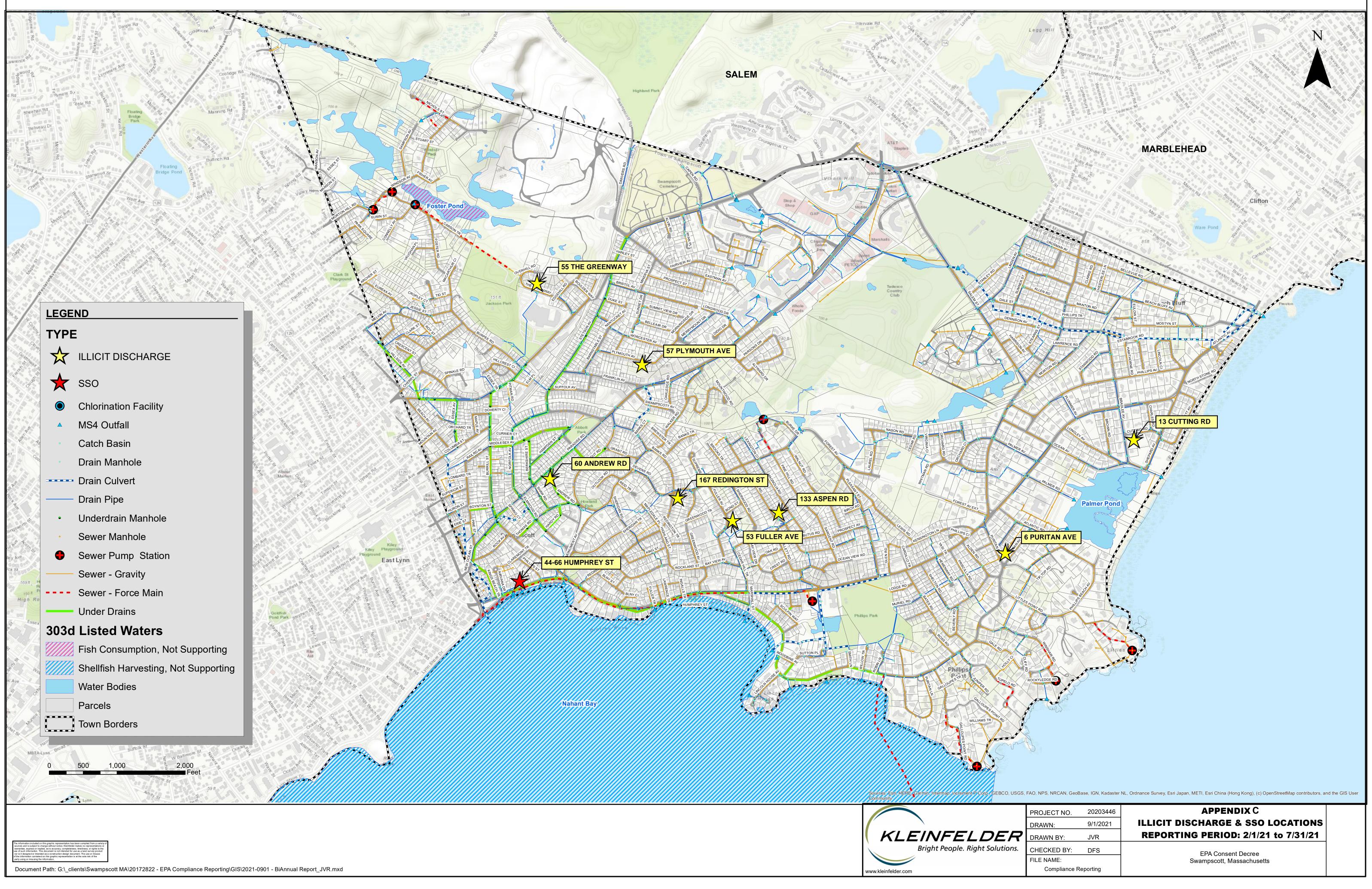






Appendix C

SSO and Illicit Discharge Map



| | PROJECT NO. | 20203446 | APPENDIX C | | | | | | |
|------|--------------|----------|-------------------------------------|--|--|--|--|--|--|
| | DRAWN: | 9/1/2021 | ILLICIT DISCHARGE & SSO LOCATIONS | | | | | | |
| R | DRAWN BY: | JVR | REPORTING PERIOD: 2/1/21 to 7/31/21 | | | | | | |
| ons. | CHECKED BY: | DFS | EPA Consent Decree | | | | | | |
| | FILE NAME: | | Swampscott, Massachusetts | | | | | | |
| | Compliance R | eporting | | | | | | | |