RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF LAND REVITALIZATION AND SUSTAINABLE MATERIALS MANAGEMENT
235 Promenade Street, Room 380
Providence, Rhode Island 02908

July 11, 2023

Donna Pallister
Principle Engineer
Arcadis U.S., Inc
2240 South County Trail (Suite 5)
East Greenwich, RI 02818

Dear Ms. Pallister:

The Rhode Island Department of Environmental Management's (RIDEM) Office of Land Revitalization and Sustainable Materials Management (LRSMM) has reviewed your May 25, 2023 Beneficial Use Determination (BUD) application for the 1,400 cubic yards of impacted soil excavated from the Envine LLC property off Sand Plains Trail. After reviewing the application and required data submission, we find the application acceptable.

Therefore, enclosed is the BUD approval, with conditions included, for the reuse of the impacted soil excavated from the Envine, LLC property (SR-32-2066), to be processed and sold as road base by South County Sand and Gravel. Your approval expires on July 15, 2024. Please submit your renewal at least 30-days prior to the expiration date.

Sincerely,

Nathan Arruda
Environmental Scientist
Office of Land Revitalization and Sustainable Materials Management
401-222-2797, ext. 2777511

CC: Leo Hellested, Environmental Administrator – DEM/LRSMM
Mark Dennen, Supervising Environmental Scientist – DEM/LRSMM
Kasie McKenzie, Environmental Engineer – DEM/LRSMM
Kirsten Nunn, Environmental Engineer- DEM/LRSMM

SOLID WASTE BENEFICIAL USE DETERMINATION (BUD)

CONDITIONS FOR RE-USE OF IMPACTED SOILS TO BE EXCAVATED, PROCESSED, AND SOLD AS ROAD BASE MATERIAL

July 2023

Arcadis U.S., Inc., representing Envine LLC and South County Sand and Gravel has submitted for approval a BUD request to allow beneficial reuse of impacted soils to be excavated from an area off Sand Plains Trail in South Kingstown. Soils from the site are to be processed by South County Sand and Gravel, then incorporated into a 50/50 aggregate mix, then sold to contractors for use as road base. Based upon the representations made in the application, the RIDEM Office of Land Revitalization and Sustainable Materials Management (OLRSMM) hereby grants approval for the reuse of this soil under the following conditions:

1. The excavated soil must be handled and processed in accordance with this approval and the BUD application submitted by Arcadis U.S., Inc., on March 25, 2023

2. A maximum of 1,400 cubic yards of excavated soil shall be stored at South County Sand and Gravel, according to Section 6 (a.) of the BUD application, at any time for future processing.

3. Erosion and Stormwater control shall be conducted according to Section 6(j) of the BUD application, with the use of polyethylene cover, silt fences, and filter socks/berms.

4. RIDEM approves of the reuse of excavated impacted soil to process for use as road base, as described in Section 4 of the BUD application.

5. The facility shall provide the Department, its authorized officers, employees, and representatives, and all other persons under Department oversight, an irrevocable right of access to the facility at all reasonable times for the purposes of performing inspections, investigations, testing, and examining records. The Department or other authorized designated personnel shall have the right to access the facility at all reasonable times for the above-stated purposes without prior notice. Refusal to permit reasonable inspections, tests and investigations shall constitute valid grounds for denial, revocation or suspension of this BUD approval; and/or issuance of a Notice of Violation with Administrative Penalty.

6. This approval expires on July 15, 2024. Acradis U.S., Inc. may request an annual renewal of this approval that may be granted with the approval of RIDEM's Director.

7. RIDEM's granting of this approval does not affect the responsibility of Acardis U.S., and South County Sand and Gravel to meet all zoning and other local ordinances and comply with any other State or Federal requirements or approvals.

8. This approval may be modified, amended, suspended, or revoked at the discretion of RIDEM.

9. Arcadis U.S., must keep all records and data referenced in this Approval for a period of at least 1 year. All records shall be made available to representatives of the Office of LRSMM upon request. If renewal of this BUD permit is needed, an electronic copy of the previous year's records and data shall be included in the application.

_____

Leo Hellested, Environmental Administrator
Office of Land Revitalization and Sustainable Materials Management

_____

Date

Nathan Arruda
Environmental Scientist
Office of Land Revitalization & Sustainable Materials Management
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www.arcadis.com

Date: May 25, 2023
Our Ref: 30052937
Subject: Beneficial Use Determination Application
South County Sand and Gravel

Dear Nathan Arruda,

Arcadis has prepared this Beneficial Use of Determination (BUD) Application on behalf of Envine LLC and South County Sand and Gravel for the beneficial use of approximately 1,400 cubic yards of soil excavated from an area off Sand Plains Trail in South Kingstown, Rhode Island, identified by Rhode Island Department of Environmental Management (RIDEM) as File No. SR-32-2066 (Figure 1). Envine LLC is the owner of the property where the soil was generated, and South County Sand and Gravel will process the soil for reuse.

This BUD application provides the required information as outlined in the RIDEM Office of Waste Management (now Land Revitalization and Sustainable Materials Management [LRSMM]) document: Guidelines for Beneficial Use Determinations ("BUDs") for Source Segregated Solid Waste, (BUD Policy) Policy Number WM-SW-2007-01, Effective March 1, 2007.

The Sand Plains Trail site was suspected of being used for septage waste disposal in the 1960's and 1970's based on a review of aerial imagery from that time period. Arcadis performed a Site Investigation and submitted a Site Investigation Report (SIR) on March 16, 2022. RIDEM issued a Remedial Decision Letter dated May 24, 2022, and Remedial Approval Letter on June 23, 2022. The approved remedial action included excavation of impacted soil for off-site disposal.

The impacted soil was excavated and stockpiled on June 27, 2022. Composite samples of the stockpiles were initially collected on August 16, 2022, to characterize the soil for off-site disposal. Follow-up samples were collected for analysis on October 5, 2022, and March 24, 2023. Based on the results of analysis of the stockpiled soil, application for a BUD and subsequent reuse of the soil as road base material was determined to be the best option for this material. Therefore, this application was prepared for review by RIDEM.

Per a verbal approval from RIDEM on March 21, 2022, the soil has been moved to the South County Sand and Gravel property pending a determination on this BUD application. The soil was moved due to the proximity of new homes being constructed in the area and the increased accessibility of the soil to residents.

Background

The impacted soil was excavated and stockpiled on June 27, 2022. Three composite samples were collected on August 16, 2022, to characterize the soil for off-site disposal. The characterization samples were collected by compositing aliquots of sample from the smaller piles (stockpiles 1, 2 and 3) with aliquots from the largest pile (stockpile 4) to create samples representative of less than 500 cubic yards each. These samples were analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), Resource Conservation and Recovery Act (RCRA) 8 total metals, total petroleum hydrocarbons (TPH), pH, flashpoint, and toxicity characteristic leaching procedure (TCLP) lead. TPH and total lead were the only analytes detected at concentrations above the Residential Direct Exposure Criteria (RDEC). These results were consistent with pre-excavation sampling which identified TPH and lead as the contaminants of concern for the site.

TPH concentrations exceeded the RDEC in two of three samples, and one sample exceeded the Industrial / Commercial Direct Exposure Criteria (ICDEC) for TPH. The average of the three TPH concentrations was above the RDEC but below the ICDEC. Total lead concentrations exceeded the RDEC in one sample, but the average concentration of all samples was below the RDEC (Table 1 and Attachment 1).

Follow-up samples were collected for analysis for TPH on October 5, 2022, and for TPH and lead on March 24, 2023. For the follow-up samples one composite sample was collected for each of stockpiles 1, 2, and 3. The larger stockpile 4 was divided roughly in half and composite samples were collected for each half of the stockpile.

The samples collected October 5, 2022, were analyzed for TPH. One sample exceeded the RDEC, and the average of the samples was below the RDEC. The samples collected March 24, 2023, were analyzed for TPH and total lead. The TPH concentrations exceeded the RDEC of 500 mg/kg in 4 of 5 samples. After excavation of target impacted soil, RIDEM approved a site-specific cleanup of level of 1,000 mg/kg for the site based on the nature of the material. All of but one soil sample had TPH concentrations less than 1,000 mg/kg, and the average TPH concentration was less than 1,000 mg/kg at 692 mg/kg. None of the TPH results for the October and March samples exceeded the ICDEC. Lead results for the samples collected in March 2023 were all below the RDEC Results of the October 2022 and March 2023 sampling events are summarized in Table 2 and Laboratory Reports are provided in Attachments 2 and 3.

The October 2022 and March 2023 results are considered to be representative of the current TPH concentrations in the soil. Aeration from moving soil, exposure to sunlight, and higher temperatures in the pile than below ground are known to accelerate natural degradation of petroleum.

BUD Application Requirements

The following sections provide answers to the list of questions to be addressed for an application for a variance from the Solid Waste Regulations, as outlined in the BUD Policy.

1. How will any environmental hazards associated with the proposed recycling of solid waste be minimized or eliminated?

The proposed plan is to process approximately 1,400 cubic yards of soil from Sand Plains Trail site to produce road base material which will be sold. Processing of the material will include blending in an approximate 50/50 mix with aggregate, crushing to achieve a maximum particle size, and screening to remove any oversized material. The resulting product is designed to be compactible into a firm stable surface and will be sold to

contractors for placement under paved roads, parking lots, or similar uses. The material will be processed to meet applicable Rhode Island Department of Transportation (RIDOT) specifications.

The recent testing indicates that concentrations of TPH and lead are low and will be further reduced after blending. Therefore, the final product would be expected to have concentrations of contaminants below RDEC after blending. In addition, the material will be used as road base and covered with asphalt, so it will not be accessible for direct contact with human or environmental receptors.

Note that road base in Rhode Island and many other states is often manufactured from reclaimed asphalt pavement. This is a widely accepted practice that is encouraged to promote recycling of asphalt paving. Asphalt pavement is manufactured from crude oil and therefore contains petroleum hydrocarbons.

2. To what extent will the recycled solid waste material be analogous to commonly used raw materials and how will this result in a viable and beneficial substitution of a discarded material for a commercial product or raw material?

Sand used for making road base material was historically mined from the Envine property by South County Sand and Gravel. As such, this material has the same soil characteristics as the material that has previously been used for making road base material. Therefore, this material is a direct substitute for sand which would otherwise be mined elsewhere to make the same product.

3. How will the proposed recycling and reuse of the solid waste in question protect the natural resources of the State?

The proposed plan would utilize approximately 1,400 cubic yards of soil which would otherwise need to be disposed of in landfills. The material is also being used as a substitute for clean sand that would otherwise need to be mined for the same purpose. An additional benefit would be the reduction in transportation distances for the waste and raw material, and the associated lowering of greenhouse gas emissions.

Pre and post excavation laboratory analysis identified TPH and lead as the only contaminants of concern. Groundwater sampling and analysis did not detect any evidence of TPH or lead leaching to groundwater at concentrations above applicable GA groundwater standards. The final product will be used in a way that will prevent migration of soil particles. Therefore, no impacts to groundwater or surface water are expected to result from leaching or soil migration.

Laboratory analysis did not detect volatile contaminants that would impact air, and the final product will be covered with pavement which will prevent it from becoming airborne, therefore no impacts to air or other environmental receptors will result from use of the product.

4. To what extent is there a guaranteed end market for the recycled solid waste material to be produced?

The road base product to be produced from the waste material is widely used across Rhode Island for construction. This product is regularly produced and sold by South County Sand and Gravel, one of Rhode Island's largest producers of construction aggregates such as this product. The solid waste is being substituted for sand that is a necessary component of the road base product.

5. Why will the proposed recycling and reuse of solid waste not degrade the environment.

The concentrations of contaminants found in the waste material are low, and the final product will have lower concentrations of contaminants after blending. The material will be used under pavement, which will prevent the material from being released into the environment.

6. Identify and discuss the controls that will be used to properly and safely recycle and reuse the solid waste.

a. The quantity of solid waste material to be received and recycled, and the maximum quantity of solid waste material to be stored at the site at any one time;

Approximately 1,400 cubic yards of soil is the total quantity of solid waste material to be received and stored.

b. The maximum quantity of solid waste material to be stored at the site at any one time;

Approximately 1,400 cubic yards of soil is the maximum quantity of solid waste material to be stored at the site at any one time.

c. The source of the solid waste, including the name and address of the generator;

The material to be recycled originated from a site located off Sand Plains Trail in Wakefield, RI 02879. As noted above, the soil was excavated in accordance with a Remedial Action Work Plan approved by RIDEM for File No. SR-32-2066.

d. A detailed narrative and schematic diagram of the production, manufacturing, and/or residue process by which the material is produced;

See Figure 3.

e. The expected consistency of the waste material;

The waste material is mainly sand with some rocks and organic matter.

f. How the generator has minimized the quantity and toxicity of waste material;

The volume of soil excavated was based on results of pre-excavation investigation.

g. Adequate and regular inspection of the waste material upon receipt;

The impacted soil has been visually inspected while in storage.

h. Adequate site controls relating to the storage, handling and processing of the waste material, including the extent to which the recycled solid waste material will be handled to minimize loss;

The soil is stored in a designated area with protection against erosion.

i. Adequate controls for handling and disposing of any residual solid wastes, including the location of final disposal for any residual solid wastes;

Some larger sized rocks contained within the soil might be discarded during the screening process, but these are not expected to be contaminated and are not solid waste and will likely be reused. No residual solid wastes are expected to require final disposal.

j. Appropriate odor, sediment, stormwater (runoff), and erosion control measures.

Material was excavated, placed on, and covered by polyethylene to prevent loss or spreading via rain, wind, or other methods of erosion following excavation. No odors have been observed.

7. Explain why the proposed recycling of solid waste is not simply an alternative method of disposal.

The proposed recycling involves substituting the waste material for a raw material in the standard process of preparing road base material.

8. What degree of processing has the solid waste material undergone and what degree of further processing is required, if any?

The only processing to date has been the excavation and stockpiling of the soil. If approved, the soil will be blended in an approximate 50/50 mix with aggregate followed by crushing to achieve a maximum particle size and screening to remove any oversized materials.

9. Where the project in question includes the reuse of any soil impacted by known or suspected contamination, or the use of any recycled waste as a "manufactured soil product" (i.e.: solid waste that has been altered or rendered into a material with soil type properties), the applicant must demonstrate the use of these materials at the location in question:

a. Is in compliance with the Residential Direct Exposure Criteria for soils listed in Rule 8.02 of the *Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases;*

Petroleum Hydrocarbons and Lead were found at concentrations exceeding the RDEC during the site investigation and during initial testing of the stockpiles. The site investigation samples were taken at locations intended to represent worst case conditions, such as stained soil or elevated photoionization detector (PID) readings.

During the soil pile sampling, the average of the stockpile composite sample results found average concentrations of lead below the RDEC level of 150 mg/kg, for each of the stockpile sampling events (see attached tables).

The average concentration of TPH for the initial round of sampling was above the RDEC and ICDEC, but subsequent sampling after the soil was exposed to conditions conducive to natural degradation were below the ICDEC but still above the RDEC. During processing, the waste material will be mixed with other aggregates and the concentrations of TPH will be further reduced.

After processing, the material will be used as road base under paving, so direct contact with the material will not be possible. Under this use condition, the risks presented by the material will be much lower than the risk scenario used to calculate the RDECs, which are based on direct human contact with soil, including direct contact and incidental ingestion of soil by children. This type of exposure will not occur with this material.

b. Is compliant with the Compost Quality and Distribution Standard listed in Rule 8.8.00 (Compost Product Requirements and Distribution) of the Solid Waste Regulations.; and

Concentrations of lead and other contaminants detected in the soil were less than the Class A Compost Quality Standards of 300 mg/kg for lead for material which is allowed to be distributed for unrestricted use. TPH does not have a limit for the Class A Compost Quality Standard.

c. Will not result in degradation of the environment.

Laboratory analysis and site groundwater testing did not demonstrate a risk for leaching of contaminants to groundwater. The proposed use will minimize mobility of the material after placement. The reuse of this soil as road base material will not result in degradation of the environment as discussed above.

10. Whenever the proposed end use for a recycled product involves land application, the applicant shall address the need for applicable engineering standards and controls in accordance with the Solid Waste Regulations to provide for the safe land application and end use of BUD materials. End uses involving land application shall be presumed to be low utility uses subject to heightened scrutiny as to whether the use constitutes beneficial reuse or is simply an alternative means of disposal.

Testing has not shown a risk of contaminants leaching into groundwater. The end product will most likely be used in areas where it will not be disturbed after placement because it will be under a road or parking lot.

Although this proposed use involves land application, it meets the definition of a beneficial use and is not simply an alternative to disposal because the material will be used in place of a raw material that has economic value (sand) to produce a product with economic value.

11. Provide a characterization plan that includes protocols for sample collections and analyses designed to provide a representative characterization of the waste material.

a. How the samples will be collected (i.e., locations, times, frequency per volume etc.).

The sampling process used the following method:

- A metal shovel, stainless-steel bowl, and small plastic shovel were all decontaminated with alconox and distilled water prior to sampling each stockpile.
- A 100-foot measuring tape was used to determine the midpoint of Stockpile 4 to determine North and South halves.
- The sampling order of the stockpiles was Stockpile 1, 2, 3, 4 North, then 4 South.
- Starting at the end nearest to Sand Plain Trail, a metal shovel was used to dig into the stockpile to collect an aliquot of the soil sample at random locations at approximately 10-foot intervals while walking clockwise around the entire perimeter of each stockpile (see Figure 2: Site Sample Locations).
- Soil was composited in the stainless-steel bowl. A composite sample was then taken from the bowl using the small plastic shovel, placed into laboratory provided bottle ware, and stored in a cooler with ice.

Sample locations are shown on Figure 2: Site Sample Locations. Additional sampling is not planned.

b. The types of samples to be collected (i.e., discrete, grab, composite, etc.).

Composite samples were collected.

c. How the substances in the solid waste will be identified.

Substances in the solid waste were determined via laboratory analysis. Soil samples were sent to Con-Test Analytical Laboratory located at 39 Spruce Street in East Longmeadow, MA, for testing. Substances to be analyzed for were selected based on the site history and included a broad range of potential contaminants characteristic of residential, commercial, or industrial uses.

d. The physical and chemical analyses to be performed (i.e., size, density, percent solids, liquid content, pH, reactivity, leachability [TCLP test], etc.).

Samples collected August 16, 2022, were analyzed using the following methods to identify potential contaminants:

- RCRA 8 Total Metals by USEPA method 6010D and 7471B
- TCLP Metals by USEPA method 6010D and 7470A (note that TCLP analysis was performed on samples where total concentrations were at least 20 times the TCLP concentration (i.e., the “20 times rule” for determining which samples could potentially exceed the TCLP characteristic waste limit).
- TPH by USEPA method 8100 modified and 8015C
- VOC’s by USEPA method 8260C-D
- SVOC’s by USEPA method 8270E
- pH by USEPA method 9045
- Flashpoint by USEPA 1010A-B

Samples collected October 5, 2023, were analyzed using the following methods:

- TPH by USEPA method 8100 modified

Samples collected March 24, 2023, were analyzed using the following methods:

- TPH by USEPA method 8100 modified
- TCLP Lead by USEPA method 6010D

e. Analysis for biological properties of the waste (i.e., pathogens)

Analysis for biological properties of the waste (i.e., pathogens) was not conducted. The impacted material was excavated from an area suspected of historic use for disposal of septage up to the 1970’s. The septage was likely produced primarily from pumping of residential septic tanks and cesspools. The United States Environmental Protection Agency (EPA) identified constituents and concentrations of pollutants in typical residential wastewater in the Onsite Wastewater Treatment and Disposal Systems Manual (USEPA 2002). Pathogens typically associated with raw sewage reportedly survive in the environment for less than a year, and therefore are not expected to be present.

A black stained soil layer was believed to be associated with the septage was visible in soil, but it did not have odors, or exhibit other characteristics of septage.

f. The variability of the substances present in the solid waste.

The soil was primarily a uniform sand with some organic components. The 1 to 2 foot black layer, which was assumed to be related to the past septage disposal did not display odors or other septage characteristics.

Laboratory analysis showed some variability in results of analysis for TPH and lead. This is likely due in part to the inherent heterogeneity of soil and distribution of contaminants in soil. Soil samples were collected from random locations and homogenized by mixing prior to placing the samples into the laboratory provided jars to attempt to provide sample results representative of the pile sampled. The multiple sample locations and events generated results that are different but within the amount variability that would be expected.

g. The number of samples required (grab and/or composite) to be collected and analyzed in order to adequately determine the physical, chemical, and biological properties of the waste.

Five composite samples were taken (one for each of the smaller piles, two for the largest) were collected. These represented roughly one sample per 280 cubic yards of soil.

h. The human health and ecological risks associated with the proposed reuse of the solid waste in the proposed manner and location.

The proposed reuse as a road base material does not pose human health or ecological risks, based on the lack of complete exposure pathways, low concentrations contaminants in the material.

i. Verification that the sampling and analytical methods used have identified all constituents present in the waste, and a detailed written report describing the concentration and distribution of all substances which may be contained in the waste material.

Sampling and analysis were conducted for a wide range of potential contaminants during both the initial Site Investigation, prior to excavation, and after excavation. The Site Investigation results were reported to RIDEM in a Site Investigation Report which was reviewed and approved, indicating that characterization was adequate.

Post excavation analysis was conducted for a wide range of potential contaminants to meet requirements of potential disposal facilities.

12. Any person involved in the storage, handling, processing or use of solid waste for beneficial reuse shall be required to provide financial assurance that the project approved in the BUD will be completed and/or any unused solid waste/beneficial reuse material will be properly removed and disposed of upon completion of the project or if project operations cease for any reason.

If necessary, South County Sand and Gravel will properly transport and dispose of excess waste soil if necessary. South County Sand & Gravel Co. was established in 1952 and is a major supplier of construction aggregates in Rhode Island, with two quarries, a processing plant, and a fleet of vehicles. As an alternative to the proposed plan, soil could be disposed of at Rhode Island Central Landfill in Johnston, Rhode Island as an alternative cover material, at a cost of $40 per ton. For the estimated 2,100 tons of soil the disposal cost would be approximately $84,000. South County Sand and Gravel will load and transport using their own trucks incurring no additional transportation costs.

13. Additional information, as required, at the discretion of the Department.

No additional information has been requested. See contacts below if additional information is needed.

Sincerely,
Arcadis U.S., Inc.

Donna Pallister
Principal Engineer

Email: donna.pallister@arcadis.com
Direct Line: 401-285-2235
Mobile: 401-255-9619

References:

USEPA. 2002. Design Manual: Onsite Wastewater Treatment and Disposal Systems. U.S. Environmental Protection Agency. EPA/625/1-80/012.

Enclosures:

Figure 1: Site Plan
Figure 2: Site Sample Locations
Figure 3: Road Base Material Flow Chart
Table 1: Summary of Initial Stockpile Sampling
Table 2: Summary of Follow-up Stockpile Samplings
Attachment 1: August 16, 2022, Laboratory Report
Attachment 2: October 5, 2022, Laboratory Report
Attachment 3: March 24, 2023, Laboratory Report

Figures

0 1,000 2,000 4,000 FEET

GRAPHIC SCALE

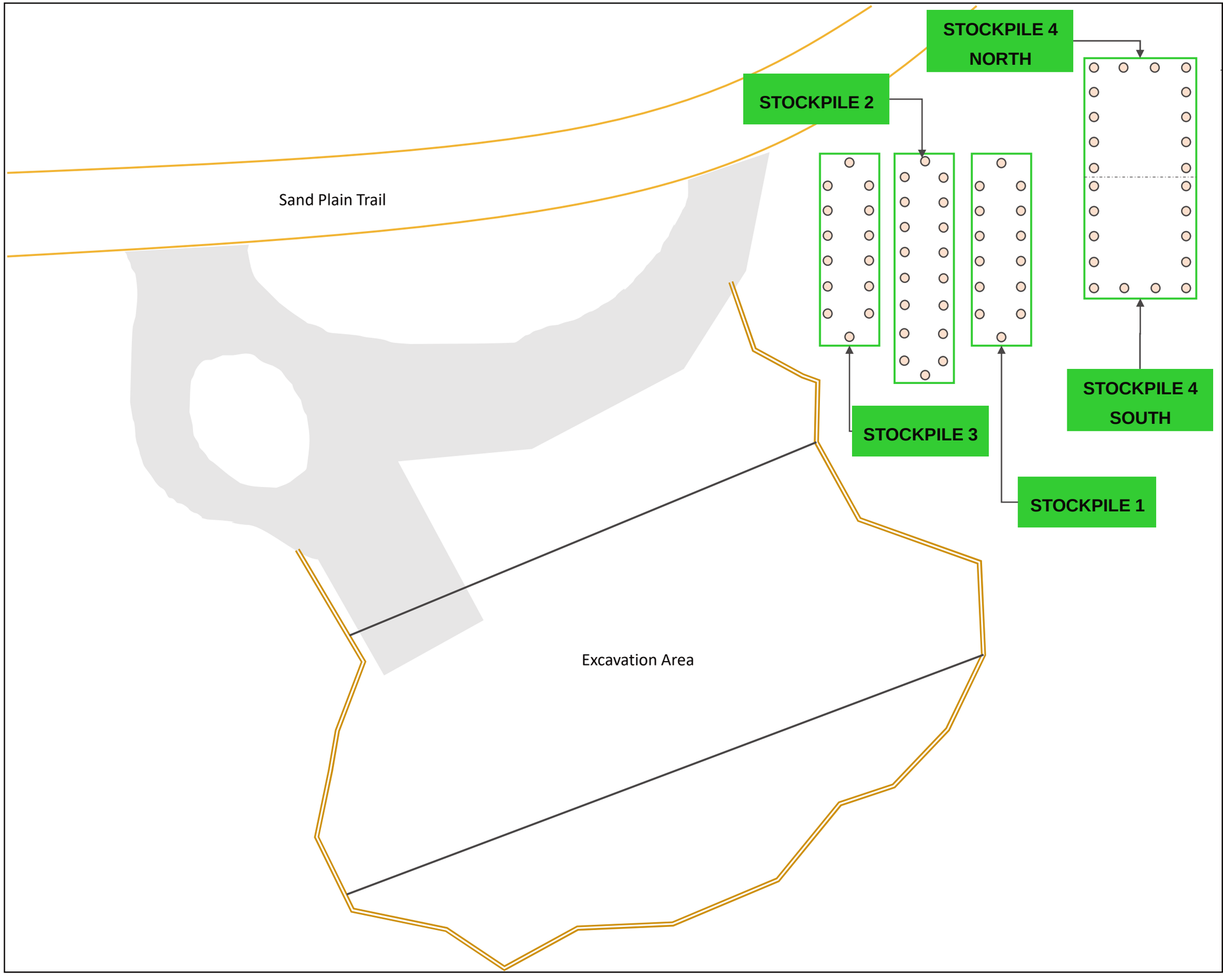
ENVINE, LLC
SAND PLAIN TRAIL / ASSESSOR PLAT 65, LOT 3
SOUTH KINGSTOWN, RHODE ISLAND
REMEDIAL ACTION CLOSURE REPORT

SITE LOCATION MAP

ARCADIS Design & Consultancy for natural and built assets

FIGURE
1

CITY: EAST GREENWICH DIV/GROUP: ENV CREATED BY: LAST SAVED BY: AFINKELMAN
PROJECT: 30052937
C:\USERS\AFINKELMAN\ONEDRIVE - ARCADIS\DOCUMENTS\ARCGIS\PROJECTS\30052937-ENVINE\SITE_INVESTIGATION_PLAN.APRX 10/12/2020 12:05 PM



Stockpile Sample Locations
March 2023

ENVINE, LLC
SAND PLAIN TRAIL / ASSESSOR PLAT 65, LOT 3, SOUTH KINGSTOWN, RHODE ISLAND

ARCADIS

Figure 2:
Stockpile Sample Locations

LEGEND:

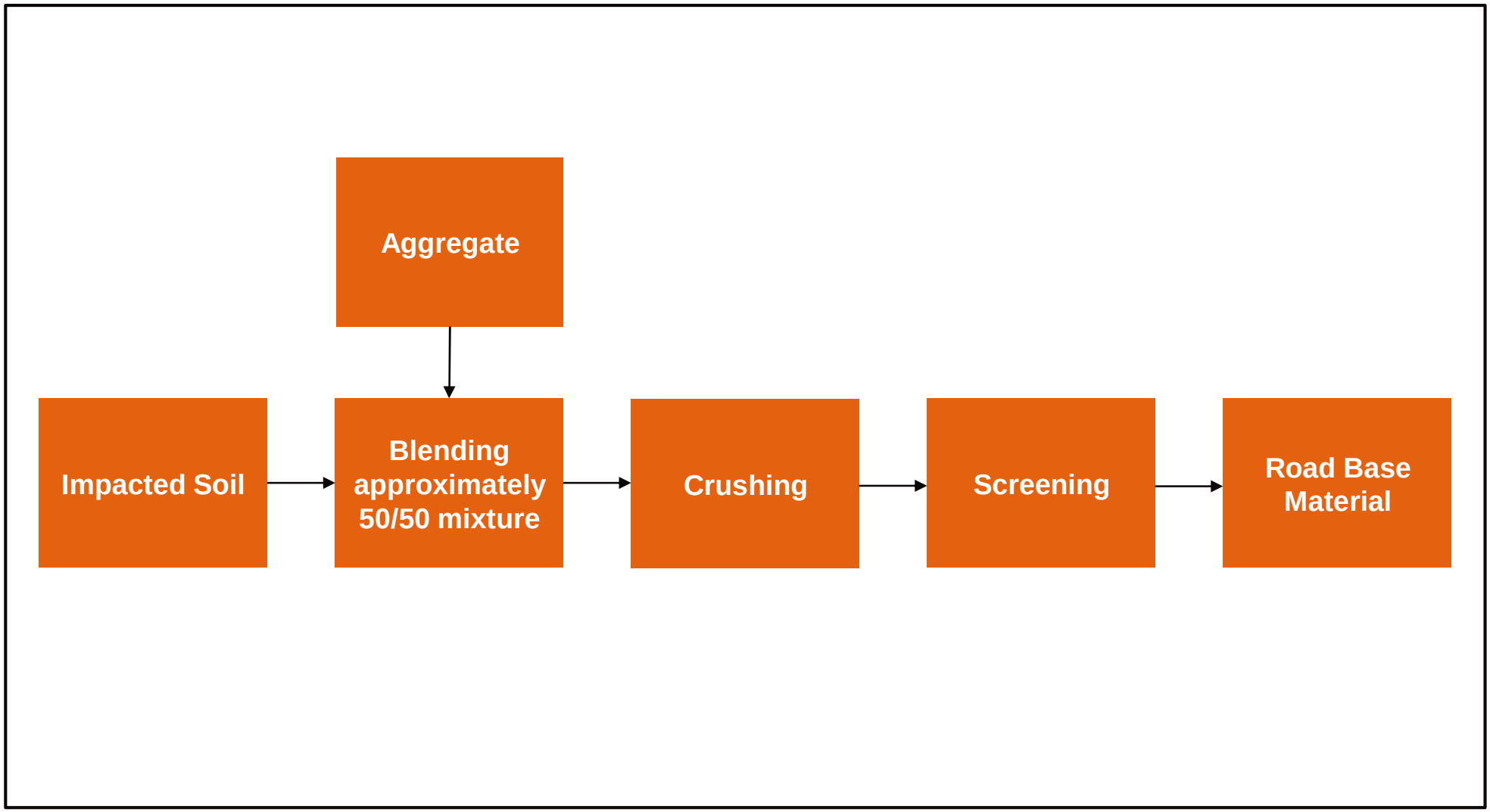
- Stockpile Sampling Location
- Excavated Soil Stockpile
- Historic Road
- Road
- Berm

Note: Locations are approximate.

Source: USGS 7.5-minute Series Topographic Quadrangle, BRANDEN KUUSELA (04/05/2023).

Project Number: 30052937

Figure 3
Road Base Material Production Flow Chart



Tables

Table 1
Results of Analysis of Excavated Soil
Envine, LLC
Sand Plains Trail
South Kingston, RI

Parameter	RIDEM Residential Direct Exposure Criteria (mg/Kg)	RIDEM Industrial/Commercial Direct Exposure Criteria (mg/Kg)	Stockpile 1 & South Stockpile 4 8/16/2022 460 cubic yards	Stockpile 2 & Middle Stockpile 4 8/16/2022 480 cubic yards	Stockpile 3 & North Stockpile 4 8/16/2022 430 cubic yards	Average
VOCs by USEPA method 8260D (mg/Kg)						
Acetone	7,800	10,000	0.076	0.110	0.087	NA
1,2,4-Trimethylbenzene			<0.0014	0.0022	<0.0015	NA
Total VOCs (mg/Kg)			0.076	0.112	0.087	NA
SVOCs by USEPA method 8270E (mg/Kg)						
1-Methylnaphthalene			<0.87	1.60	<0.18	NA
2-Methylnaphthalene	123	10,000	<0.87	3.10	<0.18	NA
Phenanthrene	40	10,000	<0.87	2.30	<0.18	NA
Pyrene	13	10,000	<0.87	1.80	<0.18	NA
Total SVOCs (mg/Kg)			ND	8.80	ND	NA
PCBs by USEPA method 8082A (mg/Kg)						
Aroclor-1254			<0.082	0.2	<0.084	NA
Total PCBs (mg/Kg)			ND	0.2	ND	NA
Total Metals by USEPA method 6010 (mg/Kg)						
Barium	5,500	10,000	41	140	35	72
Cadmium	39	1,000	<0.33	3.5	<0.35	1.2
Chromium	390	10,000	5.4	11	4.2	6.9
Lead	150	500	25	**200**	19	81
Mercury	23	610	0.29	1.1	0.89	0.76
Silver	200	10,000	1	20	0.69	7.2
TCLP Lead by USEPA method 6010D (mg/L)						
TCLP Lead			NA	0.21	NA	0.07
TPH by USEPA method 8100M (mg/Kg)						
TPH (C9-C36)	500	2,500	**1,400**	***3,800***	190	**1,797**
pH by USEPA method 9045 (pH units)						
pH	NA	NA	6.6	6.2	6.6	NA
Flashpoint by USEPA 1010A-B (˚F)						
Flashpoint	NA	NA	> 212	> 212	> 212	NA

Notes:
bolded = values exceed Residential Direct Exposure Criteria
bold and italic **=** values exceed Residential and Industrial Direct Exposure Criteria.
Only detected contaminants are listed in the table, see the laboratory report for the full analyte list.

Acronyms and Abbreviations:
mg/Kg = milligram per killogram
NA = not applicable
ND = not detected
NE = not established
< = not detected above reporting limits
PCBs = polychlorinated biphenyls
RIRRC = Rhode Island Department Resource Recovery Corporation
SVOC = semivolatile organic compounds
TPH = total petroleum hydrocarbon
USEPA = United States Environmental Protection Agency
VOCs = volatile organic compounds

Table 2
Follow-up Sampling Results
Envine, LLC
Sand Plains Trail
South Kingston, RI

Parameter	Units	RIDEM Residential Direct Exposure Criteria	RIDEM Industrial Commercial Exposure Criteria	Class A Compost Quality Standard	Stockpile 1	Stockpile 2	Stockpile 3	Stockpile 4 North	Stockpile 4 South	Average
October 5, 2022 Sampling - TPH by USEPA method 8100M										
TPH (C9-C36)	mg/Kg	500	2,500	NA	260	**680**	180	480	280	376
March 24, 2023 Sampling - TPH by USEPA method 8100M - TCLP Lead by USEPA method 6010D										
TPH (C9-C36)	mg/Kg	500	2,500	NA	**550**	**750**	**550**	310	**1,300**	**692**
Lead	mg/Kg	150	500	300	25	24	27	23	23	24.4

Notes:

Date of Sample Collection: 3/24/2023 and 10/5/2023
Bold = exceeds Residential Direct Exposure Criteria

Acronyms and Abbreviations:
mg/Kg = milligrams per kilogram
wt = weight
TPH = Total Petroleum Hydrocarbons
NA = Not Applicable
RIDEM = Rhode Island Department of Environmental Management
USEPA = United States Environmental Protection Agency

Attachment 1

August 16, 2022, Laboratory Report

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

August 25, 2022

Donna Pallister
Arcadis US, Inc.-RI
2240 South County Trail, Suite 5
East Greenwich, RI 02818

Project Location: South Kingstown, RI
Client Job Number:
Project Number: 30052937.04
Laboratory Work Order Number: 22H0999

Enclosed are results of analyses for samples as received by the laboratory on August 17, 2022. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Meghan E. Kelley
Project Manager

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Arcadis US, Inc.-RI
2240 South County Trail, Suite 5
East Greenwich, RI 02818
ATTN: Donna Pallister

REPORT DATE: 8/25/2022

PURCHASE ORDER NUMBER: 30052937.04

PROJECT NUMBER: 30052937.04

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 22H0999

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: South Kingstown, RI

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
Stockpile 1 & South Stockpile 4	22H0999-01	Soil		SM 2540G	
				SW-846 1010A-B	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8082A	
				SW-846 8100 Modified	
				SW-846 8260D	
				SW-846 8270E	
				SW-846 9045C	
Stockpile 2 & Middle Stockpile 4	22H0999-02	Soil		SM 2540G	
				SW-846 1010A-B	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8082A	
				SW-846 8100 Modified	
				SW-846 8260D	
				SW-846 8270E	
				SW-846 9045C	
Stockpile 3 & North Stockpile 4	22H0999-03	Soil		SM 2540G	
				SW-846 1010A-B	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8082A	
				SW-846 8100 Modified	
				SW-846 8260D	
				SW-846 8270E	
				SW-846 9045C	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

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SW-846 8100 Modified

Qualifications:

MS-19

Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.

Analyte & Samples(s) Qualified:

TPH (C9-C36)
B315383-MS1, B315383-MSD1

SW-846 8260D

Qualifications:

V-05

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

Analyte & Samples(s) Qualified:

Dichlorodifluoromethane (Freon 12
22H0999-01[Stockpile 1 & South Stockpile 4], 22H0999-02[Stockpile 2 & Middle Stockpile 4], 22H0999-03[Stockpile 3 & North Stockpile 4], B315408-BLK1, B315408-BS1, B315408-BSD1, S075602-CCV1

SW-846 8270E

Qualifications:

L-04

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

Hexachlorocyclopentadiene
22H0999-01[Stockpile 1 & South Stockpile 4], 22H0999-02[Stockpile 2 & Middle Stockpile 4], 22H0999-03[Stockpile 3 & North Stockpile 4], B315384-BLK1, B315384-BS1, B315384-BSD1

MS-09

Matrix spike recovery and/or matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a low bias for reported result or non-homogeneous sample aliquots cannot be eliminated.

Analyte & Samples(s) Qualified:

2,4-Dinitrophenol
B315384-MS1, B315384-MSD1

3,3-Dichlorobenzidine
B315384-MS1, B315384-MSD1

Aniline
B315384-MS1, B315384-MSD1

Benzidine
B315384-MS1, B315384-MSD1

Hexachlorocyclopentadiene
B315384-MS1, B315384-MSD1

Pyridine
B315384-MS1, B315384-MSD1

MS-22

Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is within method specified criteria.

Analyte & Samples(s) Qualified:

4-Nitroaniline
B315384-MSD1

MS-23

Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is outside of the method specified criteria. Reduced precision anticipated for any reported result for this compound.

Analyte & Samples(s) Qualified:

1-Methylnaphthalene
B315384-MS1

2-Methylnaphthalene
B315384-MS1

3-Nitroaniline
B315384-MSD1

Phenanthrene
B315384-MS1

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R-06

Matrix spike duplicate RPD is outside of control limits. Reduced precision is anticipated for reported result for this compound in this sample.

Analyte & Samples(s) Qualified:

1-Methylnaphthalene
B315384-MSD1

2-Methylnaphthalene
B315384-MSD1

3-Nitroaniline
B315384-MS1

Bis(2-chloroethyl)ether
B315384-MS1, B315384-MSD1

Bis(2-chloroisopropyl)ether
B315384-MS1, B315384-MSD1

Butylbenzylphthalate
B315384-MS1, B315384-MSD1

N-Nitrosodimethylamine
B315384-MS1, B315384-MSD1

Phenanthrene
B315384-MSD1

Phenol
B315384-MS1, B315384-MSD1

Pyridine
B315384-MS1, B315384-MSD1

RL-12

Elevated reporting limit due to matrix interference.

Analyte & Samples(s) Qualified:

22H0999-01[Stockpile 1 & South Stockpile 4], 22H0999-02[Stockpile 2 & Middle Stockpile 4]

V-04

Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria. Reported result is estimated.

Analyte & Samples(s) Qualified:

2,4-Dinitrophenol
22H0999-01[Stockpile 1 & South Stockpile 4], 22H0999-02[Stockpile 2 & Middle Stockpile 4], 22H0999-03[Stockpile 3 & North Stockpile 4], B315384-BLK1, B315384-BS1, B315384-BSD1, B315384-MS1, B315384-MSD1, S075623-CCV1, S075656-CCV1

Benzidine
22H0999-01[Stockpile 1 & South Stockpile 4], 22H0999-02[Stockpile 2 & Middle Stockpile 4], 22H0999-03[Stockpile 3 & North Stockpile 4], B315384-BLK1, B315384-BS1, B315384-BSD1, B315384-MS1, B315384-MSD1, S075623-CCV1, S075656-CCV1

V-05

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

Analyte & Samples(s) Qualified:

Hexachlorocyclopentadiene
22H0999-01[Stockpile 1 & South Stockpile 4], 22H0999-02[Stockpile 2 & Middle Stockpile 4], 22H0999-03[Stockpile 3 & North Stockpile 4], B315384-BLK1, B315384-BS1, B315384-BSD1, B315384-MS1, B315384-MSD1, S075623-CCV1, S075656-CCV1

V-35

Initial calibration verification (ICV) did not meet method specifications and was biased on the high side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:

Benzidine
22H0999-01[Stockpile 1 & South Stockpile 4], 22H0999-02[Stockpile 2 & Middle Stockpile 4], 22H0999-03[Stockpile 3 & North Stockpile 4], B315384-BLK1, B315384-BS1, B315384-BSD1, B315384-MS1, B315384-MSD1, S074943-ICV1, S075623-CCV1, S075656-CCV1

SW-846 9045C

Qualifications:

H-03

Sample received after recommended holding time was exceeded.

Analyte & Samples(s) Qualified:

pH
22H0999-01[Stockpile 1 & South Stockpile 4], 22H0999-02[Stockpile 2 & Middle Stockpile 4], 22H0999-03[Stockpile 3 & North Stockpile 4], B315364-DUP1

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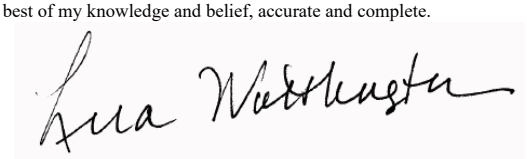
SW-846 8100 Modified

TPH (C9-C36) is quantitated against a calibration made with a diesel standard.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Kingstown, RI | Sample Description: | Work Order: 22H0999

Date Received: 8/17/2022

Field Sample #: Stockpile 1 & South Stockpile 4 | Sampled: 8/16/2022 10:35

Sample ID: 22H0999-01

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.076	0.072	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
Acrylonitrile	ND	0.0043	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00072	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
Benzene	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
Bromobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
Bromochloromethane	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
Bromodichloromethane	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
Bromoform	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
Bromomethane	ND	0.0072	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
2-Butanone (MEK)	ND	0.029	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
tert-Butyl Alcohol (TBA)	ND	0.072	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
n-Butylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
sec-Butylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
tert-Butylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00072	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
Carbon Disulfide	ND	0.0072	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
Carbon Tetrachloride	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
Chlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
Chlorodibromomethane	ND	0.00072	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
Chloroethane	ND	0.014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
Chloroform	ND	0.0029	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
Chloromethane	ND	0.0072	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
2-Chlorotoluene	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
4-Chlorotoluene	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0029	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
1,2-Dibromoethane (EDB)	ND	0.00072	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
Dibromomethane	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
1,2-Dichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
1,3-Dichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
1,4-Dichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
trans-1,4-Dichloro-2-butene	ND	0.0029	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.014	mg/Kg dry	1	V-05	SW-846 8260D	8/18/22	8/19/22 12:34	MFF
1,1-Dichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
1,2-Dichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
1,1-Dichloroethylene	ND	0.0029	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
cis-1,2-Dichloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
trans-1,2-Dichloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
1,2-Dichloropropane	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
1,3-Dichloropropane	ND	0.00072	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
2,2-Dichloropropane	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
1,1-Dichloropropene	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
cis-1,3-Dichloropropene	ND	0.00072	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
trans-1,3-Dichloropropene	ND	0.00072	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
Diethyl Ether	ND	0.014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Kingstown, RI | Sample Description: | Work Order: 22H0999

Date Received: 8/17/2022

Field Sample #: Stockpile 1 & South Stockpile 4 | Sampled: 8/16/2022 10:35

Sample ID: 22H0999-01

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00072	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
1,4-Dioxane	ND	0.072	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
Ethylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
Hexachlorobutadiene	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
2-Hexanone (MBK)	ND	0.014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
Isopropylbenzene (Cumene)	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
Methyl Acetate	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0029	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
Methyl Cyclohexane	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
Methylene Chloride	ND	0.014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
Naphthalene	ND	0.0029	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
n-Propylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
Styrene	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
1,1,1,2-Tetrachloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
1,1,2,2-Tetrachloroethane	ND	0.00072	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
Tetrachloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
Tetrahydrofuran	ND	0.0072	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
Toluene	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
1,2,3-Trichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
1,2,4-Trichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
1,3,5-Trichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
1,1,1-Trichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
1,1,2-Trichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
Trichloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0072	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
1,2,3-Trichloropropane	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0072	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
1,2,4-Trimethylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
1,3,5-Trimethylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
Vinyl Chloride	ND	0.0072	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
m+p Xylene	ND	0.0029	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF
o-Xylene	ND	0.0014	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 12:34	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	110	70-130		8/19/22 12:34
Toluene-d8	98.9	70-130		8/19/22 12:34
4-Bromofluorobenzene	97.1	70-130		8/19/22 12:34

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Kingstown, RI | Sample Description: | Work Order: 22H0999

Date Received: 8/17/2022

Field Sample #: Stockpile 1 & South Stockpile 4 | Sampled: 8/16/2022 10:35

Sample ID: 22H0999-01

Sample Matrix: Soil

Sample Flags: RL-12

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.87	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Acenaphthylene	ND	0.87	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Acetophenone	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Aniline	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Anthracene	ND	0.87	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Benzidine	ND	3.4	mg/Kg dry	5	V-04, V-35	SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Benzo(a)anthracene	ND	0.87	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Benzo(a)pyrene	ND	0.87	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Benzo(b)fluoranthene	ND	0.87	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Benzo(g,h,i)perylene	ND	0.87	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Benzo(k)fluoranthene	ND	0.87	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Benzoic Acid	ND	5.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Bis(2-chloroethoxy)methane	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Bis(2-chloroethyl)ether	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Bis(2-chloroisopropyl)ether	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Bis(2-Ethylhexyl)phthalate	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
4-Bromophenylphenylether	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Butylbenzylphthalate	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Carbazole	ND	0.87	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
4-Chloroaniline	ND	3.4	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
4-Chloro-3-methylphenol	ND	3.4	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
2-Chloronaphthalene	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
2-Chlorophenol	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
4-Chlorophenylphenylether	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Chrysene	ND	0.87	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Dibenz(a,h)anthracene	ND	0.87	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Dibenzofuran	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Di-n-butylphthalate	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
1,2-Dichlorobenzene	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
1,3-Dichlorobenzene	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
1,4-Dichlorobenzene	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
3,3-Dichlorobenzidine	ND	0.87	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
2,4-Dichlorophenol	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Diethylphthalate	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
2,4-Dimethylphenol	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Dimethylphthalate	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
4,6-Dinitro-2-methylphenol	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
2,4-Dinitrophenol	ND	3.4	mg/Kg dry	5	V-04	SW-846 8270E	8/18/22	8/22/22 17:04	BGL
2,4-Dinitrotoluene	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
2,6-Dinitrotoluene	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Di-n-octylphthalate	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
1,2-Diphenylhydrazine/Azobenzene	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Fluoranthene	ND	0.87	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Fluorene	ND	0.87	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 22H0999

Date Received: 8/17/2022

Field Sample #: Stockpile 1 & South Stockpile 4 | Sampled: 8/16/2022 10:35

Sample ID: 22H0999-01

Sample Matrix: Soil

Sample Flags: RL-12

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Hexachlorobutadiene	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Hexachlorocyclopentadiene	ND	1.7	mg/Kg dry	5	L-04, V-05	SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Hexachloroethane	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Indeno(1,2,3-cd)pyrene	ND	0.87	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Isophorone	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
1-Methylnaphthalene	ND	0.87	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
2-Methylnaphthalene	ND	0.87	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
2-Methylphenol	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
3/4-Methylphenol	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Naphthalene	ND	0.87	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
2-Nitroaniline	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
3-Nitroaniline	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
4-Nitroaniline	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Nitrobenzene	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
2-Nitrophenol	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
4-Nitrophenol	ND	3.4	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
N-Nitrosodimethylamine	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
N-Nitrosodiphenylamine/Diphenylamine	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
N-Nitrosodi-n-propylamine	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Pentachloronitrobenzene	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Pentachlorophenol	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Phenanthrene	ND	0.87	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Phenol	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Pyrene	ND	0.87	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
Pyridine	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
1,2,4,5-Tetrachlorobenzene	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
1,2,4-Trichlorobenzene	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
2,4,5-Trichlorophenol	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL
2,4,6-Trichlorophenol	ND	1.7	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:04	BGL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	74.0	30-130		8/22/22 17:04
Phenol-d6	79.0	30-130		8/22/22 17:04
Nitrobenzene-d5	113	30-130		8/22/22 17:04
2-Fluorobiphenyl	89.7	30-130		8/22/22 17:04
2,4,6-Tribromophenol	81.3	30-130		8/22/22 17:04
p-Terphenyl-d14	89.2	30-130		8/22/22 17:04

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 22H0999

Date Received: 8/17/2022

Field Sample #: Stockpile 1 & South Stockpile 4 | Sampled: 8/16/2022 10:35

Sample ID: 22H0999-01

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	8/18/22	8/21/22 12:24	SFM
Aroclor-1221 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	8/18/22	8/21/22 12:24	SFM
Aroclor-1232 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	8/18/22	8/21/22 12:24	SFM
Aroclor-1242 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	8/18/22	8/21/22 12:24	SFM
Aroclor-1248 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	8/18/22	8/21/22 12:24	SFM
Aroclor-1254 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	8/18/22	8/21/22 12:24	SFM
Aroclor-1260 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	8/18/22	8/21/22 12:24	SFM
Aroclor-1262 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	8/18/22	8/21/22 12:24	SFM
Aroclor-1268 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	8/18/22	8/21/22 12:24	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	117	30-150		8/21/22 12:24
Decachlorobiphenyl [2]	121	30-150		8/21/22 12:24
Tetrachloro-m-xylene [1]	97.1	30-150		8/21/22 12:24
Tetrachloro-m-xylene [2]	93.4	30-150		8/21/22 12:24

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 22H0999

Date Received: 8/17/2022

Field Sample #: Stockpile 1 & South Stockpile 4 | Sampled: 8/16/2022 10:35

Sample ID: 22H0999-01

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	1400	85	mg/Kg dry	10		SW-846 8100 Modified	8/18/22	8/22/22 20:28	RDD

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorobiphenyl	58.3	40-140		8/22/22 20:28

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 22H0999

Date Received: 8/17/2022

Field Sample #: Stockpile 1 & South Stockpile 4 | Sampled: 8/16/2022 10:35

Sample ID: 22H0999-01

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	3.3	mg/Kg dry	1		SW-846 6010D	8/18/22	8/19/22 20:02	ATP
Barium	41	1.7	mg/Kg dry	1		SW-846 6010D	8/23/22	8/24/22 11:37	MJH
Cadmium	ND	0.33	mg/Kg dry	1		SW-846 6010D	8/18/22	8/19/22 20:02	ATP
Chromium	5.4	0.67	mg/Kg dry	1		SW-846 6010D	8/18/22	8/19/22 20:02	ATP
Lead	25	0.50	mg/Kg dry	1		SW-846 6010D	8/18/22	8/19/22 20:02	ATP
Mercury	0.29	0.026	mg/Kg dry	1		SW-846 7471B	8/23/22	8/24/22 17:09	ATP
Selenium	ND	3.3	mg/Kg dry	1		SW-846 6010D	8/18/22	8/19/22 20:02	ATP
Silver	1.0	0.33	mg/Kg dry	1		SW-846 6010D	8/18/22	8/23/22 18:58	QNW

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 22H0999

Date Received: 8/17/2022

Field Sample #: Stockpile 1 & South Stockpile 4 | Sampled: 8/16/2022 10:35

Sample ID: 22H0999-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Flashpoint	> 212 °F		°F	1		SW-846 1010A-B	8/21/22	8/21/22 13:04	DET
pH @20.9°C	6.6		pH Units	1	H-03	SW-846 9045C	8/17/22	8/17/22 19:00	CB2

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 22H0999

Date Received: 8/17/2022

Field Sample #: Stockpile 2 & Middle Stockpile 4 | Sampled: 8/16/2022 10:50

Sample ID: 22H0999-02

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.11	0.088	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
Acrylonitrile	ND	0.0053	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00088	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
Benzene	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
Bromobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
Bromochloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
Bromodichloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
Bromoform	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
Bromomethane	ND	0.0088	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
2-Butanone (MEK)	ND	0.035	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
tert-Butyl Alcohol (TBA)	ND	0.088	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
n-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
sec-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
tert-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00088	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
Carbon Disulfide	ND	0.0088	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
Carbon Tetrachloride	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
Chlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
Chlorodibromomethane	ND	0.00088	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
Chloroethane	ND	0.018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
Chloroform	ND	0.0035	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
Chloromethane	ND	0.0088	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
2-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
4-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0035	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
1,2-Dibromoethane (EDB)	ND	0.00088	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
Dibromomethane	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
1,2-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
1,3-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
1,4-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
trans-1,4-Dichloro-2-butene	ND	0.0035	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.018	mg/Kg dry	1	V-05	SW-846 8260D	8/18/22	8/19/22 13:00	MFF
1,1-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
1,2-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
1,1-Dichloroethylene	ND	0.0035	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
cis-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
trans-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
1,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
1,3-Dichloropropane	ND	0.00088	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
2,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
1,1-Dichloropropene	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
cis-1,3-Dichloropropene	ND	0.00088	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
trans-1,3-Dichloropropene	ND	0.00088	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
Diethyl Ether	ND	0.018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 22H0999

Date Received: 8/17/2022

Field Sample #: Stockpile 2 & Middle Stockpile 4 | Sampled: 8/16/2022 10:50

Sample ID: 22H0999-02

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00088	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
1,4-Dioxane	ND	0.088	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
Ethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
Hexachlorobutadiene	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
2-Hexanone (MBK)	ND	0.018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
Isopropylbenzene (Cumene)	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
Methyl Acetate	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0035	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
Methyl Cyclohexane	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
Methylene Chloride	ND	0.018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
Naphthalene	ND	0.0035	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
n-Propylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
Styrene	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
1,1,2,2-Tetrachloroethane	ND	0.00088	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
Tetrachloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
Tetrahydrofuran	ND	0.0088	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
Toluene	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
1,2,3-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
1,2,4-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
1,3,5-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
1,1,1-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
1,1,2-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
Trichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0088	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
1,2,3-Trichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0088	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
1,2,4-Trimethylbenzene	0.0022	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
1,3,5-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
Vinyl Chloride	ND	0.0088	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
m+p Xylene	ND	0.0035	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF
o-Xylene	ND	0.0018	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:00	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	110	70-130		8/19/22 13:00
Toluene-d8	99.0	70-130		8/19/22 13:00
4-Bromofluorobenzene	101	70-130		8/19/22 13:00

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 22H0999

Date Received: 8/17/2022

Field Sample #: Stockpile 2 & Middle Stockpile 4 | Sampled: 8/16/2022 10:50

Sample ID: 22H0999-02

Sample Matrix: Soil

Sample Flags: RL-12

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	1.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Acenaphthylene	ND	1.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Acetophenone	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Aniline	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Anthracene	ND	1.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Benzidine	ND	4.1	mg/Kg dry	5	V-04, V-35	SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Benzo(a)anthracene	ND	1.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Benzo(a)pyrene	ND	1.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Benzo(b)fluoranthene	ND	1.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Benzo(g,h,i)perylene	ND	1.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Benzo(k)fluoranthene	ND	1.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Benzoic Acid	ND	6.2	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Bis(2-chloroethoxy)methane	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Bis(2-chloroethyl)ether	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Bis(2-chloroisopropyl)ether	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Bis(2-Ethylhexyl)phthalate	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
4-Bromophenylphenylether	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Butylbenzylphthalate	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Carbazole	ND	1.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
4-Chloroaniline	ND	4.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
4-Chloro-3-methylphenol	ND	4.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
2-Chloronaphthalene	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
2-Chlorophenol	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
4-Chlorophenylphenylether	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Chrysene	ND	1.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Dibenz(a,h)anthracene	ND	1.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Dibenzofuran	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Di-n-butylphthalate	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
1,2-Dichlorobenzene	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
1,3-Dichlorobenzene	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
1,4-Dichlorobenzene	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
3,3-Dichlorobenzidine	ND	1.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
2,4-Dichlorophenol	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Diethylphthalate	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
2,4-Dimethylphenol	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Dimethylphthalate	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
4,6-Dinitro-2-methylphenol	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
2,4-Dinitrophenol	ND	4.1	mg/Kg dry	5	V-04	SW-846 8270E	8/18/22	8/22/22 17:28	BGL
2,4-Dinitrotoluene	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
2,6-Dinitrotoluene	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Di-n-octylphthalate	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
1,2-Diphenylhydrazine/Azobenzene	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Fluoranthene	ND	1.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Fluorene	ND	1.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 22H0999

Date Received: 8/17/2022

Field Sample #: Stockpile 2 & Middle Stockpile 4 | Sampled: 8/16/2022 10:50

Sample ID: 22H0999-02

Sample Matrix: Soil

Sample Flags: RL-12

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Hexachlorobutadiene	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Hexachlorocyclopentadiene	ND	2.1	mg/Kg dry	5	L-04, V-05	SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Hexachloroethane	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Indeno(1,2,3-cd)pyrene	ND	1.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Isophorone	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
1-Methylnaphthalene	1.6	1.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
2-Methylnaphthalene	3.1	1.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
2-Methylphenol	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
3/4-Methylphenol	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Naphthalene	ND	1.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
2-Nitroaniline	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
3-Nitroaniline	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
4-Nitroaniline	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Nitrobenzene	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
2-Nitrophenol	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
4-Nitrophenol	ND	4.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
N-Nitrosodimethylamine	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
N-Nitrosodiphenylamine/Diphenylamine	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
N-Nitrosodi-n-propylamine	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Pentachloronitrobenzene	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Pentachlorophenol	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Phenanthrene	2.3	1.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Phenol	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Pyrene	1.8	1.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
Pyridine	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
1,2,4,5-Tetrachlorobenzene	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
1,2,4-Trichlorobenzene	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
2,4,5-Trichlorophenol	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL
2,4,6-Trichlorophenol	ND	2.1	mg/Kg dry	5		SW-846 8270E	8/18/22	8/22/22 17:28	BGL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	57.7	30-130		8/22/22 17:28
Phenol-d6	60.6	30-130		8/22/22 17:28
Nitrobenzene-d5	91.5	30-130		8/22/22 17:28
2-Fluorobiphenyl	67.8	30-130		8/22/22 17:28
2,4,6-Tribromophenol	67.6	30-130		8/22/22 17:28
p-Terphenyl-d14	75.0	30-130		8/22/22 17:28

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 22H0999

Date Received: 8/17/2022

Field Sample #: Stockpile 2 & Middle Stockpile 4 | Sampled: 8/16/2022 10:50

Sample ID: 22H0999-02

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	8/18/22	8/21/22 12:41	SFM
Aroclor-1221 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	8/18/22	8/21/22 12:41	SFM
Aroclor-1232 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	8/18/22	8/21/22 12:41	SFM
Aroclor-1242 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	8/18/22	8/21/22 12:41	SFM
Aroclor-1248 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	8/18/22	8/21/22 12:41	SFM
Aroclor-1254 [2]	0.20	0.10	mg/Kg dry	4		SW-846 8082A	8/18/22	8/21/22 12:41	SFM
Aroclor-1260 [2]	ND	0.10	mg/Kg dry	4		SW-846 8082A	8/18/22	8/21/22 12:41	SFM
Aroclor-1262 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	8/18/22	8/21/22 12:41	SFM
Aroclor-1268 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	8/18/22	8/21/22 12:41	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	115	30-150		8/21/22 12:41
Decachlorobiphenyl [2]	131	30-150		8/21/22 12:41
Tetrachloro-m-xylene [1]	94.7	30-150		8/21/22 12:41
Tetrachloro-m-xylene [2]	90.9	30-150		8/21/22 12:41

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 22H0999

Date Received: 8/17/2022

Field Sample #: Stockpile 2 & Middle Stockpile 4 | Sampled: 8/16/2022 10:50

Sample ID: 22H0999-02

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	3800	100	mg/Kg dry	10		SW-846 8100 Modified	8/18/22	8/22/22 21:59	RDD

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorobiphenyl	59.6	40-140		8/22/22 21:59

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 22H0999

Date Received: 8/17/2022

Field Sample #: Stockpile 2 & Middle Stockpile 4 | Sampled: 8/16/2022 10:50

Sample ID: 22H0999-02

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	4.0	mg/Kg dry	1		SW-846 6010D	8/18/22	8/19/22 20:08	ATP
Barium	140	2.0	mg/Kg dry	1		SW-846 6010D	8/23/22	8/24/22 11:43	MJH
Cadmium	3.5	0.40	mg/Kg dry	1		SW-846 6010D	8/18/22	8/19/22 20:08	ATP
Chromium	11	0.81	mg/Kg dry	1		SW-846 6010D	8/18/22	8/19/22 20:08	ATP
Lead	200	0.60	mg/Kg dry	1		SW-846 6010D	8/18/22	8/19/22 20:08	ATP
Mercury	1.1	0.32	mg/Kg dry	10		SW-846 7471B	8/23/22	8/24/22 17:57	ATP
Selenium	ND	4.0	mg/Kg dry	1		SW-846 6010D	8/18/22	8/19/22 20:08	ATP
Silver	20	0.40	mg/Kg dry	1		SW-846 6010D	8/18/22	8/23/22 19:04	QNW

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 22H0999

Date Received: 8/17/2022

Field Sample #: Stockpile 2 & Middle Stockpile 4 | Sampled: 8/16/2022 10:50

Sample ID: 22H0999-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Flashpoint	> 212 °F		°F	1		SW-846 1010A-B	8/21/22	8/21/22 13:04	DET
pH @19.8°C	6.2		pH Units	1	H-03	SW-846 9045C	8/17/22	8/17/22 19:00	CB2

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 22H0999

Date Received: 8/17/2022

Field Sample #: Stockpile 3 & North Stockpile 4 | Sampled: 8/16/2022 11:05

Sample ID: 22H0999-03

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.087	0.077	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
Acrylonitrile	ND	0.0046	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00077	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
Benzene	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
Bromobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
Bromochloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
Bromodichloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
Bromoform	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
Bromomethane	ND	0.0077	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
2-Butanone (MEK)	ND	0.031	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
tert-Butyl Alcohol (TBA)	ND	0.077	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
n-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
sec-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
tert-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00077	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
Carbon Disulfide	ND	0.0077	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
Carbon Tetrachloride	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
Chlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
Chlorodibromomethane	ND	0.00077	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
Chloroethane	ND	0.015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
Chloroform	ND	0.0031	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
Chloromethane	ND	0.0077	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
2-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
4-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0031	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
1,2-Dibromoethane (EDB)	ND	0.00077	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
Dibromomethane	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
1,2-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
1,3-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
1,4-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
trans-1,4-Dichloro-2-butene	ND	0.0031	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.015	mg/Kg dry	1	V-05	SW-846 8260D	8/18/22	8/19/22 13:25	MFF
1,1-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
1,2-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
1,1-Dichloroethylene	ND	0.0031	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
cis-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
trans-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
1,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
1,3-Dichloropropane	ND	0.00077	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
2,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
1,1-Dichloropropene	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
cis-1,3-Dichloropropene	ND	0.00077	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
trans-1,3-Dichloropropene	ND	0.00077	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
Diethyl Ether	ND	0.015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 22H0999

Date Received: 8/17/2022

Field Sample #: Stockpile 3 & North Stockpile 4 | Sampled: 8/16/2022 11:05

Sample ID: 22H0999-03

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00077	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
1,4-Dioxane	ND	0.077	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
Ethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
Hexachlorobutadiene	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
2-Hexanone (MBK)	ND	0.015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
Isopropylbenzene (Cumene)	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
Methyl Acetate	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0031	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
Methyl Cyclohexane	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
Methylene Chloride	ND	0.015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
Naphthalene	ND	0.0031	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
n-Propylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
Styrene	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
1,1,1,2-Tetrachloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
1,1,2,2-Tetrachloroethane	ND	0.00077	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
Tetrachloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
Tetrahydrofuran	ND	0.0077	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
Toluene	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
1,2,3-Trichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
1,2,4-Trichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
1,3,5-Trichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
1,1,1-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
1,1,2-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
Trichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0077	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
1,2,3-Trichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0077	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
1,2,4-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
1,3,5-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
Vinyl Chloride	ND	0.0077	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
m+p Xylene	ND	0.0031	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF
o-Xylene	ND	0.0015	mg/Kg dry	1		SW-846 8260D	8/18/22	8/19/22 13:25	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	108	70-130		8/19/22 13:25
Toluene-d8	98.3	70-130		8/19/22 13:25
4-Bromofluorobenzene	101	70-130		8/19/22 13:25

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 22H0999

Date Received: 8/17/2022

Field Sample #: Stockpile 3 & North Stockpile 4 | Sampled: 8/16/2022 11:05

Sample ID: 22H0999-03

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Acetophenone	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Aniline	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Benzidine	ND	0.69	mg/Kg dry	1	V-04, V-35	SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Benzoic Acid	ND	1.0	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Bis(2-chloroethoxy)methane	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Bis(2-chloroethyl)ether	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Bis(2-chloroisopropyl)ether	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
4-Bromophenylphenylether	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Butylbenzylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Carbazole	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
4-Chloroaniline	ND	0.69	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
4-Chloro-3-methylphenol	ND	0.69	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
2-Chloronaphthalene	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
2-Chlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
4-Chlorophenylphenylether	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Dibenzofuran	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Di-n-butylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
1,2-Dichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
1,3-Dichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
1,4-Dichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
3,3-Dichlorobenzidine	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
2,4-Dichlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Diethylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
2,4-Dimethylphenol	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Dimethylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
4,6-Dinitro-2-methylphenol	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
2,4-Dinitrophenol	ND	0.69	mg/Kg dry	1	V-04	SW-846 8270E	8/18/22	8/23/22 10:53	BGL
2,4-Dinitrotoluene	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
2,6-Dinitrotoluene	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Di-n-octylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
1,2-Diphenylhydrazine/Azobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 22H0999

Date Received: 8/17/2022

Field Sample #: Stockpile 3 & North Stockpile 4 | Sampled: 8/16/2022 11:05

Sample ID: 22H0999-03

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Hexachlorobutadiene	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Hexachlorocyclopentadiene	ND	0.36	mg/Kg dry	1	L-04, V-05	SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Hexachloroethane	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Isophorone	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
1-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
2-Methylphenol	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
3/4-Methylphenol	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
2-Nitroaniline	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
3-Nitroaniline	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
4-Nitroaniline	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Nitrobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
2-Nitrophenol	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
4-Nitrophenol	ND	0.69	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
N-Nitrosodimethylamine	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
N-Nitrosodiphenylamine/Diphenylamine	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
N-Nitrosodi-n-propylamine	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Pentachloronitrobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Pentachlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Phenol	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
Pyridine	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
1,2,4,5-Tetrachlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
1,2,4-Trichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
2,4,5-Trichlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL
2,4,6-Trichlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/18/22	8/23/22 10:53	BGL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	65.0	30-130		8/23/22 10:53
Phenol-d6	69.6	30-130		8/23/22 10:53
Nitrobenzene-d5	95.4	30-130		8/23/22 10:53
2-Fluorobiphenyl	82.7	30-130		8/23/22 10:53
2,4,6-Tribromophenol	93.8	30-130		8/23/22 10:53
p-Terphenyl-d14	85.6	30-130		8/23/22 10:53

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 22H0999

Date Received: 8/17/2022

Field Sample #: Stockpile 3 & North Stockpile 4 | Sampled: 8/16/2022 11:05

Sample ID: 22H0999-03

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	8/18/22	8/21/22 12:59	SFM
Aroclor-1221 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	8/18/22	8/21/22 12:59	SFM
Aroclor-1232 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	8/18/22	8/21/22 12:59	SFM
Aroclor-1242 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	8/18/22	8/21/22 12:59	SFM
Aroclor-1248 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	8/18/22	8/21/22 12:59	SFM
Aroclor-1254 [2]	ND	0.084	mg/Kg dry	4		SW-846 8082A	8/18/22	8/21/22 12:59	SFM
Aroclor-1260 [2]	ND	0.084	mg/Kg dry	4		SW-846 8082A	8/18/22	8/21/22 12:59	SFM
Aroclor-1262 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	8/18/22	8/21/22 12:59	SFM
Aroclor-1268 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	8/18/22	8/21/22 12:59	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	121	30-150		8/21/22 12:59
Decachlorobiphenyl [2]	121	30-150		8/21/22 12:59
Tetrachloro-m-xylene [1]	99.7	30-150		8/21/22 12:59
Tetrachloro-m-xylene [2]	96.0	30-150		8/21/22 12:59

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 22H0999

Date Received: 8/17/2022

Field Sample #: Stockpile 3 & North Stockpile 4 | Sampled: 8/16/2022 11:05

Sample ID: 22H0999-03

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	190	43	mg/Kg dry	5		SW-846 8100 Modified	8/18/22	8/23/22 18:26	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorobiphenyl	85.3	40-140		8/23/22 18:26

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 22H0999

Date Received: 8/17/2022

Field Sample #: Stockpile 3 & North Stockpile 4 | Sampled: 8/16/2022 11:05

Sample ID: 22H0999-03

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	3.5	mg/Kg dry	1		SW-846 6010D	8/18/22	8/19/22 20:14	ATP
Barium	35	1.7	mg/Kg dry	1		SW-846 6010D	8/23/22	8/24/22 11:49	MJH
Cadmium	ND	0.35	mg/Kg dry	1		SW-846 6010D	8/18/22	8/19/22 20:14	ATP
Chromium	4.2	0.69	mg/Kg dry	1		SW-846 6010D	8/18/22	8/19/22 20:14	ATP
Lead	19	0.52	mg/Kg dry	1		SW-846 6010D	8/18/22	8/19/22 20:14	ATP
Mercury	0.89	0.27	mg/Kg dry	10		SW-846 7471B	8/23/22	8/24/22 17:59	ATP
Selenium	ND	3.5	mg/Kg dry	1		SW-846 6010D	8/18/22	8/19/22 20:14	ATP
Silver	0.69	0.35	mg/Kg dry	1		SW-846 6010D	8/18/22	8/23/22 19:21	QNW

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 22H0999

Date Received: 8/17/2022

Field Sample #: Stockpile 3 & North Stockpile 4 | Sampled: 8/16/2022 11:05

Sample ID: 22H0999-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Flashpoint	> 212 °F		°F	1		SW-846 1010A-B	8/21/22	8/21/22 13:04	DET
pH @20.1°C	6.6		pH Units	1	H-03	SW-846 9045C	8/17/22	8/17/22 19:00	CB2

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Sample Extraction Data

SW-846 1010A-B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
22H0999-01 [Stockpile 1 & South Stockpile 4]	B315549	50.0	50.0	08/21/22
22H0999-02 [Stockpile 2 & Middle Stockpile 4]	B315549	50.0	50.0	08/21/22
22H0999-03 [Stockpile 3 & North Stockpile 4]	B315549	50.0	50.0	08/21/22

Prep Method: SW-846 3050B **Analytical Method: SW-846 6010D**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
22H0999-01 [Stockpile 1 & South Stockpile 4]	B315423	1.53	50.0	08/18/22
22H0999-02 [Stockpile 2 & Middle Stockpile 4]	B315423	1.54	50.0	08/18/22
22H0999-03 [Stockpile 3 & North Stockpile 4]	B315423	1.50	50.0	08/18/22

Prep Method: SW-846 3050B **Analytical Method: SW-846 6010D**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
22H0999-01RE1 [Stockpile 1 & South Stockpile 4]	B315742	1.50	50.0	08/23/22
22H0999-02RE1 [Stockpile 2 & Middle Stockpile 4]	B315742	1.54	50.0	08/23/22
22H0999-03RE1 [Stockpile 3 & North Stockpile 4]	B315742	1.54	50.0	08/23/22

Prep Method: SW-846 7471 **Analytical Method: SW-846 7471B**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
22H0999-01 [Stockpile 1 & South Stockpile 4]	B315682	0.598	50.0	08/23/22
22H0999-02 [Stockpile 2 & Middle Stockpile 4]	B315682	0.580	50.0	08/23/22
22H0999-03 [Stockpile 3 & North Stockpile 4]	B315682	0.582	50.0	08/23/22

Prep Method: SW-846 3540C **Analytical Method: SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
22H0999-01 [Stockpile 1 & South Stockpile 4]	B315449	10.0	10.0	08/18/22
22H0999-02 [Stockpile 2 & Middle Stockpile 4]	B315449	10.0	10.0	08/18/22
22H0999-03 [Stockpile 3 & North Stockpile 4]	B315449	10.0	10.0	08/18/22

Prep Method: SW-846 3546 **Analytical Method: SW-846 8100 Modified**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
22H0999-01 [Stockpile 1 & South Stockpile 4]	B315383	30.0	1.00	08/18/22
22H0999-02 [Stockpile 2 & Middle Stockpile 4]	B315383	30.0	1.00	08/18/22
22H0999-03 [Stockpile 3 & North Stockpile 4]	B315383	30.0	1.00	08/18/22

Prep Method: SW-846 5035 **Analytical Method: SW-846 8260D**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
22H0999-01 [Stockpile 1 & South Stockpile 4]	B315408	7.08	10.0	08/18/22
22H0999-02 [Stockpile 2 & Middle Stockpile 4]	B315408	7.06	10.0	08/18/22
22H0999-03 [Stockpile 3 & North Stockpile 4]	B315408	6.80	10.0	08/18/22

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Sample Extraction Data

Prep Method: SW-846 3546 **Analytical Method: SW-846 8270E**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
22H0999-01 [Stockpile 1 & South Stockpile 4]	B315384	30.0	1.00	08/18/22
22H0999-02 [Stockpile 2 & Middle Stockpile 4]	B315384	30.0	1.00	08/18/22
22H0999-03 [Stockpile 3 & North Stockpile 4]	B315384	30.0	1.00	08/18/22

SW-846 9045C

Lab Number [Field ID]	Batch	Initial [g]	Date
22H0999-01 [Stockpile 1 & South Stockpile 4]	B315364	20.0	08/17/22
22H0999-02 [Stockpile 2 & Middle Stockpile 4]	B315364	20.0	08/17/22
22H0999-03 [Stockpile 3 & North Stockpile 4]	B315364	20.0	08/17/22

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B315408 - SW-846 5035										
Blank (B315408-BLK1)				Prepared: 08/18/22 Analyzed: 08/19/22						
Acetone	ND	0.10	mg/Kg wet							
Acrylonitrile	ND	0.0060	mg/Kg wet							
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg wet							
Benzene	ND	0.0020	mg/Kg wet							
Bromobenzene	ND	0.0020	mg/Kg wet							
Bromochloromethane	ND	0.0020	mg/Kg wet							
Bromodichloromethane	ND	0.0020	mg/Kg wet							
Bromoform	ND	0.0020	mg/Kg wet							
Bromomethane	ND	0.010	mg/Kg wet							
2-Butanone (MEK)	ND	0.040	mg/Kg wet							
tert-Butyl Alcohol (TBA)	ND	0.10	mg/Kg wet							
n-Butylbenzene	ND	0.0020	mg/Kg wet							
sec-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg wet							
Carbon Disulfide	ND	0.010	mg/Kg wet							
Carbon Tetrachloride	ND	0.0020	mg/Kg wet							
Chlorobenzene	ND	0.0020	mg/Kg wet							
Chlorodibromomethane	ND	0.0010	mg/Kg wet							
Chloroethane	ND	0.020	mg/Kg wet							
Chloroform	ND	0.0040	mg/Kg wet							
Chloromethane	ND	0.010	mg/Kg wet							
2-Chlorotoluene	ND	0.0020	mg/Kg wet							
4-Chlorotoluene	ND	0.0020	mg/Kg wet							
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg wet							
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg wet							
Dibromomethane	ND	0.0020	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.0020	mg/Kg wet							
trans-1,4-Dichloro-2-butene	ND	0.0040	mg/Kg wet							
Dichlorodifluoromethane (Freon 12)	ND	0.020	mg/Kg wet							V-05
1,1-Dichloroethane	ND	0.0020	mg/Kg wet							
1,2-Dichloroethane	ND	0.0020	mg/Kg wet							
1,1-Dichloroethylene	ND	0.0040	mg/Kg wet							
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
1,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,3-Dichloropropane	ND	0.0010	mg/Kg wet							
2,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,1-Dichloropropene	ND	0.0020	mg/Kg wet							
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
Diethyl Ether	ND	0.020	mg/Kg wet							
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg wet							
1,4-Dioxane	ND	0.10	mg/Kg wet							
Ethylbenzene	ND	0.0020	mg/Kg wet							
Hexachlorobutadiene	ND	0.0020	mg/Kg wet							
2-Hexanone (MBK)	ND	0.020	mg/Kg wet							
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg wet							
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg wet							
Methyl Acetate	ND	0.0020	mg/Kg wet							

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B315408 - SW-846 5035										
Blank (B315408-BLK1)				Prepared: 08/18/22 Analyzed: 08/19/22						
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg wet							
Methyl Cyclohexane	ND	0.0020	mg/Kg wet							
Methylene Chloride	ND	0.020	mg/Kg wet							
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg wet							
Naphthalene	ND	0.0040	mg/Kg wet							
n-Propylbenzene	ND	0.0020	mg/Kg wet							
Styrene	ND	0.0020	mg/Kg wet							
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg wet							
Tetrachloroethylene	ND	0.0020	mg/Kg wet							
Tetrahydrofuran	ND	0.010	mg/Kg wet							
Toluene	ND	0.0020	mg/Kg wet							
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,3,5-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,1,1-Trichloroethane	ND	0.0020	mg/Kg wet							
1,1,2-Trichloroethane	ND	0.0020	mg/Kg wet							
Trichloroethylene	ND	0.0020	mg/Kg wet							
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg wet							
1,2,3-Trichloropropane	ND	0.0020	mg/Kg wet							
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.010	mg/Kg wet							
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg wet							
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg wet							
Vinyl Chloride	ND	0.010	mg/Kg wet							
m+p Xylene	ND	0.0040	mg/Kg wet							
o-Xylene	ND	0.0020	mg/Kg wet							
Surrogate: 1,2-Dichloroethane-d4	*0.0503*		mg/Kg wet	0.0500		101	70-130			
Surrogate: Toluene-d8	*0.0493*		mg/Kg wet	0.0500		98.5	70-130			
Surrogate: 4-Bromofluorobenzene	*0.0502*		mg/Kg wet	0.0500		100	70-130			
LCS (B315408-BS1)				Prepared: 08/18/22 Analyzed: 08/19/22						
Acetone	0.177	0.10	mg/Kg wet	0.200		88.4	70-160			†
Acrylonitrile	0.0205	0.0060	mg/Kg wet	0.0200		103	70-130			
tert-Amyl Methyl Ether (TAME)	0.0187	0.0010	mg/Kg wet	0.0200		93.6	70-130			
Benzene	0.0177	0.0020	mg/Kg wet	0.0200		88.6	70-130			
Bromobenzene	0.0193	0.0020	mg/Kg wet	0.0200		96.7	70-130			
Bromochloromethane	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130			
Bromodichloromethane	0.0192	0.0020	mg/Kg wet	0.0200		96.1	70-130			
Bromoform	0.0181	0.0020	mg/Kg wet	0.0200		90.3	70-130			
Bromomethane	0.0214	0.010	mg/Kg wet	0.0200		107	40-130			†
2-Butanone (MEK)	0.188	0.040	mg/Kg wet	0.200		93.9	70-160			†
tert-Butyl Alcohol (TBA)	0.165	0.10	mg/Kg wet	0.200		82.4	40-130			†
n-Butylbenzene	0.0183	0.0020	mg/Kg wet	0.0200		91.3	70-130			
sec-Butylbenzene	0.0183	0.0020	mg/Kg wet	0.0200		91.4	70-130			
tert-Butylbenzene	0.0189	0.0020	mg/Kg wet	0.0200		94.7	70-160			†
tert-Butyl Ethyl Ether (TBEE)	0.0191	0.0010	mg/Kg wet	0.0200		95.5	70-130			
Carbon Disulfide	0.180	0.010	mg/Kg wet	0.200		90.1	70-130			
Carbon Tetrachloride	0.0172	0.0020	mg/Kg wet	0.0200		85.8	70-130			
Chlorobenzene	0.0193	0.0020	mg/Kg wet	0.0200		96.4	70-130			
Chlorodibromomethane	0.0199	0.0010	mg/Kg wet	0.0200		99.5	70-130			
Chloroethane	0.0188	0.020	mg/Kg wet	0.0200		94.1	70-130			
Chloroform	0.0185	0.0040	mg/Kg wet	0.0200		92.5	70-130			

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B315408 - SW-846 5035											
LCS (B315408-BS1)				Prepared: 08/18/22 Analyzed: 08/19/22							
Chloromethane	0.0178	0.010	mg/Kg wet	0.0200		88.8	70-130				
2-Chlorotoluene	0.0188	0.0020	mg/Kg wet	0.0200		94.1	70-130				
4-Chlorotoluene	0.0190	0.0020	mg/Kg wet	0.0200		94.9	70-130				
1,2-Dibromo-3-chloropropane (DBCP)	0.0184	0.0020	mg/Kg wet	0.0200		92.1	70-130				
1,2-Dibromoethane (EDB)	0.0205	0.0010	mg/Kg wet	0.0200		102	70-130				
Dibromomethane	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130				
1,2-Dichlorobenzene	0.0195	0.0020	mg/Kg wet	0.0200		97.7	70-130				
1,3-Dichlorobenzene	0.0197	0.0020	mg/Kg wet	0.0200		98.3	70-130				
1,4-Dichlorobenzene	0.0194	0.0020	mg/Kg wet	0.0200		97.0	70-130				
trans-1,4-Dichloro-2-butene	0.0180	0.0040	mg/Kg wet	0.0200		89.9	70-130				
Dichlorodifluoromethane (Freon 12)	0.0156	0.020	mg/Kg wet	0.0200		77.9	40-160			V-05	†
1,1-Dichloroethane	0.0178	0.0020	mg/Kg wet	0.0200		88.9	70-130				
1,2-Dichloroethane	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130				
1,1-Dichloroethylene	0.0174	0.0040	mg/Kg wet	0.0200		86.9	70-130				
cis-1,2-Dichloroethylene	0.0186	0.0020	mg/Kg wet	0.0200		93.1	70-130				
trans-1,2-Dichloroethylene	0.0198	0.0020	mg/Kg wet	0.0200		98.9	70-130				
1,2-Dichloropropane	0.0194	0.0020	mg/Kg wet	0.0200		97.1	70-130				
1,3-Dichloropropane	0.0215	0.0010	mg/Kg wet	0.0200		108	70-130				
2,2-Dichloropropane	0.0175	0.0020	mg/Kg wet	0.0200		87.4	70-130				
1,1-Dichloropropene	0.0171	0.0020	mg/Kg wet	0.0200		85.6	70-130				
cis-1,3-Dichloropropene	0.0196	0.0010	mg/Kg wet	0.0200		98.1	70-130				
trans-1,3-Dichloropropene	0.0193	0.0010	mg/Kg wet	0.0200		96.7	70-130				
Diethyl Ether	0.0195	0.020	mg/Kg wet	0.0200		97.5	70-130				
Diisopropyl Ether (DIPE)	0.0197	0.0010	mg/Kg wet	0.0200		98.7	70-130				
1,4-Dioxane	0.200	0.10	mg/Kg wet	0.200		100	40-160				†
Ethylbenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.5	70-130				
Hexachlorobutadiene	0.0170	0.0020	mg/Kg wet	0.0200		85.1	70-160				
2-Hexanone (MBK)	0.197	0.020	mg/Kg wet	0.200		98.3	70-160				†
Isopropylbenzene (Cumene)	0.0186	0.0020	mg/Kg wet	0.0200		93.1	70-130				
p-Isopropyltoluene (p-Cymene)	0.0181	0.0020	mg/Kg wet	0.0200		90.5	70-130				
Methyl Acetate	0.0179	0.0020	mg/Kg wet	0.0200		89.7	70-130				
Methyl tert-Butyl Ether (MTBE)	0.0180	0.0040	mg/Kg wet	0.0200		89.8	70-130				
Methyl Cyclohexane	0.0178	0.0020	mg/Kg wet	0.0200		88.9	70-130				
Methylene Chloride	0.0198	0.020	mg/Kg wet	0.0200		98.8	40-160				†
4-Methyl-2-pentanone (MIBK)	0.201	0.020	mg/Kg wet	0.200		100	70-160				†
Naphthalene	0.0182	0.0040	mg/Kg wet	0.0200		91.0	40-130				†
n-Propylbenzene	0.0186	0.0020	mg/Kg wet	0.0200		93.0	70-130				
Styrene	0.0191	0.0020	mg/Kg wet	0.0200		95.5	70-130				
1,1,1,2-Tetrachloroethane	0.0190	0.0020	mg/Kg wet	0.0200		94.8	70-130				
1,1,2,2-Tetrachloroethane	0.0189	0.0010	mg/Kg wet	0.0200		94.3	70-130				
Tetrachloroethylene	0.0191	0.0020	mg/Kg wet	0.0200		95.7	70-130				
Tetrahydrofuran	0.0186	0.010	mg/Kg wet	0.0200		93.2	70-130				
Toluene	0.0190	0.0020	mg/Kg wet	0.0200		94.9	70-130				
1,2,3-Trichlorobenzene	0.0192	0.0020	mg/Kg wet	0.0200		96.2	70-130				
1,2,4-Trichlorobenzene	0.0181	0.0020	mg/Kg wet	0.0200		90.6	70-130				
1,3,5-Trichlorobenzene	0.0184	0.0020	mg/Kg wet	0.0200		92.0	70-130				
1,1,1-Trichloroethane	0.0175	0.0020	mg/Kg wet	0.0200		87.3	70-130				
1,1,2-Trichloroethane	0.0199	0.0020	mg/Kg wet	0.0200		99.6	70-130				
Trichloroethylene	0.0193	0.0020	mg/Kg wet	0.0200		96.6	70-130				
Trichlorofluoromethane (Freon 11)	0.0180	0.010	mg/Kg wet	0.0200		90.2	70-130				
1,2,3-Trichloropropane	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130				

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B315408 - SW-846 5035											
LCS (B315408-BS1)				Prepared: 08/18/22 Analyzed: 08/19/22							
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0184	0.010	mg/Kg wet	0.0200		92.2	70-130				
1,2,4-Trimethylbenzene	0.0188	0.0020	mg/Kg wet	0.0200		94.1	70-130				
1,3,5-Trimethylbenzene	0.0186	0.0020	mg/Kg wet	0.0200		93.2	70-130				
Vinyl Chloride	0.0169	0.010	mg/Kg wet	0.0200		84.7	40-130				†
m+p Xylene	0.0381	0.0040	mg/Kg wet	0.0400		95.3	70-130				
o-Xylene	0.0191	0.0020	mg/Kg wet	0.0200		95.5	70-130				
Surrogate: 1,2-Dichloroethane-d4	*0.0485*		mg/Kg wet	0.0500		97.0	70-130				
Surrogate: Toluene-d8	*0.0494*		mg/Kg wet	0.0500		98.7	70-130				
Surrogate: 4-Bromofluorobenzene	*0.0505*		mg/Kg wet	0.0500		101	70-130				
LCS Dup (B315408-BSD1)				Prepared: 08/18/22 Analyzed: 08/19/22							
Acetone	0.193	0.10	mg/Kg wet	0.200		96.6	70-160	8.92	25		†
Acrylonitrile	0.0218	0.0060	mg/Kg wet	0.0200		109	70-130	6.05	25		
tert-Amyl Methyl Ether (TAME)	0.0189	0.0010	mg/Kg wet	0.0200		94.4	70-130	0.851	25		
Benzene	0.0177	0.0020	mg/Kg wet	0.0200		88.5	70-130	0.113	25		
Bromobenzene	0.0195	0.0020	mg/Kg wet	0.0200		97.3	70-130	0.619	25		
Bromochloromethane	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130	1.65	25		
Bromodichloromethane	0.0188	0.0020	mg/Kg wet	0.0200		93.8	70-130	2.42	25		
Bromoform	0.0175	0.0020	mg/Kg wet	0.0200		87.3	70-130	3.38	25		
Bromomethane	0.0195	0.010	mg/Kg wet	0.0200		97.5	40-130	9.29	25		†
2-Butanone (MEK)	0.202	0.040	mg/Kg wet	0.200		101	70-160	7.07	25		†
tert-Butyl Alcohol (TBA)	0.179	0.10	mg/Kg wet	0.200		89.7	40-130	8.47	25		†
n-Butylbenzene	0.0176	0.0020	mg/Kg wet	0.0200		88.2	70-130	3.45	25		
sec-Butylbenzene	0.0181	0.0020	mg/Kg wet	0.0200		90.4	70-130	1.10	25		
tert-Butylbenzene	0.0185	0.0020	mg/Kg wet	0.0200		92.6	70-160	2.24	25		†
tert-Butyl Ethyl Ether (TBEE)	0.0191	0.0010	mg/Kg wet	0.0200		95.5	70-130	0.00	25		
Carbon Disulfide	0.177	0.010	mg/Kg wet	0.200		88.4	70-130	1.95	25		
Carbon Tetrachloride	0.0171	0.0020	mg/Kg wet	0.0200		85.4	70-130	0.467	25		
Chlorobenzene	0.0192	0.0020	mg/Kg wet	0.0200		95.9	70-130	0.520	25		
Chlorodibromomethane	0.0190	0.0010	mg/Kg wet	0.0200		95.2	70-130	4.42	25		
Chloroethane	0.0176	0.020	mg/Kg wet	0.0200		88.1	70-130	6.59	25		
Chloroform	0.0183	0.0040	mg/Kg wet	0.0200		91.4	70-130	1.20	25		
Chloromethane	0.0175	0.010	mg/Kg wet	0.0200		87.3	70-130	1.70	25		
2-Chlorotoluene	0.0187	0.0020	mg/Kg wet	0.0200		93.3	70-130	0.854	25		
4-Chlorotoluene	0.0188	0.0020	mg/Kg wet	0.0200		94.1	70-130	0.847	25		
1,2-Dibromo-3-chloropropane (DBCP)	0.0195	0.0020	mg/Kg wet	0.0200		97.3	70-130	5.49	25		
1,2-Dibromoethane (EDB)	0.0205	0.0010	mg/Kg wet	0.0200		103	70-130	0.293	25		
Dibromomethane	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130	1.91	25		
1,2-Dichlorobenzene	0.0188	0.0020	mg/Kg wet	0.0200		93.9	70-130	3.97	25		
1,3-Dichlorobenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.5	70-130	2.89	25		
1,4-Dichlorobenzene	0.0193	0.0020	mg/Kg wet	0.0200		96.4	70-130	0.620	25		
trans-1,4-Dichloro-2-butene	0.0190	0.0040	mg/Kg wet	0.0200		95.2	70-130	5.73	25		
Dichlorodifluoromethane (Freon 12)	0.0146	0.020	mg/Kg wet	0.0200		72.9	40-160	6.63	25	V-05	†
1,1-Dichloroethane	0.0177	0.0020	mg/Kg wet	0.0200		88.3	70-130	0.677	25		
1,2-Dichloroethane	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130	3.81	25		
1,1-Dichloroethylene	0.0171	0.0040	mg/Kg wet	0.0200		85.4	70-130	1.74	25		
cis-1,2-Dichloroethylene	0.0181	0.0020	mg/Kg wet	0.0200		90.7	70-130	2.61	25		
trans-1,2-Dichloroethylene	0.0187	0.0020	mg/Kg wet	0.0200		93.7	70-130	5.40	25		
1,2-Dichloropropane	0.0185	0.0020	mg/Kg wet	0.0200		92.3	70-130	5.07	25		
1,3-Dichloropropane	0.0203	0.0010	mg/Kg wet	0.0200		102	70-130	5.74	25		
2,2-Dichloropropane	0.0168	0.0020	mg/Kg wet	0.0200		84.0	70-130	3.97	25		
1,1-Dichloropropene	0.0171	0.0020	mg/Kg wet	0.0200		85.4	70-130	0.234	25		

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B315408 - SW-846 5035										
LCS Dup (B315408-BSD1)				Prepared: 08/18/22 Analyzed: 08/19/22						
cis-1,3-Dichloropropene	0.0200	0.0010	mg/Kg wet	0.0200		100	70-130	1.92	25	
trans-1,3-Dichloropropene	0.0192	0.0010	mg/Kg wet	0.0200		95.9	70-130	0.831	25	
Diethyl Ether	0.0192	0.020	mg/Kg wet	0.0200		96.1	70-130	1.45	25	
Diisopropyl Ether (DIPE)	0.0188	0.0010	mg/Kg wet	0.0200		94.2	70-130	4.67	25	
1,4-Dioxane	0.184	0.10	mg/Kg wet	0.200		91.9	40-160	8.66	50	† ‡
Ethylbenzene	0.0189	0.0020	mg/Kg wet	0.0200		94.4	70-130	1.16	25	
Hexachlorobutadiene	0.0170	0.0020	mg/Kg wet	0.0200		85.1	70-160	0.00	25	
2-Hexanone (MBK)	0.197	0.020	mg/Kg wet	0.200		98.3	70-160	0.0305	25	†
Isopropylbenzene (Cumene)	0.0187	0.0020	mg/Kg wet	0.0200		93.3	70-130	0.215	25	
p-Isopropyltoluene (p-Cymene)	0.0179	0.0020	mg/Kg wet	0.0200		89.6	70-130	0.999	25	
Methyl Acetate	0.0193	0.0020	mg/Kg wet	0.0200		96.6	70-130	7.41	25	
Methyl tert-Butyl Ether (MTBE)	0.0184	0.0040	mg/Kg wet	0.0200		92.0	70-130	2.42	25	
Methyl Cyclohexane	0.0170	0.0020	mg/Kg wet	0.0200		85.2	70-130	4.25	25	
Methylene Chloride	0.0198	0.020	mg/Kg wet	0.0200		98.8	40-160	0.00	25	†
4-Methyl-2-pentanone (MIBK)	0.201	0.020	mg/Kg wet	0.200		101	70-160	0.229	25	†
Naphthalene	0.0186	0.0040	mg/Kg wet	0.0200		93.2	40-130	2.39	25	†
n-Propylbenzene	0.0181	0.0020	mg/Kg wet	0.0200		90.5	70-130	2.72	25	
Styrene	0.0183	0.0020	mg/Kg wet	0.0200		91.7	70-130	4.06	25	
1,1,1,2-Tetrachloroethane	0.0187	0.0020	mg/Kg wet	0.0200		93.3	70-130	1.59	25	
1,1,2,2-Tetrachloroethane	0.0194	0.0010	mg/Kg wet	0.0200		96.8	70-130	2.62	25	
Tetrachloroethylene	0.0186	0.0020	mg/Kg wet	0.0200		92.9	70-130	2.97	25	
Tetrahydrofuran	0.0213	0.010	mg/Kg wet	0.0200		106	70-130	13.1	25	
Toluene	0.0183	0.0020	mg/Kg wet	0.0200		91.7	70-130	3.43	25	
1,2,3-Trichlorobenzene	0.0183	0.0020	mg/Kg wet	0.0200		91.5	70-130	5.01	25	
1,2,4-Trichlorobenzene	0.0173	0.0020	mg/Kg wet	0.0200		86.3	70-130	4.86	25	
1,3,5-Trichlorobenzene	0.0176	0.0020	mg/Kg wet	0.0200		88.1	70-130	4.33	25	
1,1,1-Trichloroethane	0.0176	0.0020	mg/Kg wet	0.0200		87.9	70-130	0.685	25	
1,1,2-Trichloroethane	0.0189	0.0020	mg/Kg wet	0.0200		94.6	70-130	5.15	25	
Trichloroethylene	0.0184	0.0020	mg/Kg wet	0.0200		92.2	70-130	4.66	25	
Trichlorofluoromethane (Freon 11)	0.0165	0.010	mg/Kg wet	0.0200		82.7	70-130	8.68	25	
1,2,3-Trichloropropane	0.0211	0.0020	mg/Kg wet	0.0200		106	70-130	5.35	25	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0181	0.010	mg/Kg wet	0.0200		90.7	70-130	1.64	25	
1,2,4-Trimethylbenzene	0.0181	0.0020	mg/Kg wet	0.0200		90.6	70-130	3.79	25	
1,3,5-Trimethylbenzene	0.0190	0.0020	mg/Kg wet	0.0200		95.0	70-130	1.91	25	
Vinyl Chloride	0.0162	0.010	mg/Kg wet	0.0200		80.9	40-130	4.59	25	†
m+p Xylene	0.0372	0.0040	mg/Kg wet	0.0400		93.0	70-130	2.50	25	
o-Xylene	0.0186	0.0020	mg/Kg wet	0.0200		93.0	70-130	2.65	25	
Surrogate: 1,2-Dichloroethane-d4	*0.0495*		mg/Kg wet	0.0500		98.9	70-130			
Surrogate: Toluene-d8	*0.0491*		mg/Kg wet	0.0500		98.2	70-130			
Surrogate: 4-Bromofluorobenzene	*0.0509*		mg/Kg wet	0.0500		102	70-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B315384 - SW-846 3546										
Blank (B315384-BLK1)				Prepared: 08/18/22 Analyzed: 08/22/22						
Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
Acetophenone	ND	0.34	mg/Kg wet							
Aniline	ND	0.34	mg/Kg wet							
Anthracene	ND	0.17	mg/Kg wet							
Benzidine	ND	0.66	mg/Kg wet							V-04, V-35
Benzo(a)anthracene	ND	0.17	mg/Kg wet							
Benzo(a)pyrene	ND	0.17	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.17	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.17	mg/Kg wet							
Benzo(k)fluoranthene	ND	0.17	mg/Kg wet							
Benzoic Acid	ND	1.0	mg/Kg wet							
Bis(2-chloroethoxy)methane	ND	0.34	mg/Kg wet							
Bis(2-chloroethyl)ether	ND	0.34	mg/Kg wet							
Bis(2-chloroisopropyl)ether	ND	0.34	mg/Kg wet							
Bis(2-Ethylhexyl)phthalate	ND	0.34	mg/Kg wet							
4-Bromophenylphenylether	ND	0.34	mg/Kg wet							
Butylbenzylphthalate	ND	0.34	mg/Kg wet							
Carbazole	ND	0.17	mg/Kg wet							
4-Chloroaniline	ND	0.66	mg/Kg wet							
4-Chloro-3-methylphenol	ND	0.66	mg/Kg wet							
2-Chloronaphthalene	ND	0.34	mg/Kg wet							
2-Chlorophenol	ND	0.34	mg/Kg wet							
4-Chlorophenylphenylether	ND	0.34	mg/Kg wet							
Chrysene	ND	0.17	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.17	mg/Kg wet							
Dibenzofuran	ND	0.34	mg/Kg wet							
Di-n-butylphthalate	ND	0.34	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.34	mg/Kg wet							
3,3-Dichlorobenzidine	ND	0.17	mg/Kg wet							
2,4-Dichlorophenol	ND	0.34	mg/Kg wet							
Diethylphthalate	ND	0.34	mg/Kg wet							
2,4-Dimethylphenol	ND	0.34	mg/Kg wet							
Dimethylphthalate	ND	0.34	mg/Kg wet							
4,6-Dinitro-2-methylphenol	ND	0.34	mg/Kg wet							
2,4-Dinitrophenol	ND	0.66	mg/Kg wet							V-04
2,4-Dinitrotoluene	ND	0.34	mg/Kg wet							
2,6-Dinitrotoluene	ND	0.34	mg/Kg wet							
Di-n-octylphthalate	ND	0.34	mg/Kg wet							
1,2-Diphenylhydrazine/Azobenzene	ND	0.34	mg/Kg wet							
Fluoranthene	ND	0.17	mg/Kg wet							
Fluorene	ND	0.17	mg/Kg wet							
Hexachlorobenzene	ND	0.34	mg/Kg wet							
Hexachlorobutadiene	ND	0.34	mg/Kg wet							
Hexachlorocyclopentadiene	ND	0.34	mg/Kg wet							L-04, V-05
Hexachloroethane	ND	0.34	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg wet							
Isophorone	ND	0.34	mg/Kg wet							
1-Methylnaphthalene	ND	0.17	mg/Kg wet							
2-Methylnaphthalene	ND	0.17	mg/Kg wet							

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B315384 - SW-846 3546										
Blank (B315384-BLK1)				Prepared: 08/18/22 Analyzed: 08/22/22						
2-Methylphenol	ND	0.34	mg/Kg wet							
3/4-Methylphenol	ND	0.34	mg/Kg wet							
Naphthalene	ND	0.17	mg/Kg wet							
2-Nitroaniline	ND	0.34	mg/Kg wet							
3-Nitroaniline	ND	0.34	mg/Kg wet							
4-Nitroaniline	ND	0.34	mg/Kg wet							
Nitrobenzene	ND	0.34	mg/Kg wet							
2-Nitrophenol	ND	0.34	mg/Kg wet							
4-Nitrophenol	ND	0.66	mg/Kg wet							
N-Nitrosodimethylamine	ND	0.34	mg/Kg wet							
N-Nitrosodiphenylamine/Diphenylamine	ND	0.34	mg/Kg wet							
N-Nitrosodi-n-propylamine	ND	0.34	mg/Kg wet							
Pentachloronitrobenzene	ND	0.34	mg/Kg wet							
Pentachlorophenol	ND	0.34	mg/Kg wet							
Phenanthrene	ND	0.17	mg/Kg wet							
Phenol	ND	0.34	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							
Pyridine	ND	0.34	mg/Kg wet							
1,2,4,5-Tetrachlorobenzene	ND	0.34	mg/Kg wet							
1,2,4-Trichlorobenzene	ND	0.34	mg/Kg wet							
2,4,5-Trichlorophenol	ND	0.34	mg/Kg wet							
2,4,6-Trichlorophenol	ND	0.34	mg/Kg wet							
Surrogate: 2-Fluorophenol	*4.54*		mg/Kg wet	6.67		68.1	30-130			
Surrogate: Phenol-d6	*4.59*		mg/Kg wet	6.67		68.8	30-130			
Surrogate: Nitrobenzene-d5	*3.35*		mg/Kg wet	3.33		100	30-130			
Surrogate: 2-Fluorobiphenyl	*2.77*		mg/Kg wet	3.33		83.0	30-130			
Surrogate: 2,4,6-Tribromophenol	*6.43*		mg/Kg wet	6.67		96.5	30-130			
Surrogate: p-Terphenyl-d14	*3.06*		mg/Kg wet	3.33		91.7	30-130			
LCS (B315384-BS1)				Prepared: 08/18/22 Analyzed: 08/22/22						
Acenaphthene	1.24	0.17	mg/Kg wet	1.67		74.2	40-140			
Acenaphthylene	1.36	0.17	mg/Kg wet	1.67		81.7	40-140			
Acetophenone	1.23	0.34	mg/Kg wet	1.67		73.9	40-140			
Aniline	0.956	0.34	mg/Kg wet	1.67		57.3	10-140			†
Anthracene	1.38	0.17	mg/Kg wet	1.67		83.1	40-140			
Benzidine	1.83	0.66	mg/Kg wet	1.67		110	40-140			V-04, V-35
Benzo(a)anthracene	1.34	0.17	mg/Kg wet	1.67		80.6	40-140			
Benzo(a)pyrene	1.29	0.17	mg/Kg wet	1.67		77.3	40-140			
Benzo(b)fluoranthene	1.32	0.17	mg/Kg wet	1.67		79.3	40-140			
Benzo(g,h,i)perylene	1.34	0.17	mg/Kg wet	1.67		80.5	40-140			
Benzo(k)fluoranthene	1.41	0.17	mg/Kg wet	1.67		84.7	40-140			
Benzoic Acid	0.854	1.0	mg/Kg wet	1.67		51.2	30-130			
Bis(2-chloroethoxy)methane	1.38	0.34	mg/Kg wet	1.67		83.1	40-140			
Bis(2-chloroethyl)ether	1.18	0.34	mg/Kg wet	1.67		71.0	40-140			
Bis(2-chloroisopropyl)ether	1.53	0.34	mg/Kg wet	1.67		91.8	40-140			
Bis(2-Ethylhexyl)phthalate	1.47	0.34	mg/Kg wet	1.67		88.0	40-140			
4-Bromophenylphenylether	1.44	0.34	mg/Kg wet	1.67		86.2	40-140			
Butylbenzylphthalate	1.38	0.34	mg/Kg wet	1.67		83.0	40-140			
Carbazole	1.38	0.17	mg/Kg wet	1.67		82.5	40-140			
4-Chloroaniline	0.961	0.66	mg/Kg wet	1.67		57.7	10-140			†
4-Chloro-3-methylphenol	1.44	0.66	mg/Kg wet	1.67		86.6	30-130			
2-Chloronaphthalene	1.13	0.34	mg/Kg wet	1.67		67.8	40-140			

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B315384 - SW-846 3546												
LCS (B315384-BS1)				Prepared: 08/18/22 Analyzed: 08/22/22								
2-Chlorophenol	1.22	0.34	mg/Kg wet	1.67		73.1		30-130				
4-Chlorophenylphenylether	1.46	0.34	mg/Kg wet	1.67		87.8		40-140				
Chrysene	1.29	0.17	mg/Kg wet	1.67		77.6		40-140				
Dibenz(a,h)anthracene	1.37	0.17	mg/Kg wet	1.67		82.4		40-140				
Dibenzofuran	1.43	0.34	mg/Kg wet	1.67		86.0		40-140				
Di-n-butylphthalate	1.44	0.34	mg/Kg wet	1.67		86.7		40-140				
1,2-Dichlorobenzene	1.13	0.34	mg/Kg wet	1.67		68.0		40-140				
1,3-Dichlorobenzene	1.08	0.34	mg/Kg wet	1.67		64.6		40-140				
1,4-Dichlorobenzene	1.10	0.34	mg/Kg wet	1.67		66.1		40-140				
3,3-Dichlorobenzidine	1.10	0.17	mg/Kg wet	1.67		66.3		20-140				†
2,4-Dichlorophenol	1.41	0.34	mg/Kg wet	1.67		84.3		30-130				
Diethylphthalate	1.50	0.34	mg/Kg wet	1.67		90.2		40-140				
2,4-Dimethylphenol	1.45	0.34	mg/Kg wet	1.67		86.8		30-130				
Dimethylphthalate	1.49	0.34	mg/Kg wet	1.67		89.6		40-140				
4,6-Dinitro-2-methylphenol	1.28	0.34	mg/Kg wet	1.67		76.7		30-130				
2,4-Dinitrophenol	0.711	0.66	mg/Kg wet	1.67		42.7		30-130			V-04	
2,4-Dinitrotoluene	1.45	0.34	mg/Kg wet	1.67		87.2		40-140				
2,6-Dinitrotoluene	1.45	0.34	mg/Kg wet	1.67		86.8		40-140				
Di-n-octylphthalate	1.36	0.34	mg/Kg wet	1.67		81.3		40-140				
1,2-Diphenylhydrazine/Azobenzene	1.36	0.34	mg/Kg wet	1.67		81.3		40-140				
Fluoranthene	1.38	0.17	mg/Kg wet	1.67		82.9		40-140				
Fluorene	1.43	0.17	mg/Kg wet	1.67		85.8		40-140				
Hexachlorobenzene	1.49	0.34	mg/Kg wet	1.67		89.5		40-140				
Hexachlorobutadiene	1.24	0.34	mg/Kg wet	1.67		74.4		40-140				
Hexachlorocyclopentadiene	0.608	0.34	mg/Kg wet	1.67		**36.5**	*	40-140			L-04, V-05	
Hexachloroethane	1.07	0.34	mg/Kg wet	1.67		64.4		40-140				
Indeno(1,2,3-cd)pyrene	1.43	0.17	mg/Kg wet	1.67		85.5		40-140				
Isophorone	1.45	0.34	mg/Kg wet	1.67		86.9		40-140				
1-Methylnaphthalene	1.19	0.17	mg/Kg wet	1.67		71.4		40-140				
2-Methylnaphthalene	1.39	0.17	mg/Kg wet	1.67		83.5		40-140				
2-Methylphenol	1.30	0.34	mg/Kg wet	1.67		78.3		30-130				
3/4-Methylphenol	1.37	0.34	mg/Kg wet	1.67		82.0		30-130				
Naphthalene	1.31	0.17	mg/Kg wet	1.67		78.5		40-140				
2-Nitroaniline	1.36	0.34	mg/Kg wet	1.67		81.4		40-140				
3-Nitroaniline	1.27	0.34	mg/Kg wet	1.67		76.4		30-140				†
4-Nitroaniline	1.37	0.34	mg/Kg wet	1.67		82.2		40-140				
Nitrobenzene	1.26	0.34	mg/Kg wet	1.67		75.5		40-140				
2-Nitrophenol	1.39	0.34	mg/Kg wet	1.67		83.3		30-130				
4-Nitrophenol	1.48	0.66	mg/Kg wet	1.67		88.9		30-130				
N-Nitrosodimethylamine	1.29	0.34	mg/Kg wet	1.67		77.6		40-140				
N-Nitrosodiphenylamine/Diphenylamine	1.46	0.34	mg/Kg wet	1.67		87.7		40-140				
N-Nitrosodi-n-propylamine	1.42	0.34	mg/Kg wet	1.67		85.0		40-140				
Pentachloronitrobenzene	1.55	0.34	mg/Kg wet	1.67		93.1		40-140				
Pentachlorophenol	1.07	0.34	mg/Kg wet	1.67		64.0		30-130				
Phenanthrene	1.39	0.17	mg/Kg wet	1.67		83.5		40-140				
Phenol	1.27	0.34	mg/Kg wet	1.67		76.3		30-130				
Pyrene	1.34	0.17	mg/Kg wet	1.67		80.7		40-140				
Pyridine	0.868	0.34	mg/Kg wet	1.67		52.1		30-140				†
1,2,4,5-Tetrachlorobenzene	1.29	0.34	mg/Kg wet	1.67		77.2		40-140				
1,2,4-Trichlorobenzene	1.24	0.34	mg/Kg wet	1.67		74.2		40-140				
2,4,5-Trichlorophenol	1.44	0.34	mg/Kg wet	1.67		86.4		30-130				
2,4,6-Trichlorophenol	1.44	0.34	mg/Kg wet	1.67		86.4		30-130				

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B315384 - SW-846 3546											
LCS (B315384-BS1)				Prepared: 08/18/22 Analyzed: 08/22/22							
Surrogate: 2-Fluorophenol	*5.01*		mg/Kg wet	6.67		75.2	30-130				
Surrogate: Phenol-d6	*5.18*		mg/Kg wet	6.67		77.7	30-130				
Surrogate: Nitrobenzene-d5	*3.60*		mg/Kg wet	3.33		108	30-130				
Surrogate: 2-Fluorobiphenyl	*3.07*		mg/Kg wet	3.33		92.2	30-130				
Surrogate: 2,4,6-Tribromophenol	*6.79*		mg/Kg wet	6.67		102	30-130				
Surrogate: p-Terphenyl-d14	*3.02*		mg/Kg wet	3.33		90.6	30-130				
LCS Dup (B315384-BSD1)				Prepared: 08/18/22 Analyzed: 08/22/22							
Acenaphthene	1.22	0.17	mg/Kg wet	1.67		73.2	40-140	1.44	30		
Acenaphthylene	1.34	0.17	mg/Kg wet	1.67		80.4	40-140	1.60	30		
Acetophenone	1.21	0.34	mg/Kg wet	1.67		72.8	40-140	1.50	30		
Aniline	1.02	0.34	mg/Kg wet	1.67		61.4	10-140	6.81	50		† ‡
Anthracene	1.35	0.17	mg/Kg wet	1.67		80.8	40-140	2.73	30		
Benzidine	1.88	0.66	mg/Kg wet	1.67		113	40-140	2.46	30	V-04, V-35	
Benzo(a)anthracene	1.28	0.17	mg/Kg wet	1.67		76.7	40-140	4.86	30		
Benzo(a)pyrene	1.25	0.17	mg/Kg wet	1.67		74.9	40-140	3.18	30		
Benzo(b)fluoranthene	1.26	0.17	mg/Kg wet	1.67		75.9	40-140	4.36	30		
Benzo(g,h,i)perylene	1.32	0.17	mg/Kg wet	1.67		79.2	40-140	1.63	30		
Benzo(k)fluoranthene	1.35	0.17	mg/Kg wet	1.67		80.9	40-140	4.59	30		
Benzoic Acid	0.824	1.0	mg/Kg wet	1.67		49.5	30-130	3.50	50		‡
Bis(2-chloroethoxy)methane	1.36	0.34	mg/Kg wet	1.67		81.6	40-140	1.77	30		
Bis(2-chloroethyl)ether	1.19	0.34	mg/Kg wet	1.67		71.6	40-140	0.841	30		
Bis(2-chloroisopropyl)ether	1.56	0.34	mg/Kg wet	1.67		93.9	40-140	2.20	30		
Bis(2-Ethylhexyl)phthalate	1.40	0.34	mg/Kg wet	1.67		84.2	40-140	4.32	30		
4-Bromophenylphenylether	1.33	0.34	mg/Kg wet	1.67		80.0	40-140	7.48	30		
Butylbenzylphthalate	1.32	0.34	mg/Kg wet	1.67		79.0	40-140	4.96	30		
Carbazole	1.34	0.17	mg/Kg wet	1.67		80.5	40-140	2.50	30		
4-Chloroaniline	0.946	0.66	mg/Kg wet	1.67		56.8	10-140	1.54	30		†
4-Chloro-3-methylphenol	1.39	0.66	mg/Kg wet	1.67		83.3	30-130	3.86	30		
2-Chloronaphthalene	1.10	0.34	mg/Kg wet	1.67		66.2	40-140	2.48	30		
2-Chlorophenol	1.20	0.34	mg/Kg wet	1.67		72.2	30-130	1.18	30		
4-Chlorophenylphenylether	1.38	0.34	mg/Kg wet	1.67		82.8	40-140	5.86	30		
Chrysene	1.24	0.17	mg/Kg wet	1.67		74.3	40-140	4.29	30		
Dibenz(a,h)anthracene	1.35	0.17	mg/Kg wet	1.67		80.9	40-140	1.84	30		
Dibenzofuran	1.39	0.34	mg/Kg wet	1.67		83.2	40-140	3.28	30		
Di-n-butylphthalate	1.39	0.34	mg/Kg wet	1.67		83.2	40-140	4.05	30		
1,2-Dichlorobenzene	1.10	0.34	mg/Kg wet	1.67		65.8	40-140	3.29	30		
1,3-Dichlorobenzene	1.05	0.34	mg/Kg wet	1.67		62.9	40-140	2.57	30		
1,4-Dichlorobenzene	1.07	0.34	mg/Kg wet	1.67		64.0	40-140	3.29	30		
3,3-Dichlorobenzidine	1.08	0.17	mg/Kg wet	1.67		64.9	20-140	2.10	50		† ‡
2,4-Dichlorophenol	1.33	0.34	mg/Kg wet	1.67		79.9	30-130	5.38	30		
Diethylphthalate	1.43	0.34	mg/Kg wet	1.67		85.6	40-140	5.28	30		
2,4-Dimethylphenol	1.39	0.34	mg/Kg wet	1.67		83.5	30-130	3.88	30		
Dimethylphthalate	1.43	0.34	mg/Kg wet	1.67		85.7	40-140	4.45	30		
4,6-Dinitro-2-methylphenol	1.23	0.34	mg/Kg wet	1.67		73.6	30-130	4.18	30		
2,4-Dinitrophenol	0.696	0.66	mg/Kg wet	1.67		41.8	30-130	2.18	30	V-04	
2,4-Dinitrotoluene	1.39	0.34	mg/Kg wet	1.67		83.5	40-140	4.36	30		
2,6-Dinitrotoluene	1.41	0.34	mg/Kg wet	1.67		84.6	40-140	2.57	30		
Di-n-octylphthalate	1.28	0.34	mg/Kg wet	1.67		76.9	40-140	5.64	30		
1,2-Diphenylhydrazine/Azobenzene	1.34	0.34	mg/Kg wet	1.67		80.6	40-140	0.889	30		
Fluoranthene	1.34	0.17	mg/Kg wet	1.67		80.7	40-140	2.76	30		
Fluorene	1.39	0.17	mg/Kg wet	1.67		83.1	40-140	3.10	30		

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B315384 - SW-846 3546												
LCS Dup (B315384-BSD1)				Prepared: 08/18/22 Analyzed: 08/22/22								
Hexachlorobenzene	1.38	0.34	mg/Kg wet	1.67		82.6		40-140	7.97	30		
Hexachlorobutadiene	1.18	0.34	mg/Kg wet	1.67		70.8		40-140	4.88	30		
Hexachlorocyclopentadiene	0.575	0.34	mg/Kg wet	1.67		**34.5**	*	40-140	5.64	30	L-04, V-05	
Hexachloroethane	1.07	0.34	mg/Kg wet	1.67		64.2		40-140	0.187	30		
Indeno(1,2,3-cd)pyrene	1.37	0.17	mg/Kg wet	1.67		82.3		40-140	3.89	30		
Isophorone	1.42	0.34	mg/Kg wet	1.67		85.5		40-140	1.65	30		
1-Methylnaphthalene	1.14	0.17	mg/Kg wet	1.67		68.7		40-140	3.86	30		
2-Methylnaphthalene	1.35	0.17	mg/Kg wet	1.67		80.9		40-140	3.19	30		
2-Methylphenol	1.27	0.34	mg/Kg wet	1.67		76.4		30-130	2.43	30		
3/4-Methylphenol	1.33	0.34	mg/Kg wet	1.67		79.7		30-130	2.84	30		
Naphthalene	1.29	0.17	mg/Kg wet	1.67		77.5		40-140	1.31	30		
2-Nitroaniline	1.37	0.34	mg/Kg wet	1.67		82.4		40-140	1.20	30		
3-Nitroaniline	1.27	0.34	mg/Kg wet	1.67		75.9		30-140	0.578	30		†
4-Nitroaniline	1.46	0.34	mg/Kg wet	1.67		87.3		40-140	6.09	30		
Nitrobenzene	1.29	0.34	mg/Kg wet	1.67		77.1		40-140	2.12	30		
2-Nitrophenol	1.36	0.34	mg/Kg wet	1.67		81.8		30-130	1.84	30		
4-Nitrophenol	1.49	0.66	mg/Kg wet	1.67		89.4		30-130	0.583	50		‡
N-Nitrosodimethylamine	1.36	0.34	mg/Kg wet	1.67		81.4		40-140	4.70	30		
N-Nitrosodiphenylamine/Diphenylamine	1.40	0.34	mg/Kg wet	1.67		83.9		40-140	4.34	30		
N-Nitrosodi-n-propylamine	1.41	0.34	mg/Kg wet	1.67		84.8		40-140	0.330	30		
Pentachloronitrobenzene	1.47	0.34	mg/Kg wet	1.67		88.1		40-140	5.49	30		
Pentachlorophenol	0.997	0.34	mg/Kg wet	1.67		59.8		30-130	6.75	30		
Phenanthrene	1.35	0.17	mg/Kg wet	1.67		80.8		40-140	3.21	30		
Phenol	1.28	0.34	mg/Kg wet	1.67		76.6		30-130	0.314	30		
Pyrene	1.28	0.17	mg/Kg wet	1.67		76.5		40-140	5.34	30		
Pyridine	0.900	0.34	mg/Kg wet	1.67		54.0		30-140	3.70	30		†
1,2,4,5-Tetrachlorobenzene	1.24	0.34	mg/Kg wet	1.67		74.7		40-140	3.24	30		
1,2,4-Trichlorobenzene	1.22	0.34	mg/Kg wet	1.67		73.0		40-140	1.71	30		
2,4,5-Trichlorophenol	1.38	0.34	mg/Kg wet	1.67		82.7		30-130	4.33	30		
2,4,6-Trichlorophenol	1.36	0.34	mg/Kg wet	1.67		81.5		30-130	5.93	30		
Surrogate: 2-Fluorophenol	*4.94*		mg/Kg wet	6.67		74.1		30-130				
Surrogate: Phenol-d6	*5.14*		mg/Kg wet	6.67		77.1		30-130				
Surrogate: Nitrobenzene-d5	*3.65*		mg/Kg wet	3.33		109		30-130				
Surrogate: 2-Fluorobiphenyl	*2.95*		mg/Kg wet	3.33		88.4		30-130				
Surrogate: 2,4,6-Tribromophenol	*6.35*		mg/Kg wet	6.67		95.2		30-130				
Surrogate: p-Terphenyl-d14	*2.83*		mg/Kg wet	3.33		84.8		30-130				
Matrix Spike (B315384-MS1)		**Source: 22H0999-02**		Prepared: 08/18/22 Analyzed: 08/23/22								
Acenaphthene	1.61	1.1	mg/Kg dry	2.08	ND	77.4		40-140				
Acenaphthylene	1.71	1.1	mg/Kg dry	2.08	ND	82.4		40-140				
Acetophenone	1.75	2.1	mg/Kg dry	2.08	ND	84.2		40-140				
Aniline	0.139	2.1	mg/Kg dry	2.08	ND	**6.70**	*	40-140			MS-09	
Anthracene	1.83	1.1	mg/Kg dry	2.08	ND	88.0		40-140				
Benzidine	0.0623	4.1	mg/Kg dry	2.08	ND	**3.00**	*	40-140			MS-09, V-04, V-35	
Benzo(a)anthracene	2.03	1.1	mg/Kg dry	2.08	0.482	74.6		40-140				
Benzo(a)pyrene	1.84	1.1	mg/Kg dry	2.08	0.413	68.9		40-140				
Benzo(b)fluoranthene	1.69	1.1	mg/Kg dry	2.08	ND	81.6		40-140				
Benzo(g,h,i)perylene	2.16	1.1	mg/Kg dry	2.08	ND	104		40-140				
Benzo(k)fluoranthene	1.61	1.1	mg/Kg dry	2.08	ND	77.3		40-140				
Benzoic Acid	1.27	6.2	mg/Kg dry	2.08	ND	61.2		40-140				
Bis(2-chloroethoxy)methane	1.76	2.1	mg/Kg dry	2.08	ND	84.9		40-140				
Bis(2-chloroethyl)ether	1.63	2.1	mg/Kg dry	2.08	ND	78.5		40-140			R-06	

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B315384 - SW-846 3546											
Matrix Spike (B315384-MS1)		**Source: 22H0999-02**		Prepared: 08/18/22 Analyzed: 08/23/22							
Bis(2-chloroisopropyl)ether	2.23	2.1	mg/Kg dry	2.08	ND	108		40-140			R-06
Bis(2-Ethylhexyl)phthalate	2.61	2.1	mg/Kg dry	2.08	ND	126		40-140			
4-Bromophenylphenylether	1.70	2.1	mg/Kg dry	2.08	ND	81.8		40-140			
Butylbenzylphthalate	2.17	2.1	mg/Kg dry	2.08	ND	105		40-140			R-06
Carbazole	1.73	1.1	mg/Kg dry	2.08	ND	83.1		40-140			
4-Chloroaniline	0.908	4.1	mg/Kg dry	2.08	ND	43.7		40-140			
4-Chloro-3-methylphenol	1.85	4.1	mg/Kg dry	2.08	ND	88.9		30-130			
2-Chloronaphthalene	1.42	2.1	mg/Kg dry	2.08	ND	68.3		40-140			
2-Chlorophenol	1.63	2.1	mg/Kg dry	2.08	ND	78.3		30-130			
4-Chlorophenylphenylether	1.70	2.1	mg/Kg dry	2.08	ND	82.1		40-140			
Chrysene	2.24	1.1	mg/Kg dry	2.08	0.710	73.5		40-140			
Dibenz(a,h)anthracene	1.84	1.1	mg/Kg dry	2.08	ND	88.8		40-140			
Dibenzofuran	1.82	2.1	mg/Kg dry	2.08	ND	87.7		40-140			
Di-n-butylphthalate	1.77	2.1	mg/Kg dry	2.08	ND	85.0		40-140			
1,2-Dichlorobenzene	1.57	2.1	mg/Kg dry	2.08	ND	75.8		40-140			
1,3-Dichlorobenzene	1.44	2.1	mg/Kg dry	2.08	ND	69.5		40-140			
1,4-Dichlorobenzene	1.58	2.1	mg/Kg dry	2.08	ND	76.3		40-140			
3,3-Dichlorobenzidine	0.0623	1.1	mg/Kg dry	2.08	ND	**3.00**	*	40-140			MS-09
2,4-Dichlorophenol	1.80	2.1	mg/Kg dry	2.08	ND	86.9		30-130			
Diethylphthalate	1.87	2.1	mg/Kg dry	2.08	ND	90.1		40-140			
2,4-Dimethylphenol	1.93	2.1	mg/Kg dry	2.08	ND	92.7		30-130			
Dimethylphthalate	1.99	2.1	mg/Kg dry	2.08	ND	95.6		40-140			
4,6-Dinitro-2-methylphenol	2.12	2.1	mg/Kg dry	2.08	ND	102		30-130			
2,4-Dinitrophenol	0.295	4.1	mg/Kg dry	2.08	ND	**14.2**	*	30-130			MS-09, V-04
2,4-Dinitrotoluene	1.73	2.1	mg/Kg dry	2.08	ND	83.1		40-140			
2,6-Dinitrotoluene	1.75	2.1	mg/Kg dry	2.08	ND	84.4		40-140			
Di-n-octylphthalate	1.71	2.1	mg/Kg dry	2.08	ND	82.4		40-140			
1,2-Diphenylhydrazine/Azobenzene	1.68	2.1	mg/Kg dry	2.08	ND	80.9		40-140			
Fluoranthene	2.08	1.1	mg/Kg dry	2.08	0.527	74.9		40-140			
Fluorene	1.85	1.1	mg/Kg dry	2.08	0.449	67.4		40-140			
Hexachlorobenzene	1.63	2.1	mg/Kg dry	2.08	ND	78.7		40-140			
Hexachlorobutadiene	1.57	2.1	mg/Kg dry	2.08	ND	75.4		40-140			
Hexachlorocyclopentadiene	ND	2.1	mg/Kg dry	2.08	ND		*	30-130			MS-09, V-05
Hexachloroethane	0.910	2.1	mg/Kg dry	2.08	ND	43.8		40-140			
Indeno(1,2,3-cd)pyrene	2.04	1.1	mg/Kg dry	2.08	ND	98.0		40-140			
Isophorone	1.97	2.1	mg/Kg dry	2.08	ND	94.7		40-140			
1-Methylnaphthalene	1.95	1.1	mg/Kg dry	2.08	1.63	**15.5**	*	40-140			MS-23
2-Methylnaphthalene	2.69	1.1	mg/Kg dry	2.08	3.11	**-20.2**	*	40-140			MS-23
2-Methylphenol	1.69	2.1	mg/Kg dry	2.08	ND	81.6		30-130			
3/4-Methylphenol	1.83	2.1	mg/Kg dry	2.08	ND	88.1		30-130			
Naphthalene	1.91	1.1	mg/Kg dry	2.08	ND	92.1		40-140			
2-Nitroaniline	1.81	2.1	mg/Kg dry	2.08	ND	87.0		40-140			
3-Nitroaniline	1.07	2.1	mg/Kg dry	2.08	ND	51.6		40-140			R-06
4-Nitroaniline	0.932	2.1	mg/Kg dry	2.08	ND	44.9		40-140			
Nitrobenzene	1.73	2.1	mg/Kg dry	2.08	ND	83.5		40-140			
2-Nitrophenol	1.74	2.1	mg/Kg dry	2.08	ND	83.6		30-130			
4-Nitrophenol	1.87	4.1	mg/Kg dry	2.08	ND	90.2		30-130			
N-Nitrosodimethylamine	1.66	2.1	mg/Kg dry	2.08	ND	80.1		40-140			R-06
N-Nitrosodiphenylamine/Diphenylamine	2.19	2.1	mg/Kg dry	2.08	ND	106		40-140			
N-Nitrosodi-n-propylamine	2.00	2.1	mg/Kg dry	2.08	ND	96.1		40-140			
Pentachloronitrobenzene	1.70	2.1	mg/Kg dry	2.08	ND	81.8		40-140			
Pentachlorophenol	1.24	2.1	mg/Kg dry	2.08	ND	59.8		30-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B315384 - SW-846 3546											
Matrix Spike (B315384-MS1)		**Source: 22H0999-02**		Prepared: 08/18/22 Analyzed: 08/23/22							
Phenanthrene	2.44	1.1	mg/Kg dry	2.08	2.27	**8.60**	*	40-140			MS-23
Phenol	1.71	2.1	mg/Kg dry	2.08	ND	82.4		30-130			R-06
Pyrene	3.49	1.1	mg/Kg dry	2.08	1.83	79.6		40-140			
Pyridine	0.754	2.1	mg/Kg dry	2.08	ND	**36.3**	*	40-140			MS-09, R-06
1,2,4,5-Tetrachlorobenzene	1.59	2.1	mg/Kg dry	2.08	ND	76.6		40-140			
1,2,4-Trichlorobenzene	1.61	2.1	mg/Kg dry	2.08	ND	77.4		40-140			
2,4,5-Trichlorophenol	1.70	2.1	mg/Kg dry	2.08	ND	81.7		30-130			
2,4,6-Trichlorophenol	1.71	2.1	mg/Kg dry	2.08	ND	82.2		30-130			
Surrogate: 2-Fluorophenol	*6.45*		mg/Kg dry	8.31		77.7		30-130			
Surrogate: Phenol-d6	*6.94*		mg/Kg dry	8.31		83.5		30-130			
Surrogate: Nitrobenzene-d5	*4.93*		mg/Kg dry	4.15		119		30-130			
Surrogate: 2-Fluorobiphenyl	*3.84*		mg/Kg dry	4.15		92.6		30-130			
Surrogate: 2,4,6-Tribromophenol	*7.18*		mg/Kg dry	8.31		86.5		30-130			
Surrogate: p-Terphenyl-d14	*4.54*		mg/Kg dry	4.15		109		30-130			
Matrix Spike Dup (B315384-MSD1)		**Source: 22H0999-02**		Prepared: 08/18/22 Analyzed: 08/23/22							
Acenaphthene	1.56	1.1	mg/Kg dry	2.08	ND	75.3		40-140	2.75	30	
Acenaphthylene	1.46	1.1	mg/Kg dry	2.08	ND	70.5		40-140	15.6	30	
Acetophenone	1.41	2.1	mg/Kg dry	2.08	ND	67.7		40-140	21.7	30	
Aniline	0.104	2.1	mg/Kg dry	2.08	ND	**5.00**	*	40-140		30	MS-09
Anthracene	2.00	1.1	mg/Kg dry	2.08	ND	96.4		40-140	9.11	30	
Benzidine	0.0312	4.1	mg/Kg dry	2.08	ND	**1.50**	*	40-140		30	MS-09, V-04, V-35
Benzo(a)anthracene	1.96	1.1	mg/Kg dry	2.08	0.482	71.3		40-140	3.43	30	
Benzo(a)pyrene	1.82	1.1	mg/Kg dry	2.08	0.413	67.9		40-140	1.13	30	
Benzo(b)fluoranthene	1.54	1.1	mg/Kg dry	2.08	ND	74.3		40-140	9.36	30	
Benzo(g,h,i)perylene	2.11	1.1	mg/Kg dry	2.08	ND	102		40-140	2.04	30	
Benzo(k)fluoranthene	1.39	1.1	mg/Kg dry	2.08	ND	67.1		40-140	14.1	30	
Benzoic Acid	1.15	6.2	mg/Kg dry	2.08	ND	55.2		40-140		30	
Bis(2-chloroethoxy)methane	1.37	2.1	mg/Kg dry	2.08	ND	65.9		40-140	25.2	30	
Bis(2-chloroethyl)ether	1.18	2.1	mg/Kg dry	2.08	ND	56.6		40-140	**32.4**	* 30	R-06
Bis(2-chloroisopropyl)ether	1.54	2.1	mg/Kg dry	2.08	ND	74.1		40-140	**36.8**	* 30	R-06
Bis(2-Ethylhexyl)phthalate	2.24	2.1	mg/Kg dry	2.08	ND	108		40-140	15.4	30	
4-Bromophenylphenylether	1.37	2.1	mg/Kg dry	2.08	ND	66.0		40-140	21.4	30	
Butylbenzylphthalate	1.60	2.1	mg/Kg dry	2.08	ND	77.1		40-140	**30.4**	* 30	R-06
Carbazole	1.49	1.1	mg/Kg dry	2.08	ND	71.7		40-140	14.7	30	
4-Chloroaniline	0.891	4.1	mg/Kg dry	2.08	ND	42.9		40-140	1.85	30	
4-Chloro-3-methylphenol	1.43	4.1	mg/Kg dry	2.08	ND	69.0		30-130	25.2	30	
2-Chloronaphthalene	1.18	2.1	mg/Kg dry	2.08	ND	56.9		40-140	18.2	30	
2-Chlorophenol	1.23	2.1	mg/Kg dry	2.08	ND	59.4		30-130	27.5	30	
4-Chlorophenylphenylether	1.38	2.1	mg/Kg dry	2.08	ND	66.6		40-140	20.8	30	
Chrysene	2.60	1.1	mg/Kg dry	2.08	0.710	90.9		40-140	14.9	30	
Dibenz(a,h)anthracene	1.63	1.1	mg/Kg dry	2.08	ND	78.5		40-140	12.3	30	
Dibenzofuran	1.72	2.1	mg/Kg dry	2.08	ND	82.6		40-140	5.99	30	
Di-n-butylphthalate	1.42	2.1	mg/Kg dry	2.08	ND	68.3		40-140	21.8	30	
1,2-Dichlorobenzene	1.23	2.1	mg/Kg dry	2.08	ND	59.4		40-140	24.3	30	
1,3-Dichlorobenzene	1.10	2.1	mg/Kg dry	2.08	ND	53.2		40-140	26.6	30	
1,4-Dichlorobenzene	1.29	2.1	mg/Kg dry	2.08	ND	62.3		40-140	20.2	30	
3,3-Dichlorobenzidine	0.0498	1.1	mg/Kg dry	2.08	ND	**2.40**	*	40-140		30	MS-09
2,4-Dichlorophenol	1.45	2.1	mg/Kg dry	2.08	ND	69.9		30-130	21.7	30	
Diethylphthalate	1.51	2.1	mg/Kg dry	2.08	ND	72.7		40-140	21.4	30	
2,4-Dimethylphenol	1.53	2.1	mg/Kg dry	2.08	ND	73.8		30-130	22.7	30	
Dimethylphthalate	1.69	2.1	mg/Kg dry	2.08	ND	81.6		40-140	15.8	30	

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD		RPD Limit	Notes
Batch B315384 - SW-846 3546												
Matrix Spike Dup (B315384-MSD1)	**Source: 22H0999-02**			Prepared: 08/18/22 Analyzed: 08/23/22								
4,6-Dinitro-2-methylphenol	2.10	2.1	mg/Kg dry	2.08	ND	101		30-130	1.28		30	
2,4-Dinitrophenol	0.426	4.1	mg/Kg dry	2.08	ND	**20.5**	*	30-130			30	MS-09, V-04
2,4-Dinitrotoluene	1.67	2.1	mg/Kg dry	2.08	ND	80.5		40-140	3.18		30	
2,6-Dinitrotoluene	1.40	2.1	mg/Kg dry	2.08	ND	67.4		40-140	22.4		30	
Di-n-octylphthalate	1.34	2.1	mg/Kg dry	2.08	ND	64.4		40-140	24.5		30	
1,2-Diphenylhydrazine/Azobenzene	1.30	2.1	mg/Kg dry	2.08	ND	62.7		40-140	25.3		30	
Fluoranthene	2.03	1.1	mg/Kg dry	2.08	0.527	72.4		40-140	2.52		30	
Fluorene	1.95	1.1	mg/Kg dry	2.08	0.449	72.5		40-140	5.57		30	
Hexachlorobenzene	1.37	2.1	mg/Kg dry	2.08	ND	66.2		40-140	17.3		30	
Hexachlorobutadiene	1.28	2.1	mg/Kg dry	2.08	ND	61.4		40-140	20.5		30	
Hexachlorocyclopentadiene	ND	2.1	mg/Kg dry	2.08	ND		*	30-130	NC		30	MS-09, V-05
Hexachloroethane	1.01	2.1	mg/Kg dry	2.08	ND	48.6		40-140	10.4		30	
Indeno(1,2,3-cd)pyrene	1.75	1.1	mg/Kg dry	2.08	ND	84.4		40-140	14.9		30	
Isophorone	1.57	2.1	mg/Kg dry	2.08	ND	75.8		40-140	22.2		30	
1-Methylnaphthalene	2.98	1.1	mg/Kg dry	2.08	1.63	65.3		40-140	**41.9**	*	30	R-06
2-Methylnaphthalene	4.91	1.1	mg/Kg dry	2.08	3.11	86.7		40-140	**58.4**	*	30	R-06
2-Methylphenol	1.28	2.1	mg/Kg dry	2.08	ND	61.8		30-130	27.6		30	
3/4-Methylphenol	1.38	2.1	mg/Kg dry	2.08	ND	66.5		30-130	27.9		30	
Naphthalene	1.83	1.1	mg/Kg dry	2.08	ND	88.0		40-140	4.55		30	
2-Nitroaniline	1.36	2.1	mg/Kg dry	2.08	ND	65.5		40-140	28.2		30	
3-Nitroaniline	0.613	2.1	mg/Kg dry	2.08	ND	**29.5**	*	40-140	**54.5**	*	30	MS-23
4-Nitroaniline	0.818	2.1	mg/Kg dry	2.08	ND	**39.4**	*	40-140	13.0		30	MS-22
Nitrobenzene	1.36	2.1	mg/Kg dry	2.08	ND	65.7		40-140	23.9		30	
2-Nitrophenol	1.41	2.1	mg/Kg dry	2.08	ND	67.9		30-130	20.7		30	
4-Nitrophenol	1.54	4.1	mg/Kg dry	2.08	ND	74.2		30-130	19.5		30	
N-Nitrosodimethylamine	1.12	2.1	mg/Kg dry	2.08	ND	53.7		40-140	**39.5**	*	30	R-06
N-Nitrosodiphenylamine/Diphenylamine	2.22	2.1	mg/Kg dry	2.08	ND	107		40-140	1.32		30	
N-Nitrosodi-n-propylamine	1.66	2.1	mg/Kg dry	2.08	ND	79.7		40-140	18.7		30	
Pentachloronitrobenzene	1.52	2.1	mg/Kg dry	2.08	ND	73.1		40-140	11.2		30	
Pentachlorophenol	1.00	2.1	mg/Kg dry	2.08	ND	48.2		30-130	21.5		30	
Phenanthrene	4.16	1.1	mg/Kg dry	2.08	2.27	91.2		40-140	**51.9**	*	30	R-06
Phenol	1.26	2.1	mg/Kg dry	2.08	ND	60.9		30-130	30.0		30	R-06
Pyrene	4.25	1.1	mg/Kg dry	2.08	1.83	116		40-140	19.7		30	
Pyridine	0.486	2.1	mg/Kg dry	2.08	ND	**23.4**	*	40-140	**43.2**	*	30	MS-09, R-06
1,2,4,5-Tetrachlorobenzene	1.30	2.1	mg/Kg dry	2.08	ND	62.6		40-140	20.1		30	
1,2,4-Trichlorobenzene	1.32	2.1	mg/Kg dry	2.08	ND	63.5		40-140	19.7		30	
2,4,5-Trichlorophenol	1.35	2.1	mg/Kg dry	2.08	ND	64.8		30-130	23.1		30	
2,4,6-Trichlorophenol	1.35	2.1	mg/Kg dry	2.08	ND	65.2		30-130	23.1		30	
Surrogate: 2-Fluorophenol	*4.82*		mg/Kg dry	8.31		58.1		30-130				
Surrogate: Phenol-d6	*5.21*		mg/Kg dry	8.31		62.8		30-130				
Surrogate: Nitrobenzene-d5	*3.86*		mg/Kg dry	4.15		92.9		30-130				
Surrogate: 2-Fluorobiphenyl	*3.06*		mg/Kg dry	4.15		73.7		30-130				
Surrogate: 2,4,6-Tribromophenol	*6.02*		mg/Kg dry	8.31		72.4		30-130				
Surrogate: p-Terphenyl-d14	*3.60*		mg/Kg dry	4.15		86.6		30-130				

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QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B315449 - SW-846 3540C										
Blank (B315449-BLK1)				Prepared: 08/18/22 Analyzed: 08/21/22						
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	*0.229*		mg/Kg wet	0.200		115	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.232*		mg/Kg wet	0.200		116	30-150			
Surrogate: Tetrachloro-m-xylene	*0.172*		mg/Kg wet	0.200		86.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.168*		mg/Kg wet	0.200		83.9	30-150			
LCS (B315449-BS1)				Prepared: 08/18/22 Analyzed: 08/21/22						
Aroclor-1016	0.18	0.020	mg/Kg wet	0.200		88.1	40-140			
Aroclor-1016 [2C]	0.17	0.020	mg/Kg wet	0.200		86.1	40-140			
Aroclor-1260	0.17	0.020	mg/Kg wet	0.200		84.8	40-140			
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200		86.1	40-140			
Surrogate: Decachlorobiphenyl	*0.244*		mg/Kg wet	0.200		122	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.247*		mg/Kg wet	0.200		123	30-150			
Surrogate: Tetrachloro-m-xylene	*0.184*		mg/Kg wet	0.200		92.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.177*		mg/Kg wet	0.200		88.7	30-150			
LCS Dup (B315449-BSD1)				Prepared: 08/18/22 Analyzed: 08/21/22						
Aroclor-1016	0.19	0.020	mg/Kg wet	0.200		97.3	40-140	9.99	30	
Aroclor-1016 [2C]	0.19	0.020	mg/Kg wet	0.200		93.7	40-140	8.53	30	
Aroclor-1260	0.18	0.020	mg/Kg wet	0.200		91.9	40-140	8.04	30	
Aroclor-1260 [2C]	0.18	0.020	mg/Kg wet	0.200		92.2	40-140	6.87	30	
Surrogate: Decachlorobiphenyl	*0.250*		mg/Kg wet	0.200		125	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.253*		mg/Kg wet	0.200		127	30-150			
Surrogate: Tetrachloro-m-xylene	*0.197*		mg/Kg wet	0.200		98.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.190*		mg/Kg wet	0.200		95.1	30-150			

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QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B315449 - SW-846 3540C										
Matrix Spike (B315449-MS1)	**Source: 22H0999-03**			Prepared: 08/18/22 Analyzed: 08/21/22						
Aroclor-1016	0.22	0.084	mg/Kg dry	0.209	ND	108	40-140			
Aroclor-1016 [2C]	0.22	0.084	mg/Kg dry	0.209	ND	107	40-140			
Aroclor-1260	0.20	0.084	mg/Kg dry	0.209	ND	96.5	40-140			
Aroclor-1260 [2C]	0.21	0.084	mg/Kg dry	0.209	ND	99.7	40-140			
Surrogate: Decachlorobiphenyl	*0.247*		mg/Kg dry	0.209		118	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.246*		mg/Kg dry	0.209		118	30-150			
Surrogate: Tetrachloro-m-xylene	*0.196*		mg/Kg dry	0.209		93.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.187*		mg/Kg dry	0.209		89.5	30-150			
Matrix Spike Dup (B315449-MSD1)	**Source: 22H0999-03**			Prepared: 08/18/22 Analyzed: 08/21/22						
Aroclor-1016	0.26	0.084	mg/Kg dry	0.209	ND	123	40-140	13.2	50	
Aroclor-1016 [2C]	0.24	0.084	mg/Kg dry	0.209	ND	116	40-140	7.55	50	
Aroclor-1260	0.22	0.084	mg/Kg dry	0.209	ND	105	40-140	8.28	50	
Aroclor-1260 [2C]	0.22	0.084	mg/Kg dry	0.209	ND	106	40-140	6.34	50	
Surrogate: Decachlorobiphenyl	*0.262*		mg/Kg dry	0.209		126	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.264*		mg/Kg dry	0.209		126	30-150			
Surrogate: Tetrachloro-m-xylene	*0.213*		mg/Kg dry	0.209		102	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.202*		mg/Kg dry	0.209		96.9	30-150			

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B315383 - SW-846 3546											
Blank (B315383-BLK1)				Prepared: 08/18/22 Analyzed: 08/22/22							
TPH (C9-C36)	ND	8.3	mg/Kg wet								
Surrogate: 2-Fluorobiphenyl	*3.05*		mg/Kg wet	3.33		91.4		40-140			
LCS (B315383-BS1)				Prepared: 08/18/22 Analyzed: 08/22/22							
TPH (C9-C36)	27.4	8.3	mg/Kg wet	33.3		82.3		40-140			
Surrogate: 2-Fluorobiphenyl	*3.00*		mg/Kg wet	3.33		89.9		40-140			
LCS Dup (B315383-BSD1)				Prepared: 08/18/22 Analyzed: 08/22/22							
TPH (C9-C36)	22.3	8.3	mg/Kg wet	33.3		66.9		40-140	20.7	30	
Surrogate: 2-Fluorobiphenyl	*2.28*		mg/Kg wet	3.33		68.5		40-140			
Matrix Spike (B315383-MS1)	**Source: 22H0999-01**			Prepared: 08/18/22 Analyzed: 08/22/22							
TPH (C9-C36)	1250	85	mg/Kg dry	34.1	1360	**-321**	*	40-140			MS-19
Surrogate: 2-Fluorobiphenyl	*2.90*		mg/Kg dry	3.41		85.0		40-140			
Matrix Spike Dup (B315383-MSD1)	**Source: 22H0999-01**			Prepared: 08/18/22 Analyzed: 08/22/22							
TPH (C9-C36)	1280	85	mg/Kg dry	34.1	1360	**-247**	*	40-140	1.99	30	MS-19
Surrogate: 2-Fluorobiphenyl	*2.80*		mg/Kg dry	3.41		82.2		40-140			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B315423 - SW-846 3050B										
Blank (B315423-BLK1)				Prepared: 08/18/22 Analyzed: 08/19/22						
Arsenic	ND	3.3	mg/Kg wet							
Cadmium	ND	0.33	mg/Kg wet							
Chromium	ND	0.66	mg/Kg wet							
Lead	ND	0.49	mg/Kg wet							
Selenium	ND	3.3	mg/Kg wet							
Silver	ND	0.33	mg/Kg wet							
LCS (B315423-BS1)				Prepared: 08/18/22 Analyzed: 08/19/22						
Arsenic	68.2	10	mg/Kg wet	63.0		108	82.2-117.6			
Cadmium	75.9	1.0	mg/Kg wet	66.6		114	82-117.9			
Chromium	77.3	2.0	mg/Kg wet	69.3		112	81.7-118.3			
Lead	93.0	1.5	mg/Kg wet	85.7		109	82.6-117.9			
Selenium	148	10	mg/Kg wet	134		110	78.4-120.9			
Silver	30.1	1.0	mg/Kg wet	26.2		115	79.4-121			
LCS Dup (B315423-BSD1)				Prepared: 08/18/22 Analyzed: 08/19/22						
Arsenic	63.5	10	mg/Kg wet	63.0		101	82.2-117.6	7.12	30	
Cadmium	72.7	1.0	mg/Kg wet	66.6		109	82-117.9	4.41	20	
Chromium	76.3	2.0	mg/Kg wet	69.3		110	81.7-118.3	1.43	30	
Lead	87.0	1.5	mg/Kg wet	85.7		102	82.6-117.9	6.63	30	
Selenium	141	10	mg/Kg wet	134		105	78.4-120.9	4.99	30	
Silver	27.9	1.0	mg/Kg wet	26.2		107	79.4-121	7.57	30	
Reference (B315423-SRM1) MRL CHECK				Prepared: 08/18/22 Analyzed: 08/19/22						
Lead	0.545	0.49	mg/Kg wet	0.493		111	80-120			
Batch B315682 - SW-846 7471										
Blank (B315682-BLK1)				Prepared: 08/23/22 Analyzed: 08/24/22						
Mercury	ND	0.025	mg/Kg wet							
LCS (B315682-BS1)				Prepared: 08/23/22 Analyzed: 08/24/22						
Mercury	22.8	3.9	mg/Kg wet	18.9		121	68.8-131.2			
LCS Dup (B315682-BSD1)				Prepared: 08/23/22 Analyzed: 08/24/22						
Mercury	19.5	3.7	mg/Kg wet	18.9		103	68.8-131.2	16.0	20	
Duplicate (B315682-DUP1)		**Source: 22H0999-01**		Prepared: 08/23/22 Analyzed: 08/24/22						
Mercury	0.253	0.025	mg/Kg dry		0.293			14.5	20	
Matrix Spike (B315682-MS1)		**Source: 22H0999-01**		Prepared: 08/23/22 Analyzed: 08/24/22						
Mercury	0.631	0.026	mg/Kg dry	0.351	0.293	96.4	80-120			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B315742 - SW-846 3050B										
Blank (B315742-BLK1)				Prepared: 08/23/22 Analyzed: 08/24/22						
Barium	ND	1.7	mg/Kg wet							
LCS (B315742-BS1)				Prepared: 08/23/22 Analyzed: 08/24/22						
Barium	274	4.8	mg/Kg wet	257		107	82.1-118.3			
LCS Dup (B315742-BSD1)				Prepared: 08/23/22 Analyzed: 08/24/22						
Barium	283	4.9	mg/Kg wet	257		110	82.1-118.3	3.21	20	

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B315364 - SW-846 9045C										
LCS (B315364-BS1)				Prepared & Analyzed: 08/17/22						
pH	6.01		pH Units	6.00		100	90-110			
Duplicate (B315364-DUP1)	**Source: 22H0999-03**			Prepared & Analyzed: 08/17/22						
pH	6.6		pH Units		6.6			0.786	8.25	H-03
Batch B315549 - SW-846 1010A-B										
Blank (B315549-BLK1)				Prepared & Analyzed: 08/21/22						
Flashpoint	> 212 °F		°F							
LCS (B315549-BS1)				Prepared & Analyzed: 08/21/22						
Flashpoint	81		°F	81.0		99.5	98.8-101			
LCS Dup (B315549-BSD1)				Prepared & Analyzed: 08/21/22						
Flashpoint	82		°F	81.0		101	98.8-101	1.22	5	

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Stockpile 2 & Middle Stockpile 4

Lab Sample ID: 22H0999-02 Date(s) Analyzed: 08/21/2022 08/21/2022

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	-0.030	0.030	0.19	
	2	0.000	-0.030	0.030	0.20	5.1

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B315449-BS1 Date(s) Analyzed: 08/21/2022 08/21/2022

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.18	
	2	0.000	-0.030	0.030	0.17	5.7
Aroclor-1260	1	0.000	-0.030	0.030	0.17	
	2	0.000	-0.030	0.030	0.17	0.0

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B315449-BSD1 Date(s) Analyzed: 08/21/2022 08/21/2022

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.19	
	2	0.000	-0.030	0.030	0.19	5.1
Aroclor-1260	1	0.000	-0.030	0.030	0.18	
	2	0.000	-0.030	0.030	0.18	0.0

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike

Lab Sample ID: B315449-MS1 Date(s) Analyzed: 08/21/2022 08/21/2022

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.22	
	2	0.000	-0.030	0.030	0.22	4.4
Aroclor-1260	1	0.000	-0.030	0.030	0.20	
	2	0.000	-0.030	0.030	0.21	4.9

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B315449-MSD1

Date(s) Analyzed: 08/21/2022 08/21/2022

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.26	
	2	0.000	-0.030	0.030	0.24	8.0
Aroclor-1260	1	0.000	-0.030	0.030	0.22	
	2	0.000	-0.030	0.030	0.22	0.0

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
H-03	Sample received after recommended holding time was exceeded.
L-04	Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.
MS-09	Matrix spike recovery and/or matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a low bias for reported result or non-homogeneous sample aliquots cannot be eliminated.
MS-19	Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.
MS-22	Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is within method specified criteria.
MS-23	Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is outside of the method specified criteria. Reduced precision anticipated for any reported result for this compound.
R-06	Matrix spike duplicate RPD is outside of control limits. Reduced precision is anticipated for reported result for this compound in this sample.
RL-12	Elevated reporting limit due to matrix interference.
V-04	Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria. Reported result is estimated.
V-05	Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.
V-35	Initial calibration verification (ICV) did not meet method specifications and was biased on the high side for this compound. Reported result is estimated.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 1010A-B in Soil	
Flashpoint	NY,NC,ME,VA
SW-846 6010D in Soil	
Arsenic	CT,NH,NY,ME,VA,NC
Barium	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,ME,VA,NC
Chromium	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,AIHA,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
SW-846 7471B in Soil	
Mercury	CT,NH,NY,NC,ME,VA
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,ME,NC,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1262	NY,NC,VA,PA
Aroclor-1262 [2C]	NY,NC,VA,PA
Aroclor-1268	NY,NC,VA,PA
Aroclor-1268 [2C]	NY,NC,VA,PA
SW-846 8260D in Soil	
Acetone	CT,NH,NY,ME,VA
Acrylonitrile	CT,NH,NY,ME,VA
Benzene	CT,NH,NY,ME,VA
Bromobenzene	NH,NY,ME,VA
Bromochloromethane	NH,NY,ME,VA
Bromodichloromethane	CT,NH,NY,ME,VA
Bromoform	CT,NH,NY,ME,VA
Bromomethane	CT,NH,NY,ME,VA
2-Butanone (MEK)	CT,NH,NY,ME,VA
tert-Butyl Alcohol (TBA)	NY,ME
n-Butylbenzene	CT,NH,NY,ME,VA
sec-Butylbenzene	CT,NH,NY,ME,VA
tert-Butylbenzene	CT,NH,NY,ME,VA
Carbon Disulfide	CT,NH,NY,ME,VA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8260D in Soil	
Carbon Tetrachloride	CT,NH,NY,ME,VA
Chlorobenzene	CT,NH,NY,ME,VA
Chlorodibromomethane	CT,NH,NY,ME,VA
Chloroethane	CT,NH,NY,ME,VA
Chloroform	CT,NH,NY,ME,VA
Chloromethane	CT,NH,NY,ME,VA
2-Chlorotoluene	CT,NH,NY,ME,VA
4-Chlorotoluene	CT,NH,NY,ME,VA
1,2-Dibromo-3-chloropropane (DBCP)	NY,ME
1,2-Dibromoethane (EDB)	NH,NY
Dibromomethane	NH,NY,ME,VA
1,2-Dichlorobenzene	CT,NH,NY,ME,VA
1,3-Dichlorobenzene	CT,NH,NY,ME,VA
1,4-Dichlorobenzene	CT,NH,NY,ME,VA
trans-1,4-Dichloro-2-butene	NY,ME
Dichlorodifluoromethane (Freon 12)	NH,NY,ME,VA
1,1-Dichloroethane	CT,NH,NY,ME,VA
1,2-Dichloroethane	CT,NH,NY,ME,VA
1,1-Dichloroethylene	CT,NH,NY,ME,VA
cis-1,2-Dichloroethylene	CT,NH,NY,ME,VA
trans-1,2-Dichloroethylene	CT,NH,NY,ME,VA
1,2-Dichloropropane	CT,NH,NY,ME,VA
1,3-Dichloropropane	NH,NY,ME,VA
2,2-Dichloropropane	NH,NY,ME,VA
1,1-Dichloropropene	NH,NY,ME,VA
cis-1,3-Dichloropropene	CT,NH,NY,ME,VA
trans-1,3-Dichloropropene	CT,NH,NY,ME,VA
Diethyl Ether	ME
1,4-Dioxane	NY,ME
Ethylbenzene	CT,NH,NY,ME,VA
Hexachlorobutadiene	NH,NY,ME,VA
2-Hexanone (MBK)	CT,NH,NY,ME,VA
Isopropylbenzene (Cumene)	CT,NH,NY,ME,VA
p-Isopropyltoluene (p-Cymene)	NH,NY
Methyl Acetate	NY,ME
Methyl tert-Butyl Ether (MTBE)	NY,ME,VA
Methyl Cyclohexane	NY
Methylene Chloride	CT,NH,NY,ME,VA
4-Methyl-2-pentanone (MIBK)	CT,NH,NY,ME,VA
Naphthalene	NH,NY,ME,VA
n-Propylbenzene	NH,NY,ME
Styrene	CT,NH,NY,ME,VA
1,1,1,2-Tetrachloroethane	CT,NH,NY,ME,VA
1,1,2,2-Tetrachloroethane	CT,NH,NY,ME,VA
Tetrachloroethylene	CT,NH,NY,ME,VA
Toluene	CT,NH,NY,ME,VA
1,2,3-Trichlorobenzene	NY,ME

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8260D in Soil	
1,2,4-Trichlorobenzene	NH,NY,ME,VA
1,3,5-Trichlorobenzene	ME
1,1,1-Trichloroethane	CT,NH,NY,ME,VA
1,1,2-Trichloroethane	CT,NH,NY,ME,VA
Trichloroethylene	CT,NH,NY,ME,VA
Trichlorofluoromethane (Freon 11)	CT,NH,NY,ME,VA
1,2,3-Trichloropropane	NH,NY,ME,VA
1,2,4-Trimethylbenzene	CT,NH,NY,ME,VA
1,3,5-Trimethylbenzene	CT,NH,NY,ME,VA
Vinyl Chloride	CT,NH,NY,ME,VA
m+p Xylene	CT,NH,NY,ME,VA
o-Xylene	CT,NH,NY,ME,VA
SW-846 8270E in Soil	
Acenaphthene	CT,NY,NH,ME,NC,VA
Acenaphthylene	CT,NY,NH,ME,NC,VA
Acetophenone	NY,NH,ME,NC,VA
Aniline	NY,NH,ME,NC,VA
Anthracene	CT,NY,NH,ME,NC,VA
Benzidine	CT,NY,NH,ME,NC,VA
Benzo(a)anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)pyrene	CT,NY,NH,ME,NC,VA
Benzo(b)fluoranthene	CT,NY,NH,ME,NC,VA
Benzo(g,h,i)perylene	CT,NY,NH,ME,NC,VA
Benzo(k)fluoranthene	CT,NY,NH,ME,NC,VA
Benzoic Acid	NY,NH,ME,NC,VA
Bis(2-chloroethoxy)methane	CT,NY,NH,ME,NC,VA
Bis(2-chloroethyl)ether	CT,NY,NH,ME,NC,VA
Bis(2-chloroisopropyl)ether	CT,NY,NH,ME,NC,VA
Bis(2-Ethylhexyl)phthalate	CT,NY,NH,ME,NC,VA
4-Bromophenylphenylether	CT,NY,NH,ME,NC,VA
Butylbenzylphthalate	CT,NY,NH,ME,NC,VA
Carbazole	NC
4-Chloroaniline	CT,NY,NH,ME,NC,VA
4-Chloro-3-methylphenol	CT,NY,NH,ME,NC,VA
2-Chloronaphthalene	CT,NY,NH,NC,VA
2-Chlorophenol	CT,NY,NH,ME,NC,VA
4-Chlorophenylphenylether	CT,NY,NH,ME,NC,VA
Chrysene	CT,NY,NH,ME,NC,VA
Dibenz(a,h)anthracene	CT,NY,NH,ME,NC,VA
Dibenzofuran	CT,NY,NH,ME,NC,VA
Di-n-butylphthalate	CT,NY,NH,ME,NC,VA
1,2-Dichlorobenzene	NY,NH,ME,NC,VA
1,3-Dichlorobenzene	NY,NH,ME,NC,VA
1,4-Dichlorobenzene	NY,NH,ME,NC,VA
3,3-Dichlorobenzidine	CT,NY,NH,ME,NC,VA
2,4-Dichlorophenol	CT,NY,NH,ME,NC,VA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270E in Soil	
Diethylphthalate	CT,NY,NH,ME,NC,VA
2,4-Dimethylphenol	CT,NY,NH,ME,NC,VA
Dimethylphthalate	CT,NY,NH,ME,NC,VA
4,6-Dinitro-2-methylphenol	CT,NY,NH,ME,NC,VA
2,4-Dinitrophenol	CT,NY,NH,ME,NC,VA
2,4-Dinitrotoluene	CT,NY,NH,ME,NC,VA
2,6-Dinitrotoluene	CT,NY,NH,ME,NC,VA
Di-n-octylphthalate	CT,NY,NH,ME,NC,VA
1,2-Diphenylhydrazine/Azobenzene	NY,NH,ME,NC,VA
Fluoranthene	CT,NY,NH,ME,NC,VA
Fluorene	NY,NH,ME,NC,VA
Hexachlorobenzene	CT,NY,NH,ME,NC,VA
Hexachlorobutadiene	CT,NY,NH,ME,NC,VA
Hexachlorocyclopentadiene	CT,NY,NH,ME,NC,VA
Hexachloroethane	CT,NY,NH,ME,NC,VA
Indeno(1,2,3-cd)pyrene	CT,NY,NH,ME,NC,VA
Isophorone	CT,NY,NH,ME,NC,VA
1-Methylnaphthalene	NC
2-Methylnaphthalene	CT,NY,NH,ME,NC,VA
2-Methylphenol	CT,NY,NH,ME,NC,VA
3/4-Methylphenol	CT,NY,NH,ME,NC,VA
Naphthalene	CT,NY,NH,ME,NC,VA
2-Nitroaniline	CT,NY,NH,ME,NC,VA
3-Nitroaniline	CT,NY,NH,ME,NC,VA
4-Nitroaniline	CT,NY,NH,ME,NC,VA
Nitrobenzene	CT,NY,NH,ME,NC,VA
2-Nitrophenol	CT,NY,NH,ME,NC,VA
4-Nitrophenol	CT,NY,NH,ME,NC,VA
N-Nitrosodimethylamine	CT,NY,NH,ME,NC,VA
N-Nitrosodi-n-propylamine	CT,NY,NH,ME,NC,VA
Pentachloronitrobenzene	NY,NC
Pentachlorophenol	CT,NY,NH,ME,NC,VA
Phenanthrene	CT,NY,NH,ME,NC,VA
Phenol	CT,NY,NH,ME,NC,VA
Pyrene	CT,NY,NH,ME,NC,VA
Pyridine	CT,NY,NH,ME,NC,VA
1,2,4,5-Tetrachlorobenzene	NY,NC
1,2,4-Trichlorobenzene	CT,NY,NH,ME,NC,VA
2,4,5-Trichlorophenol	CT,NY,NH,ME,NC,VA
2,4,6-Trichlorophenol	CT,NY,NH,ME,NC,VA
2-Fluorophenol	NC
SW-846 8270E in Water	
Acenaphthene	CT,NY,NC,ME,NH,VA
Acenaphthylene	CT,NY,NC,ME,NH,VA
Acetophenone	NY,NC
Aniline	CT,NY,NC,ME,VA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270E in Water	
Anthracene	CT,NY,NC,ME,NH,VA
Benzidine	CT,NY,NC,ME,NH,VA
Benzo(a)anthracene	CT,NY,NC,ME,NH,VA
Benzo(a)pyrene	CT,NY,NC,ME,NH,VA
Benzo(b)fluoranthene	CT,NY,NC,ME,NH,VA
Benzo(g,h,i)perylene	CT,NY,NC,ME,NH,VA
Benzo(k)fluoranthene	CT,NY,NC,ME,NH,VA
Benzoic Acid	NY,NC,ME,NH,VA
Bis(2-chloroethoxy)methane	CT,NY,NC,ME,NH,VA
Bis(2-chloroethyl)ether	CT,NY,NC,ME,NH,VA
Bis(2-chloroisopropyl)ether	CT,NY,NC,ME,NH,VA
Bis(2-Ethylhexyl)phthalate	CT,NY,NC,ME,NH,VA
4-Bromophenylphenylether	CT,NY,NC,ME,NH,VA
Butylbenzylphthalate	CT,NY,NC,ME,NH,VA
Carbazole	NC
4-Chloroaniline	CT,NY,NC,ME,NH,VA
4-Chloro-3-methylphenol	CT,NY,NC,ME,NH,VA
2-Chloronaphthalene	CT,NY,NC,ME,NH,VA
2-Chlorophenol	CT,NY,NC,ME,NH,VA
4-Chlorophenylphenylether	CT,NY,NC,ME,NH,VA
Chrysene	CT,NY,NC,ME,NH,VA
Dibenz(a,h)anthracene	CT,NY,NC,ME,NH,VA
Dibenzofuran	CT,NY,NC,ME,NH,VA
Di-n-butylphthalate	CT,NY,NC,ME,NH,VA
1,2-Dichlorobenzene	CT,NY,NC,ME,NH,VA
1,3-Dichlorobenzene	CT,NY,NC,ME,NH,VA
1,4-Dichlorobenzene	CT,NY,NC,ME,NH,VA
3,3-Dichlorobenzidine	CT,NY,NC,ME,NH,VA
2,4-Dichlorophenol	CT,NY,NC,ME,NH,VA
Diethylphthalate	CT,NY,NC,ME,NH,VA
2,4-Dimethylphenol	CT,NY,NC,ME,NH,VA
Dimethylphthalate	CT,NY,NC,ME,NH,VA
4,6-Dinitro-2-methylphenol	CT,NY,NC,ME,NH,VA
2,4-Dinitrophenol	CT,NY,NC,ME,NH,VA
2,4-Dinitrotoluene	CT,NY,NC,ME,NH,VA
2,6-Dinitrotoluene	CT,NY,NC,ME,NH,VA
Di-n-octylphthalate	CT,NY,NC,ME,NH,VA
1,2-Diphenylhydrazine/Azobenzene	NY,NC
Fluoranthene	CT,NY,NC,ME,NH,VA
Fluorene	NY,NC,ME,NH,VA
Hexachlorobenzene	CT,NY,NC,ME,NH,VA
Hexachlorobutadiene	CT,NY,NC,ME,NH,VA
Hexachlorocyclopentadiene	CT,NY,NC,ME,NH,VA
Hexachloroethane	CT,NY,NC,ME,NH,VA
Indeno(1,2,3-cd)pyrene	CT,NY,NC,ME,NH,VA
Isophorone	CT,NY,NC,ME,NH,VA
1-Methylnaphthalene	NC

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270E in Water	
2-Methylnaphthalene	CT,NY,NC,ME,NH,VA
2-Methylphenol	CT,NY,NC,NH,VA
3/4-Methylphenol	CT,NY,NC,NH,VA
Naphthalene	CT,NY,NC,ME,NH,VA
2-Nitroaniline	CT,NY,NC,ME,NH,VA
3-Nitroaniline	CT,NY,NC,ME,NH,VA
4-Nitroaniline	CT,NY,NC,ME,NH,VA
Nitrobenzene	CT,NY,NC,ME,NH,VA
2-Nitrophenol	CT,NY,NC,ME,NH,VA
4-Nitrophenol	CT,NY,NC,ME,NH,VA
N-Nitrosodimethylamine	CT,NY,NC,ME,NH,VA
N-Nitrosodi-n-propylamine	CT,NY,NC,ME,NH,VA
Pentachloronitrobenzene	NC
Pentachlorophenol	CT,NY,NC,ME,NH,VA
Phenanthrene	CT,NY,NC,ME,NH,VA
Phenol	CT,NY,NC,ME,NH,VA
Pyrene	CT,NY,NC,ME,NH,VA
Pyridine	CT,NY,NC,ME,NH,VA
1,2,4,5-Tetrachlorobenzene	NY,NC
1,2,4-Trichlorobenzene	CT,NY,NC,ME,NH,VA
2,4,5-Trichlorophenol	CT,NY,NC,ME,NH,VA
2,4,6-Trichlorophenol	CT,NY,NC,ME,NH,VA
2-Fluorophenol	NC

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO 17025:2017	100033	03/1/2024
MA	Massachusetts DEP	M-MA100	06/30/2023
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2023
RI	Rhode Island Department of Health	LAO00373	12/30/2022
NC	North Carolina Div. of Water Quality	652	12/31/2022
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
FL	Florida Department of Health	E871027 NELAP	06/30/2023
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2023
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2023
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2022
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2022
NC-DW	North Carolina Department of Health and Human Services	25703	07/31/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2023
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2022

Pace Analytical

Phone: 413-525-2332
Fax: 413-525-6405
Access COC's and Support Requests

22H0999

http://www.pacelabs.com

CHAIN OF CUSTODY RECORD

39 Spruce Street
East Longmeadow, MA 01028

Doc # 381 Rev 5_07/13/2021

Page 1 of 1

Company Name: Arcadis
Address: 2249 South County Trail, East Greenwich, RI
Phone: 401 - 285 - 2235
Project Name: Enviro
Project Location: South Kingstown, RI
Project Number: 30052937
Project Manager: Donna Pallister
Pace Quote Name/Number:
Invoice Recipient: accountspayable.usmainistration@arcadis-us.com
Sampled By: DaRata Downs

Requested Turnaround Time
7-Day ☐ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date: Standard

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

Data Delivery
Format: PDF ☒ EXCEL ☒
Other:
CLP Like Data Pkg Required: ☐
Email To: donna.pallister@arcadis.com
Fax To#: dadata.downs@arcadis.com

PCB ONLY
SOXHLET ☐
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1] Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	MS	VOC 8260	SVOC 8270	PCBs 8082	RCRA 8 6010	TPH 8100M	Pb 6010	Flash Point
1	Stockpile 1	8/16/22	1035	Comp	S	L	3	1				X	X	X	X	X	X	X	X
2	Stockpile 2	↓	1050	↓	↓	↓	3	1				X	X	X	X	X	X	X	X
3	Stockpile 3	↓	1105	↓	↓	↓	3	1				X	X	X	X	X	X	X	X

[2] Preservation Code
Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N
*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time:
	8/17/22 930
Received by: (signature)	Date/Time:
Paul Charteny	8-17-22 930
Relinquished by: (signature)	Date/Time:
Paul Charteny	8-17-22 1310
Received by: (signature)	Date/Time:
Chad Long	8/17/22 1440
Relinquished by: (signature)	Date/Time:
Chad Long	8/17/22 1615
Received by: (signature)	Date/Time:
	8/17/22 1615
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments:

Detection Limit Requirements
MA
CT
Other

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

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39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F: 413-525-6405
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Pace PEOPLE ADVANCING SCIENCE

Doc# 277 Rev 6 July 2022

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client Arcadis

Received By [signature] Date 8/17/22 Time 1615

How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____

Direct From Sample _____ Ambient _____ Melted Ice _____

Were samples within Tempurature? Within 2-6°C T By Gun # 3 Actual Temp - 2.2

By Blank # _____ Actual Temp - _____

Was Custody Seal In tact? n/a Were Samples Tampered with? n/a

Was COC Relinquished ? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? F

Did COC include all pertinent Information? Client? T Analysis? T Sampler Name? T

Project? T ID's? T Collection Dates/Times? T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F Who was notified? _____

Are there Rushes? F Who was notified? _____

Are there Short Holds? T Who was notified? Cassie

Samples are received within holding time? F Is there enough Volume? T

Is there Headspace where applicable? n/a MS/MSD? F

Proper Media/Containers Used? T splitting samples require F

Were trip blanks receive F On COC? F

Do All Samples Have the proper pH? n/a Acid _____ Base _____

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	3
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-	3	250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-	6	Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Unused Media

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments:

pH past hold.
Client sent email for updated sample IDs.

Login Login <login@contestlabs.com>

FW: Envine: COC Sample ID Updates

1 message

Kaitlyn Feliciano <Kaitlyn.feliciano@pacelabs.com> Wed, Aug 17, 2022 at 10:00 AM
To: Rebecca Faust <Rebecca.Faust@pacelabs.com>, Login Login <login@contestlabs.com>, Raisa Petraitis <Raisa.Petraitis@pacelabs.com>

Hi All

We have samples coming from Arcadis today can you please log them in with the IDs listed below?

Thank you

Kaitlyn

From: Downs, Dakota <Dakota.Downs@arcadis.com>
Sent: Wednesday, August 17, 2022 9:54 AM
To: Kaitlyn Feliciano <Kaitlyn.feliciano@pacelabs.com>
Cc: Pallister, Donna <Donna.Pallister@arcadis.com>
Subject: Envine: COC Sample ID Updates

Good morning Kaitlyn,

Paul just picked up the soil samples, obtained on 8/16, from me.

I was wondering if I could make a change to the COC sample IDs. Please see changes below:

Current Sample ID	Updated Sample ID
Stockpile 1	Stockpile 1 & South Stockpile 4
Stockpile 2	Stockpile 2 & Middle Stockpile 4
Stockpile 3	Stockpile 3 & North Stockpile 4

Attachment 2

October 5, 2022, Laboratory Report

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October 11, 2022

Donna Pallister
Arcadis US, Inc.-RI
2240 South County Trail, Suite 5
East Greenwich, RI 02818

Project Location: South Kingstown, RI
Client Job Number:
Project Number: 30052937
Laboratory Work Order Number: 22J0967

Enclosed are results of analyses for samples as received by the laboratory on October 6, 2022. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Meghan E. Kelley
Project Manager

Table of Contents

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Arcadis US, Inc.-RI
2240 South County Trail, Suite 5
East Greenwich, RI 02818
ATTN: Donna Pallister

REPORT DATE: 10/11/2022

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 30052937

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 22J0967

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: South Kingstown, RI

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
Stockpile 1	22J0967-01	Soil		SM 2540G	
				SW-846 8100 Modified	
Stockpile 2	22J0967-02	Soil		SM 2540G	
				SW-846 8100 Modified	
Stockpile 3	22J0967-03	Soil		SM 2540G	
				SW-846 8100 Modified	
Stockpile 4 North	22J0967-04	Soil		SM 2540G	
				SW-846 8100 Modified	
Stockpile 4 South	22J0967-05	Soil		SM 2540G	
				SW-846 8100 Modified	

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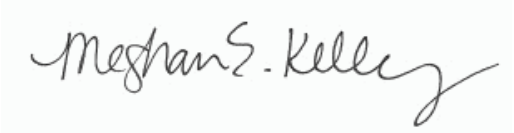
CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SW-846 8100 Modified

TPH (C9-C36) is quantitated against a calibration made with a diesel standard.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Meghan E. Kelley
Reporting Specialist

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 22J0967

Date Received: 10/6/2022

Field Sample #: Stockpile 1 | Sampled: 10/5/2022 13:54

Sample ID: 22J0967-01

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	260	46	mg/Kg dry	5		SW-846 8100 Modified	10/7/22	10/10/22 21:02	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorobiphenyl	91.8	40-140		10/10/22 21:02

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 22J0967

Date Received: 10/6/2022

Field Sample #: Stockpile 1 | Sampled: 10/5/2022 13:54

Sample ID: 22J0967-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.2		% Wt	1		SM 2540G	10/7/22	10/7/22 14:53	WDC

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 22J0967

Date Received: 10/6/2022

Field Sample #: Stockpile 2 | Sampled: 10/5/2022 14:00

Sample ID: 22J0967-02

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	680	46	mg/Kg dry	5		SW-846 8100 Modified	10/7/22	10/10/22 22:04	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual				
2-Fluorobiphenyl	72.3	40-140				10/10/22	22:04

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Kingstown, RI | Sample Description: | Work Order: 22J0967

Date Received: 10/6/2022

Field Sample #: Stockpile 2 | Sampled: 10/5/2022 14:00

Sample ID: 22J0967-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.3		% Wt	1		SM 2540G	10/7/22	10/7/22 14:53	WDC

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 22J0967

Date Received: 10/6/2022

Field Sample #: Stockpile 3 | Sampled: 10/5/2022 14:05

Sample ID: 22J0967-03

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	180	45	mg/Kg dry	5		SW-846 8100 Modified	10/7/22	10/10/22 20:01	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorobiphenyl	76.3	40-140		10/10/22 20:01

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 22J0967

Date Received: 10/6/2022

Field Sample #: Stockpile 3 | Sampled: 10/5/2022 14:05

Sample ID: 22J0967-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	91.9		% Wt	1		SM 2540G	10/7/22	10/7/22 14:53	WDC

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 22J0967

Date Received: 10/6/2022

Field Sample #: Stockpile 4 North | Sampled: 10/5/2022 14:19

Sample ID: 22J0967-04

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	480	45	mg/Kg dry	5		SW-846 8100 Modified	10/7/22	10/10/22 21:33	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual				
2-Fluorobiphenyl	74.8	40-140				10/10/22 21:33	

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 22J0967

Date Received: 10/6/2022

Field Sample #: Stockpile 4 North | Sampled: 10/5/2022 14:19

Sample ID: 22J0967-04

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	92.7		% Wt	1		SM 2540G	10/7/22	10/7/22 14:53	WDC

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 22J0967

Date Received: 10/6/2022

Field Sample #: Stockpile 4 South | Sampled: 10/5/2022 14:25

Sample ID: 22J0967-05

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	280	46	mg/Kg dry	5		SW-846 8100 Modified	10/7/22	10/10/22 20:32	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorobiphenyl	73.8	40-140		10/10/22 20:32

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Kingstown, RI | Sample Description: | Work Order: 22J0967

Date Received: 10/6/2022

Field Sample #: Stockpile 4 South | Sampled: 10/5/2022 14:25

Sample ID: 22J0967-05

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.9		% Wt	1		SM 2540G	10/7/22	10/7/22 14:54	WDC

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Sample Extraction Data

Prep Method: % Solids **Analytical Method: SM 2540G**

Lab Number [Field ID]	Batch	Date
22J0967-01 [Stockpile 1]	B319119	10/07/22
22J0967-02 [Stockpile 2]	B319119	10/07/22
22J0967-03 [Stockpile 3]	B319119	10/07/22
22J0967-04 [Stockpile 4 North]	B319119	10/07/22
22J0967-05 [Stockpile 4 South]	B319119	10/07/22

Prep Method: SW-846 3546 **Analytical Method: SW-846 8100 Modified**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
22J0967-01 [Stockpile 1]	B319171	30.3	1.00	10/07/22
22J0967-02 [Stockpile 2]	B319171	30.2	1.00	10/07/22
22J0967-03 [Stockpile 3]	B319171	30.2	1.00	10/07/22
22J0967-04 [Stockpile 4 North]	B319171	30.1	1.00	10/07/22
22J0967-05 [Stockpile 4 South]	B319171	30.1	1.00	10/07/22

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B319171 - SW-846 3546										
Blank (B319171-BLK1)				Prepared: 10/07/22 Analyzed: 10/09/22						
TPH (C9-C36)	ND	8.3	mg/Kg wet							
Surrogate: 2-Fluorobiphenyl	*3.11*		mg/Kg wet	3.32		93.5	40-140			
LCS (B319171-BS1)				Prepared: 10/07/22 Analyzed: 10/09/22						
TPH (C9-C36)	26.0	8.2	mg/Kg wet	32.8		79.4	40-140			
Surrogate: 2-Fluorobiphenyl	*2.92*		mg/Kg wet	3.28		88.9	40-140			
LCS Dup (B319171-BSD1)				Prepared: 10/07/22 Analyzed: 10/09/22						
TPH (C9-C36)	26.8	8.2	mg/Kg wet	32.9		81.4	40-140	2.91	30	
Surrogate: 2-Fluorobiphenyl	*3.01*		mg/Kg wet	3.29		91.4	40-140			

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications

No certified Analyses included in this Report

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO 17025:2017	100033	03/1/2024
MA	Massachusetts DEP	M-MA100	06/30/2023
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2023
RI	Rhode Island Department of Health	LAO00373	12/30/2022
NC	North Carolina Div. of Water Quality	652	12/31/2022
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
FL	Florida Department of Health	E871027 NELAP	06/30/2023
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2023
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2023
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2022
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2023
NC-DW	North Carolina Department of Health and Human Services	25703	07/31/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2023
MI	Dept. of Env, Great Lakes, and Energy	9100	06/30/2023
NB-CT	Connecticut Department of Public Health	PH-0554	09/30/2023
NB-NJ	New Jersey DEP	NY015 NELAP	06/30/2023
NB-NY	New York State Department of Health	10142 NELAP	04/1/2023

2250967

Pace Analytical

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http://www.pacelabs.com

CHAIN OF CUSTODY RECORD

39 Spruce Street
East Longmeadow, MA 01028

Doc # 381 Rev 5_07/13/2021

Page 1 of 1

Company Name:	Arcadis
Address:	2349 South County Trail, East Greenwich, RI
Phone:	401-285-2235
Project Name:	ENVIRO
Project Location:	South Kingstown, RI
Project Number:	30052937
Project Manager:	Donna Pallister
Pace Quote Name/Number:	
Invoice Recipient:	accountspayable.administration@arcadis-us.com
Sampled By:	Dakota Downs

Requested Turnaround Time
7-Day ☐ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☒

Data Delivery
Format: PDF ☒ EXCEL ☒
Other:
CLP Like Data Pkg Required: ☐
Email To: donna.pallister@arcadis.com
Fax To #: dakota.downs@arcadis.com

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☐
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1] Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	TPH
	Stockpile 1	10/5/22	1354	Comp	S	U		1				X
	Stockpile 2	↓	1400	↓	↓	↓		1				X
	Stockpile 3		1405					1				X
	Stockpile 4 North		1419					1				X
	Stockpile 4 South		1425					1				X

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS
GLASS 5
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time:
	10/6/22 1115
Received by: (signature)	Date/Time:
Paul Chastenay	10-6-22 11
Relinquished by: (signature)	Date/Time:
Paul Chastenay	10-6-22 1425
Received by: (signature)	Date/Time:
	10/6/22 1425
Relinquished by: (signature)	Date/Time:
	10/6/22 1615
Received by: (signature)	Date/Time:
	10/6 1615
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments:

Detection Limit Requirements
MA
CT RCP
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

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Doc# 277 Rev 6 July 2022

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client Arcadis

Received By _____ Date 10/6/22 Time 1615

How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____
Direct From Sample _____ Ambient _____ Melted Ice _____

Were samples within Tempurature? Within 2-6°C T By Gun # 3 Actual Temp - 4.5
By Blank # _____ Actual Temp -

Was Custody Seal In tact? n/a Were Samples Tampered with? n/a

Was COC Relinquished ? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client? T Analysis? T Sampler Name? T
Project? T ID's? T Collection Dates/Times? T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F Who was notified? _____

Are there Rushes? T Who was notified? Mae

Are there Short Holds? F Who was notified? _____

Samples are received within holding time? T Is there enough Volume? T

Is there Headspace where applicable? n/a MS/MSD? F

Proper Media/Containers Used? T splitting samples require F

Were trip blanks receive F On COC? F

Do All Samples Have the proper pH? n/a Acid _____ Base _____

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	5
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Unused Media

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments:

Attachment 3

March 24, 2023, Laboratory Report

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April 3, 2023

Donna Pallister
Arcadis US, Inc.-RI
2240 South County Trail, Suite 5
East Greenwich, RI 02818

Project Location: South Kingstown, RI
Client Job Number:
Project Number: 30052937
Laboratory Work Order Number: 23C2897

Enclosed are results of analyses for samples as received by the laboratory on March 24, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Meghan E. Kelley
Project Manager

Table of Contents

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Arcadis US, Inc.-RI
2240 South County Trail, Suite 5
East Greenwich, RI 02818
ATTN: Donna Pallister

REPORT DATE: 4/3/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 30052937

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23C2897

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: South Kingstown, RI

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
Stockpile 1	23C2897-01	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 8100 Modified	
Stockpile 2	23C2897-02	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 8100 Modified	
Stockpile 3	23C2897-03	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 8100 Modified	
Stockpile 4 North	23C2897-04	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 8100 Modified	
Stockpile 4 South	23C2897-05	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 8100 Modified	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SW-846 8100 Modified

Qualifications:

MS-19

Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.

Analyte & Samples(s) Qualified:

TPH (C9-C36)

B335259-MS1, B335259-MSD1

S-01

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

Analyte & Samples(s) Qualified:

2-Fluorobiphenyl

23C2897-01[Stockpile 1], 23C2897-02[Stockpile 2], 23C2897-03[Stockpile 3], 23C2897-05[Stockpile 4 South], B335259-MS1, B335259-MSD1

SW-846 8100 Modified

TPH (C9-C36) is quantitated against a calibration made with a diesel standard.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Lisa A. Worthington
Technical Representative

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Kingstown, RI | Sample Description: | Work Order: 23C2897

Date Received: 3/24/2023

Field Sample #: Stockpile 1 | Sampled: 3/24/2023 09:30

Sample ID: 23C2897-01

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	550	460	mg/Kg dry	50		SW-846 8100 Modified	3/27/23	3/28/23 17:53	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorobiphenyl	*	40-140	S-01	3/28/23 17:53

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Project Location: South Kingstown, RI Sample Description: Work Order: 23C2897

Date Received: 3/24/2023

Field Sample #: Stockpile 1 Sampled: 3/24/2023 09:30

Sample ID: 23C2897-01

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	25	0.55	mg/Kg dry	1		SW-846 6010D	3/27/23	3/30/23 14:42	ATP

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 23C2897

Date Received: 3/24/2023

Field Sample #: Stockpile 1 | Sampled: 3/24/2023 09:30

Sample ID: 23C2897-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.9		% Wt	1		SM 2540G	3/25/23	3/25/23 6:18	WDC

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 23C2897

Date Received: 3/24/2023

Field Sample #: Stockpile 2 | Sampled: 3/24/2023 09:45

Sample ID: 23C2897-02

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	750	460	mg/Kg dry	50		SW-846 8100 Modified	3/27/23	3/28/23 19:56	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorobiphenyl	*	40-140	S-01	3/28/23 19:56

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 23C2897

Date Received: 3/24/2023

Field Sample #: Stockpile 2 | Sampled: 3/24/2023 09:45

Sample ID: 23C2897-02

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	24	0.55	mg/Kg dry	1		SW-846 6010D	3/27/23	3/30/23 14:47	ATP

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 23C2897

Date Received: 3/24/2023

Field Sample #: Stockpile 2 | Sampled: 3/24/2023 09:45

Sample ID: 23C2897-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.1		% Wt	1		SM 2540G	3/25/23	3/25/23 6:18	WDC

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 23C2897

Date Received: 3/24/2023

Field Sample #: Stockpile 3 | Sampled: 3/24/2023 09:55

Sample ID: 23C2897-03

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	550	450	mg/Kg dry	50		SW-846 8100 Modified	3/27/23	3/28/23 19:25	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorobiphenyl	*	40-140	S-01	3/28/23 19:25

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 23C2897

Date Received: 3/24/2023

Field Sample #: Stockpile 3 | Sampled: 3/24/2023 09:55

Sample ID: 23C2897-03

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	27	0.54	mg/Kg dry	1		SW-846 6010D	3/27/23	3/30/23 14:52	ATP

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Kingstown, RI | Sample Description: | Work Order: 23C2897

Date Received: 3/24/2023

Field Sample #: Stockpile 3 | Sampled: 3/24/2023 09:55

Sample ID: 23C2897-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	92.0		% Wt	1		SM 2540G	3/25/23	3/25/23 6:18	WDC

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Kingstown, RI | Sample Description: | Work Order: 23C2897

Date Received: 3/24/2023

Field Sample #: Stockpile 4 North | Sampled: 3/24/2023 10:05

Sample ID: 23C2897-04

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	310	9.2	mg/Kg dry	1		SW-846 8100 Modified	3/27/23	3/28/23 12:50	GJB

Surrogates	% Recovery	Recovery Limits	Flag/Qual				
2-Fluorobiphenyl	76.2	40-140					3/28/23 12:50

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 23C2897

Date Received: 3/24/2023

Field Sample #: Stockpile 4 North | Sampled: 3/24/2023 10:05

Sample ID: 23C2897-04

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	23	0.54	mg/Kg dry	1		SW-846 6010D	3/27/23	3/30/23 14:57	ATP

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 23C2897

Date Received: 3/24/2023

Field Sample #: Stockpile 4 North | Sampled: 3/24/2023 10:05

Sample ID: 23C2897-04

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.4		% Wt	1		SM 2540G	3/25/23	3/25/23 6:18	WDC

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 23C2897

Date Received: 3/24/2023

Field Sample #: Stockpile 4 South | Sampled: 3/24/2023 10:15

Sample ID: 23C2897-05

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	1300	470	mg/Kg dry	50		SW-846 8100 Modified	3/27/23	3/28/23 20:27	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorobiphenyl	*	40-140	S-01	3/28/23 20:27

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 23C2897

Date Received: 3/24/2023

Field Sample #: Stockpile 4 South | Sampled: 3/24/2023 10:15

Sample ID: 23C2897-05

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	23	0.56	mg/Kg dry	1		SW-846 6010D	3/27/23	3/30/23 15:01	ATP

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Project Location: South Kingstown, RI | Sample Description: | Work Order: 23C2897

Date Received: 3/24/2023

Field Sample #: Stockpile 4 South | Sampled: 3/24/2023 10:15

Sample ID: 23C2897-05

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.0		% Wt	1		SM 2540G	3/25/23	3/25/23 6:18	WDC

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Sample Extraction Data

Prep Method: % Solids **Analytical Method: SM 2540G**

Lab Number [Field ID]	Batch	Date
23C2897-01 [Stockpile 1]	B335238	03/25/23
23C2897-02 [Stockpile 2]	B335238	03/25/23
23C2897-03 [Stockpile 3]	B335238	03/25/23
23C2897-04 [Stockpile 4 North]	B335238	03/25/23
23C2897-05 [Stockpile 4 South]	B335238	03/25/23

Prep Method: SW-846 3050B **Analytical Method: SW-846 6010D**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23C2897-01 [Stockpile 1]	B335334	1.51	50.0	03/27/23
23C2897-02 [Stockpile 2]	B335334	1.51	50.0	03/27/23
23C2897-03 [Stockpile 3]	B335334	1.52	50.0	03/27/23
23C2897-04 [Stockpile 4 North]	B335334	1.55	50.0	03/27/23
23C2897-05 [Stockpile 4 South]	B335334	1.50	50.0	03/27/23

Prep Method: SW-846 3546 **Analytical Method: SW-846 8100 Modified**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23C2897-01 [Stockpile 1]	B335259	30.0	1.00	03/27/23
23C2897-02 [Stockpile 2]	B335259	30.0	1.00	03/27/23
23C2897-03 [Stockpile 3]	B335259	30.0	1.00	03/27/23
23C2897-04 [Stockpile 4 North]	B335259	30.0	1.00	03/27/23
23C2897-05 [Stockpile 4 South]	B335259	30.0	1.00	03/27/23

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B335259 - SW-846 3546											
Blank (B335259-BLK1)				Prepared: 03/27/23 Analyzed: 03/28/23							
TPH (C9-C36)	ND	8.3	mg/Kg wet								
Surrogate: 2-Fluorobiphenyl	*2.38*		mg/Kg wet	3.33		71.3		40-140			
LCS (B335259-BS1)				Prepared: 03/27/23 Analyzed: 03/28/23							
TPH (C9-C36)	24.4	8.3	mg/Kg wet	33.3		73.1		40-140			
Surrogate: 2-Fluorobiphenyl	*2.61*		mg/Kg wet	3.33		78.4		40-140			
LCS Dup (B335259-BSD1)				Prepared: 03/27/23 Analyzed: 03/28/23							
TPH (C9-C36)	23.1	8.3	mg/Kg wet	33.3		69.4		40-140	5.29	30	
Surrogate: 2-Fluorobiphenyl	*2.44*		mg/Kg wet	3.33		73.3		40-140			
Matrix Spike (B335259-MS1)	**Source: 23C2897-01**			Prepared: 03/27/23 Analyzed: 03/28/23							
TPH (C9-C36)	618	460	mg/Kg dry	36.7	550	**184**	*	40-140			MS-19
Surrogate: 2-Fluorobiphenyl	*0.00*		mg/Kg dry	3.67			*	40-140			S-01
Matrix Spike Dup (B335259-MSD1)	**Source: 23C2897-01**			Prepared: 03/27/23 Analyzed: 03/28/23							
TPH (C9-C36)	494	460	mg/Kg dry	36.7	550	**-155**	*	40-140	22.3	30	MS-19
Surrogate: 2-Fluorobiphenyl	*0.00*		mg/Kg dry	3.67			*	40-140			S-01

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B335334 - SW-846 3050B										
Blank (B335334-BLK2)				Prepared: 03/27/23 Analyzed: 03/30/23						
Lead	ND	0.49	mg/Kg wet							
LCS (B335334-BS2)				Prepared: 03/27/23 Analyzed: 03/30/23						
Lead	228	1.5	mg/Kg wet	257		88.6	82.1-117.9			
LCS Dup (B335334-BSD2)				Prepared: 03/27/23 Analyzed: 03/30/23						
Lead	232	1.5	mg/Kg wet	257		90.2	82.1-117.9	1.74	30	
Reference (B335334-SRM1) MRL CHECK				Prepared: 03/27/23 Analyzed: 03/30/23						
Lead	0.494	0.49	mg/Kg wet	0.494		100	80-120			

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
MS-19	Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 6010D in Soil	
Lead	CT,NH,NY,AIHA,ME,VA,NC
SW-846 6010D in Water	
Lead	CT,NH,NY,ME,VA,NC

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO 17025:2017	100033	03/1/2024
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2023

23C2897 MEK

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Phone: 413-525-2332
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Access COC's and Support Requests

CHAIN OF CUSTODY RECORD

39 Spruce Street
East Longmeadow, MA 01028

Page 1 of 1

Company Name: Arcadis
Address: 3240 South County Trail, East Greenwich, RI
Phone: 401-385-3335
Project Name: Evans
Project Location: South Kingstown, RI
Project Number: 30052937
Project Manager: Donna Pallister
Pace Quote Name/Number:
Invoice Recipient: accountspayable.administration@arcadis-us.com
Sampled By: Dakota Davis

Requested Turnaround Time
7-Day ☐ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date: Standard

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☒

Data Delivery
Format: PDF ☒ EXCEL ☒
Other:
CLP Like Data Pkg Required: ☐
Email To: dakota.davis@arcadis.com
~~Fax To #:~~ donna.pallister@arcadis.com

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☐
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Work Order#	Client Sample ID / Description	~~Beginning~~ Date/~~Time~~	~~Ending~~ Date/Time	COMP/GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	TPH 8100M	Total Lead
1	Stockpile 1	3/24/23	930	Comp	S	U		1				X	X
2	Stockpile 2	↓	945	↓	↓	↓		1				X	X
3	Stockpile 3		955					1				X	X
4	Stockpile 4 north		1005					1				X	X
5	Stockpile 4 South		1015					1				X	X

[2] Preservation Code
Courier Use Only
Total Number Of:
VIALS
GLASS 5
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? (Y) N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N
*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time:
Dakota Davis	3/24/23 1530
Received by: (signature)	Date/Time:
Paul Chatterton	3-24-23 1530
Relinquished by: (signature)	Date/Time:
Paul Chatterton	3-24-23 17
Received by: (signature)	Date/Time:
Chalberg	3/24/23 1700
Relinquished by: (signature)	Date/Time:
Chalberg	3/24/23 1830
Received by: (signature)	Date/Time:
5.8	3/24/23 1830
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: Hold extra soil for potential TCLP analysis

Detection Limit Requirements
MA
GW1
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

MELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Comments:
Standard TAT per client - MEK 3/27/23

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F:413-525-6405
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Log In Back-Sheet

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

Pace
PEOPLE ADVANCING SCIENCE

Client Arcadis
Project Enrine
MCP/RCP Required No
Deliverable Package Req. No
Location South Kingstown, RI
PWSID# (When Applicable) NA
Arrival Method:
Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐ _____
Received By / Date / Time MFM 3/24/23 1830
Back-Sheet By / Date / Time GM 3/24/23 2018
Temperature Method gun #5
Temp ☑ < 6° C Actual Temperature 5.8
Rush Samples: Yes / (No) Notify _____
Short Hold: Yes / (No) Notify _____

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☐	☑
MS/MSD	☐	☑
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

Notes regarding Samples/COC outside of SOP:

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑
Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: (N/A) ☐ ☐

Container (Circle when applicable)	UnP	HCl	HNO3	H2SO4	NaOH	Trizma	NaS2O3	Other Preservative
1L Amber Plastic								
500 mL Amber Plastic								
250 mL Amber Plastic								
Other Amber Clear Plastic								
16oz (Amber) Clear	5							
8oz Amber Clear								
4oz Amber Clear								
2oz Amber Clear								
Col/Bacteria								
Flashpoint								
Plastic Bag								
SOC Kit								
Perchlorate								
Encore								
Frozen								

	Proper Headspace	UnP	HCl	MeOH	Bisulfate	DI	Thiosulfate	Sulfuric	Other
Vials									