Waste Management Division
PO Box 95, 29 Hazen Drive
Concord, NH 03302

Type of Submittal (Check One-Most Applicable)

☐ Work Scope ☐ Reimbursement Request	☐ Remedial Action • Remedial Action Plan • Bid Plans and Specifications • Remedial Action Implementation Report ☐ Treatment System and POE O&M ☐ Activity and Use Restriction
☐ UST Facility Report ☐ AST Facility Report	
☐ Emergency/Initial Response Action ☐ Groundwater Quality Assessment	☐ Temporary Surface Water Discharge Permit
☐ Initial Site Characterization ☐ Site Investigation • Site Investigation Report • Supplemental Site Investigation Report • GMZ Delineation • Source Area Investigation • Data Submittal • Annual Summary Report ☒ Unsolicited Phase II Environmental Site Assessment ☐ Closure Documentation	☐ Groundwater Management Permit • Permit Application • Renewal Application • Deed Recordation Documentation • Abutter Notification Documentation • Release of Recordation ☐ Data Submittal ☐ Annual Summary Report

SUPPLEMENTAL PHASE II ENVIRONMENTAL SITE ASSESSMENT

Dagostino Rose Farm
Oak Street Extension
Exeter, New Hampshire
NHDES Site #201203003

Judd Newcomb
Digitally signed by Judd Newcomb
DN: cn=Judd Newcomb, o=Credere Associates, LLC, ou, email=jnewcomb@crederellc.com, c=US
Date: 2016.07.29 11:27:21 -04'00'

Prepared For:
Rockingham Planning Commission
156 Water Street
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Phone: (603) 778-0885
Contact: Ms. Theresa Walker

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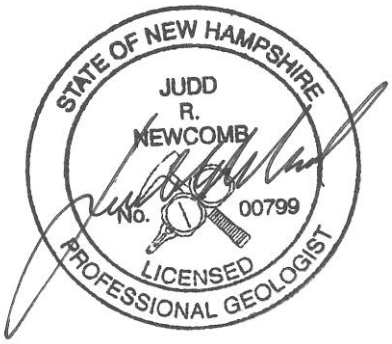

July 29, 2016

Recommended Risk Category (check one)

☐ 1. Immediate Human Health Risk (Impacted water supply well, etc.)	☐ 4. Surface Water Impact	☐ 7. Alternate Water Available/Low Level Groundwater Contamination (<1,000 X AGQS)
☐ 2. Potential Human Health Risk (Water supply well within 1,000' or Site within SWPA)	☐ 5. No Alternate Water Available/No Existing Wells in Area	☐ 8. No AGQS Violation/No Source Remaining
☐ 3. Free Product or Source Hazard	☐ 6. Alternate Water Available/High Level Groundwater Contamination (>1,000 X AGQS)	☐ Closure Recommended

CREDERE ASSOCIATES, LLC
776 Main Street
Westbrook, Maine 04092
Phone: 207-828-1272
Fax: 207-887-1051

July 29, 2016

Theresa Walker
Rockingham Planning Commission
156 Water Street
Exeter, NH 03833

Subject: **Supplemental Phase II Environmental Site Assessment**
Dagostino Rose Farm, NHDES #201203003
Oak Street Extension, Exeter, New Hampshire

Dear Ms. Walker:

This report has been prepared to present the results of a Supplemental Phase II Environmental Site Assessment completed for the above referenced property (the Site). Sections 6 and 7 of this report include the conclusions and recommendations generated during the performance of the Supplemental Phase II Environmental Site Assessment.

Please do not hesitate to contact me at (207) 828-1272 extension 15 if you have any questions, comments, or require additional information regarding this investigation.

Sincerely,

CREDERE ASSOCIATES, LLC

Allison S. Drouin, PG
Primarily Author/Geologist

Judd Newcomb, PG, CG
Project Manager/Geologist

Enclosure: Phase II ESA

CC: Michael McCluskey, NHDES

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Supplemental Phase II Environmental Site Assessment

Dagostino Rose Farm
NHDES Site #201203003
Oak Street Extension

Prepared for:
Rockingham Planning Commission
156 Water Street
Exeter, New Hampshire 03833

July 29, 2016

In Reference to:
Project No. 15001275

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EXECUTIVE SUMMARY

Credere Associates, LLC (Credere) was retained by the Rockingham Planning Commission (RPC) to conduct a Supplemental Phase II Environmental Site Assessment (ESA) at the Dagostino Rose Farm located on the Oak Street Extension in Exeter, New Hampshire (the Site). This Supplemental Phase II ESA was completed in conformance with the ASTM International (ASTM) E 1903-11 *Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process* and with Credere's New Hampshire Department of Environmental Services (NHDES) approved Phase II Additional Investigation Work Plan for the Site dated April 1, 2016.

The Site comprises three parcels of land totaling 41.07 acres that are accessed by Oak Street Extension. The Site is identified by the Town of Exeter as Map 54, Lots 5, 6, and 7, which are currently owned by members of the Dagostino family. The Site is currently occupied by residences but was formerly occupied by a greenhouse facility that cultivated roses. An abandoned rose packing house and a three bay garage formerly used by the greenhouse facility are located in the western portion of the Site, and a large field is located between the residences where the greenhouses once stood. The remainder of the Site is wooded or overgrown and is characterized by hummocky land interwoven with streams and wet areas.

The primary objective of this Supplemental Phase II ESA was to address data gaps and NHDES concerns remaining after completion of a 2015 Phase II ESA. Based on the NHDES' January 27, 2016, response letter to Credere's 2015 Phase II ESA and discussions during a meeting at the Site on February 26, 2016, and follow-up correspondence, the following specific objectives were established for this assessment:

- Further assess the area of CA-TP-103 behind the packing house to observe the composition of layers of varying fill material and assess groundwater beneath the previously observed fill
- Further assess PAH and lead impacted sediment in the detention area south of the pond and downstream in Norris Brook
- Attempt to delineate the extent of lead impacted surface soil in the vicinity of CA-SS-1 and former greenhouse area
- Further assess the extent of lead in pond sediment presumed to have been discharged through a drain pipe from the former greenhouses
- Assess possible releases of oil or hazardous materials from the newly identified culvert behind the packing house

The following sampling program was conducted to accomplish the above objectives:

- Advanced one soil boring (CA-SB-103) through the fill material and collected a soil sample in the vicinity of CA-TP-103 and complete as a monitoring well (CA-MW-103)

- Collected surface soil samples from the culvert discharge (CA-SS-105) and greenhouse area (CA-SS-101A through CA-SS-101F)
- Installed one groundwater monitoring well (CA-MW-103) through the fill material and collected a groundwater sample
- Collected sediment samples from the pond, detention area, and Norris Brook (CA-SED-103 through CA-SED-108)

Credere makes the following conclusions with regard to the above objectives:

The coal ash and clinker previously observed and attributed as the likely source of PAHs and arsenic was confirmed through observation to be present throughout the area southwest of the Site driveway. CA-MW-103 was installed to assess the mobilization of PAHs and arsenic from soil to groundwater. Groundwater sample analytical results were below the laboratory reporting limits indicating PAHs and arsenic in the coal ash and clinker appear generally stable and do not appear to be leaching to groundwater at a high enough rate to elevate concentrations above the AGQS.

PAHs exceeded the threshold effect concentrations (TECs) in sediment (CA-SED-101) previously collected from the man-made detention area that receives drainage from the pond across the driveway. The presence of PAHs exceeding the TEC cannot be dismissed in other samples collected from this detention area (CA-SED-106 and CA-SED-107) and further downstream (CA-SED-102 and CA-SED-108) due to laboratory detection limits exceeding the TECs as a result of the high organic content of the sediment causing matrix interference. Observation of the sample location for CA-SED-101 indicated the presence of degraded asphalt that likely washed into the detention area from the adjoining unmaintained road/driveway as significant erosion was observed along the bank of the detention area. Therefore, the PAHs exceeding the TEC can likely be attributable to the asphalt; however, lack of the known extent of PAHs exceeding the TEC in the detention area is considered a data gap.

Lead previously identified in the area of the former greenhouses is presumed to be associated with lead-containing paint that chipped to the exterior soil and/or was later spread during demolition of the greenhouses. Analytical results exceed the NHDES lead SRS in only one location near the center of the greenhouse area, which has been delineated through step out sampling. However, elevated lead concentrations were screened to likely exceed the NHDES SRS in areas not previously identified throughout the greenhouse area. There are likely several hot spots throughout this area; therefore, the entire greenhouse area is considered lead-impacted.

Lead appears to be eroding from the greenhouse area into the adjoining pond where sediment concentrations exceed the lead TEC and probable effect concentration (PEC). Lead is also present within the manmade detention area and swale where sediment concentrations for lead exceed the TEC and/or PEC at the outfall and downstream. However, it remains unclear if lead in the detention area and Norris Brook are related to the greenhouse area, as lead may be contained in the degraded asphalt, a background condition (i.e., lead was detected in CA-SED-BKG), or another unidentified source.

A culvert with an unknown inlet was identified west of the packing house during an early spring (i.e., low vegetation) Site visit. Due to the unknown inlet, one soil sample was collected from the soil within the culvert to assess for possible oil or hazardous materials. Results were below the NHDES SRSs or were considered background (e.g., arsenic); however, since low levels of pesticides, lead and arsenic were detected, an upstream (i.e., inlet) source may be possible and further assessment of the location of the inlet is warranted.

Based on the findings and conclusions of Credere Phase II ESA and this Supplemental Phase II ESA, Credere makes the following cumulative recommendations:

- Remove and properly dispose of surficial solid waste including appliances, containers, batteries, scrap metal, other containers, etc. to eliminate future potential releases of contaminants to the environment and assess soil and groundwater impacts associated with any newly discovered drums, ASTs, or other containers
- Subsequently, prepare a Remedial Action Plan including additional remedial investigation for addressing areas of solid waste fill, coal ash and clinker, and lead impacted soil in the area of the greenhouses and residence perimeters
- Trace the location of the newly discovered culvert to its inlet to assess the source of soil within the culvert and assess for possible sources of low levels of pesticides, lead and arsenic
- Stabilize lead-containing paint on the exterior of 24 Oak Street Extension to eliminate the continuing source of lead to soil
- Engage the NHDES to determine the appropriate remedial action or mitigation actions, if any, necessary to address concentrations of lead in sediments within the pond and detention area
- Proper abatement of identified asbestos-containing materials (ACMs) prior to renovation/demolition of the Site buildings and further assessment of areas not previously surveyed
- Proper handling and disposal of lead-containing paint coated and possible polychlorinated biphenyl (PCB)-containing (greater than 1 mg/kg but less than 50 mg/kg) building materials during renovation/demolition and further assessment of areas not previously surveyed
- Perform a groundwater elevation survey of the wells in the early winter to very early spring when vegetation is lowest. Properly abandon the groundwater monitoring well network at the Site during redevelopment

1. INTRODUCTION

Credere Associates, LLC (Credere) was retained by the Rockingham Planning Commission (RPC) to conduct a Supplemental Phase II Environmental Site Assessment (ESA) at the Dagostino Rose Farm located on the Oak Street Extension in Exeter, New Hampshire (the Site). This Supplemental Phase II ESA was completed in conformance with the ASTM International (ASTM) E 1903-11 *Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process* and with Credere's New Hampshire Department of Environmental Services (NHDES) approved Phase II Additional Investigation Work Plan for the Site dated April 1, 2016. A copy of the work plan is included in **Appendix A**.

1.1 PURPOSE

A previous Phase II ESA was completed by Credere in April 2013 to assess petroleum related recognized environmental conditions (RECs) identified in Credere's April 23, 2012, Phase I ESA. Due to eligibility restrictions associated with use of Brownfield's petroleum assessment funding, hazardous material related RECs were not assessed at that time. To complete the assessment of hazardous substance related RECs, RPC submitted an Assessment Grant Application for funding through New Hampshire Department of Environmental Services (NHDES) Brownfields Revolving Loan Fund (RLF). The subgrant was awarded and RPC retained Credere to perform the additional assessment work.

Credere prepared a Supplemental Phase II ESA Work Plan dated July 2, 2015, to assess the remaining hazardous material related RECs at the Site in accordance with the recommendations of Credere's April 5, 2013, Preliminary Phase II ESA recommendations, and NHDES' May 5, 2015, Preliminary Phase II ESA review letter. Credere completed the Phase II ESA work that identified fill materials and soil/sediment containing polycyclic aromatic hydrocarbons (PAHs) and/or lead in soil/sediment at concentrations above the NHDES' Soil Remediation Standards (SRS). Results were summarized in a draft Phase II ESA dated November 9, 2015 (revised April 1, 2016). NHDES reviewed the document and provided comments in a January 27, 2016, response letter. The purpose of this Supplemental Phase II ESA was to further assess concerns at the Site.

1.2 STATEMENT OF OBJECTIVES

This section was developed to provide clarity and transparency in communicating and interpreting Phase II ESA results. The primary objective of this Supplemental Phase II ESA was to address data gaps and NHDES concerns remaining after completion of the 2015 Phase II ESA. Based on the NHDES' January 27, 2016, response letter to Credere's 2015 Phase II ESA, discussions during February 26, 2016, Site meeting, and follow-up correspondence, the following specific objectives were established for this assessment:

- Further assess the area of CA-TP-103 behind the packing house to observe the composition of layers of varying fill material and assess groundwater beneath the previously observed fill

- Further assess PAH and lead impacted sediment in the detention area south of the pond and downstream in Norris Brook
- Attempt to delineate the extent of lead impacted surface soil in the vicinity of CA-SS-1 and former greenhouse area
- Further assess the extent of lead in pond sediment presumed to have been discharged through a drain pipe from the former greenhouses
- Assess possible releases of oil or hazardous materials from the newly identified culvert behind the packing house

2. BACKGROUND INFORMATION

2.1 SITE DESCRIPTION

The Site comprises three parcels of land totaling 41.07 acres that are accessed by Oak Street Extension. The Site is identified by the Town of Exeter as Map 54, Lots 5, 6, and 7, which are currently owned by members of the Dagostino family. The Site is currently occupied by residences but was formerly occupied by a greenhouse facility that cultivated roses. An abandoned rose packing house and a three bay garage formerly used by the greenhouse facility are located in the western portion of the Site, and a large field is located between the residences where the greenhouses once stood. The remainder of the Site is wooded or overgrown and is characterized by hummocky land interwoven with streams and wet areas. A Site Location Plan has been provided as **Figure 1**.

Each residence is serviced by a separate septic system. The former cultivation beds reportedly drained water from a subsurface piping system to the onsite pond to the south, which was also used for fire suppression. A culvert behind the packing house may also receive runoff from the former greenhouse area. One private drinking water well (DW-1) services the abandoned residence, cottage residence, and abandoned mobile homes in the western portion of the Site. The three permanent residences (22, 23, and 24 Oak Street Extension) are serviced water by pumping from the spring (DW-2) located at the bottom of Oak Street Extension.

2.2 SITE HISTORY

The Site was originally developed with the residences during the 1930s. The Site was purchased by the Exeter Rose Farm in 1939, and the greenhouse and boiler house were constructed by 1943. The construction time of the packing house is not known. The Site operated as a rose farm through the late 1980s. The greenhouse and boiler house were razed in 1998. The residences remain maintained; however, the packing house was abandoned, and the mobile homes and western farm portion of the Site has deteriorated and overgrown with vegetation.

2.3 PREVIOUS ENVIRONMENTAL INVESTIGATIONS

The following prior environmental reports were identified for the Site.

Phase I ESA, Credere, April 23, 2012

Credere was retained by RPC to complete a Phase I ESA for the Site. Based on reviews of historical sources, environmental databases, interviews, information provided by the Town of Exeter, a Site reconnaissance, and judgment by the Environmental Professional, the following RECs were identified in connection with the Site:

- REC #1 – Historical release through use of pesticides during use of the Site as a rose farm: The documented historical use of a pesticide on the Site represents a REC because the mixing, application, and subsequent drainage or tracking of these materials may have resulted in releases to environmental media including soil at mixing locations (including

where a wooden spray tank was discovered during the Site reconnaissance) and areas where excess pesticide may have been applied and/or accumulated (including planting beds, the greenhouse underdrain systems, and the pond to the west of the packing house where the underdrain systems discharged). (*Note: The Site owners have since indicated the drains discharged to the pond south of the greenhouses as indicated on* ***Figure 2***.)

- REC #2 – Historical presence of No. 6 fuel oil storage in the former boiler house: The former presence of a boiler house with 30,000 gallons of No. 6 fuel oil storage represents a REC because undocumented releases of petroleum or hazardous materials associated with the former operation of this facility may have occurred and impacted soil and/or groundwater in the vicinity of the building.
- REC #3 – Coal ash and clinker dumping and/or filling was observed to the west of the former boiler house: This represents a REC because environmental media in contact with the ash/clinker may have impacted soil and groundwater at the Site.
- REC #4 – Possible releases of oil to the oil change pit: The former use of the open-ended oil change pit represents a REC because undocumented releases of petroleum (waste oil) and associated hazardous materials may have impacted environmental media, such as soil and groundwater, in the area of the pit.
- REC #5 – The historical presence of a 100-gallon gasoline underground storage tank (UST) to the southeast of the packing house: This represents a REC because undocumented spills or releases may have impacted environmental media including soil and groundwater near the tank.
- REC #6 – Solid waste dumping west of the packing house: The observed dumping of solid waste and other refuse to the west of the packing house represents a REC because, if present, petroleum and/or hazardous materials in the waste may have impacted environmental media in its vicinity.
- REC #7 – Possible release to the three bay garage: The historical use of the three bay garage in the central portion of the Site as an automotive maintenance and/or repair facility represents a REC because undocumented releases of petroleum and/or hazardous materials used in connection with this building may have occurred and impacted environmental media in its vicinity.
- REC #8 – Possible release from the 275-gallon aboveground storage tank (AST) behind the western abandoned mobile home: The out-of-service 275-gallon fuel oil AST located to the rear of the abandoned mobile home represents a REC because there is a potential that undocumented leaks to have occurred from its buried supply line and impacted soil and/or groundwater in its vicinity.

Additionally, the following ASTM non-scope considerations (NCs) were noted during the Phase I ESA:

- NC #1 – Possible asbestos-containing materials (ACM) in the Site buildings: Based on the ages of the Site buildings, asbestos may be present in building materials at the Site, or

may have been present in materials used to construct the previously demolished greenhouses and boiler house.

- NC #2 – Possible lead-paint in/on the Site buildings: Based on the ages of the Site buildings, regulated concentrations of lead may be present in painted surfaces throughout the Site.
- NC #3 – Possible polychlorinated biphenyl (PCB)-containing building materials in the Site buildings: Based on the ages of the Site buildings, PCBs may be present in building materials used to construct the Site buildings.
- NC #4 – Universal wastes in the packing house: Universal wastes were observed in the packing house, may be present in the dumped refuse identified on the Site, and may remain within the abandoned house and/or abandoned mobile home.
- NC #5 – Coal ash and clinker used as aggregate in packing house concrete: Coal ash and clinker was observed to be used as filler material in the concrete blocks of the packing house.

Phase II ESA Preliminary Report, Credere, April 5, 2013

Credere completed a Phase II ESA Preliminary Report for the Site dated April 5, 2013, to assess petroleum related RECs at the Site. In accordance with a November 5, 2012, approved Site Specific Quality Assurance Project Plan (SSQAPP), the scope of work completed to assess RECs #2, #4, #5, #7, and #8 included the following:

- A ground-penetrating radar (GPR) and metal detector survey of a portion of the Site in an attempt to locate a 100-gallon gasoline UST thought to be located southeast of the packing house
- Advancement of eight (8) soil borings, field screening, and collection of surface and subsurface soil samples for a combination of volatile organic compounds (VOCs), diesel range organics (DRO), semi-volatile organic compounds (SVOCs), PAHs, PCBs, and/or Resource Conservation and Recovery Act (RCRA) 8 metals analyses
- Installation of five (5) groundwater monitoring wells and groundwater sampling for VOC, SVOC, pesticide, and dissolved RCRA 8 metals analyses
- Collection of two (2) drinking water samples for confirmatory SVOCs analyses

The inability to gain access to the interior of the three bay garage from its tenant represented a data gap during Credere's Phase I ESA. During the Phase II ESA work, Credere attempted to contact the tenant by telephone on two separate occasions; however, the tenant did not respond to Credere's inquiry. Therefore, the interior of the three bay garage remained a data gap for the Site (REC #7).

Based on the results of the Phase II ESA work, Credere made the following conclusions for the Site:

- REC #2 – Historical presence of No. 6 fuel oil storage in the former boiler house – CONFIRMED. Soil in the vicinity of the former boiler house (soil borings CA-SB-1, CA-SB-4, and CA-SB-5) had been impacted by PAHs and arsenic. These contaminants are likely the result of the presence of former boiler house related coal ash and/or clinker fill materials that were observed in the soil borings. However, groundwater did not appear to have been impacted by this contamination.
- REC #4 – Possible releases of oil to the oil change pit – DISMISSED.
- REC #5 –The historical presence of a 100-gallon gasoline UST to the southeast of the packing house – DISMISSED.
- REC #7 – Possible release to the three bay garage – NEITHER CONFIRMED OR DISMISSED. While the collected soil and groundwater samples did not reveal any direct evidence of petroleum or hazardous substance release related to this use, a data gap remains since Credere was not able to gain access to the interior of the building to conduct site reconnaissance activities.
- REC #8 – Possible release from the 275-gallon AST behind the western mobile home – DISMISSED.

Based on the above conclusions, Credere made the following recommendations for additional work at the Site:

- Additional soil sampling to characterize contaminated soil associated with REC #2 to assess the vertical and horizontal extent of arsenic and PAH impacts in the vicinity of the former boiler house. Supplemental sampling to be performed at the Site during the assessment of RECs #1 and #3 should also include a background study and/or further assessment of arsenic identified in the area of soil boring CA-SB-8.
- To satisfy the NHDES guidelines for assessing seasonal fluctuations in groundwater conditions, groundwater monitoring wells CA-MW-1 through CA-MW-5, as well as drinking water sample locations DW-1 and DW-2, should be resampled during the summer for VOCs to confirm the presence of VOCs in groundwater and to document concentrations remain below the NHDES Ambient Groundwater Quality Standards (AGQS). In addition, these samples should be analyzed for SVOC, di-n-butylphthalate, to confirm the recent detections were the result of laboratory contamination.
- To further evaluate REC #7 and determine if additional investigation is warranted, Credere recommended gaining access to the interior of the three bay garage so it can be viewed for evidence of RECs.
- REC #1, REC #3, and REC #6, which were not assessed as part of the petroleum focused Phase II ESA work, should be assessed using either private funding, or should be assessed when additional RPC Brownfields funding is available.

- Following the assessment of REC #1, REC #3, and REC #6, the preparation of a comprehensive ASTM compliant Phase II ESA report detailing the cumulative work at the Site is recommended.
- Following completion of all Phase II ESA work, preparation of an Analysis of Brownfields Cleanup Alternatives (ABCA) and remedial action plan (RAP) to determine the appropriate mitigation or cleanup actions necessary for the identified contaminants of concern.

Phase II ESA, Credere, Draft November 9, 2015, Revised April 1, 2016

Credere completed a Phase II ESA in November 2015 to assess the hazardous material related RECs not previously assessed as part of the preliminary Phase II ESA due to Brownfields funding restrictions on hazardous material assessment. The work scope was conducted in accordance with Credere's NHDES approved July 2, 2015, Supplemental Phase II ESA Work Plan for the Site. Based on the results of the investigation, Credere made the following conclusions with regard to the remaining RECs:

- REC #1 – Historical release through use of pesticides during use of the Site as a rose farm: Impacts to soil and groundwater DISMISSED, sediment impacts INCONCLUSIVE**.** Credere collected surface soil samples from the area of a discarded pesticide mixing tank as well as from the area of the former greenhouses where pesticides would have been applied. Trace levels of 4,4'-DDE and 4,4'-DDT were detected in the samples; however, results were below the NHDES Soil Remediation Standards (SRSs) indicating those compounds were likely applied sparingly in accordance with the manufacturer's instructions, and releases of pesticides is not likely to have occurred. Pesticides were not detected in sediment samples collected from the Site; however, due to reporting limits exceeding the pesticide threshold effect concentrations (TECs) and probable effect concentrations (PECs), data collected as part of this Phase II ESA could not be used to dismiss pesticides in sediment.
- REC #2 and REC #3 – Impacts associated with the former boiler house and observed clinker and coal ash: CONFIRMED. The coal ash and clinker previously observed and attributed as the likely source of PAHs and arsenic was confirmed through observation to be present throughout the area southwest of the Site driveway. Sampling of native soil beyond the vertical and horizontal extents of the clinker and coal ash and solid waste fills indicated the PAHs and arsenic were confined to the fill materials and in some areas a thin layer of native material in contact with the fills. Due to limited data an accurate estimation of volume of the impacted soil is considered a data gap.
- REC #6 – Solid waste dumping: CONFIRMED. Solid waste was observed to be disposed along the southwest edge of the Site driveway. The primary area of solid waste adjacent to the driveway extended approximately 30 feet west of the driveway in a distinct visible lobe. The lobe was observed to contain appliances, household waste, car batteries, and other metal debris. Large solid waste objects were observed near the surface behind the western mobile home and included car frames, drums, and scrap ASTs. Additionally, household solid waste was observed to be intermixed with soil to a

depth of approximately 12 feet behind the packing house, which was underlain by coal ash and clinker. Based on the limited data within the body of the solid waste fill, the estimated extent solid waste fill did not permit an accurate estimation of volume.

- REC #7 – Possible release to the three bay garage: DISMISSED. One concrete sample was collected from an area of staining and analyzed for PCBs. Additionally, one soil sample was collected from beneath the concrete slab near where the heaviest staining was observed for possible impacts associated with a release to the garage. Analytical results were below the laboratory reporting limits for PCBs, VOCs, SVOCs, and pesticides. Metals were detected below the NHDES SRSs.

- NC #1 – Possible ACM in the Site buildings: CONFIRMED. Window glazing on the cottage residence and the packing house was found to contain asbestos.

- NC #2 – Possible lead-paint in/on the Site buildings and associated secondary impacts: CONFIRMED. Lead paint was identified on white exterior siding and trim on 23 and 24 Oak Street Extension. Lead in soil screening of the 23 and 24 Oak Street Extension residences indicated soil around the perimeter of the buildings was impacted with lead. Soil samples collected from the lead in soil screening locations contained concentrations of lead exceeding the NHDES lead SRS. With the exception of the CA-LBP-6 location, lead impacts exceeding the NHDES SRS were confined to the top 6 inches. Additional vertical delineation is required at CA-LBP-6. Impacts are presumed to extend approximately 4 feet from the drip line; however, horizontal delineation has not been completed. Chipping and flaking paint on the exterior of 24 Oak Street Extension is considered a continuing source of lead that will require stabilization prior to remediation of lead in perimeter soil.

  Soil analytical results for samples collected from the area of the greenhouses do not indicate elevated concentrations of pesticide related compounds (e.g., pesticides and arsenic); however, elevated lead is present in one sample in the area of the former greenhouses. Therefore, this impact is presumed to be associated with lead-containing paint on the exterior of the former greenhouses that chipped to the exterior soil and was later spread during demolition of the greenhouses. Lead exceeds the NHDES lead SRS in only one location near the center of the greenhouse area; however, lead concentrations high enough to be contributing to lead exceedances of sediment standards is present throughout the greenhouse area. Lead appears to be running off this area into the adjoining pond where sediment concentrations exceed the lead TEC and PECs. Lead also appears to be migrating downstream within the manmade swale where sediment concentrations for lead exceed the TEC.

- NC #3 – Possible Toxic Substance Control Act (TSCA)-regulated PCB-containing building materials in/on the Site buildings: DISMISSED. Two samples were collected from representative paint and adhesive in the packing house. No other likely PCB-containing materials were observed at the Site. Analytical results were below the laboratory reporting limits for both samples.

- Confirmatory sampling for the presence of SVOCs in drinking water: DISMISSED. Di-n-butylphthalate was not detected above laboratory reporting limits in the sample collected from the nearby spring. Chloroform was detected below the NHDES AGQS. Based on these results, it can be concluded the former detection was likely due to laboratory contamination.

Based on the findings and conclusions, Credere made the following recommendations:

- Remove and properly dispose of surficial solid waste including appliance, containers, batteries, scrap metal, other containers, etc. to eliminate future potential releases of contaminants to the environment and assess soil and groundwater impacts associated with any newly discovered drums, ASTs, or other containers
- Subsequently, prepare a Remedial Action Plan including additional remedial investigation for addressing areas of solid waste fill, coal ash and clinker, and lead impacted soil in the area of the greenhouses and residence perimeters
- Stabilize lead paint on the exterior of 24 Oak Street Extension to eliminate the continuing source of lead to soil
- Perform additional sediment sampling to support localized remediation efforts and/or perform a toxicological study of PAH and lead sediment impacts in accordance with the NHDES Evaluation of Sediment Quality Guidance Document
- In addition, assess the potential for discharges to the area to the rear of the packing house from a previously unidentified culvert
- Proper abatement of identified ACM prior to renovation/demolition of the Site buildings and further assessment of areas not previously surveyed
- Proper handling and disposal of lead-paint coated and possible PCB-containing (greater than 1 milligram per kilogram [mg/kg] but less than 50 mg/kg) building materials during renovation/demolition and further assessment of areas not previously surveyed
- Properly abandon the groundwater monitoring well network at the Site during redevelopment activities

2.4 REDEVELOPMENT SCENARIO

The Site was assessed for unrestricted use. There are plans for a single-family residential development at the Site.

3. SCOPE OF WORK & METHODOLOGY

The following sampling program was developed to investigate select environmental media at the Site and meet the objectives identified in **Section 1**. Sampling was conducted in accordance with Credere's April 1, 2016, Phase II Additional Investigation Work Plan, which is included in **Appendix A**. A photo log of field activities is included as **Appendix B**.

3.1 SOIL BORING ADVANCEMENT & SOIL SAMPLING

On April 8, 2016, Credere oversaw Northern Test Boring of Gorham, Maine, advance one (1) soil boring (CA-SB-103, **Photograph 1**) at the Site using a track mounted hollow-stem auger drill rig. Soil borings CA-SB-103 was advanced to 18 feet below ground surface (bgs). Core samples were collected continuously using a 24 inch long, 2 ¼ inch diameter steel split spoon. Cores were individually logged, evidence of contamination was noted; and soil was field screened for total VOCs using a MiniRae 2000 photoionization detector (PID) calibrated with a 100 part per million by volume (ppm_v) isobutylene gas standard with an instrument response factor of 1.0. Soil was screened in accordance with the NHDES HWRB-12 jar headspace technique SOP. The soil boring log is provided in **Appendix C**.

One (1) subsurface soil sample was collected from 10 to 12 feet bgs from the first encountered native soil to assess the vertical extent of impacts associated with the solid waste and coal ash and clinker fills.

VOC samples were collected with a dedicated soil syringe directly from the split spoon immediately after opening to prevent loss of volatiles and degradation. The remaining soil from the split spoon was placed in a decontaminated stainless steel bowl, homogenized, and placed in appropriate laboratory provided glassware for other analyses. Soil samples were stored on ice and submitted to Absolute Resource Associates (ARA) of Portsmouth, New Hampshire, for analysis.

Sample locations are depicted on **Figure 2**, and a summary and justification of soil boring and samples collected from the Site is provided in **Table 1**.

Excess soil from the soil boring was returned to its place of origin within the borehole or to the surface surrounding the borehole.

3.2 SURFACE SOIL SAMPLING AND SCREENING

On April 8, 2016, Credere performed soil delineation screening and sampling surrounding the location of CA-SS-101 where lead concentrations previously exceeded the NHDES SRS. Sample locations were targeted using screening results of an X-ray fluorescence (XRF) meter. Soil was screened in 5 foot step out increments around CA-SS-101 and screening results were compared to 240 mg/kg determined based on the 40% instrument error range for the XRF relative to the NHDES SRS. When screening results fell below 240 mg/kg, Credere collected six (6) soil samples CA-SS-101A through CA-SS-101F from 0 to 0.5 feet bgs. Samples were

submitted to ARA for lead analysis by EPA Method 6020A. An inset on **Figure 2** depicts the delineation sample locations and **Photograph 2** depicts the delineation area. A summary of soil samples collected relative to the screening locations is provided in **Table 2**.

To further assess the extent of lead impacts throughout the greenhouse area, Credere screened surface soil in a random pattern using the XRF. Soil was screened for concentrations relative to the SRS of 400 mg/kg and was presumed to be impacted if XRF screening results exceed 240 parts per million (ppm) (40% error range for the XRF relative to the NHDES SRS). XRF precision was assessed by performing precision measurements at XRF screening location 21. A seven (7) time replicate (XRF screening locations 21 through 27) was performed and the relative standard deviation (RSD) was calculated (RSD = (SD/mean concentrations) x 100).

Additionally, on April 8, 2016, Credere collected sample CA-SS-105 from soil within the culvert (**Photograph 3**) to assess if potential releases of petroleum or hazardous materials may have occurred through the previously unidentified culvert to the west of the packing house.

Each surface soil sample was collected using decontaminated hand tools and placed directly into laboratory glassware after removing any organic detritus. Sample locations are depicted on **Figure 2**, and a summary and justification of soil boring and samples collected from the Site is provided in **Table 1**.

3.3 MONITORING WELL INSTALLATION & GROUNDWATER SAMPLING

On April 8, 2016, soil borings CA-SB-103 was completed as groundwater monitoring well CA-MW-103. The groundwater monitoring well was constructed using 10 feet of 1-inch diameter 0.010-inch slotted PVC screen with at least 5 feet of screen below the depth of the water table to allow for groundwater table fluctuations and enough solid PVC riser to reach the ground surface. The well annulus was filled with No. 2 washed silica sand, and a bentonite seal was installed above the screen. Monitoring well construction details are provided in **Table 3** and on the soil boring log in **Appendix C**.

Depth to groundwater was measured in all onsite wells (CA-MW-100, CA-MW-101, CA-MW-102, and CA-MW-103). Credere again attempted to survey the four monitoring wells on the Site; however, due to dense vegetation even with the lack of spring growth, Credere was still unable to see any two wells (particularly CA-MW-102 located within a grove of trees) from a single location for correlation without Site clearing; therefore, groundwater elevations could not be calculate and the relative groundwater flow direction was unable to be calculated. As discussed later in this report, no groundwater impacts were identified at the Site; therefore, the lack of groundwater elevation and flow direction data has not affected the outcome of this investigation.

On April 8, 2016, the newly installed well was developed by overpumping and agitation methods until the purge water ran clear. Credere allowed at least 14 days for the monitoring wells to equilibrate with the surrounding aquifer prior to sampling.

On April 29, 2016, Credere sampled the newly installed well using low-flow sampling methodologies. The well was purged at a stable flow rate with a peristaltic pump to avoid drawdown of the water. After a stable flow rate was achieved, groundwater was periodically monitored for temperature, pH, oxidation-reduction potential, specific conductivity, dissolved oxygen, and turbidity using a multi-parameter sonde and an in-line flow-through cell until parameters stabilized over a period of three readings spaced at least 5 minutes apart or at a spacing to allow for a complete exchange of flow through the flow-through cell based on the flow-through cell volume and flow rate. Groundwater samples were collected immediately after the pump and directly into the appropriate bottleware in order of decreasing volatility. The groundwater sample was stored on ice and submitted to ARA for analysis in accordance with **Table 1**.

3.4 SEDIMENT SAMPLING

On April 8, 2016, three (3) sediment samples (CA-SED-103 through CA-SED-105) were collected from the pond to further assess the extent of lead impacts (**Photograph 4**). Samples were collected in a 5 foot arc from the discharge pipe into the pond (i.e., the former location of CA-SED-100). Samples were collected using hand tools and placed directly into laboratory provided glassware after decanting surface water. Samples were submitted to ARA for lead analysis by EPA Method 6020A.

Two sediments samples (CA-SED-106 and CA-SED-107) were collected from the detention area (**Photographs 5 and 6**) and one additional sediment sample (CA-SED-108) was collected from Norris Brook (**Photograph 7**) to further assess PAHs and lead. One sample within the detention area was biased toward the location receiving discharge water from the pond's overflow discharge culvert, and the second was biased toward where detained water pools before draining through or overtopping the detention area. The sample within Norris Brook was biased to the area at the base of the slope receiving any water from the detention area. Each sample was collected using decontaminated hand tools and placed directly in laboratory glassware after decanting any surface water.

Sample locations are depicted on **Figure 2**, and a summary of sediment samples collected and requested analyses is provided in **Table 1**.

3.5 REGULATORY CRITERIA

Sample results were compared to the following applicable state and federal standards and/or guidelines.

Soil

Soil analytical results were compared to the New Hampshire Code of Administrative Rules Chapter Env-Or 600 – Contaminated Site Management Table 600-2 SRSs.

Groundwater

Groundwater analytical results were compared to the New Hampshire Code of Administrative Rules Chapter Env-Or 600 – Contaminated Site Management Table 600-1 AGQS and Table 2, Method 1 Groundwater Standards as revised in June 2015. Volatile results were also compared to the February 7, 2013, Table 1 Vapor Intrusion Screening Levels for Groundwater to Indoor Air Screening Levels (i.e., Method 1 GW-2 standards) to assess the potential for vapor intrusion into the current or future Site buildings.

Sediment

Sediment analytical results were compared to the TEC and PEC referenced in the NHDES' DRAFT Evaluation of Sediment Quality Guidance Document dated April 2005. Concentrations obtained from the *Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems* Macdonald et al, 2000.

4. RESULTS

The following subsections present the results of the data collected during the field work portion of this Supplemental Phase II ESA. Analytical tables included in this report include historical sample results.

4.1 SOIL SCREENING RESULTS FOR VOCS

Soil was screened in the field for VOCs using the jar headspace methodology. Screening results ranged from non-detect (0.0 ppm_v) to 1.4 ppm_v. Soil screening results are provided on the soil boring logs included in **Appendix C**.

4.2 LEAD IN SOIL XRF SCREENING RESULTS AND ANALYTICAL CONFIRMATORY RESULTS

A summary of lead in soil screening results and associated analytical results are provided in **Table 2** (analytical results are also summarized on **Table 4**), and the complete laboratory analytical report is provided in **Appendix D**.

Soil screening step-out locations from CA-SS-101 indicate lead impacted soil extends 20 feet north ranging in lead screening concentrations from 153 to 911 mg/kg, 10 feet northeast ranging in concentrations from 221 to 575 mg/kg, 15 feet southeast ranging in concentrations from 205 to 951 mg/kg, 5 feet south to a concentration of 184 mg/kg, 25 feet southwest ranging in concentrations from 185 to 516 mg/kg, and 5 feet northwest to a concentrations of 229 mg/kg. Confirmatory laboratory samples collected from these extents (i.e., the lowest indicated concentration in each direction) confirmed lead concentrations below the NHDES SRS of 400 mg/kg. Results could be correlated in that the screening results for locations that were below the 240 mg/kg concentration determined based on 40% error range of the XRF, were also below the NHDES SRS when analyzed by the laboratory; however, concentrations between the XRF and lab varied by two-fold in some locations.

Additionally, lead screening throughout the remainder of the greenhouse area indicated lead concentrations ranging from 196 to 759 mg/kg. Based on the inconsistent nature of concentrations throughout the greenhouse area, elevated lead concentrations are considered ubiquitous across the greenhouse area.

4.3 SOIL ANALYTICAL RESULTS

Soil analytical results are summarized on **Table 4**, and the complete laboratory analytical reports are provided in **Appendix D**.

VOCs

VOC results were below the laboratory reporting limits for samples collected from the Site.

SVOCs

Several SVOCs, more specifically PAHs, were detected in soil sample CA-SS-105; however, results were below the NHDES SRSs for the detected compounds. Other SVOCs were below the laboratory reporting limits.

Pesticides

4,4-DDT was detected below the NHDES SRS in CA-SS-105. Other pesticide compounds were below the laboratory reporting limits.

Total Petroleum Hydrocarbons (TPH)

TPH results were below the laboratory reporting limit in the one sample analyzed (CA-SS-105).

Metals

Arsenic, barium, total chromium, and lead were detected in soil samples CA-SB-103 (10-12) and CA-SS-105. Arsenic results exceeded the NHDES SRS in CA-SS-105; however, results were below the Site-specific background concentrations of 19 and 27 mg/kg and are not considered a contaminant of concern (COC) at this location. Soil containing background levels of arsenic is presumed to have eroded and entered the culvert at an upgradient location. Other detected metals were below the NHDES SRSs in samples collected as part of this Supplemental Phase II ESA.

(*Note: Lead results for surface soil samples CA-SS-101A through CA-SS-101F were summarized in* ***Section 4.2***).

4.4 GROUNDWATER ANALYTICAL RESULTS

Groundwater analytical results are summarized on **Table 5**, and the complete laboratory analytical report is provided in **Appendix D**.

Groundwater analytical results for VOCs, SVOCs, pesticides and dissolved RCRA 8 metals were below the laboratory reporting limits in groundwater samples collected from the Site.

4.5 SEDIMENT ANALYTICAL RESULTS

Sediment analytical results are summarized on **Table 6**, and the complete laboratory analytical reports are provided in **Appendix D**.

PAHs

PAH results for sediment samples CA-SED-106, CA-SED-107, and CA-SED-108 were below the laboratory reporting limits; however, the reporting limits exceeded the TECs and, therefore, this data cannot be used to dismiss the presence of PAHs at these locations.

Lead

Lead results for samples collected from the pond exceeded the TEC in samples CA-SED-103 and CA-SED-105 and exceeded both the TEC and PEC in sample CA-SED-104.

Lead results also exceeded both the TEC and PEC in the pond discharge location to the detention area in sample CA-SED-106, and results exceeded the TEC further downstream in samples CA-SED-107 and CA-SED-108.

4.6 DATA USABILITY ASSESSMENT

The contracted laboratory, ARA, provided analytical data in accordance with Credere's New Hampshire Brownfields Generic Quality Assurance Project Plan (QAPP, EPA RFA#14123) and the Site Work Plan. The laboratories provided the following information in analytical reports:

- Data results sheets
- Method blank results
- Surrogate recoveries and acceptance limits
- Duplicate results/acceptance limits
- Spike/duplicate results/acceptance limits
- Laboratory control sample results
- Description of analytical methods and results
- Other pertinent results/limits as deemed appropriate

At the completion of the field tasks and upon receipt of the analytical results, a data usability analysis was conducted to document the precision, bias, accuracy, representativeness, comparability, and completeness of the results. The complete Data Usability Assessment (DUA) is included in **Appendix E**.

In general, the data reviewed for this project are usable for making project decisions. Data are considered representative with regard to the sample design. No data were qualified as a result of this DUA. The following concerns were identified with regard to reporting limits relative to regulatory criteria:

- Reporting limits for PAHs in sediment samples CA-SED-106, CA-SED-107, and CA-SED-108 exceeded the applicable regulatory criteria, and, therefore, cannot be used to dismiss the presence of these contaminants in sediment. Improved reporting limits for these sediment samples may alter the conclusions drawn regarding the PAHs in sediment; however, due to the high organic content of the sediment (i.e., decomposed leaves and roots) the laboratory indicated lowering the reporting limits was unlikely to be feasible.

5. UPDATED CONCEPTUAL SITE MODEL

The conceptual site model (CSM) was updated using the results of this Supplemental Phase II ESA and prior reports and will be updated in subsequent reports as new information becomes available. This CSM includes a description of the physical setting of the Site, COCs, exposure pathways, and potential human and environmental receptors.

5.1 SITE DESCRIPTION

A detailed Site description consisting of Site use, Site location as depicted on **Figure 1**, and Site utilities is included in **Section 2.1**.

5.2 SITE HISTORY

A description of Site history including historical information as it relates to current environmental conditions at the Site is included in **Section 2.2**.

5.3 PHYSICAL SETTING

Topography

Based on Credere's observations and the United States Geological Survey (USGS) Topographic Map of the Exeter Quadrangle, New Hampshire, topography in the vicinity of the Site slopes generally downward to the southwest. The Site is generally flat to gently sloping to the southwest and south throughout most of the northeast portion of the Site. The southwest edge of the Site has steep slopes down to a river and pond. An excerpt from the USGS map has been included as **Figure 1**.

Geology

Surficial Geology

Soil in the northeastern portion of the Site east of the driveway consists of varying amounts of silt and sand. Concrete and building debris is present in the area of the former greenhouses; otherwise, soil appeared generally native.

Southwest of the driveway in the area of the packing house and former boiler house, surficial materials consist of solid waste debris (appliances, car batteries, household waste, etc.), rose cultivation waste, clinker, and coal ash all intermixed with soil. Adjacent to the driveway, fill was measured to be approximately 12 feet thick. The lobe of solid waste fill extends approximately 30 feet west from the driveway where fill transitions to primarily coal ash and clinker. Behind the mobile home, larger debris items such as car frames, drums, metal scraps, and scrap ASTs can be observed at the surface. At the tree line some evidence of disposal associated with the rose farm can be observed in the form of clay pots, miticide containers, and other herbicide, pesticide, or fertilizer containers. Generally, fill extends to the stream along the southwestern edge of the Site decreasing in thickness toward the stream. The approximate extent of fill types is depicted on **Figure 2**.

Bedrock Geology

According to the Bedrock Geologic Map of New Hampshire, bedrock beneath the Site consists of Early Devonian diorite, gabbro, granodiorite and granite of the Exeter Diorite. No bedrock outcrops were observed; however, refusal presumably on bedrock was encountered between 12 and 15 feet bgs in soil borings advanced at the Site.

Hydrology

The nearest surface water body to the Site is the stream that runs along the southwestern edge of the Site and the two onsite ponds. Stormwater likely infiltrates the mostly permeable Site or flows overland to the onsite stream or ponds.

Groundwater has been encountered at depths ranging from 2.70 to 11.25 feet bgs. A groundwater elevation survey could not be conducted due to inability to sight any two wells from a single location due to high vegetation. Where no impacts to groundwater were observed during this assessment, the lack of groundwater elevation data has not affected the outcome of this investigation. Based on the location of the stream and onsite ponds, groundwater at the Site is presumed to flow southwest toward Norris Brook.

5.4 SOURCE AREAS & CURRENT CONTAMINANTS OF CONCERN

Based on the results of this Supplemental Phase II ESA and prior investigations, an updated list of COCs is provided below.

Source Areas

The following source areas are present at the Site:

- Solid waste fill
- Clinker and coal ash fill
- Surface soil in the area of the former green houses
- Peeling and chipping lead paint
- Site building components

Current COCs

The following COCs currently exceed their applicable regulatory criteria at the Site:

- Solid waste
- PAHs and arsenic in coal ash and clinker
- Lead in surface soil and sediment
- Lead in paint and soil containing paint chips
- Asbestos

Pesticides may be a COC in sediment since pesticide concentrations have not been analyzed to a level sufficient to confirm or dismiss their concentrations relative to the TECs and PECs; however, per Credere's generic QAPP and based on available data, pesticides are not considered a COC at this time.

Additionally, although concentrations of 4,4-DDT, arsenic and lead do not exceed the NHDES SRSs, the inlet and source of these low level contaminants is not known and a more concentrated source area may be present at the inlet location.

5.5 NATURE AND EXTENT

Based on available data, the physical setting, and COC characteristics, the migration and extent of contamination at the Site has been inferred as follows:

Solid Waste Fill

The full extent of COCs associated with the solid waste beyond PAHs and arsenic have not been assessed; however, the composition of the waste including appliances, car batteries, car frames, etc. will require proper offsite disposal. Additionally, if not properly managed, solid wastes such as car batteries and junk cars may release lead and acid or oils as they degrade. Solid waste fill and coal ash and clinker have been visually delineated to extend to the stream along the southwest edge of the property and to the east to the road; however, delineation was not possible to the southwest behind the packing house and to the northwest behind the abandoned mobile homes due to dense vegetation, and steep terrain.

PAHs and Arsenic in Coal Ash and Clinker

PAHs and arsenic were detected exceeding the NHDES SRSs in soil during the previous April 2013 Preliminary Phase II ESA. PAHs and arsenic were found to be associated with the solid waste fill, clinker, and coal ash throughout the southwest portion of the property. Further confirmation of PAH and arsenic concentrations in the clinker and coal ash was not completed during this Supplemental Phase II ESA; however, samples were collected beyond observable fill to assess the extent of the PAH and arsenic impacts. Generally, arsenic concentrations across the Site can be attributed to local background concentrations based on comparison to Site-specific background sample results.

To assess the vertical extent of impacts, subsurface samples were collected from the first encountered native brown to gray silt and clay. With the exception of arsenic in CA-TP-102 (4-5), PAHs and arsenic were below the laboratory reporting limits, the NHDES SRSs, or were considered background in the vertical delineation samples. Additional vertical delineation may be necessary in the area of CA-TP-102 where arsenic exceeded the NHDES SRS in the intended vertical delineation sample; however, the arsenic may be an anomaly when compared to other native samples at the Site. Therefore, it can be presumed PAHs and arsenic are confined to the observed solid waste fill, clinker, and coal ash and likely a thin layer of native soil in contact with the fill, and are delineated just below the transition to native soil. Although this generalized

delineation is apparent, vertical thicknesses of solid waste fill, clinker, and coal ash within some portions of the fill interior are not documented and are considered a data gap.

To delineate the approximate horizontal extent, surface soil samples were collected from beyond the areas visually observed to contain coal ash and clinker at the surface. Generally, the coal ash and clinker extended to the intermittent stream along the west and southwest edge of the Site. Subsurface exploration of the horizontal extent was not possible due to limitations of access by trees and topography. Credere was also limited in delineation of extent to the northwest behind the mobile homes and behind the former packing house due to steep terrain. Lack of delineation in these directions is considered a data gap.

The PAHs detected in soil were not detected in groundwater samples collected from monitoring wells installed east of the eastern extent of fill and from CA-MW-2 and CA-MW-103 installed within the fill. Trace arsenic and barium were previously detected below the NHDES AGQS in CA-MW-1. Based on these groundwater results, PAHs and arsenic appear generally stable and do not appear to be leaching to groundwater at a high enough rate to elevate concentrations above the AGQS.

PAHs exceeded the TECs in sediment (CA-SED-101) in the man-made detention area that receives drainage from the pond across the driveway. The presence of PAHs exceeding the TEC cannot be dismissed in other samples collected from this detention area (CA-SED-106 and CA-SED-107) and further downstream (CA-SED-102 and CA-SED-108) due to elevated reporting limits as a result of high organic content of the sediment and matrix interferences. Observation of the sample location for CA-SED-101 indicated the presence of degraded asphalt that likely washed into the detention area from the adjoining unmaintained road/driveway (**Photograph 6**) as significant erosion was observed along the bank of the detention area. Therefore, the PAHs exceeding the TEC can likely be attributable to the asphalt; however, lack of the known extent of PAHs exceeding the TEC in the detention area is considered a data gap.

Most arsenic concentrations can be attributed to background conditions, as arsenic concentrations in the coal ash and clinker fill is consistent with arsenic concentrations in native soil at the Site (except for CA-SB-4 [Preliminary Phase II ESA concentration of 67 mg/kg] and CA-TP-102 between the former boiler house and packing house). Where the highest arsenic concentration in stream sediment was the upstream background sample CA-SED-BKG, sediment arsenic concentrations can also be considered background.

Lead in Surface Soil and Sediment

Elevated lead was detected above the NHDES lead SRS in surface soil sample CA-SS-101 (0-0.5) in the area of the former greenhouses. Lead concentrations above those detected elsewhere on the Site (i.e., apparent background) were detected in surface soil samples CA-SB-100, CA-SB-100A, CA-SS-100, CA-SS-101A through CA-SS-101F, and CA-SS-102 through CA-SS-104 also collected from this area of the Site. The exceedance of the NHDES SRS was delineated by step-out samples CA-SS-101A through CA-SS-101F; however, supplemental XRF screening indicates elevated concentrations are random throughout the entire former greenhouse area and

lead impacts can be considered ubiquitous across the greenhouse area. Based on lack of elevated pesticide related compounds (e.g., pesticides and arsenic) in this area, elevated lead concentrations are likely associated with lead-containing paint flaking to the soil surrounding the greenhouses during historical use and/or being spread during demolition.

Elevated lead concentrations in the greenhouse area may be contributing to elevated lead concentrations in pond sediment resulting in exceedance of the TEC and PEC (CA-SED-100). Additional samples collected from the pond (CA-SED-103 through CA-SED-105) indicated lead concentrations exceeding the TEC and PEC appear to continue into the center discharge line of the pond and lead concentrations exceeding only the TEC are likely present throughout the pond. Lead concentrations also exceed the TEC in the detention area (CA-SED-101, CA-SED-106, CA-SED-107, and CA-SED-108); however, it remains unclear if lead in the detention area and Norris Brook are related to the greenhouse area, as lead may be contained in the degraded asphalt, a background condition (i.e., lead was detected in CA-SED-BKG), or another unidentified source.

Lead in Paint and Soil Containing Paint Chips

Lead-containing paint was identified on white exterior siding and trim on 23 and 24 Oak Street Extension. Lead screening of the 23 and 24 Oak Street Extension residences indicated soil around the perimeter of the buildings was impacted with lead. Lead-containing paint was observed to have chipped and flaked from the exterior of 24 Oak Street Extension and identified lead concentrations in soil can likely be attributed to this flaking paint. However, exterior siding on 23 Oak Street Extension did not screen positive for lead-containing paint and chipping or flaking paint was not observed on the ground surface. Coal ash and clinker was observed to have been used as fill surrounding the 23 Oak Street Extension residence in locations CA-LBP-3, CA-LBP-4, and CA-LBP-5; however, the observed coal ash intervals do not correlate with the highest lead results. Therefore, it is presumed the residence was formerly painted with lead paint that chipped to the ground below and was fully removed prior to repainting.

With the exception of the CA-LBP-6 location, lead impacts exceeding the NHDES SRS are confined to the top 6 inches. Additional vertical delineation is required at CA-LBP-6. Impacts are presumed to extend approximately 4 feet from the drip line; however, horizontal delineation has not been completed.

Asbestos

Window glazing on the cottage residence and the former packing house was found to contain asbestos. In its current condition the asbestos is relatively stable but disturbance through demolition or renovations may increase exposure by mobilizing fibers to air.

5.6 EXPOSURE PATHWAYS AND POTENTIAL RECEPTORS

Exposure pathways describe how a human or environmental receptor comes into contact with contaminants that may be present at the Site. Potential migration pathways through ground water, surface water, air, soils, sediments, and biota were considered for each COC and each source. A migration pathway is considered an exposure pathway if there is a mechanism of

contaminant release from primary or secondary sources, a transport medium, and a point of potential contact with a receptors. Both current and potential future releases and migration pathways to receptors are considered. Exposure pathways presented in the CSM include the following:

Active Ingestion:	The active ingestion pathway represents exposure which may occur through the active ingestion of contaminant concentrations via a drinking water supply well, through agricultural products, or through direct consumption of soil (typically by children).
Dermal Absorption:	Exposure via dermal absorption occurs when receptors are exposed to chemical concentrations present in soil, groundwater, surface water, or hazardous building materials through direct contact with the skin.
Incidental Uptake:	This pathway is applicable when receptors may incidentally inhale or ingest impacted media in the form of contaminated dust, chips, or airborne asbestos fibers.

Potential Receptors are categorized by duration of exposure and intensity of use at the Site. The receptor categories described in the CSM include the following:

Resident:	The residential receptor is defined by high durational exposure and high intensity usage which may occur through gardening, digging, and recreational sports. This group includes the occupants of a residential property or a residential neighborhood, or a daycare.
Recreational or Park User:	Park users (including trespassers) are characterized by low duration, i.e. less than two hours per day, and low intensity usage such as that which would occur during activities such as walking, shopping, and bird watching.
Commercial Worker:	Outdoor commercial receptors are those which are present at the Site for long durations but with low intensity exposure such as groundskeepers, parking lot attendants, and mechanics. This category is also conservatively applied for indoor office workers at the Site.
Excavation or Construction Worker:	Excavation or construction workers are present at the Site for short durations though intensity of use is high, such as during non-routine activities including construction or utility work. Examples include utility and construction contractors and landscapers.
Terrestrial and Aquatic Biota:	These receptors include flora and fauna which may be exposed to contaminants in their respective environments.

5.7 CSM SUMMARY

COCs at the Site include possible COCs in solid waste fill, PAHs and arsenic in solid waste fill and coal ash and clinker, lead in surface soil in the area of the former greenhouses, lead in sediment, lead in paint and soil surrounding 23 and 24 Oak Street Extension, and asbestos in

window glazing at abandoned residence and the former packing house. Generally, the solid waste fill COCs and PAHs and arsenic are stable and do not appear to be impacting groundwater; however, elevated naturally occurring arsenic is present in stream sediment. Lead screening indicates additional hot spots may be present in the greenhouse area and lead may be mobilized by runoff from this area into the nearby pond where elevated lead concentrations in sediment were identified. Lead-containing paint, lead-containing paint chips in soil and asbestos in window glazing are generally stable if they remain undisturbed.

Due to the unconfirmed future use of the property, receptors include residents, commercial workers, park users or construction workers during redevelopment. Exposure pathways would include active ingestion of contaminated soil by children, by construction workers employing poor hygiene, or by uptake into fruits and vegetables grown in contaminated gardens; dermal absorption through direct contact with impacted soil; and incidental uptake of contaminated dust or asbestos fibers.

Since sediment was found to contain concentrations of lead exceeding the TEC and PEC, impacts to aquatic organisms are possible. Aquatic biota would be exposed to lead through active ingestion of impacted soil particles, other organisms where bioaccumulation has occurred, or through respiration in surface water with contaminated suspended sediment.

6. CONCLUSIONS

We have performed a Supplemental Phase II ESA at the Dagostino Rose Farm located at the Oak Street Extension in Exeter, New Hampshire, in conformance with the scope and limitations of ASTM E 1903-11 and for the following objectives:

- Further assess the area of CA-TP-103 behind the packing house to observe the composition of layers of varying fill material and assess groundwater beneath the previously observed fill
- Further assess PAH and lead impacted sediment in the detention area south of the pond and downstream in Norris Brook.
- Attempt to delineate the extent of lead impacted surface soil in the vicinity of CA-SS-1 and former greenhouse area
- Further assess the extent of lead in pond sediment presumed to have been discharged through a drain pipe from the former greenhouses
- Assess possible releases of oil or hazardous materials from the newly identified culvert behind the packing house

Credere's cumulative understanding of the Site based on the Preliminary Phase II ESA, Phase II ESA, and the results of this Supplemental Phase II ESA is presented in **Section 5**. Credere makes the following conclusions with regard to the above objectives:

The coal ash and clinker previously observed and attributed as the likely source of PAHs and arsenic was confirmed through observation to be present throughout the area southwest of the Site driveway. CA-MW-103 was installed to assess the mobilization of PAHs and arsenic from soil to groundwater. Groundwater sample analytical results were below the laboratory reporting limits indicating PAHs and arsenic in the coal ash and clinker appear generally stable and do not appear to be leaching to groundwater at a high enough rate to elevate concentrations above the AGQS.

PAHs exceeded the TECs in sediment (CA-SED-101) previously collected from the man-made detention area that receives drainage from the pond across the driveway. The presence of PAHs exceeding the TEC cannot be dismissed in other samples collected from this detention area (CA-SED-106 and CA-SED-107) and further downstream (CA-SED-102 and CA-SED-108) due to laboratory detection limits exceeding the TECs as a result of the high organic content of the sediment causing matrix interference. Observation of the sample location for CA-SED-101 indicated the presence of degraded asphalt that likely washed into the detention area from the adjoining unmaintained road/driveway as significant erosion was observed along the bank of the detention area. Therefore, the PAHs exceeding the TEC can likely be attributable to the asphalt; however, lack of the known extent of PAHs exceeding the TEC in the detention area is considered a data gap.

Lead previously identified in the area of the former greenhouses is presumed to be associated with lead-containing paint that chipped to the exterior soil and and/or was later spread during

demolition of the greenhouses. Analytical lead results exceed the NHDES lead SRS in only one location near the center of the greenhouse area, which has been delineated through step out sampling. However, elevated lead concentrations were screened to likely exceed the NHDES SRS in areas not previously identified throughout the greenhouse area. There are likely several hot spots throughout this area; therefore, the entire greenhouse area is considered lead-impacted.

Lead appears to be eroding from the greenhouse area into the adjoining pond where sediment concentrations exceed the lead TEC and PEC. Lead is also present within the manmade detention area and swale where sediment concentrations for lead exceed the TEC and/or PEC at the outfall and downstream. However, it remains unclear if lead in the detention area and Norris Brook are related to the greenhouse area, to lead that may be contained in the degraded asphalt, a background condition (i.e., lead was detected in CA-SED-BKG), or another unidentified source.

A culvert with an unknown inlet was identified west of the packing house during an early spring (i.e., low vegetation) Site visit. Due to the unknown inlet, one soil sample was collected from the soil within the culvert to assess for possible oil or hazardous materials. Results were below the NHDES SRSs or were considered background (e.g., arsenic); however, since low levels of pesticides, lead and arsenic were detected, an upstream (i.e., inlet) source may be possible and further assessment of the location of the inlet is warranted.

7. RECOMMENDATIONS

Based on the findings and conclusions of the cumulative investigations completed at the Site, Credere makes the following recommendations:

- Remove and properly dispose of surficial solid waste including appliances, containers, batteries, scrap metal, other containers, etc. to eliminate future potential releases of contaminants to the environment and assess soil and groundwater impacts associated with any newly discovered drums, ASTs, or other containers
- Subsequently, prepare a Remedial Action Plan including additional remedial investigation for addressing areas of solid waste fill, coal ash and clinker, and lead impacted soil in the area of the greenhouses and residence perimeters
- Trace the location of the newly discovered culvert to its inlet to assess the source of soil within the culvert and assess for possible sources of low levels of pesticides, lead and arsenic
- Stabilize lead-containing paint on the exterior of 24 Oak Street Extension to eliminate the continuing source of lead to soil
- Engage the NHDES to determine the appropriate remedial action or mitigation actions, if any, necessary to address concentrations of lead in sediments within the pond and detention area
- Proper abatement of identified asbestos-containing materials (ACMs) prior to renovation/demolition of the Site buildings and further assessment of areas not previously surveyed
- Proper handling and disposal of lead-containing paint coated and possible polychlorinated biphenyl (PCB)-containing (greater than 1 mg/kg but less than 50 mg/kg) building materials during renovation/demolition and further assessment of areas not previously surveyed
- Perform a groundwater elevation survey of the wells in the early winter to very early spring when vegetation is lowest. Properly abandon the groundwater monitoring well network at the Site during redevelopment

8. LIMITATIONS

This report has been prepared by Credere for the RPC Brownfields Assessment program in order to provide RPC or other project stakeholders with information upon which it can rely concerning the existence or likely existence of various environmental contaminants on or adjacent to the property evaluated.

This report does not reflect:

1. Conditions in untested areas and the characteristics of untested media.
2. Variations in chemical concentrations that can occur between sample locations.
3. The total understanding of historical Site activities, uses, equipment, or fixtures that may have contributed or are currently contributing to Site contamination, particularly relating to building material history.
4. Knowledge of the potential presence of compound sources other than what was surficially visible at the time of survey performance.
5. The potential presence of analytes that were not analyzed or that may be present below minimum laboratory reporting limits for the methods tested.
6. Potential variation in the Site conditions that may have occurred at a time other than when the Site survey was completed.

In the event that any conditions different from those described herein are encountered at a later time, Credere requests an opportunity to review such differences and modify the assessment and conclusions of this report. This report was prepared expressly for the purpose described. The information in this report may not be suitable for any other use without adaptation for the specific purpose intended. Any such reuse of this report, without adaptation, shall be at the sole risk and liability of the party undertaking the reuse.

9. SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

The following individual(s) meet the qualifications for individuals completing or overseeing all appropriate inquiries, and possess sufficient specific education, training, and experience necessary to exercise professional judgment to develop opinions and conclusions regarding the existence of environmental conditions on the Site. Any work completed on this ESA by an individual who is not considered an environmental professional was completed under the supervision or responsible charge of the environmental professional.

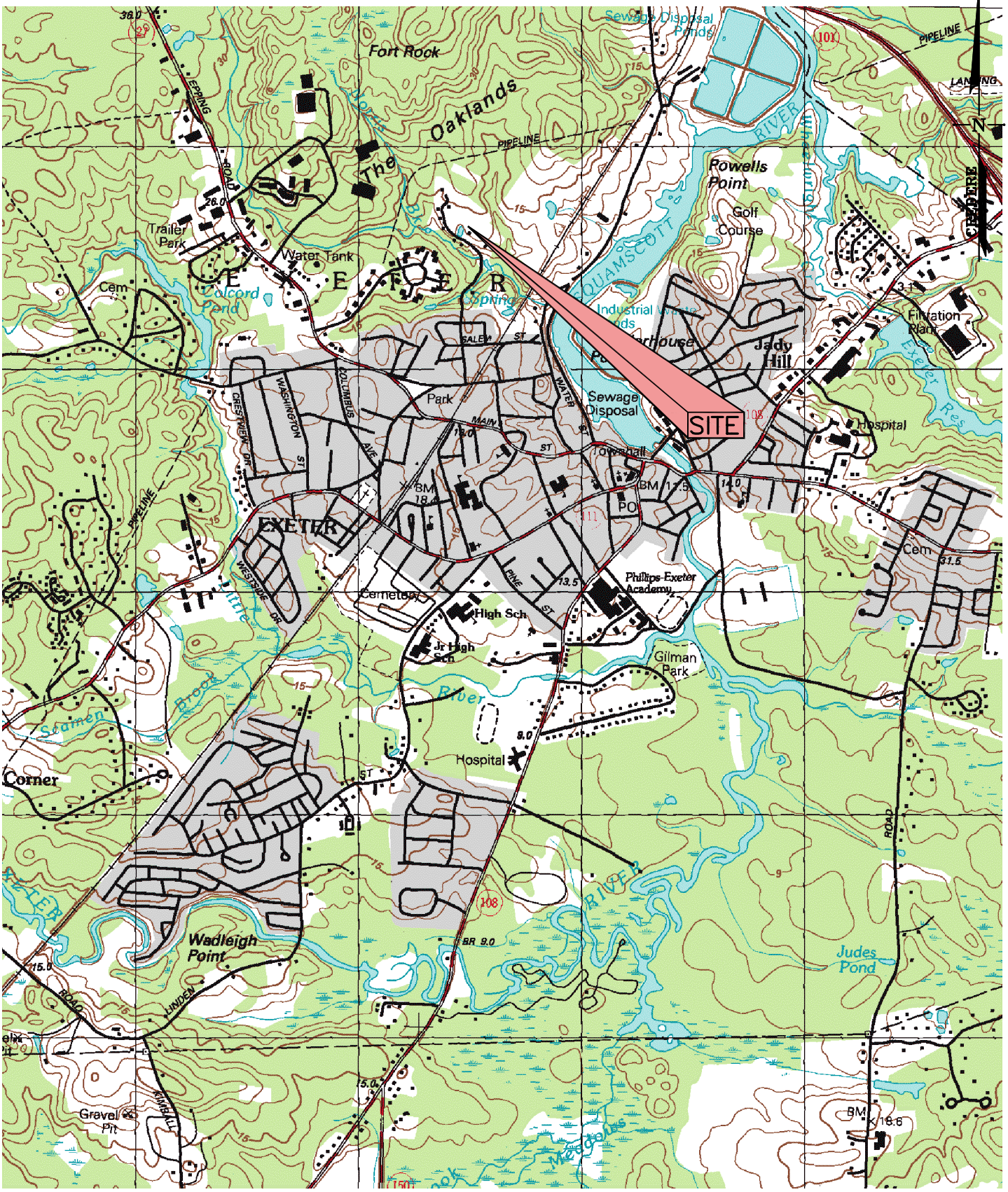
Allison Drouin, PG
Project Geologist

Judd Newcomb, CG, PG
Project Manager/Geologist

Rip Patten, PE, LSP
Vice President

Theresa Patten, PE
President

FIGURES



USGS QUADRANGLE INFORMATION: EXETER, NEW HAMPSHIRE 7.5X15 MINUTE SERIES

DRAWN BY: WTE	DATE: 2/1/2013
CHECKED BY: JSS/RSV	PROJECT: 11001122

FIGURE 1 - SITE LOCATION PLAN

CREDERE ASSOCIATES, LLC
776 MAIN STREET
WESTBROOK, MAINE 04092
TEL: 207.828.1272
FAX: 207.887.1051
WWW.CREDERELLC.COM

DAGOSTINO ROSE FARM PROPERTY
OAK STREET EXTENSION
EXETER, NEW HAMPSHIRE
NHDES# 201203003

GRAPHIC SCALE
2,000 0 1,000 2,000
1 inch =2,000ft.

SITE

J:\CREDERE\11001122\Dagostino Rose Farm Property\Phase II Sample Location Plan 2-8-2013.dwg plot date: 2/11/2013

NOTES

1. EXISTING INFORMATION SHOWN ON THIS PLAN IS APPROXIMATE AND IS BASED ON INFORMATION OBTAINED FROM THE TOWN OF EXETER PARCELS DATA LAYER AND A 2005 ORTHO PHOTO OBTAINED FROM THE NHGRANIT GIS DATABASE AND CREDERE'S SITE VISITS IN 2012 AND 2013.
2. PLEASE NOTE THAT THE PROPOSED SAMPLING LOCATIONS HAVE BEEN DESIGNED TO ASSESS THE HAZARDOUS MATERIAL RELATED RECS AND SUPPLEMENT THE PRELIMINARY PHASE II COMPLETED IN APRIL 2013, WHICH ADDRESSED PETROLEUM-RELATED RECS IDENTIFIED AT THE SITE.

LEGEND

- SOIL BORING/MONITORING WELL
- XRF LEAD SCREENING POINT
- SURFACE SOIL SAMPLE
- SEDIMENT SAMPLE
- PREVIOUS SURFACE SOIL SAMPLE
- PREVIOUS SEDIMENT SAMPLE
- PREVIOUS TEST PIT
- PREVIOUS SURFACE WATER SAMPLE
- PREVIOUS DRINK WATER WELL SAMPLE
- EXISTING MONITORING WELL
- PREVIOUS SOIL BORING
- PREVIOUS CONCRETE SAMPLE
- DRUM
- FORMER 30,000-GALLON AST
- 275-GALLON FUEL OIL/KEROSENE AST
- REPORTED 100-GALLON GASOLINE UST
- APPROXIMATE AREA OF COAL ASH AND CLINKER
- APPROXIMATE AREA OF SOLID WASTE FILL

SED-BKG
ABANDONED RESIDENCE
THREE BAY GARAGE
BKG-1
CA-MW-5
CURRENT LOCATION OF WOODEN PESTICIDE TANK
FORMER LOCATION OF WOODEN PESTICIDE TANK
COTTAGE RESIDENCE
CA-SB/MW-100
ABANDONED MOBILE HOMES
CA-CC-100
CA-SB-100A
CA-TP-100B
CA-SB-8
CA-SS-100
20
19
CA-TP-104S
CA-TP-104
CA-SS-104
CA-MW-2
FORMER ROSE GREENHOUSE BUILDINGS
CA-SS-102
CA-TP-105S
CA-TP-100
21-27
CA-SS-101
CA-SS-101A-F SEE INSET
CA-SS-103
CA-TP-100A
CA-TP-105
CA-SB-5
CA-MW-102
29
FORMER BOILER HOUSE AND FORMER 30,000-GALLON FUEL OIL AST
CA-TP-106
28
DRAIN PIPE (APPROXIMATE)
sd
CA-SB-102
DW-1
WELL
CA-MW-4
CA-SB/MW-101
CA-MW-1
CA-TP-102
DW HOLDING TANK
BKG-2 (ON SITE IN LARGE FIELD)
CA-TP-101S
CA-SED-103
CA-SED-100
CA-SED-105
CA-SW-100
CA-TP-101
ABANDONED PACKING HOUSE
CA-SED-104
APPROXIMATE CULVERT LOCATION AND CA-SS-105
CA-SB-6
GARAGE
OUT BUILDING
CA-TP-103
CA-SB-103/CA-MW-103
CA-MW-2
CA-SED-107
23
FORMER OIL CHANGE PIT
CA-SED-101
OAK STREET EXTENSION
FORMER BARN
CA-SED-106
24
DETENTION AREA
22
CA-SED-108
DW-2 (IN SOUTHERN CORNER OF SITE)
CA-SED-102

INSET: CA-SS-101 1'=10'

CA-SS-101A
CA-SS-101B
CA-SS-101C
CA-SS-101D
CA-SS-101E
CA-SS-101F
CA-SS-101
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18

N
CREDERE

GRAPHIC SCALE
100 50 0 100
1 inch = 100 ft.

FIGURE 2
SAMPLE LOCATION PLAN

DAGOSTINO ROSE FARM PROPERTY
OAK STREET EXTENSION
EXETER, NEW HAMPSHIRE
NHDES #201203003

DRAWN BY: MTG
CHECKED BY: ASD
DATE: 5/19/2016
PROJECT: 15001275

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Economy Community Environment

J:\CREDERE\11001122\Dagostino Rose Farm Property\Phase II Sample Location Plan 2015.dwg plot date: 6/10/2016 11:09 AM

TABLES

Table 1: Sample Summary Table
Dagostino Rose Farm Property
Oak Street Extension
Exeter, New Hampshire

Task	Proposed Sample IDs	Sample Depth (feet bgs)	Sample Type	Sample Rationale	Analytical Methods Requested
Assess Fill Material	CA-SB-103/ CA-MW-103	10-12	Subsurface soil (Native)	To further assess extent of fill material layers and impacts to groundwater beneath fill	PAHs (EPA Method 8270D) Pesticides (EPA Method 8081B) RCRA 8 Metals (EPA Method 6020A & 7471B) VOC (EPA Method 8260C)
		Screened interval	Groundwater		
Assesa and Delineate Surface Soil	CA-SS-105	Soil in culvert	Surface soil	To assess potential releases through previously unidentified culvert	VOCs (EPA Method 8260C) TPH (EPA Method 8100) SVOCs (EPA Method 8270D) Pesticides (EPA Method 8081B) RCRA 8 metals (EPA Method 6020A & 7471B)
	CA-SS-101A through CA-SS-101F	0-0.5	Surface Soil	To further assess the extent of lead impacts in surface soil in the former greenhouse area	Lead (EPA Method 6020A)
	Consecutively numbered grid points	NA	Surface soil		XRF Screening
Delineate and Further Evaluate Sediment	CA-SED-103	0-0.5	Sediment	To further assess extent of lead impacts near the discharge pipe in the pond to the east of the Packing House	Lead (EPA Method 6020A)
	CA-SED-104	0-0.5	Sediment		Lead (EPA Method 6020A)
	CA-SED-105	0-0.5	Sediment		Lead (EPA Method 6020A)
	CA-SED-106	0-0.5	Sediment	To further evaluate presence of PAHs and lead in sediment within the detention area	PAHs (EPA Method 8270D) Lead (EPA Method 6020A)
	CA-SED-107	0-0.5	Sediment		PAHs (EPA Method 8270D) Lead (EPA Method 6020A)
	CA-SED-108	0-0.5	Sediment	To evaluate if PAHs or lead have impacted sediment in Norris Brook beneath the detention area	PAHs (EPA Method 8270D) Lead (EPA Method 6020A)

NA - not applicable
REC - recognized environmental condition
bgs - below ground surface
NHDES - New Hampshire Department of Environmental Services
VOC - volatile organic compounds
SVOC - semi-volatile organic compounds
PID - photoionization detector
TPH - total petroleum hydrocarbons
PAHs - polycyclic aromatic hydrocarbons
EPA - environmental protection agency
SRS - Soil Remediation Standard
LBP - lead-based paint
RCRA - Resource Conservation and Recovery Act
XRF - X-ray fluorescence

Table 2
Lead in Soil Screening Results and Soil Sample Summary for XRF Correlation
Dagostino Rose Farm, NHDES Site #201203003
Oak Street Extension, Exeter, New Hampshire

Target Screening	Soil Screening Location	XRF Lead Concentration at the Surface (mg/kg)[1]	Soil Analytical Sample	Lab Analytical Lead Concentration (mg/kg)
				Applicable SRS[2]
				400 mg/kg
Delineation of CA-SS-101	3	**911**	Not collected	
	4	**275**		
	5	**242**		
	6	153	CA-SS-101A	360
	7	**575**	Not collected	
	8	221	CA-SS-101B	320
	9	**951**	Not collected	
	10	**425**		
	11	205	CA-SS-101C	210
	12	184	CA-SS-101D	220
	13	**384**	Not collected	
	14	**331**		
	15	**516**		
	16	**300**		
	17	185	CA-SS-101E	250
	18	229	CA-SS-101F	270
General greenhouse area supplemental screening	19	**314**	Not collected	
	20	**531**		
	21	**658**		
	22	**670**		
	23	**355**		
	24	**411**		
	25	**435**		
	26	**655**		
	27	**759**		
	28	196		
	29	**487**		

1 - **Bold** screening location considered to exceed NHDES SRS based on 40% error range for XRF of the the NHDES SRS (i.e., 240 mg/kg)

2 - Result compared to the Env-Or 600, Soil Remediation Standard, Table 600-2, June 1, 2015, for lead.

Seven times replicate of soil screening point 21. RPD = 28.1%, exceeds 20% limit

Table 3
Monitoring Well Construction Details
Dagostino Rose Farm, NHDES Site #201203003
Oak Street Extension, Exeter, New Hampshire

Monitoring Well ID	Approx. Screened Interval (feet bgs)^	Depth to Bottom (feet*)	Top of Riser Elevation (AMSL)	Gauging Date	Depth to Water from Top of Riser (feet*)	Water Surface Elevation (ft AMSL)
CA-MW-100	5-15	14.35	NA	8/6/2015	11.00	NA
		14.10		4/29/2016	5.55	
CA-MW-101	2-12	11.65	NA	8/6/2015	4.55	NA
		11.36		4/29/2016	2.70	
CA-MW-102	5-15	14.45	NA	8/6/2015	9.45	NA
		14.30		4/29/2016	3.40	
CA-MW-103	8-18	20.35	NA	4/29/2016	11.25	NA

*Depths measured from top of riser

^Depth inferred during well installation

bgs - below ground surface

AMSL - above mean sea level

NA - Elevations could not be calculated because a survey could not be completed due to dense vegetation and inability to establish lines of sight between any two wells from a single location.

Table 4
Summary of New and Historical Soil Analytical Results
Dagostino Rose Farm, NHDES Site #201203003
Oak Street Extension, Exeter, New Hampshire

Parameter*	Regulatory Criteria[1] (mg/kg)	Sample ID, Depth, Sample Date											
		BKG-1	BKG-2	CA-SB-100		CA-SB-100A		CA-SB-101			CA-SB-102		**CA-SB-103**
		0-0.5	0-0.5	0-0.5	0.5-2	0-0.5/0.5	0.5-2	0-0.5		0.5-2	0-0.5	0.5-2	**10-12**
		7/23/2015	7/23/2015	7/23/2015	7/23/2015	8/6/2015	8/6/2015	7/23/2015	CA-DUP-1	7/23/2015	7/23/2015	7/23/2015	**4/8/2016**
Volatile Organic Compounds (VOCs) by EPA Method 8260C (mg/kg)													
All compounds	NA	NS	NS	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND
Semivolatile Organic Compounds (SVOCs) or Polycyclic Aromatic Hydrocarbons (PAHs) only by EPA Method 8270D (mg/kg)													
acenaphthylene	490	NS	NS	ND<0.27	ND<0.05	ND<0.05	ND<0.06	ND<0.05	ND<0.06	ND<0.05	ND<0.06	ND<0.06	ND<0.59
naphthalene	5	NS	NS	ND<0.27	ND<0.05	ND<0.05	ND<0.06	ND<0.05	ND<0.06	ND<0.05	ND<0.06	ND<0.06	ND<0.59
2-methylnaphthalene	96	NS	NS	ND<0.27	ND<0.05	ND<0.05	ND<0.06	ND<0.05	ND<0.06	ND<0.05	ND<0.06	ND<0.06	ND<0.59
phenanthrene	NE	NS	NS	ND<0.27	ND<0.05	ND<0.05	ND<0.06	ND<0.05	ND<0.06	ND<0.05	ND<0.06	ND<0.06	ND<0.59
anthracene	1,000	NS	NS	ND<0.27	ND<0.05	ND<0.05	ND<0.06	ND<0.05	ND<0.06	ND<0.05	ND<0.06	ND<0.06	ND<0.59
fluoranthene	960	NS	NS	ND<0.27	ND<0.05	**0.09**	ND<0.06	ND<0.05	ND<0.06	ND<0.05	ND<0.06	ND<0.06	ND<0.59
pyrene	720	NS	NS	ND<0.27	ND<0.05	**0.08**	ND<0.06	ND<0.05	ND<0.06	ND<0.05	ND<0.06	ND<0.06	ND<0.59
benzo(a)anthracene	1	NS	NS	ND<0.27	ND<0.05	ND<0.05	ND<0.06	ND<0.05	ND<0.06	ND<0.05	ND<0.06	ND<0.06	ND<0.59
chrysene	120	NS	NS	ND<0.27	ND<0.05	**0.06**	ND<0.06	ND<0.05	ND<0.06	ND<0.05	ND<0.06	ND<0.06	ND<0.59
benzo(b)fluoranthene	1	NS	NS	ND<0.27	ND<0.05	**0.07**	ND<0.06	ND<0.05	ND<0.06	ND<0.05	ND<0.06	ND<0.06	ND<0.59
benzo(k)fluoranthene	12	NS	NS	ND<0.27	ND<0.05	**0.05**	ND<0.06	ND<0.05	ND<0.06	ND<0.05	ND<0.06	ND<0.06	ND<0.59
benzo(a)pyrene	0.7	NS	NS	ND<0.27	ND<0.05	**0.06**	ND<0.06	ND<0.05	ND<0.06	ND<0.05	ND<0.06	ND<0.06	ND<0.59
indeno(1,2,3-cd)pyrene	1	NS	NS	ND<0.27	ND<0.05	ND<0.05	ND<0.06	ND<0.05	ND<0.06	ND<0.05	ND<0.06	ND<0.06	ND<0.59
dibenzo(a,h)anthracene	0.7	NS	NS	ND<0.27	ND<0.05	ND<0.05	ND<0.06	ND<0.05	ND<0.06	ND<0.05	ND<0.06	ND<0.06	ND<0.59
benzo(g,h,i)perylene	NE	NS	NS	ND<0.27	ND<0.05	ND<0.05	ND<0.06	ND<0.05	ND<0.06	ND<0.05	ND<0.06	ND<0.06	ND<0.59
Pesticides by EPA Method 8081 (mg/kg)													
4,4'-DDE	4	NS	NS	**0.05**	ND<0.04	ND<0.04	ND<0.04	ND<0.04	ND<0.05	ND<0.04	ND<0.04	ND<0.04	ND<0.04
4,4'-DDT	4	NS	NS	**0.15**	ND<0.04	ND<0.04	ND<0.04	ND<0.04	ND<0.05	ND<0.04	ND<0.04	ND<0.04	ND<0.04
Total Petroleum Hydrocarbons (TPH) by EPA method 3550C (mg/kg)													
TPH	10,000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Polychlorinated biphenyls (PCBs) by EPA Method 8082A (mg/kg)													
Total PCBs	1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Priority Pollutant Metals by EPA Method 6010C & 7471B (mg/kg)													
arsenic	11	**19**	**27**	**12**	**8.4**	**7.3**	**7.7**	**8.4**	**25**	**5.5**	**18**	**10**	**11**
barium	1,000	**8**	**19**	**110**	**38**	**52**	**46**	**16**	**10**	**9**	**73**	**43**	**30**
cadmium	33	**1.1**	**1.2**	ND<0.5	ND<0.4	ND<0.4	ND<0.5	ND<0.4	**1.4**	ND<0.4	ND<0.5	ND<0.5	ND<0.6
chromium (total)	130	**7**	**12**	**21**	**13**	**14**	**16**	**5**	**6**	ND<5	**25**	**16**	**17**
lead	400	**11**	**22**	**280**	**10**	**120**	**58**	**22**	**58**	**5.4**	**31**	**14**	**5.5**
mercury	7	ND<0.19	ND<0.20	ND<0.21	ND<0.19	ND<0.21	ND<0.19	ND<0.20	ND<0.21	ND<0.19	ND<0.21	ND<0.19	ND<0.22

NOTES:
Gray and Bold headings are new samples collected during this Supplemental Phase II ESA
mg/kg - milligrams per kilogram
*Only analytes with detections are shown, all other sample results analyses were below the laboratory reporting limit.
1 - New Hampshire Department of Environmental Services (NHDES) Code of Administrative Rules Chap. Env-Or 600, Soil Remediation Standards, Table 600-2, June 1, 2015
2 - Sample collected from soil within culvert
NE - not established
NS - not sampled
ND<0.2 - Results were below the laboratory reporting limits, laboratory reporting limit shown
NA - Regulatory criteria vary by compound
ND - All compound results were below the laboratory reporting limits; however, reporting limits vary by compound
White and not bold headings are historical samples collected during the prior Phase II ESA
Bold Exceeds laboratory reporting limit
Exceeds applicable regulatory guideline
Exceeds applicable regulatory guidelines but is considered background

Table 4
Summary of New and Historical Soil Analytical Results
Dagostino Rose Farm, NHDES Site #201203003
Oak Street Extension, Exeter, New Hampshire

Parameter*	Regulatory Criteria[1] (mg/kg)	Sample ID, Depth, Sample Date												
		CA-SS-100	CA-SS-101	**CA-SS-101A**	**CA-SS-101B**	**CA-SS-101C**	**CA-SS-101D**	**CA-SS-101E**	**CA-SS-101F**	CA-SS-102	CA-SS-103	CA-SS-104		**CA-SS-105**
		0-0.5	0-0.5	**0-0.5**	**0-0.5**	**0-0.5**	**0-0.5**	**0-0.5**	**0-0.5**	0-0.5	0-0.5	0-0.5		**NA[2]**
		7/23/2015	7/23/2015	**4/8/2016**	**4/8/2016**	**4/8/2016**	**4/8/2016**	**4/8/2016**	**4/8/2016**	7/23/2015	7/23/2015	9/15/2015	CA-DUP-2	**4/8/2016**
Volatile Organic Compounds (VOCs) by EPA Method 8260C (mg/kg)														
All compounds	NA	ND	ND	NS	NS	NS	NS	NS	NS	ND	ND	ND	ND	ND
Semivolatile Organic Compounds (SVOCs) or Polycyclic Aromatic Hydrocarbons (PAHs) only by EPA Method 8270D (mg/kg)														
acenaphthylene	490	ND<0.05	ND<0.28	NS	NS	NS	NS	NS	NS	ND<0.06	**0.08**	ND<0.06	ND<0.06	**0.13**
naphthalene	5	ND<0.05	ND<0.28	NS	NS	NS	NS	NS	NS	ND<0.06	ND<0.06	ND<0.06	ND<0.06	**0.15**
2-methylnaphthalene	96	ND<0.05	ND<0.28	NS	NS	NS	NS	NS	NS	ND<0.06	ND<0.06	ND<0.06	ND<0.06	**0.10**
phenanthrene	NE	ND<0.05	ND<0.28	NS	NS	NS	NS	NS	NS	ND<0.06	ND<0.06	ND<0.06	ND<0.06	**0.29**
anthracene	1,000	ND<0.05	ND<0.28	NS	NS	NS	NS	NS	NS	ND<0.06	ND<0.06	ND<0.06	ND<0.06	**0.42**
fluoranthene	960	ND<0.05	ND<0.28	NS	NS	NS	NS	NS	NS	ND<0.06	**0.10**	ND<0.06	ND<0.06	**0.51**
pyrene	720	ND<0.05	ND<0.28	NS	NS	NS	NS	NS	NS	ND<0.06	**0.09**	ND<0.06	ND<0.06	**0.45**
benzo(a)anthracene	1	ND<0.05	ND<0.28	NS	NS	NS	NS	NS	NS	ND<0.06	**0.12**	ND<0.06	ND<0.06	**0.48**
chrysene	120	ND<0.05	ND<0.28	NS	NS	NS	NS	NS	NS	ND<0.06	**0.14**	ND<0.06	ND<0.06	**0.71**
benzo(b)fluoranthene	1	**0.06**	ND<0.28	NS	NS	NS	NS	NS	NS	ND<0.06	**0.3**	ND<0.06	ND<0.06	**0.40**
benzo(k)fluoranthene	12	**0.09**	ND<0.28	NS	NS	NS	NS	NS	NS	ND<0.06	**0.21**	ND<0.06	ND<0.06	**0.51**
benzo(a)pyrene	0.7	**0.07**	ND<0.28	NS	NS	NS	NS	NS	NS	ND<0.06	**0.26**	ND<0.06	ND<0.06	**0.60**
indeno(1,2,3-cd)pyrene	1	ND<0.05	ND<0.28	NS	NS	NS	NS	NS	NS	ND<0.06	**0.12**	ND<0.06	ND<0.06	**0.29**
dibenzo(a,h)anthracene	0.7	ND<0.05	ND<0.28	NS	NS	NS	NS	NS	NS	ND<0.06	**0.05**	ND<0.06	ND<0.06	**0.11**
benzo(g,h,i)perylene	NE	ND<0.05	ND<0.28	NS	NS	NS	NS	NS	NS	ND<0.06	**0.12**	ND<0.06	ND<0.06	**0.33**
Pesticides by EPA Method 8081 (mg/kg)														
4,4'-DDE	4	**0.23**	**0.35**	NS	NS	NS	NS	NS	NS	**0.29**	**0.25**	NS	NS	ND<0.04
4,4'-DDT	4	**0.11**	**0.16**	NS	NS	NS	NS	NS	NS	**0.06**	**0.12**	NS	NS	**0.09**
Total Petroleum Hydrocarbons (TPH) by EPA method 3550C (mg/kg)														
TPH	10,000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND<230	ND<230	ND<220
Polychlorinated biphenyls (PCBs) by EPA Method 8082A (mg/kg)														
Total PCBs	1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND<0.2	ND<0.2	NS
Priority Pollutant Metals by EPA Method 6010C & 7471B (mg/kg)														
arsenic	11	**9.6**	**10**	NS	NS	NS	NS	NS	NS	**8.9**	**11**	**6.7**	**6.6**	**15**
barium	1,000	**53**	**130**	NS	NS	NS	NS	NS	NS	**56**	**52**	**40**	**38**	**52**
cadmium	33	**0.5**	**1.5**	NS	NS	NS	NS	NS	NS	ND<0.5	**0.5**	ND<0.5	ND<0.5	ND<0.6
chromium (total)	130	**14**	**14**	NS	NS	NS	NS	NS	NS	**15**	**9**	**10**	**10**	**20**
lead	400	**200**	**870**	**360**	**320**	**210**	**220**	**250**	**270**	**200**	**260**	**290**	**270**	**170**
mercury	7	ND<0.20	ND<0.19	NS	NS	NS	NS	NS	NS	ND<0.21	ND<0.19	ND<0.21	ND<0.22	ND<0.21

NOTES:
Gray and Bold are new samples collected during this Supplemental Phase II ESA
mg/kg - milligrams per kilogram
*Only analytes with detections are shown, all other sample results analyses were below the laboratory reporting limit.
1 - New Hampshire Department of Environmental Services (NHDES) Code of Administrative Rules Chap. Env-Or 600, Soil Remediation Standards, Table 600-2, June 1, 2015
2 - Sample collected from soil within culvert
NE - not established
NS - not sampled
ND<0.2 - Results were below the laboratory reporting limits, laboratory reporting limit shown
NA - Regulatory criteria vary by compound
ND - All compound results were below the laboratory reporting limits; however, reporting limits vary by compound
White and not bold are historical samples collected during the prior Phase II ESA
Bold Exceeds laboratory reporting limit
Exceeds applicable regulatory guideline
Exceeds applicable regulatory guidelines but is considered background

Table 4
Summary of New and Historical Soil Analytical Results
Dagostino Rose Farm, NHDES Site #201203003
Oak Street Extension, Exeter, New Hampshire

Parameter*	Regulatory Criteria[1] (mg/kg)	Sample ID, Depth, Sample Date								
		CA-TP-100	CA-TP-100A	CA-TP-101	CA-TP-101S	CA-TP-102	CA-TP-104S	CA-TP-105	CA-TP-105S	CA-TP-106
		0-2/1	9-10/9	5-5.5	0-2	4-5	0-2	5-6	0-2	0-2/1.5
		8/6/2015	8/6/2015	8/6/2015	8/6/2015	8/6/2015	8/6/2015	8/6/2015	8/6/2015	8/6/2015
Volatile Organic Compounds (VOCs) by EPA Method 8260C (mg/kg)										
All compounds	NA	ND	ND	ND	ND	NS	NS	NS	NS	ND
Semivolatile Organic Compounds (SVOCs) or Polycyclic Aromatic Hydrocarbons (PAHs) only by EPA Method 8270D (mg/kg)										
acenaphthylene	490	ND<0.06	ND<0.06	ND<0.06	ND<0.09	ND<0.6	ND<0.6	ND<0.8	ND<0.6	ND<0.06
naphthalene	5	ND<0.06	ND<0.06	ND<0.06	ND<0.09	ND<0.6	ND<0.6	ND<0.8	ND<0.6	ND<0.06
2-methylnaphthalene	96	ND<0.06	ND<0.06	ND<0.06	ND<0.09	ND<0.6	ND<0.6	ND<0.8	ND<0.6	ND<0.06
phenanthrene	NE	ND<0.06	ND<0.06	ND<0.06	ND<0.09	ND<0.6	ND<0.6	ND<0.8	ND<0.6	ND<0.06
anthracene	1,000	ND<0.06	ND<0.06	ND<0.06	ND<0.09	ND<0.6	ND<0.6	ND<0.8	ND<0.6	ND<0.06
fluoranthene	960	ND<0.06	ND<0.06	ND<0.06	**0.12**	ND<0.6	ND<0.6	ND<0.8	ND<0.6	ND<0.06
pyrene	720	ND<0.06	ND<0.06	ND<0.06	**0.10**	ND<0.6	ND<0.6	ND<0.8	ND<0.6	ND<0.06
benzo(a)anthracene	1	ND<0.06	ND<0.06	ND<0.06	ND<0.09	ND<0.6	ND<0.6	ND<0.8	ND<0.6	ND<0.06
chrysene	120	ND<0.06	ND<0.06	ND<0.06	**0.10**	ND<0.6	ND<0.6	ND<0.8	ND<0.6	ND<0.06
benzo(b)fluoranthene	1	ND<0.06	ND<0.06	ND<0.06	**0.12**	ND<0.6	ND<0.6	ND<0.8	ND<0.6	ND<0.06
benzo(k)fluoranthene	12	ND<0.06	ND<0.06	ND<0.06	ND<0.09	ND<0.6	ND<0.6	ND<0.8	ND<0.6	ND<0.06
benzo(a)pyrene	0.7	ND<0.06	ND<0.06	ND<0.06	ND<0.09	ND<0.6	ND<0.6	ND<0.8	ND<0.6	ND<0.06
indeno(1,2,3-cd)pyrene	1	ND<0.06	ND<0.06	ND<0.06	ND<0.09	ND<0.6	ND<0.6	ND<0.8	ND<0.6	ND<0.06
dibenzo(a,h)anthracene	0.7	ND<0.06	ND<0.06	ND<0.06	ND<0.09	ND<0.6	ND<0.6	ND<0.8	ND<0.6	ND<0.06
benzo(g,h,i)perylene	NE	ND<0.06	ND<0.06	ND<0.06	ND<0.09	ND<0.6	ND<0.6	ND<0.8	ND<0.6	ND<0.06
Pesticides by EPA Method 8081 (mg/kg)										
4,4'-DDE	4	ND<0.04	ND<0.04	ND<0.05	ND<0.07	NS	NS	NS	NS	ND<0.04
4,4'-DDT	4	ND<0.04	**0.27**	ND<0.05	ND<0.07	NS	NS	NS	NS	ND<0.04
Total Petroleum Hydrocarbons (TPH) by EPA method 3550C (mg/kg)										
TPH	10,000	NS	NS	NS	NS	NS	NS	NS	NS	NS
Polychlorinated biphenyls (PCBs) by EPA Method 8082A (mg/kg)										
Total PCBs	1	NS	NS	NS	NS	NS	NS	NS	NS	NS
Priority Pollutant Metals by EPA Method 6010C & 7471B (mg/kg)										
arsenic	11	**8.4**	**20**	**11**	**9.8**	**45**	**7.8**	**23**	**13**	**14**
barium	1,000	**36**	**110**	**80**	**90**	**59**	**65**	**100**	**100**	**79**
cadmium	33	ND<0.5	ND<0.5	ND<0.5	ND<0.7	ND<0.5	ND<0.5	ND<0.5	ND<0.6	ND<0.5
chromium (total)	130	**17**	**42**	**31**	**31**	**24**	**36**	**33**	**36**	**31**
lead	400	**25**	**20**	**13**	**57**	**15**	**39**	**79**	**59**	**14**
mercury	7	ND<0.20	ND<0.23	ND<0.22	**0.34**	ND<0.20	ND<0.23 UJ	ND<23	ND<0.26	ND<0.21

NOTES:
Gray and Bold headings are new samples collected during this Supplemental Phase II ESA
mg/kg - milligrams per kilogram
*Only analytes with detections are shown, all other sample results analyses were below the laboratory reporting limit.
1 - New Hampshire Department of Environmental Services (NHDES) Code of Administrative Rules Chap. Env-Or 600, Soil Remediation Standards, Table 600-2, June 1, 2015
2 - Sample collected from soil within culvert
NE - not established
NS - not sampled
ND<0.2 - Results were below the laboratory reporting limits, laboratory reporting limit shown
NA - Regulatory criteria vary by compound
ND - All compound results were below the laboratory reporting limits; however, reporting limits vary by compound
White and not bold headings are historical samples collected during the prior Phase II ESA
Bold Exceeds laboratory reporting limit
Exceeds applicable regulatory guideline
Exceeds applicable regulatory guidelines but is considered background

Table 5
Summary of New and Historical Groundwater Analytical Results
Dagostino Rose Farm, NHDES Site #201203003
Oak Street Extension, Exeter, New Hampshire

Parameter	Regulatory Criteria		Sample ID, Sample Date*				
	AGQS[1]	GW-2[2]	CA-MW-100	CA-MW-101		CA-MW-102	**CA-MW-103**
			5/27/2015	5/27/2015	DUP-GW-1	5/27/2015	**4/29/2016**
Volatile Organic Compounds (VOCs) by EPA Method 8260C (µg/L)							
All compounds	NA	NA	ND	ND	ND	ND	ND
Semi-Volatile Organic Compounds (SVOCs) by EPA Method 8270D (µg/L)							
All compounds	NA	NA	ND	ND	ND	ND	ND
Pesticides by EPA Method 8081B (µg/L)							
All compounds	NA	NA	ND	ND	ND UJ	ND	ND
Dissolved RCRA 8 Metals by EPA Method 6010C and EPA Methods 7470A (µg/L)							
All Metals	NA	NA	ND	ND	ND	ND	ND

NOTES:

µg/L - micrograms per liter

*Only analytes with detections are shown, all other sample results analyses were below the laboratory reporting limits

1 - New Hampshire Department of Environmental Services, Table 600-1, Ambient Groundwater Quality Standards effective June, 1, 2015

2 - NHDES Risk Characterization management Policy Table 2, Method 1 Groundwater Standards GW-2, February 2013 (Also the Groundwater to Indoor Air Screening Levels GW-2 from NHDES Table 1 Vapor Instrusion Screening Levels, February 2013)

NA - Compounds have various regulatory criteria

ND - Results were not detected above the laboratory reporting limit for all compounds with different reporting limits

UJ - Results are considered estimated due to laboratory non-conformance, results are below the laboratory reporting limits.

Gray and Bold headings are new samples collected during this Supplemental Phase II ESA

Table 6
Summary of New and Historical Sediment Analytical Results
Dagostino Rose Farm, NHDES Site #201203003
Oak Street Extension, Exeter, New Hampshire

Parameter*	Regulatory Criteria[1] (mg/kg)		Sample ID, Depth, Sample Date									
			SED-BKG	CA-SED-100	CA-SED-101	CA-SED-102	**CA-SED-103**	**CA-SED-104**	**CA-SED-105**	**CA-SED-106**	**CA-SED-107**	**CA-SED-108**
	TEC	PEC	0-0.5	0-0.5	0-0.5	0-0.5	**0-0.5**	**0-0.5**	**0-0.5**	**0-0.5**	**0-0.5**	**0-0.5**
			7/23/2015	7/23/2015	7/23/2015	7/23/2015	**4/8/2016**	**4/8/2016**	**4/8/2016**	**4/8/2016**	**4/8/2016**	**4/8/2016**
Volatile Organic Compounds (VOCs) by EPA Method 8260C (mg/kg)												
All compounds	NA	NA	ND	ND	ND	ND	NS	NS	NS	NS	NS	NS
Semivolatile Organic Compounds (SVOCs) or Polycyclic Aromatic Hydrocarbons (PAHs) by EPA Method 8270D (mg/kg)												
fluoranthene	0.423	2.23	ND<0.07	ND<0.09	**0.76**	ND<0.41	NS	NS	NS	ND<1.1	ND<0.96	ND<0.66
pyrene	0.195	1.52	ND<0.07	ND<0.09	**0.75**	ND<0.41	NS	NS	NS	ND<1.1	ND<0.96	ND<0.66
chrysene	0.166	1.29	ND<0.07	ND<0.09	**0.53**	ND<0.41	NS	NS	NS	ND<1.1	ND<0.96	ND<0.66
benzo(b)fluoranthene	0.24	13.4	ND<0.07	ND<0.09	**0.53**	ND<0.41	NS	NS	NS	ND<1.1	ND<0.96	ND<0.66
benzo(a)pyrene	0.15	1.45	ND<0.07	ND<0.09	**0.56**	ND<0.41	NS	NS	NS	ND<1.1	ND<0.96	ND<0.66
Pesticides by EPA Method 8081B (mg/kg)												
All compounds	NA	NA	ND	ND	ND	ND	NS	NS	NS	NS	NS	NS
Priority Pollutant Metals by EPA Method 6010C & 7471B (mg/kg)												
arsenic	9.79	33	**32**	**9.5**	**12**	**14**	NS	NS	NS	NS	NS	NS
barium	NE	NE	**64**	**460**	**39**	**47**	NS	NS	NS	NS	NS	NS
cadmium	0.99	4.98	**1.8**	**1.3**	**1.0**	ND<0.6	NS	NS	NS	NS	NS	NS
chromium (total)	43.4	111	**29**	ND<9	ND<9	**14**	NS	NS	NS	NS	NS	NS
lead	35.8	128	**44**	**180**	**140**	**46**	**110**	**140**	**81**	**220**	**66**	**57**

NOTES:
Gray and Bold headings are new samples collected during this Supplemental Phase II ESA
mg/kg - milligrams per kilogram
*Only analytes with detections are shown, all other sample results analyses were below the laboratory reporting limits.
1 - New Hampshire Department of Environmental Services, DRAFT Evaluation of Sediment Quality Guidance Document, April 2005.
NE - not established
ND<0.2 - Results were below the laboratory reporting limits, laboratory reporting limit shown
ND - Results were below the laboratory reporting limits and reporting limits vary between compounds
Bold Exceeds laboratory reporting limit
White and not bold headings are historical samples collected during the prior Phase II ESA
Reporting limit exceeds regulatory criteria
Exceeds applicable TEC or PEC but is consistent with site-specific background sample SED-BKG
Exceeds applicable TEC but is below applicable PEC
Exceeds applicable TEC and PEC

APPENDIX A

NHDES APPROVED WORK PLAN

Waste Management Division
PO Box 95, 29 Hazen Drive
Concord, NH 03302

Type of Submittal (Check One-Most Applicable)

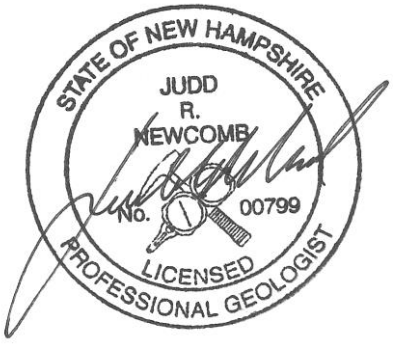
☐ Work Scope ☐ Reimbursement Request	☐ Remedial Action • Remedial Action Plan • Bid Plans and Specifications • Remedial Action Implementation Report ☐ Treatment System and POE O&M ☐ Activity and Use Restriction
☐ UST Facility Report ☐ AST Facility Report	
☐ Emergency/Initial Response Action ☐ Groundwater Quality Assessment	☐ Temporary Surface Water Discharge Permit
☐ Initial Site Characterization ☐ Site Investigation • Site Investigation Report • Revised Supplemental Site Investigation Report • GMZ Delineation • Source Area Investigation • Data Submittal • Annual Summary Report ☒ Brownfields Related Document ☐ Closure Documentation	☐ Groundwater Management Permit • Permit Application • Renewal Application • Deed Recordation Documentation • Abutter Notification Documentation • Release of Recordation ☐ Data Submittal ☐ Annual Summary Report

PHASE II ADDITIONAL INVESTIGATION WORK PLAN

Dagostino Rose Farm
Oak Street Extension
Exeter, New Hampshire
NHDES Site #201203003

Prepared For:
Rockingham Planning Commission
156 Water Street
Exeter, NH 03833
Phone: (603) 778-0885
Contact: Ms. Theresa Walker

Prepared By:
CREDERE ASSOCIATES, LLC
776 Main Street
Westbrook, ME 04092
Phone: (207) 828-1272 ext. 16
Contact: Judd R. Newcomb, CG, PG
April 1, 2016



Recommended Risk Category (check one)

☐ 1. Immediate Human Health Risk (Impacted water supply well, etc.)	☐ 4. Surface Water Impact	☐ 7. Alternate Water Available/Low Level Groundwater Contamination (<1,000 X AGQS)
☐ 2. Potential Human Health Risk (Water supply well within 1,000' or Site within SWPA)	☐ 5. No Alternate Water Available/No Existing Wells in Area	☐ 8. No AGQS Violation/No Source Remaining
☐ 3. Free Product or Source Hazard	☐ 6. Alternate Water Available/High Level Groundwater Contamination (>1,000 X AGQS)	☐ Closure Recommended

CREDERE ASSOCIATES, LLC
776 Main Street
Westbrook, Maine 04092
Phone: 207-828-1272
Fax: 207-887-1051

April 1, 2016

Michael McCluskey
Waste Management Division
29 Hazen Drive, P.O. Box 95
Concord, NH 03302-0095
Via Email: michael.mccluskey@des.nh.gov

SUBJECT: Phase II Additional Investigation Work Plan
Dagostino Rose Farm Property, NHDES Site #201203003
Oak Street Extension, Exeter, New Hampshire

Dear Mr. McCluskey:

Credere Associates, LLC (Credere) has prepared this work plan for the above referenced property (the Site) to outline the proposed methodology, sample justification, and analyses to perform Phase II Additional Investigation at the Site.

An initial Preliminary Phase II ESA was completed on April 5, 2013, using funding from the Rockingham Planning Commission (RPC) Brownfields Assessment program; however, only petroleum assessment funds were available at that time. Therefore, only petroleum related recognized environmental conditions (RECs) identified in Credere's April 23, 2012, Phase I ESA were previously assessed. To complete the assessment of hazardous substance related RECs, RPC submitted an Assessment Grant Application for funding through New Hampshire Department of Environmental Services (NHDES) Brownfields Revolving Loan Fund (RLF). The subgrant was awarded and RPC retained Credere to perform the additional assessment work. Credere prepared a Supplemental Phase II ESA Work Plan dated July 2, 2015, to assess the remaining hazardous material related RECs at the Site in accordance with the recommendations of Credere's April 5, 2013, Preliminary Phase II ESA recommendations, and NHDES' May 5, 2015, Preliminary Phase II ESA review letter. Credere completed the Supplemental Phase II ESA work that identified fill materials and soil/sediment containing polycyclic aromatic hydrocarbons (PAHs) and/or lead in soil/sediment at concentrations above the NHDES' Soil Remediation Standards (SRS). Results were summarized in a draft Phase II ESA dated November 9, 2015. NHDES reviewed the document and provided comments in a January 27, 2016 response letter.

Tasks and Objectives

The objective of this additional investigation is to address data gaps and NHDES concerns remaining after completion of the Supplemental Phase II Investigation. Based on the NHDES' January 27, 2016, response letter to Credere's Phase II ESA, and our discussions during a meeting at the Site on February 26, 2016, Credere proposes the following tasks to fill certain data gaps identified at the Site:

- Installation of a soil boring/monitoring well adjacent to the location of CA-TP-103 to further assess the composition of layers of varying fill material and to assess groundwater beneath the previously observed fill. The data obtained from this effort may be useful in determining if the material can remain in place with an appropriate cover system and be registered as a pre-1981 landfill.
- Sample material in or beneath the newly identified culvert behind the Packing House to assess if any previously unidentified petroleum or hazardous materials have been released to the environment.
- Collect surface soil samples to further assess the extent of lead impacts around CA-SS-1 in the former greenhouse area and perform a supplemental X-ray fluorescence (XRF) grid screening program in the area of the former Greenhouses to assess the extent of lead impacts
- Collect additional sediment samples within the pond to the east of the Packing house to further assess the extent of lead in sediment presumed to have been discharged through a drain pipe from the former greenhouses.
- Collect sediment samples to further assess PAH and lead impacts in the detention area located across the driveway to the south of the pond, and/or downslope within Norris Brook.

Sample Design

To meet these objectives, Credere proposes collection of the samples outlined in **Table 1**. **Table 1** includes a list of proposed samples, sample justification, and proposed analyses based on previously identified contaminants of concern (COCs). Proposed sample locations are depicted on the attached **Figure 2**.

Methodology

Soil Boring Advancement and Soil Sampling (CA-SB-103)

To assess the layers of fill material observed in test pit CA-TP-103 as well as other materials present below the maximum reach of the test pitting excavator, one soil boring (CA-SB-103) will be advanced adjacent to the location of CA-TP-103 as close to the top of the slope as accessible with the hollow stem auger drilling rig. Soil samples will be collected during drilling in continuous 2-foot intervals using a decontaminated split-spoon sampler. Split spoon samples will be individually logged, evidence of contamination will be noted, and soil will be field screened for total volatile organic compounds (VOCs) using a Thermo 580B OVM photoionization detector (PID) (or similar) calibrated with a 100 part per million by volume (ppm_v) isobutylene gas with a response factor of 1.0 ppm_v. Soil will be screened in accordance with the NHDES HWRB-12 jar headspace technique SOP.

One soil sample will be collected from the first encountered native soil (i.e., the native clay/silt) beneath the observed layers of fill. Native soil is anticipated to be encountered beneath a layer of coal ash and clinker previously encountered at approximately 13 feet. The

soil sample will be submitted for laboratory analysis of PAHs, VOCs, pesticides and RCRA 8 metals.

Surface Soil Sampling and Screening

To assess if potential releases of petroleum or hazardous materials may have occurred through the previously unidentified culvert to the west of the Packing House, a representative sample will be collected from material accumulated in the culvert, or in the absence of material in the culvert, from surface soil directly beneath the culvert's discharge location (CA-SS-105). The sample will be collected using decontaminated hand tool and placed directly into laboratory glassware after removing any organic detritus. As there are no known COCs for this portion of the Site, the sample will be laboratory analyzed for VOCs, semi-VOCs (SVOCs), pesticides, RCRA 8 metals, and total petroleum hydrocarbons (TPH).

To further assess the extent of lead-impacted soil in the former greenhouse area, Credere will collect six (6) soil samples CA-SS-101A through CA-SS-101F in the vicinity of previous surface soil CA-SS-101. Each soil sample will be evenly spaced radially around and approximately five feet away from CA-SS-1. Samples will be submitted for laboratory analysis of lead, and any evidence of paint in the samples or surrounding area will be noted.

Additionally to further assess the extent of lead impacts, Credere will screen surface soil in a grid pattern focused around CA-SS-101 and the remainder of the former greenhouse area using an XRF. Soil will be screened for concentrations relative to the SRS of 400 mg/kg, and will be presumed to be impacted if XRF screening results exceed 240 parts per million (ppm) (40% error range for the XRF relative to the NHDES SRS). Each location will be screened in triplicate and the average of the three readings will be taken to represent the concentration at that location. XRF precision will be assessed by performing precision measurements at two soil screening location. A seven (7) time replicate will be performed and the relative standard deviation (RSD) will be calculated (RSD = (SD/mean concentrations) x 100). RSD should not exceed 20 percent.

Sediment Sampling

To further assess the extent of lead in sediment within the pond to the east of the Packing house, three sediment samples (CA-SED-103 through CA-SED-105) will be collected in an arc approximately 5 feet south of the drain pipe discharge location and CA-SED-100. Samples will be collected from accessible bank or exposed bottom (i.e., if the water is low) of each location using hand tools (i.e., a decontaminated bulb corer) or with a submersible sediment sampler (e.g., a Ponar brand sampler). Each sample will be placed directly into laboratory glassware after decanting any surface water, and submitted for laboratory analysis of lead.

To further assess PAHs and lead in the detention area to the south of the road and downslope to Norris Brook, two additional sediments samples (CA-SED-106 and CA-SED-107) will be collected form the detention area and one additional sediment sample (CA-SED-108) will be collected from Norris Brook. Samples within the detention area will be biased toward the

location receiving discharge water from the pond's overflow discharge culvert, and the second will be biased toward where any detained water pools before draining through or overtopping the detention area. The sample within Norris Brook will be biased to the area at the base of the slope receiving any water from the detention area. Each sample will be collected using decontaminated hand tools and be placed directly in laboratory glassware after decanting any surface water. The samples will then be submitted for laboratory analysis of PAHs and lead. The presence of any asphalt or other roadway related runoff (e.g., salt and sand) will be noted as a potential source material for the previously detected PAHs in sediment sample CA-SED-101.

Monitoring Well Installation and Groundwater Sampling

Soil borings CA-SB-103 will be completed as groundwater monitoring well CA-MW-103 using at least 10 feet of 2-inch diameter 0.010-inch slotted PVC screen with at least 5 feet of screen below the depth of the water table to allow for groundwater table fluctuations and enough solid PVC riser to reach the ground surface. The well annulus will be filled with no larger than No. 2 washed silica sand, and a bentonite seal will be installed above the screen. The well will be finished with a standpipe and concrete collar.

The new well will be developed by overpumping and agitation methods. The well will be purged until a total of at least three well volumes have been removed and turbidity has been reduced to less than 10 NTUs. Credere will allow at least 14 days for the monitoring wells to equilibrate with the surrounding aquifer prior to sampling.

Following installation, the newly installed monitoring well and previously installed wells' top of PVC elevation will be attempted to be surveyed to an onsite benchmark, if available, or an arbitrary datum, if necessary. However, due to the distribution of wells over an approximate 400 to 500 foot area and seasonally dense vegetation, previous attempts to survey all wells installed at the Site have been unsuccessful. To date this has not affected the outcome of investigations at the Site as no contaminants have been identified in groundwater at the Site and groundwater flow obviously flows southward with topography and area streamflow.

If top of well elevations were able to be surveyed (all or in part of the Site's network), depth to groundwater and non-aqueous phase liquid (NAPL) thickness, if present, will then be measured in all onsite wells relative to the top of well elevation to allow for the calculation of relative groundwater elevations and the determination of groundwater flow direction at the Site.

Credere will then sample each well using low-flow sampling methodologies or no-purge methodologies where appropriate. Wells will be purged at a stable flow rate with a peristaltic pump to avoid drawdown of the water level. Purging will occur by one of the following methods:

1. If a stable flow rate is achieved, groundwater will be periodically monitored for temperature, pH, oxidation-reduction potential, specific conductivity, dissolved

oxygen, and turbidity using a multi-parameter meter and an in-line flow-through cell until parameters have stabilized over a period of three readings, spaced at least 5 minutes apart or at a spacing to allow for a complete exchange of flow through the flow-through cell based on the flow-through cell volume and flow rate. If parameters do not stabilize within a period of 2 hours or before a maximum purge volume of 5 well volumes, samples will be collected with field note justification of attempts to achieve stabilization and data will be reviewed for evidence of bias.

2. If a stable flow rate cannot be achieved, purging will be ceased and the no-purge sampling method will be implemented. Tubing will be placed at the desired pump intake, one tubing volume will be purged, and samples will be collected. The wells will not be permitted to be pumped dry.

Groundwater samples will be collected immediately after the pump and directly into the appropriate bottle ware in order of decreasing volatility. Sample volume to be analyzed for dissolved metals will be field filtered with a 0.45-micron in-line filter. Groundwater samples will be stored on ice and submitted to ARA for analysis of PAHs, VOCs, pesticides and dissolved RCRA-8 metals.

Reporting

Following receipt of sampling results, Credere will prepare a succinct Supplemental Phase II Investigation Letter report that will include summaries of the objectives, site description and background, methodologies, sample results, conclusions, and recommendations concerning any additional site characterization or remediation recommendations.

Credere will compare the soil analytical results to the June 2015 NHDES Table 600-2 Soil Remediation Standards (SRSs) and groundwater analytical results to the Table 600-1 Ambient Groundwater Quality Standards (AGQSs).

Sediment results will be compared to the threshold effect concentrations (TEC) and probable effect concentrations (PEC) referenced in the NHDES' DRAFT Evaluation of Sediment Quality Guidance Document dated April 2005.

Please let us know if there are any questions or concerns with this proposed scope of work for the Site. If you should have any questions or require clarification on any element of this work plan, please do not hesitate to contact me at (207) 828-1272, extension 16 or via e-mail at jnewcomb@crederellc.com.

Sincerely,
Credere Associates, LLC

Judd Newcomb, PG, CG
Project Manager

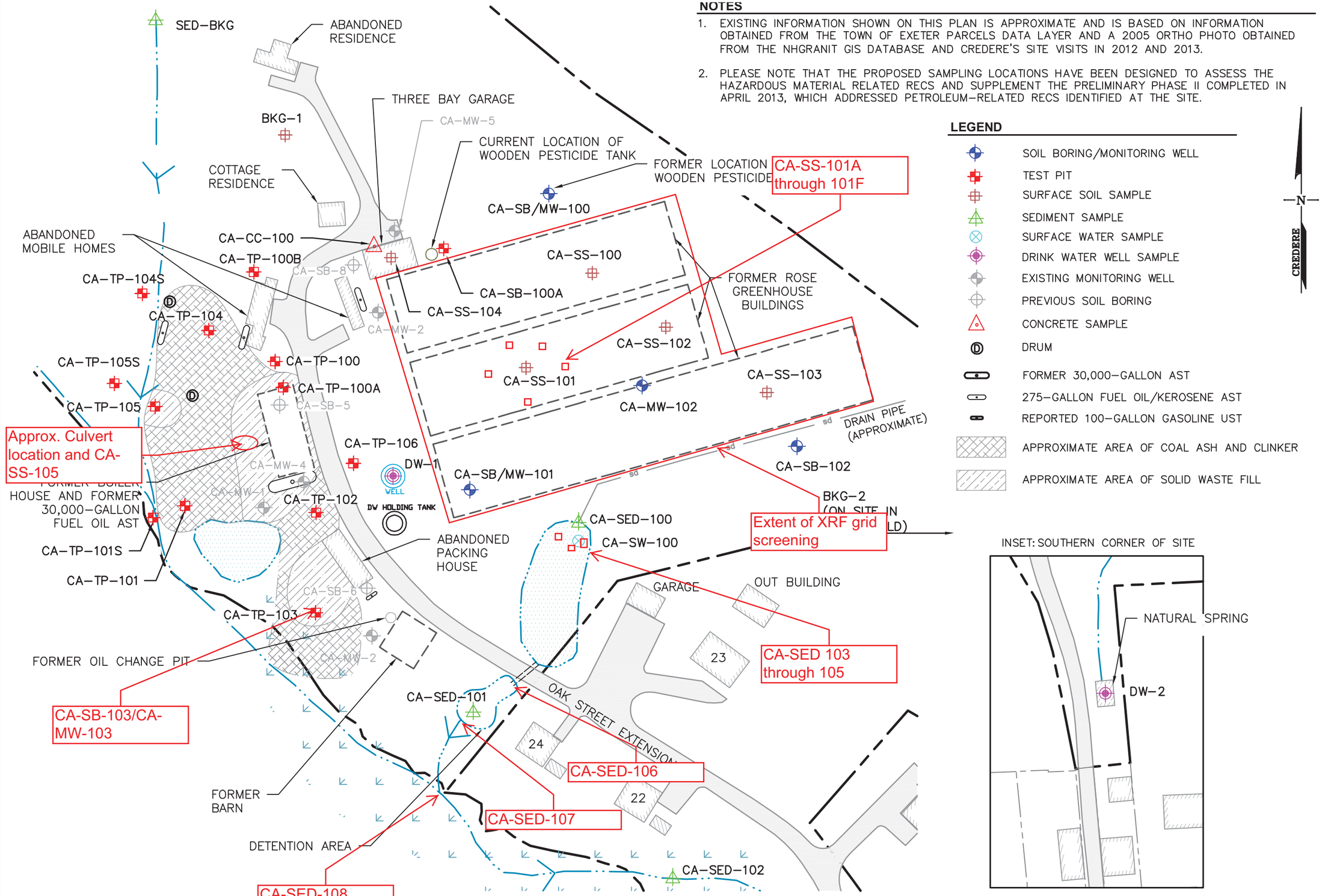


FIGURE 2
SAMPLE LOCATION PLAN

DAGOSTINO ROSE FARM PROPERTY
OAK STREET EXTENSION
EXETER, NEW HAMPSHIRE
NHDES #201203003

DRAWN BY: MTG
CHECKED BY: ASD
DATE: 11/09/2015
PROJECT: 15001275

CREDERE ASSOCIATES, LLC
776 MAIN STREET
WESTBROOK, MAINE 04092
TEL: 207.828.1272
FAX: 207.887.1051
WWW.CREDERELLC.COM

J:\CREDERE\11001122\Dagostino Rose Farm Property\Phase II Sample Location Plan 2015.dwg plot date: 3/7/2016 12:03

Table 1: Sample Summary Table
Dagostino Rose Farm Property
Oak Street Extension
Exeter, New Hampshire

Task	Proposed Sample IDs	Sample Depth (feet bgs)	Sample Type	Sample Rationale	Analytical Method
Assess Fill Material	CA-SB-103/ CA-MW-103	TBD	Subsurface soil (Native)	To further assess extent of fill material layers and impacts to groundwater beneath fill.	PAHs (EPA Method 8270D) Pesticides (EPA Method 8081B) RCRA 8 Metals (EPA Method 6010C or 6020A & 7471B) VOC (EPA Method 8260C)
		Screened interval	Groundwater		
Assesa and Delineate Surface Soil	CA-SS-105	Soil in Culvert or 0-0.5' directly beneath culvert	Surface soil	To assess potential releases through previously unidentified culvert	VOCs (EPA Method 8260C) TPH (EPA Method 8100) SVOCs (EPA Method 8270D) Pesticides (EPA Method 8081B) RCRA 8 metals (EPA Method 6010C or 6020A & 7471B)
	CA-SS-101A through CA-SS-101F	0-0.5	Surface Soil	To further assess the extent of lead impacts in surface soil in the former greenhouse area.	Lead (EPA Method 6010C or 6020A)
	Consecutively numbered grid points	NA	Surface soil		XRF Screening
Delineate and Further Evaluate Sediment	CA-SED-103	0-0.5	Sediment	To further assess extent of lead impacts near the discharge piipe in the pond to the east of the Packing House.	Lead (EPA Method 6010C or 6020A)
	CA-SED-104	0-0.5	Sediment		Lead (EPA Method 6010C or 6020A)
	CA-SED-105	0-0.5	Sediment		Lead (EPA Method 6010C or 6020A)
	CA-SED-106	0-0.5	Sediment	To further evaluate presence of PAHs and lead in sediment within the detention area.	PAHs (EPA Method 8270D) Lead (EPA Method 6010C or 6020A)
	CA-SED-107	0-0.5	Sediment		PAHs (EPA Method 8270D) Lead (EPA Method 6010C or 6020A)
	CA-SED-108	0-0.5	Sediment	To evaluate if PAHs or lead have impacted sediment in Norris Brook beneath the detention area.	PAHs (EPA Method 8270D) Lead (EPA Method 6010C or 6020A)

NA - not applicable
REC - recognized environmental condition
bgs - below ground surface
NHDES - New Hampshire Department of Environmental Services
VOC - volatile organic compounds
SVOC - semi-volatile organic compounds
PID - photoionization detector
TPH - total petroleum hydrocarbons
PAHs - polycyclic aromatic hydrocarbons
EPA - environmental protection agency
SRS - Soil Remediation Standard
LBP - lead-based paint
RCRA - Resource Conservation and Recovery Act
XRF - x-ray fluorescence

APPENDIX B

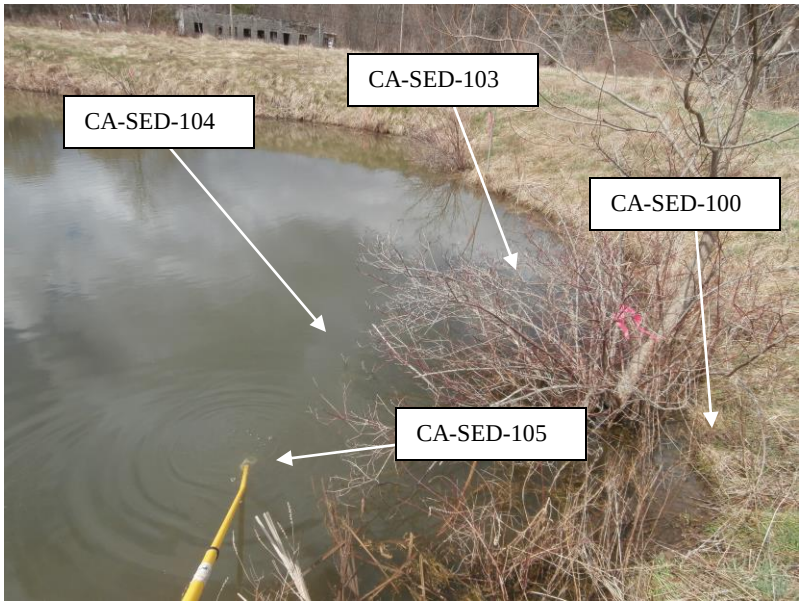
PHASE II PHOTO LOG

Site Reconnaissance Photo Log
Dagostino Rose Farm
Oak Street Extension, Exeter, New Hampshire

1. Location of CA-SB/MW-103 west of the Packing House looking east.

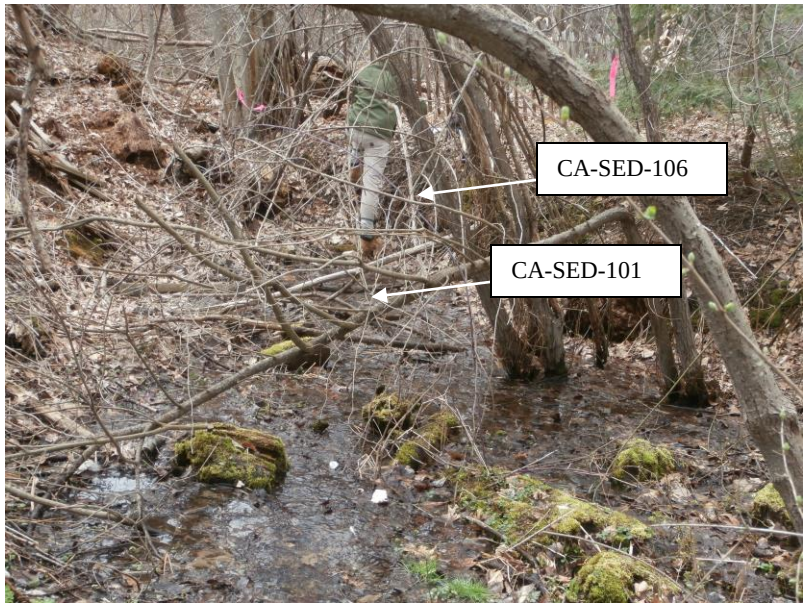
2. View of surface soil sample location sCA-SS-01 and delineation sample area (see Figure 2) looking west.

3. View of soil accumulated within culvert to west of Packing House. Note photograph rotated 90 degrees counterclockwise.

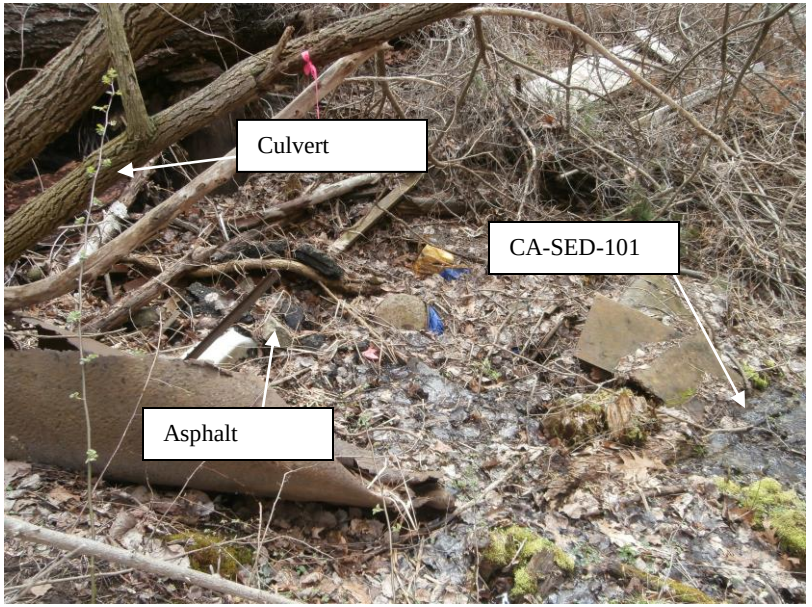


4. View of sediment sample locations in pond south of greenhouse area looking northwest.

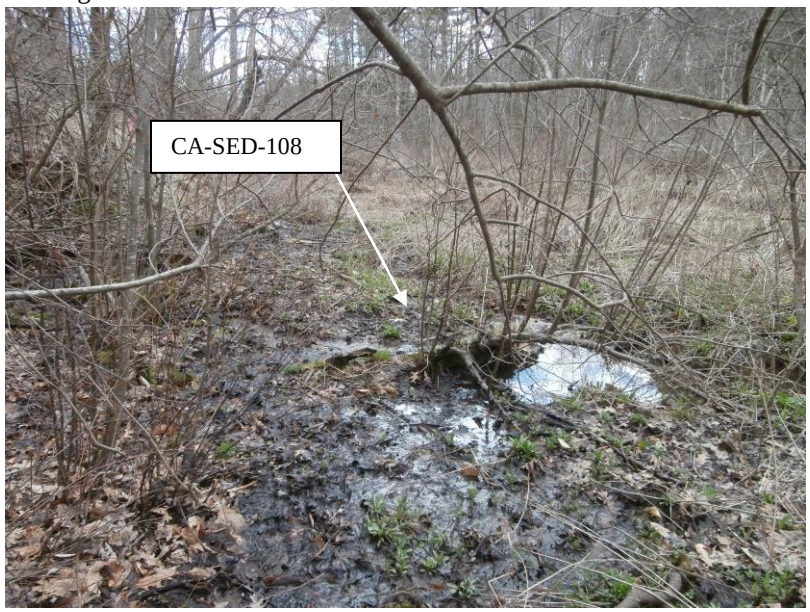
Site Reconnaissance Photo Log
Dagostino Rose Farm
Oak Street Extension, Exeter, New Hampshire



5. View of sediment sample locations within detention area looking southwest.



6. View of sediment sample location and culvert in detention area looking east.



7. View of sediment sample location in Norris Brook looking southeast.

APPENDIX C

FIELD LOGS

Credere Associates, LLC
776 Main Street
Westbrook, Maine 04092
Phone: 207-828-1272
Fax: 207-887-1051

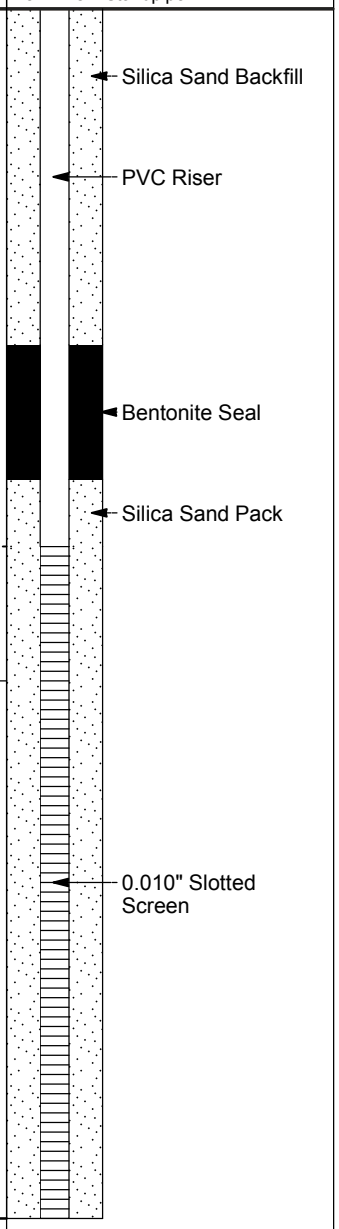
Soil Boring Log

CA-SB-103/CA-MW-103

CLIENT Rockingham Planning Commission
PROJECT NAME Dagostino Rose Farm
PROJECT # 15001275
PROJECT LOCATION Oak Street Extension, Exeter, NH
DATE STARTED 4/8/16 **LOGGED BY** J. Newcomb
DEPTH TO WATER 10 **DIAMETER** 2 inch
CONTRACTOR Northern Test Boring/Mike Nedeau
WELL MATERIALS PVC, 0.010" slotted screen, solid riser
DRILLING METHOD Hollow Stem Auger
ANNULUS MATERIALS #2 Silica Sand, Bentonite Chips
DRILLING EQUIPMENT Diedrich Track Mount
TOC ELEVATION **GROUND ELEVATION**
NOTES Collected CA-SB-103 (10-12) for VOCs, pesticides, and PAHs

Depth (ft)	Penetration/ Recovery (in)	Blow Counts	Field Screening (ppm)	Lab Analytical Sample	Graphic Log	LITHOLOGY
0	24/10	3 4 4 3				0-10" Gray-brown fine SAND and fine to coarse GRAVEL and CONCRETE and ASPHALT [FILL].
	24/8	2 2 3 4	0.0			0-8" Gray-brown fine SAND and fine to coarse GRAVEL and CONCRETE and ASPHALT, with Brick [FILL].
	24/13	2 3 2 3	1.0			0-13" Gray, moist, fine to medium SAND, some Coal fragments or Asphalt.
5	24/4	2 3 15 5	1.4			0-4" Gray, moist, fine SAND, fine GRAVEL, WOOD and PLASTIC, 1 inch chunk of concrete.
	24/0	3 2 1 1	NA			No recovery
10	24/20	1 1 1 1 1	0.0	CA-SB-103 (10-12)		0-20" Brown, wet, fine SAND.
	24/24	1 2 3 4	0.0			0-24" Gray, wet, fine SAND.
	24/16	1 2 2 3	0.0			0-16" Gray, wet, fine SAND.
15	24/24	3 3 3 3	0.0			0-24" Light-gray, wet, fine SAND transitioning to gray clay.
						End of Boring @ 18 feet

WELL DIAGRAM



LOW FLOW SAMPLING LOG
CREDERE ASSOCIATES. LLC

Credere Associates LLC

PROJECT NAME: Dagostino Brownfields DATE: 4/29/2016

PROJECT NUMBER: 15001275

SAMPLE LOCATION ID: CA-MW-103

LOCATION ACTIVITY
START: 1230
END: 1340

WELL DATA:

WELL DEPTH (ft): 20.35 [X] MEASURED [ ] HISTORICAL
WATER DEPTH (ft): 11.25 [X] MEASURED [ ] HISTORICAL

[X] TOP OF WELL
[ ] TOP OF CASING
[ ] FROM GRADE
[ ] ____

WATER LEVEL EQUIPMENT USED:
[X] ELECT. COND. PROBE
[ ] FLOAT ACTIVATED PROBE
[ ] PRESSURE TRANSDUCER
[ ] ____
[ ] ____

DEPTH OF PUMP INTAKE (ft): 19.35 Stick-up (in): ____

WELL MATERIAL:
[X] PVC
[ ] SS
[ ] ____

WELL LOCKED:
[X] YES
[ ] NO

PROTECTIVE CASING SECURE:
[X] YES
[ ] NO

CONCRETE COLLAR INTACT:
[X] YES
[ ] NO

AMBIENT AIR VOC: NA PPM

WELL MOUTH VOC: NA PPM

EQUIPMENT DATA:

PURGING	SAMPLING		Equipment
X	X	PERISTALTIC PUMP	Solinst interface probe, Lamotte 2020
[ ]	[ ]	SUBMERSIBLE	turbidity meter, YSI 556 multi-parameter
[ ]	[ ]	BLADDER PUMP	meter with display, geopump peristaltic pump
[ ]	[ ]	HAND PUMP	250 mL flow through cell
[ ]	[ ]	DEDICATED HDPE	
[ ]	[ ]	NEW HDPE	
[ ]	[ ]	DEDICATED LDPE	YSI SN: 11D101441
X	X	NEW LDPE	Turbidity SN: 17050C14007
	X	FILTER	
[ ]	[ ]	____	

DECONTAMINATION FLUIDS USED:
x DISTILLED WATER
[ ] DEIONIZED WATER
[ ] POTABLE WATER
[ ] TSP SOLUTION
x ALCONOX SOLUTION
[ ] NONE
[ ] ____
[ ] ____

FIELD ANALYSIS DATA:

TIME	TEMP (°C)	pH	SP. COND. (mS/cm)	ORP (mV)	D.O. (mg/l)	TURBID. (ntu)	Flow Rate (mL/min)	DTW (ft)	Comments/Flow Rate (indicate stable flow rate)
1240	9.03	6.32	.121	192.9	6.32	8.64	200	11.45	
1245	9.15	6.15	.116	210.5	6.52	5.40	200	11.45	
1250	8.87	6.14	.116	212.5	6.50	2.53	200	11.45	
1300	9.00	6.15	.116	224.0	6.49	Clear	200	11.45	
1310	9.03	6.15	.116	228.5	6.51	↓	200	11.45	
1320	9.02	6.14	.117	230.1	6.50	↓	200	11.45	
						↓			
	3%	±0.1	3%	±10	10%, <0.5	<10	100-400 mL/min		

SAMPLE DATA:

SAMPLE BOTTLE ID TIME	LOCATION	PRESERVATION METHOD	SAMPLE CONTAINER #	TYPE	LABORATORY ANALYSIS
1325	CA-MW-103	HCL	2	VOA	VOC
		HNO3	1	250 Poly	RCRA 8
		NONE	2	1L	Pesticides
		NONE	2	1L	PAHs

PURGE DATA

[ ] 0.04 GAL/FT (1" DIAM.) x length of water column = 9.10
[X] 0.16 GAL/FT (2" DIAM.) Total Well Volume: 1,456 g
[ ] 0.65 GAL/FT (4" DIAM.) Total Purge Volume: 3x 3.5 g
[ ] 1.47 GAL/FT (6" DIAM.) # of well volumes: 2.5

Stable flow not achieved, sampled via no-purge: [ ]

SAMPLER

APPENDIX D

LABORATORY ANALYTICAL REPORTS

Laboratory Report

Absolute Resource associates
124 Heritage Avenue Portsmouth NH 03801

Judd Newcomb
CREDERE Associates
776 Main Street
Westbrook, ME 04092

PO Number: None
Job ID: 36139
Date Received: 4/8/16

Project: Dagostino 15001275

Attached please find results for the analysis of the samples received on the date referenced above.

Unless otherwise noted in the attached report, the analyses performed met the requirements of Absolute Resource Associates' Quality Assurance Plan. The Standard Operating Procedures are based upon USEPA SW-846, USEPA Methods for Chemical Analysis of Water and Wastewater, Standard Methods for the Examination of Water and Wastewater and other recognized methodologies. The results contained in this report pertain only to the samples as indicated on the chain of custody.

Absolute Resource Associates maintains certification with the agencies listed below.

We appreciate the opportunity to provide laboratory services. If you have any questions regarding the enclosed report, please contact the laboratory and we will be glad to assist you.

Sincerely,
Absolute Resource Associates

(for)

Sue Sylvester
Principal, General Manager

Date of Approval: 4/26/2016
Total number of pages: 38

Absolute Resource Associates Certifications

New Hampshire	1732	Massachusetts	M-NH902
Maine	NH903		

Project ID: Dagostino 15001275
Lab ID: 36139

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
CA-SB-103 10-12'	Solid	4/8/2016 10:00	36139-001	
				Pesticides in soil by 8081
				PAHs in solid by 8270
				Solid Digestion for ICP Analysis
				Silver in solids by 6020
				Arsenic in solids by 6020
				Barium in solids by 6020
				Cadmium in solids by 6020
				Chromium in solids by 6020
				Mercury in solids by 7471
				Lead in solids by 6020
				Selenium in solids by 6020
				Percent Dry Matter for Sample Calc by SM2540B,G
				VOCs in solid by 8260 Petro & Haz Waste
CA-SS-101A	Solid	4/8/2016 10:30	36139-002	
				Solid Digestion for ICP Analysis
				Lead in solids by 6020
				Percent Dry Matter for Sample Calc by SM2540B,G
CA-SS-101B	Solid	4/8/2016 10:35	36139-003	
				Solid Digestion for ICP Analysis
				Lead in solids by 6020
				Percent Dry Matter for Sample Calc by SM2540B,G
CA-SS-101C	Solid	4/8/2016 10:40	36139-004	
				Solid Digestion for ICP Analysis
				Lead in solids by 6020
				Percent Dry Matter for Sample Calc by SM2540B,G
CA-SS-101D	Solid	4/8/2016 10:25	36139-005	
				Solid Digestion for ICP Analysis
				Lead in solids by 6020
				Percent Dry Matter for Sample Calc by SM2540B,G
CA-SS-101E	Solid	4/8/2016 10:45	36139-006	
				Solid Digestion for ICP Analysis
				Lead in solids by 6020
				Percent Dry Matter for Sample Calc by SM2540B,G
CA-SS-101F	Solid	4/8/2016 10:20	36139-007	
				Solid Digestion for ICP Analysis
				Lead in solids by 6020
				Percent Dry Matter for Sample Calc by SM2540B,G
CA-SS-105	Solid	4/8/2016 10:50	36139-008	
				Pesticides in soil by 8081
				TPH in solids by 8100
				Acid & Base/Neutral Extractables in solid by 8270
				Solid Digestion for ICP Analysis
				Silver in solids by 6020
				Arsenic in solids by 6020
				Barium in solids by 6020
				Cadmium in solids by 6020
				Chromium in solids by 6020
				Mercury in solids by 7471
				Lead in solids by 6020
				Selenium in solids by 6020
				Percent Dry Matter for Sample Calc by SM2540B,G

Absolute Resource associates

Project ID: Dagostino 15001275
Lab ID: 36139

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
CA-SS-105	Solid	4/8/2016 10:50	36139-008	
				VOCs in solid by 8260 Petro & Haz Waste
Trip Blank	Solid	4/8/2016 0:00	36139-009	
				VOCs in solid by 8260 Petro & Haz Waste
CA-SED-103	Solid	4/8/2016 11:15	36139-010	
				Solid Digestion for ICP Analysis
				Lead in solids by 6020
				Percent Dry Matter for Sample Calc by SM2540B,G
CA-SED-104	Solid	4/8/2016 11:25	36139-011	
				Solid Digestion for ICP Analysis
				Lead in solids by 6020
				Percent Dry Matter for Sample Calc by SM2540B,G
CA-SED-105	Solid	4/8/2016 11:35	36139-012	
				Solid Digestion for ICP Analysis
				Lead in solids by 6020
				Percent Dry Matter for Sample Calc by SM2540B,G
CA-SED-106	Solid	4/8/2016 12:10	36139-013	
				PAHs in solid by 8270
				Solid Digestion for ICP Analysis
				Lead in solids by 6020
				Percent Dry Matter for Sample Calc by SM2540B,G
CA-SED-107	Solid	4/8/2016 12:15	36139-014	
				PAHs in solid by 8270
				Solid Digestion for ICP Analysis
				Lead in solids by 6020
				Percent Dry Matter for Sample Calc by SM2540B,G
CA-SED-108	Solid	4/8/2016 11:50	36139-015	
				PAHs in solid by 8270
				Solid Digestion for ICP Analysis
				Lead in solids by 6020
				Percent Dry Matter for Sample Calc by SM2540B,G

Project ID: Dagostino 15001275
Job ID: 36139
Sample#: 36139-001
Sample ID: CA-SB-103 10-12'
Matrix: Solid Percent Dry: 83.5% Results expressed on a dry weight basis.
Sampled: 4/8/16 10:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
dichlorodifluoromethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
chloromethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
vinyl chloride	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
bromomethane	< 0.2	0.2	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
chloroethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
trichlorofluoromethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
diethyl ether	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
acetone	< 2	2	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
1,1-dichloroethene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
methylene chloride	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
carbon disulfide	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
methyl t-butyl ether (MTBE)	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
trans-1,2-dichloroethene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
isopropyl ether (DIPE)	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
ethyl t-butyl ether (ETBE)	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
1,1-dichloroethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
t-butanol (TBA)	< 2	2	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
2-butanone (MEK)	< 0.3	0.3	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
2,2-dichloropropane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
cis-1,2-dichloroethene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
chloroform	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
bromochloromethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
tetrahydrofuran (THF)	< 0.5	0.5	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
1,1,1-trichloroethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
1,1-dichloropropene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
t-amyl-methyl ether (TAME)	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
carbon tetrachloride	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
1,2-dichloroethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
benzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
trichloroethene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
1,2-dichloropropane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
bromodichloromethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
1,4-dioxane	< 2	2	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
dibromomethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
4-methyl-2-pentanone (MIBK)	< 0.4	0.4	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
cis-1,3-dichloropropene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
toluene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
trans-1,3-dichloropropene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
2-hexanone	< 0.5	0.5	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
1,1,2-trichloroethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
1,3-dichloropropane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
tetrachloroethene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
dibromochloromethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C

Project ID: Dagostino 15001275
Job ID: 36139
Sample#: 36139-001
Sample ID: CA-SB-103 10-12'
Matrix: Solid Percent Dry: 83.5% Results expressed on a dry weight basis.
Sampled: 4/8/16 10:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
1,2-dibromoethane (EDB)	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
chlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
1,1,1,2-tetrachloroethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
ethylbenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
m&p-xylenes	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
o-xylene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
styrene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
bromoform	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
isopropylbenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
1,1,2,2-tetrachloroethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
1,2,3-trichloropropane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
n-propylbenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
bromobenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
1,3,5-trimethylbenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
2-chlorotoluene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
4-chlorotoluene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
tert-butylbenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
1,2,4-trimethylbenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
sec-butylbenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
1,3-dichlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
4-isopropyltoluene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
1,4-dichlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
1,2-dichlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
n-butylbenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
1,2-dibromo-3-chloropropane (DBCP)	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
1,2,4-trichlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
1,3,5-trichlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
hexachlorobutadiene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
naphthalene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
1,2,3-trichlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**92**	78-114	%	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
toluene-D8 SUR	**97**	88-110	%	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
4-bromofluorobenzene SUR	**101**	86-115	%	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C
a,a,a-trifluorotoluene SUR	**103**	70-130	%	1	LMM	4/11/16	8707	4/15/16	19:23	SW5035A8260C

Project ID: Dagostino 15001275
Job ID: 36139
Sample#: 36139-008
Sample ID: CA-SS-105
Matrix: Solid Percent Dry: 85.1% Results expressed on a dry weight basis.
Sampled: 4/8/16 10:50

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
dichlorodifluoromethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
chloromethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
vinyl chloride	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
bromomethane	< 0.2	0.2	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
chloroethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
trichlorofluoromethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
diethyl ether	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
acetone	< 2	2	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
1,1-dichloroethene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
methylene chloride	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
carbon disulfide	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
methyl t-butyl ether (MTBE)	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
trans-1,2-dichloroethene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
isopropyl ether (DIPE)	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
ethyl t-butyl ether (ETBE)	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
1,1-dichloroethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
t-butanol (TBA)	< 2	2	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
2-butanone (MEK)	< 0.2	0.2	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
2,2-dichloropropane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
cis-1,2-dichloroethene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
chloroform	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
bromochloromethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
tetrahydrofuran (THF)	< 0.4	0.4	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
1,1,1-trichloroethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
1,1-dichloropropene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
t-amyl-methyl ether (TAME)	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
carbon tetrachloride	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
1,2-dichloroethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
benzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
trichloroethene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
1,2-dichloropropane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
bromodichloromethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
1,4-dioxane	< 2	2	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
dibromomethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
4-methyl-2-pentanone (MIBK)	< 0.4	0.4	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
cis-1,3-dichloropropene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
toluene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
trans-1,3-dichloropropene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
2-hexanone	< 0.4	0.4	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
1,1,2-trichloroethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
1,3-dichloropropane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
tetrachloroethene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
dibromochloromethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C

Project ID: Dagostino 15001275
Job ID: 36139
Sample#: 36139-008
Sample ID: CA-SS-105
Matrix: Solid Percent Dry: 85.1% Results expressed on a dry weight basis.
Sampled: 4/8/16 10:50

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
1,2-dibromoethane (EDB)	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
chlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
1,1,1,2-tetrachloroethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
ethylbenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
m&p-xylenes	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
o-xylene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
styrene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
bromoform	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
isopropylbenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
1,1,2,2-tetrachloroethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
1,2,3-trichloropropane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
n-propylbenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
bromobenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
1,3,5-trimethylbenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
2-chlorotoluene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
4-chlorotoluene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
tert-butylbenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
1,2,4-trimethylbenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
sec-butylbenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
1,3-dichlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
4-isopropyltoluene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
1,4-dichlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
1,2-dichlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
n-butylbenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
1,2-dibromo-3-chloropropane (DBCP)	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
1,2,4-trichlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
1,3,5-trichlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
hexachlorobutadiene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
naphthalene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
1,2,3-trichlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**90**	78-114	%	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
toluene-D8 SUR	**97**	88-110	%	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
4-bromofluorobenzene SUR	**100**	86-115	%	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C
a,a,a-trifluorotoluene SUR	**109**	70-130	%	1	LMM	4/11/16	8707	4/15/16	19:50	SW5035A8260C

Project ID: Dagostino 15001275
Job ID: 36139
Sample#: 36139-009
Sample ID: Trip Blank
Matrix: Solid
Sampled: 4/8/16 0:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
dichlorodifluoromethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
chloromethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
vinyl chloride	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
bromomethane	< 0.2	0.2	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
chloroethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
trichlorofluoromethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
diethyl ether	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
acetone	< 2	2	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
1,1-dichloroethene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
methylene chloride	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
carbon disulfide	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
methyl t-butyl ether (MTBE)	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
trans-1,2-dichloroethene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
isopropyl ether (DIPE)	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
ethyl t-butyl ether (ETBE)	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
1,1-dichloroethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
t-butanol (TBA)	< 2	2	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
2-butanone (MEK)	< 0.3	0.3	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
2,2-dichloropropane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
cis-1,2-dichloroethene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
chloroform	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
bromochloromethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
tetrahydrofuran (THF)	< 0.5	0.5	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
1,1,1-trichloroethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
1,1-dichloropropene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
t-amyl-methyl ether (TAME)	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
carbon tetrachloride	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
1,2-dichloroethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
benzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
trichloroethene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
1,2-dichloropropane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
bromodichloromethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
1,4-dioxane	< 2	2	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
dibromomethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
4-methyl-2-pentanone (MIBK)	< 0.4	0.4	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
cis-1,3-dichloropropene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
toluene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
trans-1,3-dichloropropene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
2-hexanone	< 0.5	0.5	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
1,1,2-trichloroethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
1,3-dichloropropane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
tetrachloroethene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
dibromochloromethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C

Absolute Resource associates

Project ID: Dagostino 15001275
Job ID: 36139
Sample#: 36139-009
Sample ID: Trip Blank
Matrix: Solid
Sampled: 4/8/16 0:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
1,2-dibromoethane (EDB)	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
chlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
1,1,1,2-tetrachloroethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
ethylbenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
m&p-xylenes	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
o-xylene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
styrene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
bromoform	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
isopropylbenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
1,1,2,2-tetrachloroethane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
1,2,3-trichloropropane	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
n-propylbenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
bromobenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
1,3,5-trimethylbenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
2-chlorotoluene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
4-chlorotoluene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
tert-butylbenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
1,2,4-trimethylbenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
sec-butylbenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
1,3-dichlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
4-isopropyltoluene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
1,4-dichlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
1,2-dichlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
n-butylbenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
1,2-dibromo-3-chloropropane (DBCP)	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
1,2,4-trichlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
1,3,5-trichlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
hexachlorobutadiene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
naphthalene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
1,2,3-trichlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**96**	78-114	%	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
toluene-D8 SUR	**99**	88-110	%	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
4-bromofluorobenzene SUR	**100**	86-115	%	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C
a,a,a-trifluorotoluene SUR	**102**	70-130	%	1	LMM	4/11/16	8707	4/15/16	18:30	SW5035A8260C

Project ID: Dagostino 15001275
Job ID: 36139
Sample#: 36139-001
Sample ID: CA-SB-103 10-12'
Matrix: Solid Percent Dry: 83.5% Results expressed on a dry weight basis.
Sampled: 4/8/16 10:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.59	0.59	ug/g	1	AJD	4/13/16	8709	4/14/16	12:42	SW3550C8270D
2-methylnaphthalene	< 0.59	0.59	ug/g	1	AJD	4/13/16	8709	4/14/16	12:42	SW3550C8270D
acenaphthylene	< 0.59	0.59	ug/g	1	AJD	4/13/16	8709	4/14/16	12:42	SW3550C8270D
acenaphthene	< 0.59	0.59	ug/g	1	AJD	4/13/16	8709	4/14/16	12:42	SW3550C8270D
dibenzofuran	< 0.59	0.59	ug/g	1	AJD	4/13/16	8709	4/14/16	12:42	SW3550C8270D
fluorene	< 0.59	0.59	ug/g	1	AJD	4/13/16	8709	4/14/16	12:42	SW3550C8270D
phenanthrene	< 0.59	0.59	ug/g	1	AJD	4/13/16	8709	4/14/16	12:42	SW3550C8270D
anthracene	< 0.59	0.59	ug/g	1	AJD	4/13/16	8709	4/14/16	12:42	SW3550C8270D
fluoranthene	< 0.59	0.59	ug/g	1	AJD	4/13/16	8709	4/14/16	12:42	SW3550C8270D
pyrene	< 0.59	0.59	ug/g	1	AJD	4/13/16	8709	4/14/16	12:42	SW3550C8270D
benzo(a)anthracene	< 0.59	0.59	ug/g	1	AJD	4/13/16	8709	4/14/16	12:42	SW3550C8270D
chrysene	< 0.59	0.59	ug/g	1	AJD	4/13/16	8709	4/14/16	12:42	SW3550C8270D
benzo(b)fluoranthene	< 0.59	0.59	ug/g	1	AJD	4/13/16	8709	4/14/16	12:42	SW3550C8270D
benzo(k)fluoranthene	< 0.59	0.59	ug/g	1	AJD	4/13/16	8709	4/14/16	12:42	SW3550C8270D
benzo(a)pyrene	< 0.59	0.59	ug/g	1	AJD	4/13/16	8709	4/14/16	12:42	SW3550C8270D
indeno(1,2,3-cd)pyrene	< 0.59	0.59	ug/g	1	AJD	4/13/16	8709	4/14/16	12:42	SW3550C8270D
dibenzo(a,h)anthracene	< 0.59	0.59	ug/g	1	AJD	4/13/16	8709	4/14/16	12:42	SW3550C8270D
benzo(g,h,i)perylene	< 0.59	0.59	ug/g	1	AJD	4/13/16	8709	4/14/16	12:42	SW3550C8270D
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**66**	43-116	%	1	AJD	4/13/16	8709	4/14/16	12:42	SW3550C8270D
o-terphenyl SUR	**70**	33-141	%	1	AJD	4/13/16	8709	4/14/16	12:42	SW3550C8270D

Project ID: Dagostino 15001275
Job ID: 36139
Sample#: 36139-008
Sample ID: CA-SS-105
Matrix: Solid Percent Dry: 85.1% Results expressed on a dry weight basis.
Sampled: 4/8/16 10:50

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
N-nitrosodimethylamine	< 0.22	0.22	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
aniline	< 0.22	0.22	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
phenol	< 0.22	0.22	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
2-chlorophenol	< 0.54	0.54	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
bis(2-chloroethyl)ether	< 0.22	0.22	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
1,3-dichlorobenzene	< 0.22	0.22	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
1,4-dichlorobenzene	< 0.22	0.22	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
1,2-dichlorobenzene	< 0.22	0.22	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
benzyl alcohol	< 0.22	0.22	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
2-methylphenol	< 0.22	0.22	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
bis(2-chloroisopropyl) ether	< 0.22	0.22	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
hexachloroethane	< 0.22	0.22	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
N-nitroso-di-N-propylamine	< 0.22	0.22	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
4-methylphenol	< 0.22	0.22	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
nitrobenzene	< 0.22	0.22	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
isophorone	< 0.54	0.54	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
2-nitrophenol	< 0.22	0.22	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
2,4-dimethylphenol	< 0.22	0.22	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
bis(2-chloroethoxy)methane	< 0.22	0.22	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
2,4-dichlorophenol	< 0.54	0.54	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
1,2,4-trichlorobenzene	< 0.54	0.54	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
naphthalene	**0.15**	0.054	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
benzoic acid	< 5.4	5.4	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
4-chloroaniline	< 0.22	0.22	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
hexachlorobutadiene	< 0.22	0.22	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
4-chloro-3-methylphenol	< 0.22	0.22	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
2-methylnaphthalene	**0.10**	0.054	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
hexachlorocyclopentadiene	< 1.1	1.1	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
2,4,6-trichlorophenol	< 0.22	0.22	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
2,4,5-trichlorophenol	< 0.22	0.22	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
2-chloronaphthalene	< 0.54	0.54	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
2-nitroaniline	< 0.22	0.22	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
acenaphthylene	**0.13**	0.054	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
dimethylphthalate	< 0.54	0.54	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
2,6-dinitrotoluene	< 0.22	0.22	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
2,4-dinitrotoluene	< 0.22	0.22	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
acenaphthene	< 0.054	0.054	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
3-nitroaniline	< 0.22	0.22	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
2,4-dinitrophenol	< 5.4	5.4	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
dibenzofuran	< 0.054	0.054	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
4-nitrophenol	< 2.2	2.2	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
fluorene	< 0.054	0.054	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
diethyl phthalate	< 0.54	0.54	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D

Project ID: Dagostino 15001275
Job ID: 36139
Sample#: 36139-008
Sample ID: CA-SS-105
Matrix: Solid Percent Dry: 85.1% Results expressed on a dry weight basis.
Sampled: 4/8/16 10:50

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
4-chlorophenyl phenyl ether	< 0.54	0.54	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
4-nitroaniline	< 0.54	0.54	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
4,6-dinitro-2-methylphenol	< 2.2	2.2	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
azobenzene	< 0.22	0.22	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
N-nitrosodiphenylamine	< 0.22	0.22	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
4-bromophenyl phenyl ether	< 0.22	0.22	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
hexachlorobenzene	< 0.22	0.22	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
pentachlorophenol	< 1.1	1.1	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
phenanthrene	**0.29**	0.054	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
anthracene	**0.42**	0.054	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
carbazole	< 0.22	0.22	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
di-n-butylphthalate	< 0.54	0.54	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
fluoranthene	**0.51**	0.054	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
benzidine	< 3.2	3.2	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
pyrene	**0.45**	0.054	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
butyl benzyl phthalate	< 0.54	0.54	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
benzo(a)anthracene	**0.48**	0.054	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
chrysene	**0.71**	0.054	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
3,3'-dichlorobenzidine	< 3.2	3.2	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
bis(2-ethylhexyl)phthalate	< 0.54	0.54	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
di-n-octyl phthalate	< 0.54	0.54	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
benzo(b)fluoranthene	**0.40**	0.054	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
benzo(k)fluoranthene	**0.51**	0.054	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
benzo(a)pyrene	**0.60**	0.054	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
indeno(1,2,3-cd)pyrene	**0.29**	0.054	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
dibenzo(a,h)anthracene	**0.11**	0.054	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
benzo(g,h,i)perylene	**0.33**	0.054	ug/g	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
Surrogate Recovery		**Limits**								
2-fluorophenol SUR	**71**	21-100	%	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
phenol-D5 SUR	**70**	10-102	%	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
2,4,6-tribromophenol SUR	**74**	10-123	%	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
nitrobenzene-D5 SUR	**65**	35-114	%	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
2-fluorobiphenyl SUR	**68**	43-116	%	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D
p-terphenyl-D14 SUR	**70**	33-141	%	1	AJD	4/13/16	8711	4/19/16	18:48	SW3546/8270D

Project ID: Dagostino 15001275
Job ID: 36139
Sample#: 36139-013
Sample ID: CA-SED-106
Matrix: Solid Percent Dry: 45.4% Results expressed on a dry weight basis.
Sampled: 4/8/16 12:10

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 1.1	1.1	ug/g	1	AJD	4/13/16	8709	4/14/16	13:21	SW3550C8270D
2-methylnaphthalene	< 1.1	1.1	ug/g	1	AJD	4/13/16	8709	4/14/16	13:21	SW3550C8270D
acenaphthylene	< 1.1	1.1	ug/g	1	AJD	4/13/16	8709	4/14/16	13:21	SW3550C8270D
acenaphthene	< 1.1	1.1	ug/g	1	AJD	4/13/16	8709	4/14/16	13:21	SW3550C8270D
dibenzofuran	< 1.1	1.1	ug/g	1	AJD	4/13/16	8709	4/14/16	13:21	SW3550C8270D
fluorene	< 1.1	1.1	ug/g	1	AJD	4/13/16	8709	4/14/16	13:21	SW3550C8270D
phenanthrene	< 1.1	1.1	ug/g	1	AJD	4/13/16	8709	4/14/16	13:21	SW3550C8270D
anthracene	< 1.1	1.1	ug/g	1	AJD	4/13/16	8709	4/14/16	13:21	SW3550C8270D
fluoranthene	< 1.1	1.1	ug/g	1	AJD	4/13/16	8709	4/14/16	13:21	SW3550C8270D
pyrene	< 1.1	1.1	ug/g	1	AJD	4/13/16	8709	4/14/16	13:21	SW3550C8270D
benzo(a)anthracene	< 1.1	1.1	ug/g	1	AJD	4/13/16	8709	4/14/16	13:21	SW3550C8270D
chrysene	< 1.1	1.1	ug/g	1	AJD	4/13/16	8709	4/14/16	13:21	SW3550C8270D
benzo(b)fluoranthene	< 1.1	1.1	ug/g	1	AJD	4/13/16	8709	4/14/16	13:21	SW3550C8270D
benzo(k)fluoranthene	< 1.1	1.1	ug/g	1	AJD	4/13/16	8709	4/14/16	13:21	SW3550C8270D
benzo(a)pyrene	< 1.1	1.1	ug/g	1	AJD	4/13/16	8709	4/14/16	13:21	SW3550C8270D
indeno(1,2,3-cd)pyrene	< 1.1	1.1	ug/g	1	AJD	4/13/16	8709	4/14/16	13:21	SW3550C8270D
dibenzo(a,h)anthracene	< 1.1	1.1	ug/g	1	AJD	4/13/16	8709	4/14/16	13:21	SW3550C8270D
benzo(g,h,i)perylene	< 1.1	1.1	ug/g	1	AJD	4/13/16	8709	4/14/16	13:21	SW3550C8270D
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**24** *	43-116	%	1	AJD	4/13/16	8709	4/14/16	13:21	SW3550C8270D
o-terphenyl SUR	**31** *	33-141	%	1	AJD	4/13/16	8709	4/14/16	13:21	SW3550C8270D

**** The surrogate showed recovery outside the acceptance limits as a result of an obvious matrix interference.***

Project ID: Dagostino 15001275
Job ID: 36139
Sample#: 36139-014
Sample ID: CA-SED-107
Matrix: Solid Percent Dry: 48.7% Results expressed on a dry weight basis.
Sampled: 4/8/16 12:15

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.96	0.96	ug/g	1	AJD	4/13/16	8709	4/14/16	14:01	SW3550C8270D
2-methylnaphthalene	< 0.96	0.96	ug/g	1	AJD	4/13/16	8709	4/14/16	14:01	SW3550C8270D
acenaphthylene	< 0.96	0.96	ug/g	1	AJD	4/13/16	8709	4/14/16	14:01	SW3550C8270D
acenaphthene	< 0.96	0.96	ug/g	1	AJD	4/13/16	8709	4/14/16	14:01	SW3550C8270D
dibenzofuran	< 0.96	0.96	ug/g	1	AJD	4/13/16	8709	4/14/16	14:01	SW3550C8270D
fluorene	< 0.96	0.96	ug/g	1	AJD	4/13/16	8709	4/14/16	14:01	SW3550C8270D
phenanthrene	< 0.96	0.96	ug/g	1	AJD	4/13/16	8709	4/14/16	14:01	SW3550C8270D
anthracene	< 0.96	0.96	ug/g	1	AJD	4/13/16	8709	4/14/16	14:01	SW3550C8270D
fluoranthene	< 0.96	0.96	ug/g	1	AJD	4/13/16	8709	4/14/16	14:01	SW3550C8270D
pyrene	< 0.96	0.96	ug/g	1	AJD	4/13/16	8709	4/14/16	14:01	SW3550C8270D
benzo(a)anthracene	< 0.96	0.96	ug/g	1	AJD	4/13/16	8709	4/14/16	14:01	SW3550C8270D
chrysene	< 0.96	0.96	ug/g	1	AJD	4/13/16	8709	4/14/16	14:01	SW3550C8270D
benzo(b)fluoranthene	< 0.96	0.96	ug/g	1	AJD	4/13/16	8709	4/14/16	14:01	SW3550C8270D
benzo(k)fluoranthene	< 0.96	0.96	ug/g	1	AJD	4/13/16	8709	4/14/16	14:01	SW3550C8270D
benzo(a)pyrene	< 0.96	0.96	ug/g	1	AJD	4/13/16	8709	4/14/16	14:01	SW3550C8270D
indeno(1,2,3-cd)pyrene	< 0.96	0.96	ug/g	1	AJD	4/13/16	8709	4/14/16	14:01	SW3550C8270D
dibenzo(a,h)anthracene	< 0.96	0.96	ug/g	1	AJD	4/13/16	8709	4/14/16	14:01	SW3550C8270D
benzo(g,h,i)perylene	< 0.96	0.96	ug/g	1	AJD	4/13/16	8709	4/14/16	14:01	SW3550C8270D
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**49**	43-116	%	1	AJD	4/13/16	8709	4/14/16	14:01	SW3550C8270D
o-terphenyl SUR	**59**	33-141	%	1	AJD	4/13/16	8709	4/14/16	14:01	SW3550C8270D

Project ID: Dagostino 15001275
Job ID: 36139
Sample#: 36139-015
Sample ID: CA-SED-108
Matrix: Solid Percent Dry: 74.5% Results expressed on a dry weight basis.
Sampled: 4/8/16 11:50

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.66	0.66	ug/g	1	AJD	4/13/16	8709	4/14/16	14:41	SW3550C8270D
2-methylnaphthalene	< 0.66	0.66	ug/g	1	AJD	4/13/16	8709	4/14/16	14:41	SW3550C8270D
acenaphthylene	< 0.66	0.66	ug/g	1	AJD	4/13/16	8709	4/14/16	14:41	SW3550C8270D
acenaphthene	< 0.66	0.66	ug/g	1	AJD	4/13/16	8709	4/14/16	14:41	SW3550C8270D
dibenzofuran	< 0.66	0.66	ug/g	1	AJD	4/13/16	8709	4/14/16	14:41	SW3550C8270D
fluorene	< 0.66	0.66	ug/g	1	AJD	4/13/16	8709	4/14/16	14:41	SW3550C8270D
phenanthrene	< 0.66	0.66	ug/g	1	AJD	4/13/16	8709	4/14/16	14:41	SW3550C8270D
anthracene	< 0.66	0.66	ug/g	1	AJD	4/13/16	8709	4/14/16	14:41	SW3550C8270D
fluoranthene	< 0.66	0.66	ug/g	1	AJD	4/13/16	8709	4/14/16	14:41	SW3550C8270D
pyrene	< 0.66	0.66	ug/g	1	AJD	4/13/16	8709	4/14/16	14:41	SW3550C8270D
benzo(a)anthracene	< 0.66	0.66	ug/g	1	AJD	4/13/16	8709	4/14/16	14:41	SW3550C8270D
chrysene	< 0.66	0.66	ug/g	1	AJD	4/13/16	8709	4/14/16	14:41	SW3550C8270D
benzo(b)fluoranthene	< 0.66	0.66	ug/g	1	AJD	4/13/16	8709	4/14/16	14:41	SW3550C8270D
benzo(k)fluoranthene	< 0.66	0.66	ug/g	1	AJD	4/13/16	8709	4/14/16	14:41	SW3550C8270D
benzo(a)pyrene	< 0.66	0.66	ug/g	1	AJD	4/13/16	8709	4/14/16	14:41	SW3550C8270D
indeno(1,2,3-cd)pyrene	< 0.66	0.66	ug/g	1	AJD	4/13/16	8709	4/14/16	14:41	SW3550C8270D
dibenzo(a,h)anthracene	< 0.66	0.66	ug/g	1	AJD	4/13/16	8709	4/14/16	14:41	SW3550C8270D
benzo(g,h,i)perylene	< 0.66	0.66	ug/g	1	AJD	4/13/16	8709	4/14/16	14:41	SW3550C8270D
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**59**	43-116	%	1	AJD	4/13/16	8709	4/14/16	14:41	SW3550C8270D
o-terphenyl SUR	**67**	33-141	%	1	AJD	4/13/16	8709	4/14/16	14:41	SW3550C8270D

Project ID: Dagostino 15001275
Job ID: 36139
Sample#: 36139-001
Sample ID: CA-SB-103 10-12'
Matrix: Solid Percent Dry: 83.5% Results expressed on a dry weight basis.
Sampled: 4/8/16 10:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
alpha-BHC	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:18	SW3546/8081B
beta-BHC	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:18	SW3546/8081B
delta-BHC	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:18	SW3546/8081B
gamma-BHC (Lindane)	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:18	SW3546/8081B
Heptachlor	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:18	SW3546/8081B
Aldrin	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:18	SW3546/8081B
Heptachlor Epoxide	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:18	SW3546/8081B
Endosulfan I	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:18	SW3546/8081B
Dieldrin	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:18	SW3546/8081B
4,4'-DDE	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:18	SW3546/8081B
Endrin	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:18	SW3546/8081B
Endosulfan II	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:18	SW3546/8081B
4,4'-DDD	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:18	SW3546/8081B
Endosulfan Sulfate	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:18	SW3546/8081B
4,4'-DDT	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:18	SW3546/8081B
Methoxychlor	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:18	SW3546/8081B
Endrin Ketone	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:18	SW3546/8081B
Endrin Aldehyde	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:18	SW3546/8081B
alpha-Chlordane	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:18	SW3546/8081B
gamma-Chlordane	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:18	SW3546/8081B
Toxaphene	< 0.2	0.2	ug/g	1	AM	4/13/16	8712	4/19/16	16:18	SW3546/8081B
Surrogate Recovery		**Limits**								
tetrachloro-m-xylene SUR	**68**	30-150	%	1	AM	4/13/16	8712	4/19/16	16:18	SW3546/8081B
decachlorobiphenyl SUR	**102**	30-150	%	1	AM	4/13/16	8712	4/19/16	16:18	SW3546/8081B

Project ID: Dagostino 15001275
Job ID: 36139
Sample#: 36139-008
Sample ID: CA-SS-105
Matrix: Solid Percent Dry: 85.1% Results expressed on a dry weight basis.
Sampled: 4/8/16 10:50

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
alpha-BHC	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:47	SW3546/8081B
beta-BHC	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:47	SW3546/8081B
delta-BHC	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:47	SW3546/8081B
gamma-BHC (Lindane)	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:47	SW3546/8081B
Heptachlor	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:47	SW3546/8081B
Aldrin	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:47	SW3546/8081B
Heptachlor Epoxide	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:47	SW3546/8081B
Endosulfan I	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:47	SW3546/8081B
Dieldrin	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:47	SW3546/8081B
4,4'-DDE	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:47	SW3546/8081B
Endrin	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:47	SW3546/8081B
Endosulfan II	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:47	SW3546/8081B
4,4'-DDD	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:47	SW3546/8081B
Endosulfan Sulfate	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:47	SW3546/8081B
4,4'-DDT	**0.09**	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:47	SW3546/8081B
Methoxychlor	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:47	SW3546/8081B
Endrin Ketone	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:47	SW3546/8081B
Endrin Aldehyde	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:47	SW3546/8081B
alpha-Chlordane	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:47	SW3546/8081B
gamma-Chlordane	< 0.04	0.04	ug/g	1	AM	4/13/16	8712	4/19/16	16:47	SW3546/8081B
Toxaphene	< 0.2	0.2	ug/g	1	AM	4/13/16	8712	4/19/16	16:47	SW3546/8081B
Surrogate Recovery		**Limits**								
tetrachloro-m-xylene SUR	**69**	30-150	%	1	AM	4/13/16	8712	4/19/16	16:47	SW3546/8081B
decachlorobiphenyl SUR	**107**	30-150	%	1	AM	4/13/16	8712	4/19/16	16:47	SW3546/8081B

Sample#: 36139-008
Sample ID: CA-SS-105
Matrix: Solid Percent Dry: 85.1% Results expressed on a dry weight basis.
Sampled: 4/8/16 10:50

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
TPH C10-C36	< 220	220	ug/g	1	AM	4/14/16	8710	4/14/16	12:01	SW3550C8100m
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**72**	40-140	%	1	AM	4/14/16	8710	4/14/16	12:01	SW3550C8100m
o-terphenyl SUR	**67**	40-140	%	1	AM	4/14/16	8710	4/14/16	12:01	SW3550C8100m

Project ID: Dagostino 15001275

Job ID: 36139

Sample#: 36139-001

Sample ID: CA-SB-103 10-12'

Matrix: Solid Percent Dry: 83.5% Results expressed on a dry weight basis.

Sampled: 4/8/16 10:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Arsenic	**11**	2.9	ug/g	5	AC	4/18/16	8721	4/18/16	20:49	SW3051A6020A
Barium	**30**	6	ug/g	5	AC	4/18/16	8721	4/18/16	20:49	SW3051A6020A
Cadmium	< 0.6	0.6	ug/g	5	AC	4/18/16	8721	4/18/16	20:49	SW3051A6020A
Chromium	**17**	6	ug/g	5	AC	4/18/16	8721	4/18/16	20:49	SW3051A6020A
Lead	**5.5**	2.9	ug/g	5	AC	4/18/16	8721	4/18/16	20:49	SW3051A6020A
Mercury	< 0.22	0.22	ug/g	1	AC	4/20/16	8731	4/20/16	15:41	SW7471B
Selenium	< 6	6	ug/g	5	AC	4/18/16	8721	4/18/16	20:49	SW3051A6020A
Silver	< 2.9	2.9	ug/g	5	AC	4/18/16	8721	4/18/16	20:49	SW3051A6020A

Sample#: 36139-002

Sample ID: CA-SS-101A

Matrix: Solid Percent Dry: 58.8% Results expressed on a dry weight basis.

Sampled: 4/8/16 10:30

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Lead	**360**	4.1	ug/g	5	AC	4/18/16	8721	4/18/16	20:56	SW3051A6020A

Sample#: 36139-003

Sample ID: CA-SS-101B

Matrix: Solid Percent Dry: 67.6% Results expressed on a dry weight basis.

Sampled: 4/8/16 10:35

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Lead	**320**	3.5	ug/g	5	AC	4/18/16	8721	4/18/16	21:02	SW3051A6020A

Sample#: 36139-004

Sample ID: CA-SS-101C

Matrix: Solid Percent Dry: 70.2% Results expressed on a dry weight basis.

Sampled: 4/8/16 10:40

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Lead	**210**	3.6	ug/g	5	AC	4/18/16	8721	4/18/16	21:09	SW3051A6020A

Sample#: 36139-005

Sample ID: CA-SS-101D

Matrix: Solid Percent Dry: 73.2% Results expressed on a dry weight basis.

Sampled: 4/8/16 10:25

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Lead	**220**	3.3	ug/g	5	AC	4/18/16	8721	4/18/16	21:15	SW3051A6020A

Project ID: Dagostino 15001275
Job ID: 36139

Sample#: 36139-006
Sample ID: CA-SS-101E
Matrix: Solid Percent Dry: 67.5% Results expressed on a dry weight basis.
Sampled: 4/8/16 10:45

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Lead	**250**	3.2	ug/g	5	AC	4/18/16	8721	4/18/16	21:22	SW3051A6020A

Sample#: 36139-007
Sample ID: CA-SS-101F
Matrix: Solid Percent Dry: 73.3% Results expressed on a dry weight basis.
Sampled: 4/8/16 10:20

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Lead	**270**	3.4	ug/g	5	AC	4/18/16	8721	4/18/16	21:28	SW3051A6020A

Sample#: 36139-008
Sample ID: CA-SS-105
Matrix: Solid Percent Dry: 85.1% Results expressed on a dry weight basis.
Sampled: 4/8/16 10:50

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Arsenic	**15**	2.8	ug/g	5	AC	4/18/16	8721	4/18/16	21:48	SW3051A6020A
Barium	**52**	6	ug/g	5	AC	4/18/16	8721	4/18/16	21:48	SW3051A6020A
Cadmium	< 0.6	0.6	ug/g	5	AC	4/18/16	8721	4/18/16	21:48	SW3051A6020A
Chromium	**20**	6	ug/g	5	AC	4/18/16	8721	4/18/16	21:48	SW3051A6020A
Lead	**170**	2.8	ug/g	5	AC	4/18/16	8721	4/18/16	21:48	SW3051A6020A
Mercury	< 0.21	0.21	ug/g	1	AC	4/20/16	8731	4/20/16	15:43	SW7471B
Selenium	< 6	6	ug/g	5	AC	4/18/16	8721	4/18/16	21:48	SW3051A6020A
Silver	< 2.8	2.8	ug/g	5	AC	4/18/16	8721	4/18/16	21:48	SW3051A6020A

Sample#: 36139-010
Sample ID: CA-SED-103
Matrix: Solid Percent Dry: 44.2% Results expressed on a dry weight basis.
Sampled: 4/8/16 11:15

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Lead	**110**	5.5	ug/g	5	AC	4/18/16	8721	4/20/16	14:15	SW3051A6020A

Sample#: 36139-011
Sample ID: CA-SED-104
Matrix: Solid Percent Dry: 45% Results expressed on a dry weight basis.
Sampled: 4/8/16 11:25

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Lead	**140**	5.6	ug/g	5	AC	4/18/16	8721	4/20/16	14:22	SW3051A6020A

Project ID: Dagostino 15001275
Job ID: 36139

Sample#: 36139-012
Sample ID: CA-SED-105
Matrix: Solid Percent Dry: 39.4% Results expressed on a dry weight basis.
Sampled: 4/8/16 11:35

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Lead	**81**	6.0	ug/g	5	AC	4/18/16	8721	4/20/16	14:29	SW3051A6020A

Sample#: 36139-013
Sample ID: CA-SED-106
Matrix: Solid Percent Dry: 45.4% Results expressed on a dry weight basis.
Sampled: 4/8/16 12:10

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Lead	**220**	4.7	ug/g	5	AC	4/18/16	8721	4/20/16	14:35	SW3051A6020A

Sample#: 36139-014
Sample ID: CA-SED-107
Matrix: Solid Percent Dry: 48.7% Results expressed on a dry weight basis.
Sampled: 4/8/16 12:15

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Lead	**66**	4.6	ug/g	5	AC	4/18/16	8721	4/20/16	14:42	SW3051A6020A

Sample#: 36139-015
Sample ID: CA-SED-108
Matrix: Solid Percent Dry: 74.5% Results expressed on a dry weight basis.
Sampled: 4/8/16 11:50

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Lead	**57**	3.1	ug/g	5	AC	4/18/16	8721	4/20/16	14:48	SW3051A6020A

Quality Control Report

124 Heritage Avenue Unit 16
Portsmouth, NH 03801
www.absoluteresourceassociates.com

Case Narrative
Lab # 36139

Sample Receiving and Chain of Custody Discrepancies

Samples were received in acceptable condition, at 3 degrees C, on ice, and in accordance with sample handling, preservation and integrity guidelines.

Calibration

No exceptions noted.

Method Blank

No exceptions noted.

Surrogate Recoveries

PAH: The surrogates were below the acceptance criteria in the sample 36139-013 due to obvious matrix interference. The sample consisted of wet organic material made up of leaves and roots.

Laboratory Control Sample Results

VOC: The MLCS8707 did not meet the acceptance criteria for dichlorodifluoromethane, 1,1-dichloroethene, carbon disulfide, t-butanol (TBA), and 1,4-dioxane. The MLCSD8707 did not meet the acceptance criteria for dichlorodifluoromethane, 1,1-dichloroethene, and carbon disulfide. Since <10% of the compounds were outside of the acceptance criteria, reanalysis is not required.

Matrix Spike/Matrix Spike Duplicate/Duplicate Results

Not requested for this project.

Other

Reporting Limits: Dilutions performed during the analysis are noted on the result pages.

No other exceptions noted.

- QC Report -

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits	RPD	RPD Limit
SW5035A8260C	MB8707	dichlorodifluoromethane		<	0.1	ug/g					
		chloromethane		<	0.1	ug/g					
		vinyl chloride		<	0.1	ug/g					
		bromomethane		<	0.2	ug/g					
		chloroethane		<	0.1	ug/g					
		trichlorofluoromethane		<	0.1	ug/g					
		diethyl ether		<	0.5	ug/g					
		acetone		<	2.5	ug/g					
		1,1-dichloroethene		<	0.1	ug/g					
		methylene chloride		<	0.2	ug/g					
		carbon disulfide		<	0.1	ug/g					
		methyl t-butyl ether (MTBE)		<	0.1	ug/g					
		trans-1,2-dichloroethene		<	0.1	ug/g					
		isopropyl ether (DIPE)		<	0.1	ug/g					
		ethyl t-butyl ether (ETBE)		<	0.1	ug/g					
		1,1-dichloroethane		<	0.1	ug/g					
		t-butanol (TBA)		<	2.5	ug/g					
		2-butanone (MEK)		<	0.5	ug/g					
		2,2-dichloropropane		<	0.1	ug/g					
		cis-1,2-dichloroethene		<	0.1	ug/g					
		chloroform		<	0.1	ug/g					
		bromochloromethane		<	0.1	ug/g					
		tetrahydrofuran (THF)		<	0.5	ug/g					
		1,1,1-trichloroethane		<	0.1	ug/g					
		1,1-dichloropropene		<	0.1	ug/g					
		t-amyl-methyl ether (TAME)		<	0.1	ug/g					
		carbon tetrachloride		<	0.1	ug/g					
		1,2-dichloroethane		<	0.1	ug/g					
		benzene		<	0.1	ug/g					
		trichloroethene		<	0.1	ug/g					
		1,2-dichloropropane		<	0.1	ug/g					
		bromodichloromethane		<	0.1	ug/g					
		1,4-dioxane		<	2.5	ug/g					
		dibromomethane		<	0.1	ug/g					
		4-methyl-2-pentanone (MIBK)		<	0.5	ug/g					
		cis-1,3-dichloropropene		<	0.1	ug/g					
		toluene		<	0.1	ug/g					
		trans-1,3-dichloropropene		<	0.1	ug/g					
		2-hexanone		<	0.5	ug/g					
		1,1,2-trichloroethane		<	0.1	ug/g					
		1,3-dichloropropane		<	0.1	ug/g					
		tetrachloroethene		<	0.1	ug/g					
		dibromochloromethane		<	0.1	ug/g					
		1,2-dibromoethane (EDB)		<	0.1	ug/g					
		chlorobenzene		<	0.1	ug/g					
		1,1,1,2-tetrachloroethane		<	0.1	ug/g					
		ethylbenzene		<	0.1	ug/g					
		m&p-xylenes		<	0.1	ug/g					
		o-xylene		<	0.1	ug/g					
		styrene		<	0.1	ug/g					

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5035A8260C	MB8707	bromoform		<	0.1	ug/g						
		isopropylbenzene		<	0.1	ug/g						
		1,1,2,2-tetrachloroethane		<	0.1	ug/g						
		1,2,3-trichloropropane		<	0.1	ug/g						
		n-propylbenzene		<	0.1	ug/g						
		bromobenzene		<	0.1	ug/g						
		1,3,5-trimethylbenzene		<	0.1	ug/g						
		2-chlorotoluene		<	0.1	ug/g						
		4-chlorotoluene		<	0.1	ug/g						
		tert-butylbenzene		<	0.1	ug/g						
		1,2,4-trimethylbenzene		<	0.1	ug/g						
		sec-butylbenzene		<	0.1	ug/g						
		1,3-dichlorobenzene		<	0.1	ug/g						
		4-isopropyltoluene		<	0.1	ug/g						
		1,4-dichlorobenzene		<	0.1	ug/g						
		1,2-dichlorobenzene		<	0.1	ug/g						
		n-butylbenzene		<	0.1	ug/g						
		1,2-dibromo-3-chloropropane (DBCP)		<	0.1	ug/g						
		1,2,4-trichlorobenzene		<	0.1	ug/g						
		1,3,5-trichlorobenzene		<	0.1	ug/g						
		hexachlorobutadiene		<	0.1	ug/g						
		naphthalene		<	0.2	ug/g						
		1,2,3-trichlorobenzene		<	0.1	ug/g						
		dibromofluoromethane SUR			96	%			78	114		
		toluene-D8 SUR			109	%			88	110		
		4-bromofluorobenzene SUR			106	%			86	115		
		a,a,a-trifluorotoluene SUR			127	%			70	130		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5035A8260C	MLCS8707	dichlorodifluoromethane			0.6	ug/g	1	64	*	70	130		
		chloromethane			0.9	ug/g	1	91		70	130		
		vinyl chloride			0.9	ug/g	1	90		70	130		
		bromomethane			0.7	ug/g	1	74		70	130		
		chloroethane			0.9	ug/g	1	95		70	130		
		trichlorofluoromethane			1.0	ug/g	1	98		70	130		
		diethyl ether			1.3	ug/g	1	129		70	130		
		acetone		<	2.5	ug/g	1	139					
		1,1-dichloroethene			1.6	ug/g	1	156	*	70	130		
		methylene chloride			1.1	ug/g	1	115		70	130		
		carbon disulfide			2.4	ug/g	1	236	*	70	130		
		methyl t-butyl ether (MTBE)			1.2	ug/g	1	119		70	130		
		trans-1,2-dichloroethene			1.2	ug/g	1	116		70	130		
		isopropyl ether (DIPE)			1.2	ug/g	1	117		70	130		
		ethyl t-butyl ether (ETBE)			1.1	ug/g	1	109		70	130		
		1,1-dichloroethane			1.1	ug/g	1	106		70	130		
		t-butanol (TBA)			7.7	ug/g	5	153	*	70	130		
		2-butanone (MEK)			1.2	ug/g	1	121		70	130		
		2,2-dichloropropane			1.0	ug/g	1	101		70	130		
		cis-1,2-dichloroethene			1.1	ug/g	1	106		70	130		
		chloroform			1.0	ug/g	1	104		70	130		
		bromochloromethane			1.0	ug/g	1	97		70	130		
		tetrahydrofuran (THF)			1.2	ug/g	1	116		70	130		
		1,1,1-trichloroethane			1.1	ug/g	1	114		70	130		
		1,1-dichloropropene			1.1	ug/g	1	107		70	130		
		t-amyl-methyl ether (TAME)			1.1	ug/g	1	108		70	130		
		carbon tetrachloride			1.1	ug/g	1	110		70	130		
		1,2-dichloroethane			1.1	ug/g	1	114		70	130		
		benzene			1.1	ug/g	1	108		70	130		
		trichloroethene			1.1	ug/g	1	112		70	130		
		1,2-dichloropropane			0.9	ug/g	1	95		70	130		
		bromodichloromethane			1.0	ug/g	1	100		70	130		
		1,4-dioxane			3.2	ug/g	2	161	*	70	130		
		dibromomethane			1.0	ug/g	1	102		70	130		
		4-methyl-2-pentanone (MIBK)			1.1	ug/g	1	114		70	130		
		cis-1,3-dichloropropene			0.9	ug/g	1	92		70	130		
		toluene			1.0	ug/g	1	105		70	130		
		trans-1,3-dichloropropene			1.0	ug/g	1	99		70	130		
		2-hexanone			1.2	ug/g	1	116		70	130		
		1,1,2-trichloroethane			1.1	ug/g	1	106		70	130		
		1,3-dichloropropane			0.9	ug/g	1	94		70	130		
		tetrachloroethene			1.0	ug/g	1	99		70	130		
		dibromochloromethane			0.9	ug/g	1	89		70	130		
		1,2-dibromoethane (EDB)			0.9	ug/g	1	95		70	130		
		chlorobenzene			0.9	ug/g	1	93		70	130		
		1,1,1,2-tetrachloroethane			0.9	ug/g	1	90		70	130		
		ethylbenzene			1.0	ug/g	1	96		70	130		
		m&p-xylenes			1.9	ug/g	2	95		70	130		
		o-xylene			0.9	ug/g	1	93		70	130		
		styrene			1.0	ug/g	1	95		70	130		
		bromoform			0.9	ug/g	1	94		70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5035A8260C	MLCS8707	isopropylbenzene		0.8	ug/g	1	81	70	130		
		1,1,2,2-tetrachloroethane		0.9	ug/g	1	89	70	130		
		1,2,3-trichloropropane		1.0	ug/g	1	98	70	130		
		n-propylbenzene		0.8	ug/g	1	84	70	130		
		bromobenzene		0.9	ug/g	1	94	70	130		
		1,3,5-trimethylbenzene		1.0	ug/g	1	96	70	130		
		2-chlorotoluene		0.9	ug/g	1	90	70	130		
		4-chlorotoluene		1.0	ug/g	1	95	70	130		
		tert-butylbenzene		0.9	ug/g	1	91	70	130		
		1,2,4-trimethylbenzene		0.9	ug/g	1	94	70	130		
		sec-butylbenzene		0.9	ug/g	1	92	70	130		
		1,3-dichlorobenzene		1.0	ug/g	1	98	70	130		
		4-isopropyltoluene		0.9	ug/g	1	93	70	130		
		1,4-dichlorobenzene		1.0	ug/g	1	99	70	130		
		1,2-dichlorobenzene		1.0	ug/g	1	101	70	130		
		n-butylbenzene		1.0	ug/g	1	96	70	130		
		1,2-dibromo-3-chloropropane (DBCP)		1.1	ug/g	1	113	70	130		
		1,2,4-trichlorobenzene		1.2	ug/g	1	115	70	130		
		1,3,5-trichlorobenzene		1.0	ug/g	1	101	70	130		
		hexachlorobutadiene		1.0	ug/g	1	99	70	130		
		naphthalene		1.3	ug/g	1	126	70	130		
		1,2,3-trichlorobenzene		1.2	ug/g	1	119	70	130		
		dibromofluoromethane SUR		97	%			78	114		
		toluene-D8 SUR		103	%			88	110		
		4-bromofluorobenzene SUR		106	%			86	115		
		a,a,a-trifluorotoluene SUR		109	%			70	130		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5035A8260C	MLCSD8707	dichlorodifluoromethane			0.7	ug/g	1	68	*	70	130	6	30
		chloromethane			0.9	ug/g	1	94		70	130	3	30
		vinyl chloride			0.9	ug/g	1	93		70	130	3	30
		bromomethane			0.9	ug/g	1	87		70	130	17	30
		chloroethane			1.0	ug/g	1	104		70	130	9	30
		trichlorofluoromethane			1.0	ug/g	1	102		70	130	4	30
		diethyl ether			1.3	ug/g	1	127		70	130	1	30
		acetone		<	2.5	ug/g	1	138				0	30
		1,1-dichloroethene			1.6	ug/g	1	160	*	70	130	3	30
		methylene chloride			1.2	ug/g	1	116		70	130	1	30
		carbon disulfide			2.4	ug/g	1	242	*	70	130	3	30
		methyl t-butyl ether (MTBE)			1.1	ug/g	1	113		70	130	5	30
		trans-1,2-dichloroethene			1.2	ug/g	1	121		70	130	4	30
		isopropyl ether (DIPE)			1.1	ug/g	1	114		70	130	2	30
		ethyl t-butyl ether (ETBE)			1.1	ug/g	1	109		70	130	1	30
		1,1-dichloroethane			1.1	ug/g	1	109		70	130	3	30
		t-butanol (TBA)			6.4	ug/g	5	129		70	130	17	30
		2-butanone (MEK)			1.1	ug/g	1	113		70	130	7	30
		2,2-dichloropropane			1.0	ug/g	1	103		70	130	2	30
		cis-1,2-dichloroethene			1.1	ug/g	1	110		70	130	3	30
		chloroform			1.1	ug/g	1	105		70	130	2	30
		bromochloromethane			1.0	ug/g	1	101		70	130	4	30
		tetrahydrofuran (THF)			1.1	ug/g	1	110		70	130	5	30
		1,1,1-trichloroethane			1.2	ug/g	1	116		70	130	1	30
		1,1-dichloropropene			1.1	ug/g	1	111		70	130	4	30
		t-amyl-methyl ether (TAME)			1.1	ug/g	1	105		70	130	2	30
		carbon tetrachloride			1.1	ug/g	1	113		70	130	3	30
		1,2-dichloroethane			1.1	ug/g	1	113		70	130	1	30
		benzene			1.1	ug/g	1	112		70	130	4	30
		trichloroethene			1.1	ug/g	1	109		70	130	2	30
		1,2-dichloropropane			1.0	ug/g	1	98		70	130	3	30
		bromodichloromethane			1.0	ug/g	1	105		70	130	5	30
		1,4-dioxane		<	2.5	ug/g	2	119		70	130	30	30
		dibromomethane			1.0	ug/g	1	101		70	130	1	30
		4-methyl-2-pentanone (MIBK)			1.0	ug/g	1	102		70	130	11	30
		cis-1,3-dichloropropene			1.0	ug/g	1	95		70	130	3	30
		toluene			1.1	ug/g	1	108		70	130	3	30
		trans-1,3-dichloropropene			1.0	ug/g	1	95		70	130	4	30
		2-hexanone			1.0	ug/g	1	101		70	130	13	30
		1,1,2-trichloroethane			1.0	ug/g	1	104		70	130	2	30
		1,3-dichloropropane			0.9	ug/g	1	88		70	130	7	30
		tetrachloroethene			1.0	ug/g	1	96		70	130	4	30
		dibromochloromethane			0.8	ug/g	1	82		70	130	7	30
		1,2-dibromoethane (EDB)			0.9	ug/g	1	90		70	130	5	30
		chlorobenzene			0.9	ug/g	1	94		70	130	0	30
		1,1,1,2-tetrachloroethane			0.9	ug/g	1	91		70	130	1	30
		ethylbenzene			0.9	ug/g	1	92		70	130	4	30
		m&p-xylenes			1.8	ug/g	2	92		70	130	3	30
		o-xylene			0.9	ug/g	1	92		70	130	1	30
		styrene			0.9	ug/g	1	93		70	130	3	30
		bromoform			0.8	ug/g	1	83		70	130	13	30

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5035A8260C	MLCSD8707	isopropylbenzene		0.8	ug/g	1	80	70	130	1	30
		1,1,2,2-tetrachloroethane		0.8	ug/g	1	85	70	130	4	30
		1,2,3-trichloropropane		0.9	ug/g	1	90	70	130	9	30
		n-propylbenzene		0.8	ug/g	1	83	70	130	1	30
		bromobenzene		0.9	ug/g	1	90	70	130	5	30
		1,3,5-trimethylbenzene		0.9	ug/g	1	94	70	130	2	30
		2-chlorotoluene		0.9	ug/g	1	93	70	130	3	30
		4-chlorotoluene		0.9	ug/g	1	89	70	130	6	30
		tert-butylbenzene		0.9	ug/g	1	90	70	130	1	30
		1,2,4-trimethylbenzene		0.9	ug/g	1	92	70	130	2	30
		sec-butylbenzene		0.9	ug/g	1	90	70	130	2	30
		1,3-dichlorobenzene		0.9	ug/g	1	95	70	130	4	30
		4-isopropyltoluene		0.9	ug/g	1	90	70	130	3	30
		1,4-dichlorobenzene		1.0	ug/g	1	96	70	130	3	30
		1,2-dichlorobenzene		1.0	ug/g	1	97	70	130	4	30
		n-butylbenzene		0.9	ug/g	1	92	70	130	4	30
		1,2-dibromo-3-chloropropane (DBCP)		0.9	ug/g	1	92	70	130	20	30
		1,2,4-trichlorobenzene		1.1	ug/g	1	106	70	130	8	30
		1,3,5-trichlorobenzene		1.0	ug/g	1	99	70	130	1	30
		hexachlorobutadiene		1.0	ug/g	1	95	70	130	4	30
		naphthalene		1.1	ug/g	1	111	70	130	12	30
		1,2,3-trichlorobenzene		1.1	ug/g	1	108	70	130	10	30
		dibromofluoromethane SUR		100	%			78	114		
		toluene-D8 SUR		103	%			88	110		
		4-bromofluorobenzene SUR		101	%			86	115		
		a,a,a-trifluorotoluene SUR		113	%			70	130		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW3546/8081B	BLK8712	alpha-BHC		<	0.040	ug/g						
		beta-BHC		<	0.040	ug/g						
		delta-BHC		<	0.040	ug/g						
		gamma-BHC (Lindane)		<	0.040	ug/g						
		Heptachlor		<	0.040	ug/g						
		Aldrin		<	0.040	ug/g						
		Heptachlor Epoxide		<	0.040	ug/g						
		Endosulfan I		<	0.040	ug/g						
		Dieldrin		<	0.040	ug/g						
		4,4'-DDE		<	0.040	ug/g						
		Endrin		<	0.040	ug/g						
		Endosulfan II		<	0.040	ug/g						
		4,4'-DDD		<	0.040	ug/g						
		Endosulfan Sulfate		<	0.040	ug/g						
		4,4'-DDT		<	0.040	ug/g						
		Methoxychlor		<	0.040	ug/g						
		Endrin Ketone		<	0.040	ug/g						
		Endrin Aldehyde		<	0.040	ug/g						
		alpha-Chlordane		<	0.040	ug/g						
		gamma-Chlordane		<	0.040	ug/g						
		Toxaphene		<	0.40	ug/g						
		tetrachloro-m-xylene SUR			81	%			30	150		
		decachlorobiphenyl SUR			114	%			30	150		
SW3546/8081B	LCS8712	alpha-BHC			0.25	ug/g	0.4	62	40	140		
		beta-BHC			0.27	ug/g	0.4	67	40	140		
		delta-BHC			0.25	ug/g	0.4	63	40	140		
		gamma-BHC (Lindane)			0.25	ug/g	0.4	62	40	140		
		Heptachlor			0.23	ug/g	0.4	59	40	140		
		Aldrin			0.25	ug/g	0.4	63	40	140		
		Heptachlor Epoxide			0.26	ug/g	0.4	66	40	140		
		Endosulfan I			0.21	ug/g	0.4	53	40	140		
		Dieldrin			0.25	ug/g	0.4	63	40	140		
		4,4'-DDE			0.31	ug/g	0.4	78	40	140		
		Endrin			0.33	ug/g	0.4	81	40	140		
		Endosulfan II			0.24	ug/g	0.4	60	40	140		
		4,4'-DDD			0.26	ug/g	0.4	66	40	140		
		Endosulfan Sulfate			0.25	ug/g	0.4	62	40	140		
		4,4'-DDT			0.27	ug/g	0.4	68	40	140		
		Methoxychlor			0.30	ug/g	0.4	74	40	140		
		Endrin Ketone			0.26	ug/g	0.4	65	40	140		
		Endrin Aldehyde			0.22	ug/g	0.4	55	40	140		
		alpha-Chlordane			0.30	ug/g	0.4	74	40	140		
		gamma-Chlordane			0.26	ug/g	0.4	65	40	140		
		Toxaphene		<	0.40	ug/g						
		tetrachloro-m-xylene SUR			84	%			30	150		
		decachlorobiphenyl SUR			122	%			30	150		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits	RPD	RPD Limit
SW3546/8270D	BLK8711	N-nitrosodimethylamine		<	0.20	ug/g					
		aniline		<	0.20	ug/g					
		phenol		<	0.20	ug/g					
		2-chlorophenol		<	0.50	ug/g					
		bis(2-chloroethyl)ether		<	0.20	ug/g					
		1,3-dichlorobenzene		<	0.20	ug/g					
		1,4-dichlorobenzene		<	0.20	ug/g					
		1,2-dichlorobenzene		<	0.20	ug/g					
		benzyl alcohol		<	0.20	ug/g					
		2-methylphenol		<	0.20	ug/g					
		bis(2-chloroisopropyl) ether		<	0.20	ug/g					
		hexachloroethane		<	0.20	ug/g					
		N-nitroso-di-N-propylamine		<	0.20	ug/g					
		4-methylphenol		<	0.20	ug/g					
		nitrobenzene		<	0.20	ug/g					
		isophorone		<	0.50	ug/g					
		2-nitrophenol		<	0.20	ug/g					
		2,4-dimethylphenol		<	0.20	ug/g					
		bis(2-chloroethoxy)methane		<	0.50	ug/g					
		2,4-dichlorophenol		<	0.50	ug/g					
		1,2,4-trichlorobenzene		<	0.50	ug/g					
		naphthalene		<	0.050	ug/g					
		benzoic acid		<	5.0	ug/g					
		4-chloroaniline		<	0.20	ug/g					
		hexachlorobutadiene		<	0.20	ug/g					
		4-chloro-3-methylphenol		<	0.20	ug/g					
		2-methylnaphthalene		<	0.050	ug/g					
		hexachlorocyclopentadiene		<	1.0	ug/g					
		2,4,6-trichlorophenol		<	0.20	ug/g					
		2,4,5-trichlorophenol		<	0.20	ug/g					
		2-chloronaphthalene		<	0.50	ug/g					
		2-nitroaniline		<	0.20	ug/g					
		acenaphthylene		<	0.050	ug/g					
		dimethylphthalate		<	0.50	ug/g					
		2,6-dinitrotoluene		<	0.20	ug/g					
		2,4-dinitrotoluene		<	0.20	ug/g					
		acenaphthene		<	0.050	ug/g					
		3-nitroaniline		<	0.20	ug/g					
		2,4-dinitrophenol		<	5.0	ug/g					
		dibenzofuran		<	0.050	ug/g					
		4-nitrophenol		<	1.0	ug/g					
		fluorene		<	0.050	ug/g					
		diethyl phthalate		<	0.50	ug/g					
		4-chlorophenyl phenyl ether		<	0.50	ug/g					
		4-nitroaniline		<	0.50	ug/g					
		4,6-dinitro-2-methylphenol		<	2.0	ug/g					
		azobenzene		<	0.20	ug/g					
		N-nitrosodiphenylamine		<	0.20	ug/g					
		4-bromophenyl phenyl ether		<	0.20	ug/g					
		hexachlorobenzene		<	0.20	ug/g					
		pentachlorophenol		<	1.0	ug/g					

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW3546/8270D	BLK8711	phenanthrene		<	0.050	ug/g						
		anthracene		<	0.050	ug/g						
		carbazole		<	0.20	ug/g						
		di-n-butylphthalate		<	0.50	ug/g						
		fluoranthene		<	0.050	ug/g						
		benzidine		<	3.0	ug/g						
		pyrene		<	0.050	ug/g						
		butyl benzyl phthalate		<	0.50	ug/g						
		benzo(a)anthracene		<	0.050	ug/g						
		chrysene		<	0.050	ug/g						
		3,3'-dichlorobenzidine		<	3.0	ug/g						
		bis(2-ethylhexyl)phthalate		<	0.50	ug/g						
		di-n-octyl phthalate		<	0.20	ug/g						
		benzo(b)fluoranthene		<	0.050	ug/g						
		benzo(k)fluoranthene		<	0.050	ug/g						
		benzo(a)pyrene		<	0.020	ug/g						
		indeno(1,2,3-cd)pyrene		<	0.050	ug/g						
		dibenzo(a,h)anthracene		<	0.050	ug/g						
		benzo(g,h,i)perylene		<	0.050	ug/g						
		2-fluorophenol SUR			52	%			21	100		
		phenol-D5 SUR			53	%			10	102		
		2,4,6-tribromophenol SUR			45	%			10	123		
		nitrobenzene-D5 SUR			50	%			35	114		
		2-fluorobiphenyl SUR			50	%			43	116		
		p-terphenyl-D14 SUR			50	%			33	141		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW3546/8270D	LCS8711	N-nitrosodimethylamine			2.5	ug/g	4	61	40	140		
		aniline			2.7	ug/g	4	69	40	140		
		phenol			3.3	ug/g	4	83	30	130		
		2-chlorophenol			3.2	ug/g	4	79	30	130		
		bis(2-chloroethyl)ether			2.8	ug/g	4	69	40	140		
		1,3-dichlorobenzene			2.6	ug/g	4	65	40	140		
		1,4-dichlorobenzene			2.7	ug/g	4	67	40	140		
		1,2-dichlorobenzene			2.7	ug/g	4	68	40	140		
		benzyl alcohol			3.2	ug/g	4	80	30	130		
		2-methylphenol			3.0	ug/g	4	75	30	130		
		bis(2-chloroisopropyl) ether			2.6	ug/g	4	66	40	140		
		hexachloroethane			2.7	ug/g	4	67	40	140		
		N-nitroso-di-N-propylamine			2.9	ug/g	4	72	40	140		
		4-methylphenol			2.9	ug/g	4	73	30	130		
		nitrobenzene			2.9	ug/g	4	72	40	140		
		isophorone			3.2	ug/g	4	79	40	140		
		2-nitrophenol			2.7	ug/g	4	68	30	130		
		2,4-dimethylphenol			2.6	ug/g	4	66	30	130		
		bis(2-chloroethoxy)methane			3.0	ug/g	4	74	40	140		
		2,4-dichlorophenol			2.8	ug/g	4	70	30	130		
		1,2,4-trichlorobenzene			2.6	ug/g	4	66	40	140		
		naphthalene			2.8	ug/g	4	69	40	140		
		benzoic acid		<	5.0	ug/g						
		4-chloroaniline			2.4	ug/g	4	60	40	140		
		hexachlorobutadiene			2.7	ug/g	4	68	40	140		
		4-chloro-3-methylphenol			3.2	ug/g	4	79	30	130		
		2-methylnaphthalene			2.9	ug/g	4	72	40	140		
		hexachlorocyclopentadiene			2.9	ug/g	4	72	40	140		
		2,4,6-trichlorophenol			2.7	ug/g	4	68	30	130		
		2,4,5-trichlorophenol			2.6	ug/g	4	64	30	130		
		2-chloronaphthalene			2.8	ug/g	4	71	40	140		
		2-nitroaniline			3.2	ug/g	4	81	40	140		
		acenaphthylene			3.0	ug/g	4	74	40	140		
		dimethylphthalate			3.0	ug/g	4	76	40	140		
		2,6-dinitrotoluene			3.0	ug/g	4	74	40	140		
		2,4-dinitrotoluene			2.9	ug/g	4	73	40	140		
		acenaphthene			2.9	ug/g	4	71	40	140		
		3-nitroaniline			3.1	ug/g	4	78	40	140		
		2,4-dinitrophenol		<	5.0	ug/g						
		dibenzofuran			2.9	ug/g	4	72	40	140		
		4-nitrophenol			3.1	ug/g	4	77	30	130		
		fluorene			2.9	ug/g	4	74	40	140		
		diethyl phthalate			3.0	ug/g	4	76	40	140		
		4-chlorophenyl phenyl ether			3.0	ug/g	4	74	40	140		
		4-nitroaniline			3.1	ug/g	4	78	40	140		
		4,6-dinitro-2-methylphenol		<	2.0	ug/g						
		azobenzene			2.9	ug/g	4	73	40	140		
		N-nitrosodiphenylamine			3.6	ug/g	4	90	40	140		
		4-bromophenyl phenyl ether			3.0	ug/g	4	76	40	140		
		hexachlorobenzene			2.8	ug/g	4	69	40	140		
		pentachlorophenol			2.6	ug/g	4	65	30	130		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW3546/8270D	LCS8711	phenanthrene			3.0	ug/g	4	76	40	140		
		anthracene			3.0	ug/g	4	75	40	140		
		carbazole			3.5	ug/g	4	87	40	140		
		di-n-butylphthalate			3.1	ug/g	4	78	40	140		
		fluoranthene			3.0	ug/g	4	74	40	140		
		benzidine		<	3.0	ug/g						
		pyrene			3.1	ug/g	4	78	40	140		
		butyl benzyl phthalate			3.5	ug/g	4	87	40	140		
		benzo(a)anthracene			3.4	ug/g	4	84	40	140		
		chrysene			3.1	ug/g	4	78	40	140		
		3,3'-dichlorobenzidine		<	3.0	ug/g						
		bis(2-ethylhexyl)phthalate			3.6	ug/g	4	91	40	140		
		di-n-octyl phthalate			3.3	ug/g	4	83	40	140		
		benzo(b)fluoranthene			3.1	ug/g	4	77	40	140		
		benzo(k)fluoranthene			2.7	ug/g	4	68	40	140		
		benzo(a)pyrene			3.3	ug/g	4	83	40	140		
		indeno(1,2,3-cd)pyrene			2.9	ug/g	4	72	40	140		
		dibenzo(a,h)anthracene			2.9	ug/g	4	73	40	140		
		benzo(g,h,i)perylene			2.6	ug/g	4	65	40	140		
		2-fluorophenol SUR			76	%			21	100		
		phenol-D5 SUR			80	%			10	102		
		2,4,6-tribromophenol SUR			78	%			10	123		
		nitrobenzene-D5 SUR			72	%			35	114		
		2-fluorobiphenyl SUR			75	%			43	116		
		p-terphenyl-D14 SUR			79	%			33	141		
SW3550C8100	BLK8710	TPH C10-C36		<	200	ug/g						
		2-fluorobiphenyl SUR			77	%			40	140		
		o-terphenyl SUR			79	%			40	140		
SW3550C8100	LCS8710	TPH C10-C36			2100	ug/g	2500	83	40	140		
		2-fluorobiphenyl SUR			78	%			40	140		
		o-terphenyl SUR			82	%			40	140		
SW3550C8100	MS8710	TPH C10-C36	36185-001		3100	ug/g	3178	99	40	140		
		2-fluorobiphenyl SUR	36185-001		75	%			40	140		
		o-terphenyl SUR	36185-001		68	%			40	140		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW3550C8270D	BLK8709	naphthalene		<	0.47	ug/g						
		2-methylnaphthalene		<	0.47	ug/g						
		acenaphthylene		<	0.47	ug/g						
		acenaphthene		<	0.47	ug/g						
		dibenzofuran		<	0.47	ug/g						
		fluorene		<	0.47	ug/g						
		phenanthrene		<	0.47	ug/g						
		anthracene		<	0.47	ug/g						
		fluoranthene		<	0.47	ug/g						
		pyrene		<	0.47	ug/g						
		benzo(a)anthracene		<	0.47	ug/g						
		chrysene		<	0.47	ug/g						
		benzo(b)fluoranthene		<	0.47	ug/g						
		benzo(k)fluoranthene		<	0.47	ug/g						
		benzo(a)pyrene		<	0.47	ug/g						
		indeno(1,2,3-cd)pyrene		<	0.47	ug/g						
		dibenzo(a,h)anthracene		<	0.47	ug/g						
		benzo(g,h,i)perylene		<	0.47	ug/g						
		2-fluorobiphenyl SUR			74	%			43	116		
		o-terphenyl SUR			82	%			33	141		
SW3550C8270D	LCS8709	naphthalene			2.9	ug/g	3.86	75	40	140		
		2-methylnaphthalene			3.0	ug/g	3.86	77	40	140		
		acenaphthylene			2.9	ug/g	3.86	74	40	140		
		acenaphthene			2.7	ug/g	3.86	69	40	140		
		dibenzofuran		<	0.48	ug/g						
		fluorene			2.8	ug/g	3.86	71	40	140		
		phenanthrene			2.7	ug/g	3.86	69	40	140		
		anthracene			2.7	ug/g	3.86	70	40	140		
		fluoranthene			2.7	ug/g	3.86	69	40	140		
		pyrene			2.7	ug/g	3.86	71	40	140		
		benzo(a)anthracene			3.0	ug/g	3.86	77	40	140		
		chrysene			2.8	ug/g	3.86	72	40	140		
		benzo(b)fluoranthene			2.3	ug/g	3.86	60	40	140		
		benzo(k)fluoranthene			2.9	ug/g	3.86	75	40	140		
		benzo(a)pyrene			2.8	ug/g	3.86	72	40	140		
		indeno(1,2,3-cd)pyrene			2.4	ug/g	3.86	63	40	140		
		dibenzo(a,h)anthracene			2.4	ug/g	3.86	62	40	140		
		benzo(g,h,i)perylene			2.3	ug/g	3.86	58	40	140		
		2-fluorobiphenyl SUR			75	%			43	116		
		o-terphenyl SUR			79	%			33	141		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW3550C8270D	MS8709	naphthalene	36139-014		3.6	ug/g	7.81	47	40	140		
		2-methylnaphthalene	36139-014		3.6	ug/g	7.81	47	40	140		
		acenaphthylene	36139-014		3.9	ug/g	7.81	47	40	140		
		acenaphthene	36139-014		3.6	ug/g	7.81	44	40	140		
		dibenzofuran	36139-014	<	0.98	ug/g						
		fluorene	36139-014		3.8	ug/g	7.81	49	40	140		
		phenanthrene	36139-014		4.4	ug/g	7.81	55	40	140		
		anthracene	36139-014		4.2	ug/g	7.81	54	40	140		
		fluoranthene	36139-014		5.1	ug/g	7.81	56	40	140		
		pyrene	36139-014		4.8	ug/g	7.81	53	40	140		
		benzo(a)anthracene	36139-014		5.2	ug/g	7.81	63	40	140		
		chrysene	36139-014		5.2	ug/g	7.81	61	40	140		
		benzo(b)fluoranthene	36139-014		3.8	ug/g	7.81	43	40	140		
		benzo(k)fluoranthene	36139-014		6.2	ug/g	7.81	75	40	140		
		benzo(a)pyrene	36139-014		5.0	ug/g	7.81	59	40	140		
		indeno(1,2,3-cd)pyrene	36139-014		3.8	ug/g	7.81	45	40	140		
		dibenzo(a,h)anthracene	36139-014		3.7	ug/g	7.81	47	40	140		
		benzo(g,h,i)perylene	36139-014		3.3	ug/g	7.81	40	40	140		
		2-fluorobiphenyl SUR	36139-014		50	%			43	116		
		o-terphenyl SUR	36139-014		55	%			33	141		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW3051A6020A	BLK8721	Silver		<	0.25	ug/g						
		Arsenic		<	0.50	ug/g						
		Barium		<	2.5	ug/g						
		Cadmium		<	0.20	ug/g						
		Chromium		<	2.5	ug/g						
		Lead		<	0.50	ug/g						
		Selenium		<	2.5	ug/g						
SW3051A6020A	CRM8721	Silver			46	ug/g	38		25.1	51.9		
		Arsenic			429	ug/g	400		292	508		
		Barium			35	ug/g	25		0	51.3		
		Cadmium			16	ug/g	15		8.71	22		
		Chromium			20	ug/g	14		2.45	24.7		
		Lead			5500	ug/g	5100		3750	6470		
		Selenium			11	ug/g	6.6		0	18.4		
SW3051A6020A	CRMD8721	Silver			43	ug/g	38		25.1	51.9	7	35
		Arsenic			428	ug/g	400		292	508	0	35
		Barium			36	ug/g	25		0	51.3	3	35
		Cadmium			16	ug/g	15		8.71	22	4	35
		Chromium			20	ug/g	14		2.45	24.7	1	35
		Lead			5300	ug/g	5100		3750	6470	4	35
		Selenium			11	ug/g	6.6		0	18.4	5	35
SW3051A6020A	DUP8721	Lead	36139-007		270	ug/g					1	35
SW3051A6020A	MS8721	Lead	36139-007		350	ug/g	68.1	123	75	125		
SW7471B	BLK8731	Mercury		<	0.14	ug/g						
SW7471B	CRM8731	Mercury			1.3	ug/g	1.1		0.49	1.76		
SW7471B	CRMD8731	Mercury			1.4	ug/g	1.1		0.49	1.76	2	35
SW7471B	MS8731	Mercury	36158-001		0.59	ug/g	0.641	84	80	120		

PAGE 1 OF 2

Absolute Resource associates

124 Heritage Avenue #16
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

36139

Company Name: CREDERE

Company Address: 776 MAIN ST WESTBROOK ME 04092

Report To: JUDD NEWCOMB

Phone #: 207-232-5387

Invoice to Email: JNEWCOMB@CREDERELLC.COM

☐ Hard Copy Invoice Required

Project Name: DAGOSTINO

Project #: 15001275

Project Location: (NH) MA ME VT NY Other

Protocol: RCRA SDWA NPDES MCP NHDES OTHER

Reporting Limits: QAPP (GW-1) (S-1) EPA DW Other

Quote # CREDERE ☐ NH Reimbursement Pricing

PO # 15001275

ANALYSIS REQUEST

Analysis columns:
1. ☐ VOC 8260 ☒ VOC 8260 NHDES ☐ VOC 8260 MADEP
2. ☐ VOC 624 ☐ VOC BTEX ☐ MtBE, only ☐ VOC 8021VT
3. ☐ VPH MADEP ☐ GRO 8015 ☐ 1,4-Dioxane
4. ☐ VOC 524.2 ☐ VOC 524.2 NH List ☐ Gases-List:
5. ☒ TPH ☐ DRO 8015 ☐ EPH MADEP ☐ TPH Fingerprint
6. ☒ 8270PAH ☐ 8270ABN ☐ 625 ☐ EDB
7. ☐ 8082 PCB ☒ 8081 Pesticides ☐ 608 Pest/PCB
8. ☐ O&G 1664 ☐ Mineral O&G SM5520F
9. ☐ pH ☐ BOD ☐ Conductivity ☐ Turbidity
10. ☐ TSS ☐ TDS ☐ TS ☐ TVS ☐ Alkalinity
11. ☒ RCRA Metals ☐ Priority Pollutant Metals ☐ TAL Metals ☐ Hardness
12. ☒ Total Metals-list: Pb
13. ☐ Dissolved Metals-list:
14. ☐ Ammonia ☐ COD ☐ TKN ☐ TN ☐ TON ☐ TOC
15. ☐ T-Phosphorus ☐ Phenols ☐ Bacteria P/A ☐ Bacteria MPN
16. ☐ Cyanide ☐ Sulfide ☐ Nitrate + Nitrite ☐ Ortho P
17. ☐ Nitrate ☐ Nitrite ☐ Chloride ☐ Sulfate ☐ Bromide ☐ Fluoride
18. ☐ Corrosivity ☐ Reactive CN ☐ Reactive S- ☐ Ignitibility/FP
19. ☐ TCLP Metals ☐ TCLP VOC ☐ TCLP SVOC ☐ TCLP Pesticide
20. Subcontract: ☐ Grain Size ☐ Herbicides ☐ Formaldehyde
21. 8270.ABN
22. (blank)
23. (blank)
24. Grab (G) or Composite (C)

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	Matrix: SOLID	Matrix: OTHER	Preservation: HCl	Preservation: HNO_3	Preservation: H_2SO_4	Preservation: NaOH	Preservation: MeOH	Sampling: DATE	Sampling: TIME	Sampling: SAMPLER
3613901	CA-SB-103 10-12'	3		X						X	4/8/16	1000	JN
-02	CA-SS-101 A	1		↓							↓	1030	MK
-03	CA-SS-101 B	1		↓							↓	1035	MK
-04	CA-SS-101 C	1		↓							↓	1040	MK
-05	CA-SS-101 D	1		↓							↓	1025	MK
-06	CA-SS-101 E	1		↓							↓	1045	MK
-07	CA-SS-101 F	1		↓							↓	1020	MK
-08	CA-SS-105	3		↓						X	↓	1050	JN
-09	TRIP BLANK	1		↓						X	↓	—	
-10	CA-SED-103	1		↓							↓	1115	JN
-11	CA-SED-104	1		↓							↓	1125	JN

Lab Sample ID	1 VOC 8260	2 VOC 624	3 VPH MADEP	4 VOC 524.2	5 TPH	6 8270PAH	7 8082 PCB	8 O&G 1664	9 pH	10 TSS	11 RCRA Metals	12 Total Metals-list	13 Dissolved Metals-list	14 Ammonia	15 T-Phosphorus	16 Cyanide	17 Nitrate	18 Corrosivity	19 TCLP Metals	20 Subcontract	21 8270.ABN	22	23	24 Grab (G) or Composite (C)
3613901	X					X	X				X													G
-02												X												↓
-03												X												↓
-04												X												↓
-05												X												↓
-06												X												↓
-07												X												↓
-08	X				X		X				X										X			↓
-09	X																							↓
-10												X												↓
-11												X												↓

TAT REQUESTED

Priority (24 hr)* ☐
Expedited (48 hr)* ☐
Standard (10 Business Days) ☐
*Date Needed 4/20/16

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS

REPORTING INSTRUCTIONS ☒ PDF (e-mail address) SAME

☐ HARD COPY REQUIRED ☐ FAX (FAX#)

RECEIVED ON ICE ☒ YES ☐ NO

TEMPERATURE 3 °C

CUSTODY RECORD

Relinquished by	Date	Time	Received by	Date	Time
Relinquished by Sampler: [signature]	4/8/16	1315	Received by:		
Relinquished by:			Received by:		
Relinquished by:			Received by Laboratory: [signature]	4/8/16	1315

QSD-01 Revision 1/27/16

Absolute Resource associates
124 Heritage Avenue #16
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

36139

Company Name: CREDERE

Company Address: 776 MAIN ST WESTBROOK ME 04092

Report To: JUDD NEWLOMB

Phone #: 207-232-5387

Invoice to Email: JNEWLOMB@CREDERELLC.com

☐ Hard Copy Invoice Required

Project Name: DAGOSTINO

Project #: 150012 75

Project Location: (NH) MA ME VT NY Other

Protocol: RCRA SDWA NPDES MCP (NHDES) OTHER

Reporting Limits: QAPP GW-1 (S-1) EPA DW Other

Quote # CREDERE ☐ NH Reimbursement Pricing

PO # 150061275

ANALYSIS REQUEST

☐ VOC 8260 ☐ VOC 8260 NHDES ☐ VOC 8260 MADEP ☐ VOC 624 ☐ VOC BTEX ☐ MtBE only ☐ VOC 8021VT ☐ VPH MADEP ☐ GRO 8015 ☐ 1,4-Dioxane ☐ VOC 524.2 ☐ VOC 524.2 NH List ☐ Gases-List: ☐ TPH ☐ DRO 8015 ☐ EPH MADEP ☐ TPH Fingerprint ☒ 8270PAH ☐ 8270ABN ☐ 625 ☐ EDB ☐ 8082 PCB ☐ 8081 Pesticides ☐ 608 Pest/PCB ☐ O&G 1664 ☐ Mineral O&G SM5520F ☐ pH ☐ BOD ☐ Conductivity ☐ Turbidity ☐ TSS ☐ TDS ☐ TS ☐ TVS ☐ Alkalinity ☐ RCRA Metals ☐ Priority Pollutant Metals ☐ TAL Metals ☐ Hardness ☒ Total Metals-list: Pb ☐ Dissolved Metals-list: ☐ Ammonia ☐ COD ☐ TKN ☐ TN ☐ TON ☐ TOC ☐ T-Phosphorus ☐ Phenols ☐ Bacteria P/A ☐ Bacteria MPN ☐ Cyanide ☐ Sulfide ☐ Nitrate + Nitrite ☐ Ortho P ☐ Nitrate ☐ Nitrite ☐ Chloride ☐ Sulfate ☐ Bromide ☐ Fluoride ☐ Corrosivity ☐ Reactive CN ☐ Reactive S- ☐ Ignitibility/FP ☐ TCLP Metals ☐ TCLP VOC ☐ TCLP SVOC ☐ TCLP Pesticide Subcontract: ☐ Grain Size ☐ Herbicides ☐ Formaldehyde

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	SOLID	OTHER	Preservation Method: HCl	HNO_3	H_2SO_4	NaOH	MeOH	Sampling: DATE	TIME	SAMPLER	Grab (G) or Composite (C)
36139-12	CA-SED-105	1		X							4/8/16	1135	JN	G
-13	CA-SED-106	1		X								1210	JN	G
-14	CA-SED-107	1		X								1215	JN	G
-15	CA-SED-108	1		X								1150	JN	G

TAT REQUESTED

Priority (24 hr)* ☐
Expedited (48 hr)* ☐
Standard (10 Business Days) ☐
*Date Needed 4/20/16

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS

REPORTING INSTRUCTIONS ☒ PDF (e-mail address) SAME
☐ HARD COPY REQUIRED ☐ FAX (FAX#)

RECEIVED ON ICE ☐ YES ☐ NO
TEMPERATURE 2.3 °C

CUSTODY RECORD
QSD-01 Revision 1/27/16

Relinquished by Sampler:	Date	Time	Received by:	Date	Time
	4/8/16	1315			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by Laboratory:	Date	Time
				4/8/16	1315

Laboratory Report

Absolute Resource associates
124 Heritage Avenue Portsmouth NH 03801

Judd Newcomb
CREDERE Associates
776 Main Street
Westbrook, ME 04092

PO Number: 15001275
Job ID: 36355
Date Received: 4/29/16

Project: Dagostino 15001275

Attached please find results for the analysis of the samples received on the date referenced above.

Unless otherwise noted in the attached report, the analyses performed met the requirements of Absolute Resource Associates' Quality Assurance Plan. The Standard Operating Procedures are based upon USEPA SW-846, USEPA Methods for Chemical Analysis of Water and Wastewater, Standard Methods for the Examination of Water and Wastewater and other recognized methodologies. The results contained in this report pertain only to the samples as indicated on the chain of custody.

Absolute Resource Associates maintains certification with the agencies listed below.

We appreciate the opportunity to provide laboratory services. If you have any questions regarding the enclosed report, please contact the laboratory and we will be glad to assist you.

Sincerely,
Absolute Resource Associates

(for)

Sue Sylvester
Principal, General Manager

Date of Approval: 5/10/2016
Total number of pages: 18

Absolute Resource Associates Certifications

New Hampshire	1732	Massachusetts	M-NH902
Maine	NH903		

Project ID: Dagostino 15001275
Lab ID: 36355

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
CA-MW-103	Water	4/29/2016 13:25	36355-001	
				Pesticides in water by 8081
				PAHs in water by 8270
				Water Digestion for ICP Analysis
				Silver in water by 6020
				Arsenic in water by 6020
				Barium in water by 6020
				Cadmium in water by 6020
				Chromium in water by 6020
				Mercury in water by 7470
				Lead in water by 6020
				Selenium in water by 6020
				VOCs in water by 8260 Petro & Haz Waste

Project ID: Dagostino 15001275
Job ID: 36355
Sample#: 36355-001
Sample ID: CA-MW-103
Matrix: Water
Sampled: 4/29/16 13:25

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
chloromethane	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
vinyl chloride	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
bromomethane	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
chloroethane	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
diethyl ether	< 5	5	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
acetone	< 50	50	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
methylene chloride	< 5	5	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
carbon disulfide	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
isopropyl ether (DIPE)	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
ethyl t-butyl ether (ETBE)	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
t-butanol (TBA)	< 30	30	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
2-butanone (MEK)	< 10	10	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
2,2-dichloropropane	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
chloroform	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
bromochloromethane	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
tetrahydrofuran (THF)	< 10	10	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
1,1-dichloropropene	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
t-amyl-methyl ether (TAME)	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
carbon tetrachloride	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
benzene	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
trichloroethene	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
bromodichloromethane	< 0.6	0.6	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
1,4-dioxane	< 50	50	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
dibromomethane	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
toluene	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
2-hexanone	< 10	10	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
1,3-dichloropropane	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
tetrachloroethene	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
dibromochloromethane	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C

Project ID: Dagostino 15001275
Job ID: 36355
Sample#: 36355-001
Sample ID: CA-MW-103
Matrix: Water
Sampled: 4/29/16 13:25

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
chlorobenzene	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
ethylbenzene	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
m&p-xylenes	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
o-xylene	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
styrene	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
bromoform	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
isopropylbenzene	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
1,2,3-trichloropropane	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
n-propylbenzene	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
bromobenzene	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
1,3,5-trimethylbenzene	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
2-chlorotoluene	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
4-chlorotoluene	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
tert-butylbenzene	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
1,2,4-trimethylbenzene	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
sec-butylbenzene	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
1,3-dichlorobenzene	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
4-isopropyltoluene	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
1,4-dichlorobenzene	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
1,2-dichlorobenzene	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
n-butylbenzene	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
1,2,4-trichlorobenzene	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
1,3,5-trichlorobenzene	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
hexachlorobutadiene	< 0.5	0.5	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
naphthalene	< 5	5	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
1,2,3-trichlorobenzene	< 2	2	ug/L	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**103**	78-114	%	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
toluene-D8 SUR	**101**	88-110	%	1	LMM		1601015	5/4/16	4:05	SW5030C8260C
4-bromofluorobenzene SUR	**93**	86-115	%	1	LMM		1601015	5/4/16	4:05	SW5030C8260C

Project ID: Dagostino 15001275
Job ID: 36355
Sample#: 36355-001
Sample ID: CA-MW-103
Matrix: Water
Sampled: 4/29/16 13:25

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.5	0.5	ug/L	1	AJD	5/2/16	8750	5/3/16	19:59	SW3510C8270D
2-methylnaphthalene	< 0.5	0.5	ug/L	1	AJD	5/2/16	8750	5/3/16	19:59	SW3510C8270D
acenaphthylene	< 0.5	0.5	ug/L	1	AJD	5/2/16	8750	5/3/16	19:59	SW3510C8270D
acenaphthene	< 0.5	0.5	ug/L	1	AJD	5/2/16	8750	5/3/16	19:59	SW3510C8270D
dibenzofuran	< 0.5	0.5	ug/L	1	AJD	5/2/16	8750	5/3/16	19:59	SW3510C8270D
fluorene	< 0.5	0.5	ug/L	1	AJD	5/2/16	8750	5/3/16	19:59	SW3510C8270D
phenanthrene	< 0.5	0.5	ug/L	1	AJD	5/2/16	8750	5/3/16	19:59	SW3510C8270D
anthracene	< 0.5	0.5	ug/L	1	AJD	5/2/16	8750	5/3/16	19:59	SW3510C8270D
fluoranthene	< 0.5	0.5	ug/L	1	AJD	5/2/16	8750	5/3/16	19:59	SW3510C8270D
pyrene	< 0.5	0.5	ug/L	1	AJD	5/2/16	8750	5/3/16	19:59	SW3510C8270D
benzo(a)anthracene	< 0.1	0.1	ug/L	1	AJD	5/2/16	8750	5/3/16	19:59	SW3510C8270D
chrysene	< 0.5	0.5	ug/L	1	AJD	5/2/16	8750	5/3/16	19:59	SW3510C8270D
benzo(b)fluoranthene	< 0.1	0.1	ug/L	1	AJD	5/2/16	8750	5/3/16	19:59	SW3510C8270D
benzo(k)fluoranthene	< 0.5	0.5	ug/L	1	AJD	5/2/16	8750	5/3/16	19:59	SW3510C8270D
benzo(a)pyrene	< 0.2	0.2	ug/L	1	AJD	5/2/16	8750	5/3/16	19:59	SW3510C8270D
indeno(1,2,3-cd)pyrene	< 0.1	0.1	ug/L	1	AJD	5/2/16	8750	5/3/16	19:59	SW3510C8270D
dibenzo(a,h)anthracene	< 0.1	0.1	ug/L	1	AJD	5/2/16	8750	5/3/16	19:59	SW3510C8270D
benzo(g,h,i)perylene	< 0.5	0.5	ug/L	1	AJD	5/2/16	8750	5/3/16	19:59	SW3510C8270D
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**81**	43-116	%	1	AJD	5/2/16	8750	5/3/16	19:59	SW3510C8270D
o-terphenyl SUR	**90**	33-141	%	1	AJD	5/2/16	8750	5/3/16	19:59	SW3510C8270D

Project ID: Dagostino 15001275
Job ID: 36355
Sample#: 36355-001
Sample ID: CA-MW-103
Matrix: Water
Sampled: 4/29/16 13:25

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
alpha-BHC	< 0.05	0.05	ug/L	1	AM	5/4/16	8755	5/4/16	13:57	SW3510C8081B
beta-BHC	< 0.05	0.05	ug/L	1	AM	5/4/16	8755	5/4/16	13:57	SW3510C8081B
delta-BHC	< 0.05	0.05	ug/L	1	AM	5/4/16	8755	5/4/16	13:57	SW3510C8081B
gamma-BHC (Lindane)	< 0.05	0.05	ug/L	1	AM	5/4/16	8755	5/4/16	13:57	SW3510C8081B
Heptachlor	< 0.05	0.05	ug/L	1	AM	5/4/16	8755	5/4/16	13:57	SW3510C8081B
Aldrin	< 0.05	0.05	ug/L	1	AM	5/4/16	8755	5/4/16	13:57	SW3510C8081B
Heptachlor Epoxide	< 0.05	0.05	ug/L	1	AM	5/4/16	8755	5/4/16	13:57	SW3510C8081B
Endosulfan I	< 0.05	0.05	ug/L	1	AM	5/4/16	8755	5/4/16	13:57	SW3510C8081B
Dieldrin	< 0.05	0.05	ug/L	1	AM	5/4/16	8755	5/4/16	13:57	SW3510C8081B
4,4'-DDE	< 0.05	0.05	ug/L	1	AM	5/4/16	8755	5/4/16	13:57	SW3510C8081B
Endrin	< 0.05	0.05	ug/L	1	AM	5/4/16	8755	5/4/16	13:57	SW3510C8081B
Endosulfan II	< 0.05	0.05	ug/L	1	AM	5/4/16	8755	5/4/16	13:57	SW3510C8081B
4,4'-DDD	< 0.05	0.05	ug/L	1	AM	5/4/16	8755	5/4/16	13:57	SW3510C8081B
Endosulfan Sulfate	< 0.05	0.05	ug/L	1	AM	5/4/16	8755	5/4/16	13:57	SW3510C8081B
4,4'-DDT	< 0.05	0.05	ug/L	1	AM	5/4/16	8755	5/4/16	13:57	SW3510C8081B
Methoxychlor	< 0.05	0.05	ug/L	1	AM	5/4/16	8755	5/4/16	13:57	SW3510C8081B
Endrin Ketone	< 0.05	0.05	ug/L	1	AM	5/4/16	8755	5/4/16	13:57	SW3510C8081B
Endrin Aldehyde	< 0.05	0.05	ug/L	1	AM	5/4/16	8755	5/4/16	13:57	SW3510C8081B
alpha-Chlordane	< 0.05	0.05	ug/L	1	AM	5/4/16	8755	5/4/16	13:57	SW3510C8081B
gamma-Chlordane	< 0.05	0.05	ug/L	1	AM	5/4/16	8755	5/4/16	13:57	SW3510C8081B
Toxaphene	< 0.4	0.4	ug/L	1	AM	5/4/16	8755	5/4/16	13:57	SW3510C8081B
Surrogate Recovery		**Limits**								
tetrachloro-m-xylene SUR	**70**	30-150	%	1	AM	5/4/16	8755	5/4/16	13:57	SW3510C8081B
decachlorobiphenyl SUR	**84**	30-150	%	1	AM	5/4/16	8755	5/4/16	13:57	SW3510C8081B

Project ID: Dagostino 15001275
Job ID: 36355
Sample#: 36355-001
Sample ID: CA-MW-103
Matrix: Water
Sampled: 4/29/16 13:25

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Arsenic	< 0.005	0.005	mg/L	1	AJC	5/4/16	8756	5/4/16	18:31	SW3005A6020A
Barium	< 0.01	0.01	mg/L	1	AJC	5/4/16	8756	5/4/16	18:31	SW3005A6020A
Cadmium	< 0.001	0.001	mg/L	1	AJC	5/4/16	8756	5/4/16	18:31	SW3005A6020A
Chromium	< 0.01	0.01	mg/L	1	AJC	5/4/16	8756	5/4/16	18:31	SW3005A6020A
Lead	< 0.005	0.005	mg/L	1	AJC	5/4/16	8756	5/4/16	18:31	SW3005A6020A
Mercury	< 0.0002	0.0002	mg/L	1	AC	5/4/16	8760	5/4/16	15:50	SW7470A
Selenium	< 0.01	0.01	mg/L	1	AJC	5/4/16	8756	5/4/16	18:31	SW3005A6020A
Silver	< 0.005	0.005	mg/L	1	AJC	5/4/16	8756	5/4/16	18:31	SW3005A6020A

Quality Control Report

124 Heritage Avenue Unit 16
Portsmouth, NH 03801
www.absoluteresourceassociates.com

Case Narrative
Lab # 36355

Sample Receiving and Chain of Custody Discrepancies

Samples were received in acceptable condition, on the day of sampling, at 8 degrees C, on ice, and in accordance with sample handling, preservation and integrity guidelines.

Calibration

No exceptions noted.

Method Blank

No exceptions noted.

Surrogate Recoveries

No exceptions noted.

Laboratory Control Sample Results

VOC: The LCS/D1601015 did not meet the acceptance criteria for 2-butanone (MEK) and 2-hexanone. These compounds showed high recovery. There is no impact to the data as these analytes were not detected in the associated samples.

Matrix Spike/Matrix Spike Duplicate/Duplicate Results

Not requested for this project.

Other

Reporting Limits: Dilutions performed during the analysis are noted on the result pages.

No other exceptions noted.

- QC Report -

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits	RPD	RPD Limit
SW5030C8260C	BLK1601015	dichlorodifluoromethane		<	2	ug/L					
		chloromethane		<	2	ug/L					
		vinyl chloride		<	2	ug/L					
		bromomethane		<	2	ug/L					
		chloroethane		<	2	ug/L					
		trichlorofluoromethane		<	2	ug/L					
		diethyl ether		<	10	ug/L					
		acetone		<	50	ug/L					
		1,1-dichloroethene		<	1	ug/L					
		methylene chloride		<	5	ug/L					
		carbon disulfide		<	2	ug/L					
		methyl t-butyl ether (MTBE)		<	2	ug/L					
		trans-1,2-dichloroethene		<	2	ug/L					
		isopropyl ether (DIPE)		<	2	ug/L					
		ethyl t-butyl ether (ETBE)		<	2	ug/L					
		1,1-dichloroethane		<	2	ug/L					
		t-butanol (TBA)		<	30	ug/L					
		2-butanone (MEK)		<	10	ug/L					
		2,2-dichloropropane		<	2	ug/L					
		cis-1,2-dichloroethene		<	2	ug/L					
		chloroform		<	2	ug/L					
		bromochloromethane		<	2	ug/L					
		tetrahydrofuran (THF)		<	10	ug/L					
		1,1,1-trichloroethane		<	2	ug/L					
		1,1-dichloropropene		<	2	ug/L					
		t-amyl-methyl ether (TAME)		<	2	ug/L					
		carbon tetrachloride		<	2	ug/L					
		1,2-dichloroethane		<	2	ug/L					
		benzene		<	2	ug/L					
		trichloroethene		<	2	ug/L					
		1,2-dichloropropane		<	2	ug/L					
		bromodichloromethane		<	0.6	ug/L					
		1,4-dioxane		<	50	ug/L					
		dibromomethane		<	2	ug/L					
		4-methyl-2-pentanone (MIBK)		<	10	ug/L					
		cis-1,3-dichloropropene		<	2	ug/L					
		toluene		<	2	ug/L					
		trans-1,3-dichloropropene		<	2	ug/L					
		2-hexanone		<	10	ug/L					
		1,1,2-trichloroethane		<	2	ug/L					
		1,3-dichloropropane		<	2	ug/L					
		tetrachloroethene		<	2	ug/L					
		dibromochloromethane		<	2	ug/L					
		1,2-dibromoethane (EDB)		<	2	ug/L					
		chlorobenzene		<	2	ug/L					
		1,1,1,2-tetrachloroethane		<	2	ug/L					
		ethylbenzene		<	2	ug/L					
		m&p-xylenes		<	2	ug/L					
		o-xylene		<	2	ug/L					
		styrene		<	2	ug/L					

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030C8260C	BLK1601015	bromoform		<	2	ug/L						
		isopropylbenzene		<	2	ug/L						
		1,1,2,2-tetrachloroethane		<	2	ug/L						
		1,2,3-trichloropropane		<	2	ug/L						
		n-propylbenzene		<	2	ug/L						
		bromobenzene		<	2	ug/L						
		1,3,5-trimethylbenzene		<	2	ug/L						
		2-chlorotoluene		<	2	ug/L						
		4-chlorotoluene		<	2	ug/L						
		tert-butylbenzene		<	2	ug/L						
		1,2,4-trimethylbenzene		<	2	ug/L						
		sec-butylbenzene		<	2	ug/L						
		1,3-dichlorobenzene		<	2	ug/L						
		4-isopropyltoluene		<	2	ug/L						
		1,4-dichlorobenzene		<	2	ug/L						
		1,2-dichlorobenzene		<	2	ug/L						
		n-butylbenzene		<	2	ug/L						
		1,2-dibromo-3-chloropropane (DBCP)		<	2	ug/L						
		1,2,4-trichlorobenzene		<	2	ug/L						
		1,3,5-trichlorobenzene		<	2	ug/L						
		hexachlorobutadiene		<	0.5	ug/L						
		naphthalene		<	5	ug/L						
		1,2,3-trichlorobenzene		<	2	ug/L						
		dibromofluoromethane SUR			104	%			78	114		
		toluene-D8 SUR			101	%			88	110		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5030C8260C	LCS1601015	dichlorodifluoromethane			19	ug/L	20	93		70	130		
		chloromethane			20	ug/L	20	100		70	130		
		vinyl chloride			22	ug/L	20	109		70	130		
		bromomethane			14	ug/L	20	72		70	130		
		chloroethane			23	ug/L	20	115		70	130		
		trichlorofluoromethane			23	ug/L	20	115		70	130		
		diethyl ether			21	ug/L	20	106		70	130		
		acetone		<	50	ug/L	20	200					
		1,1-dichloroethene			20	ug/L	20	101		70	130		
		methylene chloride			22	ug/L	20	108		70	130		
		carbon disulfide			18	ug/L	20	89		70	130		
		methyl t-butyl ether (MTBE)			21	ug/L	20	103		70	130		
		trans-1,2-dichloroethene			21	ug/L	20	107		70	130		
		isopropyl ether (DIPE)			22	ug/L	20	108		70	130		
		ethyl t-butyl ether (ETBE)			20	ug/L	20	102		70	130		
		1,1-dichloroethane			22	ug/L	20	109		70	130		
		t-butanol (TBA)			120	ug/L	100	116		70	130		
		2-butanone (MEK)			29	ug/L	20	145	*	70	130		
		2,2-dichloropropane			20	ug/L	20	98		70	130		
		cis-1,2-dichloroethene			21	ug/L	20	106		70	130		
		chloroform			22	ug/L	20	112		70	130		
		bromochloromethane			21	ug/L	20	106		70	130		
		tetrahydrofuran (THF)			21	ug/L	20	105		70	130		
		1,1,1-trichloroethane			23	ug/L	20	115		70	130		
		1,1-dichloropropene			21	ug/L	20	106		70	130		
		t-amyl-methyl ether (TAME)			20	ug/L	20	100		70	130		
		carbon tetrachloride			22	ug/L	20	112		70	130		
		1,2-dichloroethane			24	ug/L	20	120		70	130		
		benzene			22	ug/L	20	109		70	130		
		trichloroethene			23	ug/L	20	117		70	130		
		1,2-dichloropropane			22	ug/L	20	108		70	130		
		bromodichloromethane			23	ug/L	20	113		70	130		
		1,4-dioxane		<	50	ug/L	40	106		70	130		
		dibromomethane			21	ug/L	20	106		70	130		
		4-methyl-2-pentanone (MIBK)			23	ug/L	20	113		70	130		
		cis-1,3-dichloropropene			21	ug/L	20	103		70	130		
		toluene			21	ug/L	20	107		70	130		
		trans-1,3-dichloropropene			20	ug/L	20	101		70	130		
		2-hexanone			27	ug/L	20	133	*	70	130		
		1,1,2-trichloroethane			22	ug/L	20	109		70	130		
		1,3-dichloropropane			20	ug/L	20	102		70	130		
		tetrachloroethene			21	ug/L	20	105		70	130		
		dibromochloromethane			21	ug/L	20	106		70	130		
		1,2-dibromoethane (EDB)			21	ug/L	20	107		70	130		
		chlorobenzene			22	ug/L	20	109		70	130		
		1,1,1,2-tetrachloroethane			20	ug/L	20	99		70	130		
		ethylbenzene			21	ug/L	20	105		70	130		
		m&p-xylenes			42	ug/L	40	104		70	130		
		o-xylene			20	ug/L	20	101		70	130		
		styrene			21	ug/L	20	104		70	130		
		bromoform			20	ug/L	20	101		70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030C8260C	LCS1601015	isopropylbenzene		20	ug/L	20	100	70	130		
		1,1,2,2-tetrachloroethane		24	ug/L	20	118	70	130		
		1,2,3-trichloropropane		21	ug/L	20	107	70	130		
		n-propylbenzene		21	ug/L	20	106	70	130		
		bromobenzene		21	ug/L	20	104	70	130		
		1,3,5-trimethylbenzene		21	ug/L	20	107	70	130		
		2-chlorotoluene		22	ug/L	20	109	70	130		
		4-chlorotoluene		22	ug/L	20	108	70	130		
		tert-butylbenzene		21	ug/L	20	106	70	130		
		1,2,4-trimethylbenzene		21	ug/L	20	103	70	130		
		sec-butylbenzene		21	ug/L	20	107	70	130		
		1,3-dichlorobenzene		21	ug/L	20	107	70	130		
		4-isopropyltoluene		21	ug/L	20	104	70	130		
		1,4-dichlorobenzene		22	ug/L	20	110	70	130		
		1,2-dichlorobenzene		22	ug/L	20	109	70	130		
		n-butylbenzene		22	ug/L	20	109	70	130		
		1,2-dibromo-3-chloropropane (DBCP)		21	ug/L	20	106	70	130		
		1,2,4-trichlorobenzene		21	ug/L	20	103	70	130		
		1,3,5-trichlorobenzene		21	ug/L	20	104	70	130		
		hexachlorobutadiene		18	ug/L	20	90	70	130		
		naphthalene		22	ug/L	20	111	70	130		
		1,2,3-trichlorobenzene		21	ug/L	20	104	70	130		
		dibromofluoromethane SUR		103	%			78	114		
		toluene-D8 SUR		102	%			88	110		
		4-bromofluorobenzene SUR		98	%			86	115		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5030C8260C	LCSD1601015	dichlorodifluoromethane			17	ug/L	20	87		70	130	6	20
		chloromethane			19	ug/L	20	94		70	130	6	20
		vinyl chloride			20	ug/L	20	102		70	130	7	20
		bromomethane			16	ug/L	20	79		70	130	9	20
		chloroethane			21	ug/L	20	106		70	130	8	20
		trichlorofluoromethane			22	ug/L	20	108		70	130	6	20
		diethyl ether			20	ug/L	20	101		70	130	5	20
		acetone		<	50	ug/L	20	222				10	20
		1,1-dichloroethene			19	ug/L	20	94		70	130	8	20
		methylene chloride			22	ug/L	20	111		70	130	3	20
		carbon disulfide			17	ug/L	20	83		70	130	8	20
		methyl t-butyl ether (MTBE)			19	ug/L	20	97		70	130	6	20
		trans-1,2-dichloroethene			20	ug/L	20	99		70	130	8	20
		isopropyl ether (DIPE)			20	ug/L	20	99		70	130	9	20
		ethyl t-butyl ether (ETBE)			19	ug/L	20	95		70	130	7	20
		1,1-dichloroethane			20	ug/L	20	102		70	130	7	20
		t-butanol (TBA)			110	ug/L	100	106		70	130	8	20
		2-butanone (MEK)			29	ug/L	20	146	*	70	130	0	20
		2,2-dichloropropane			18	ug/L	20	91		70	130	7	20
		cis-1,2-dichloroethene			20	ug/L	20	98		70	130	8	20
		chloroform			21	ug/L	20	105		70	130	7	20
		bromochloromethane			20	ug/L	20	99		70	130	8	20
		tetrahydrofuran (THF)			20	ug/L	20	100		70	130	5	20
		1,1,1-trichloroethane			22	ug/L	20	108		70	130	6	20
		1,1-dichloropropene			20	ug/L	20	101		70	130	5	20
		t-amyl-methyl ether (TAME)			19	ug/L	20	94		70	130	6	20
		carbon tetrachloride			21	ug/L	20	104		70	130	8	20
		1,2-dichloroethane			22	ug/L	20	111		70	130	7	20
		benzene			20	ug/L	20	100		70	130	9	20
		trichloroethene			21	ug/L	20	106		70	130	9	20
		1,2-dichloropropane			20	ug/L	20	102		70	130	6	20
		bromodichloromethane			21	ug/L	20	105		70	130	7	20
		1,4-dioxane		<	50	ug/L	40	112		70	130	6	20
		dibromomethane			21	ug/L	20	103		70	130	3	20
		4-methyl-2-pentanone (MIBK)			22	ug/L	20	111		70	130	2	20
		cis-1,3-dichloropropene			19	ug/L	20	95		70	130	8	20
		toluene			20	ug/L	20	100		70	130	7	20
		trans-1,3-dichloropropene			19	ug/L	20	96		70	130	6	20
		2-hexanone			28	ug/L	20	141	*	70	130	6	20
		1,1,2-trichloroethane			21	ug/L	20	105		70	130	4	20
		1,3-dichloropropane			20	ug/L	20	100		70	130	2	20
		tetrachloroethene			20	ug/L	20	100		70	130	5	20
		dibromochloromethane			20	ug/L	20	102		70	130	4	20
		1,2-dibromoethane (EDB)			21	ug/L	20	103		70	130	4	20
		chlorobenzene			21	ug/L	20	104		70	130	4	20
		1,1,1,2-tetrachloroethane			20	ug/L	20	98		70	130	1	20
		ethylbenzene			20	ug/L	20	101		70	130	4	20
		m&p-xylenes			40	ug/L	40	99		70	130	5	20
		o-xylene			19	ug/L	20	97		70	130	4	20
		styrene			20	ug/L	20	100		70	130	4	20
		bromoform			19	ug/L	20	97		70	130	4	20

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030C8260C	LCSD1601015	isopropylbenzene		19	ug/L	20	96	70	130	4	20
		1,1,2,2-tetrachloroethane		23	ug/L	20	113	70	130	5	20
		1,2,3-trichloropropane		21	ug/L	20	106	70	130	1	20
		n-propylbenzene		20	ug/L	20	99	70	130	6	20
		bromobenzene		20	ug/L	20	99	70	130	5	20
		1,3,5-trimethylbenzene		20	ug/L	20	102	70	130	5	20
		2-chlorotoluene		20	ug/L	20	101	70	130	7	20
		4-chlorotoluene		20	ug/L	20	102	70	130	5	20
		tert-butylbenzene		20	ug/L	20	99	70	130	6	20
		1,2,4-trimethylbenzene		19	ug/L	20	97	70	130	6	20
		sec-butylbenzene		20	ug/L	20	100	70	130	7	20
		1,3-dichlorobenzene		21	ug/L	20	103	70	130	3	20
		4-isopropyltoluene		20	ug/L	20	98	70	130	6	20
		1,4-dichlorobenzene		21	ug/L	20	106	70	130	4	20
		1,2-dichlorobenzene		21	ug/L	20	103	70	130	5	20
		n-butylbenzene		20	ug/L	20	102	70	130	6	20
		1,2-dibromo-3-chloropropane (DBCP)		21	ug/L	20	103	70	130	2	20
		1,2,4-trichlorobenzene		19	ug/L	20	97	70	130	7	20
		1,3,5-trichlorobenzene		19	ug/L	20	96	70	130	8	20
		hexachlorobutadiene		17	ug/L	20	86	70	130	5	20
		naphthalene		22	ug/L	20	109	70	130	2	20
		1,2,3-trichlorobenzene		20	ug/L	20	102	70	130	2	20
		dibromofluoromethane SUR		106	%			78	114		
		toluene-D8 SUR		101	%			88	110		
		4-bromofluorobenzene SUR		99	%			86	115		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW3510C8081B	BLK8755	alpha-BHC		<	0.05	ug/L						
		beta-BHC		<	0.05	ug/L						
		delta-BHC		<	0.05	ug/L						
		gamma-BHC (Lindane)		<	0.05	ug/L						
		Heptachlor		<	0.05	ug/L						
		Aldrin		<	0.05	ug/L						
		Heptachlor Epoxide		<	0.05	ug/L						
		Endosulfan I		<	0.05	ug/L						
		Dieldrin		<	0.05	ug/L						
		4,4'-DDE		<	0.05	ug/L						
		Endrin		<	0.05	ug/L						
		Endosulfan II		<	0.05	ug/L						
		4,4'-DDD		<	0.05	ug/L						
		Endosulfan Sulfate		<	0.05	ug/L						
		4,4'-DDT		<	0.05	ug/L						
		Methoxychlor		<	0.05	ug/L						
		Endrin Ketone		<	0.05	ug/L						
		Endrin Aldehyde		<	0.05	ug/L						
		alpha-Chlordane		<	0.05	ug/L						
		gamma-Chlordane		<	0.05	ug/L						
		Toxaphene		<	1.0	ug/L						
		tetrachloro-m-xylene SUR			69	%			30	150		
		decachlorobiphenyl SUR			84	%			30	150		
SW3510C8081B	LCS8755	Toxaphene										
		alpha-BHC			0.64	ug/L	1	64	40	140		
		beta-BHC			0.67	ug/L	1	67	40	140		
		delta-BHC			0.70	ug/L	1	70	40	140		
		gamma-BHC (Lindane)			0.63	ug/L	1	63	40	140		
		Heptachlor			0.56	ug/L	1	56	40	140		
		Aldrin			0.61	ug/L	1	61	40	140		
		Heptachlor Epoxide			0.64	ug/L	1	64	40	140		
		Endosulfan I			0.58	ug/L	1	58	40	140		
		Dieldrin			0.64	ug/L	1	64	40	140		
		4,4'-DDE			0.75	ug/L	1	75	40	140		
		Endrin			0.84	ug/L	1	84	40	140		
		Endosulfan II			0.66	ug/L	1	66	40	140		
		4,4'-DDD			0.72	ug/L	1	72	40	140		
		Endosulfan Sulfate			0.68	ug/L	1	68	40	140		
		4,4'-DDT			0.72	ug/L	1	72	40	140		
		Methoxychlor			0.78	ug/L	1	78	40	140		
		Endrin Ketone			0.76	ug/L	1	76	40	140		
		Endrin Aldehyde			0.64	ug/L	1	64	40	140		
		alpha-Chlordane			1.1	ug/L	1	106	40	140		
		gamma-Chlordane			0.65	ug/L	1	65	40	140		
		tetrachloro-m-xylene SUR			68	%			30	150		
		decachlorobiphenyl SUR			83	%			30	150		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW3005A6020A	BLK8756	Silver		<	0.005	mg/L						
		Arsenic		<	0.005	mg/L						
		Barium		<	0.01	mg/L						
		Cadmium		<	0.001	mg/L						
		Chromium		<	0.01	mg/L						
		Lead		<	0.005	mg/L						
		Selenium		<	0.01	mg/L						
SW3005A6020A	DUP8756	Silver	36344-001		0.074	mg/L					41	20
SW3005A6020A	LCS8756	Silver			0.27	mg/L	0.25	108	80	120		
		Arsenic			0.51	mg/L	0.5	103	80	120		
		Barium			0.55	mg/L	0.5	110	80	120		
		Cadmium			0.51	mg/L	0.5	102	80	120		
		Chromium			0.54	mg/L	0.5	107	80	120		
		Lead			0.57	mg/L	0.5	114	80	120		
		Selenium			0.53	mg/L	0.5	106	80	120		
SW3005A6020A	LCSD8756	Silver			0.28	mg/L	0.25	113	80	120	5	20
		Arsenic			0.52	mg/L	0.5	104	80	120	1	20
		Barium			0.56	mg/L	0.5	111	80	120	1	20
		Cadmium			0.54	mg/L	0.5	108	80	120	6	20
		Chromium			0.54	mg/L	0.5	108	80	120	1	20
		Lead			0.57	mg/L	0.5	115	80	120	1	20
		Selenium			0.53	mg/L	0.5	106	80	120	1	20
SW3005A6020A	MS8756	Silver	36344-001		0.36	mg/L	0.25	124	70	130		
SW7470A	BLK8760	Mercury		<	0.0002	mg/L						
SW7470A	LCS8760	Mercury			0.0020	mg/L	0.002	101	80	120		
SW7470A	LCSD8760	Mercury			0.0019	mg/L	0.002	97	80	120	4	20
SW7470A	MS8760	Mercury	36323-001		0.0019	mg/L	0.002	95	80	120		

Absolute Resource associates
124 Heritage Avenue #16
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

36355

Company Name: CROSSROADS ASSOC. LLC

Company Address: 776 MAIN ST WESTBROOK ME

Report To: JUDD NEWCOMB

Phone #: 207-824-1672

Invoice to Email: JNEWCOMB@CROSSROADSLLC.com

☐ Hard Copy Invoice Required

Project Name: DAGOSTINO

Project #: 15001275

Project Location: (NH) MA ME VT NY Other

Protocol: RCRA SDWA NPDES MCP (NHDES) OTHER

Reporting Limits: QAPP GW-1 S-1 EPA DW Other

Quote #: ☐ NH Reimbursement Pricing

PO #: 15001275

ANALYSIS REQUEST

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	Matrix: SOLID	Matrix: OTHER	Preservation: HCl	Preservation: HNO_3	Preservation: H_2SO_4	Preservation: NaOH	Preservation: MeOH	Sampling: DATE	Sampling: TIME	SAMPLER	☒ VOC 8260 ☐ VOC 8260 NHDES ☐ VOC 8260 MADEP	☐ 8270PAH ☒ 8270ABN ☐ 625 ☐ EDB	☐ 8082 PCB ☒ 8081 Pesticides ☐ 608 Pest/PCB	☒ RCRA Metals ☐ Priority Pollutant Metals ☐ TAL Metals ☐ Hardness	Grab (G) or Composite (C)
36355-01	CA-MW-103	7	X			X	X				4/29/16	1325	MM	X	X	X	X	G

Other analysis request options (not selected): ☐ VOC 624 ☐ VOC BTEX ☐ MtBE, only ☐ VOC 8021VT; ☐ VPH MADEP ☐ GRO 8015 ☐ 1,4-Dioxane; ☐ VOC 524.2 ☐ VOC 524.2 NH List ☐ Gases-List:; ☐ TPH ☐ DRO 8015 ☐ EPH MADEP ☐ TPH Fingerprint; ☐ O&G 1664 ☐ Mineral O&G SM5520F; ☐ pH ☐ BOD ☐ Conductivity ☐ Turbidity; ☐ TSS ☐ TDS ☐ TS ☐ TVS ☐ Alkalinity; ☐ Total Metals-list:; ☐ Dissolved Metals-list:; ☐ Ammonia ☐ COD ☐ TKN ☐ TN ☐ TON ☐ TOC; ☐ T-Phosphorus ☐ Phenols ☐ Bacteria P/A ☐ Bacteria MPN; ☐ Cyanide ☐ Sulfide ☐ Nitrate + Nitrite ☐ Ortho P; ☐ Nitrate ☐ Nitrite ☐ Chloride ☐ Sulfate ☐ Bromide ☐ Fluoride; ☐ Corrosivity ☐ Reactive CN ☐ Reactive S- ☐ Ignitibility/FP; ☐ TCLP Metals ☐ TCLP VOC ☐ TCLP SVOC ☐ TCLP Pesticide; Subcontract: ☐ Grain Size ☐ Herbicides ☐ Formaldehyde

TAT REQUESTED

Priority (24 hr)* ☐

Expedited (48 hr)* ☐

Standard (10 Business Days) ☐

*Date Needed 5/6/16

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS

REPORTING INSTRUCTIONS ☒ PDF (e-mail address) JNEWCOMB@CROSSROADSLLC.com

☐ HARD COPY REQUIRED ☐ FAX (FAX#)

RECEIVED ON ICE ☒ YES ☐ NO

TEMPERATURE 8 °C

CUSTODY RECORD

Relinquished by	Date	Time	Received by	Date	Time
Relinquished by Sampler: [signature]	4/29/16	1523	Received by:		
Relinquished by:			Received by:		
Relinquished by:			Received by Laboratory: [signature]	4/29/16	1523

QSD-01 Revision 1/27/16

APPENDIX E

DATA USABILITY ASSESSMENT

Data Usability Assessment (DUA)
Dagostino Rose Farm
Oak Street Extension, Exeter, New Hampshire
Supplemental Phase II Environmental Site Assessment

Credere has reviewed the following laboratory analytical data reports for precision, bias, accuracy, representativeness, comparability, and completeness:

- Absolute Resource Associates Job ID 36139
- Absolute Resource Associates Job ID 36355

The following samples were included in the above reports and were reviewed as part of this DUA:

Field Sample ID	Laboratory Sample ID
CA-SB-103 (10-12)	36139-001
CA-SS-101B	36139-003
CA-SS-101D	36139-005
CA-SS-101F	36139-007
Trip Blank	36139-009
CA-SED-104	36139-011
CA-SED-106	36139-013
CA-SED-108	36139-015

Field Sample ID	Laboratory Sample ID
CA-SS-101A	36139-002
CA-SS-101C	36139-004
CA-SS-101E	36139-006
CA-SS-105	36139-008
CA-SED-103	36139-010
CA-SED-105	36139-012
CA-SED-107	36139-014
CA-MW-103	36355-001

General Summary

In general, the data reviewed for this project are usable for making project decisions. Data are considered representative with regard to the sample design. No data were qualified as a result of this DUA. The following concerns were identified with regard to reporting limits relative to regulatory criteria:

- Reporting limits for PAHs in sediment samples CA-SED-106, CA-SED-107, and CA-SED-108 exceeded the applicable regulatory criteria, and, therefore, cannot be used to dismiss the presence of these contaminants in sediment. Improved reporting limits for these sediment samples may alter the conclusions drawn regarding the PAHs in sediment.

Precision

Precision is a measure of the mutual agreement between concentrations of samples (e.g., duplicates) collected at the same time from the same location. Precision is measured by performing duplicate measurements in the field or laboratory. Precision is expressed in terms of relative percent difference (RPD) using the following equation:

$$RPD = [(C1-C2) /(C1+C2)/2)] \times 100$$

Where:
C1 = The larger of the two concentrations.
C2 = The smaller of the two concentrations.

Duplicate samples were not collected as part of this Supplemental Phase II ESA.

Bias

Bias is the systematic or persistent distortion of a measurement process that causes errors in one direction. Bias assessments are made using personnel, equipment, and spiking materials or reference materials as independent as possible from those used in the calibration of the measurement system. Bias assessments were based on the analysis of spiked samples so that the effect of the matrix on recovery is incorporated into the assessment. A documented spiking protocol and consistency in following that protocol are important in obtaining meaningful data quality estimates.

Matrix spike and matrix spike duplicate samples (MS/MSD) were used to assess bias as prescribed in EPA Method 6020A and 7471B/7470A. Recovery values were within the recoveries specified by each of the analysis methods. Control samples for assessing bias were analyzed at a rate as specified in the analytical SOPs and specified analytical methods. MS/MSD samples were not submitted as part of this Supplemental Phase II ESA.

The laboratory provides quality control non-conformance reports that indicate if Laboratory Control Samples/Laboratory Control Sample Duplicates (LCS/LCSD) and/or MS/MSD had low, failing, or high recoveries, and if the sample result was affected. Likewise, the laboratory reports any compounds that had failing RPDs in the LCS/LCSD pair or the MS/MSD pair. This indicates the percent difference between the laboratory sample and its duplicate or the spike and it's duplicate. The following were reported by the laboratory as being outside their acceptable limits:

- The VOC LCS percent recoveries for dichlorodifluoromethane, 1,1-dichloroethene, carbon disulfide, t-butanol (TBA) and 1,4-dioxane were above or below the limits affecting soil samples CA-SB-103 (10-12) and CA-SS-105. TBA and 1,4-dioxane were within the acceptable range for the LCSD and the RPDs were within the allowable range; therefore, data for these compounds is not expected to be impacted. Since less than 10% of compounds were out of range, reanalysis was not performed and data is not considered impacted by this non-conformance.
- The VOC LCS and LCSD percent recoveries for 2-butanone and 2-hexanone were above the limits affecting groundwater sample CA-MW-103. As these compounds were below the laboratory reporting limits in the sample, data is not considered to impacted by this non-conformance.

Accuracy

Accuracy is a statistical measurement of correctness and includes components of random error (variability due to imprecision) and systemic error. It, therefore, reflects the total error associated with a measurement. A measurement is accurate when the value reported does not differ from the true value or known concentration of the spike or standard. Surrogate compound recoveries are also used to assess accuracy and method performance for each sample analyzed. Analysis of performance evaluation samples are also used to provide additional information for assessing the accuracy of the analytical data being produced. Both accuracy and precision are calculated for each analytical batch, and the associated sample results are interpreted by considering these specific measurements. The following non-conformances were noted:

- The PAH surrogates percent recovery for 2-fluorobiphenyl and o-terphenyl were below the laboratory established lower limits affecting sample CA-SED-106. The lab reported obvious interference based on the presence of organic materials and high water content; therefore, reanalysis was not required. Data is not considered impacted by this non-conformance.

Representativeness

Sample representativeness was assessed through an analysis of the blank results. The concentrations and frequencies of target analytes detected in blanks provide an indication of data representativeness. The five times and ten times rules were used judiciously to eliminate potential false positive results indicated by the blank data. Regulatory criteria were considered when using the five and ten times rule to avoid elevation of the reporting limit above the criteria for certain compounds. Blank non-conformances were not encountered during review of the data.

Sample representativeness was also assessed through an evaluation of the sample results compared to the sample design (locations and conceptual site model) to determine if the results are representative of the environment from which the samples were collected.

All objectives for sampling and analytical representativeness for samples that were analyzed, as specified in the SSQAPP Addendum, were met with the exception of the following:

- Reporting limits for PAHs in sediment sample CA-SED-106, CA-SED-107, and CA-SED-108 exceeded the applicable regulatory criteria, and, therefore, cannot be used to dismiss the presence of these contaminants in sediment.

Comparability

Comparability is the confidence with which one data set can be compared to another data set (i.e. how well the data can be reproduced). The objective for this quality assurance/quality control (QA/QC) program is to produce data with the greatest possible degree of comparability. Comparability was achieved by using standard methods for sampling and analysis, reporting data in standard units, normalizing results to standard conditions and using standard and

comprehensive reporting formats. Complete field documentation was used, including standardized data collection forms to support the assessment of comparability.

Completeness

Completeness is calculated by comparing the number of samples successfully analyzed to the number of samples collected. The goal for completeness is 95 percent. The completeness for this project was 100 percent, as there were no samples that were not analyzed due to holding time violations, samples spilled or broken, or any other reason.