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

Type of Submittal (Check One-Most Applicable)

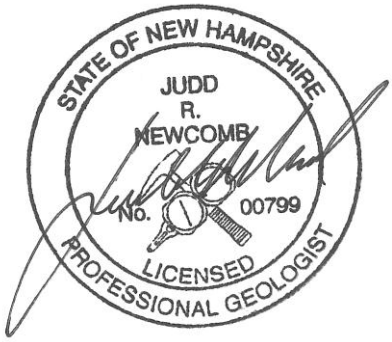
☐ Work Scope ☐ Reimbursement Request	☐ Remedial Action • Remedial Action Plan • Bid Plans and Specifications • Remedial Action Implementation Report ☐ Treatment System and POE O&M ☐ Activity and Use Restriction
☐ UST Facility Report ☐ AST Facility Report	
☐ Emergency/Initial Response Action ☐ Groundwater 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 Brownfields Submittal ☐ 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 ENVIRONMENTAL SITE ASSESSMENT REPORT

New England Yard (A.K.A. DPW New England Yard)
210 Messer Street
Laconia, NH
NHDES Site # 200911005

Prepared For:
Lakes Region Planning Commission
103 Main Street – Suite #3
Meredith, NH 03253
Phone: (603) 279-8171
Contact: Mr. Kimon Koulet

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



May 22, 2012

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

May 22, 2012

Mr. Kimon Koulet, Executive Director
Lakes Region Planning Commission
103 Main Street, Suite #3
Meredith, New Hampshire 03253

Subject: **Phase II Environmental Site Assessment**
New England Yard (A.K.A. DPW New England Yard)
210 Messer Street, Laconia, New Hampshire
NHDES Site # 200911005

Dear Mr. Koulet:

Attached is the Phase II Environmental Site Assessment for the New England Yard (A.K.A. DPW New England Yard) Site located at 210 Messer Street in Laconia, New Hampshire. **Sections 12** and **13** of the attached report present our conclusions and recommendations regarding the Site. Copies of this report have been forwarded to the New Hampshire Department of Environmental Services, the City of Laconia, and the United States Environmental Protection Agency.

Please do not hesitate to contact me at (207) 828-1272 ext. 16 if you have any questions, comments, or require additional information regarding this investigation.

Very truly,

CREDERE ASSOCIATES, LLC

Judd R. Newcomb, CG, PG
Project Manager

cc: Shanna Saunders, City of Laconia
Luke Powell, City of Laconia
Mr. John F. Liptak, M.Ed., P.G., NHDES
Ms. Jerry Minor-Gordon, USEPA

Phase II Environmental Site Assessment Report

New England Yard (A.K.A. DPW New England Yard)
210 Messer Street
Laconia, New Hampshire
NHDES Site #200911005
EPA Grant #BF-96111801

Prepared for:

Lakes Region Planning Commission
103 Main Street, Suite #3
Meredith, NH 03253

May 22, 2012

In Reference to:
Project No. 10001086

Submitted by:
Credere Associates, LLC
776 Main Street
Westbrook, ME 04092

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EXECUTIVE SUMMARY

Credere Associates, LLC (Credere) conducted a Phase II Environmental Site Assessment (Phase II ESA) at the New England Yard (A.K.A. DPW New England Yard) located at 210 Messer Street in Laconia, New Hampshire (the Site) in conformance with the ASTM International (ASTM) Standard Guide for Environmental Site Assessments: *Phase II Environmental Site Assessment Process* E 1903-11. This Phase II ESA was undertaken using United States Environmental Protection Agency (EPA) funds awarded to the Lakes Region Planning Commission (LRPC) for their Brownfields Assessment Program.

Phase II ESA activities were performed specifically to confirm or dismiss *recognized environmental conditions* (RECs) and other ASTM non-scope considerations (NCs) identified during a Phase I Environmental Site Assessment (Phase I ESA) for the Site that was completed by Credere in May 2011.

The Phase II ESA work at the Site included: the advancement of six (6) soil borings and installation of six (6) groundwater monitoring wells; collection and laboratory analysis of six (6) groundwater samples, thirteen (13) soil samples, and one (1) catch basin sample; and, field screening and sampling associated with surveys or screenings for asbestos-containing materials, lead-based paint, and polychlorinated biphenyl (PCB)-containing bulk products.

Based on the findings of this work, Credere's conclusions include the following:

- REC-1 concerning potential soil and groundwater contamination from the historical uses of the Site by coal and ice companies with a railroad spur, a blacksmith shop, and for storage by the City of Laconia Department of Public Works is confirmed because polycyclic aromatic hydrocarbons (PAHs) were identified in groundwater throughout the Site and a limited area of PAH contaminated soil was identified beneath the Vactor Shed.
- REC-2 concerning the oil stained soil observed within the Blacksmith Shop is dismissed because the oil stained soil has been consolidated into drums for disposal and no contaminants were detected above the New Hampshire Department of Environmental Services (NHDES) Soil Remediation Standards (SRS) beneath the floor of the building.
- REC-3 concerning impact to the Site from a historical undocumented gasoline underground storage tank (UST) on the east adjoining property is dismissed because no gasoline related compounds were identified in soil or groundwater along the eastern Site boundary in soil boring/monitoring well CA-4.
- REC-4 concerning potential releases from a historical bulk oil storage tank adjacent to the Sand/Salt Shed is dismissed because no concentrations of total petroleum hydrocarbons (TPH) were identified above the NHDES SRS in soil borings CA-5 or CA-6 in the vicinity of the tank.
- REC-5 concerning the potential landfilling or burying of wastes reported in the northern portion of the Site is confirmed because buried ash, metal, asphalt, refuse, and other

materials were observed in test pits excavated in this area of the Site and PAHs and arsenic were detected in laboratory samples above the applicable NHDES SRS. It should be noted that although not a contaminant of concern for the investigation, chromium was also detected above the SRS during field screening with an X-ray fluorescence (XRF) meter in test pit TP-1.

- REC-6 concerning the potential for contaminants to be present from dumping or incidental spills of painting products into the Vactor Shed catch basin is confirmed because the sampled material within the catch basin structure was determined to be impacted by lead and chromium, which are components of paint, at concentrations exceeding the NHDES SRS.
- REC-7 concerning the open pail of waste oil and approximately 30-gallon drum of unknown contents observed in the Horse Barn building; and one (1) 55-gallon drum of unknown contents observed outside the Blacksmith Shop building remains a REC because these items have not been removed to date, and represent a material threat of release to the environment.
- NC-1, which was associated with the presence of asbestos-containing material (ACM) in the Site buildings, was dismissed because no ACMs were identified in/on the Site buildings. However, the known bailed asbestos piping (DMEC-1) that is being stored in the Horse Barn Shed should be removed from the Site and property disposed.
- NC-2, which was associated with the presence of lead-based paint (LBP) in/on the Site buildings, was confirmed because LBP was identified on the green doors of the Rodder Shed and the off-white door of the Horse Barn.
- NC-3, which was associated with potential PCB-containing bulk products within the Site buildings, is inconclusive because with the exception of painted exterior surfaces and a limited number of painted interior surfaces, no potential PCB-containing bulk products were observed at the Site during the completed inventory of building materials. Regarding the painted surfaces, no paints that, in Credere's experience, have a high probability to contain PCBs, such as heat resistant or moisture resistant paints, were observed during the screening.

Based on these conclusions, Credere recommends the following tasks be completed for the Site:

- To further assess REC-1, Credere recommends that the monitoring well network at the Site be resampled for laboratory analysis of PAHs, and that the groundwater samples be filtered to determine if the identified PAHs are the result of suspended solids in the samples or reflect dissolved phase concentrations.
- Credere recommends that the drum of consolidated oily soil (REC-2) from the Blacksmith Shop be removed from the Site and properly disposed of.
- Contaminated fill material (REC-5) is present in the northern portion of the Site where this material was historically land filled (see **Figure 2**). This material represents a potential health risk during redevelopment; therefore, Credere recommends that a

remedial action plan be developed and implemented to appropriately address this material. Because redevelopment plans have not been formally developed for the Site, necessary remedial measures cannot be determined at this time; however, such measures would likely include either capping the material in place to prevent exposure, the excavation and off-site disposal of this material, or a combination thereof. Once redevelopment plans have been developed, some additional soil and/or groundwater assessment work may be warranted to determine accurate horizontal and vertical extents of these materials. Based on XRF field screening results, collected samples should also be analyzed for chromium during any additional assessment work in this area. Once redevelopment plans have been established, if this material is to be capped in place, Credere recommends that this portion of the Site be registered as a Pre-1981 landfill according to NHDES Solid Waste Rules Env-Sw 309.

- The area of contaminated fill in the northern portion of the Site was identified as a landfill with concentrations of PAHs, arsenic, and chromium (via XRF field screening) analyzed above the NHDES SRS. As the extent of environmental impact from this area has not been fully assessed, Credere recommends that sediments along the toe of the landfill within Opechee Bay be sampled to determine if impacts to the bay have occurred.
- Contaminated soil was identified beneath the Vactor Shed (REC-1). This material also represents a potential health risk during redevelopment; therefore, Credere recommends that a remedial action plan be developed and implemented to appropriately address this material. Because redevelopment plans have not been formally developed for the Site, necessary remedial measures cannot be determined at this time; however, such plans would likely include either the capping in place or excavation and off-site disposal of this material to prevent exposure. Once redevelopment plans have been developed or the building has been demolished, additional assessment work may be warranted to determine the horizontal and vertical extent of these materials.
- Credere recommends that the accumulated chromium and lead contaminated material identified within the Vactor Shed catch basin (REC-6) be removed for proper disposal. In addition, if an outlet to this drain is identified during redevelopment, additional assessment would be necessary to determine the extent of potential impact from these contaminants.
- Credere recommends that the unknown 55-gallon drum outside the Blacksmith Shop and the pail of waste oil within the Horse Barn (REC-7) be removed from the Site and properly disposed.
- Credere recommends that the bailed asbestos piping stored in the Horse Barn Shed (DMEC-1), the pail of waste oil and 30-gallon drum of unknown contents in the Horse Barn (REC-7) should be removed from the Site and properly disposed.
- Credere recommends that the City of Laconia DPW workers and future Site users or occupants should be notified of the presence of LBP (NC-2) on the green doors of the Rodder Shed and on the off-white door of the Horse Barn. If paint is removed from these surfaces, the paint waste should be properly disposed.

- Based on the PCB bulk products inventory observations and the lack of paint applications for which, in Credere's experience, there is a high risk of PCBs, Credere recommends that PCB sampling of building materials be deferred until redevelopment begins at the Site and bulk samples of demolition materials can be collected for waste characterization prior to disposal.

1. INTRODUCTION

This report presents the objectives, scope of work, and results of a Phase II Environmental Site Assessment (Phase II ESA) conducted by Credere Associates, LLC (Credere) at the New England Yard facility (A.K.A. DPW New England Yard), the 'Site', located at 210 Messer Street in Laconia, New Hampshire.

The Phase II ESA was completed in conformance with the ASTM International (ASTM) Standard Guide for Environmental Site Assessments: *Phase II Environmental Site Assessment Process* E 1903-11 as part of the Lakes Region Planning Commission's (LRPC) Brownfields Program using United States Environmental Protection Agency (EPA) Brownfields assessment grant funds. **Figure 1** shows the location of the Site in Laconia.

The objective of this Phase II ESA was to confirm or dismiss seven (7) recognized environmental conditions (RECs) and three (3) ASTM non-scope considerations (NCs) that were identified in a Phase I Environmental Site Assessment (Phase I ESA) completed by Credere on May 2, 2011, and are further discussed in **Section 2**. The field program and preliminary conceptual site model (CSM) used during this Phase II ESA was included within the EPA approved Site-Specific Quality Assurance Project Plan (SSQAPP) Addendum for the Site, which is included in **Appendix A**. The SSQAPP is an addendum to Credere's previously approved New Hampshire Generic Quality Assurance Project Plan (QAPP) EPA RFA #08166 and #09036, which was prepared for all of Credere's EPA work in New Hampshire. Photographs taken during the completion of this Phase II ESA are included in **Appendix B**.

2. PROJECT BACKGROUND

2.1 SITE DESCRIPTION

The Site is composed of a 2.40-acre parcel of land located at 210 Messer Street in Laconia, New Hampshire. The Site's entire western frontage is located on Opechee Bay, which is part of Lake Winnipesaukee. Five (5) buildings are located on the Site, which include: a 'Horse Barn' building (**Picture 1**), a 'Blacksmith Shop' building (**Picture 2**), the 'Sand/Salt Shed' building (**Picture 3**), the 'Vactor Shed' building (**Picture 4**), and the 'Rodder Shed' building (**Picture 5**). The Site and buildings are currently in use by the City of Laconia Department of Public Works for the cold storage of equipment, seasonal items (e.g. trash cans, planters, etc.), and road sand storage and loading. It should be noted that road salt has not been stored at the facility since 2005.

A paved walking/biking trail, known as the Laconia Winnisquam, Opechee, Winnipesaukee (WOW) Paved Trail, bounds the Site to the east, beyond which is a state-owned rail line and a fuel oil company. Exterior portions of the Site consist of a paved driveway/parking area, a gravel lot, unpaved grassy areas, and a small wooded/brushy area. A grassy area located in the northern portion of the Site was reportedly formerly used to store cold patch asphalt and reclaimed asphalt.

2.2 SUMMARY OF PREVIOUS ENVIRONMENTAL REPORTS AND DOCUMENTS

Credere completed a Phase I ESA for the Site in May 2011, in accordance with ASTM Standard Practice E 1527-05. The Phase I ESA identified the following *recognized environmental conditions* (RECs) at the Site:

- REC-1 – The historical uses of the Site by coal and ice companies with a railroad spur, a blacksmith shop, and for storage by the City of Laconia Department of Public Works represent a REC because soil or groundwater beneath the Site may have been affected by the use of heavy oils, metals, and other petroleum and/or hazardous materials associated with these uses.
- REC-2 – Oil stained soil observed within the Blacksmith Shop (**Pictures 5 and 6**) represents a REC because it is indicative of a release of oil and/or hazardous substances, which may have affected soil and/or groundwater at the Site.
- REC-3 – The historical presence of an undocumented gasoline underground storage tank (UST) on the east adjoining property represents a REC because undocumented spills or releases associated with this tank may have affected soil or groundwater beneath the Site. In addition, the presence of nearby leaking UST sites may have affected groundwater beneath the Site.

- REC-4 – A bulk oil storage tank noted in the vicinity of the Sand/Salt Shed on historical Sanborn Fire Insurance Maps represents a REC because spills or releases associated with this tank may have affected soil or groundwater at the Site.
- REC-5 – The potential landfilling or burying of wastes reported in the northern portion of the Site (**Picture 7**) represents a REC because unknown types and quantities of materials placed in this area are unknown and may have impacted soil and groundwater beneath the Site.
- REC-6 – The catch basin (**Picture 8**) located within the Vactor Shed building represents a REC because evidence of dumping was observed around the drain (i.e. paint covered grate and floor) that may have resulted in releases to the environment.
- REC-7 – The open pail of waste oil (**Picture 9**) and approximately 30-gallon drum of unknown contents (**Picture 11**) observed in the Horse Barn building, and 55-gallon drum of unknown contents (**Picture 12**) observed outside the Blacksmith Shop building represent a REC because these items are improperly stored and labeled and represent a material threat of release.

During the Phase I ESA, Credere also noted one (1) *de minimis* environmental condition (DMEC) and three (3) NCs at the Site which included:

- DMEC-1 –Waste asbestos piping (**Picture 13**) that was observed to be stored in the locked Horse Barn shed.
- NC-1 – The potential for asbestos-containing materials (ACMs) to be present on or within the buildings.
- NC-2 – The potential for lead-based paint (LBP) to be present on or within the buildings.
- NC-3 – The potential for PCB-containing bulk products (i.e. building materials) to be present on or within the buildings.

2.3 POTENTIAL FUTURE SITE USE

No formal redevelopment plans have been established for the Site; however, the City of Laconia would like to redevelop the Site into either a park, mixed-use, or residential development.

3. PHASE II ESA OBJECTIVES

In accordance with section 5.0 of ASTM 1903-11, this section is provided to promote clarity and transparency in communicating and interpreting Phase II ESA results. As this Phase II ESA was developed and performed as a part of Lakes Region Planning Commission's Brownfields program, Mr. Eric Senecal, the former Brownfields Coordinator for LRPC was involved with the review of the draft Scope of Work (**Section 4**). Mr. Kimon Koulet, the acting Brownfields Coordinator, will review and approve this Phase II ESA report.

3.1 STATEMENT OF OBJECTIVES

We have performed a Phase II ESA at 210 Messer Street, Laconia, New Hampshire in conformance with the scope and limitations of ASTM Practice E-1903-11 and for the following objectives:

1. To assess the Site for release(s) of oil and/or hazardous substances that may have resulted from the RECs identified during the May2011 Phase I ESA.

2. To determine if asbestos-containing building materials are present in the Site buildings per the non-scope consideration identified during the May 2011 Phase I ESA.

3. To determine if PCB-containing building materials are present in the Site buildings per the non-scope consideration identified during the May 2011 Phase I ESA.

4. To determine if lead-based paint is present on the Site buildings per the non-scope consideration identified during the May 2011 Phase I ESA.

The scope of work that was developed in consideration of these objectives is discussed in **Section 4** below.

3.2 SCHEDULE, COST, AND BUDGET LIMITATIONS

Due to budget constraints, this Phase II ESA was designed to confirm or dismiss the presence of source areas of contamination on the Site and the need for additional assessment or remediation. As such, this Phase II ESA was not designed to wholly delineate the nature and extent of any identified contaminant areas.

3.3 INFORMANTION AND EXPLANATION

Information and explanation of the Phase II ESA process was provided to LRPC as a part of developing the above referenced statement of objectives and the work scope noted in **Section 4.**

3.4 SCOPE OF WORK

Section 4 details Credere's scope of work as it relates to this Phase II ESA.

3.5 COMMENTS REGARDING COMPENSATION

Credere's compensation for conducting this Phase II ESA was not in any way connected to the results obtained or conclusions drawn from the data.

3.6 ISSUES BEYOND THE SCOPE OF ASTM PRACTICE

No issues were identified beyond scope ASTM 1903-11 or the developed Scope of Work.

4. PHASE II SCOPE OF WORK

Credere performed this Phase II ESA to assess the RECs and NCs identified in Credere's Phase I ESA for the Site. An SSQAPP Addendum was developed that outlined a preliminary CSM, the work to be completed to achieve the objectives of this Phase II ESA, the field and laboratory methodologies to be used, and data quality objectives for the project (see **Appendix A**). The SSQAPP Addendum was approved by EPA and NHDES on August 30, 2011. The Phase II ESA tasks completed included the following:

1. Six (6) soil borings (CA-1 through CA-6) were advanced at the Site and seven (7) soil samples were submitted for off-site laboratory analysis to assess REC-1, REC-2, REC-3, and REC-4. Each of these soil borings were also completed as groundwater monitoring wells and sampled for off-site laboratory analysis.
2. Three (3) surficial soil samples (SS-1 through SS-3) were collected from the Site and submitted for off-site laboratory analysis to assess REC-1. In addition, one (1) soil sample (CA-2 Floor) was collected from the stained soil on the floor of the Blacksmith Shop to assess REC-2.
3. Four (4) test pits (TP-1 through TP-4) were excavated and two (2) soil samples were submitted for off-site laboratory analysis to assess REC-5.
4. The catch basin in the Vactor Shed was inspected for a potential outlet and a soil/sediment sample (CB-1) was collected from the base of the structure and submitted for off-site laboratory analysis to assess REC-6.
5. A survey of potential ACMs within and on the Site buildings was conducted to assess NC-1.
6. A survey of potential LBP within and on the Site buildings was conducted to assess NC-2.
7. The Site buildings were surveyed to inventory potential PCB-containing building materials to assess NC-3.

5. PHASE II FIELD ACTIVITIES

Summaries of the Phase II ESA tasks conducted in accordance with the EPA and NHDES approved SSQAPP Addendum (**Appendix A**) are presented below. Any deviations from the SSQAPP Addendum are described in **Section 10** of this report. All laboratory analytical samples collected by Credere were submitted to Absolute Resource Associates (ARA) of Portsmouth, New Hampshire for analysis. Requirements relative to Chain of Custody, Data Management and Documentation, Data Validation, and Data Usability Assessments contained in the SSQAPP were followed. **Figure 2** shows the approximate locations of the Site buildings, pertinent Site features, and sample locations.

5.1 SOIL BORING AND MONITORING WELL INSTALLATION

Six (6) soil borings (CA-1 through CA-6) were advanced at the Site on September 22, 2011. Soil boring locations are depicted on **Figure 2**. T&K Well Drilling, a licensed New Hampshire well driller from Troy, New Hampshire, was retained by Credere and performed the drilling activities. Credere was on-site during the work to provide oversight of the drilling and monitoring well installation, and to collect soil samples for field screening and laboratory analysis.

Exterior soil borings (CA-1, CA-3, CA-4, and CA-5) were advanced using a truck-mounted hollow stem auger drill rig. Soil samples were continuously collected and logged using hollow stem auger and split-spoon soil sampling methodologies. Interior soil borings (CA-2 and CA-6) were advanced using a truck-mounted direct-push drill rig. Direct push samples were collected in 3-foot polyethylene core tubes. Soil from both the split spoon samplers and core tubes were sampled in whole, or were divided into discrete samples based on visual observations, soil stratigraphy, and/or the depth of the groundwater table.

Each collected sample was logged and visual and/or olfactory evidence of contamination was noted. Samples were then field screened for volatile organic compounds (VOCs) using a Thermo OVM 580B photoionization detector (PID) calibrated to a 100 parts per million by volume (ppm_v) isobutylene standard with the instrument response factor set to 1.0, and for the identified metals of concern at the Site with an Innov-X Alpha 4000 X-ray fluorescence (XRF) meter. Exploration locations and methodologies are summarized in **Table 1**. XRF field screening results are summarized in **Table 2**. PID field screening results are summarized on the soil boring logs included in **Appendix C**.

Monitoring wells were constructed in soil borings CA-1 through CA-6. Exterior monitoring wells CA-1, CA-3, CA-4, and CA-5 were constructed using 2-inch diameter PVC pipe and 0.010-inch wide slotted PVC screen, and interior monitoring wells CA-2 and CA-6 were constructed using 1-inch diameter PVC materials. In both cases, the well annulus were packed with size No. 2 washed sand to approximately 1-foot above the screen depth and a bentonite seal was placed on top of the annulus with a road box and concrete collar at the ground surface to prevent surface water infiltration around each monitoring well. Following installation, each

monitoring well was developed by over pumping and agitation, and allowed to equilibrate for two weeks. **Table 1** is a summary of the exploration methods used at each location including the media that was sampled. Copies of soil boring and monitoring well installation logs are included as **Appendix C.**

The rationale for the location of each soil boring and the soil sample(s) submitted for laboratory analyses is provided below. Soil sample laboratory analytical results are summarized in **Table 3**.

CA-1

Soil boring CA-1 was advanced to a depth of approximately 10 feet below ground surface (bgs) in a location interpreted to be downgradient of the Horse Barn and its floor drain system (REC-1). Groundwater was observed in this boring at approximately 2.5 feet bgs during drilling. The 0 to 2 foot bgs interval soil sample was submitted for laboratory analysis because no additional subsurface samples were able to be collected due to spoon refusals on large subsurface objects (i.e. boulders or concrete). Augers were able to be advanced through the objects to a depth of approximately 10-feet bgs. The 0 to 2 foot bgs interval soil sample was submitted to ARA for laboratory analysis of polycyclic aromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPH), and the metals arsenic, barium, boron, cadmium, copper, lead, mercury, nickel, and zinc. Based on the suspected fill materials in this boring location, sampling spoon refusal has resulted in a data gap for the Site.

The soil boring was completed as a monitoring well and the well screen was placed from approximately 2-feet bgs to 10-feet bgs to allow for adequate room for the installation of a bentonite seal and a road box.

CA-2

Soil boring CA-2 was advanced to the depth of refusal at approximately 7 feet bgs through the interior concrete floor of the Blacksmith Shop to assess soil and groundwater conditions beneath the building (REC-2). One soil sample was also collected from the oil stained soil (sample CA-2 Floor) located on top of the concrete floor, and one sample was collected from the 0 to 3-foot interval, which was directly beneath the concrete floor, to assess impacts from historical oil spills and blacksmith activities within the building. The soil samples were submitted to ARA for laboratory analysis of VOCs, PAHs, TPH, and the metals arsenic, barium, boron, cadmium, copper, lead, mercury, nickel, and zinc.

Groundwater in the boring was observed at approximately 2 feet bgs during drilling. The soil boring was completed as a monitoring well and the well screen was placed from approximately 2 feet bgs to 7 feet bgs to allow for adequate room for the installation of a bentonite seal and a road box.

CA-3

Soil boring CA-3 was advanced to a depth of 14 feet bgs in the northern portion of the Site to assess potential landfilling activities (REC-5), and to assess soil and groundwater

conditions downgradient of fuel oil ASTs located at an upgradient fuel oil company property. The soil sample from 6 to 8 feet bgs, the inferred groundwater table interface, was collected to assess conditions that could be attributed to the potential upgradient source. The soil sample was submitted to ARA for laboratory analysis of VOCs, PAHs, TPH, and lead. In addition, based on XRF field screening results, the surficial soil sample interval from 0 to 2 feet bgs was also collected for laboratory analysis of lead to confirm field screening results.

Groundwater was observed at approximately 7.5 feet bgs during drilling. The soil boring was completed as a monitoring well and the well screen was placed from approximately 4 feet bgs to 14 feet bgs.

CA-4

Soil boring CA-4 was advanced to a depth of approximately 10 feet bgs in a location along the eastern Site boundary to assess soil and groundwater downgradient of a fuel oil company and historical gasoline UST (REC-3) located on an adjacent property. The 6 to 8 foot bgs interval was sampled for laboratory analysis of VOCs, TPH, and PAHs based on the highest PID field screening result and to assess conditions that could be attributed to the potential upgradient source.

Groundwater in the boring was observed at approximately 4 feet bgs during drilling. The soil boring was completed as a monitoring well and the well screen was placed from approximately 3 feet bgs to 10 feet bgs to allow for adequate room for the installation of a bentonite seal and a road box.

CA-5

Soil boring CA-5 was advanced to a depth of approximately 10 feet bgs, adjacent to the Sand/Salt Shed and slightly downgradient of a historical oil tank (REC-4) to assess impacts to soil and groundwater in this area. The 2 to 3 foot bgs interval of soil was selected for laboratory analysis of VOCs, TPH, and PAHs based on an observed black band of soil that exhibited a potential petroleum odor.

Groundwater in the boring was observed at approximately 2.5 feet bgs during drilling. The soil boring was completed as a monitoring well and the well screen was placed from approximately 2-feet bgs to 10-feet bgs to allow for adequate room for the installation of a bentonite seal and a road box.

CA-6

Soil boring CA-6 was advanced to a depth of approximately 7 feet bgs through the interior concrete floor of the Vactor Shed to assess soil and groundwater conditions beneath the building and potential impacts from the catch basin (REC-6). The boring could not be advanced further due to refusal of the direct-push drilling equipment. The 0 to 3 foot bgs interval of soil was selected for laboratory analysis based on observed soil discoloration at the inferred water table interface. The sample was submitted to ARA for

analysis of VOCs, TPH, semi-volatile organic compounds (SVOCs), and Resource Conservation and Recovery Act (RCRA) 8 Metals.

Concurrently, Credere opened the catch basin within the Vactor Shed to determine if an outlet was present. The drain structure appeared to be a circular brick and concrete structure, and no outlet pipe was observed. Credere explored the material in the base of the drain structure with a hand auger and determined at least several feet of loose sandy material comingled with organic material and paint chips was present in the structure. Credere collected a grab sample of this material (CB-1) for off-site laboratory analysis of VOCs, SVOCs, TPH, and RCRA 8 Metals.

Groundwater in the boring was observed at approximately 2.5 feet bgs during drilling. The soil boring was completed as a monitoring well and the well screen was placed from approximately 2 feet bgs to 7 feet bgs to allow for adequate room for the installation of a bentonite seal and a road box.

5.2 SURFICIAL SOIL SAMPLING

On September 22, 2011, Credere collected three (3) surficial soil samples (SS-1 to SS-3) from the Site to assess conditions associated with the historical uses of the Site for coal storage and railroad activities (REC-1). Surficial soil samples were collected from 0 to 1 feet bgs using hand tools. Any visible organic debris and/or degraded asphalt was removed from samples prior to placement in laboratory glassware.

Each collected sample was logged and field screened for VOCs and metals as described in **Section 5.1**. No VOCs were detected with a PID in any surficial soil sample. Exploration locations and methodologies used are summarized in **Table 1** and XRF field screening results are included in **Table 2**.

The rationale for each surficial sample is described below. Soil sample laboratory analytical results are summarized in **Table 3**.

- Surficial soil sample SS-1 was collected in the location of a reported historical coal pocket and was submitted for laboratory analysis of PAHs, TPH, PCBs, and metals, including arsenic, barium, boron, cadmium, copper, lead, mercury, nickel, and vanadium.
- Surficial soil samples SS-2 and SS-3 were collected in the approximate location of a historical railroad spur and were submitted for laboratory analysis of PAHs, TPH, PCBs, and metals, including arsenic, barium, boron, cadmium, copper, lead, mercury, nickel, and vanadium.

5.3 TEST PITTING AND SOIL SAMPLING

On September 22, 2011, Credere directed City of Laconia DPW personnel in the excavation of four (4) test pits (TP-1 through TP-4) with a backhoe in the northern portion of the Site to determine if landfilling had occurred. Test pits were excavated to the maximum depth limitation of the backhoe (approximately 10 feet bgs) or to a depth where material was caving and no progress was being made. Test pit logs are included in **Appendix D**.

Soil samples were collected at approximate 2-foot depth intervals and were logged and field screened for VOCs and metals as described in **Section 5.1**. No VOCs were detected with a PID in any sample collected from the test pits. Based on field screening results and field observations indicating that the majority of materials in the northern portion of the Site were similar, two soil samples (TP-1 and TP-2) were collected from the 4 to 6 foot bgs interval and submitted for laboratory analysis of PAHs, TPH, and metals, including arsenic, barium, boron, cadmium, copper, lead, mercury, nickel, and vanadium.

5.4 GROUNDWATER SAMPLING AND SURVEY

Credere returned to the Site on October 6, 2011, to collect groundwater samples from the newly installed monitoring wells (CA-1 through CA-6) at the Site (see **Figure 2**), and returned on October 18, 2011, to perform an elevation survey of the wells.

Each of the new monitoring wells was surveyed for elevation relative to a sewer manhole located with the WOW Paved Trail. According to the City of Laconia, this manhole was recently reconstructed and has not been re-surveyed for a real elevation to date; therefore, the manhole was utilized as an arbitrary benchmark of 100 feet. If future groundwater sampling is performed at the Site, Credere will attempt to locate a permanent benchmark to establish a real Site datum. Based on the results of the survey and measured groundwater elevations, a model of groundwater flow within the local overburden aquifer was interpolated to be west (see **Figure 3**). Groundwater measurements and elevations are summarized in **Table 4**.

Samples were collected from each monitoring well using standard low-flow sampling techniques. Groundwater sampling logs are included in **Appendix E**. All collected groundwater samples were submitted to ARA for laboratory analysis of NHDES Full List VOCs and PAHs. However, per the SSQAPP, sample CA-6 was submitted for full SVOC analysis instead to PAH analysis due to the use of paints and related materials in the Vactor Shed building. Sample CA-6 was also analyzed for dissolved RCRA 8 metals. Based on soil sample results, the groundwater samples from monitoring wells CA-1 and CA-2 were also analyzed for dissolved lead. Groundwater sample analytical results are summarized in **Table 5**.

5.5 BUILDING MATERIAL SAMPLING

5.5.1 Potential Asbestos Containing Materials

On September 22, 2011, NH certified Asbestos Inspectors Mr. Jonathan O'Donnell (Certification # AI 000382) and Mr. Judd Newcomb (Certification # AI 000383) of Credere inventoried suspect ACM within and on the Site buildings. Credere identified nine (9) potential ACMs (see **Figure 4** for sample locations) and collected three (3) samples of each material for laboratory analysis of asbestos in accordance with NHDES Env-A 1800. Samples were submitted to EMSL of Woburn, Massachusetts for analysis. In addition, baled asbestos piping (**Picture 13**) is located in the Horse Barn Shed. This material was identified as asbestos by the City of Laconia and was therefore not sampled.

5.5.2 Lead-Based Paint Screening

All accessible painted surfaces in and on the Site buildings were screened for lead concentrations using the XRF on September 22, 2011. Paint with a lead concentration of greater than 1.00 mg/cm^2 was considered to represent LBP. Additionally, in accordance with the XRF manufacturer specifications, paint with a lead concentration greater than 0.60 mg/cm^2 was also conservatively considered LBP to account for the potential margin of error that could occur with Credere's specific XRF.

Building sides were described as A to D in a clockwise fashion where Side A included the main entrance to the building. Thus Wall B was to the left, Wall C is across from Side A, and Side D is to the right of Side A. The condition of identified LBP was noted as good, fair, or poor according to the following:

- Good condition is one in which the paint is entirely intact.
- Fair condition is one in which paint is intact, but worn; minor chips are evident as a result of normal wear and tear; no adhesion or substrate problems, e.g., no broken wallboard is present. Individual interior components with large surface areas (walls, ceilings, floors, doors) that evidence less than or equal to 2 square feet of normal wear and tear or direct damage are considered to be in fair condition. Individual interior components with small surface areas (window sills, baseboard) that evidence less than or equal to 10 percent normal wear and tear or direct damage on the total surface area of the component are considered to be in fair condition. Exterior components with large surface areas that evidence less than or equal to 10 square feet of normal wear and tear or direct damage are considered to be in fair condition. Individual exterior components with small surface areas (soffits, trim) that evidence less than or equal to 10 percent normal wear and tear or direct damage on the total surface area of the component are considered to be in fair condition.

- Poor condition is one in which paint is severely worn, weathered or no longer adhering, i.e., peeling, cracking, flaking, chalking; or the substrate is broken, exposed or otherwise deteriorated. Individual interior components with large surface areas (walls, ceilings, floors, doors) that evidence greater than 2 square feet of normal wear and tear or direct damage are considered to be in poor condition. Individual interior components with small surface areas (window sills, baseboard) that evidence greater than 10 percent normal wear and tear or direct damage on the total surface area of the component are considered to be in poor condition. Exterior components with large surface areas that evidence greater than 10 square feet of normal wear and tear or direct damage are considered to be in poor condition. Individual exterior components with small surface areas (soffits, trim) that evidence greater than 10 percent normal wear and tear or direct damage on the total surface area of the component are considered to be in poor condition.

Please note that this work was not intended to determine the suitability of the buildings for residential or child-occupied uses, or to assess the risk associated with LBP on the Site for occupants or residents. If the Site buildings are to be used in the future as residences or child-occupied facilities, a formal lead survey of the Site should be conducted in accordance with New Hampshire HE-P 1600.

5.5.3 Potential PCB-Containing Materials

On September 22, 2011, Credere surveyed the Site buildings for suspect PCB-containing building materials. Examples of suspect products typically include, but are not limited to, paint, caulking, sealants, grout, mastic, glazing, insulation, cable insulation, thermal insulation, adhesives and tapes, plastics, floor finishes, gaskets, ceiling tile coatings, flooring sealants, roofing materials, and siding materials.

With the exception of painted exterior surfaces and a limited number of painted interior surfaces, no potential PCB-containing bulk products were observed at the Site during a screening of building materials. Regarding the painted surfaces, paint applications for which, in Credere's experience, there is a high risk of PCBs, such as heat resistant or moisture resistant paints, were not observed during the screening. Therefore, no samples were collected for off-site laboratory analysis at this time.

6. SUMMARY OF REGULATORY STANDARDS

As a part of this Phase II ESA, Credere collected samples of soil, groundwater, and building materials to confirm or dismiss the presence of contaminants associated with the RECs and NCs identified at the Site. Sample results were compared to the applicable state and federal standards described below.

6.1 SOIL AND SURFICIAL FILL/DEBRIS

Concentrations in soil samples and the material collected from the Vactor Shed catch basin were compared to New Hampshire's Soil Remediation Standards (SRS) detailed in NHDES Env-Or 600 Contaminated Site Management.

6.2 GROUNDWATER

Concentrations in groundwater samples were compared to New Hampshire's Ambient Groundwater Quality Standards (AGQS) detailed in NHDES Env-Or 600 Contaminated Site Management.

6.3 LEAD-BASED PAINT

Concentrations of lead in paint as determined through the use of the XRF analyzer were compared to the limit of 1.0 mg/cm^2 or 0.5% by weight. Additionally, in accordance with the Credere's XRF manufacturer specifications, paint with a lead concentration greater than 0.60 mg/cm^2 was also conservatively considered LBP. All construction work involving exposure or potential exposure to lead is covered by the OSHA Lead in Construction Standard 29 CFR 1926.62.

6.4 POTENTIAL ASBESTOS-CONTAINING MATERIALS

Concentrations of asbestos in bulk building material samples were compared to the limit of 1% by weight detailed in NHDES Env-A 1800 Asbestos Management and Control.

7. PHASE II RESULTS

The following subsections present the results of the data collected during the field work portion of this Phase II ESA. Sample locations are depicted on **Figure 2**.

7.1 SITE GEOLOGY

7.1.1 Surficial Geology

Surficial material observed in the northern portion of the Site consist of fill material including sand, gravel, ash, metal, asphalt, brick, and refuse (i.e. ceramic, plastic, etc.). A layer of leaves and other organic materials overlying cobbles was observed beneath the fill layer and was interpreted to be native former lake bottom (See test pit logs in **Appendix D**).

Surficial materials observed to the west of the Horse Barn included sand and gravel over large objects that were inferred to be bricks, concrete, and boulders. Due to the proximity to the lake, these materials are probably fill materials used to level the Site during its historical development.

Surficial materials observed in the east areas of the Site included mixtures of sand and gravel consistent with the stratified drift materials mapped in the vicinity of the Site. These materials have likely been historically re-worked to establish existing Site grades.

7.1.2 Bedrock Geology

Bedrock outcrops have not been observed on the Site and bedrock was not encountered during Phase II ESA explorations. Bedrock beneath the northern portion of the Site is mapped as Concord Granite, which is known for its fine texture and uniformity. According to the *Bedrock Geologic Map of New Hampshire* prepared by the United States Geological Survey (USGS), bedrock beneath the southern portion of the Site is mapped as the upper Rangeley Formation, which is described as a pelitic schist, metasandstone, and locally coarse-grained metasandstone with rusty weathering.

7.1.3 Site Hydrogeology

Area topography generally slopes west on and in the vicinity of the Site and groundwater flow at the Site has been interpreted to mimic surface topography and flow west toward Opechee Bay (see **Figure 3**). Due to the close proximity of the lake, the depth to groundwater at the Site is shallow and likely varies with seasonal fluctuations in precipitation and water level changes in the lake. Based on the groundwater contours depicted on **Figure 3**, the hydraulic gradient at the Site ranges from 0.001 to 0.004 feet per foot. It should be noted that local groundwater flow may be highly varied due to precipitation events, stormwater runoff, infiltration/recharge, and varying subsurface hydrogeologic conditions.

7.2 SOIL BORING SAMPLE RESULTS

Staining was observed on soil throughout the Blacksmith Shop floor during the Phase I ESA that was centered on the approximate location of soil boring CA-2. Prior to Credere's Phase II ESA activities, the City of Laconia DPW personnel consolidated the stained soil into 55-gallon drums. The sample of this material (CA-2 Floor) contained concentrations of xylenes, TPH, arsenic, barium, boron, cadmium, copper, lead, nickel, and vanadium, but no compounds exceeded the NHDES SRS. No PAHs were detected above the laboratory practical quantitation limit (PQL) in the sample.

Samples collected from soil borings CA-2, CA-3, CA-4, CA-5, and CA-6, and the catch basin sample CB-1 were analyzed for NDHES Full List VOCs. No VOCs were detected above the laboratory PQL in any soil boring sample analyzed.

Samples collected from soil borings CA-1 through CA-5 were analyzed for PAHs, and the samples collected from soil boring CA-6 and the catch basin (CB-1) were analyzed for the full list of SVOCs. No PAHs were detected above the laboratory PQL in soil borings CA-1 through CA-3, or CA-5. The following PAHs were detected in soil boring CA-4 at concentrations exceeding their respective NHDES SRS: benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, and indeno(1,2,3-cd)pyrene. Several PAHs were also detected in soil boring CA-6 exceeding their respective NHDES SRS: benzo(a)anthracene, benzo(b)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, and dibenzo(a,h)anthracene. No other SVOCs were detected above the laboratory PQL in CA-6. While several PAHs were detected in CB-1, none were quantified in excess of their respective SRSs.

Samples collected from soil borings CA-1 through CA-6 were analyzed for TPH. TPH was detected in samples collected from soil borings CA-2, CA-3, CA-4, CA-5, and CA-6, but all of the concentrations were below the NHDES SRS of 10,000 micrograms per gram (ug/g).

Samples collected from soil borings CA-1 and CA-2 were analyzed for the metals arsenic, barium, boron, cadmium, copper, lead, mercury, nickel, and vanadium; samples from soil boring CA-3 were analyzed for lead; and, the sample collected from soil boring CA-6 and the catch basin bottom sample CB-1 was analyzed for RCRA 8 metals, which include, arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. No metals were detected above the applicable NHDES SRS in any soil boring sample. Chromium and lead were detected above the NHDES SRS in sample CB-1.

Soil boring sample results are summarized in **Table 3** and copies of the laboratory analytical reports are included in **Appendix F**. NHDES SRS exceedances in soil samples are depicted on **Figure 5**.

7.3 SURFICIAL SOIL SAMPLE RESULTS

Surficial soil samples SS-1 through SS-3 were submitted for laboratory analysis of PAHs, PCBs, TPH, and the metals arsenic, barium, boron, cadmium, copper, lead, mercury, nickel, and vanadium.

No PAHs were detected above the laboratory PQL in SS-1 or SS-3. Fluoranthene and pyrene were detected in SS-2, but the concentrations were below their respective NHDES SRS. No other PAHs were detected above the laboratory PQL in SS-2.

No PCB congeners were detected above the laboratory PQL in any of the collected surficial soil samples.

No TPH was detected above the laboratory PQL in SS-1 or SS-3, but TPH was detected at a concentration of 500 ug/g in SS-2, which is below the NHDES SRS of 10,000 ug/g.

The metals arsenic, barium, copper, lead, nickel, and vanadium were detected in SS-1 through SS-3, and boron was also detected in SS-2; however, no metals were detected above their respective NHDES SRSs.

Surficial soil sample laboratory analytical results are summarized in **Table 3**. Copies of the laboratory analytical reports are included as **Appendix F**.

7.4 TEST PIT SOIL SAMPLE RESULTS

Soil samples were collected from test pits TP-1 and TP-2 and were submitted for laboratory analysis of PAHs, TPH, and the metals arsenic, barium, boron, cadmium, copper, lead, mercury, nickel, and vanadium.

Several PAHs were detected in the samples and benzo(a)anthracene, benzo(b)fluoranthene, and benzo(a)pyrene were detected above their respective NHDES SRS in both test pit samples. Indeno(1,2,3-cd)pyrene was also detected above its NHDES SRS in the sample collected from TP-2.

TPH was detected in both soil samples, but the concentrations were below the NHDES SRS.

Arsenic was detected in both samples analyzed. Arsenic in the soil sample from TP-1 was detected below the NHDES SRS, and arsenic in the soil sample from TP-2 was detected above the NHDES SRS. Barium, boron, cadmium, copper, lead, mercury, nickel, and vanadium were detected in both samples, but all were at concentrations below the applicable NHDES SRS. It should also be noted that although not a contaminant of concern during this investigation, chromium was detected in TP-1with an XRF during field screening at a concentration that is above the NHDES SRS.

7.5 GROUNDWATER SAMPLE RESULTS

As indicated in **Section 5.4**, groundwater samples were collected from monitoring wells CA-1 through CA-5 and were analyzed for NHDES Full List VOCs and PAHs. CA-6 was sampled for NHDES Full List VOCs, SVOCs, and dissolved RCRA-8 metals. CA-1 and CA-2 were also analyzed for dissolved lead.

Naphthalene was detected below the NHDES AGQS in CA-1. No other VOCs were detected above the laboratory PQL in any groundwater sample.

Dissolved barium was detected below its NHDES AGQS in CA-6. No other metals were detected above the laboratory PQL in any groundwater sample.

Several PAHs were detected in CA-1, CA-2, CA-3, CA-4, and CA-6. No PAHs were detected above the laboratory PQL in CA-5. Benzo(a)pyrene was detected above the NHDES AGQS in CA-1, CA-2, CA-4, and CA-6; benzo(a)anthracene and benzo(b)fluoranthene were detected above the NHDES AGQS in CA-2 and CA-6; and, benzo(k)fluoranthene was detected above the NHDES AGQS in CA-2. No other PAHs were detected above the NHDES AGQS. It should be noted that PAHs generally have low solubilities and that the samples submitted for PAH analysis were not filtered; therefore, the PAHs detected in groundwater have the potential to be the result of suspended solids in the samples.

Groundwater sample laboratory analytical results are summarized in **Table 5** and sample locations where exceedances of NHDES SRS occurred are depicted on **Figure 6**. Copies of the laboratory analytical results are included in **Appendix F**.

7.6 BUILDING MATERIAL SAMPLE RESULTS

7.6.1 Potential Asbestos Containing Material

Twenty-seven (27) samples from 9 homogeneous areas of potential ACMs were submitted for laboratory analysis. No asbestos was identified in building materials at the Site. Potential ACM sampling locations are depicted on **Figure 4**. The laboratory analytical report is included as **Appendix F**. The only known ACM at the Site is the baled asbestos piping being stored within the Horse Barn Shed.

7.6.2 Lead-Based Paint Screening

The following table summarizes the September 22, 2011, LBP screening results for the Site:

New England Yard LBP Screening Results						
Building	**Sample Location**	**Fixture Type and Material**	**Building Side**	**Paint Color**	**Result**	**Paint Condition**
Vactor Shed	Interior	Concrete Wall	A	White	Negative	Fair
Vactor Shed	Outside	Concrete Wall	B	White	Negative	Fair
Vactor Shed	Outside	Concrete Wall	D	White	Negative	Fair
Vactor Shed	Outside	Metal Door Header	D	White	Negative	Good
Vactor Shed	Outside	Metal Door Header	B	Green	Negative	Good
Vactor Shed	Outside	Metal Door	B	Green	Negative	Good
Vactor Shed	Room 1	Concrete Wall	A	Yellow	Negative	Good
Vactor Shed	Room 1	Concrete Wall	B	White	Negative	Good
Vactor Shed	Room 1	Concrete Wall	C	White	Negative	Good
Vactor Shed	Room 1	Concrete Wall	D	White	Negative	Good
Vactor Shed	Room 1	Metal Door	D	Green	Negative	Good
Vactor Shed	Room 1	Metal Door	B	Blue	Negative	Good
Sand/Salt Shed	Outside	Wood Siding	A	White	Negative	Poor
Sand/Salt Shed	Outside	Wood Siding	A	Grey	Negative	Poor
Rodder Shed	Outside	Concrete Wall	A	White	Negative	Good
Rodder Shed	Outside	Concrete Wall	A	White	Negative	Good
Rodder Shed	Outside	Wood Door	A	Green	Negative	Good
Rodder Shed	Outside	Wood Door	A	Green	**Positive**	Good
Rodder Shed	Outside	Wood Door	A	Green	**Positive**	Good
Horse Barn Shed	Outside	Wood Wall	A	Off-white	Negative	Poor
Horse Barn Shed	Outside	Wood Wall	A	Off-white	Negative	Poor
Horse Barn	Outside	Wood Wall	A	Off-white	Negative	Poor
Horse Barn	Outside	Wood Door	A	Off-white	Negative	Poor
Horse Barn	Outside	Wood Door	B	Off-white	**Positive**	Poor
Horse Barn	Outside	Wood Wall	B	Off-white	Negative	Poor
Horse Barn	Outside	Wood Wall	C	Off-white	Negative	Poor
Horse Barn	Room 1	Wood Wall	A	White	Negative	Poor
Horse Barn	Room 1	Wood Wall	A	Grey	Negative	Poor
Horse Barn	Room 2	Wood Wall	A	White	Negative	Poor
Horse Barn	Room 2	Wood Wall	D	White	Negative	Poor
Horse Barn	Room 2	Wood Wall	B	White	Negative	Poor
Blacksmith Shop	Room 2	Wood Door	A	Green	Negative	Poor

Based on these screening results, LBP is present on the green wood doors of the Rodder Shed and the off-white wood door of the Horse Barn. The off-white paint on the Horse Barn was observed to be in poor condition and peeling or flaking; therefore, can be easily disturbed and pose a health risk.

7.6.3 Potential PCB-Containing Materials

With the exception of painted exterior surfaces and a few painted interior surfaces, no potential PCB-containing bulk products were observed at the Site during a screening of building materials. Regarding the painted surfaces, paint applications for which, in Credere's experience, there is a high risk of PCBs, such as heat resistant or moisture resistant paints, were not observed during the screening. Therefore, no samples were collected for off-site laboratory analysis at this time.

8. QUALITY ASSURANCE/QUALITY CONTROL

The contracted laboratory, ARA of Portsmouth, New Hampshire, provided Level II analytical data according to EPA protocols, EPA laboratory data validation guidance, and the SSQAPP. 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

As outlined in the SSQAPP, 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 following sections present this analysis.

8.1 PRECISION

Precision measures the reproducibility of measurements. The precision measurement is established using the relative percent difference (RPD) between the sample and duplicate results. Relative percent differences were calculated for soil samples where both sample and duplicate values were greater than five times (5X) the PQL of the analyte. The RPD is calculated as follows:

$$RPD = \frac{(\text{Sample Result - Duplicate Result})}{\text{Mean of the Two Results}} \times 100$$

The following duplicate samples were collected during this Phase II ESA:

- SB-DUP was a duplicate soil sample collected from the soil boring sample CA-4 at 6-8 feet bgs and was analyzed for NHDES Full List VOCs. All detected analytes in the sample and duplicate were below 5X the PQL; therefore, RPDs were not calculated.
- SS-DUP was a duplicate soil sample collected from the surficial soil sample SS-1 and was analyzed for TPH, PAHs, PCBs, and the metals arsenic, barium, boron, cadmium, copper, lead, mercury, nickel, and vanadium. No TPH, PAHs, or PCBs were detected in the sample or the duplicate; therefore, RPDs were not calculated. Arsenic and lead were detected in both the sample and the duplicate and RPDs were 3.8% and 0%, respectively; therefore, the laboratory analytical results for these analytes were considered to be precise.

- DUP-GW was a duplicate groundwater sample collected from monitoring well CA-4 and was analyzed for NHDES Full List VOCs and PAHs. All detected analytes in the sample and duplicate were below 5X the PQL; therefore, RPDs were not calculated.
- DUP-GW-2 was a duplicate groundwater sample collected from monitoring well CA-1 and was analyzed for dissolved lead. Dissolved lead was not detected in the sample or duplicate; therefore, RPDs were not calculated.

Table 6 summarizes the duplicate sample results and calculated RPDs.

8.2 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 the specified methods. Control samples for assessing bias were analyzed at a rate as specified in the analytical SOPs and specified analytical methods.

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. According to the laboratory, unless noted in the non-conformance summary, all of the quality control criteria for these analyses were within acceptable limits. Specific comments from the laboratory included:

> ***VOCs (Soil)***
> *The MLCS/D4576 did not meet the acceptance criteria for bromomethane, carbon disulfide, and 1,2-dibromo-3-chloropropane. Since <10% of the compounds were outside of the acceptance criteria, reanalysis is not required.* Because no VOCs were detected above the applicable NHDES SRSs at the Site, it is Credere's opinion that this potential laboratory bias has not affected the outcome of the investigation.
>
> ***VOCs (Groundwater)***
> *The LCS/D1102315 did not meet the acceptance criteria for dichlorodifluoromethane and 1,4-dioxane. These compounds showed high recovery. There is no impact to the data as these analytes were not detected in the associated samples. The LCS/D1102315 did not meet the acceptance criteria for bromomethane, 2-butanone (MEK), and 2,2dichloropropane. Since*

<10% of the compounds were outside of the acceptance criteria, reanalysis is not required. Because no VOCs were detected above the applicable NHDES SRSs at the Site, it is Credere's opinion that this potential laboratory bias has not affected the outcome of the investigation.

SVOCs (Soil)
The LCS/D4577 did not meet the acceptance criteria for dibenzo(a,h)anthracene due to degradation of the spiking solution. Dibenzo(a,h)anthracene was only detected above the NHDES SRS in one sample. Because other PAHs were detected above the NHDES SRS in the same sample, it is Credere's opinion that this potential laboratory bias has not affected the outcome of this investigation.

SVOCs (Groundwater)
The LCS/D4624 did not meet the acceptance criteria for phenol, hexachlorocyclopentadiene, and dimethylphthalate. Since <10% of the compounds were outside of the acceptance criteria, reanalysis is not required. Because these compounds were not detected in any of the submitted samples and other SVOCs (specifically, PAHs) were detected above the applicable NHDES SRSs, it is Credere's opinion that this potential laboratory bias has not affected the outcome of this investigation.

8.3 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. For VOCs and PAHs, 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 lab provides a non-conformance summary that reports if all of the quality control criteria including initial calibration, calibration verification, surrogate recovery, holding time and method accuracy/precision for analysis were within acceptable limits. According to the laboratory, unless noted in the non-conformance summary, all of the quality control criteria for these analyses were within acceptable limits. Specific comments from the laboratory included:

SVOCs (Soil)
The surrogates, nitrobenzene-D5 and 2-fluorobiphenyl for sample 22468-009 was outside the acceptance limits as a result of interferences caused by the matrix. This laboratory sample refers to Credere sample CA-6 0-3'. It is Credere's opinion that the unacceptable surrogate recovery has not affected the outcome of the investigation because several PAHs and arsenic were detected above the applicable NHDES SRSs and soil in this sample was discolored, indicating a source area of contaminants may be present in the vicinity.

PAHs (Soil)

The surrogate, 2-fluorobiphenyl for sample 22468-014 was outside the acceptance limits as a result of interferences caused by the matrix. This laboratory sample refers to Credere's sample TP-2 4-6'. It is Credere's opinion that the unacceptable surrogate recovery has not affected the outcome of the investigation because several PAHs and arsenic were detected above the applicable NHDES SRSs and the sample matrix contained large quantities of ash, which would naturally contain high levels of PAHs and would likely require remedial action.

8.4 REPRESENTATIVENESS

Objectives for representativeness are defined for each sampling and analysis task and are a function of the investigative objectives. Representativeness was accomplished during this project through use of standard field, sampling, and analytical procedures.

All objectives for sampling and analytical representativeness for samples that were analyzed, as specified in the SSQAPP Addendum, were met.

8.5 COMPARABILITY

Comparability is the confidence with which one data set can be compared to another data set. The objective for this 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. Historical comparability shall be achieved through consistent use of methods and documentation procedures throughout the project.

8.6 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 could not be analyzed due to holding time violations, samples spilled or broken, or any other reason.

9. UPDATED CONCEPTUAL SITE MODEL

This Phase II ESA was designed to provide further understanding of the contaminants at the Site and to aid in changing the Site use from a municipal use (DPW facility) to a park, mixed-use, or residential use property. The following section is a description of the updated CSM, which incorporates information from this investigation.

9.1 STORMWATER WATER FLOW

Topography at the Site generally slopes to the west, with an approximate 8 foot elevation differential across the Site from the east to west. Storm water from the Site is expected to generally flow west to Opechee Bay.

9.2 SITE GROUNDWATER AND HYDROGEOLOGY

Groundwater at the Site was determined to be shallow and flow in a similar pattern to surface topography, which slopes west to Opechee Bay.

9.3 GEOLOGICAL CHARACTERISTICS

9.3.1 Surficial Geology

Surficial materials at the Site were determined to be a mixture of native sand and gravel, native organic and cobble lake bottom, and other fill materials including ash, asphalt, metal, and inert material (e.g. brick, concrete).

9.3.2 Bedrock Geology

Bedrock was not encountered during this investigation. According to the *Bedrock Geologic Map of New Hampshire* compiled by the USGS and available through the City of Laconia Public Mapping website, the northern portion of the subject property is underlain by the early to late Devonian aged (410 to 365 million years ago) rocks of the Concord Granite. These rocks are known for their fine texture and uniformity. The southern portion of the subject property is underlain by the Lower Silurian aged (372 million years old ago) upper Rangeley Formation. The Rangeley Formation is described at a pelitic schist, metasandstone, and locally coarse-grained metasandstone with rusty weathering.

9.4 CONTAMINANTS OF CONCERN

The contaminants of concern discussed in this CSM are those compounds that (1) are associated with historic use of the Site, and (2) were detected above applicable regulatory standards. Based on this, the contaminants of concern at the Site include the following:

- PAHs detected in subsurface soils associated with the northern portion of the Site.
- Arsenic and chromium (via XRF field screening) detected in subsurface soils associated with the northern portion of the Site.
- Chromium and lead detected in material accumulated in the catch basin of the Vactor Building.
- PAHs detected in groundwater across the Site, which may be the result of suspended solids.
- LBP identified on the green doors of the Rodder Shed and off-white door of the Horse Barn.
- Known waste asbestos piping currently being stored in the Horse Barn Shed.

To aid in a thorough understanding of the environmental concerns present at the Site, a graphical presentation of the identified contaminants of concern and the migration pathways to potential receptors is included as **Figure 7**. Exposure Pathways and Potential Receptors depicted on the CSM are defined below.

Exposure Pathways describe how a human or environmental receptor comes into contact with contaminants which may be present at the Site. Exposure pathways presented in the CSM include the following:

Inhalation:	This pathway is primarily associated with groundwater contamination within 30 feet of an occupied structure when groundwater elevation is less than 15 feet below surface grade, or when depth to groundwater is unknown. This pathway is applicable when receptors may inhale impacted media in the form of vapor.
Dermal Absorption:	Exposure via dermal absorption occurs when receptors are exposed to chemical concentrations present in soil, groundwater, or surface water through direct contact with the skin.
Active Ingestion:	The Active Ingestion pathway represents exposure which may occur through the active ingestion of contaminant concentrations via a drinking water supply well or through agricultural products.
Incidental Uptake:	This pathway is applicable when receptors may incidentally

ingest impacted media in the form of dust or airborne particulates.

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.
Commercial:	Commercial receptors are those which are present at the Site for long durations but with low intensity exposure such as indoor office workers.
Site Worker:	Site 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 outdoor commercial workers and construction workers.
Visitor:	Visitors 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.
Terrestrial and Aquatic Biota:	These receptors include flora and fauna which may be exposed to contaminants in their respective land-based or aquatic environments.

9.5 SUMMARY OF EXPOSURE PATHWAYS AND HUMAN RECEPTORS

Based on the physical and chemical properties of PAHs, these COCs in surficial/subsurface soil have a low affinity to leach significantly into groundwater. In this regard, while the turbidity was low for each of the samples (<25 NTU), the concentrations of PAHs currently observed in groundwater may be the result of suspended solids, and not dissolved concentrations.

Arsenic observed in soil in the northern portion of the Site was not shown to be leaching into groundwater based on data obtained from monitoring well CA-3. Therefore, the primary migration pathways for these COCs would be through stormwater runoff or disturbance of the impacted materials causing a secondary impact to adjacent surface materials or air at the Site. Potential exposure pathways for these COCs to human receptors are dermal contact and incidental uptake. Potential human receptors for these COCs at the Site are nearby or future residents, commercial workers, Site workers, and visitors.

With the exception of commercial workers who would likely be removing the material and would be exposed through incidental uptake, there is currently no identified migration pathway or exposure pathway for chromium and lead detected in the Vactor Shed catch basin structure.

Asbestos stored in the Horse Barn Shed could potentially be released by disturbing the bales of the material, potentially impacting air in the breathing zone and resulting in asbestos dusts within the building. Potential exposure pathways for ACM would be incidental uptake by inhalation. Potential human receptors for ACM at the Site are currently Site workers, and visitors.

Lead in LBP at the Site can potentially be released if the painted surfaces are disturbed, impacting adjacent surfaces and air. Potential exposure pathways for lead from LBP would be from dermal contact and incidental uptake by Site workers and visitors. Potential human receptors for LBP at the Site are Site workers and visitors.

10. DEVIATIONS

The following deviations were made from the SSQAPP Addendum (see **Appendix A**) during the course of the investigation:

1. A subsurface soil sample could not be collected from soil boring CA-1 due to large subsurface obstructions including concrete, bricks, and boulders that were impeding soil collection and creating large void spaces when shifted with the hollow stem auger rig. Because fill materials were interpreted to be present in this area, this deviation has resulted in a data gap at the Site.
2. Due to height restrictions within the Blacksmith Shop and the Vactor Shed buildings, soil borings CA-2 and CA-6 were completed using direct-push methodologies in place of hollow-stem auger methodologies. Because continuous sampling is used in both methodologies, it is Credere's opinion that this deviation has not impacted the conclusions of this Phase II ESA.
3. The location of surficial soil sample SS-1 was moved slightly south from its proposed location due to the presence of pavement. The final location remained within the historical coal pocket area; therefore, Credere does not believe that this deviation has impacted the conclusions of this Phase II ESA.

11. DATA GAPS

The following data gaps were identified at the Site as part of this Phase II ESA:

- Subsurface soil in the vicinity of soil boring CA-1 could not be collected or assessed due to large subsurface obstructions impeding sample collection. Because concrete and brick were observed in boring cuttings, this material is interpreted to be fill material, which has the potential to be impacted with contaminants similar to those identified throughout the rest of the Site.

12. CONCLUSIONS

We have performed a Phase II environmental site assessment at the property at 210 Messer Street in Laconia, New Hampshire in conformance with the scope and limitations of ASTM Practice E 1903-11 and for the following objectives: to confirm or dismiss recognized environmental conditions (RECs) and other ASTM non-scope conditions (NCs) identified during the Phase I ESA that was completed for the Site by Credere in May 2011. A summary of our conclusions in relation to the identified RECs, other environmental concerns, and the investigation results are presented below:

- REC-1 concerning potential soil and groundwater contamination from the historical uses of the Site by coal and ice companies with a railroad spur, a blacksmith shop, and for storage by the City of Laconia Department of Public Works is confirmed because PAHs were identified in groundwater throughout the Site and a limited area of PAH contaminated soil was identified beneath the Vactor Shed.
- REC-2 concerning the oil stained soil observed within the Blacksmith Shop is dismissed because the oil stained soil has been consolidated into drums for disposal and no contaminants were detected above the NHDES SRS beneath the floor of the building.
- REC-3 concerning impact to the Site from a historical undocumented gasoline UST on the east adjoining property is dismissed because no gasoline related compounds were identified in soil or groundwater along the eastern Site boundary in soil boring/monitoring well CA-4.
- REC-4 concerning potential releases from a historical bulk oil storage tank adjacent to the Sand/Salt Shed is dismissed because no concentrations of TPH were identified above the NHDES SRS in soil borings CA-5 or CA-6 in the vicinity of the tank.
- REC-5 concerning the potential landfilling or burying of wastes reported in the northern portion of the Site is confirmed because buried ash, metal, asphalt, refuse, and other materials were observed in test pits excavated in this area of the Site and PAHs and arsenic were detected in laboratory samples above the applicable NHDES SRS. It should be noted that although not a contaminant of concern for the investigation, chromium was also detected above the SRS during field screening with an XRF in TP-1.
- REC-6 concerning the potential for contaminants to be present from dumping or incidental spills of painting products into the Vactor Shed catch basin is confirmed because the sampled material within the catch basin structure was determined to be impacted by lead and chromium, which are components of paint, at concentrations exceeding the NHDES SRS.
- REC-7 concerning the open pail of waste oil and approximately 30-gallon drum of unknown contents observed in the Horse Barn building; and one (1) 55-gallon drum of unknown contents observed outside the Blacksmith Shop building remains a REC because these items have not been removed to date, and represent a material threat of release to the environment.

- DMEC-1 concerning the baled asbestos piping that is being stored in the Horse Barn Shed should be removed from the Site and property disposed of.
- NC-1, which was associated with the presence of ACM in the Site buildings, was dismissed because no ACMs were identified in/on the Site buildings.
- NC-2, which was associated with the presence of LBP in/on the Site buildings, was confirmed because LBP was identified on the green doors of the Rodder Shed and the off-white door of the Horse Barn.
- NC-3, which was associated with potential PCB-containing bulk products within the Site buildings, is inconclusive because with the exception of painted exterior surfaces and a limited number of painted interior surfaces, no potential PCB-containing bulk products were observed at the Site during the completed inventory of building materials. Regarding the painted surfaces, no paints that, in Credere's experience, have a high probability to contain PCBs, such as heat resistant or moisture resistant paints, were observed during the screening.

13. RECOMMENDATIONS

Based on these conclusions, Credere recommends the following tasks be completed for the Site:

- To further assess REC-1, Credere recommends that the monitoring well network at the Site be resampled for laboratory analysis of PAHs, and that the groundwater samples be filtered to determine if the identified PAHs are the result of suspended solids in the samples or reflect dissolved phase concentrations.
- Credere recommends that the drum of consolidated oily soil (REC-2) from the Blacksmith Shop be removed from the Site and properly disposed of.
- Contaminated fill material (REC-5) is present in the northern portion of the Site where this material was historically land filled (see **Figure 2**). This material represents a potential health risk during redevelopment; therefore, Credere recommends that a remedial action plan be developed and implemented to appropriately address this material. Because redevelopment plans have not been formally developed for the Site, necessary remedial measures cannot be determined at this time; however, such measures would likely include either capping the material in place to prevent exposure, the excavation and off-site disposal of this material, or a combination thereof. Once redevelopment plans have been developed, some additional soil and/or groundwater assessment work may be warranted to determine accurate horizontal and vertical extents of these materials. Based on XRF field screening results, collected samples should also be analyzed for chromium during any additional assessment work in this area. Once redevelopment plans have been established, if this material is to be capped in place, Credere recommends that this portion of the Site be registered as a Pre-1981 landfill according to NHDES Solid Waste Rules Env-Sw 309.
- The area of contaminated fill in the northern portion of the Site was identified as a landfill with concentrations of PAHs, arsenic, and chromium (via XRF field screening) analyzed above the NHDES SRS. As the extent of environmental impact from this area has not been fully assessed, Credere recommends that sediments along the toe of the landfill within Opechee Bay be sampled to determine if impacts to the bay have occurred.
- Contaminated soil was identified beneath the Vactor Shed (REC-1). This material also represents a potential health risk during redevelopment; therefore, Credere recommends that a remedial action plan be developed and implemented to appropriately address this material. Because redevelopment plans have not been formally developed for the Site, necessary remedial measures cannot be determined at this time; however, such plans would likely include either the capping in place or excavation and off-site disposal of this material to prevent exposure. Once redevelopment plans have been developed or the building has been demolished, additional assessment work may be warranted to determine the horizontal and vertical extent of these materials.
- Credere recommends that the accumulated chromium and lead contaminated material identified within the Vactor Shed catch basin (REC-6) be removed for proper disposal.

In addition, if an outlet to this drain is identified during redevelopment, additional assessment would be necessary to determine the extent of potential impact from these contaminants.

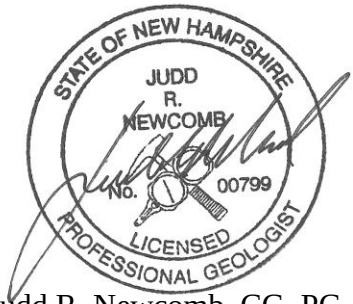
- Credere recommends that the unknown 55-gallon drum outside the Blacksmith Shop and the pail of waste oil within the Horse Barn (REC-7) be removed from the Site and properly disposed.
- Credere recommends that the bailed asbestos piping stored in the Horse Barn Shed (DMEC-1), the pail of waste oil and 30-gallon drum of unknown contents in the Horse Barn (REC-7) should be removed from the Site and properly disposed.
- Credere recommends that the City of Laconia DPW workers and future Site users or occupants should be notified of the presence of LBP (NC-2) on the green doors of the Rodder Shed and on the off-white door of the Horse Barn. If paint is removed from these surfaces, the paint waste should be properly disposed.
- Based on the PCB bulk products inventory observations and the lack of paint applications for which, in Credere's experience, there is a high risk of PCBs, Credere recommends that PCB sampling of building materials be deferred until redevelopment begins at the Site and bulk samples of demolition materials can be collected for waste characterization prior to disposal.

14. SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

We have performed this Phase II environmental site assessment at the property at 210 Messer Street in conformance with the scope and limitations of ASTM Practice E 1901-11 and for the following objectives:

1. To assess the Site for release(s) of oil and/or hazardous substances that may have resulted from the RECs identified during the May 2011 Phase I ESA.
2. To determine if asbestos-containing building materials are present in the Site buildings per the non-scope consideration identified during the May 2011 Phase I ESA.
3. To determine if PCB-containing building materials are present in the Site buildings per the non-scope consideration identified during the May 2011 Phase I ESA.
4. To determine if lead-based paint is present on the Site buildings per the non-scope consideration identified during the May 2011 Phase I ESA.

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 Phase II environmental site assessment by an individual who is not considered an environmental professional was completed under the supervision or responsible charge of the environmental professional.



Judd R. Newcomb, CG, PG
Geologist/Project Manager

Jedd Steinglass
Senior Geologist

Richard S. Vandenberg, CG, PG
Senior Hydrogeologist

15. LIMITATIONS

This report has been prepared as part of a contract agreement between Credere Associates, LLC and LRPC for their Brownfields program. This agreement was established in order to provide LRPC with information upon which it can rely concerning the existence or likely existence of various environmental contaminants on or adjacent to the Site.

This report does not reflect:

1. Conditions in untested areas.
2. Variations in chemical concentrations that can occur between sample locations.
3. The total understanding of potential influences of off-site areas or historical uses that may have contributed or currently contribute to Site contamination, particularly relating to groundwater and subsurface soil conditions. The limited evaluation of off-site contamination sources was based on available data and records.
4. The potential presence of compound sources was based on available data and records.
5. The potential presence of analytes that were not analyzed for or that may be present below minimum Practical Quantification Limits for the methods tested.
6. The conditions of groundwater and/or surface water beyond available data.
7. Variation in the Site conditions that occurred at a time other than when the Site inspection was completed.

In the event that any conditions different from those described herein are encountered at a later time, Credere Associates, LLC 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.

FIGURES

USGS 7.5 MINUTE LACONIA, NH QUADRANGLE (1987)

DRAWN BY:WTE/JRN	DATE: 12/21/11
CHECKED BY:RSV/JSS	PROJECT: 10001086

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

NEW ENGLAND YARD PROPERTY
A.K.A DPW NEW ENGLAND YARD
210 MESSER STREET
LACONIA, NH
NHDES #200911005

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

N

CREDERE

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SAMPLE LOCATION LEGEND

SYMBOL	DESCRIPTION
⊕	SOIL BORING / MONITORING WELL
⊞	SURFICIAL SOIL SAMPLE
▣	TEST PIT
▲	SAMPLE FROM CATCH BASIN

EXISTING FEATURES LEGEND

SYMBOL	DESCRIPTION
	PROPERTY LINE
	ABUTTER PROPERTY LINE
	EDGE OF LAKE
	BUILDING
	EXISTING RAILROAD TRACK
	FORMER RAILROAD SPUR
sd	STORM DRAIN LINE
	EDGE OF PAVEMENT
⊞	CATCH BASIN
○	OBSERVED OBJECT
●	FLOOR DRAIN
⬭	ABOVEGROUND STORAGE TANK
⬭	FORMER UNDERGROUND STORAGE TANK
▨	APPROXIMATE LANDFILL AREA (REC-5)

NOTES:
1. INFORMATION SHOWN ON THIS PLAN WAS OBTAINED FROM THE CITY OF LACONIA "MAPS ONLINE" AND FROM FIELD OBSERVATIONS ON DECEMBER 7, 2010.
2. APPROXIMATE LIMITS OF LANDFILL AREA SHOWN ON THIS PLAN ARE BASED ON CREDERE ASSOCIATES SOIL BORING AND TEST PIT OBSERVATIONS ON SEPTEMBER 22, 2011, AND SITE TOPOGRAPHY.
3. REC-1 CONCERNS THE POTENTIAL FOR THE SITE TO HAVE BEEN IMPACTED FROM ITS HISTORICAL USES.

DRAWN BY: WTE	DATE: 12/21/11
CHECKED BY: RSV/JSS	PROJECT: 10001086

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FIGURE 2
DETAILED SITE PLAN

NEW ENGLAND YARD PROPERTY
A.K.A. DPW NEW ENGLAND YARD
210 MESSER STREET
LACONIA, NH
NHDES #200911005

GRAPHIC SCALE
60 0 30 60
1 inch = 60 ft.

SAMPLE LOCATION LEGEND

SYMBOL	DESCRIPTION
⊕	SOIL BORING / MONITORING WELL
⊞	SURFICIAL SOIL SAMPLE
▪	TEST PIT
▲	SAMPLE FROM CATCH BASIN

EXISTING FEATURES LEGEND

SYMBOL	DESCRIPTION
	PROPERTY LINE
	ABUTTER PROPERTY LINE
	EDGE OF LAKE
	BUILDING
	EXISTING RAILROAD TRACK
	FORMER RAILROAD SPUR
90.90	GROUNDWATER CONTOUR
? ? ?	ASSUMED GROUNDWATER CONTOUR
sd	STORM DRAIN LINE
	EDGE OF PAVEMENT
	CATCH BASIN
	OBSERVED OBJECT
	FLOOR DRAIN
	ABOVEGROUND STORAGE TANK
	FORMER UNDERGROUND STORAGE TANK
	APPROXIMATE LANDFILL AREA (REC-5)
	GROUNDWATER FLOW DIRECTION ARROW

NOTES:
1. INFORMATION SHOWN ON THIS PLAN WAS OBTAINED FROM THE CITY OF LACONIA "MAPS ONLINE" AND FROM FIELD OBSERVATIONS ON DECEMBER 7, 2010.
2. APPROXIMATE LIMITS OF LANDFILL AREA SHOWN ON THIS PLAN ARE BASED ON CREDERE ASSOCIATES SOIL BORING AND TEST PIT OBSERVATIONS ON SEPTEMBER 22, 2011 AND SITE TOPOGRAPHY.
3. GROUNDWATER ELEVATIONS MEASURED ON OCTOBER 6, 2011.
4. REC-1 CONCERNS THE POTENTIAL FOR THE SITE TO HAVE BEEN IMPACTED FROM ITS HISTORICAL USES.

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CHECKED BY: RSV/JSS	PROJECT: 10001086

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FIGURE 3
GROUNDWATER FLOW PLAN

NEW ENGLAND YARD PROPERTY
A.K.A. DPW NEW ENGLAND YARD
210 MESSER STREET
LACONIA, NH
NHDES #200911005

GRAPHIC SCALE
60 0 30 60
1 inch = 60 ft.

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LEGEND

SYMBOL	DESCRIPTION
	PROPERTY LINE
	ABUTTER PROPERTY LINE
	EDGE OF LAKE
	BUILDING
	EXISTING RAILROAD TRACK
	FORMER RAILROAD SPUR
sd	STORM DRAIN LINE
	EDGE OF PAVEMENT
	CATCH BASIN
	FLOOR DRAIN
	OBSERVED OBJECT
	ABOVEGROUND STORAGE TANK
	FORMER UNDERGROUND STORAGE TANK
⊗	ASBESTOS SAMPLE

CREDERE

NOTE: INFORMATION SHOWN ON THIS PLAN WAS OBTAINED FROM THE CITY OF LACONIA "MAPS ONLINE" AND FROM FIELD OBSERVATIONS ON DECEMBER 7, 2010.

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CHECKED BY: RSV/JSS	PROJECT: 10001086

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FAX: 207.887.1051
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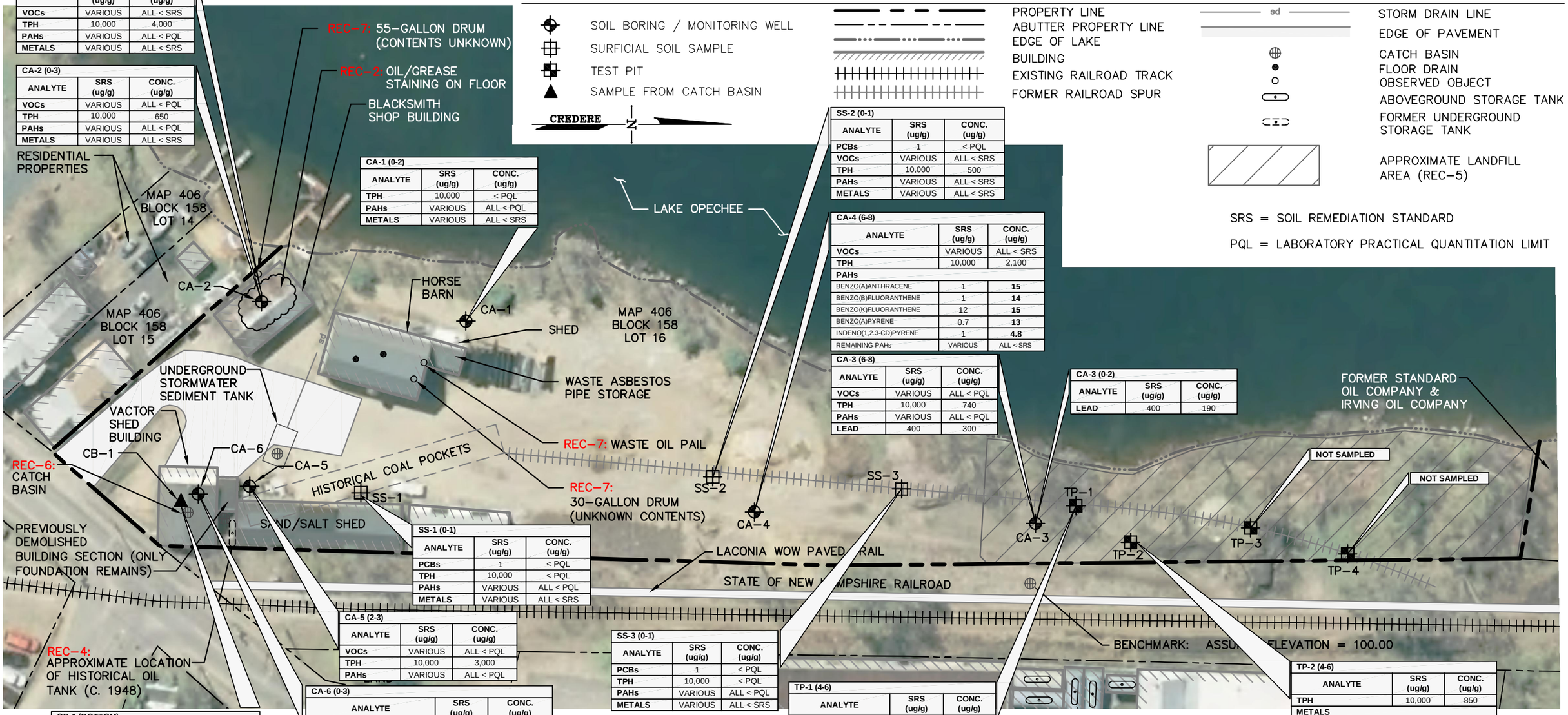
FIGURE 4
ASBESTOS SAMPLE LOCATION PLAN

NEW ENGLAND YARD PROPERTY
A.K.A. DPW NEW ENGLAND YARD
210 MESSER STREET
LACONIA, NH
NHDES #200911005

GRAPHIC SCALE
60 0 30 60
1 inch = 60 ft.



SAMPLE LOCATION LEGEND

SYMBOL	DESCRIPTION
	SOIL BORING / MONITORING WELL
	SURFICIAL SOIL SAMPLE
	TEST PIT
	SAMPLE FROM CATCH BASIN

EXISTING FEATURES LEGEND

SYMBOL	DESCRIPTION
	PROPERTY LINE
	ABUTTER PROPERTY LINE
	EDGE OF LAKE
	BUILDING
	EXISTING RAILROAD TRACK
	FORMER RAILROAD SPUR

EXISTING FEATURES LEGEND

SYMBOL	DESCRIPTION
sd	STORM DRAIN LINE
	EDGE OF PAVEMENT
	CATCH BASIN
	FLOOR DRAIN
	OBSERVED OBJECT
	ABOVEGROUND STORAGE TANK
	FORMER UNDERGROUND STORAGE TANK
	APPROXIMATE LANDFILL AREA (REC-5)

SRS = SOIL REMEDIATION STANDARD

PQL = LABORATORY PRACTICAL QUANTITATION LIMIT

CA-2 FLOOR (SURFACE)

ANALYTE	SRS (ug/g)	CONC. (ug/g)
VOCs	VARIOUS	ALL < SRS
TPH	10,000	4,000
PAHs	VARIOUS	ALL < PQL
METALS	VARIOUS	ALL < SRS

CA-2 (0-3)

ANALYTE	SRS (ug/g)	CONC. (ug/g)
VOCs	VARIOUS	ALL < PQL
TPH	10,000	650
PAHs	VARIOUS	ALL < PQL
METALS	VARIOUS	ALL < SRS

CA-1 (0-2)

ANALYTE	SRS (ug/g)	CONC. (ug/g)
TPH	10,000	< PQL
PAHs	VARIOUS	ALL < PQL
METALS	VARIOUS	ALL < SRS

SS-2 (0-1)

ANALYTE	SRS (ug/g)	CONC. (ug/g)
PCBs	1	< PQL
VOCs	VARIOUS	ALL < SRS
TPH	10,000	500
PAHs	VARIOUS	ALL < SRS
METALS	VARIOUS	ALL < SRS

CA-4 (6-8)

ANALYTE	SRS (ug/g)	CONC. (ug/g)
VOCs	VARIOUS	ALL < SRS
TPH	10,000	2,100
PAHs		
BENZO(A)ANTHRACENE	1	**15**
BENZO(B)FLUORANTHENE	1	**14**
BENZO(K)FLUORANTHENE	12	**15**
BENZO(A)PYRENE	0.7	**13**
INDENO(1,2,3-CD)PYRENE	1	**4.8**
REMAINING PAHs	VARIOUS	ALL < SRS

CA-3 (6-8)

ANALYTE	SRS (ug/g)	CONC. (ug/g)
VOCs	VARIOUS	ALL < PQL
TPH	10,000	740
PAHs	VARIOUS	ALL < PQL
LEAD	400	300

CA-3 (0-2)

ANALYTE	SRS (ug/g)	CONC. (ug/g)
LEAD	400	190

SS-1 (0-1)

ANALYTE	SRS (ug/g)	CONC. (ug/g)
PCBs	1	< PQL
TPH	10,000	< PQL
PAHs	VARIOUS	ALL < PQL
METALS	VARIOUS	ALL < SRS

CA-5 (2-3)

ANALYTE	SRS (ug/g)	CONC. (ug/g)
VOCs	VARIOUS	ALL < PQL
TPH	10,000	3,000
PAHs	VARIOUS	ALL < PQL

SS-3 (0-1)

ANALYTE	SRS (ug/g)	CONC. (ug/g)
PCBs	1	< PQL
TPH	10,000	< PQL
PAHs	VARIOUS	ALL < PQL
METALS	VARIOUS	ALL < SRS

TP-1 (4-6)

ANALYTE	SRS (ug/g)	CONC. (ug/g)
TPH	10,000	880
METALS	VARIOUS	ALL < SRS
PAHs		
BENZO(A)ANTHRACENE	1	**2.8**
BENZO(B)FLUORANTHENE	1	**5.8**
BENZO(A)PYRENE	0.7	**3.8**
REMAINING PAHs	VARIOUS	ALL < SRS

TP-2 (4-6)

ANALYTE	SRS (ug/g)	CONC. (ug/g)
TPH	10,000	850
METALS		
ARSENIC	11	**18**
REMAINING METALS	VARIOUS	ALL < SRS
PAHs		
BENZO(A)ANTHRACENE	1	**11**
BENZO(B)FLUORANTHENE	1	**13**
BENZO(A)PYRENE	0.7	**9.9**
INDENO(1,2,3-CD)PYRENE	1	**4.7**
REMAINING PAHs	VARIOUS	ALL < SRS

CB-1 (BOTTOM)

ANALYTE	SRS (ug/g)	CONC. (ug/g)
VOCs	VARIOUS	ALL < PQL
TPH	10,000	560
SVOCs	VARIOUS	ALL < SRS
METALS		
CHROMIUM	130[2]	**290**
LEAD	400	**810**
REMAINING METALS	VARIOUS	ALL < SRS

CA-6 (0-3)

ANALYTE	SRS (ug/g)	CONC. (ug/g)
VOCs	VARIOUS	ALL < SRS
TPH	10,000	870
METALS	VARIOUS	ALL < SRS
SVOCs		
BENZO(A)ANTHRACENE	1	**5.5**
BENZO(B)FLUORANTHENE	1	**3.7**
BENZO(A)PYRENE	0.7	**3.9**
INDENO(1,2,3-CD)PYRENE	1	**1.4**
DIBENZO(A,H)ANTHRACENE	0.7	**0.83**
REMAINING SVOCs	VARIOUS	ALL < SRS

NOTES:

1. INFORMATION SHOWN ON THIS PLAN WAS OBTAINED FROM THE CITY OF LACONIA "MAPS ONLINE" AND FROM FIELD OBSERVATIONS ON DECEMBER 7, 2010.
2. THE REGULATORY STANDARD THRESHOLD FOR CHROMIUM VI WAS USED BECAUSE IT IS MORE STRINGENT THAN THE CHROMIUM III STANDARD.
3. APPROXIMATE LIMITS OF LANDFILL AREA SHOWN ON THIS PLAN ARE BASED ON CREDERE ASSOCIATES SOIL BORING AND TEST PIT OBSERVATIONS ON SEPTEMBER 22, 2011 AND SITE TOPOGRAPHY.
4. ANALYTE CONCENTRATIONS SHOWN IN BOLD EXCEED THE APPLICABLE SRS.
5. REC-1 CONCERNS THE POTENTIAL FOR THE SITE TO HAVE BEEN IMPACTED FROM ITS HISTORICAL USES.

DRAWN BY: WTE/SWC	DATE: 12/21/11
CHECKED BY: RSV/JSS	PROJECT: 10001086

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FIGURE 5
SOIL SAMPLE RESULTS PLAN

NEW ENGLAND YARD PROPERTY
A.K.A. DPW NEW ENGLAND YARD
210 MESSER STREET
LACONIA, NH
NHDES #200911005

GRAPHIC SCALE
60 0 30 60
1 inch = 60 ft.

CREDERE

N

SAMPLE LOCATION LEGEND

SYMBOL	DESCRIPTION
⊕	SOIL BORING / MONITORING WELL

EXISTING FEATURES LEGEND

SYMBOL	DESCRIPTION
	PROPERTY LINE
	ABUTTER PROPERTY LINE
	EDGE OF LAKE
	BUILDING
	EXISTING RAILROAD TRACK
	FORMER RAILROAD SPUR
sd	STORM DRAIN LINE
	EDGE OF PAVEMENT
	CATCH BASIN
	FLOOR DRAIN
	OBSERVED OBJECT
	ABOVEGROUND STORAGE TANK
	FORMER UNDERGROUND STORAGE TANK
	APPROXIMATE LANDFILL AREA (REC–5)

AGQS = AMBIENT GROUNDWATER QUALITY STANDARDS.

PQL = LABORATORY PRACTICAL QUANTITATION LIMIT.

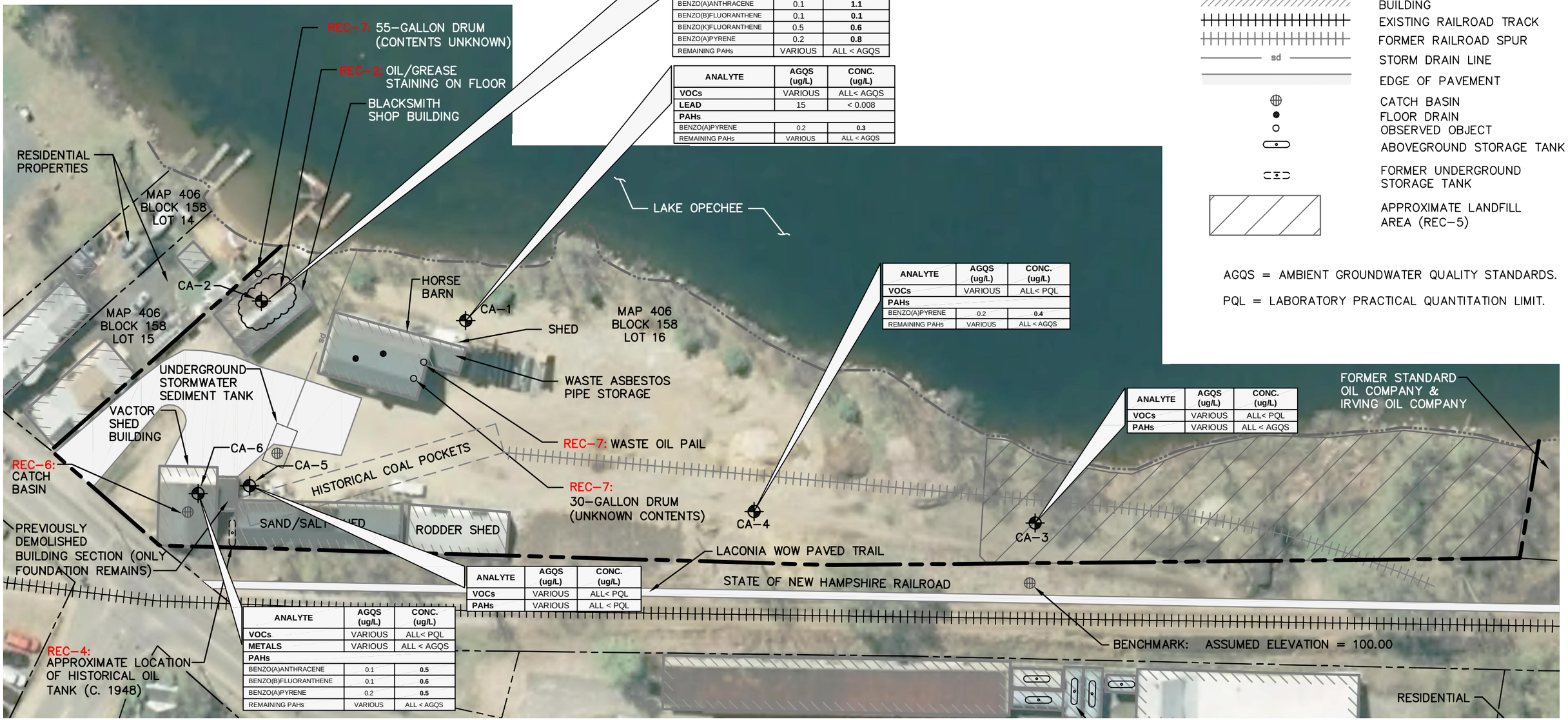
ANALYTE	AGQS (ug/L)	CONC. (ug/L)
VOCs	VARIOUS	ALL< PQL
PAHs		
BENZO(A)ANTHRACENE	0.1	**1.1**
BENZO(B)FLUORANTHENE	0.1	**0.1**
BENZO(K)FLUORANTHENE	0.5	**0.6**
BENZO(A)PYRENE	0.2	**0.8**
REMAINING PAHs	VARIOUS	ALL < AGQS

ANALYTE	AGQS (ug/L)	CONC. (ug/L)
VOCs	VARIOUS	ALL< AGQS
LEAD	15	< 0.008
PAHs		
BENZO(A)PYRENE	0.2	**0.3**
REMAINING PAHs	VARIOUS	ALL < AGQS

ANALYTE	AGQS (ug/L)	CONC. (ug/L)
VOCs	VARIOUS	ALL< PQL
PAHs		
BENZO(A)PYRENE	0.2	**0.4**
REMAINING PAHs	VARIOUS	ALL < AGQS

ANALYTE	AGQS (ug/L)	CONC. (ug/L)
VOCs	VARIOUS	ALL< PQL
PAHs	VARIOUS	ALL < AGQS

ANALYTE	AGQS (ug/L)	CONC. (ug/L)
VOCs	VARIOUS	ALL< PQL
METALS	VARIOUS	ALL < AGQS
PAHs		
BENZO(A)ANTHRACENE	0.1	**0.5**
BENZO(B)FLUORANTHENE	0.1	**0.6**
BENZO(A)PYRENE	0.2	**0.5**
REMAINING PAHs	VARIOUS	ALL < AGQS



NOTES:

1. INFORMATION SHOWN ON THIS PLAN WAS OBTAINED FROM THE CITY OF LACONIA "MAPS ONLINE" AND FROM FIELD OBSERVATIONS ON DECEMBER 7, 2010. AGQS – AMBIENT GROUNDWATER QUALITY STANDARDS.
2. APPROXIMATE LIMITS OF LANDFILL AREA SHOWN ON THIS PLAN ARE BASED ON CREDERE ASSOCIATES SOIL BORING AND TEST PIT OBSERVATIONS ON SEPTEMBER 22, 2011 AND SITE TOPOGRAPHY.
3. ANALYTE CONCENTRATIONS SHOWN IN BOLD EXCEED THE APPLICABLE AGQS.
4. REC–1 CONCERNS THE POTENTIAL FOR THE SITE TO HAVE BEEN IMPACTED FROM ITS HISTORICAL USES.

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FIGURE 6
GROUNDWATER RESULTS PLAN

NEW ENGLAND YARD PROPERTY
A.K.A. DPW NEW ENGLAND YARD
210 MESSER STREET
LACONIA, NH
NHDES #200911005

GRAPHIC SCALE
60 0 30 60
1 inch = 60 ft.

J:\CREDERE\10001086\New England Yard\dwg\Phase II\Phase II Figure_2.dwg plot date: 4/12/2012 4:31 PM

SOURCE (REC)	CONTAMINANTS OF CONCERN	PRIMARY MIGRATION PATHWAY	PRIMARY IMPACTED MEDIA	SECONDARY MIGRATION PATHWAY	SECONDARY IMPACTED MEDIA	TERTIARY MIGRATION PATHWAY	TERTIARY IMPACTED MEDIA
REC-1 HISTORICAL USE	PAHs	HISTORICAL SPILLS	SUBSURFACE SOIL	INFILTRATION AND LEACHING	GROUNDWATER		
REC-2 OIL STAINED SOIL	NONE. REC DISMISSED. SOIL HAS BEEN DRUMMED FOR DISPOSAL.						
REC-3 OFF-SITE GASOLINE	NONE. REC DISMISSED.						
REC-4 HISTORICAL BULK OIL STORAGE	NONE. REC DISMISSED.						
REC-5 POTENTIAL LANDFILLING	PAHs ARSENIC CHROMIUM	DUMPING AND WASTE DISPOSAL	SURFICIAL AND SUBSURFACE SOIL	STORMWATER RUNOFF INFILTRATION AND LEACHING	SURFACE WATER AND SEDIMENT GROUNDWATER		

POTENTIAL EXPOSURE PATHWAYS

	RESIDENTIAL	COMMERCIAL	SITE WORKER	VISITOR	TERRESTRIAL BIOTA	AQUATIC BIOTA
INHALATION						
DERMAL ABSORPTION			X	X	X	X
ACTIVE INGESTION					X	X
INCIDENTAL UPTAKE			X	X	X	X

POTENTIAL EXPOSURE PATHWAYS

	RESIDENTIAL	COMMERCIAL	SITE WORKER	VISITOR	TERRESTRIAL BIOTA	AQUATIC BIOTA
INHALATION						
DERMAL ABSORPTION			X	X	X	X
ACTIVE INGESTION					X	X
INCIDENTAL UPTAKE			X	X	X	X

NOTES:
1. UST = UNDERGROUND STORAGE TANK
2. PAH = POLYCYCLIC AROMATIC HYDROCARBONS

DRAWN BY: JRN/WTE	DATE: 12/21/11
CHECKED BY: RSV/JSS	PROJECT: 10001086

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FIGURE 7
UPDATED CONCEPTUAL SITE MODEL
(SHEET 1 OF 2)

NEW ENGLAND YARD PROPERTY
A.K.A. DPW NEW ENGLAND YARD
210 MESSER STREET
LACONIA, NH
NHDES #200911005

SOURCE (REC)	CONTAMINANTS OF CONCERN	PRIMARY MIGRATION PATHWAY	PRIMARY IMPACTED MEDIA	SECONDARY MIGRATION PATHWAY	SECONDARY IMPACTED MEDIA	TERTIARY MIGRATION PATHWAY	TERTIARY IMPACTED MEDIA
REC-6 CATCH BASIN	CHROMIUM, LEAD	DUMPING AND WASTE DISPOSAL	SUBSURFACE SOIL	LEACHING TO GROUNDWATER	GROUNDWATER	GROUNDWATER FLOW	SURFACE WATER
REC-7 OPEN PAIL OF WASTE OIL, 30-GALLON DRUM OF UNKNOWN CONTENTS, AND 55-GALLON DRUM OF UNKNOWN CONTENTS	PETROLEUM, UNKNOWN	POTENTIAL SPILLS OR LEAKS	SURFICIAL AND SUBSURFACE SOIL	STORMWATER RUNOFF	SURFACE WATER AND SEDIMENT		
				INFILTRATION AND LEACHING	GROUNDWATER		
NC-1 ACMs	ASBESTOS	DISTURBANCE OF WASTE ASBESTOS PIPE BALES	INDOOR AIR				
NC-2 LEAD-BASED PAINT	LEAD	DEGRADATION/ DISTURBANCE	EXTERIOR SURFACES	PEDESTRIAN TRACKING	SURFICIAL SOIL	STORMWATER RUNOFF	SURFACE WATER
NC-3 PCBs IN BUILDING MATERIALS	PCBs	DEGRADATION/ DISTURBANCE	EXTERIOR SURFACES	PEDESTRIAN TRACKING	SURFICIAL SOIL	STORMWATER RUNOFF	SURFACE WATER

POTENTIAL EXPOSURE PATHWAYS

	RESIDENTIAL	COMMERCIAL	SITE WORKER	VISITOR	TERRESTRIAL BIOTA	AQUATIC BIOTA
INHALATION						
DERMAL ABSORPTION			X	X	X	X
ACTIVE INGESTION					X	X
INCIDENTAL UPTAKE			X	X	X	X

POTENTIAL EXPOSURE PATHWAYS

	RESIDENTIAL	COMMERCIAL	SITE WORKER	VISITOR	TERRESTRIAL BIOTA	AQUATIC BIOTA
INHALATION						
DERMAL ABSORPTION			X	X	X	X
ACTIVE INGESTION					X	X
INCIDENTAL UPTAKE			X	X	X	X

POTENTIAL EXPOSURE PATHWAYS

	RESIDENTIAL	COMMERCIAL	SITE WORKER	VISITOR	TERRESTRIAL BIOTA	AQUATIC BIOTA
INHALATION						
DERMAL ABSORPTION						
ACTIVE INGESTION						
INCIDENTAL UPTAKE			X	X		

POTENTIAL EXPOSURE PATHWAYS

	RESIDENTIAL	COMMERCIAL	SITE WORKER	VISITOR	TERRESTRIAL BIOTA	AQUATIC BIOTA
INHALATION						
DERMAL ABSORPTION			X	X	X	X
ACTIVE INGESTION					X	X
INCIDENTAL UPTAKE			X	X	X	X

POTENTIAL EXPOSURE PATHWAYS

	RESIDENTIAL	COMMERCIAL	SITE WORKER	VISITOR	TERRESTRIAL BIOTA	AQUATIC BIOTA
INHALATION						
DERMAL ABSORPTION			X	X	X	X
ACTIVE INGESTION					X	X
INCIDENTAL UPTAKE			X	X	X	X

NOTES:
1. ACM = ASBESTOS CONTAINING MATERIAL
2. PCB = POLYCHLORINATED BIPHENYL

DRAWN BY: JRN/WTE	DATE: 12/21/11
CHECKED BY: RSV/JSS	PROJECT: 10001086

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FIGURE 7
UPDATED CONCEPTUAL SITE MODEL
(SHEET 2 OF 2)

NEW ENGLAND YARD PROPERTY
A.K.A. DPW NEW ENGLAND YARD
210 MESSER STREET
LACONIA, NH
NHDES #200911005

TABLES

TABLE 1
NEW ENGLAND YARD (A.K.A. DPW NEW ENGLAND YARD)
210 MESSER STREET, LACONIA, NEW HAMPSHIRE
NHDES# 200911005
SUMMARY OF EXPLORATION LOCATIONS, SAMPLES, AND EXPLORATION METHODS

Location Name	Media Sampled	Type of Sample(s) Analyzed	Exploration Method
CA-1	Soil	Surficial soil sample	Hollow-stem auger
	Groundwater	Groundwater sample	Low flow groundwater sampling
CA-2	Soil	Surficial soil sample	Geoprobe
	Groundwater	Groundwater sample	Low flow groundwater sampling
CA-2 FLOOR	Soil	Grab sample	Hand tools
CA-3	Soil	Subsurface soil sample	Hollow-stem auger
	Groundwater	Groundwater sample	Low flow groundwater sampling
CA-4	Soil	Subsurface soil sample	Hollow-stem auger
	Groundwater	Groundwater sample	Low flow groundwater sampling
CA-5	Soil	Subsurface soil sample	Hollow-stem auger
	Groundwater	Groundwater sample	Low flow groundwater sampling
CA-6	Soil	Surficial soil sample	Hollow-stem auger
	Groundwater	Groundwater sample	Low flow groundwater sampling
SS-1	Soil	Surficial soil sample	Hand tools
SS-2	Soil	Surficial soil sample	Hand tools
SS-3	Soil	Surficial soil sample	Hand tools
TP-1	Soil	Subsurface soil sample	Test Pit
TP-2	Soil	Subsurface soil sample	Test Pit
TP-3	Soil	Field screening only	Test Pit
TP-4	Soil	Field screening only	Test Pit
CB-1	Soil/Sediment	Material in base of catch basin	Hand tools

TABLE 2
NEW ENGLAND YARD (A.K.A. DPW NEW ENGLAND YARD)
210 MESSER STREET, LACONIA, NEW HAMPSHIRE
NHDES# 200911005
SUMMARY OF SOIL SAMPLE X-RAY FLUORESCENCE FIELD SCREENING RESULTS

Location	Sample Depth (feet bgs)	Sample Date	NHDES Soil Remediation Standard and Metal Concentration (ug/g)								
			As	Ba	Cd	Cr	Cu	Pb	Hg	Ni	Se
			11	1,000	33	130	NE	400	6	400	180
CA-1	0-2	9/22/2011	<LOD	<LOD	<LOD	<LOD	<LOD	**30**	<LOD	<LOD	<LOD
CA-2	0-3	9/22/2011	<LOD	<LOD	<LOD	<LOD	**23**	**77**	<LOD	<LOD	<LOD
	3-6		<LOD	<LOD	<LOD	<LOD	<LOD	**17**	<LOD	<LOD	<LOD
	6-7		<LOD	<LOD	<LOD	<LOD	<LOD	**14**	<LOD	<LOD	<LOD
CA-3	0-2	9/22/2011	<LOD	<LOD	<LOD	<LOD	**65**	**706**	<LOD	<LOD	<LOD
	2-4		**29**	<LOD	<LOD	<LOD	**118**	**260**	<LOD	<LOD	<LOD
	4-6		<LOD	<LOD	<LOD	<LOD	**63**	**131**	<LOD	<LOD	<LOD
	6-8		<LOD	<LOD	<LOD	<LOD	**115**	**996**	**18**	<LOD	<LOD
	8-10		<LOD	<LOD	<LOD	<LOD	**30**	**550**	<LOD	<LOD	<LOD
	10-12		<LOD	<LOD	<LOD	<LOD	**69**	**191**	<LOD	<LOD	<LOD
CA-4	0-2	9/22/2011	<LOD	**493**	<LOD	<LOD	<LOD	**23**	<LOD	<LOD	<LOD
	2-4		<LOD	<LOD	<LOD	<LOD	**24**	**24**	<LOD	<LOD	<LOD
	4-6		<LOD	<LOD	<LOD	<LOD	<LOD	**39**	<LOD	<LOD	<LOD
	6-8		<LOD	<LOD	<LOD	<LOD	37	**219**	<LOD	<LOD	<LOD
CA-5	0-2	9/22/2011	<LOD	<LOD	<LOD	<LOD	<LOD	**32**	<LOD	<LOD	<LOD
	2-3		<LOD	<LOD	<LOD	<LOD	<LOD	**20**	<LOD	<LOD	<LOD
	3-4		<LOD	<LOD	<LOD	<LOD	<LOD	**18**	<LOD	<LOD	<LOD
	4-6		<LOD	<LOD	<LOD	<LOD	<LOD	**22**	<LOD	<LOD	<LOD
CA-6	0-3	9/22/2011	<LOD	**348**	<LOD	<LOD	<LOD	**27**	<LOD	<LOD	<LOD
	3-6		<LOD	<LOD	<LOD	<LOD	<LOD	**24**	<LOD	<LOD	<LOD
SS-1	0-1	9/22/2011	<LOD	<LOD	<LOD	<LOD	<LOD	**28**	<LOD	<LOD	<LOD
SS-2	0-1	9/22/2011	**12**	<LOD	<LOD	<LOD	**28**	**41**	<LOD	<LOD	<LOD
SS-3	0-1	9/22/2011	**10**	**557**	<LOD	<LOD	<LOD	**25**	<LOD	<LOD	<LOD
TP-1	0-2	9/22/2011	<LOD	**488**	<LOD	**120**	**84**	**303**	<LOD	**48**	<LOD
	2-4		<LOD	**451**	<LOD	<LOD	**35**	**81**	<LOD	<LOD	<LOD
	4-6		**28**	<LOD	<LOD	**466**	**287**	**367**	<LOD	<LOD	<LOD
	6-8		<LOD	<LOD	<LOD	<LOD	**23**	**97**	<LOD	<LOD	<LOD
	8-10		<LOD	<LOD	<LOD	<LOD	**45**	**192**	<LOD	<LOD	<LOD
TP-2	0-2	9/22/2011	<LOD	<LOD	<LOD	<LOD	**67**	**221**	<LOD	<LOD	<LOD
	2-4		**41**	**496**	<LOD	<LOD	**100**	**53**	**11**	**55**	<LOD
	4-6		**21**	<LOD	<LOD	<LOD	**92**	**237**	**12**	**264**	<LOD
	6-8		<LOD	**430**	<LOD	<LOD	**83**	**272**	**15**	<LOD	<LOD
TP-3	0-2	9/22/2011	<LOD	<LOD	<LOD	<LOD	**44**	**187**	<LOD	<LOD	<LOD
	2-4		<LOD	<LOD	<LOD	<LOD	**49**	**226**	<LOD	<LOD	<LOD
	4-6		<LOD	<LOD	<LOD	<LOD	**29**	**36**	<LOD	<LOD	<LOD
	6-8		<LOD	<LOD	<LOD	<LOD	**32**	**65**	<LOD	<LOD	<LOD
TP-4	0-2	9/22/2011	<LOD	<LOD	<LOD	<LOD	<LOD	**90**	<LOD	<LOD	<LOD
	2-4		<LOD	<LOD	<LOD	<LOD	<LOD	**53**	<LOD	<LOD	<LOD
	4-6		<LOD	<LOD	<LOD	<LOD	**79**	**141**	<LOD	<LOD	<LOD
	6-8		**14**	<LOD	<LOD	<LOD	**55**	**118**	<LOD	<LOD	<LOD
	8-10		<LOD	<LOD	<LOD	<LOD	<LOD	**94**	<LOD	<LOD	<LOD

<LOD - Concentration less than instrument level of detection
XRF - X-Ray Fluorescence Meter
Bold - detected above instrument level of detection
Highlighted cells have concentrations that exceed NHDES Soil Remediation Standards
bgs - below ground surface

TABLE 3
NEW ENGLAND YARD (A.K.A. DPW NEW ENGLAND YARD)
210 MESSER STREET, LACONIA, NEW HAMPSHIRE
NHDES# 200911005
SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS

Parameter[1]	Regulatory Standard	Soil Sample Location, Sample Date, and Sample Depth Interval (feet)												
	NH Soil Remediation Standards [2] (µg/g)	CA-1	CA-2	CA-2 FLOOR	CA-3		CA-4	CA-5	CA-6	CB-1	SS-1	SS-2	SS-3	TP-1	TP-2
		9/22/2011	9/22/2011	9/22/2011	9/22/2011		9/22/2011	9/22/2011	9/22/2011	9/22/2011	9/22/2011	9/22/2011	9/22/2011	9/22/2011	9/22/2011
		0-2'	0-3'	Surface	0-2'	6-8'	6-8'	2-3'	0-3'	Drain bottom	0-1'	0-1'	0-1'	4-6'	4-6'
Volatile Organic Compounds (µg/g) EPA Method 8260B															
Naphthalene	5	NS	ND<0.1	ND<0.1	NS	ND<0.2	**1.0**	ND<0.1	**0.1**	ND<0.1	NS	NS	NS	NS	NS
Xylenes (mixed isomers)	500	NS	ND<0.1	**0.3**	NS	ND<0.2	ND<0.1	ND<0.1	ND<0.1	ND<0.1	NS	NS	NS	NS	NS
Semi-volatile Organic Compounds including Polycyclic Aromatic Hydrocarbons (ug/g) EPA Method 8270D															
Fluoranthene	960	ND<0.6	ND<2.9	ND<4.9	NS	ND<0.7	**34**	ND<5.5	**11**	**0.59**	ND<0.5	**3.9**	ND<0.5	**3.9**	**20**
Pyrene	720	ND<0.6	ND<2.9	ND<4.9	NS	ND<0.7	**38**	ND<5.5	**12**	**0.68**	ND<0.5	**3.5**	ND<0.5	**5.4**	**20**
Benzo(a)anthracene	1	ND<0.6	ND<2.9	ND<4.9	NS	ND<0.7	**15**	ND<5.5	**5.5**	**0.45**	ND<0.5	ND<2.7	ND<0.5	**2.8**	**11**
Chrysene	120	ND<0.6	ND<2.9	ND<4.9	NS	ND<0.7	**19**	ND<5.5	**5.2**	**0.47**	ND<0.5	ND<2.7	ND<0.5	**3.8**	**12**
Benzo(b)fluoranthene	1	ND<0.6	ND<2.9	ND<4.9	NS	ND<0.7	**14**	ND<5.5	**3.7**	**0.64**	ND<0.5	ND<2.7	ND<0.5	**5.8**	**13**
Benzo(k)fluoranthene	12	ND<0.6	ND<2.9	ND<4.9	NS	ND<0.7	**15**	ND<5.5	**3.7**	**0.31**	ND<0.5	ND<2.7	ND<0.5	**2.9**	**5.5**
Benzo(a)pyrene	0.7	ND<0.6	ND<2.9	ND<4.9	NS	ND<0.7	**13**	ND<5.5	**3.9**	**0.48**	ND<0.5	ND<2.7	ND<0.5	**3.8**	**9.9**
Fluorene	77	ND<0.6	ND<2.9	ND<4.9	NS	ND<0.7	**3.9**	ND<5.5	**1.3**	ND<0.29	ND<0.5	ND<2.7	ND<0.5	ND<2.7	ND<3.2
Phenanthrene	960	ND<0.6	ND<2.9	ND<4.9	NS	ND<0.7	**30**	ND<5.5	**12**	ND<0.29	ND<0.5	ND<2.7	ND<0.5	ND<2.7	**9.7**
Benzo(g,h,i)perylene	960	ND<0.6	ND<2.9	ND<4.9	NS	ND<0.7	**4.3**	ND<5.5	**1.5**	ND<0.29	ND<0.5	ND<2.7	ND<0.5	ND<2.7	**5.1**
Indeno(1,2,3-cd)pyrene	1	ND<0.6	ND<2.9	ND<4.9	NS	ND<0.7	**4.8**	ND<5.5	**1.4**	ND<0.29	ND<0.5	ND<2.7	ND<0.5	ND<2.7	**4.7**
Acenaphthene	340	ND<0.6	ND<2.9	ND<4.9	NS	ND<0.7	ND<3.1	ND<5.5	**1.1**	ND<0.29	ND<0.5	ND<2.7	ND<0.5	ND<2.7	ND<3.2
Dibenzofuran	NE	ND<0.6	ND<2.9	ND<4.9	NS	ND<0.7	ND<3.1	ND<5.5	**0.79**	ND<0.29	ND<0.5	ND<2.7	ND<0.5	ND<2.7	ND<3.2
Anthracene	1,000	ND<0.6	ND<2.9	ND<4.9	NS	ND<0.7	ND<3.1	ND<5.5	**2.8**	ND<0.29	ND<0.5	ND<2.7	ND<0.5	ND<2.7	ND<3.2
Dibenzo(a,h)anthracene	0.7	ND<0.6	ND<2.9	ND<4.9	NS	ND<0.7	ND<3.1	ND<5.5	**0.83**	ND<0.29	ND<0.5	ND<2.7	ND<0.5	ND<2.7	ND<3.2
Polychlorinated Biphenyls (µg/g) EPA Method 8082A															
All Araclors	NA	NS	NS	NS	NS	NS	NS	NS	NS	NS	All ND<0.03	All ND<0.03	All ND<0.03	NS	NS
Total Petroleum Hydrocarbons (µg/g) EPA Method 8015B															
TPH	10,000	ND<220	**650**	**4,000**	NS	**740**	**2,100**	**3,000**	**870**	**560**	ND<200	**500**	ND<200	**880**	**850**
Metals SW3051A (µg/g)															
Arsenic	11	**5.4**	**3.4**	**6.4**	NS	NS	NS	NS	**3.6**	**2.8**	**2.6**	**5.4**	**7.7**	**7.5**	**18**
Barium	1,000	**34**	**35**	**79**	NS	NS	NS	NS	**14**	**86**	**8**	**34**	**37**	**160**	**200**
Boron	1,000	ND<3	**6**	**35**	NS	NS	NS	NS	NS	NS	ND<2	**3**	ND<3	**49**	**25**
Cadmium	33	ND<0.2	ND<0.2	**1.6**	NS	NS	NS	NS	ND<0.2	**0.5**	ND<0.2	ND<0.2	ND<0.2	**15**	**0.7**
Chromium*	130	NS	NS	NS	NS	NS	NS	NS	**5**	**290**	NS	NS	NS	NS	NS
Copper	NE	**12**	**17**	**86**	NS	NS	NS	NS	NS	NS	**6**	**16**	**15**	**320**	**79**
Lead	400	**17**	**66**	**150**	**190**	**300**	NS	NS	**15**	**810**	**13**	**25**	**9**	**820**	**260**
Mercury	6	ND<0.17	ND<0.18	ND<0.15	NS	NS	NS	NS	ND<0.16	ND<0.19	ND<0.16	NS<0.16	NS<0.16	**0.26**	**0.44**
Nickel	400	**7**	**6**	**9**	NS	NS	NS	NS	NS	NS	**5**	**8**	**7**	**22**	**150**
Vanadium	NE	**26**	**18**	**18**	NS	NS	NS	NS	NS	NS	**7**	**22**	**20**	**22**	**24**

NOTES:

[1] Only analytes above detection limit are summarized herein.

[2] New Hampshire Code of Administrative Rules Soil Remediation Standards (SRS), effective July 2008

ug/g = micrograms per gram (equivalent to milligrams per kilogram)

* = The regulatory threshold for Chromium VI was used because it is more stringent than the Chromium III standard

NE = No regulatory guideline established

ND = Not detected above quantitation limit (i.e. 0.2 µg/g)

NS = Not sampled

Bold Exceeds laboratory quantitation limit

Exceeds NH DES Env-OR 606.19 Soil Remediation Standards

TABLE 4
NEW ENGLAND YARD (A.K.A. DPW NEW ENGLAND YARD)
210 MESSER STREET, LACONIA, NEW HAMPSHIRE
NHDES# 200911005
SUMMARY OF MONITORING WELL CONSTRUCTION, GAUGING, AND GROUNDWATER ELEVATIONS

MONITORING WELL ID	CA-1	CA-2	CA-3	CA-4	CA-5	CA-6
WELL LOCATION	Northwest of the Horse Barn	Within the Blacksmith Shop	In northern portion of Site in potential landfill area	In east central portion of Site downgradient of off-site UST	Northwest of historical oil tank outside Sand/Salt Shed	Within the Vactor Building adjacent to catch basin
WELL DEPTH (FEET BELOW TOP OF WELL)	9.47	6.27	13.17	9.30	9.40	6.27
LENGTH OF SCREEN (FEET)	8	5	10	7	8	5
WELL MATERIAL	2" PVC	1" PVC	2" PVC	2" PVC	2" PVC	1" PVC
WELL COVER TYPE	Flush-mounted road box	Flush-mounted road box	Flush-mounted road box	Flush-mounted road box	Flush-mounted road box	Flush-mounted road box
WELL ELEVATION [(1)] (ARBITRARY BENCHMARK)	93.52	92.30	98.19	95.15	92.71	93.45
GROUNDWATER DEPTH[(2)] (FEET BELOW TOP OF WELL) October 6, 2011	2.63	1.25	7.15	4.05	1.66	2.40
GROUNDWATER ELEVATION[(3)] (ARBITRARY BENCHMARK) October 6, 2011	90.89	91.05	91.04	91.10	91.05	91.05

NOTES:

[(1)] Elevations based on a temporary benchmark of 100 feet at manhole located in W.O.W. Paved Trail

[(2)] Groundwater levels gauged to top of PVC riser

[(3)] Groundwater elevations have been calculated by subtracting the depth to groundwater from the top of PVC Elevation

TABLE 5
NEW ENGLAND YARD (A.K.A. DPW NEW ENGLAND YARD)
210 MESSER STREET, LACONIA, NEW HAMPSHIRE
NHDES# 200911005
SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS

Parameter[1]	Regulatory Standard	Sample Location and Date					
	NH AGQS[2] (µg/L)	CA-1	CA-2	CA-3	CA-4	CA-5	CA-6
		10/6/2011	10/6/2011	10/6/2011	10/6/2011	10/6/2011	10/6/2011
Volatile Organic Compounds (µg/L) EPA Method 8260B							
Naphthalene	20	**6**	ND<5	ND<5	ND<5	ND<5	ND<5
Metals (µg/L) EPA Methods 6010C or 7470A							
Barium	2,000	NS	NS	NS	NS	NS	**0.06**
Semi-Volatile Organic Compounds or Polycyclic Aromatic Hydrocarbons (µg/L) EPA Method 8270D							
Naphthalene	20	**1.4**	**0.9**	**0.8**	ND<0.5	ND<0.5	ND<0.5
Acenaphthylene	420	ND<0.5	**1.0**	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Acenaphthene	420	**0.7**	**0.7**	**0.6**	**0.6**	ND<0.5	**0.6**
Dibenzofuran	NE	**0.5**	**1.1**	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Fluorene	280	**0.8**	**1.4**	ND<0.5	**0.7**	ND<0.5	**0.7**
Phenanthrene	210	**0.9**	**4.6**	**0.7**	**1.0**	ND<0.5	**1.1**
Anthracene	2,100	ND<0.5	**1.1**	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Fluoranthene	280	**0.9**	**2.7**	ND<0.5	**1.4**	ND<0.5	**1.6**
Pyrene	210	**0.8**	**2.6**	ND<0.5	**1.4**	ND<0.5	**1.6**
Benzo(a)anthracene	0.1	ND<0.5	**1.1**	ND<0.5	ND<0.5	ND<0.5	**0.5**
Chrysene	5	ND<0.5	**1.0**	ND<0.5	**0.6**	ND<0.5	**0.7**
Benzo(b)fluoranthene	0.1	ND<0.5	**1.0**	ND<0.5	ND<0.5	ND<0.5	**0.6**
Benzo(k)fluoranthene	0.5	ND<0.5	**0.6**	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Benzo(a)pyrene	0.2	**0.3**	**0.8**	ND<0.2	**0.4**	ND<0.2	**0.5**
Benzo(g,h,i)anthracene	210	ND<0.5	**0.6**	ND<0.5	ND<0.5	ND<0.5	ND<0.5

NOTES:

[1] Only analytes detected above reported method detection level are summarized herein

[2] New Hampshire Code of Administrative Rules Ambient Groundwater Quality Standards (AGQS), effective July 2008

ug/L = micrograms per liter

NE = No regulatory guideline established

ND = Not detected above quantitation limit (i.e. 0.2 µg/g)

NS = Not Sampled

Bold Exceeds laboratory quantitation limit

Exceeds NHDES AGQS

TABLE 6
NEW ENGLAND YARD (A.K.A. DPW NEW ENGLAND YARD)
210 MESSER STREET, LACONIA, NEW HAMPSHIRE
NHDES# 200911005
SUMMARY OF DUPLICATE SAMPLE ANALYSES

Parameter	NHDES Standard [1,2]	Quantitation Limit	5x Quantitation Limit	Sample [3]	Duplicate	Relative Percent Difference
SB-DUP (CA-4 6-8')						
VOCs (µg/g)						
All detected analyte concentrations were below 5X quantitation limit; therefore, RPDs were not calcuated.						
SS-DUP (SS-1)						
TPH (µg/g)						
TPH was not detected in the sample or the duplicate; therefore a RPD was not calculated.						
PAHs (µg/g)						
PAHs were not detected in the sample or the duplicate; therefore a RPD was not calculated.						
PCBs (µg/g)						
PCBs were not detected in the sample or the duplicate; therefore a RPD was not calculated.						
Metals (µg/g)						
Arsenic	11	0.5	2.5	2.6	2.7	3.8%
Lead	400	0.6	3	13	13	0.0%
DUP-GW (CA-4)						
VOCs (µg/g)						
All detected analyte concentrations were below 5X quantitation limit; therefore, RPDs were not calcuated.						
PAHs (µg/g)						
All detected analyte concentrations were below 5X quantitation limit; therefore, RPDs were not calcuated.						
DUP-GW-2 (CA-1)						
Metals (µg/g)						
Lead was not detected in the sample or the duplicate; therefore, RPDs were not calcuated.						

NOTES:

[1] New Hampshire Code of Administrative Rules Soil Remediation Standards (SRS), effective July 2008

[2] New Hampshire Code of Administrative Rules Ambient Groundwater Quality Standards (AGQS), effective July 2008

[3] Only analytes at or above 5X quantitation limit are summarized herein.

Exceeds Relative Percent Difference quality control limit of 35% for samples as specified in Project Quality Assurance Project Plan (QAPP)

APPENDIX A

SITE-SPECIFIC QUALITY ASSURANCE PROJECT PLAN ADDENDUM

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 Site-Specific Quality Assurance Project Plan Addendum ☐ Closure Documentation	☐ Groundwater Management Permit • Permit Application • Renewal Application • Deed Recordation Documentation • Abutter Notification Documentation • Release of Recordation ☐ Data Submittal ☐ Annual Summary Report

SITE SPECIFIC QUALITY ASSURANCE PROJECT PLAN ADDENDUM

New England Yard
a.k.a DPW New England Yard
210 Messer Street
Laconia, New Hampshire
NHDES#200911005
Brownfields Grant #BF-96111801

Prepared For:
Lakes Region Planning Commission
103 Main Street, Suite #3
Meredith, NH 03253
Phone: (603) 279-8171
Contact: Mr. Kimon Koulet

Prepared By:
CREDERE ASSOCIATES, LLC
776 Main Street
Westbrook, ME 04902
Phone: (207) 828-1272 ext. 16
Contact: Judd R. Newcomb, CG

July 13, 2011

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

1. TITLE AND APPROVAL PAGE

SITE-SPECIFIC QUALITY ASSURANCE PROJECT PLAN ADDENDUM TO GENERIC QAPP RFA #08166 AND #09036

Revision 1

Site Information:
New England Yard a.k.a DPW New England Yard
210 Messer Street, Laconia, New Hampshire
New Hampshire Department of Environmental Services (NHDES) Site No. 200911005

Funding Source:
Lakes Region Planning Commission (LRPC) Brownfields Assessment Program
United States Environmental Protection Agency (EPA) Brownfields Grant # BF96111801

Prepared By:
Judd R. Newcomb, CG
Credere Associates, LLC
776 Main Street, Westbrook, Maine 04092
(207) 828-1272 ext. 16

Date Prepared:
July 13, 2011

Below is a listing of the names, titles, signatures, and signature dates of officials approving this SSQAPP:

Jerry Minor-Gordon USEPA Brownfields Project Officer	8/30/11 Date
USEPA Quality Assurance Officer Robert Reinhart	8/26/11 Date
John F. Liptak, M.Ed., P.G. New Hampshire DES Project Manager	8-25-11 Date
Robert Minicucci New Hampshire DES QA Manager	8/25/11 Date
Richard S. Vandenberg, CG, PG Credere Associates, LLC Project QA/QC Manager	8/25/11 Date
Robert I Patten, PE, LEED-AP, LSP Credere Associates, LLC Project Manager	8/25/11 Date

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2. INTRODUCTION

The Lakes Region Planning Commission (LRPC) has received a United States Environmental Protection Agency (USEPA) Brownfields Hazardous Substance Assessment Grant to conduct environmental investigations at sites within the 30 member communities of the Lake Winnipesaukee Region. The investigations provide the basis for reuse planning specific to each site's community needs. The assessment of each site will include the completion of Phase I and Phase II Environmental Site Assessments (ESAs), and may also potentially include the development of cleanup and reuse options for selected sites.

On behalf of LPRC's Brownfields Assessment Program, this document is a Site-Specific Quality Assurance Project Plan (SSQAPP) Addendum for the New England Yard, a.k.a DPW New England Yard, located at 210 Messer Street in Laconia, New Hampshire (the Site). **Figure 1** shows the general location of the Site in Laconia and **Figure 2** is a detailed plan showing the locations of proposed sampling work. **Figure 3** shows the project organization chart for the project team. **Figure 4** is a graphical summary of the Conceptual Site Model (CSM) described in **Section 5**.

This SSQAPP presents the following information:

1. A summary of the pertinent findings of the Phase I ESA
2. The potential redevelopment scenario for the Site
3. A conceptual site model
4. Credere's proposed sampling design including recommended sample locations and analytical methods for proposed Site assessment activities
5. Regulatory standards applicable to the Site
6. A proposed project schedule

This SSQAPP was prepared to be used in concert with Credere Associates, LLC (Credere) Generic Quality Assurance Project Plan (QAPP) Rev. 2 (USEPA RFA #08166 and #09036) which was prepared for all of Credere's USEPA work in New Hampshire. The quality assurance and quality control (QA/QC) procedures outlined in Credere's Generic QAPP will be followed for this investigation program including sample collection, handling, and analysis, chain of custody, data management and documentation, data validation, and data usability assessments.

3. FINDINGS OF THE PHASE I ESA

A Phase I ESA was completed by Credere for the Site in March 2011. During the course of the Phase I ESA, Credere conducted a site reconnaissance, reviewed available local, state, and federal documents, and reviewed other available historical documents to identify evidence of *recognized environmental conditions* (RECs) in connection with the Site. The following summarizes the pertinent findings and recommendations from the Phase I ESA.

3.1 SITE DESCRIPTION AND HISTORY

The Site is composed of a 2.40-acre parcel of land located at 210 Messer Street in Laconia, New Hampshire, with its entire western frontage on Opechee Bay, which is a 499 acre lake connected to Lake Winnisquam. A paved walking/biking trail, known as the Laconia Winnisquam, Opechee, Winnipesaukee (WOW) Paved Trail, bounds the Site to the east, beyond which is a state owned rail line and a bulk petroleum distribution company. A residential property adjoins the Site to the south and a property owned by the Irving Oil Company adjoins the Site to the north.

Exterior portions of the Site consist of a paved driveway/parking area, a gravel lot, unpaved grassy areas, and a small wooded/brushy area that is located in the northwest portion of the Site. The Site has five (5) buildings that include: the Vactor Shed building, the Blacksmith Shop building, the Horse Barn building, Sand/Salt Shed building, and the Rodder Shed building.

The Site is currently in use by the City of Laconia Department of Public Works for the cold storage of equipment and seasonal items (e.g. trash cans, planters, etc.), and for sand/salt storage and loading equipment. Historical uses of the Site have been confirmed from standard historical records to include coal and ice companies storage and shipping from at least 1911 to 1917. The City of Laconia purchased the property for use by the Department of Public Works in 1917 and has been used as described above since that time. The Site is known to have had a railroad spur on or adjacent to the Site since at least 1902 to sometime prior to 1948. The historical use of the surrounding area was mixed residential, commercial, and/or industrial in each of the records reviewed. Industrial uses in the surrounding area included petroleum and coal storage, and coal gasification.

3.2 FINDINGS AND OPINIONS

The following summarizes the pertinent findings of the Phase I ESA and Credere's opinions relative to the findings:

- The Site has historically been used for storage and shipping by coal and ice companies and was serviced by a railroad spur. The Site was also used as a blacksmith shop and for storage by the City of Laconia Department of Public Works. The Site may have been impacted by petroleum and/or hazardous substances related to these uses.

- Coal and bulk oil have historically been stored on the adjoining north (former Standard Oil Co. and Irving Oil Co. bulk petroleum facility) and east (Dutile & Sons, Inc. bulk petroleum facility) properties, and several leaking underground storage tank (UST) sites are located in the vicinity of the Site. In addition, a historical Sanborn Fire Insurance map from 1948 indicates that a gasoline UST was present on the east adjoining Dutile & Sons, Inc. property. Based on when this tank was in operation, no NHDES records exist for this tank. Although available information indicates that the documented releases have a low potential to have affected environmental conditions at the Site, undocumented releases may have occurred in the vicinity of the Site that could have affected its soil or groundwater quality.
- A historical Sanborn Fire Insurance map from 1948 indicates that a bulk oil tank was formerly located on the Site in the vicinity of the existing Sand/Salt Shed. Based on when this tank was in operation, no NHDES records exist for this tank. Historical releases of petroleum may have gone undocumented and may have impacted soil or groundwater at the Site.
- a previous Phase I ESA performed by others noted that a former City of Laconia employee stated that the northern portion of the Site had historically been used for landfilling or burying of wastes. This account could not be substantiated during the course of Credere's Phase I ESA; however, the northern portion of the property is raised compared to the surrounding area and may have been filled. No solid waste was observed during our reconnaissance, but concrete and granite blocks were observed protruding from the area. It is unclear whether this area was filled as part of waste disposal or as part of some other historical use of the Site, such as to accommodate the former railroad spur that serviced the historical coal and ice company. If petroleum or hazardous substances were buried in this area as a part of any landfilling, they may have affected soil or groundwater beneath the Site.
- Oil staining was observed throughout the floor of the blacksmith shop. The floor appeared to be concrete with significant accumulation of sandy materials on top of it. It is possible that the staining is due to the accumulation of drips and/or small spills from machinery stored and maintained in the shed. The historic use of this building as a blacksmith shop also may have affected the soil on the floor or soil and/or groundwater beneath the building.
- Floor drains were observed within the Vactor Shed building (a garage building that formerly stored the City's catch basin cleaning vactor truck) and the Horse Barn Building. All drains at the Site reportedly historically discharged directly to Opechee Bay but were recently connected to a sedimentation tank located beneath the Site. The floor drain observed within the Vactor Shed had paint covering its grate and the surrounding floor, indicating that waste paint may have been dumped into the drain. The outlet of this drain could not be confirmed during our reconnaissance. The dumping of materials into the Vactor Shed floor drain may have ultimately either discharged to Opechee Bay or below the Vactor Shed and may have impacted the environmental media beneath the Site.
- Waste asbestos piping is currently being stored in the Horse Barn attached shed. Information documenting the source of the piping was not available, but it was reportedly generated during an off-site City utility project. The shed is locked and is not accessible to the public.

- A pail of waste oil and an approximate 30-gallon drum with unknown contents were observed in the Horse Barn, and a 55-gallon drum of unknown contents was observed outside the Blacksmith Shop. These containers are not stored in a secure manner and the contents should be determined, properly managed, and disposed of.

- Due to the ages of the buildings, lead-based paint, asbestos-containing materials (ACMs), and polychlorinated biphenyl (PCB) bulk products may be present in the buildings.

3.3 IDENTIFIED RECOGNIZED ENVIRONMENTAL CONDITIONS

Based on the information obtained as a part of the Phase I ESA, the following RECs, *de minimis environmental conditions* (DMECs), and ASTM *Non-Scope considerations* (NCs) were identified at the Site:

- REC-1 – The historical uses of the Site for storage and shipping by coal and ice companies, the historical presence of a railroad spur, a blacksmith shop, and for storage by the City of Laconia Department of Public Works, represent a REC because soil or groundwater beneath the Site may have been affected by the use of heavy oils, metals, and other petroleum and/or hazardous materials associated with these uses.
- REC-2 – Oil stained soil observed within the Blacksmith Shop represents a REC because it is indicative of a release of oil and/or hazardous substances, which may have affected soil and/or groundwater at the Site.
- REC-3 – The historical bulk oil storage and presence of an undocumented gasoline UST on the east adjoining property represents a REC because undocumented spills or releases associated with current and/or historical bulk oil storage may have affected soil or groundwater beneath the Site. In addition, although the potential is low, the presence of nearby leaking UST and bulk petroleum storage sites may have affected groundwater beneath the Site.
- REC-4 – A bulk oil storage tank noted in the vicinity of the Sand/Salt Shed on historical Sanborn Fire Insurance Maps represents a REC because spills or releases associated with this former tank may have affected soil or groundwater at the Site.
- REC-5 – The potential landfilling or burying of wastes reported in the northern portion of the Site represents a REC because the types and quantities of materials placed in this area are unknown and may have impacted soil and groundwater beneath the Site.
- REC-6 – The floor drain located within the Vactor Shed building represents a REC because evidence of dumping was observed around the drain (i.e. paint covered grate and floor) that may have resulted in releases to the environment.

Credere identified the following DMECs at the Site during the Phase I ESA:

- DMEC-1 –Waste asbestos piping was observed to be stored in the locked Horse Barn shed.

- DMEC-2 – An open pail of waste oil and an approximately 30-gallon drum of unknown contents was observed in the Horse Barn building, and a 55-gallon drum of unknown contents was observed outside the Blacksmith Shop building.

The following NCs were also noted during this Phase I ESA:

- NC-1 – The potential for ACMs to be present on or within the buildings.
- NC-2 – The potential for lead-based paint to be present on or within the buildings.
- NC-3 – The potential for PCB-containing bulk products (caulking, paint, etc.) to be present on the interior and exterior of the buildings.

4. POTENTIAL REDEVELOPMENT SCENARIO

The current owner of the Site, the City of Laconia, has partnered with LRPC to assess the Site so the City can redevelop it into a public waterfront park; however, no formal redevelopment plans have been established.

5. CONCEPTUAL SITE MODEL

The CSM includes a description of source areas and/or RECs, the nature and extent of the identified or suspected releases, potential contaminants of concern (COCs), impacted media, transport mechanisms, and potential human and environmental receptors.

5.1 CONTAMINANTS OF CONCERN

Based on the findings of the Phase I ESA and the identified RECs, DMECs, and NCs, the following COCs were identified for the Site:

Identified COCs		
REC	**COCs**	**Potential Source**
REC-1 Historical Use	**Polycyclic aromatic hydrocarbons (PAHs)** **Total Petroleum Hydrocarbons (TPH)** **Metals** (arsenic, barium, boron, cadmium, copper, lead, mercury, nickel, selenium, and vanadium) **PCBs** (railroad spur only)	- railroad activities -blacksmith shop -equipment storage -metals – coal dust, coal ash, metal waste
REC-2 Oil Staining in Blacksmith Shop Building	**PAHs** **TPH** **VOCs** **Metals** (arsenic, barium, boron, cadmium, copper, lead, mercury, nickel, selenium, and vanadium)	- oils and fuels released to the blacksmith shop - coal ash and metal waste
REC-3 Off-site Bulk Petroleum Storage	**PAHs** **TPH** **VOCs**	- petroleum releases
REC-4 Historical On-Site Bulk Petroleum Storage	**PAHs** **TPH** **VOCs**	- releases from bulk storage near Sand/Salt Shed building
REC-5 Potential Landfilling	**PAHs** **TPH** **Metals (**arsenic, barium, boron, cadmium, copper, lead, mercury, nickel, selenium, and vanadium)	- landfilled materials
REC-6 Floor Drains	**TPH** **VOCs** **Semi-volatile Organic Compounds (SVOCs)** **Resource Conservation and Recovery Act (RCRA) 8 Metals**	-paints and/or petroleum product dumping in the drain in the Vactor Building
NC-1, 2, 3, 4 Potential hazardous Building Materials	**Asbestos** **Lead-based Paint** **PCB Bulk Products** **PCBs**	- building materials - painted surfaces - paint, caulking, mastic, etc. - fluorescent lighting ballasts

5.2 STORMWATER FLOW, GEOLOGY, AND GROUNDWATER FLOW

The portion of the Site encompassing the buildings and parking area is generally flat. The northern portion of the Site slightly rises from south to north, and the eastern property boundary has been raised to accommodate railroad tracks. Stormwater on the Site either infiltrates the ground surface, sheet flows to Opechee Bay to the west, or is directed into a stormwater catch basin within the parking lot immediately west of the Sand/Salt Shed building that discharges to Opechee Bay.

Surficial materials at the Site are mapped as consisting of fine grained stratified drift materials, or fine over coarse grained stratified drift materials. Fine grained stratified drift materials range from clay to fine sand. Fine over coarse grained drift materials range from fine grained sediment to medium sand or coarse gravel. Based on the long history of use of the Site, it is likely that the surficial materials have been reworked and/or fill materials have been brought to the Site to establish the current grades. In addition, there is a raised area in the northern portion of the Site that reportedly may have been used for landfilling.

Bedrock outcrops have not been observed on the Site. Bedrock beneath the northern portion of the Site is mapped as Concord Granite, which is known for its fine texture and uniformity. Bedrock beneath the southern portion of the Site is mapped as the upper Rangeley Formation, which is described as a pelitic schist, metasandstone, and locally coarse-grained metasandstone with rusty weathering.

Groundwater flow at the Site likely mimics surface topography and flows west toward Opechee Bay. Area topography also generally slopes west toward Opechee Bay. Due to the close proximity of the lake, the depth to groundwater at the Site is likely shallow and varies with seasonal fluctuations in precipitation and water level changes in the lake. It should be noted that local groundwater flow may be highly varied due to precipitation events, stormwater runoff, infiltration/recharge, the presence of subsurface structures and utilities, and varying subsurface hydrogeologic conditions.

5.3 DEFINITIONS OF EXPOSURE PATHWAYS AND POTENTIAL RECEPTORS

To aid in a thorough understanding of the environmental concerns present at the Site, a graphical presentation of the identified contaminants of concern and potential migration pathways to receptors is included as **Figure 4**. Exposure Pathways and Potential Receptors depicted on the CSM are defined below.

Exposure Pathways describe how a human or environmental receptor comes into contact with contaminants which may be present at the Site. Exposure pathways presented in the CSM include the following:

- Inhalation: This pathway is primarily associated with groundwater where

petroleum contaminated groundwater is within 30 feet (horizontally or vertically), or non-petroleum contaminated groundwater is within 100 feet (horizontally or vertically) of an occupied structure, or when depth to groundwater is unknown. In addition, this pathway is applicable when receptors may incidentally inhale impacted media in the form of dust, vapor, or airborne particulates.

- Dermal Absorption: Exposure via dermal absorption occurs when receptors are exposed to chemical concentrations present in soil, groundwater, or surface water through direct contact with the skin.
- Active Ingestion: The active ingestion pathway represents exposure which may occur through the active ingestion of contaminant concentrations via a drinking water supply well or through agricultural products.
- Incidental Ingestion: This pathway is applicable when receptors may incidentally ingest impacted media in the form of dust or airborne particulates.

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.
- Commercial: Commercial receptors are those which are present at the Site for long durations but with low intensity exposure such as indoor office workers.
- Site Worker: Site 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 outdoor commercial workers and construction workers.
- Visitor: Visitors 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.
- Terrestrial and Aquatic Biota: These receptors include flora and fauna which may be exposed to contaminants in their respective land-based or aquatic environments.

Based on known history of the Site and area properties, the identified COCs may have been released to the environment through surficial releases associated with coal storage, the blacksmith shop, equipment and bulk petroleum storage, subsurface burying of wastes, or surficial and subsurface releases from the historical on-site bulk oil tank or USTs and ASTs on the adjoining properties. Primary impacted media at the Site include surficial and subsurface soil, and groundwater.

Contaminants present in surficial soil may migrate through stormwater runoff and impact off-site receptors, or they may affect subsurface conditions through infiltration and leaching. Similarly, releases which have impacted subsurface soil conditions have the potential to infiltrate and leach to the overburden groundwater aquifer. Following the redevelopment of the Site, impacted groundwater presents a potential risk to indoor air conditions on adjoining properties through contaminant migration via vaporization and diffusion.

Human receptors identified for the Site include potential future Site workers (i.e. construction workers, etc.) and visitors to the planned park. Site workers may be exposed to the suspected COCs during excavation and construction activities associated with the anticipated redevelopment of the Site, and park users may come into contact with impacted media through typical activities such as recreational sports. Current and future potential environmental receptors include terrestrial and aquatic biota.

Exposure pathways to Site workers may include dermal absorption, inhalation, and incidental ingestion during excavation activities. Visitors (park users) may be exposed to contaminants in surficial soil through dermal absorption and incidental ingestion during routine park activities. An inhalation exposure pathway also may exist for residents on adjoining properties through vapor intrusion. Terrestrial and aquatic biota may be exposed through active ingestion of impacted groundwater or surface water and/or sediment; however, the active ingestion pathway does not currently nor is expected to pose a potential future pathway for human receptors, as the Site and all properties in the vicinity are serviced by a public water supply system.

6. SAMPLING DESIGN

The following section describes the COCs, rationale, and the proposed number of samples to be collected during the Phase II ESA sampling program. This program was developed to confirm or dismiss the RECs and NCs identified during the Phase I ESA. Proposed sample locations are depicted on **Figure 2** and sampling methodologies are described in below in **Section 7**.

REC-1: This REC will be assessed by:

1. Advancing one (1) soil boring (CA-1) downgradient of Horse Barn building floor drains and historical coal pockets, collecting one (1) surficial soil sample and one (1) subsurface soil sample from soil boring CA-1 for laboratory analysis of PAHs, TPH, and metals including arsenic, barium, boron, cadmium, copper, lead, mercury, nickel, selenium, and vanadium. This soil boring will be completed as a groundwater monitoring well (CA-1) and one (1) groundwater sample will be collected and submitted for laboratory analysis of PAHs and VOCs. Although VOCs are not listed as a COC in the CSM, the NDHES does not regulate dissolved concentrations of TPH; therefore, analysis of VOCs is warranted to assess potential petroleum related compounds in groundwater. Based on soil sample analytical results, groundwater may also be analyzed for the metals that were detected at concentrations exceeding the NHDES Soil Remediation Standards.
2. Collecting three (3) surficial soil samples (SS-1 through SS-3) from the historical coal pockets and railroad spur areas for laboratory analysis of PAHs, TPH, metals including arsenic, cadmium, copper, lead, mercury, nickel, selenium, and vanadium, and PCBs.
3. Evaluating the other data collected from the Site during this Phase II ESA (described below) and previous investigations conducted at the Site, which were documented in the Phase I ESA.

REC-2: This REC will be assessed by advancing one (1) soil boring (CA-2) inside the Blacksmith Shop building through the concrete floor to assess the potential for observed oil staining to have impacted environmental media in this area of the site. One (1) surficial and one (1) subsurface soil sample will be collected from this soil boring for laboratory analysis of PAHs, TPH, metals including arsenic, barium, boron, cadmium, copper, lead, mercury, nickel, selenium, and vanadium, and VOCs. The surficial soil will be collected from the oil stained material on top of the concrete floor and the subsurface sample will be collected below the floor. The soil boring will be completed as a groundwater monitoring well (CA-2) and one (1) groundwater sample will be collected and submitted for laboratory analysis of PAHs and VOCs. Based on soil sample analytical results, groundwater will also be analyzed for the metals that were detected at concentrations exceeding the NHDES Soil Remediation Standards.

REC-3: This REC will be assessed by advancing two (2) soil borings (CA-3 and CA-4) along the eastern Site boundary and downgradient of the railroad and historical UST and ASTs at the east adjoining Dutile & Sons, Inc. property. One (1) subsurface soil sample will be collected from each of these borings for laboratory analysis of TPH, PAHs, and VOCs. Each of these borings will be completed as monitoring wells CA-3 and CA-4, respectively, and one (1) groundwater sample will be collected from each location and submitted for laboratory analysis of PAHs and VOCs.

REC-4: This REC will be assessed by advancing one (1) soil boring (CA-5) in the location of the former bulk oil tank located to the south of the Sand/Salt Shed building. One (1) subsurface soil sample will be collected from this soil boring for laboratory analysis of PAHs, TPH, and VOCs. This soil boring will be completed as monitoring well CA-5 and one (1) groundwater sample will be collected from this location and submitted for laboratory analysis of PAHs and VOCs. Dissolved concentrations of TPH are not regulated by the NHDES; therefore, groundwater will not be sampled for TPH.

REC-5: This REC will be assessed by excavating four (4) test pits (TP-1 through TP-4) to assess the types of materials present in the northern portion of the Site. Based on observed conditions and the results of field screening, between one (1) and four (4) soil samples will be collected from the test pits for laboratory analysis of PAHs, TPH, and metals including arsenic, barium, boron, cadmium, copper, lead, mercury, nickel, selenium, and vanadium.

REC-6: This REC will be assessed by dye testing or electronically tracing the floor drain within the Vactor Shed building to determine its discharge location. If the discharge location is determined to be Opechee Bay or the recently installed sedimentation tank, one (1) sediment sample (SED-1) will be collected from the drain line terminus at Opechee Bay. Additionally, if appreciable sediment is observed within the floor drain, one (1) sediment sample (CB-1) will be collected from within the drain.

Alternatively, if the discharge location is determined to be a drywell, one (1) soil boring (CA-6) will be performed in the drywell location and one (1) subsurface soil sample will be collected from that location. The sediment or subsurface soil samples will be submitted for laboratory analysis of TPH, VOCs, SVOCs, and RCRA 8 Metals. If installed, this soil boring will be completed as monitoring well CA-6 and one (1) groundwater sample will be collected from this location and submitted for laboratory analysis of VOCs, SVOCs, and dissolved RCRA 8 Metals. Dissolved concentrations of TPH are not regulated by the NHDES; therefore, groundwater will not be sampled for TPH.

DMEC-1 and DMEC-2 should be addressed by properly managing and disposing of the waste asbestos material and open pail of waste oil in the Horse Barn building and attached shed and do not require further evaluation at this time.

NC-1: This NC will be addressed by performing a survey to identify ACMs on the exterior or within the Site buildings.

NC-2: This NC will be addressed by performing a lead-based paint screening of Site buildings to determine if lead-based painted surfaces are present.

NC-3: This NC will be addressed by performing an inspection of the Site buildings for bulk products that may contain PCBs as a screening level assessment. Based on the size of the Site buildings and Credere's experience at similar sites, Credere anticipates that collecting up to six (6) suspect building material samples (BM-1 through BM-6), each representing a distinct building material matrix, would be appropriate as an initial assessment of potential risks posed by suspect PCB bulk products. Each building material sample collected will be submitted for off-site laboratory analysis of PCBs.

Table 1 through **Table 3** includes the number and type of samples that are proposed to be collected, cross-referenced with the appropriate standard operating procedure (SOP) that will be used from Credere's Generic QAPP. The data collected from these activities will serve as the basis for evaluating the Site conditions and will determine if any additional investigation and/or remedial actions are necessary. **Figure 2** shows the proposed locations where media will be collected. Requirements relative to Chain of Custody, Data Management and Documentation, Data Validation, and Data Usability Assessments contained in the Generic QAPP will be followed.

7. FIELD ACTIVITY METHODOLOGY

Field activity methodologies for assessing the RECs and NCs are summarized in the following subsections. Field activities will be conducted in accordance with the SOPs included in Credere's Generic QAPP Rev. 2 (USEPA RFA #08166 and #09036) and the rationale discussed in Section 5. Where field observations and/or field screening results indicate the presence of additional source areas or potentially impacted media, additional exploration locations or samples may be added to determine the horizontal and/or vertical extent of contamination. If additional exploration/sample locations are deemed necessary, Credere will contact the USEPA Project Officer, USEPA QA Officer, and LRPC, and pending the outcome of the communication, an email update or SSQAPP Amendment will be provided to the USEPA and LRPC for review and approval describing the additional sample analysis, methods, and SOPs. The number and locations of these additional soil samples or exploration locations will be dependent on field data, site constraints, and professional judgment.

7.1 SOIL BORINGS, TEST PITTING, SOIL SAMPLING, AND FIELD SCREENING

Soil samples will be collected from soil borings and test pits in accordance with NHDES SOP HWRB-11 for soil sampling. Soil borings will be completed using hollow stem auger methodologies. During soil boring advancement, soil samples will be continuously collected in 2-foot split spoon samplers. During test pitting, soil samples will be collected from each approximate 2-foot depth interval. Each soil sample will be individually logged, and evidence of contamination will be noted. If changes in strata occur (e.g. a transition from sand to clay), the split spoon sample may be appropriately divided or additional test pit samples will be collected and individually logged.

Each collected soil sample will then be field screened for total VOCs using a photoionization detector (PID) in accordance with NHDES SOP HWRB-12. The PID will be calibrated with a 100 part per million by volume (ppm_v) isobutylene gas and a response factor of 1.0. Soil samples collected for laboratory analysis of VOCs will be collected and preserved in accordance with NHDES SOP VOCs/Soil-2000.

Each soil sample will also be field screened for RCRA-8 metals with an Innov-X® Alpha 4000 portable X-ray fluorescence meter (XRF) in accordance with Maine DEP SOP DR#025. Because this is a screening level event to determine which, if any, metals are present in Site soil, samples will be screened directly in the collected polybags. Prior to XRF screening, sample bags will be kneaded to homogenize soil.

Soil samples will be collected in accordance with NHDES SOP HWRB-11. Surficial soil samples from soil borings will be collected from the 0 to 2 foot below ground surface (bgs) interval. Surficial soil samples collected from hand dug locations will be collected from the 0 to 1 foot bgs interval. In each case, asphalt and base materials, landscaping materials, and other organic detritus will be removed prior to sampling.

Subsurface soil samples will be selected based on the sampling rationale discussed in **Section 6**. In general, subsurface soil samples will be selected based on the highest PID field screening result for VOCs, where visual or olfactory observations of contamination are observed, or from the depth of the water table interface if no other indicators of contamination are noted. Based on XRF field screening results, if elevated metals concentrations are detected at depths that differ from other indicators of contamination, additional soil samples may be selected for laboratory analysis to assess concentrations of individual metals.

7.2 MONITORING WELL INSTALLATION AND SURVEY

7.2.1 Monitoring Well Installation and Development

Selected soil borings will be completed as groundwater monitoring wells per EPA SOP EPASOP#2048. Unless Site conditions (e.g. shallow bedrock or confining layers) warrant modified well construction, each monitoring well will be installed using ten feet of 2-inch PVC well materials including a well point or cap, 10 feet of 0.010-inch slotted pipe, and solid pipe to grade. Washed No. 1 size silica sand will be placed around the slotted pipe to an elevation approximately 2-feet above the slotted pipe to establish a well annulus. At least 1-foot of bentonite chips will be placed on top of each well annulus to prevent stormwater infiltration into the wells. Each well will then be completed to grade with a flush-mounted road box protected by a minimum of a 1-foot by 1-foot concrete pad. Each monitoring well will be developed by overpumping and agitation, and then allowed to equilibrate for at least two weeks prior to sampling.

7.2.2 Rod and Level Survey

Following installation, each monitoring well will be surveyed with a rod and level to determine the top of well and ground elevation at each location in accordance with ASTM E 1364-95. If readily available, the monitoring well network will be tied to a landmark with a known elevation (e.g. a utility manhole or USGS benchmark) to establish the regional datum. Otherwise, a temporary benchmark and an arbitrary datum will be established for the Site.

7.3 GROUNDWATER SAMPLING

Prior to sampling, the depth to groundwater will be measured (and the presence of free floating product will be noted) in each groundwater monitoring well in accordance with NHDES SOP HWRB-1 to allow for the calculation of groundwater elevations and the determination of groundwater flow direction and gradients. Each monitoring well will then be sampled using low-flow sampling techniques and dedicated equipment in accordance with NHDES SOP HWRB-9. Each groundwater sample will be collected directly in laboratory glassware and will be submitted for off-site laboratory analysis.

7.4 SEDIMENT SAMPLING

If warranted based on the rationale presented in **Section 6**, sediment will be collected from the floor drain discharge location in Opechee Bay in accordance with NHDES SOP HWRB-13. Prior to collection, the lake bottom will be inspected, as possible, from the shoreline to determine potential water current direction, the most likely location for sediment accumulation, and feasibility of sampling. The sampling location will then be approached from down-current to avoid disturbance of up-current sediments. The sample will then be collected by slowly using a stainless steel scoop to raise sediment from the lake bottom until the desired sample volume has been collected. The sediment will be placed in a stainless steel bowl and foreign material including leaves, twigs, rocks, or other debris will then be removed from the sample. At this point grab sample(s) will be collected for off-site VOC analysis and the sediment will then be homogenized and placed into the appropriate laboratory glassware for off-site laboratory analysis of the non-volatile COCs.

7.5 ACM AND LEAD-BASED PAINT SURVEYS

An NHDES-certified asbestos inspector will be contracted to perform an asbestos survey of the Site. During the asbestos survey, samples will be collected from each suspect media (i.e. piping insulation, flooring, ceiling tiles) in accordance with NHDES Administrative Rule ENV-1800: Asbestos Management Control. Asbestos samples will be submitted to a State approved laboratory for asbestos analysis by polarized light microscopy (PLM) by USEPA Method 600/R-93/116.

Credere will perform a lead-based paint screening of the Site buildings to determine if lead is present in painted surfaces at concentrations that warrant construction worker notification under the Occupation Safety and Health Administration's Lead in Construction Standard 29 CFR 1926.62. An XRF will be used to screen each type of painted surface in accordance with Maine DEP SOP DR#025. If the Site buildings are to be used as residences or child-occupied facilities, a formal lead survey should be conducted by a NHDES-Certified Lead Inspector.

7.6 PCB-CONTAINING BULK PRODUCTS

Credere will inventory all suspect PCB-containing building materials at the Site. Examples include paint, caulking, sealants, adhesives, grout, mastic, glazing, and insulation. Consistent with this inventory and the results of previous investigations at similar sites, Credere will collect samples from distinct matrices which are most likely to contain PCBs for laboratory analysis as a screening to determine if further assessment is warranted. Each sample will be collected from the matrix itself and no adjacent building materials (i.e. sheetrock or wood) will be included in the aliquot. This method will ensure that potentially regulated PCB concentrations are not diluted by unrelated materials. All building material samples will be collected using dedicated sampling equipment in accordance with EPA SOPs #2011 and EIASOP_POROUSSAMPLING1.

Based on this screening level approach, the materials which present the highest degree of potential risk will be assessed. If the inventory identifies greater than six (6) significantly suspect matrices, additional sample collection and analysis may be warranted. This may be accomplished either through SSQAPP revision or a separate investigation. The collected samples will be submitted for independent laboratory analysis. Following the receipt of laboratory results, a determination can be made whether there is risk of regulated PCB building materials at the Site and additional assessment, remediation, or no further action can be recommended.

8. REGULATORY STANDARDS

Sample results will be compared to the applicable state and/or federal standards/guidelines described below.

8.1 SOIL

Concentrations in soil samples will be compared to New Hampshire's Soil Remediation Standards detailed in NHDES Env-Or 600 Contaminated Site Management. Where guidelines are not available, soil concentrations will be compared to other appropriate regulatory standards and guidelines, e.g., USEPA Regional Screening Levels (RSL) for Chemical Contaminants at Superfund Sites, and/or RSL Table Updated April 2009 for soil. If standards or guidelines do not exist, action levels will be triggered if the sample analytical results exceed available published background levels.

8.2 GROUNDWATER

Groundwater sample results will be compared to the New Hampshire Ambient Groundwater Quality Standards (AGQS) detailed in NHDES Env-Or 600 Contaminated Site Management and USEPA Maximum Contaminant Levels (MCLs) for Drinking Water. In the event that no AGQS or MCLs exist for a particular contaminant, results will be compared to the USEPA Region 9 RSLs.

8.3 SEDIMENT

Sediment sample results will be evaluated according to the NHDES Evaluation of Sediment Quality Guidance Document. The guidance document references the National Oceanic and Atmospheric Administration (NOAA) Screening Quick Reference Tables (SQuiRTs) to be used for comparison (**Attachment A**). Hazard quotients (HQs) will be calculated using the sample results and the NOAA Threshold Effect Level (TEL) and Probable Effect Level (PEL) values and risk will be determined based on the Triad Approach described within the guidance.

8.4 ACM

Asbestos sampling will be completed in accordance with NHDES Administrative Rule ENV-1800: Asbestos Management Control. Levels of asbestos greater than or equal to 1% by volume as determined by weight, visual evaluation, and/or point count analysis within representative bulk samples obtained from the Site will result in the definition of such bulk materials as ACM.

8.5 LEAD-BASED PAINT

Concentrations of lead in paint as determined through the use of a XRF analyzer will be compared to a limit of 1.0 mg/cm^2 or 0.5% by weight. All construction work involving exposure

or potential exposure to lead is regulated by the Occupation Safety and Health Administration's Lead in Construction Standard 29 CFR 1926.62.

8.6 PCB BULK PRODUCTS

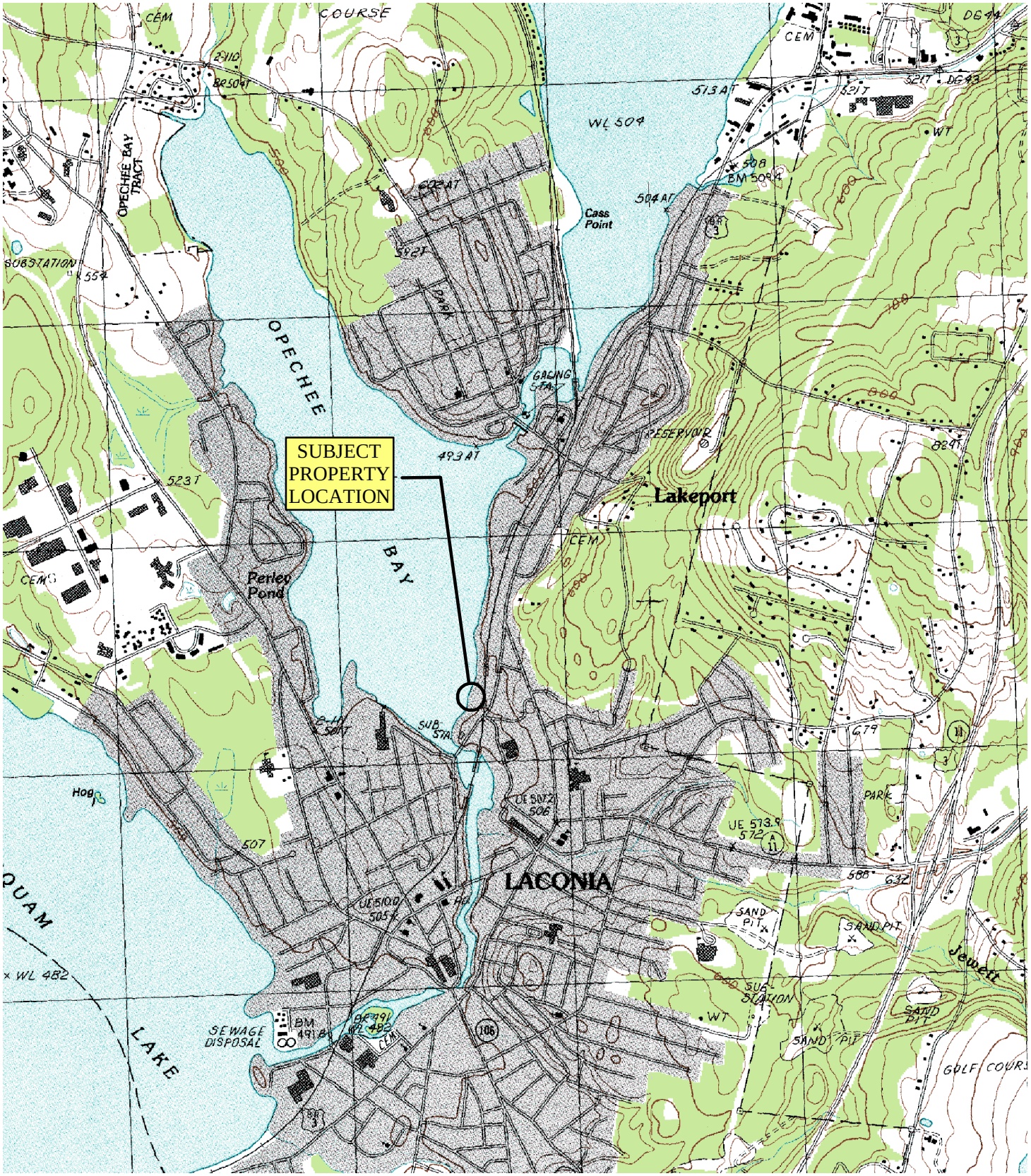
Building materials that have been analyzed to contain concentrations of total PCBs equal to or in excess of 50 parts per million (ppm) are defined as a PCB bulk product waste in accordance with 40 CFR 761.3. These materials are regulated for disposal under 40 CFR 761.62. Materials that have been analyzed to contain total PCBs at a concentration of equal to or greater than 1 ppm but less than 50 ppm are not regulated by the Toxic Substance Control Act (TSCA) for disposal as long as they remains in use. However, if this material is removed from use, such as through demolition, they must be disposed of at a facility that is licensed to accept this waste. Building materials which have been analyzed to contain total PCBs at a concentration of less than 1 ppm are unrestricted for future use and/or disposal.

9. PROPOSED PROJECT SCHEDULE

The following schedule is proposed for the Phase II ESA activities at the Site:

DATE	ACTION
Week of July 18, 2011	Finalize SSQAPP
Week of August 1, 2011	Lead-based Paint Survey, ACM Survey, and PCB Building Materials Sampling
Week of August 15, 2011	Soil Boring, Soil/Sediment Sample Collection, Monitoring Well Installation, and Floor Drain Assessment
Week of August 29, 2011	Groundwater Sampling
Week of September 12, 2011	Receive Laboratory Analytical Data
Week of October 12, 2011	Submit Draft Phase II ESA Report
Week of November 10, 2011	Submit Final Phase II ESA Report

FIGURES



USGS 7.5 MINUTE LACONIA, NH QUADRANGLE (1987)

DRAWN BY:SWC/JRN	DATE: 12/14/10
CHECKED BY:RSV/JSS	PROJECT: 10001086

FIGURE 1 - SITE LOCATION PLAN

CREDERE ASSOCIATES, LLC
776 MAIN STREET
WESTBROOK, MAINE 04092
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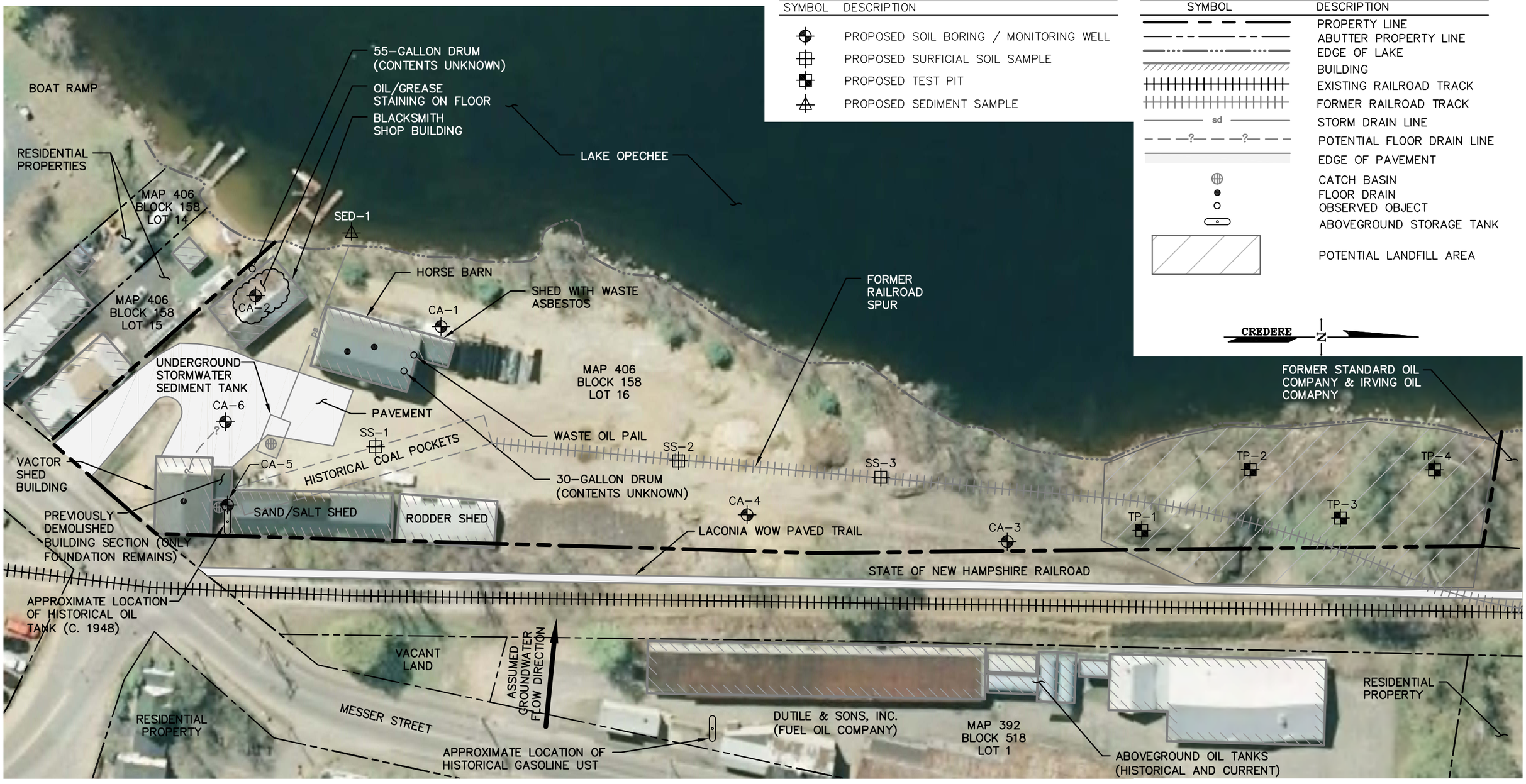
NEW ENGLAND YARD PROPERTY
A.K.A DPW NEW ENGLAND YARD
210 MESSER STREET
LACONIA, NH
NHDES #200911005

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

N

CREDERE

J:\CREDERE\10001086\New England Yard\dwg\SSQAPP Figures.dwg plot date: 3/14/2011 1:46 PM



PROPOSED SAMPLE LOCATION LEGEND

SYMBOL	DESCRIPTION
	PROPOSED SOIL BORING / MONITORING WELL
	PROPOSED SURFICIAL SOIL SAMPLE
	PROPOSED TEST PIT
	PROPOSED SEDIMENT SAMPLE

EXISTING FEATURES LEGEND

SYMBOL	DESCRIPTION
	PROPERTY LINE
	ABUTTER PROPERTY LINE
	EDGE OF LAKE
	BUILDING
	EXISTING RAILROAD TRACK
	FORMER RAILROAD TRACK
sd	STORM DRAIN LINE
?—?—	POTENTIAL FLOOR DRAIN LINE
	EDGE OF PAVEMENT
	CATCH BASIN
	FLOOR DRAIN
	OBSERVED OBJECT
	ABOVEGROUND STORAGE TANK
	POTENTIAL LANDFILL AREA

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NOTE: INFORMATION SHOWN ON THIS PLAN IS FROM INFORMATION PROVIDED ON THE CITY OF LACONIA "MAPS ONLINE", SANBORN FIRE INSURANCE MAPS, AND FIELD OBSERVATIONS ON DECEMBER 7, 2010.

DRAWN BY: JRN	DATE: 7/13/11
CHECKED BY: RSV/JSS	PROJECT: 10001086

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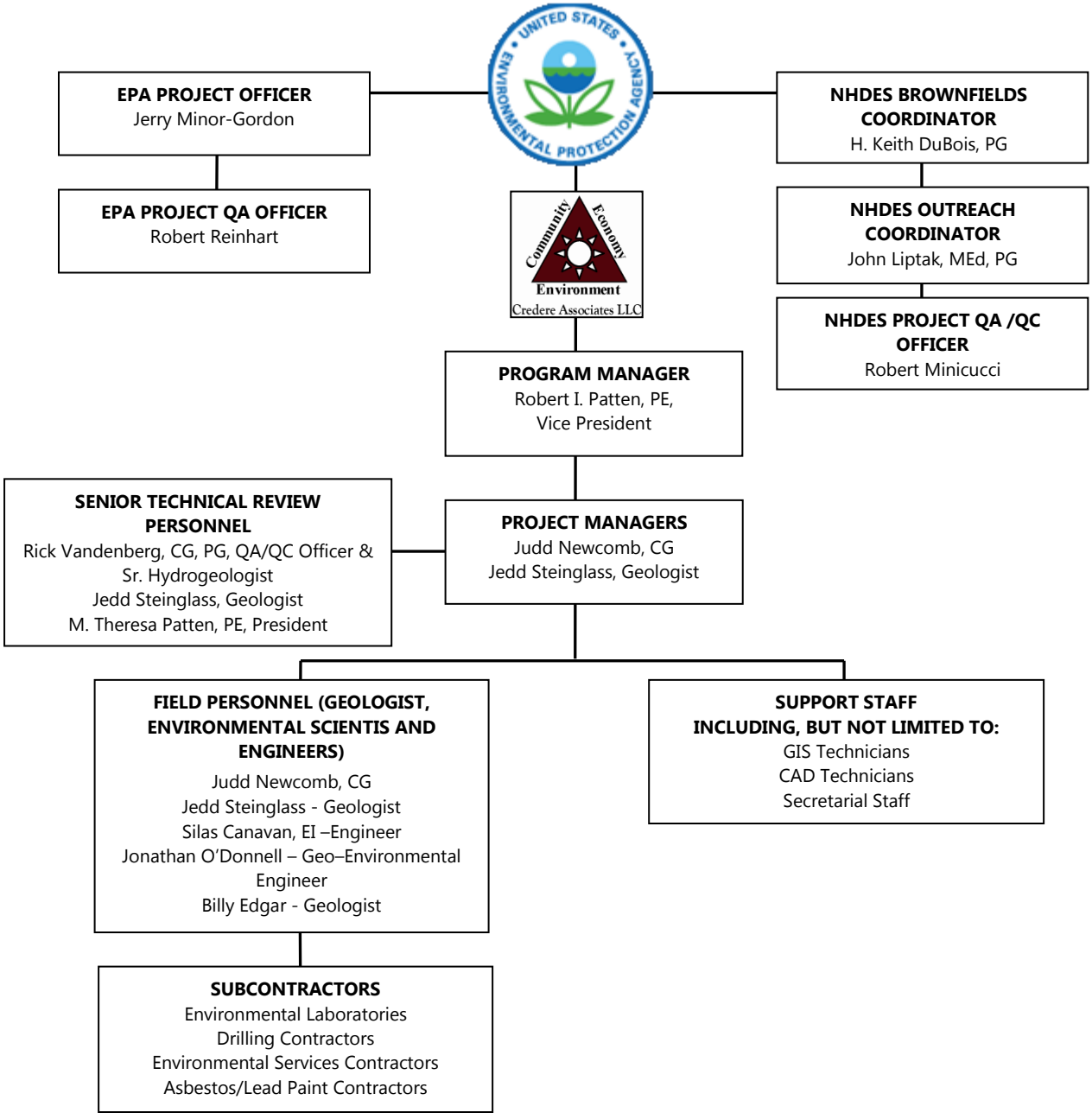
FIGURE 2
DETAILED SITE PLAN

NEW ENGLAND YARD PROPERTY
A.K.A. DPW NEW ENGLAND YARD
210 MESSER STREET
LACONIA, NH
NHDES #200911005

GRAPHIC SCALE
60 0 30 60
1 inch = 60 ft.

Figure 3: Credere Organization and Responsibility Chart



SOURCE (REC)	CONTAMINANTS OF CONCERN	PRIMARY MIGRATION PATHWAY	PRIMARY IMPACTED MEDIA	SECONDARY MIGRATION PATHWAY	SECONDARY IMPACTED MEDIA	TERTIARY MIGRATION PATHWAY	TERTIARY IMPACTED MEDIA
REC-1 HISTORICAL USE	PAHs PETROLEUM METALS PCBs	HISTORICAL SPILLS	SURFICIAL SOIL	STORMWATER RUNOFF	SURFACE WATER AND SEDIMENT		
				INFILTRATION AND LEACHING	GROUNDWATER		
REC-2 OIL STAINED SOIL	PAHs PETROLEUM METALS VOCs	HISTORICAL SPILLS	SURFICIAL SOIL	STORMWATER RUNOFF	SURFACE WATER AND SEDIMENT		
				INFILTRATION AND LEACHING	GROUNDWATER		
REC-3 OFF-SITE PETROLEUM STORAGE	PETROLEUM VOCs	HISTORICAL SPILLS	SURFICIAL AND SUBSURFACE SOIL	INFILTRATION AND LEACHING	GROUNDWATER		
REC-4 HISTORICAL BULK OIL STORAGE	PAHs PETROLEUM VOCs	HISTORICAL SPILLS	SURFICIAL SOIL	STORMWATER RUNOFF	SURFACE WATER AND SEDIMENT		
				INFILTRATION AND LEACHING	GROUNDWATER		
REC-5 POTENTIAL LANDFILLING	PAHs PETROLEUM METALS	DUMPING AND WASTE DISPOSAL	SURFICIAL AND SUBSURFACE SOIL	STORMWATER RUNOFF	SURFACE WATER AND SEDIMENT		
				INFILTRATION AND LEACHING	GROUNDWATER		

POTENTIAL EXPOSURE PATHWAYS

	RESIDENTIAL	COMMERCIAL	SITE WORKER	VISITOR	TERRESTRIAL BIOTA	AQUATIC BIOTA
INHALATION	X		X			
DERMAL ABSORPTION			X	X	X	X
ACTIVE INGESTION					X	X
INCIDENTAL INGESTION			X	X		

POTENTIAL EXPOSURE PATHWAYS

	RESIDENTIAL	COMMERCIAL	SITE WORKER	VISITOR	TERRESTRIAL BIOTA	AQUATIC BIOTA
INHALATION	X		X			
DERMAL ABSORPTION			X	X	X	X
ACTIVE INGESTION					X	X
INCIDENTAL INGESTION			X	X		

POTENTIAL EXPOSURE PATHWAYS

	RESIDENTIAL	COMMERCIAL	SITE WORKER	VISITOR	TERRESTRIAL BIOTA	AQUATIC BIOTA
INHALATION			X			
DERMAL ABSORPTION			X			
ACTIVE INGESTION					X	
INCIDENTAL INGESTION			X			

POTENTIAL EXPOSURE PATHWAYS

	RESIDENTIAL	COMMERCIAL	SITE WORKER	VISITOR	TERRESTRIAL BIOTA	AQUATIC BIOTA
INHALATION	X		X			
DERMAL ABSORPTION			X	X	X	X
ACTIVE INGESTION					X	X
INCIDENTAL INGESTION			X	X		

POTENTIAL EXPOSURE PATHWAYS

	RESIDENTIAL	COMMERCIAL	SITE WORKER	VISITOR	TERRESTRIAL BIOTA	AQUATIC BIOTA
INHALATION	X		X			
DERMAL ABSORPTION			X	X	X	X
ACTIVE INGESTION					X	X
INCIDENTAL INGESTION			X	X		

DRAWN BY: JRN	DATE: 3/4/11
CHECKED BY: RSV/JSS	PROJECT: 10001086

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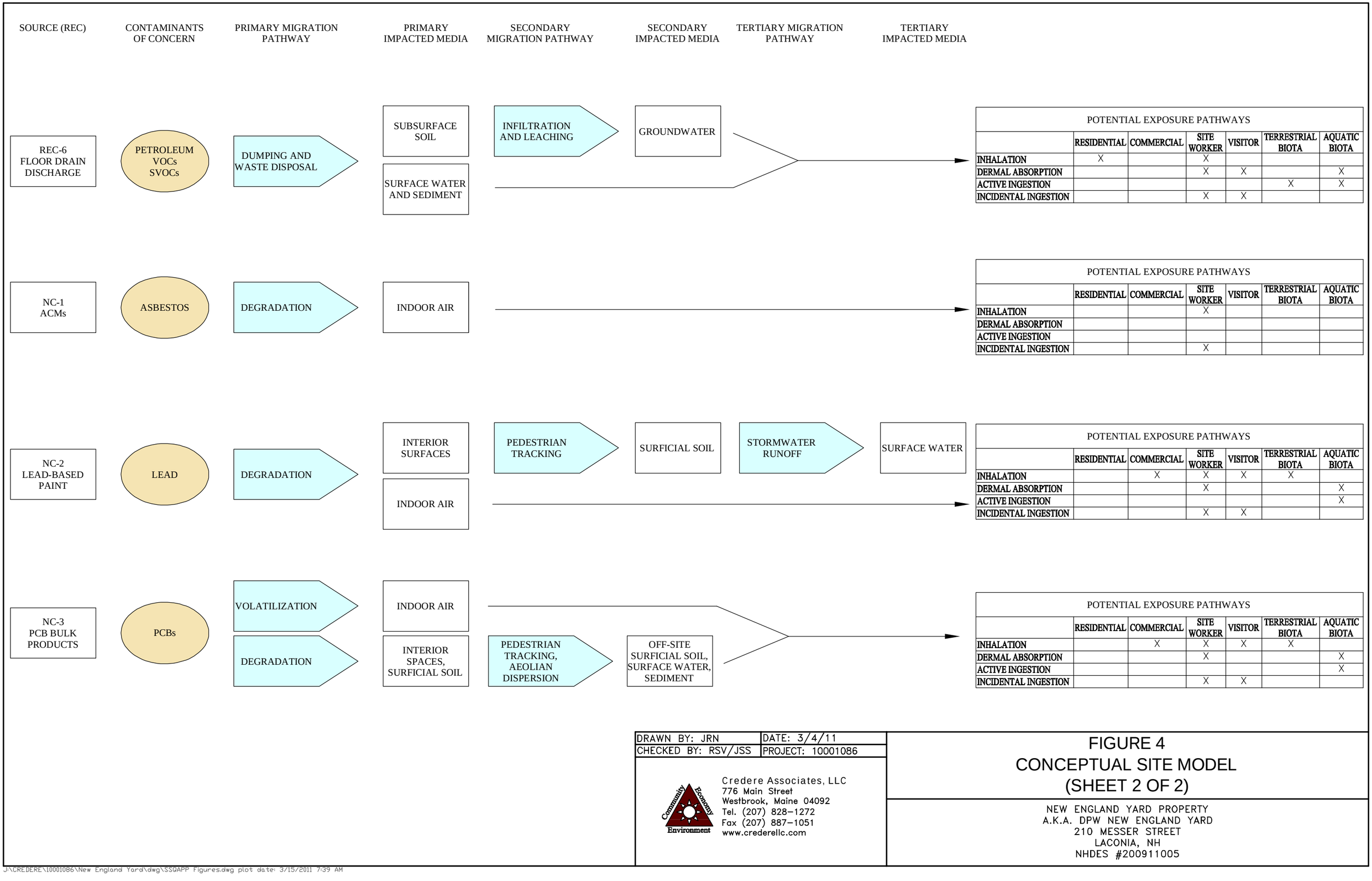
FIGURE 4
CONCEPTUAL SITE MODEL
(SHEET 1 OF 2)

NEW ENGLAND YARD PROPERTY
A.K.A. DPW NEW ENGLAND YARD
210 MESSER STREET
LACONIA, NH
NHDES #200911005



POTENTIAL EXPOSURE PATHWAYS

	RESIDENTIAL	COMMERCIAL	SITE WORKER	VISITOR	TERRESTRIAL BIOTA	AQUATIC BIOTA
INHALATION	X		X			
DERMAL ABSORPTION			X	X		X
ACTIVE INGESTION					X	X
INCIDENTAL INGESTION			X	X		

POTENTIAL EXPOSURE PATHWAYS

	RESIDENTIAL	COMMERCIAL	SITE WORKER	VISITOR	TERRESTRIAL BIOTA	AQUATIC BIOTA
INHALATION			X			
DERMAL ABSORPTION						
ACTIVE INGESTION						
INCIDENTAL INGESTION			X			

POTENTIAL EXPOSURE PATHWAYS

	RESIDENTIAL	COMMERCIAL	SITE WORKER	VISITOR	TERRESTRIAL BIOTA	AQUATIC BIOTA
INHALATION		X	X	X	X	
DERMAL ABSORPTION			X			X
ACTIVE INGESTION						X
INCIDENTAL INGESTION			X	X		

POTENTIAL EXPOSURE PATHWAYS

	RESIDENTIAL	COMMERCIAL	SITE WORKER	VISITOR	TERRESTRIAL BIOTA	AQUATIC BIOTA
INHALATION		X	X	X	X	
DERMAL ABSORPTION			X			X
ACTIVE INGESTION						X
INCIDENTAL INGESTION			X	X		

DRAWN BY: JRN	DATE: 3/4/11
CHECKED BY: RSV/JSS	PROJECT: 10001086

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FIGURE 4
CONCEPTUAL SITE MODEL
(SHEET 2 OF 2)

NEW ENGLAND YARD PROPERTY
A.K.A. DPW NEW ENGLAND YARD
210 MESSER STREET
LACONIA, NH
NHDES #200911005

TABLES

Table 1: Soil and Sediment Sample Reference Table
New England Yard a.k.a DPW New England Yard
210 Messer Street
Laconia, New Hampshire
NHDES #200911005

Media to be Collected	Proposed Sample IDs	Associated RECs	Sample Design	Sample Depth (ft bgs)	Field SOPs to be Used	Field Analysis/ Observations	No. of Samples for Analysis	No. of Field Dups	Analytical Method	Sample Container information & Preservative (per location)	Lab SOPs	Laboratory To be Used
Surficial Soil	SS-1 through SS-3	REC-1	Soil samples will be collected to assess potential impacts from the historical coal pockets and railroad spur on Site soil.	0-1	Credere-004 HWRB-11 HWRB-12 HWRB-15 HWRB-17 DR#012 DR#024 DR#025 VOCs/Soil-2000	Visual & Olfactory PID Headspace XRF Screening	3	Soil samples will be duplicated at a rate of 5% per the generic QAPP for a total of one (1) based on the proposed total number of samples indicated in this table.	- **TPH** by EPA Method 8015 - **As, Ba, B, Cd, Cu, Pb, Hg, Ni, Se, V** by EPA Method 6010 - **PAHs** by EPA Method 8270 - **PCBs** by EPA Method 8082 using extraction Method 3540	**TPH** 4 oz. amber glass **Metals** - 4 oz. glass with Teflon-lined cap **PAHs** - 4 oz. amber glass with Teflon-lined cap **PCBs** - 4 oz. glass with Teflon-lined cap, no preservative	RL-4 RL-5 RL-7 RL-13	
Surficial and/or Subsurface Soil (Soil Borings and Test Pits)	CA-1	REC-1	One boring will be performed downgradient of the Horse Barn building and former railroad spur to assess potential impacts to surficial and subsurface soil at the Site.	Soil field screened every 2-foot interval. Laboratory samples collected at highest field screening detection, visual/olfactory evidence of contamination, OR at water table interface.	Credere-003 Credere-004 HWRB-11 HWRB-12 HWRB-15 HWRB-17 VOCs/SOIL-2000 DR#012 DR#024 DR#025	Visual & Olfactory PID Headspace XRF Screening	2	Soil samples will be duplicated at a rate of 5% per the generic QAPP for a total of one (1) based on the proposed total number of samples indicated in this table.	- **TPH** by EPA Method 8015 - **As, Ba, B, Cd, Cu, Pb, Hg, Ni, Se, V** by EPA Method 6010 - **PAHs** by EPA Method 8270	**TPH** - 4 oz. amber glass **Metals** - 4 oz. glass with Teflon-lined cap **PAHs** - 4 oz. amber glass with Teflon-lined cap	RL-5 RL-7 RL-13	Absolute Resource Associates (formerly Resource Laboratories)
	CA-2	REC-2	One boring will be performed through the floor of the Blacksmith Shop building and downgradient of the historical coal pockets and railroad spur to assess impacts from potential petroleum releases and coal usage on Site soil.				2		- **TPH** by EPA Method 8015 - **VOCs** by EPA Method 8260 - **As, Ba, B, Cd, Cu, Pb, Hg, Ni, Se, V** by EPA Method 6010 - **PAHs** by EPA Method 8270	**TPH** - 4 oz. amber glass **VOCs** - (1) 40 ml VOA w/5 ml methanol, (1) 40 ml VOA for % solids **Metals** - 4 oz. glass with Teflon-lined cap **PAHs** - 4 oz. amber glass with Teflon-lined cap	RL-5 RL-7 RL-9 RL-13	
	CA-3 through CA-4	REC-3	Borings will be installed along the eastern Site boundary to assess potential off-site sources of petroleum contamination migrating onto the Site.				2		- **TPH** by EPA Method 8015 - **VOCs** by EPA Method 8260 - **PAHs** by EPA Method 8270	**TPH** - 4 oz. amber glass **VOCs** - (1) 40 ml VOA w/5 ml methanol, (1) 40 ml VOA for % solids **PAHs** - 4 oz. amber glass with Teflon-lined cap	RL-7 RL-9 RL-13	
	CA-5	REC-4	A soil boring will be installed in the location of historical petroleum bulk storage to assess potential releases to the environment.				1		- **TPH** by EPA Method 8015 - **VOCs** by EPA Method 8260 - **PAHs** by EPA Method 8270	**TPH** - 4 oz. amber glass **VOCs** - (1) 40 ml VOA w/5 ml methanol, (1) 40 ml VOA for % solids **PAHs** - 4 oz. amber glass with Teflon-lined cap	RL-7 RL-9 RL-13	
	TP-1 through TP-4	REC-5	Test pits will be performed to determine the types of wastes, if any, buried in the northern portion of the Site and if these materials have affected the environment.				1 to 4		- **TPH** by EPA Method 8015 - **As, B, Cd, Cu, Pb, Hg, Ni, Se, V** by EPA Method 6010 - **PAHs** by EPA Method 8270	**TPH** - 4 oz. amber glass **Metals** - 4 oz. glass with Teflon-lined cap **PAHs** - 4 oz. amber glass with Teflon-lined cap	RL-5 RL-7 RL-13	
Sediment	SED-1 or CA-6 CB-1	REC-6	Sediment will be collected from the floor drain discharge location in Opechee Bay, or alternatively, soil will be collected from a soil boring installed near the floor drain discharge to assess impacts from dumping into the Vactor Shed building floor drain. In addition, if appreciable sediment is observed within the floor drain, a sample of the material will be collected.	Opechee Bay bottom or below the depth of the floor drain discharge	Credere-004 HWRB-13 DR#012	Visual & Olfactory	1	1	- **TPH** by EPA Method 8015 - **VOCs** by EPA Method 8260 - **SVOCs** by EPA Method 8270 - **RCRA 8 Metals** by EPA Method 6010	**TPH** - 4 oz. amber glass **VOCs** - (1) 40 ml VOA w/5 ml methanol, (1) 40 ml VOA for % solids **SVOCs** - 4 oz. amber glass **Metals** - 4 oz. glass with Teflon-lined cap	RL-5 RL-7 RL-9 RL-13	

Table 2: Groundwater Sample Reference Table
New England Yard a.k.a. DPW New England Yard
210 Messer Street
Laconia, New Hampshire
NHDES #200911005

Media to be Collected	Proposed Sample IDs	Associated RECs	Sample Design	Field SOPs to be Used	Field Analysis/ Observations	No. of Samples for Analysis	No. of Field Dups	No. of Trip Blanks	Analytical Method	Sample Container information & Preservative (per location)	Lab SOPs	Laboratory To be Used
Groundwater	CA-1 and CA-2	REC-1 REC-2	Monitoring wells will be assessed for free floating product and groundwater samples will be collected to assess the presence of contaminants in groundwater at the Site from historical Site uses and off-site sources.	Credere-004 HWRB-1 HWRB-3 HWRB-9 HWRB-15 HWRB-17 DR#012	Visual & Olfactory Field Parameters: Temperature, PH, Dissolved Oxygen, Turbidity, Conductivity, Oxidation-Reduction Potentional	2	Groundwater samples will be duplicated at a rate of 5% per the generic QAPP for a total of one (1) based on the proposed total number of samples indicated in this table.	1	- **VOCs** by EPA Method 8260 - **PAHs** by EPA Method 8270 Based on soil results: - **Dissolved As, B, Cd, Cu, Pb, Hg, Ni, Se, V** by EPA Method 6010	**VOCs** - (2) 40 ml VOA with HCL **PAHs** - 1 Liter amber bottle, unpreserved **Dissolved Metals** - 250mL plastic, unpreserved	RL-5 RL-9 RL-13	Absolute Resource Associates (formerly Resource Laboratories)
	CA-3 through CA-5	REC-3 REC-4				3			- **VOCs** by EPA Method 8260 - **PAHs** by EPA Method 8270	**VOCs** - (2) 40 ml VOA with HCL **PAHs** - 1 Liter amber bottle, unpreserved	RL-9 RL-13	
	CA-6	REC-6				1			- **VOCs** by EPA Method 8260 - **SVOCs** by EPA Method 8270 - **Dissolved RCRA 8 Metal**s by EPA Method 6010	**VOCs** - (2) 40 ml VOA with HCL **SVOCs** - 1 Liter amber bottle, unpreserved **Dissolved Metal**s - 250mL plastic, unpreserved	RL-5 RL-9 RL-13	

Table 3: Building Materials Sample Reference Table
New England Yard a.k.a. DPW New England Yard
210 Messer Street
Laconia, New Hampshire
NHDES #200911005

Media to be Collected	Proposed Sample IDs	Associated RECs/NCs	Sample Design	Field SOPs to be Used	Field Analysis/ Observations	No. of Samples for Analysis	No. of Field Dups	Analytical Method	Sample Container information & Preservative (per location)	Lab SOPs	Laboratory To be Used
Asbestos Containing Materials	TBD Based on Visual Inspection	NC-1	An asbestos survey will be conducted to evaluate the "ASTM Non-scope" consideration related to potential ACMs at the Site.	According to NH DES Env-A-1800	Visual Inspection and Bulk Sampling	According to NH DES Env-A-1800	According to NH DES Env-A-1800	**Polarized Light Microscopy** byEPA 600/R-93/116	Plastic bags, labeled (no preservation)	Included in SSQAPP Addendum No. 4	Absolute Resource Associates (formerly Resource Laboratories)
Lead-Based Paint	TBD	NC-2	A lead-based paint screening will be conducted to evaluate the "ASTM Non-scope" consideration related to lead-based paint on Site buildings.	DR#024 DR#025 Credere-004	XRF Screening	TBD	NA	EPA Method 6200	NA	NA	NA
Potential PCB-Containing Building Materials	As Needed: BM-1 through BM-6	NC-3	One (1) representative bulk sample will be collected from up to six (6) representative suspect building material matrices.	EPA SOP No. 2011 for Chip, Wipe, and Sweep Sampling; EIASOP_POROUSSAMPLING1; Credere-004	Visual Inspection and Bulk Sampling	Up to 6 building material matrices	1	**PCBs** via EPA Method 8082 using extraction Method 3540	**PBCs** - 4 oz. glass with Teflon-lined cap, no preservative	RL-4	Absolute Resource Associates (formerly Resource Laboratories)

ATTACHMENT A

NOAA SQuiRTs

Screening Quick Reference Tables

These tables were developed for screening purposes only: they do not represent official NOAA policy and do not constitute criteria or clean-up levels.
All attempts have been made to ensure accuracy; however, NOAA is not liable for errors. Values are subject to changes as new data become available.

This set of NOAA Screening Quick Reference Tables, or SQuiRTs, presents screening concentrations for inorganic and organic contaminants in various environmental media. Additional reference material, such as guidelines for sample preservation, are also included.

NOAA identifies potential impacts to coastal resources and habitats likely to be affected by hazardous wastes. To screen for substances which may threaten natural resources of concern to NOAA, environmental concentrations are compared to these screening levels. These tables are intended for preliminary screening purposes only: they do not represent official NOAA policy and do not constitute criteria or clean-up levels. NOAA does not endorse their use for any other purposes. Screening levels are reported with the number of significant figures they were originally reported with.

In this new version, column headings link to OR&R's web site wherebrief descriptions of the benchmark may be found. However, detailed guidance on the recommended application of various screening guidelines is provided in the original sources (listed in each SQuiRT section, with web links for many). Users of the SQuiRT cards are strongly encouraged to review supporting documentation to determine appropriateness for their specific use.

The SQuiRT card set has been re-organized from earlier versions to accommodate expansion. Benchmarks from numerous new sources have been incorporated, and the list of analytes vastly increased. The SQuiRT cards present benchmarks representing different degrees of protectiveness. Multiple benchmarks are also provided in many cases: the user is advised to review the derivation of any particular benchmark before selecting a specific value. Information is still presented in sections, with *new sections* appearing in this expanded version:

- Inorganics in Sediment (freshwater and marine)
- Inorganics in Water (groundwater and surface water)
- Organics in Water and Soil
- *Toxic Equivalency Factors*
- Guidelines for Sample Collection & Storage
- Analytical Methods for Inorganics
- Inorganics in Soil
- Organics in Sediment
- *PCB Composition*
- *Composition by Carbon Range*
- Analytical Methods for Organics

Footnotes within each SQuiRT section which appear at the bottom of the page are only to aid in deciphering the nature of specific entries. Due to space constraints, notations which relate to the source for individual values are explained at the end of the section. Organic chemicals are now listed alphabetically, without categorization. A few synonyms are provided, but CAS numbers are also presented to aid in identifying and finding specific analytes. Except as noted, all concentrations in the SQuiRT cards are in parts per billion.

For surface water samples, because releases from hazardous waste sites are often continuous and long-term, concentrations are most often compared directly with chronic benchmarks, when available. Groundwater concentrations are also screened against chronic benchmarks. However, suitable site-specific dilution factors should be applied to allow for dilution upon migration and discharge of groundwater to surface water. The SQuiRT cards present U.S. Environmental Protection Agency (EPA) Maximum Contaminant Levels (MCLs), applicable to drinking water sources and secondary MCLs applicable to groundwater, supplemented by values from Canada and the United Nations World Health Organization.

Preference for surface water and groundwater benchmarks is given to U.S. EPA Ambient Water Quality Criteria (AWQC). This is generally followed by Tier II Secondary Acute Values (SAVs) or available standards and guidelines from other regulatory agencies. Tier II SAVs are derived using a similar approach to AWQC, but do not have sufficient supporting data for full criteria calculation. Lowest Observable Effect Levels (LOELs) were originally published by EPA with AWQC. Around 2000, EPA stopped publishing these values, however, LOELs are reproduced here when no other benchmark is available, because in many instances, they formed the basis for state standards.

For many trace elements, AWQC are now expressed in terms of the "dissolved" fraction, which is essentially defined operationally as a filtered fraction. Likewise, the toxicity of many trace elements is related to the water hardness, and the values presented are for a default hardness of 100 mg/L $CaCO_3$. Equations are provided in the SQuiRT cards to calculate the exact criteria for a given hardness, or, to convert from unfiltered, total concentrations to "dissolved" fractions.

Screening Quick Reference Table for Inorganics in Sediment

These tables were developed for screening purposes only: they do not represent official NOAA policy and do not constitute criteria or clean-up levels.
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Analyte		FRESHWATER SEDIMENT									MARINE SEDIMENT						
All concentrations in parts per billion dry weight unless specified otherwise		"Background" [1]	ARCS *H. azteca* TEL [2]	TEC [3]	TEL [3]	LEL [4]	PEC [3]	PEL [3]	SEL [4]	UET [1]	T_{20} [5]	TEL [6]	ERL [6]	T_{50} [5]	PEL [6]	ERM [6]	AET [7]
Predicted Toxicity Gradient:		Increasing →									Increasing →						
Aluminum (%)	Al	0.26%	2.55%														1.8% N
Antimony	Sb	160								3,000 M	630			2,400			9,300 E
Arsenic	As	1,100	10,798	9,790	5,900	6,000	33,000	17,000	33,000	17,000 I	7,400	7,240	8,200	20,000	41,600	70,000	35,000 B
Barium	Ba	700										130,100#					48,000 A
Cadmium	Cd	100-300	583	990	596	600	4,980	3,530	10,000	3,000 I	380	680	1,200	1,400	4,210	9,600	3,000 N
Chromium	Cr	7,000-13,000	36,286	43,400	37,300	26,000	111,000	90,000	110,000	95,000 H	49,000	52,300	81,000	141,000	160,000	370,000	62,000 N
Cobalt	Co	10,000				50,000+											10,000 N
Copper	Cu	10,000-25,000	28,012	31,600	35,700	16,000	149,000	197,000	110,000	86,000 I	32,000	18,700	34,000	94,000	108,000	270,000	390,000 MO
Iron (%)	Fe	0.99-1.8 %	18.84%			2%			4%	4% I							22% N
Lead	Pb	4,000-17,000	37,000	35,800	35,000	31,000	128,000	91,300	250,000	127,000 H	30,000	30,240	46,700	94,000	112,000	218,000	400,000 B
Manganese	Mn	400,000	630,000			460,000			1,100,000	1,100,000 I							260,000 N
Mercury	Hg	4-51		180	174	200	1,060	486	2,000	560 M	140	130	150	480	700	710	410 M
Nickel	Ni	9,900	19,514	22,700	18,000	16,000	48,600	36,000	75,000	43,000 H	15,000	15,900	20,900	47,000	42,800	51,600	110,000 EL
Selenium	Se	290															1,000 A
Silver	Ag	<500				500 +				4,500 H	230	730	1,000	1,100	1,770	3,700	3,100 B
Strontium	Sr	49,000															
Tin	Sn	5,000										48 *					> 3,400 N
Vanadium	V	50,000															57,000 N
Zinc	Zn	7,000-38,000	98,000	121,000	123,000	120,000	459,000	315,000	820,000	520,000 M	94,000	124,000	150,000	245,000	271,000	410,000	410,000 I
Lead 210 $^{bq}/_{g}$ dw						0.5 ^			< 9.7 ^								
Polonium 210 $^{bq}/_{g}$ dw						0.6 ^			< 8.7 ^								
Radium 226 $^{bq}/_{g}$ dw						0.1 ^			< 13 ^								
Sulfides										130,000 M							4,500 MO

- Based on SLC approach using sensitive species HC5%; ES&T 2005 39(14):5148-5156.
* - Based upon EQp approach using current AWQC CCC
^ - Based on SLC approach to derive LEL and SEL; Env'al Monitor & Ass'ment 2005 110:71-85
+ - Carried over from Open Water disposal Guidelines; treated as if LEL for management decisions.
Bioassay endpoints: M – Microtox; B – Bivalve; E – Echinoderm larvae; O – Oyster larvae; A – Amphipod; N – Neanthes; L –Larval bioassay; plus, I – Infaunal community impacts

Sources

1 – Buchman, M. 1999. NOAA HAZMAT Report 99-1.
2 – EPA 905-R96-008
3 – Arch ET&C 2000, 39(1)20- TEL and PEL are also known as Canadian ISQGs and PELs
4 – Guidelines for the protection and management of aquatic sediment quality in Ontario Aug 1993
5 – ET&C 2002, 21(9)1993-
6 – Ecotox. 1996, 5(4):253-
7 – Chapter 173-204 WAC, 1991/95 as supplemented by WA Dept of Ecology staff with unpublished data.

Screening Quick Reference Table for Inorganics in Soil

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ANALYTE		CAS Number	BACKGROUND [1]		DUTCH STANDARDS [2]		Eco-SSL [3]				Microbes [4]
All concentrations in parts per billion dry weight unless specified otherwise			Mean	Range	Target	Intervention	Avian	Inverts	Mammals	Plants	
Aluminum	Al	7429905	4.70%	0.5- >10%						50,000 a	600,000
Antimony	Sb	7440360	480	bd-8,800	3,000	15,000		78,000	142 v	5,000 a	
Arsenic	As	7440382	5,200	bd-97,000	900 L	55,000	43,000	60,000 a	5,700 v	18,000	100,000
Barium	Ba	7440393	440,000	10,000-0.5%	160,000	625,000		330,000	1,040 v	500,000 a	3,000,000
Beryllium	Be	7440417	630	bd-15,000	1,100	30,000 S		40,000	1,060 v	10,000 a	
Boron	B	7440428	26,000	bd-300,000						500 a	20,000
Bromine	Br	7726956	560	bd-11,000	20,000					10,000 a	
Cadmium	Cd	7440439			800	12,000	770	20,000 a	2.22 v	4,000 a	20,000
Chromium III	Cr	7440473	< 37,000	1,000-0.2%	< 380 L	< 220,000 L	26,000	<400 a	34,000	< 1,000 a	< 10,000
Chromium VI	Cr	18540299	< 37,000		< 380 L	< 220,000 L		400 a	81,000	< 1,000 a	< 10,000
Cobalt	Co	7440484	6,700	bd-70,000	2,400 L	180,000 L	120,000		140 v	13,000	1,000,000
Copper	Cu	7440508	17,000	bd-700,000	3,400 L	96,000 L	28,000	50,000 a	5,400 v	70,000	100,000
Cyanide (total complex)	CN	57125			5,000	50,000 (pH>5)			1,330 v		
Cyanide (total free)	CN				1,000	20,000					
Fluorine	F	7782414	210,000	bd-0.37%	500,000					200,000 a	30,000
Iodine	I	7553562	750	bd-9,600						4,000 a	
Iron	Fe	7439896	1.80%	0.01- >10%							200,000
Lanthanum	La	7439910	30,000	bd-200,000							50,000
Lead	Pb	7439921	16,000	bd-700,000	55,000 L	530,000	11,000	500,000 a	53.7 v	50,000 a	900,000
Lithium	Li	7439932	20,000	bd-140,000						2,000 a	10,000
Manganese	Mn	7439965	330,000	bd-0.7%			4,300,000	450,000	4,000,000	220,000	100,000
Mercury	Hg	7439976	58	bd-4,600	300	10,000		100 a v		300 a	30,000
Mercury(methyl)		22967926			37 L	4,000 L		< 100 a v	1.58 v	< 300 a	
Molybdenum	Mo	7439987	590	bd-15,000	3,000	190,000 L				2,000 a	200,000
Nickel	Ni	7440020	13,000	bd-700,000	260 L	100,000 L	210,000	200,000 a	13,600 v	30,000 a	90,000
Selenium	Se	7782492	260	bd-4,300	700 L	100,000 S	1,2000	4,100	630	520	100,000
Silver	Ag	7440224				15,000 S	4,200		4,040 v	2,000 a	50,000
Strontium	Sr	7440246	120,000	bd-0.3%							
Sulfide		18496258							3.58 v		
Sulfur	S	7704349	0.12%	bd-4.8%							
Technetium	Tc	7440268								200 a	

1: bd – below detection
2: S – serious contamination level; L – Environmental Risk Limit

Screening Quick Reference Table for Inorganics in Soil

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All attempts have been made to ensure accuracy; however, NOAA is not liable for errors. Values are subject to changes as new data become available.

ANALYTE All concentrations in parts per billion dry weight unless specified otherwise		CAS Number	BACKGROUND [1]		DUTCH STANDARDS [2]		Eco-SSL [3]				Microbes [4]
			Mean	Range	Target	Intervention	Avian	Inverts	Mammals	Plants	
Tellurium	Te	13494809				600,000					
Thallium	Tl	7440280	8,600	2,20-31,000	1,000	15,000 S			56.9 v	1,000 a	
Tin	Sn	7440315	890	bd-10,000	19,000 background	900,000 S			7,620 v	50,000 a	2,000,000
Titanium	Ti	7440326	0.224 %	0.007-2 %							1,000,000
Tin as Triphenyltin		668348				< 2,500					
Tungsten	W	7440337									400,000
Uranium	U	7440611	2,300	290-11,000						5,000 a	
Vanadium	V	7440622	58,000	bd-500,000	42,000	250,000 S	7,800		1,590 v	2,000 a	20,000
Zinc	Zn	7440666	48,000	bd-0.29%	16,000 L	350,000 L	46,000	6,620 v		50,000 a	100,000

Sources

1 – USGS Prof. Paper 1270, 1984. Mean is geometric mean of national data.

2 – Entry is lower of current VROM Environmental Quality standards or the updated RIVM Environmental Risk Limits. Risk limits are typically divided by 100 to derive the Target value; this computation has not been done here.
Dutch Target/Intervention: E.M.J. Verbruggen, R. Posthumus and A.P. van Wezel, 2001. Ecotoxicological Serious Risk Concentrations for soil, sediment, and (ground)water: Updated proposal for first series of compounds. Nat. Inst. Public Health and the Env., and subsequent updates as published elsewhere.
Min. Housing, Spatial Plan. And the Env., 2000. Annexes Circular on target values and intervention values for soil remediations.

3 – Entry is lower of either:
EPA Eco-SSLs, www.epa.gov/ecotox/ecossl/
a – ORNL Screening benchmark for earthworms and soil microorganisms: ORNL 1997a, ES/ER/TM-126/R2
v – EPA R5 Eco Screening levels soil - shrew or vole, www.epa.gov/reg5rcra/ca/

4 - ORNL 1997b, ES/ER/TM-85/R3.

1: bd – below detection
2: S – serious contamination level; L – Environmental Risk Limit

Screening Quick Reference Table for Inorganics in Water

These tables were developed for screening purposes only: they do not represent official NOAA policy and do not constitute criteria or clean-up levels.
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ELEMENT All concentrations in parts per billion unless specified otherwise		GROUND WATER [1]	SURFACE WATERS [2]			
			Freshwater		Marine	
			Acute	Chronic	Acute	Chronic
Aluminum	Al	50-200 *	pH 750	pH 87		
Antimony	Sb	6	88 p	30 p	1,500 p	500 p
Arsenic III	As^{+3}	<10		190 E		2.3 NZ
Arsenic V	As^{+5}	< 10	66 T	3.1 T	2,319 *	
Arsenic, Total	As	10	340	150	69	36
Barium	Ba	2,000	110 T	3.9 E	1,000 BC	200 BC
Beryllium	Be	4	35 T	0.66 T	1,500 BC	100 BC
Boron	B	5,000 C	30 T	1.6 T		1,200
Cadmium	Cd	5	2.0 †	0.25 †	40	8.8
Chromium III	Cr^{+3}	< 100	570 †	74 †	10,300 *	27.4 NZ
Chromium VI	Cr^{+6}	< 100	16	11	1,100	50
Chromium, Total	Cr	100				
Cobalt	Co		1,500 T	3.0 E		1 NZ
Copper	Cu	1,300	13 †	9 †	4.8	3.1
Fluoride	F	4,000	200 BC (hardness < 50)		1,500 BC	
Gallium	Ga			18 NZ		use 18 NZ
Iron	Fe	300 *		1,000	300 BC	50 BC
Lanthium	La			0.04 NZ		
Lead	Pb	15	65 †	2.5 †	210	8.1
Lithium	Li		260 T	14 T		
Manganese	Mn	50 *	2,300 T	80 E		100 BC
Mercury	Hg	2	1.4	0.77	1.8	0.94
Methyl Mercury			0.099 T	0.0028 T		
Molybdenum	Mo	70 W	16,000 T	34 NZ		23 NZ
Nickel	Ni	20 W	470 †	52 †	74	8.2
Phosphorus	P					0.1
Potassium	K		373,000 BC			
Selenium	Se	50	13-186 total	5 total	290	71
Silver	Ag	100 *	1.6 (½) †	0.36 T	0.95 (½)	
Strontium	Sr		15,000 T	1,500 T		
Thallium	Tl	2	110 T	0.03 NZ	2,130 *	17 NZ
Tin as TBT			0.46	0.072	0.42	0.0074

1: * – Secondary standard
2: pH – criteria is pH dependent ; p - proposed; † - hardness dependent; * - EPA LOEL ; (½) - CMC is halved to compare to 1985 Guideline derivation

Screening Quick Reference Table for Inorganics in Water

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ELEMENT All concentrations in parts per billion unless specified otherwise		GROUND WATER [1]	SURFACE WATERS [2]			
			Freshwater		Marine	
			Acute	Chronic	Acute	Chronic
Tin as Di-N-Butyl			0.08 BC			
Tin as Triethyl			0.4 BC			
Tin as Triphenyl			0.022 BC		34 BC	
Titanium	Ti		2,000 BC			
Uranium	U	30	46 T	0.5 NZ	500 BC	100 BC
Vanadium	V		280 T	19 E		50 BC
Zinc (Zn)	Zn	5,000 *	120 †	120 †	90	81
Zirconium	Zr		310 T	17 T		
Hydrogen Sulfide			2		2	
Cyanide, free	CN	200	22	5.2	1	1

Freshwater criterion for certain elements (†) are expressed as a function of hardness (mg/L) in the water column. The values shown assume 100 mg/L. Values for a different hardness may be calculated using the following equations to arrive at a CMC or CCC for *filtered* samples. Hardness may range up to 400 mg/L as calcium carbonate. For hardness above this range, use 400 mg/L as the maximum value allowed.

For salinity between 1 and 10 ppt, use the more stringent of either fresh or marine values.

Sources

1 – Primary entry is the US EPA MCL value, followed by the WHO drinking water guidelines.
Maximum Contaminant Levels (MCLs): http://www.epa.gov/safewater/index.html
W – World Health Organization's (WHO) Drinking water guidelines: http://www.who.int/water_sanitation_health/dwq/en/
C – Canadian water Quality Guidelines: http://www.ec.gc.ca/CEQG-RCQE/English/Ceqg/Water/default.cfm

2 – Primary entry is the US Ambient Water Quality Criteria, followed by the lowest of Tier II SAVs or available standards and guidelines.
EPA Ambient water Quality Criteria (AWQC): http://www.epa.gov/waterscience/criteria/aqlife.html
T – Tier II Secondary Acute Value: http://www.esd.ornl.gov/programs/ecorisk/tools.html
BC – British Columbia Water Quality Guidelines (either working or recommended): http://www.env.gov.bc.ca/wat/wq/
NZ – Australian & New Zealand ECLs and Trigger values: ANZECC Oct 2000, Volume 1, The Guidelines. www.mfe.govt.nz/publications/
E – EcoUpdate: www.epa.gov/oswer/riskassessment/ecoup/

Lowest Observable Effect Levels (LOELs) previously published by EPA are also included since these essentially were the basis for many state standards.
EPA LOELs: EPA Water quality Criteria Summary, Office of Science & Technology, Health & Ecological Criteria Div., Ecological Risk Assessment Branch, 1991.
Full listings appeared in various Fed. Register notices and in EPA's Quality Criteria for Water, 1992.

1: * – Secondary standard
2: pH – criteria is pH dependent ; p - proposed; † - hardness dependent; * - EPA LOEL ; (½) - CMC is halved to compare to 1985 Guideline derivation

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ELEMENT	HARDNESS CALCULATIONS – UNFILTERED FRESHWATER CRITERIA		UNFILTERED TO FILTERED CALCULATIONS		
	CMC	CCC	Fresh water CMC	Freshwater CCC	Marine CMC / CCC
Arsenic (As)			1	1	1
Cadmium (Cd)	$CMC = e^{1.0166 [\ln(\text{hardness})] - 3.924}$	$CCC = e^{0.7409 [\ln(\text{hardness})] - 4.719}$	CF = 1.136672 - 0.041838 [ln(hardness)]	CF = 1.101672 - 0.041838 [ln(hardness)]	CF = 0.994
Chromium III (Cr+3)	$CMC = e^{0.819 [\ln(\text{hardness})] + 3.7256}$	$CCC = e^{0.819 [\ln(\text{hardness})] + 0.6848}$	CF = 0.316	CF = 0.860	–
Chromium VI (Cr +6)			CF = 0.982	CF = 0.962	CF = 0.993
Copper (Cu)	$CMC = e^{0.9422 [\ln(\text{hardness})] - 1.7}$	$CCC = e^{0.8545 [\ln(\text{hardness})] - 1.702}$	CF = 0.960	CF = 0.960	CF = 0.83
Lead (Pb)	$CMC = e^{1.273 [\ln(\text{hardness})] - 1.46}$	$CCC = e^{1.273 [\ln(\text{hardness})] - 4.705}$	CF = 1.46203 - 0.145712 [ln(hardness)]	SAME AS CMC	CF = 0.951
Mercury (Hg)			CF = 0.85	CF = 0.85	CF = 0.85
Nickel (Ni)	$CMC = e^{0.846 [\ln(\text{hardness})] + 2.255}$	$CCC = e^{0.846 [\ln(\text{hardness})] + 0.0584}$	CF = 0.998	CF = 0.997	CF = 0.990
Selenium (Se)			–	–	CF = 0.998
Silver (Ag)	$CMC = e^{1.72 [\ln(\text{hardness})] - 6.52}$	CCC — No criteria	CF = 0.85	–	CF = 0.85 / –
Zinc (Zn)	$CMC = e^{0.8473 [\ln(\text{hardness})] + 0.884}$	$CCC = e^{0.8473 [\ln(\text{hardness}) + 0.884}$	CF = 0.978	CF = 0.986	CF = 0.946

Freshwater criterion for certain elements are expressed as a function of hardness (mg/L) in the water column. The values shown assume 100 mg/L. Values for a different hardness may be calculated using the above equations to arrive at a CMC or CCC for *filtered* samples. Hardness may range up to 400 mg/L as calcium carbonate. For hardness above this range, use 400 mg/L as the maximum value allowed.

Criteria for most metals are expressed as standards for samples filtered through 0.45 m filter (*i.e.*, "dissolved"). To convert unfiltered concentrations to filtered, multiply the unfiltered concentration value by the appropriate Conversion Factor (CF) above. For cadmium and lead, the conversion factor itself is hardness-dependent.

CMC: Criteria Maximum Concentration is the highest level for a 1-hour average exposure not to be exceeded more than once every three years, and is synonymous with “acute.”
CCC: for a 4-day average exposure not to be exceeded more than once every three years, and is synonymous with “chronic.”

Sources

EPA Ambient water Quality Criteria (AWQC): http://www.epa.gov/waterscience/criteria/aqlife.html

Screening Quick Reference Tables for Organics – Sediment

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		ARCS *Hyalella* TEL[1]	TEL[2]	TEC[2]	LEL[3]	PEL[2]	PEC[2]	SEL[3]	UET[4] @1%TOC	Target	Intervention	T_{20}[6]	TEL[7]	ERL[7]	T_{50}[6]	PEL[7]	ERM[7]	AET[8]	
2,3,7,8-TCDD dioxin TEQs	1746016		0.00085 c			0.0215 c			0.0088†H		1 S		0.00085 c			0.0215 c		0.0036 N	
Acenaphthene	83329		6.71 c			88.9 c			290 M			19	6.71	16	116	88.9	500	130 E	
Acenaphthylene	208968		5.87 c			128 c			160 M			14	5.87	44	140	128	640	71 E	
Acrylonitrile	107131									0.07	100 S								
Aldrin	309002				2			80	40 I	0.06	1,700 LB							9.5 AE	
Aldrin + Dieldrin + Endrin	na									5	140 L								
Anthracene	120127	10	46.9 c	57.2	220	245 c	845	3,700	260 M	39 LB	1,600 LB	34	46.9	85.3	290	245	1,100	280 E	
Atrazine	1912249									0.2	710 LB								
BCH compounds (sum)	na									10	6,400 L								
Benz[a]anthracene	56553	15.72	31.7	108	320	385	1,050	14,800	500 I	25 L	2,500 L	61	74.8	261	466	693	1,600	960 E	
Benzene	71432									10	1,000								57
Benzo(ghi)perylene	191242				170			3,200	300 M	570 LB	33,000 LB	67			497			670 M	
Benzo[a]pyrene	50328	32.4	31.9	150	370	782	1,450	14,400	700 I	52 L	7,000 L	69	88.8	430	520	763	1,600	1,100 E	
Benzo[b]fluoranthene	205992											130			1,107			1,800 E I	
Benzo[k]fluoranthene	207089	27.2			240			13,400	13,400B	380 LB	38,000 LB	70			537			1,800 E I	
Benzoic acid	65850																	65 O	
Benzyl alcohol	100516																	52 B	
BHC, alpha (α-HCH)	319846				6			100		3	< 2,000								
BHC, beta (β-HCH)	319857				5			210		9	< 2,000								
BHC, delta (δ-HCH)	319868									< 10	< 2,000								
BHC, gamma- (γ-HCH; Lindane)	58899		0.94	2.37	3	1.38	4.99	10	9 I	0.05	1,200 L		0.32			0.99		> 4.8 N	3.7
Biphenyl	92524											17			73				1,100
Bis(2-ethylhexyl)phthalate (DEHP)	117817								750 †M	< 100	10,000 LB		182			2647		1,300 I	
Bromoform (Tribromomethane)	75252										75,000								650
Butanol	35296721										30,000 S								
Butyl acetate, 1- or 2-	na										200,000 S								
Butyl benzyl phthalate	85687									< 100	48,000 LB							63 M	1,100
Carbaryl	63252									0.03	450 LB								
Carbofuran	1563662									0.02	17 LB								
Carbon tetrachloride (Tetrachloromethane;Tetra)	56235									170 LB	1,000								1,200

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		ARCS *Hyalella* TEL[1]	TEL[2]	TEC[2]	LEL[3]	PEL[2]	PEC[2]	SEL[3]	UET[4] @1%TOC	Target	Intervention	T_{20}[6]	TEL[7]	ERL[7]	T_{50}[6]	PEL[7]	ERM[7]	AET[8]	
Catechol (o-Dihydroxybenzene)	120809									3.2 LB	2,600 LB								
Chlordane	57749		4.5	3.24	7	8.9	17.6	60	30 I	0.03	4,000		2.26	0.5		4.79	6	2.8 A	
Chlordane (alpha)	5103719									< 0.03	< 4,000								
Chlordane (gamma)	5103742									< 0.03	< 4,000								
Chloro, 4- 2-methyl phenol	1570645										< 15,000 S								
Chloro, 4- 2-methylphenoxy acetic acid (MCPA)	94746									0.05	4,000								
Chloro, 4- 3-methyl phenol	59507										< 15,000 S								
Chloro, 4- methyl phenols	na										15,000 S								
Chloroaniline	27134265									5	50,000								
Chlorobenzenes (sum)	na									30	30,000								820
Chloroform (trichloromethane)	67663									20	10,000								
Chloronaphthalene, 1-	90131									57 LB	< 10,000								
Chloronaphthalene, 2-	91587									250 LB	< 10,000								
Chlorophenol, 2-	95578									55 LB	7,800 LB							0.333	
Chlorophenol, 3-	108430									35 L	14,000 L								
Chlorophenol, 4-	106489									20 LB	1,400 LB								
Chlorophenols (sum)	na									10	10,000								
Chrysene	218019	26.83	57.1	166	340	862	1,290	4,600	800 I	8,100 LB	35,000 LB	82	108	384	650	846	2,800	950 E	
Cresol [m-] (3-Methyl phenol)	108394									1,600 L	16,000 L								
Cresol [o-] (2-Methyl phenol)	95487									500 L	50,000 L							8 B	
Cresol [p-] (4-Methyl phenol)	106445									5.1 LB	2,600 LB							100 B	
Cresols, sum	1319773									50	5,000								
Cyclohexanone	108941									100	45,000								
DDD, 4,4- (p,p-DDD, TDE)	72548		3.54	4.88	8	8.51	28	60	< 60 I	3.9 LB	34,000 LB		1.22	2		7.81	20	< 16 I	
DDE, 4,4- (p,p-DDE)	72559		1.42	3.16	5	6.75	31.3	190	<50 I	5.8 LB	1,300 LB		2.07	2.2		374	27	< 9 I	
DDT, 4,4- (p,p-DDT)	50293		1.19 c	4.16	8	4.77 c	62.9	710	50 I	9.8 LB	1,000 L		1.19	1		4.77	7	< 12 E	
DDT+DDE+DDD (sum)	na		7	5.28	7	4,450	572	120	50 I	10	4,000		3.89	1.58		51.7	46.1	11 B	
Diazinon	333415																		1.9
Dibenz[ah]anthracene	53703	10	6.22 c	33	60	135 c		1,300	100 M			19	6.22	63.4	113	135	260	230 OM	
Dibenzofuran	132649								5,100 H									110 E	2,000

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Dichloroaniline, 2,4-	554007									< 5	< 50,000 S								
Dichloroaniline, 3,4-	95761									< 5	< 50,000 S								
Dichloroaniline, 3,4-	95761									< 5	< 50,000 S								
Dichlorobenzene, 1,2-	95501									< 30	17,000 LB							13 N	340
Dichlorobenzene, 1,3-	541731									< 30	24,000 LB								1700
Dichlorobenzene, 1,4-	106467									< 30	18,000 LB							110 IM	350
Dichlorobenzenes	25321226									< 30	19,000 LB								
Dichloroethane, 1,1-	75343									20	15,000								
Dichloroethane, 1,2-	107062									20	4,000								
Dichloroethene, 1,1- (vinylidene chloride)	75354									100	300								
Dichloroethene, 1,2- (cis or trans)	540590									200	1,000								
Dichlorophenol, 2,4-	120832									< 10	8,400 LB							0.2083	
Dichlorophenol, 2,6-	87650									< 10	57,000 LB								
Dichlorophenol, 3,4-	95772									< 10	57,000 LB								
Dichlorophenol, 3,5-	591355									< 10	5,400 LB								
Dichlorophenols (sum)	na									< 10	22,000 LB								
Dichloropropane, 1,2- (propylene dichloride)	78875									< 2	< 2,000								
Dieldrin ‡	60571		2.85	1.9	2	6.67	61.8	910	300 I	0.5	1,900 LB	0.83	0.72	0.02	2.9	4.3	8	1.9 E	
Diethyl phthalate	84662									530 L	53,000 L							6 BL	630
Diethylene-glycol	111466										270,000 S								
Dihydroxybenzenes, sum	na									62 LB	8,000 LB								
Di-iso-butyl phthalate	84695									92 LB	17,000 LB								
Dimethyl phthalate	131113									1,000 LB	84,000 LB							6 B	
Dimethylnaphthalene, 2,6-	581420											25			133				
Dimethylphenol, 2,4-	105679																	18 N	
Di-n-butyl phthalate	84742								110 H	7,000 LB	36,000 LB							58 BL	11,000
Di-n-octyl phthalate	117840									< 100	< 60,000							61 BL	
Dodecylbenzene	25155300										1,000,000 S								
Endosulfan (a or b)	115297									0.01	4,000								2.9 α 14 β

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Endosulfan II	33213659																		
Endrin	72208		2.67	2.22	3	62.4	207	1,300	500 I	0.04	95 L								
Ethyl acetate	141786										75,000 S								
Ethyl acetate	141786										75,000 S								
Ethyl benzene	100414									30	50,000							4 EL	3,600
Ethylene glycol	107211										100,000 S								
Fluoranthene	206440	31.46	111	423	750	2,355	2,230	10,200	1,500 M	1,000 LB	260,000	119	113	600	1,034	1,494	5,100	1,300 E	
Fluorene	86737	10	21.2 c	77.4	190	144 c	536	1,600	300 M			19	21.2	19	114	144	540	120 E	540
Formaldehyde	50000										100 S								
Guthion (Azinphos-methyl)	865000									0.005	2,000 S								
Heptachlor	76448								10 I	0.7	4,000							0.3 B	
Heptachlorepoxide	1024573		0.6	2.47	5	2.74	16	50	30 I	0.0002	4,000	0.6 c				2.74 c			
Hexachlorobenzene	118741				20			240	100 I	1.4 LB	2,000 LB							6 B	
Hexachlorobutadiene (HCBD)	87683																	1.3 E	
Hexachlorocyclohexane (BHC)	608731				3			120	100 I										
Hexachloroethane	67721																	73 BL	1,000
Hydroquinone (p-dihydroxybenzene)	123319									50	43,000 LB								
Indeno[1,2,3-cd]pyrene	193395	17.32			200			3,200	330 M	31 LB	1,900 LB	68			488			600 M	
Linar alkylbenzene sulfonates (LAS)	na												<12,800 €			>62,000 €			
Malathion	121755																		0.67
Maneb	12427382									2	22,000 L								
Methanol	67561										30,000 S								
Methoxychlor	72435																		19
Methyl ethyl ketone (MEK; 2-Butanone)	78933										35,000 S								
Methyl naphthalene, 2-	91576											21	20.2	70	128	201	670	64 E	
Methylene chloride (Dichloromethane, DCM)	75092									18 LB	3,900 L								
Methylnaphthalene, 1-	90120											21			94				
Methylphenanthrene, 1-	832699											18			112				
Methyl-tert-butyl ether (MTBE)	1634044										100,000 S								
Mirex	2385855				7			1,300	800 I										

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Monochloroaniline (3 isomers)	na									5	50,000								
Monochlorobenzenes	108907									< 30	15,000 LB								820
Monochloronaphthalenes	na									120 LB	10,000								
Monochlorophenols (sum)	na									< 10	5,400 L								
Naphthalene	91203	14.65	34.6 c	176		391 c	561		600 I	120 LB	17,000 LB	30	34.6	160	217	391	2,100	230 E	480
Nitrobenzene	98953																	21 N	
Nitrosodiphenylamine, N-	86306																	28 I	
Nonylphenol	25154523		1,400 c										1,000 c						
PAHs, Low MW	na	76.42							5,300 M	< 1,000	< 40,000		312	552		1,442	3,160	1,200 E	
PAHs, High MW	na	193							6,500 M	< 1,000	< 40,000		655	1,700		6,676	9,600	7,900 E	
PAHs, Total	na	264.1		1,610	4,000		22,800*	100,000*	12,000 M	1,000	40,000		1,684	4,022		16,770	44,792		
PCB 105	32598144									1.5 LB	< 1,000								
PCB 126	57465288									0.0025 LB	920 LB								
PCB 77	32598131									0.42 LB	< 1,00								
PCB-Aroclor 1254	na		60 c		60	340 c		340					63.3 c			709 c			
PCBs (sum)	1336363	31.62	34.1	59.8	70	277	676	5,300	26 M	0.3 LB	1,000	35	21.6	22.7	368	189	180	130 M	
Pentachloroaniline	527208										10,000 S								
Pentachlorobenzene	608935									15 LB	16,000 LB								690
Pentachlorophenol [PCP: at ph 7.8‡]	87865									< 10	8,000 LB							17 B	
Perylene	198550											74			453				
Phenanthrene	85018	18.73	41.9	204	560	515	1,170	9,500	800 I	3,300 LB	31,00 LB	68	86.7	240	455	544	1500	660 E	
Phenol	108952								48 † H	50	14,000 LB							130 E	
Phthalates (sum)	na									100	60,000								
Propanol, 2- (Isopropanol)	67630										220,000 S								
Pyrene	129000	44.27	53	195	490	875	1,520	8,500	1,000 i			125	153	665	932	1,398	2,600	2,400 E	
Pyridine	110861									100	500								
Resorcinol (m-dihydroxybenzene)	108463									34 LB	4,600 LB								
Styrene (Vinyl benzene)	100425									200 LB	86,000 LB								
Tetrachloroaniline, 2,3,5,6-	3481207										< 30,000 S								
Tetrachlorobenzene, 1,2,3,4-	634662									160 L	16,000 L								
Tetrachlorobenzene, 1,2,3,5-	634902									6.5 L	650 L								

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5: S – Serious Contamination; L – Environmental Risk Limit for soil; LB – Environmental Risk Limit for soil or bedded sediment
8: Entry is lowest value among AET tests: I - Infaunal community impact ; A - Amphipod ; B - Bivalve ; M- Microtox bioassay ; O - Oyster larvae ; E - Echinoderm larvae ; L - $Larval_{max}$; or , N - *Neanthes* bioassay.

Screening Quick Reference Tables for Organics – Sediment

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ANALYTE All concentrations in parts per billion dry weight unless specified otherwise	CAS Number	FRESHWATER SEDIMENT								DUTCH Sediment[5]		MARINE SEDIMENT							Eco Tox EqP[9] @1%TOC
		ARCS *Hyalella* TEL[1]	TEL[2]	TEC[2]	LEL[3]	PEL[2]	PEC[2]	SEL[3]	UET[4] @1%TOC	Target	Intervention	T_{20}[6]	TEL[7]	ERL[7]	T_{50}[6]	PEL[7]	ERM[7]	AET[8]	
Tetrachlorobenzene, 1,2,4,5-	95943									10 L	1,000 L								
Tetrachlorobenzenes	na									22 L	2,200 L								
Tetrachloroethylene (Tetrachloroethene; PCE; PER)	127184									2	4,000							57 I	530
Tetrachlorophenol, 2,3,4,5-	4901513									< 10	< 10,000								
Tetrachlorophenol, 2,3,4,6-	58902									< 10	< 10,000								
Tetrachlorophenols (sum)	25167833									< 10	< 10,000								
Tetrahydrofuran	109999									100	2,000								
Tetrahydrothiophene	110010									100	8,800 LB								
Toluene	108883									10	47,000 L								670
Toxaphene	8001352		0.1 c										0.1 c						28
Tributyltinoxide	56359									< 10	< 2,500								
Trichloroaniline (multiple isomers)	na										10,000 S								
Trichloroaniline, 2,4,5-	636306										< 10,000 S								
Trichlorobenzene, 1,2,3-	87616									< 11 L	5,000 L								
Trichlorobenzene, 1,2,4-	120821									11 LB	5,100 LB							> 4.8 E	9,200
Trichlorobenzenes	12002481									38 L	11,000 L								
Trichloroethane, 1,1,1-	71556									70	15,000								170
Trichloroethane, 1,1,2-	79005									400	10,000								
Trichloroethene (TCE)	na									7.8 L	2,500 L							41 N	1,600
Trichlorophenol, 2,3,5-	na									< 10	4,500 L								
Trichlorophenol, 2,4,5-	95954									< 10	22,000 LB							3 I	
Trichlorophenol, 2,4,6-	88062									< 10	110,000 LB							6 I	
Triclorophenols, (sum)	na									< 10	22,000 L								
Vinyl chloride	75014									10	100								
Xylene	1330207									130 LB	17,000 LB							4 BL	
Xylene, m-	108383									110 LB	18,000 LB								25
Xylene, o-	95476									89 LB	9,300LB								

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Sources

1 – Assessment & Remediation of Contaminated Sediments (ARCS) Program, Sept 1996. EPA 905-R96-008.

2 – MacDonald et al, 2000. Arch ET&C 39(1):20-
C – Canadian Sediment Quality Guidelines for the Protection of Aquatic Life, Summary Tables Update 2002, www.ccme.ca/publications/cegg_rcqe.html

3 – Persuad 1993. Guidelines for the Protection and Management of Aquatic Sediment Quality in Ontario. Thompson et al., 2005. Enval Monitor & Assessment 110:71-

4 – Buchman 1999. NOAA HAZMAT Report 99-1.

5 – Entry is lower of current VROM Environmental Quality standards or the updated RIVM Environmental Risk Limits. Risk limits are typically divided by 100 to derive the Target value; this computation has not been done here.
Dutch Target/Intervention: E.M.J. Verbruggen, R. Posthumus and A.P. van Wezel, 2001. Ecotoxicological Serious Risk Concentrations for soil, sediment, and (ground)water: updated proposal for first series of compounds. Nat. Inst. Public Health and the Env., and subsequent updates as published elsewhere.
Min. Housing, Spatial Plan. And the Env., 2000. Annexes Circular on target values and intervention values for soil remediations.

6 – Field et al., 2002. ET&C 21:1993-

7 – MacDonald et al., 1996. Ecotox. 5(4):253-
C – Canadian Sediment Quality Guidelines for the Protection of Aquatic Life, Summary Tables Update 2002, www.ccme.ca/publications/cegg_rcqe.html
€ - DelValls et al., 1999. Ecotox. & Env Rest 2(1):34-

8 – Wash Dept Ecol Publ 95-308, 1995 and 97-323a, 1997
Gries & Waldrow Puget Sound Dredged Disposal Analysis Rept 1996. http://www.ecy.wa.gov/biblio/wac173204.html
plus unpublished information.

9 – EcoUpdate EcoTox Thresholds, http://www.epa.gov/oswer/riskassessment/

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		Dutch [1]		MCL [2]	Fresh		Marine		Invertebrates [4]	Mammals [5]	Plants [6]	Other [7]
		Target	Intervention		Acute [3]	Chronic [3]	Acute [3]	Chronic [3]				
2,3,7,8-TCDD (dioxin TEQs)	1746016		0.001 ng/L S	0.00003	<0.01 *	<0.00001 *				0.000199		
2,4,5-Trichlorphenoxyacetic acid (2,4,5-T)	93765			9 W		36 NZ				596		
2,4-Dichlorophenoxyacetic acid (2,4-D)	94757			70		4.0 CA				27.2		
Acenaphthene	83329				1,700 *	5.8 CA	970 *	40 Eco		682,000	20,000	
Acenaphthylene	208968					4,840 V	300 *C			682,000		
Acetone	67641				28,000 T	1,500 T				2,500		
Acetonitrile	75058					160 NZ				1,370		
Acetophenone	98862									300,000		
Acetylaminofluorene, 2-	53963									596		
Acridine	260946					4.4 CA						
Acrolein	107028				68 *	0.01 NZ	55 *	0.1 NZ		5,270		
Acrylonitrile	107131	0.08	5 S		7,550 *	2,600 *				23.9		1,000,000 M 0.007 D
Alcohol ethoxylated surfactants (AE)	na					140 NZ						
Alcohol ethoxyolated sulfate (AES)	na					650 NZ						
Aldicarb	116063			9 C		1 CA		0.15 CA				
Aldrin	309002	0.009 ng/L	< 0.1		1.5 (½)	0.017 V	0.65 (½)				3.32 V	0.06 D
Aldrin+Dieldrin+Endrin	na		0.1	<0.03 W								5 D
Allyl chloride	107051									13.4		
Aminobiphenyl, 4-	92671									3.05		
Aminomethylphosphonic acid (AMPA)	1066519	0.797 L										
Amitrole	61825					22 NZ						
Aniline	62533					2.2 CA				56.8		
Anthracene	120127	0.0007	5		13 T	0.73 T 0.012 CA	300 *C			1.48E6		
Aramite	140578									16,600		
Atrazine	1912249	29 ng/L	76 L	3		1.8 CA		10 BC				0.2 D
Benz[a]anthracene	56553	0.0001	0.5		0.49 T	0.027 T	300 *C			5,210		
Benzene	71432	0.2	30	5	2,300 T	46 Eco	5,100 *	110 CA		255		10 D
Benzidine	92875				70 T	3.9 T						
Benzo(ghi)perylene	191242	0.0003	0.05			7.64 V	300 *C			119,000		
Benzo[a]pyrene	50328	0.0005	0.05	0.2	0.24 T	0.014 T Eco	300 *C			1,520		

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		Target	Intervention		Acute [3]	Chronic [3]	Acute [3]	Chronic [3]				
Benzo[b]fluoranthene	205992					9.07 V	300 *C			59,800		
Benzo[k]fluoranthene	207089	0.0004	0.05				300 *C			148,000		
Benzoic acid	65850				740 T	42 T						
Benzyl alcohol	100516				150 T	8.6 T				65,800		
BHC, alpha (α-HCH)	319846	33 ng/L	<1		39 T	2.2 T				99.4		3 D
BHC, beta (β-HCH)	319857	8 ng/L	<1		39 T	2.2 T 0.495 V					3.98 V	9 D
BHC, delta δ-HCH)	319868	< 0.05	<1		39 T	2.2 T				9,940		< 10 D
BHC, gamma- (γ-HCH; Lindane)	58899	9 ng/L	<1	0.2	0.95	0.08	0.08 (½)				5 V	0.05 D
BHC (sum)	na	0.05	1		< 0.95	< 0.08	< 0.08					10 D
Biphenyl	92524					14 T Eco					60,000	
Bis(2-chloroethoxy) methane	111911				11,000 *C		12,000 *C	6,400 *C		302		
Bis(2-chloroethyl) ether	111444					1,900 V				23,700		
Bis(2-ethylhexyl)phthalate (DEHP)	117817	1.9 ng/L L	< 5	6	400 p	32 Eco 16 CA 0.3 V	400 p	360 p		925		< 100 D
Bis-2-chloro-1-methylethylether	108601									19,900		
Bromocil	314409					5 CA						
Bromodichloromethane (Dichlorobromomethane)	75274			60 W	11,000 *C		12,000 *C	6,400 *C		540		
Bromoform (Tribromomethane)	75252		630		2,300 T	320 T Eco				15,900		
Bromoxynil	1689845			5 C		5 CA						
Butanol	35296721		5,600 S									
Butyl acetate, 1- or 2-	na		6,300 S									
Butyl benzyl phthalate	85687	2.9 ng/L L	< 5		940 *C	19 T Eco	2,944 *C	3.4 *C		239		< 100 D
Captan	133062					1.3 CA						
Carbaryl	63252	2 ng/L	41 L	90 C		0.2 CA		0.32 CA				
Carbofuran	1563662	9 ng/L	6.5 L	40		1.8 CA		0.06 NZ				
Carbon disulfide	75150				17 T	0.92 T				94.1		
Carbon tetrachloride (Tetrachloromethane;Tetra)	56235	0.01	10	5	180 T	9.8 T	50,000 *	5,000 x 0.1		2,980		1,000,000 M 400 D
Catechol (o-Dihydroxybenzene)	120809	0.2	630 L									50 D

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		Target	Intervention		Acute [3]	Chronic [3]	Acute [3]	Chronic [3]				
Chlordane	57749	0.02 ng/L	0.2	2	1.2 (½)	0.00215 (½)	0.045 (½)	0.002 (½)			224 V	0.03 D
Chlordane (alpha)	5103719	< 0.02 ng/L	< 0.2								< 224 V	< 0.03 D
Chlordane (gamma)	5103742	< 0.02 ng/L	< 0.2								< 224 V	< 0.03 D
Chlorfenvinphos	470906					0.1 EU		0.1 EU				
Chloroacetamide	79072								2,000			5 D
Chloroaniline	27134265		30									< 5 D
Chloroaniline, 3-	108429		< 30						30,000		20,000	< 5 D
Chloroaniline, 4-	106478		< 30		250 *C	50 *C	160 *C	129 *C		1,100		< 30 D
Chlorobenzenes (sum)	na	< 7	< 180	100		130 Eco <47 V			< 40,000	< 13,100		30 D
Chlorobenzilate	510156									5,050		20 D
Chloroform (trichloromethane)	67663	6	400	200 W	490 T	1.8 CA				1,190		
Chloro, 4- 2-methyl phenol	1570645		< 350 S									
Chloro, 4- 3-methyl phenol	59507		< 350 S							7,950		
Chloro, 4- methyl phenols	na		350 S							< 7,950		
Chloro, 4- 2-methylphenoxy acetic acid (MCPA)	94746	0.02	50	2 W		2.6 CA		4.2 CA				0.05 D
Chloronaphthalene, 1-	90131	3.7 ng/L L	< 6									
Chloronaphthalene, 2-	91587	0.016 L	< 6		1,600 * C	0.396 V	7.5 * C			12.2		
Chlorophenol, 2-	95578	< 0.3	< 100		4,380 *	490 NZ 24 V				243		< 10 D
Chlorophenol, 3-	108430	< 0.3	< 100						10,000		7,000	< 10 D
Chlorophenol, 4-	106489	< 0.3	< 100			220 NZ						< 10 D
Chlorophenols (sum)	na	0.3	100			< 24 V			< 10,000	< 243	< 7,000	< 10 D
Chloroprene	126998									2.9		
Chlorothalonil	1897456			200 BC		0.18 CA		0.36 CA				
Chlorpyrifos	2921882			30 W	0.083	0.041	0.011	0.0056				
Chrysene	218019	0.003	0.2				300 *C			4,730		
Cresol [m-] (3-Methyl phenol)	108394	< 0.2	< 200							3,490		< 50 D
Cresol [o-] (2-Methyl phenol)	95487	< 0.2	<200		230 T	13 T				40,400		< 50 D
Cresol [p-] (4-Methyl phenol)	106445	< 0.2	< 200							163,000		< 50 D
Cresols, sum	1319773	0.2	200		< 230 T	< 13 T				< 3,490		50 D
Cyclohexanone	108941	0.5	15,000									100 D

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		Target	Intervention		Acute [3]	Chronic [3]	Acute [3]	Chronic [3]				
DDD, 4,4- (p,p-DDD, TDE)	72548	<0.004 ng/L	< 0.01	< 1 W	0.19 T	0.011 T	3.6 *	0.36 x 0.1		758		< 10 D
DDE, 4,4- (p,p-DDE)	72559	<0.004 ng/L	< 0.01	< 1 W	1,050 *	105 x 0.1	14 *	1.4 x 0.1		596		< 10 D
DDT, 4,4- (p,p-DDT)	50293	<0.004 ng/L	< 0.01	< 1 W	0.55 (½)	0.0005 (½)	0.065 (½)	0.0005 (½)		3.5		< 10 D
DDT+DDE+DDD (sum)	na	0.004 ng/L	0.01	1 W	<0.55 (½)	<0.0005 (½)	<0.065 (½)	<0.0005 (½)		21 EPA		93 A 10 D
Decane	124185				880 T	49 T						
Deltamethrin	52918635					0.0004 CA						
Demeton	8065483					0.1		0.1				
Diallate	2303164									452		
Diazinon	333415			20 C	0.17	0.17	0.82	0.82				
Dibenz[ah]anthracene	53703						300 *C			18,400		
Dibenzofuran	132649				66 T	3.7 T						
Dibromo, 1,2- 3-chloropropane (DBCP)	96128			0.2						35.2		
Dibromochloromethane (Chlorodibromomethane)	124481			100 W	11,000 *C		12,000 *C	6,400 *C		2,050		
Dibromoethane, 1,2-	106934			0.4 W						1,230		
Dicambia	1918009			120 C		10 CA						
Dichloro, 1,4- 2-butene (cis)	1476115											1,000,000 M
Dichloro, 1,4- 2-butene (trans)	110576											1,000,000 M
Dichloroaniline, 2,4-	554007		< 100 S			7 NZ			100,000			< 5 D
Dichloroaniline, 3,4-	95761		< 100 S			3 NZ		150 NZ	20,000			< 5 D
Dichlorobenzene, 1,2-	95501	< 3	< 50	600	260 T	0.7 CA	< 1,970 *S	42 CA		2,960		< 30 D
Dichlorobenzene, 1,3-	541731	< 3	< 50		630 T	71 T Eco 38 V	< 1,970 *S			37,700		< 30 D
Dichlorobenzene, 1,4-	106467	< 3	< 50	75	180 T	15 T Eco 60 NZ 9.4 V	< 1,970 *S	129 *C	20,000	546		< 30 D
Dichlorobenzenes	25321226	3	50	< 75	< 180 T	< 0.7 CA	1,970 *S		< 20,000	< 548		< 30 D
Dichlorobenzidine, 3,3-	91941					4.5 V				646		
Dichlorodifluoromethane	75718									39,500		
Dichloroethane, 1,1-	75343	7	900		830 T	47 T Eco				20,100		20 D
Dichloroethane, 1,2-	107062	7	400	5	8,800 T	100 CA	113,000 *	11,300 x 0.1		21,200		20 D

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		Target	Intervention		Acute [3]	Chronic [3]	Acute [3]	Chronic [3]				
Dichloroethene, 1,1- (vinylidene chloride)	75354	0.01	10	7	450 T	25 T	224,000 *S			8,280		100 D
Dichloroethene, 1,2- (cis or trans)	540590	0.01	20	70 cis	1,100 T	590 T	224,000 *S					200 D
Dichloroethene, 1,2- (trans)	156605			100	11,600 *S	1,160 x 0.1	224,000 *S			784		
Dichlorophenol, 2,4-	120832	< 0.2	< 30	900 C	2,020 *	160 NZ 11 V				87,500		< 10 D
Dichlorophenol, 2,6-	87650	< 0.2	< 30			< 0.2 CA				1,170		< 10 D
Dichlorophenol, 3,4-	95772	< 0.2	< 30			< 0.2 CA			20,000		20,000	< 10 D
Dichlorophenol, 3,5-	591355	< 0.2	< 30			< 0.2 CA						< 10 D
Dichlorophenols (sum)	na	0.2	30	< 900 C	<2,020 *	0.2 CA			< 20,000	< 1,170	< 20,000	< 10 D
Dichloropropane, 1,2- (propylene dichloride)	78875	< 0.08	< 80	5	23,000 *S	5,700 *S	10,300 *S	3,040 *S	700,000	32,700		< 2 D
Dichloropropene, 1,3-	542756			20 W	0.99 T	0.055 T	790 *S					
Dichloropropene, 1,3- (cis)	10061015			< 20 W	< 0.99 T	< 0.055 T				398		
Dichloropropene, 1,3- (trans)	10061026			< 20 W	< 0.99 T	< 0.055 T				398		
Diclofop-methyl	51338273			9 C		6.1 CA						
Dicofol	115322					0.5 NZ		0.1 NZ				
Didecyl dimethyl ammonium chloride (DDAC)	7173515					1.5 CA						
Dieldrin ‡	60571	0.1 ng/L	< 0.1		0.24	0.056	0.355 (½)	0.00095 (½)		2.38		22 A
Diethyl phthalate	84662	< 0.5	< 5		1,800 T	210 T 110 V	2,944 *C	3.4 *C		24,800	100,000	< 100 D
Diethylene-glycol	111466		13,000 S									
Dihydroxybenzenes, sum	na	0.24 L										
Di-iso-butyl phthalate	84695	< 0.5	< 5									< 100 D
Dimethoate	60515			6 W		6.2 CA 0.15 NZ				218		
Dimethyl aminoazobenzene [p-]	60117									40		
Dimethyl benz(a)anthracene, 7,12-	57976									16,300		
Dimethyl benzidine, 3,3-	119937									104		
Dimethyl naphthalene, 2,6-	581420											
Dimethyl phenethylamine [alpha,alpha]	122098									300		
Dimethyl phenol, 2,4-	105679				2,120 *	100 V					10 V	
Dimethyl phthalate	131113	< 0.5	< 5		940 *C	3 *C	2,944 *C	3.4 *C	200,000	734,000		< 100 D

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		Target	Intervention		Acute [3]	Chronic [3]	Acute [3]	Chronic [3]				
Di-n-butyl phthalate	84742	< 0.5	< 5		190 T	19 CA 9.7 V	2,944 *C	3.4 *C		150	200,000	< 100 D
Dinitrobenzene, 1,3-	99650									655		
Dinitrophenol, 2,4-	51285				230 *C	45 NZ 19 V	4,850 *C			60.9		
Dinitrotoluene, 2,4-	121142				330 *	65 NZ 44 V	590 * S	370 *S		1,280		
Dinitrotoluene, 2,6-	606202									32.8		
Di-n-octyl phthalate	117840	< 0.5	< 5		940 *C	3 *C	2,944 *C	3.4 *C		709,000		< 100 D
Dinoseb	88857			7		0.05 CA				21.8		
Dioxane, 1,4-	123911									2,050		
Dioxins (sum of PCDDs)	na		0.001 ng/L S							0.000199		
Diphenlyhydrazine 1,2-	122667				270 *	27 x 0.1						
Diphenylamine	122394									1,010		
Diquat	85007			20		1.4 NZ						
Disulfoton	298044									19.9		
Diuron	330541			150 C		0.1EU		0.1EU				
Dodecylbenzene	25155300		0.02 S									
Endosulfan (α or β: I or II)	115297	0.2 ng/L	5		0.11 (½)	0.028 (½)	0.017 (½)	0.00435 (½)		119		0.01 D
Endosulfan sulfate	1031078					2.22 V				35.8		
Endrin	72208	0.04 ng/L	< 0.1	2	0.086	0.036	0.0185 (½)	0.00115 (½)		10.1		0.04 D
Endrin aldehyde	7421934					0.15 V				10.5		
Esfenvalerate	66230044					0.001 NZ						
Ethanol	64175					1,400 NZ						
Ethyl acetate	141786		15,000 S									
Ethyl benzene	100414	4	150	700	130 T	7.3 T 14 V	430 *	25 CA		5,160		30 D
Ethyl methacrylate	97632									30,000		
Ethylene glycol	107211		5,500 S			192,000 CA						
Famphur	52857									49.7		
Fenitrothion	122145					0.2 NZ						
Fluoranthene	206440	0.003	1		3,980 *	0.04 CA	40 *	11 Eco		122,000		
Fluorene	86737				70 T	3.9 T Eco	300 *C		30,000	122,000		

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Formaldehyde	50000		50 S	900 W								
Furan	110009										600,000	
Glyphosate	1071836			280 C		65 CA						
Guthion (azinphos-methyl)	865000	0.1 ng/L	2 S	20 C		0.01 0.02 NZ		0.01				0.005 D
Heptachlor	76448	0.005 ng/L	0.3	0.4	0.26 (½)	0.0019 (½)	0.0265 (½)	0.0018 (½)		5.98		0.7 D
Heptachlor epoxide	1024573	0.005 ng/L	3	0.2	0.26 (½)	0.0019 (½)	0.0265 (½)	0.0018 (½)		152		0.0002 D
Hexachlorobenzene	118741	2.1E-7 L	0.5	1	6 p	3.68 p 0.0003 V	160 *C	129 *C		199		1,000,000 M
Hexachlorobutadiene (HCBD)	87683			0.6 W	90 *	1.3 CA 0.053 V	32 *	3.2 x 0.1		39.8		
Hexachlorocyclohexane (BHC)	608731				100 *	10 x 0.1	0.34 *	0.034 x 0.1				
Hexachlorocyclopentadiene	77474			50	7 *	5.2 *	7 *	0.7 x 0.1		755	10,000	
Hexachloroethane	67721				210 T	12 T Eco 8 V	940 *	94 x 0.1		596		
Hexachlorophene	70304									199		
Hexane	110543				10 T	0.58 T						
Hexanone, 2- (methyl butyl ketone)	591786				1,800 T	99 T				12,600		
Hydroquinone (p-dihydroxybenzene)	123319	0.2	800									50 D
Indeno[1,2,3-cd]pyrene	193395	0.0004	0.05			4.31 V	300 *C			109,000		
Iodo, 3- 2-propynl butyl carbamate (IPBC)	55406536					1.9 CA						
Isodrin	465736										3.32 V	
Isophorone	78591				117,000 *	1,170 x 0.1 920 V	12,900 *	1,290 x 0.1		139,000		
Isoproturon	34123596			9 W		0.1 EU		0.1 EU				
Isosafrole	120581									9,940		
Kepone	143500									32.7		
Linar alkylbenzene sulfonates (LAS)	na					280 NZ						
Linuron	335502					7.0 CA						
Malathion	121755			190 C		0.1		0.1				
Maneb	12427382	0.05 ng/L	0.1									2 D
Methacrylonitrile	126987									57		
Methanol	67561		24,000 S									

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Methanol	67561		24,000 S									
Methapyrilene	91805									2,780		
Methomyl	16752775					3.5 NZ						
Methoxychlor	72435			40		0.03		0.03		19.9		
Methyl bromide	74839					16 V				235		
Methyl chloride	74873									10,400		
Methyl cholanthrene, 3-	56495									77.9		
Methyl, 2- 4,6-dinitrophenol	534521									144		
Methyl ethyl ketone (MEK; 2-Butanone)	78933		6,000 S		240,000 T	14,000 T				89,600		
Methyl iodide	74884									1,230		
Methyl methacrylate	80626									984,000		
Methyl methanesulfanate	66273									315		
Methyl naphthalene, 1-	90120				37 T	2.1 T						
Methyl naphthalene, 2-	91576					330 V	300 *C			3,240		
Methyl parathion	298000									0.292		
Methyl, 4- 2-pentanone	108101				2,200 T	170 T				443,000		
Methyl-tert-butyl ether (MTBE)	1634044		9,200 S			10,000 CA		5,000 CA				
Methylene bromide (Dibromomethane)	74953				11,000 *C		12,000 *C	6,400 *C		65,000		
Methylene chloride (Dichloromethane, DCM)	75092	0.01	1,000	5	26,000 T	2,200 T 98.1 CA	12,000 *C	6,400 *C		4,050		400 D
Metolachlor	51218452			10 W		7.8 CA						
Metribuzin	21087649			80 C		1 CA						
Mineral oil (Operationally defined)	8012951	50	600									50,000 D
Mirex	2385855					0.001		0.001				
Molinate	2212671			6 W		3.4 NZ						
Monochloroaniline (3 isomers)	na		30									5 D
Monochlorobenzenes	108907	7	180	100	1,100 T	1.3 CA	160 *C	25 CA	40,000	13,100		< 30 D
Monochloronaphthalenes		7.7 ng/L L	6									120 L
Monochlorophenols (sum)	na	0.3	100			7 CA						< 10 D
Naphthalene	91203	0.01	70		190 T	1.1 CA	2,350 *	1.4 CA		99.4		
Naphthoquinone, 1,4-	130154									1,670		

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Naphthylamine, 1-	134327									9,340		
Naphthylamine, 2-	91598									3,030		
Nitroaniline [m-]	99092									3,160		
Nitroaniline [p-]	100016									21,900		
Nitroaniline, 2-	88744									74,100		
Nitrobenzene	98953				27,000 *	550 NZ 220 V	6,680 *	668 x 0.1	40,000	1,310		1,000,000 M
Nitro-o-toluidine, 5-	99558									8,730		
Nitrophenol, 2-	88755									1,600		
Nitrophenol, 4-	100027				1,200 T	300 T 60 V	4,850 *C		7,000	5,120		
Nitroquinoline, 4- 1-oxide	56575									122		
Nitrosodiethylamine, N-	55185					768 V				69.3		
Nitrosodimethylamine, N-	62759									0.0321		
Nitroso-di-n-butylamine, N-	924163									267		
Nitroso-di-n-propylamine, N-	621647									544		
Nitrosodiphenylamine, N-	86306				3,800 T	210 T	3,300,000*C		20,000	545		
Nitrosomethylethylamine, N-	10595956									1.66		
Nitrosomorpholine, N-	59892									70.6		
Nitrosopiperidine, N-	100754									6.65		
Nitrosopyrrolidine, N-	930552									12.6		
Nonylphenol	25154523				28	6.6	7	1.7				
O,O-diethyl O-2-pyrazinylphosphorothioate	297972									799,000		
Octanone, 2-	111137				150 T	8.3 T						
PAHs, High MW	na						300 *C		29,000 EPA	100,000 EPA		< 1,000 D
PAHs, Low MW	na						300 *C		18,000 EPA	1,100 EPA		< 1,000 D
PAHs, Total	na						300 *C					1,000 D
Paraquat	4685147					0.5 NZ						
Parathion	56382			50 C	0.065	0.013			0.34 V			
PCBs (sum)	1336363	0.01	0.01	0.5	0.6 T 0.03 NZ	0.014	0.033 T	0.03		0.332	40,000	< 20 D
Pentachloroaniline	527208		1 S						100,000			

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Pentachlorobenzene	608935	0.003	1		8.4 T	0.47 T 0.019 V	160 *C	129 *C	20,000	497		< 30 D
Pentachloroethane	76017				7,240 *	1,100 *	390 *	281 *		10,700		
Pentachloronitrobenzene	82688									7,090		
Pentachlorophenol [PCP: at pH 7.8]	87865	0.04	3	1.0	19 ph	15 Ph	13	7.9	6,000	119	3,000	2,100 A
Pentanol, 1-	71410				2,000 T	110 T						
Permethrin	52645531					0.004 CA		0.001 CA				
Phenacetin	62442									11,700		
Phenanthrene	85018	0.003	5		30 p	6.3 p Eco 3.6 V	7.7 p	4.6 p		45,700		
Phenol	108952	0.2	2,000		10,200 *	320 NZ 180 V	5,800 *	400 NZ	30,000	120,000	70,000	1,000,000 M 500 D
Phenylenediamine [p-]	106503									6,160		
Phorate	298022			2 C						0.496		
Phthalates (sum)	na	0.5	5									100 D
Picloram	1918021			500		29 CA						
Picoline, 2-	109068									9,900		
Polychlorinated dibenzofurans	51207319									0.0386		
Pronamide	23950585										13.6 v	
Propanol, 2- (Isopropanol)	67630		31,000 S		130 T	7.5 T						
Propionitrile	107120									49.8		
Propylene glycol	57556					500,000 CA						
Pyrene	129000					0.025 CA	300 *C			78,500		
Pyridine	110861	0.5	30							1,030		100 D
Quinoline	91225					3.4 CA						
Resorcinol (m-dihydroxybenzene)	108463	0.2	600									50 D
Safrole	94597									404		
Silvex (2,4,5-TP)	93721			50							109 v	
Simazine	122349			4		10 CA 3.2 NZ		1 EU				
Styrene (Vinyl benzene)	100425	6	300	100		72 CA 32 V				4,690	300,000	300 D

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Tebuthiuron	34014181			490 BC		1.6 CA 2.2 NZ						
Temephos	3383968					0.05 NZ		0.05 NZ				
Tetrachloroaniline, 2,3,5,6-	3481207		< 10 S						20,000		20,000	
Tetrachlorobenzene, 1,2,3,4-	634662	< 0.01	< 2.5		250 *C	1.8 CA	160 *C	129 *C	10,000			< 30 D
Tetrachlorobenzene, 1,2,3,5-	634902	< 0.01	< 2.5		250 *C		160 *C	129 *C				< 30 D
Tetrachlorobenzene, 1,2,4,5-	95943	< 0.01	< 2.5		250 *C	50 *C 3 V	160 *C	129 *C		2,020		< 30 D
Tetrachlorobenzenes	na	0.01	2.5		250 *C	< 3 V	160 *C	129 *C	< 10,000	< 2,020		< 30 D
Tetrachloroethane, 1,1,1,2-	630206									225,000		
Tetrachloroethane, 1,1,2,2-	79345				2,100 T	111 CA	9,020 *	902 x 0.1		127		
Tetrachloroethylene (Tetrachloroethene; PCE; PER)	127184	0.01	40	5	830 T	98 T 45 V	10,200 *	450 *		9,920		2 D
Tetrachlorophenol, 2,3,4,5-	4901513	< 0.01	< 10			< 1 CA			20,000			< 10 D
Tetrachlorophenol, 2,3,4,6-	58902	< 0.01	< 10	100 C		20 NZ	440 *	44 x 0.1		199		< 10 D
Tetrachlorophenols (sum)	25167833	0.01	10			1 CA			< 20,000	< 199		< 10 D
Tetraethyldithiopyrophosphate	3689245									596		
Tetrahydrofuran	109999	0.5	300									100 D
Tetrahydrothiophene	110010	0.5	5,000									100 D
Thiobencarb	28249776					2.8 NZ						
Thiram	137268					0.2 NZ		0.01 NZ				
Toluene	108883	7	1,000	1,000	120 T	9.8 T 2 CA	6,300 *	215 CA		5,450	200,000	10 D
Toluidine [o-]	95534									2,970		
Toxaphene	8001352			3	0.73	0.0002	0.21	0.0002		119		
Triallate	2303175					0.24 CA						
Tributyltinoxide	56359	<0.05E-16 ng/L	< 0.7		0.46	0.072	0.42	0.0074				< 1 D
Trichloroaniline (multiple isomers)	na		10 S									
Trichloroaniline, 2,4,5-	636306		< 10 S						20,000		20,000	
Trichlorobenzene, 1,2,3-	87616	< 0.10	< 10			8.0 CA			20,000			< 30 D
Trichlorobenzene, 1,2,4-	120821	< 0.10	< 10	70	700 T	24 CA	160 *C	5.4 CA	20,000	11,100		< 30 D
Trichlorobenzenes	12002481	0.01	10	< 70	< 700 T	< 8 CA	160 *C	<5.4 CA	< 20,000	< 11,100		< 30 D

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Trichloroethane, 1,1,1-	71556	0.01	300	200	200 T	11 T	31,200 *	3,120 x 0.1		29,800		70 D
Trichloroethane, 1,1,2-	79005	0.01	130	5	5,200 T	1,200 T 500 V		1,900 NZ		28,600		400 D
Trichloroethene (TCE)		24	500	5		21 CA	2,000 *	200 x 0.1		12,400		100 D
Trichloroethene, 1,1,1-	71556	< 24	< 500	< 5	< 440 T	< 21 CA						< 100 D
Trichloroethene, 1,1,2-	79016	< 24	< 500	< 5	< 440 T	< 21 CA						< 100 D
Trichlorofluoromethane	75694				11,000 *C		12,000 *C	6,400 *C		16,400		
Trichlorophenol, 2,3,5-		< 0.03	< 10			< 18 CA						< 10 D
Trichlorophenol, 2,4,5-	95954	< 0.03	< 10		100 p	63 p	240 p	11 p	9,000	14,100	4,000	< 10 D
Trichlorophenol, 2,4,6-	88062	< 0.03	< 10	5 C		20 NZ 4.9 V			10,000	9,940		< 10 D
Triclorophenols, (sum)	na	0.03	10			18 CA			< 9,000	<9,940	< 4,000	< 10 D
Trichloropropane, 1,2,3-	96184									3,360		
Triethylphosphorothioate [O,O,O-]	126681									818		
Trifluralin	1582098			20 W		0.2 CA		0.1EU				
Trinitrobenzene, 1,3,5-	99354									376		
Trinitrotoluene, 2,4,6-	118967					140 NZ						
Vinyl acetate	108054				280 T	16 T				12,700		
Vinyl chloride	75014	0.01	5	2		930 V				646		10 D
Xylene, m-	108383	< 0.2	< 70		32 T	1.8 T Eco						< 100
Xylene, o-	95476	< 0.2	< 70			350 NZ						< 100
Xylene, p-		< 0.2	< 70									< 100
Xylenes	1330207	0.2	70	10,000	230 T	13 T					10,000 v	100 D

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Sources

1 – Entry is lower of current VROM Environmental Quality standards or the updated RIVM Environmental Risk Limits. Risk limits are typically divided by 100 to derive the Target value; this computation has been done here.
Dutch Target/Intervention: E.M.J. Verbruggen, R. Posthumus and A.P. van Wezel, 2001. Ecotoxicological Serious Risk Concentrations for soil, sediment, and (ground)water: updated proposal for first series of compounds. Nat. Inst. Public Health and the Env., and subsequent updates as published elsewhere.
Min. Housing, Spatial Plan. And the Env., 2000. Annexes Circular on target values and intervention values for soil remediations.

2 – Primary entry is the US EPA MCL value, followed by the lower of appropriate WHO, Canadian, or British Columbia guidelines.
Maximum Contaminant Levels (MCLs): http://www.epa.gov/safewater/index.html
W – World Health Organization's (WHO) Drinking water guidelines: http://www.who.int/water_sanitation_health/dwq/en/
C – Canadian Environmental Quality Guidelines for Community Water, Summary Table Update 2002: http://www.ccme.ca
BC – British Columbia Water Quality Guidelines (either working or recommended): http://www.env.gov.bc.ca/wat/wq/

3 – Primary entry is the US Ambient Water Quality Criteria, followed by the lowest of Tier II SAVs or available standards or guidelines.
Lowest Observable Effect Levels (LOELs) previously published by EPA are also included since these essentially were the basis for many state standards.
EPA Ambient water Quality Criteria (AWQC): http://www.epa.gov/waterscience/criteria/aqlife.html
T – Tier II Secondary Acute Value: http://www.esd.ornl.gov/programs/ecorisk/tools.html
Eco – EPA EcoUpdate, Ecotox Thresholds, EPA 540/F-95/038
CA – Canadian water Quality Guidelines: http://www.ec.gc.ca/CEQG-RCQE/English/Cegg/Water/default.cfm
BC – British Columbia Water Quality Guidelines (either working or recommended): http://www.env.gov.bc.ca/wat/wq/
EU – European Union (EU) Environmental Quality Standards: COM(2006) 397 and 398 final.
V – US EPA Region V Ecological Screening Levels: http://www.epa.gov/reg5rcra/ca/edql.htm

4 – Toxicological Benchmarks for Effects on Earthworms: http://www.esd.ornl.gov/programs/ecorisk/tools.html
EPA – Eco-SSL for Invertebrates: http://www.epa.gov/ecotox/ecossl/
Region V Ecological Screening Level for Invertebrates: http://www.epa.gov/reg5rcra/ca/

5 – Entry is lower of either:
Region V Ecological Screening Level for shrew or vole: http://www.epa.gov/reg5rcra/ca/
EPA – Eco-SSL for Mammals: http://www.epa.gov/ecotox/ecossl/

6 – Toxicological Benchmarks for Effects on Terrestrial Plants: http://www.esd.ornl.gov/programs/ecorisk/tools.html
V – EPA Region V Ecological Screening Level for Plants: http://www.epa.gov/reg5rcra/ca/

7 – Entry is lower of either:
M – Toxicological Benchmarks for Effects on Microbes: http://www.esd.ornl.gov/programs/ecorisk/tools.html
A – Eco-SSL for Avian Receptors: http://www.epa.gov/ecotox/ecossl/
D – Entry is lower of current VROM Environmental Quality standards or the updated RIVM Environmental Risk Limits. See #1 above for sources.

Screening Quick Reference Table for PCB Composition

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Degree of Chlorination	A1221 Wt %	A1232 Wt %	A1016 Wt %	A1242 Wt %	A1248 Wt %	A1254 Wt %	A1260 Wt %	A1262 Wt %
Biphenyl	11.7 [a]	6.2 [a]						
∑1 Cl	65.5	31.3	Tr (#1, 3)	Tr (#1, 3)				
∑2 Cl	30.0	26.1	15.2	11.5	Tr (#7, 8)			
∑3 Cl	3.5	21.7	58.2	51.0	21.8	2.1		
∑4 Cl	Tr	15.0	26.5	29.0	60.2	14.3	Tr (#52, 70, 74)	Tr (#52, 70, 74)
∑5 Cl	Tr (#95)	5.8	Tr (#91, 95, 102)	8.5	17.1	53.2	8.2	3.5
∑6 Cl				Tr (#136, 138)	0.8	26.6	47.2	31.6
∑7 Cl					Tr	3.8	37.6	45.8
∑8 Cl						Tr (#202)	6.3	17.7
∑9 Cl							0.7	1.3
Total	99.1%	99.94%	99.95%	100%	99.93%	99.95%	100.01%	99.98%
Prominent congeners [b]	1 3 8 4 15 6	1 8 3 4 15 28	18 28 8 31 33 16	18 28 31 8 33 16	66 70 64 28 52 60	118 110 101 95 138 153	180 138 149 187 174 170	180 153187 149 174 203
Unique congener	#11 Tr					#137	#189 Tr	
Peak Range [c]	1-48	1-74	2-50	2-82	8-106	8-107	31.1-117	31.1-117
Ratio #118:203 [d]	Neither	No #203	Neither	No #203	73	370 - 1230	0.3 – 0.5	0.1
Ratio #31:118 [e]	No #118	4.3	No #118	8.5 - 9.2	2.1	0.01 – 0.04	0.1	No #31
Wt % of #153 [f]				0.1 - 0.14	Tr - 0.52	4.7-6.1	11.0 – 12.2	
Additional Information		~ 1:1 mix of 1221-1242	Distillation of 1242					

Notes

Commercial PCBs were manufactured by chlorination of biphenyl to produce complex mixtures (Aroclors in the USA and Great Britain, Clophens in Germany, or Kanechlors in Japan), each containing 60 to 90 different molecular species *(congeners)* and a specified weight percent of chlorine (for example, 54% in Aroclor 1254). There are 209 distinct congener structures possible, of which about 140 to 150 have been detected at significant levels in commercial PCBs.

Congener distributions in environmental samples roughly resemble those of the parent commercial mixtures, but are often modified due to evaporation, water extraction, microbial oxidation or dechlorination, photochemical dechlorination or differential biological uptake and metabolism. Compositional modification from original Aroclor patterns increases in biotic samples with trophic level. Still, it is often useful or necessary to attempt distinguishing the parent mixture released. The following information is presented to provide assistance with initial, preliminary evaluation of Aroclor. *Aroclor assignment should be conducted only by qualified chemists.*

Total PCBs can be characterized by two primary methods – the sum of congeners, or, the sum of estimates of individual Aroclor concentrations. In lower trophic level samples, these two methods provide approximately equal estimates of total PCBs. At higher trophic levels, analyses of samples tend to overestimate total PCBs by as much as 2-fold using the sum of Aroclor method, due to an overestimation of Aroclor 1254.

Tr - Individual congeners are at trace levels - 0.05 to 0.5% each - and are not included in totals.
- Refers to IUPAC congener number. IUPAC #s 107, 108, 109, 199, 200, 201 correspond to BZ#s 108, 109, 107, 201, 199, and 200, respectively.
a – Biphenyl figures are not reflected in congener weight percentages.
b – The six most prominent peaks listed by IUPAC congener number.
c – In the 118 peak numbering system, peak 1 is biphenyl.
d – This ratio is often used as an indicator for Aroclor 1260.
e – This ratio is often used as an indicator for Aroclor 1248.
f – Congener 153 is persistent in biota and abundantly present in higher chlorinated Aroclors and so provides a degree of modification estimate for biotic samples (increasing modification with decreasing PD values):

$$PD_{153} = \left[\frac{\#153_{theory} - \#153_{sample}}{\#153_{sample}}\right] * 100$$

Screening Quick Reference Table for Toxic Equivalency Factors

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Compound	2005 Mammals / human TEF	1998 Fish TEF	1998 Avian TEF
CHLORINATED DIBENZO-P-DIOXINS			
2,3,7,8-TCDD	1	1	1
1,2,3,7,8-PeCDD	1	1	1
1,2,3,4,7,8-HxCDD	0.1	0.5	0.05
1,2,3,6,7,8-HxCDD	0.1	0.01	0.01
1,2,3,7,8,9-HxCDD	0.1	0.01	0.1
1,2,3,4,6,7,8-HpCDD	0.01	0.001	<0.001
OCDD	0.0003	<0.0001	< 0.0001
CHLORINATED DIBENZOFURANS			
2,3,7,8-TCDF	0.1	0.05	1
1,2,3,7,8-PeCDF	0.03	0.05	0.1
2,3,4,7,8-PeCDF	0.3	0.5	1
1,2,3,4,7,8-HxCDF	0.1	0.1	0.1
1,2,3,6,7,8-HxCDF	0.1	0.1	0.1
1,2,3,7,8,9-HxCDF	0.1	0.1	0.1
2,3,4,6,7,8-HxCDF	0.1	0.1	0.1
1,2,3,4,6,7,8-HpCDF	0.01	0.01	0.01
1,2,3,4,7,8,9-HpCDF	0.01	0.01	0.01
OCDF	0.0003	<0.0001	0.0001
NON-ORTHO-SUBSTITUTED PCBS			
3,3#,4,4#-tetraCB (PCB 77)	0.0001	0.0001	0.05
3,4,4#,5-tetraCB (PCB 81)	0.0003	0.0005	0.1
3,3#,4,4#,5-pentaCB (PCB 126)	0.1	0.005	0.1
3,3#,4,4#,5,5#-hexaCB (PCB 169)	0.03	0.00005	0.001
MONO-ORTHO-SUBSTITUTED PCBs			
2,3,3#, 4,4#-pentaCB (PCB 105)	0.00003	<0.000005	0.0001
2,3,4,4#,5-pentaCB (PCB 114)	0.00003	<0.000005	0.0001
2,3#,4,4#,5-pentaCB (PCB 118)	0.00003	<0.000005	0.00001
2# ,3,4,4# ,5-pentaCB (PCB 123)	0.00003	<0.000005	0.00001
2,3,3#, 4,4#,5-hexaCB (PCB 156)	0.00003	<0.000005	0.0001
2,3,3#,4,4#,5#-hexaCB (PCB 157)	0.00003	<0.000005	0.0001
2,3#,4,4#,5,5#-hexaCB (PCB 167)	0.00003	<0.000005	0.00001
2,3,3#, 4,4#, 5,5#-heptaCB (PCB 189)	0.00003	<0.000005	0.00001

It has been well established that 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD), and other chlorinated dioxins, furans, and even PCBs with a similar planar chemical structures are capable of inducing similar toxicity, such as carcinogenicity. Since these compounds generally are observed in mixtures, it is desirable to be able to express the cumulative, overall toxicity of the mixture. However, since each of these congeners does not exhibit the same degree, or potency, of toxicity, some manipulations of raw concentrations are required to express total toxicity.

A number of systems have been developed to express the total, overall toxicity from mixtures of these chemicals. Most commonly, the potency of each congener is weighted relative to a standard, generally the most potent congener. For dioxins and furans, 2,3,7,8-TCDD is the common standard which is given a reference value of one. The weighting, or potency factor, is called a Toxic Equivalency Factor (TEF). When cumulative results are reported, the absolute concentration of each congener is multiplied by its corresponding TEF to derive a TCDD-equivalency. These values are then summed together to give a total Toxic Equivalency Quotient, or TEQ.

The TEQ scheme refers ***only*** to adverse effects (e.g., cancer) following interactions with certain cellular enzyme systems (the Ah receptors). Other toxic effects of dioxins and dioxin-like compounds are not quantified by this method. Because they involve potency to specific enzyme systems, TEF values vary for different animal species.

There are two main schemes:

The two most common systems for determining TEQs are:

1) **I-TEF and I-TEQ:** The older International Toxic Equivalent (I-TEQ) scheme by the North Atlantic Treaty Organization (NATO) initially set up in 1989 and later extended and updated.

2) **WHO-TEF and WHO-TEQ** (also referred to as TEF or TEQ): More recently, the World Health Organization (WHO) suggested modified Toxic Equivalency Factor (TEF) values for human risk assessment.

ITEQs are most common in North America, while Asia and Europe tend to use WHO-TEQs. On average, the result of TEQ-calculations is about 10% higher when I-TEFs are used compared to when WHO-TEFs are used.

Potency in fish reflects mainly rainbow trout: potency for birds is mainly derived from chickens.

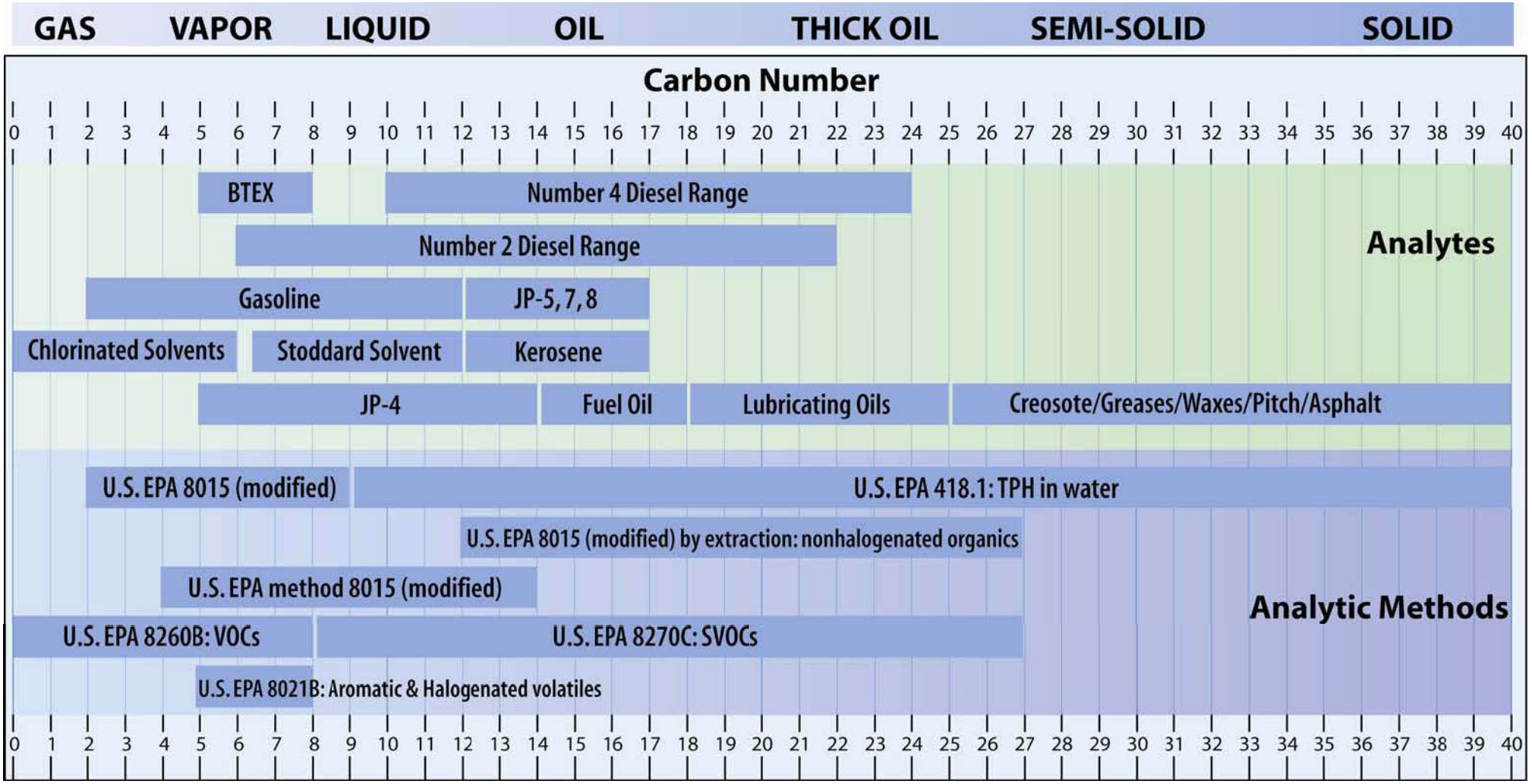
Sources

Van den Berg, M., and others. 1998. “Toxic Equivalency Factors (TEFs) for PCBs, PCDDs, and PCDFs for Humans and Wildlife.” *Environmental Health Perspectives*. Volume 106. Pages 775 - 792.

Van den Berg, M., and others. 2006. “The 2005 World Health Organization Re-evaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds.” *Toxicological Sciences* 93(2):223-241.

Screening Quick Reference Tables for Composition by Carbon Range

These tables were developed for screening purposes only: they do not represent official NOAA policy and do not constitute criteria or clean-up levels.
All attempts have been made to ensure accuracy; however, NOAA is not liable for errors. Values are subject to changes as new data become available.



Carbon ranges are approximate: actual carbon ranges for a specific product are dependent upon the distillation process of the exact source.

Analytic Methods generally refer to EPA SW-846 methods (www.epa.gov/SW-846/index.htm)

Screening Quick Reference Tables for Sample Collection and Storage

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MATERIAL	CONTAINER	PRESERVATION	MAXIMUM HOLDING TIME	SAMPLE SIZE
INORGANICS				
Chromium^{+6} (Cr^{+6})	P,G	Cool, 4ºC	24 hours	400 mL/200 g
Mercury (Hg)	P,G	HNO_3, to pH <2	28 days	400 mL/200 g
Metals, except Cr^{+6} and Hg	P,G	HNO_3, to pH <2	6 months	600 mL/200 g
Cyanide by method no. 9010	P,G	Cool 4ºC, pH >12 See method 9010	14 days	1,000 mL
Alpha, Beta, and Radium Radiation	P,G	HNO_3 to pH <2	6 months	1,000 mL
ORGANICS				
Benzidines	G, TLC	Cool, 4ºC	7 days until extraction, 40 days after extraction	1,000 mL
Chlorinated Hydrocarbons	G, TLC	Cool, 4ºC[3]	7 days until extraction, 40 days after extraction	1,000 mL
Dioxins and Furans	G, TLC	Cool, 4ºC[3]	30 days until extraction, 45 days after extraction	1,000 mL
Haloethers	G, TLC	Cool, 4ºC[3]	7 days until extraction, 40 days after extraction	1,000 mL
Nitrites	G, TLC	Cool, 4ºC[3]	14 days	
Nitrosamines	G, TLC	Cool, 4ºC[3]	7 days until extraction, 40 days after extraction	1,000 mL
Nitroaromatics and Cyclic Ketones	G, TLC	Cool, 4ºC[3]	7 days until extraction, 40 days after extraction	1,000 mL
OIL And GREASE	G	Cool, 4ºC[2]	28 days	1,000 mL
TOTAL Organic Carbon, By Method No. 9060	P,G	Cool, 4ºC[2] store in the dark	28 days	100 mL
TOTAL Organic Halides By Method No. 9020/9021	G, TLC	Cool, 4ºC[2]	28 days	500 mL
PCBs	G, TLC	Cool, 4ºC	7 days until extraction, 40 days after extraction	1,000 mL/250 mL
Pesticides	G, TLC	Cool 4ºC,	7 days until extraction, 40 days after extraction	1,000 mL/250 mL
Phenols	G, TLC	Cool, 4ºC[3]	7 days until extraction, 40 days after extraction	1,000 mL
Phthalate Esters	G, TLC	Cool, 4ºC	7 days until extraction, 40 days after extraction	1,000 mL
Polynuclear Aromatic Hydrocarbons	G, TLC	Cool, 4ºC[3] store in the dark	7 days until extraction, 40 days after extraction	1,000 mL/250 mL
Purgeable Aromatic Hydrocarbons	VOA	Cool, 4ºC[2,3]	14 days	40 mL
Purgeable Halocarbons	VOA	Cool, 4ºC[3]	14 days	40 mL

Sources

EPA SW846

1 P - Polyethylene; G - Amber glass containers; TLC - Teflon-lined cap; VOA - Volatile organic analyte vial of amber glass with teflon-lined septum.
2 Adjust to pH <2 with H_2SO_4, HCl, or solid $NaHSO_4$
3 Free chlorine must be removed before addition of HCl by exact addition of $Na_2S_2O_3$

Screening Quick Reference Table
Options for Selection of Analytical Methods: Inorganics

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TRACE ELEMENT	OTHER [1]	FLAME AA	FURNANCE AA	ICP	EXTRACTION METHODS	
					WATER	SOIL/SEDIMENT
Aluminum (Al)	6800	7020		6010B 6020A	3005A 3010A 3015A	3050B 3051A
Antimony (Sb)	6200(55) 6800	7040	7041 7062 [3]	6010B 6020A	3005A 3015A	3050B 3051A
Arsenic (As)	6200(60) 7063 7061A [3]		7060 7062 [3]	6010B 6020A	3005A 3010A 3015A 7063	3050B 3051A
Barium (Ba)	6200(60) 6800	7080A	7081 [3]	6010B 6020A	3005A 3010A 3015A	3050B 3051A
Beryllium (Be)		7090	7091	6010B 6020A	3005A 3010A 3015A 3020A	3050B 3051A
Cadmium (Cd)	6200 6800	7130	7131A	6010B 6020A	3005A 3010A 3015A 3020A	3050B 3051A
Calcium (Ca)	6200 6800	7140		6010B 6020A	3005A 3010A 3015A	3050B 3051A
Chromium (CR), total	6200(200) 6800	7190	7191	6010B 6020A	3005A 3010A 3015A 3020A	3050B 3051A
Chromium+6 (Cr+6)	7195 — 7199 [3]				7195 - 7199	3060A
Cobalt (Co)	6200(330)	7200	7201	6010B 6020A	3005A 3010A 3015A 3020A	3050B 3051A
Copper (Cu)	6200(85) 6800	7210	7211 [3]	6010B 6020A	3005A 3010A 3015A	3050B 3051A
Iron (Fe)	6200 6 800	7380	7381 [3]	6010B 6020A	3005A 3010A 3015A	3050B 3051A
Lead (Pb)	6200(45) 6800	7420	7421	6010B 6020A	3005A 3010A 3015A 3020A	3051A
Magnesium (Mg)	6800	7450		6010B 6020A	3005A 3010A 3015A	3050B 3051A
Manganese (Mn)	6200(240)	7460	7461	6010B 6020A	3005A 3010A 3015A	3050B 3051A
Mercury (Hg)	4500(0.5) 6200 6800 7470A 7471B 7472 7473 7474 [3]			6020A	7470A 7472 3015A	3051A 7471B 7473 7474
Molybdenum (Mo)	6200(25) 6800	7480	7481	6010B	3005A 3010A 3015A 3020A	3050B 3051A
Nickel (Ni)	6200(100) 6800	7520	7521	6010B 6020A	3005A 3010A 3015A	3050B 3051A
Potassium (K)	6200 6800	7610		6010B 6020A	3005A 3010A 3015A	3050B 3051A
Selenium (Se)	6200 6800 7741A 7742 [3]		7740	6010B 6020A	3005A 3010A 3015A	3050B 3051A
Silver (Ag)	6200 6800	7760A	7761 [3]	6010B 6020A	3005A 3015A	3051A 7760 7761
Sodium (Na)		7770		6010B 6020A	3005A 3010A 3015A	3050B 3051A
Strontium (Sr)	6200(30) 6800	7780		6010B	3015A	3050B 3051A
Thallium (Tl)	6200 6800	7840	7841	6010B 6020A	3005A 3010A 3015A 3020A	3050B 3051A
Tin (Sn)	6200(85)	7870				
Vanadium (V)	6200 6800	7910	7911	6010B 6020A	3005A 3010A 3015A 3020A	3050B 3051A
Zinc (Zn)	6200(80) 6800	7950	7951 [3]	6010B 6020A	3005A 3010A 3015A	3050B 3051A
Cyanide (HCN)	9010B — 9014 [3]					

Sources

All method numbers refer to EPA SW-846, Volume III with changes as proposed for Volume IV.
ICP's advantage is that it allows simultaneous or rapid sequential determination of many elements, but suffers from interferences. AA determinations are normally completed as single element analyses. ICP and Flame AA have comparable detection limits (within a factor of 4), but ICP-MS (6020A) can drastically improve the detection limits (e.g., an order of magnitude lower). Furnace AA generally exhibits lower detection limits than ICP or Flame-AA, and offers more control over unwanted matrix components. X-RAY and immunoassays allow field determinations.

1 Method 6200 is Portable X-Ray; 6800 is Elemental/Isotope Mass Spec.; 4500 is Immunoassay; 7063 is ASV; where available, soil detection limits in ppm are in parentheses.
2 Except as noted, most individual procedures are proposed to be integrated into Method 7000B or 7010.
3 Includes various methods. Follow the extraction procedure detailed in the individual determinative method.

Screening Quick Reference Table
Options for Selection of Analytical Methods: Organics

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COMPOUNDS	FIELD METHODS	OC/MS METHOD	SPECIFIC DETECTION METHOD	HPLC METHOD	EXTRACTION METHODS		CLEANUP METHOD
					WATER	SOIL/SEDIMENT	
Aromatic and Halogenated Volatiles		8260B	8021B		5021 5030B 5032	5021 5032 5035	
Carbamates				8318 8321B	8318 8321B	8318 8321B	8318
Chlorinated Dioxins and Furans			8280B 8290A		8280B 8290A	8280B 8290A 3545A	8280B 8290A
Chlorinated Hydrocarbons		8270D	8121		3510C 3520C 3535A	3540C 3550B	3620B 3640A
Chlorinated Phenoxyacids	4015 (0.1 ppm)	8270D 2	8151A	8321B	8151A 8321B 3535A	8321B 8151A 3545A 3580A	8151A 3620B
Haloethers		8270D	8111		3510C 3520C	3540C 3545 3550B	3620B 3640A
Nitriles and Amides		8260B	8031 8032A 8033	8315 8316	5030B — 5032 8031 8032A 8316	5031 5032 5035	8032A
Nitroaromatics and Ketones		8270D	8091	8330A	3510C 3520C 3535A	3540C 3545 3550B	3620B 3640A
Nitroaromatics (Explosives)	4050 (0.5 ppm) 4051 8515 (1 ppm)			8330A - 8332	8330A — 8332	8330A — 8332	8330A — 8332 3620B
Nitrosamines		8270D	8070A		3510C 3520C 8070A	3540C 3545 3550B 8070A	3610B 3620B 3640A 8070A
Non-Halogenated Volatiles		8260B	8015B		5030B — 5032	5021 5031 5032 5035	
Organochlorines	4040 — 4042 (0.2 to 20 ppm)	8270D 2	8081B 8275A		3510C 3520C 3535A	3540C 3545A 3550B 3562	3620B 3630C 3640A 3660
Organophosphates		8270D 2	8141B	8321B	3510C 3520C 3535A	3540C 3545A 3550B	3620B
PAHs	4035 (1 ppm)	8270D	8100 8275A	8310	3510C 3520C	3540C 3545 3550B 3561	3610B 3630 3640A 3650B
PCBs	4020 (5 ppm) 9078 (2 ppm)	8270D 2	8082A 8275A		3510C 3520C 3535A	3540C 3545A 3550B 3665A 3562	3620B 3630C 3640A 3660 3665A
Phenolics	4010A (0.5 ppm)	8270D	8041		3510C 3520C	3540C 3545 3550B	3630 3640A 3650B 8041
Phthalates		8270D	8061A		3510C 3520C 3535A	3540C 3545 3550B	3610B 3620B 3640A
Semi-Volatile Organics		8270D			3510C 3520C 3535A	3540C 3545A 3550B	3640A 3650B 3660
Total Organic Halides (TOX)			9020B 9022		9020B 9022		
Total Petroleum Hydrocarbons	4030 (5 ppm) 9074		8015B				
Volatile Organics		8260B	8015B 8021B		5030B — 5032	5021 5031 5032 5035	

Sources

All method numbers refer to EPA SW-846, Update III, with changes as proposed in Update IV.

Options shown are generally for chemical classes; more detailed information may be available for specific compounds

GC/MS methods allow for scanning a broad range of volatile and semi-volatile compounds, but suffer from interference and higher detection limits.

Specific determination methods and HPLC methods allow for more precise determinations of specific compounds of interest.

1 Series 4000 are immunoassays and are for specific compounds within these classes (i.e., 2,4-D, TNT, RDX, and PCP). Soil detection limits are in parentheses.
2 This is not a method of choice, but rather a confirmatory method.

Screening Quick Reference Tables

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All attempts have been made to ensure accuracy; however, NOAA is not liable for errors. Values are subject to changes as new data become available.

Because trace elements are naturally occurring compounds, concentrations reflective of non-anthropogenically impacted, or "background," are provided in addition to toxicological benchmarks. For screening, trace element levels may be compared to the geometric mean (and range) observed in natural soils in the U.S. Further comparisons to regional values is encouraged.

Promulgated criteria or standards for sediments or soils are generally not available in the U.S. For screening purposes, contaminant levels in solids (sediment or soil) may be compared to benchmarks representative of different characterizations of ecological risk. They should ***not*** be applied without a reasonable understanding of their development, their performance, and their limitations.

The NOAA SQuiRTs include multiple sediment screening values to help portray a spectrum of concentrations which have been associated with various probabilities of adverse biological effects. This spectrum ranges from presumably nearly non-toxic to toxic levels. For instance, if all analytes screen below lower-threshold values (for example, TELs), this suggests, with a high degree of confidence, that a sample with these levels of contaminants has a low probability of being toxic, as tested through standard bioassays. Conversely, exceeding lower thresholds does ***not*** necessarily predict toxicity. Comparison to higher toxicity thresholds (for example, PELs) identifies compounds which are more probably present at elevated, toxic levels.

Sources of benchmarks for sediment were chosen primarily on the basis of representing a fairly unique approach for their derivation. A major exception is the "Consensus TEC/PEC" values: these values are simply averages of other existing benchmarks (mostly those appearing in the SQuiRT cards). The consensus TEC/PECs are provided here merely as a service.

For soil- and sediment-associated contaminants, dry weight concentrations are screened directly against published benchmarks. Some benchmarks are available only on a Total Organic Carbon (TOC) normalized basis, and are footnoted as such. Separate values are provided for either freshwater and estuarine or marine sediments.

For freshwater sediments, the Upper Effects Threshold (UET) was derived by NOAA as the lowest AET from a compilation of endpoint analogous to the marine AET endpoints. The UETs for organic contaminants are generally listed for a sediment containing 1% TOC.

This version of the SQuiRT cards adds a section on the composition of PCBs. A characterization of Aroclors by their degree of chlorination and congener patterns may aid in *preliminary* exploration of source type. Definitive Aroclor assignment should only be conducted by a qualified chemist.

To express cumulative toxicity from mixtures of dioxins and furans, Toxic Equivalency Factors are included in this version of the SQuiRT cards. Absolute concentrations can be multiplied by the TEF potency factors and the products then summed to derive total toxicity.

Every effort has been made to ensure accuracy in these SQuiRT cards. However, NOAA is not liable for errors in original sources or revision of values. These screening values are subject to change as new data become available. The SQuiRT cards may be freely reproduced and distributed, if they are distributed in their entirety, without modification, and properly credited to NOAA.

The SQuiRT cards should be cited as:

"Buchman, M. F., 2008. NOAA Screening Quick Reference Tables, NOAA OR&R Report 08-1, Seattle WA, Office of Response and Restoriation Division, National Oceanic and Atmospheric Administration, 34 pages."

APPENDIX B

SITE PHOTOGRAPHS

PHASE II ENVIRONMENTAL SITE ASSESSMENT
NEW ENGLAND YARD (A.K.A. DPW NEW ENGLAND YARD)
210 MESSER STREET, LACONIA, NEW HAMPSHIRE
NHDES #200911005

Picture 1 - View of the Horse Barn building looking northwest

Picture 2 – View of the Blacksmith Shop building looking west

Picture 3 - View of Sand/Salt Shed building looking southeast

Picture 4 – View of the Vactor Shed building looking north

Picture 5 - View of the oil stained soil within the Blacksmith Shop

Picture 6 - View of the oil stained soil within the Blacksmith Shop, specifically, oil staining emanating from beneath a bulldozer

Picture 7 - View of the Rodder Shed and Sand/Salt Shed buildings looking southeast

Picture 8 - View of the northern portion of the Site where landfilling occurred looking south

Picture 9 – View of the Vactor Shed floor drain structure

Picture 10 – View of the open pail of waste oil in the Horse Barn

Picture 11 – View of the 30-gallon drum of unknown contents in the Horse Barn

Picture 12 – View of the 55-gallon drum of unknown contents outside the Blacksmith Shop looking southeast

Picture 13– View of the baled asbestos piping in the Horse Barn Shed

APPENDIX C

SOIL BORING LOGS

Geologic Log

Credere Associates, LLC
776 Main Street
Westbrook, Maine 04092

CA-1

SITE INFORMATION	
Project Number/Client/Site:	10001086 New England Yard 210 Messer Street, Laconia, NH
DES #:	DES#200911005
Date:	9/22/11
Credere, LLC Representative:	Judd R. Newcomb, CG

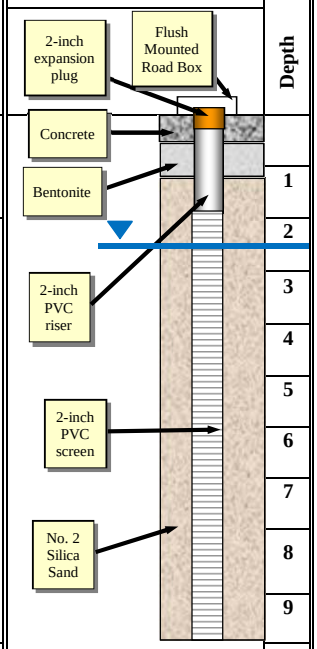
WELL SPECIFICATIONS	
Well Depth (feet) from TOW:	9.47
Screen Length (feet):	8
TOW Elevation:	93.52
Well Material	2" PVC riser and 0.010-inch slotted screen; No. 2 sand

CONTRACTOR	
Drilling Contractor:	T&K Drilling
Foreman:	Sean McGarry
Drilling Method:	Auger and SPT

DRILLING EQUIPMENT	
Equipment:	4 1/4" ID Hollow Stem Auger
Casing Diameter:	NA
Casing Material:	NA

Depth	Sample No.	Pen/Rec (In.)	Depth (Ft.)	Blows (/0.5')	PID (ppm) (RF=1.0)	Soil Description and Classification (Modified Burmister)	Strata	USCS Code
1	S-1	24/12	0-2	6-5-3-1	ND	Tan, moist fine to coarse SAND and fine to medium GRAVEL	Fill Materials	GW
2	S-2	24/0	2-4	20-1-1-10	NS	Wet, brick jammed in spoon		FILL
4	NA	0/0	4-6	50/0"	NS	Spoon Refusal		
6	NA	0/0	6-8	50/0"	NS	Spoon Refusal		
8	NA	0/0	8-10	50/0"	NS	Spoon Refusal		
10						End of exploration at 10' bgs		

Equipment Installed



Remarks:

TOW - Top of Well
ND - None Detected
NS - No sample for interval
Graphically shows depth of the inferred water table.
NA - Not applicable
SPT - Standard Penetration Test

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Geologic Log

Credere Associates, LLC
776 Main Street
Westbrook, Maine 04092

CA-2

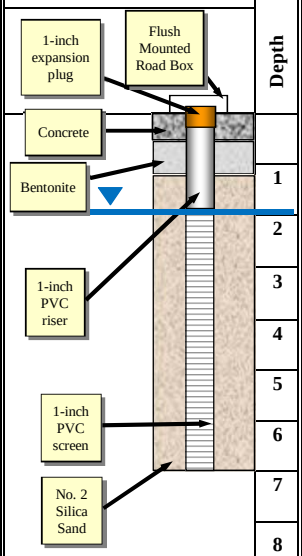
SITE INFORMATION	
Project Number/Client/Site:	
10001086	
New England Yard	
210 Messer Street, Laconia, NH	
DES #:	**Date:**
DES#200911005	9/22/11
Credere, LLC Representative:	
Judd R. Newcomb, CG	

WELL SPECIFICATIONS	
Well Depth (feet) from TOW:	6.27
Screen Length (feet):	5
TOW Elevation:	92.30
Well Material	
1" PVC riser and 0.010-inch slotted screen; No. 2 sand	

CONTRACTOR	DRILLING EQUIPMENT
Drilling Contractor: T&K Drilling	**Equipment:** Geoprobe
Foreman: Sean McGarry	**Casing Diameter:** NA
Drilling Method: Direct-push	**Casing Material:** NA

Depth	Sample No.	Pen/Rec (In.)	Depth (Ft.)	Blows (/0.5')	PID (ppm) (RF=1.0)	Soil Description and Classification (Modified Burmister)	Strata	USCS Code
1	S-1	24/12	0-3	NA	ND	3" Concrete floor Wet, dark gray and reddish-black medium to coarse SAND and fine to medium GRAVEL. Ceramic pieces observed.	Fill Materials	FILL
3	S-2	36/18	3-6	NA	ND	Wet, tan medium to coarse SAND, little fine Gravel, trace fine SAND	Native Stratified Drift	SW
6	S-3	12/5	6-7	NA	ND	Same as above.		
7						End of exploration at 7' bgs		

Equipment Installed



Remarks:

TOW - Top of Well
ND - None Detected
SPT - Standard Penetration Test
Graphically shows depth of the inferred water table.
NA - Not applicable

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Geologic Log

Credere Associates, LLC
776 Main Street
Westbrook, Maine 04092

CA-3

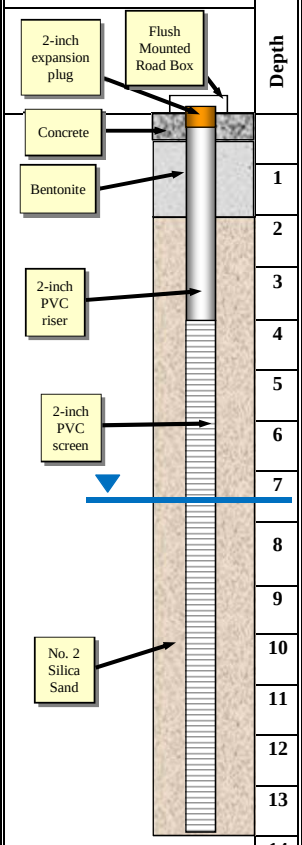
SITE INFORMATION	
Project Number/Client/Site:	
10001086	
New England Yard	
210 Messer Street, Laconia, NH	
DES #:	**Date:**
DES#200911005	9/22/11
Credere, LLC Representative:	
Judd R. Newcomb, CG	

WELL SPECIFICATIONS	
Well Depth (feet) from TOW:	13.17
Screen Length (feet):	10
TOW Elevation:	98.19
Well Material	
2" PVC riser and 0.010-inch slotted screen; No. 2 sand	

CONTRACTOR	DRILLING EQUIPMENT
Drilling Contractor:	**Equipment:**
T&K Drilling	4 1/4" ID Hollow Stem Auger
Foreman:	**Casing Diameter:**
Sean McGarry	NA
Drilling Method:	**Casing Material:**
Auger and SPT	NA

Depth	Sample No.	Pen/Rec (In.)	Depth (Ft.)	Blows (/0.5')	PID (ppm) (RF=1.0)	Soil Description and Classification (Modified Burmister)	Strata	USCS Code
1	S-1	24/12	0-2	8-13-13-11	ND	4" Organics Black, dry fine to coarse SAND, trace Ash	Fill Materials	SW/ FILL
2-3	S-2	24/13	2-4	5-5-4-5	ND	Black to rusty gray, moist fine to coarse SAND, little fine Gravel and Ash		
4-5	S-3	24/16	4-6	4-3-3-1	ND	Grayish-black, moist fine to coarse SAND, little fine Gravel and Ash		
6-7	S-4	24/8	6-8	1-1-1-1	ND	Same as above, moist to wet		
8-9	S-5	24/10	8-10	1-1-2-1	ND	Same as above, wet		
10-11	S-6	24/3	10-12	1-3-2-1	ND	Same as above, running into augers		
12-13	NS					Augerred to 14' through running material	NS	NS
14-19						End of exploration at 14' bgs		
20								

Equipment Installed



Remarks:

TOW - Top of Well
ND - None Detected
SPT - Standard Penetration Test
▼ Graphically shows depth of the inferred water table.
NS - No sample for interval

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Geologic Log

Credere Associates, LLC
776 Main Street
Westbrook, Maine 04092

CA-4

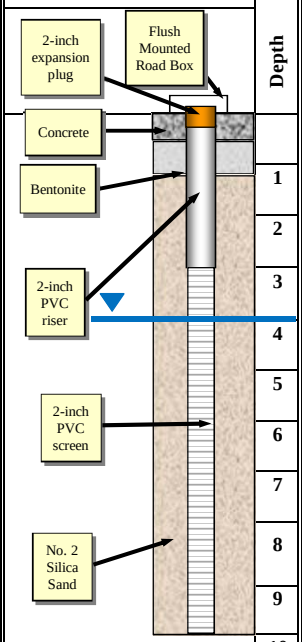
SITE INFORMATION	
Project Number/Client/Site:	
10001086	
New England Yard	
210 Messer Street, Laconia, NH	
DES #:	**Date:**
DES#200911005	9/22/11
Credere, LLC Representative:	
Judd R. Newcomb, CG	

WELL SPECIFICATIONS	
Well Depth (feet) from TOW:	9.30
Screen Length (feet):	7
TOW Elevation:	95.15
Well Material	
2" PVC riser and 0.010-inch slotted screen; No. 2 sand	

CONTRACTOR	DRILLING EQUIPMENT
Drilling Contractor:	**Equipment:**
T&K Drilling	4 1/4" ID Hollow Stem Auger
Foreman:	**Casing Diameter:**
Sean McGarry	NA
Drilling Method:	**Casing Material:**
Auger and SPT	NA

Depth	Sample No.	Pen/Rec (In.)	Depth (Ft.)	Blows (/0.5')	PID (ppm) (RF=1.0)	Soil Description and Classification (Modified Burmister)	Strata	USCS Code
1	S-1	24/20	0-2	14-13-12-12	ND	Orangish-tan, dry to moist fine to coarse SAND and fine to medium GRAVEL	Fill Materials	SP
2								
3	S-2	24/19	2-4	19-24-25-27	ND	Same as above, slight oxidation and change to wet at 3.9' bgs		
4								
5	S-3	24/14	4-6	21-26-25-25	ND	Light gray, wet fine to coarse SAND and fine to medium GRAVEL		
6								
7	S-4	24/12	6-8	16-14-9-7	1.8	Black, wet fine to medium SAND and ASH, trace Brick		SW/ FILL
8	NS					Augered to 10' bgs through running material	NS	NS
9								
10						End of exploration at 10' bgs		
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

Equipment Installed



Remarks:

TOW - Top of Well
ND - None Detected
SPT - Standard Penetration Test
Graphically shows depth of the inferred water table.
NA - Not applicable
NS - No sample for interval

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Geologic Log

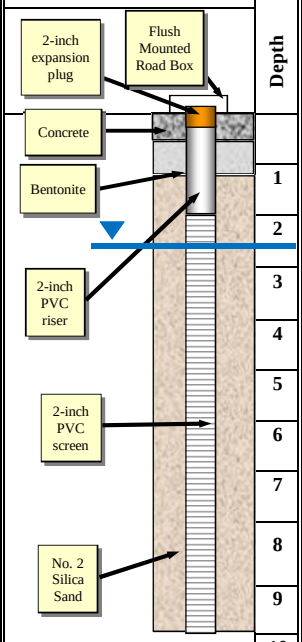
Credere Associates, LLC
776 Main Street
Westbrook, Maine 04092

CA-5

SITE INFORMATION	WELL SPECIFICATIONS
Project Number/Client/Site: 10001086 New England Yard 210 Messer Street, Laconia, NH	**Well Depth (feet) from TOW:** 9.40
	Screen Length (feet): 8
DES #: DES#200911005 **Date:** 9/22/11	**TOW Elevation:** 92.71
Credere, LLC Representative: Judd R. Newcomb, CG	**Well Material** 2" PVC riser and 0.010-inch slotted screen; No. 2 sand
CONTRACTOR	**DRILLING EQUIPMENT**
Drilling Contractor: T&K Drilling	**Equipment:** 4 1/4" ID Hollow Stem Auger
Foreman: Sean McGarry	**Casing Diameter:** NA
Drilling Method: Auger and SPT	**Casing Material:** NA

Depth	Sample No.	Pen/Rec (In.)	Depth (Ft.)	Blows (/0.5')	PID (ppm) (RF=1.0)	Soil Description and Classification (Modified Burmister)	Strata	USCS Code
1	S-1	24/9	0-2	1-3-2-3	ND	2" Asphalt Tan, wet medium to coarse SAND and fine to coarse GRAVEL	Fill Materials	GW
2	S-2	24/12	2-4	15-6-7-9	ND	Brown, wet fine to coarse SAND and fine GRAVEL 2" Black band with potential petroleum odor at 2.5' bgs		
3								
4	S-3	24/14	4-6	1-2-4-5	ND	Orangish-brown, wet medium to coarse SAND and fine GRAVEL		
5								
6	NS					Augered to 10' bgs through running material	NS	NS
7								
8								
9								
10						End of exploration at 10' bgs		
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

Equipment Installed



Remarks:

TOW - Top of Well
ND - None Detected
SPT - Standard Penetration Test
▼ Graphically shows depth of the inferred water table.
NA - Not applicable
NS - No sample for interval

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Geologic Log

Credere Associates, LLC
776 Main Street
Westbrook, Maine 04092

CA-6

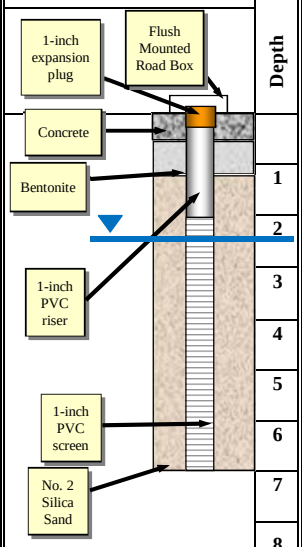
SITE INFORMATION	
Project Number/Client/Site:	
10001086	
New England Yard	
210 Messer Street, Laconia, NH	
DES #:	**Date:**
DES#200911005	9/22/11
Credere, LLC Representative:	
Judd R. Newcomb, CG	

WELL SPECIFICATIONS	
Well Depth (feet) from TOW:	6.27
Screen Length (feet):	5
TOW Elevation:	93.45
Well Material	
1" PVC riser and 0.010-inch slotted screen; No. 2 sand	

CONTRACTOR	DRILLING EQUIPMENT
Drilling Contractor:	**Equipment:**
T&K Drilling	Geoprobe
Foreman:	**Casing Diameter:**
Sean McGarry	NA
Drilling Method:	**Casing Material:**
Direct-push	NA

Depth	Sample No.	Pen/Rec (In.)	Depth (Ft.)	Blows (/0.5')	PID (ppm) (RF=1.0)	Soil Description and Classification (Modified Burmister)	Strata	USCS Code
1	S-1	36/18	0-3	NA	ND	7" Concrete floor 4" Brown, dry fine SAND Gray, moist medium to coarse SAND and fine GRAVEL. 2" black layer observed at water table	Fill Materials	FILL
2								
3	S-2	36/28	3-6	NA	ND	Grayish-brown, wet medium to coarse SAND and fine GRAVEL	Native Stratified Drift	SW
4								
5								
6	S-3	12/12	6-7	NA	ND	Same as above.		
7						End of exploration at 7' bgs		
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

Equipment Installed



Remarks:

TOW - Top of Well
ND - None Detected
SPT - Standard Penetration Test
▼ Graphically shows depth of the inferred water table.
NA - Not applicable

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

APPENDIX D

TEST PIT LOGS

CREDERE ASSOCIATES, LLC
TEST PIT SAMPLING LOG
776 Main Street, Westbrook, Maine 04092 - 207-828-1272

TEST PIT DATA:

PROJECT NAME: New England Yard DATE: 9/22/2011

PROJECT NUMBER: 10001086

SAMPLE LOCATION ID: **TP-1**

CREDERE REPRESENTATIVE: Jonathan O'Donnell

CONTRACTOR/FOREMAN: City of Laconia DPW

NOTES:

Test pit located in mounded potential fill area in northern portion of the Site.

FIELD ANALYSIS DATA:

DEPTH (FT)	SAMPLE DEPTH (FT)	SAMPLE NUMBER	MOISTURE	PID (ppm_v)	SOIL DESCRIPTION (MODIFIED BURMISTER) / NOTES
0	0-2	S-1	Slightly moist	ND	0.5' Organic material 1.5' Dark brown, medium to coarse SAND, some fine Gravel
1					
2	2-4	S-2	Slightly moist	ND	Dark brown, medium to coarse SAND, some fine Gravel
3					
4	4-6	S-3	Slightly moist	ND	Light brown medium SAND
5					
6	6-8	S-4	Slightly moist	ND	FILL materials including ash, glass bottles, metal and some fine to medium Sand
7					
8	8-10	S-5	Wet	ND	Same as above
9					
10	**End of Exploration at 10' bgs.**				

PID - Photo-Ionization Detector
ppm_v - parts per million by volume

CREDERE ASSOCIATES, LLC
TEST PIT SAMPLING LOG
776 Main Street, Westbrook, Maine 04092 - 207-828-1272

TEST PIT DATA:

PROJECT NAME: New England Yard DATE: 9/22/2011

PROJECT NUMBER: 10001086

SAMPLE LOCATION ID: **TP-2**

CREDERE REPRESENTATIVE: Jonathan O'Donnell

CONTRACTOR/FOREMAN: City of Laconia DPW

NOTES:

Test pit located in mounded potential fill area in northern portion of the Site.

FIELD ANALYSIS DATA:

DEPTH (FT)	SAMPLE DEPTH (FT)	SAMPLE NUMBER	MOISTURE	PID (ppm_v)	SOIL DESCRIPTION (MODIFIED BURMISTER) / NOTES
0	0-2	S-1	Slightly moist	ND	0.5' Organic material 1.5' Brown medium SAND, ASH, and ASPHALT
1					
2	2-4	S-2	Slightly moist	ND	1' Brown medium SAND, ASH, and ASPHALT 1' FILL materials including ash, glass bottles, metal, and some fine to medium SAND
3					
4	4-6	S-3	Slightly moist	ND	Same as above
5					
6	6-8	S-4	Slightly moist	ND	Same as above
7					
8	End of Exploration at 8' bgs.				

PID - Photo-Ionization Detector
ppm_v - parts per million by volume

CREDERE ASSOCIATES, LLC
TEST PIT SAMPLING LOG
776 Main Street, Westbrook, Maine 04092 - 207-828-1272

TEST PIT DATA:

PROJECT NAME: New England Yard DATE: 9/22/2011

PROJECT NUMBER: 10001086

SAMPLE LOCATION ID: **TP-3**

CREDERE REPRESENTATIVE: Jonathan O'Donnell

CONTRACTOR/FOREMAN: City of Laconia DPW

NOTES:

Test pit located in mounded potential fill area in northern portion of the Site.

FIELD ANALYSIS DATA:

DEPTH (FT)	SAMPLE DEPTH (FT)	SAMPLE NUMBER	MOISTURE	PID (ppm_v)	SOIL DESCRIPTION (MODIFIED BURMISTER) / NOTES
0	0-2	S-1	Slightly moist	ND	0.5' Organic material 1.5' Dark brown, medium to coarse SAND, ASPHALT, and coarse GRAVEL
1					
2	2-4	S-2	Slightly moist	ND	Same as above
3					
4	4-6	S-3	Slightly moist	ND	Dark brown, medium to coarse SAND, coarse GRAVEL, and FILL including ash, asphalt and glass bottles
5					
6	6-8	S-4	Slightly moist	ND	Same as above
7					
8	End of Exploration at 8' bgs.				

PID - Photo-Ionization Detector
ppm_v - parts per million by volume

CREDERE ASSOCIATES, LLC
TEST PIT SAMPLING LOG
776 Main Street, Westbrook, Maine 04092 - 207-828-1272

TEST PIT DATA:

PROJECT NAME: New England Yard DATE: 9/22/2011

PROJECT NUMBER: 10001086

SAMPLE LOCATION ID: **TP-4**

CREDERE REPRESENTATIVE: Jonathan O'Donnell

CONTRACTOR/FOREMAN: City of Laconia DPW

NOTES:

Test pit located in mounded potential fill area in northern portion of the Site.

FIELD ANALYSIS DATA:

DEPTH (FT)	SAMPLE DEPTH (FT)	SAMPLE NUMBER	MOISTURE	PID (ppm_v)	SOIL DESCRIPTION (MODIFIED BURMISTER) / NOTES
0	0-2	S-1	Slightly moist	ND	Dark brown, medium SAND, some medium to coarse Gravel
1					
2	2-4	S-2	Slightly moist	ND	Dark brown, medium SAND, some medium to coarse Gravel interbedded with FILL including ash, glass and brick
3					
4	4-6	S-3	Slightly moist	ND	Same as above
5					
6	6-8	S-4	Slightly moist	ND	Dark brown, medium to coarse SAND, some coarse Gravel, little Asphalt
7					
8	8-10	S-5	Wet	ND	Same as above. Stony organic layer of leaves at base of test pit that may be old lake bottom.
9					
10	**End of Exploration at 10' bgs.**				

PID - Photo-Ionization Detector
ppm_v - parts per million by volume

APPENDIX E

GROUNDWATER SAMPLING LOGS

LOW FLOW SAMPLING LOG
CREDERE ASSOCIATES

Credere Associates LLC

PROJECT NAME: NEW ENGLAND YARD

DATE: 10 , 6 , 11

PROJECT NUMBER: 10001086

LOCATION ACTIVITY START: 1320

SAMPLE LOCATION ID: CA-1

END:

WELL DATA:

WELL DEPTH (ft): 9.47 [ ] MEASURED [ ] HISTORICAL

WATER DEPTH (ft): 2.63 [ ] MEASURED [ ] HISTORICAL

[ ] TOP OF WELL [ ] TOP OF CASING [ ] FROM GRADE [ ] _____

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

WELL MATERIAL: [Y] PVC [ ] SS [ ] _____

WELL LOCKED: [ ] YES [X] NO

PROTECTIVE CASING SECURE: [ ] YES [✓] NO

CONCRETE COLLAR INTACT: [ ] YES [✓] NO

AMBIENT AIR VOC: ✓ PPM

WELL MOUTH VOC: ✓ PPM

EQUIPMENT DATA:

PURGING	SAMPLING		METER ID
[X]	[X]	PERISTALTIC PUMP	[X] pH — YSI
[ ]	[ ]	SUBMERSIBLE	[✓] Specific Conductivity
[ ]	[ ]	BLADDER PUMP	[✓] Dissolved Oxygen
[ ]	[ ]	HAND PUMP	[✓] ORP
[ ]	[ ]	DEDICATED HDPE	[✓] Turbidity — Lamotte 2020
[ ]	[ ]	NEW HDPE	
[✓]	[X]	DEDICATED LDPE	
[ ]	[ ]	NEW LDPE	
	[ ]	FILTER	
[ ]	[ ]	_____	

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

FIELD ANALYSIS DATA:

PUMP ON: 1324 PUMP OFF: _____ STABLE FLOW RATE (ml/min): 200 [ ] MEASURED [✓] ESTIMATED

TIME	TEMP (°C)	pH	COND. (mS)	ORP (mV)	D.O. (mg/l)	TURBID. (ntu)	COMMENTS
1337	15.68	6.71	3.725	-56.4	0.93	—	
1345	15.57	7.20	3.634	-88.0	0.23	160	
1358	15.58	7.34	3.444	-106.7	0.17	—	
1406	15.60	7.37	3.381	-111.4	0.18	48.1	
1412	15.58	7.38	3.334	-114.3	0.15	—	
1418	15.59	7.39	3.312	-116.5	0.12	—	
1423	15.59	7.40	3.281	-118.4	0.12	21.5	

SAMPLE DATA:

SAMPLE BOTTLE ID TIME	LOCATION	PRESERVATION METHOD	SAMPLE CONTAINER #	TYPE	LABORATORY ANALYSIS
1428	CA-1	HCl	2	VOA	NJDES FULL LIST VOCs
↓	↓	HNO_3	1	LDPE	Metals
			1	1L Amber	PAHs

NOTES:

DUP for metals only,

SAMPLER

\\Me01seusse\Overhead\Environmental Information\Logs\[Well Sampling Log - Low Flow2.xls]A

DUP-GW-2

LOW FLOW SAMPLING LOG
CREDERE ASSOCIATES

Community Economy Environment
Credere Associates LLC

PROJECT NAME: LRPC - NEY DATE: 10 16 11

PROJECT NUMBER: 10 001 086

SAMPLE LOCATION ID: CA-2

LOCATION ACTIVITY
START: 1250
END: 1345

WELL DATA:

WELL DEPTH (ft): 6.27 [X] MEASURED [ ] HISTORICAL

WATER DEPTH (ft): 1.25 [X] MEASURED [ ] HISTORICAL

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

WATER LEVEL EQUIPMENT USED:
[✓] ELECT. COND. PROBE
[ ] FLOAT ACTIVATED PROBE
[ ] PRESSURE TRANSDUCER
[ ] _____

WELL MATERIAL:
[✓] PVC
[ ] SS
[ ] _____

WELL LOCKED:
[ ] YES
[✓] NO

PROTECTIVE CASING SECURE:
[✓] YES
[ ] NO

CONCRETE COLLAR INTACT:
[✓] YES
[ ] NO

AMBIENT AIR VOC: — PPM

WELL MOUTH VOC: — PPM

EQUIPMENT DATA:

PURGING	SAMPLING		METER ID
[✓]	[✓]	PERISTALTIC PUMP	
[ ]	[ ]	SUBMERSIBLE	
[ ]	[ ]	BLADDER PUMP	
[ ]	[ ]	HAND PUMP	
[ ]	[ ]	DEDICATED HDPE	
[ ]	[ ]	NEW HDPE	
[✓]	[✓]	DEDICATED LDPE	
[ ]	[ ]	NEW LDPE	
	[✓]	FILTER 0.45 um	
[ ]	[ ]		

[✓] pH — YSI
[ ] Specific Conductivity — /
[ ] Dissolved Oxygen — "
[ ] ORP — "
[ ] Turbidity — Lamotte 2020

DECONTAMINATION FLUIDS USED:
[ ] DISTILLED WATER
[ ] DEIONIZED WATER
[✓] POTABLE WATER
[ ] TSP SOLUTION
[ ] ALCONOX SOLUTION
[ ] NONE
[ ] _____
[ ] _____

FIELD ANALYSIS DATA:

PUMP ON: 1252 PUMP OFF: 1342 STABLE FLOW RATE (ml/min): 350 [X] MEASURED [ ] ESTIMATED

TIME	TEMP (°C)	pH	COND. (mS)	ORP (mV)	D.O. (mg/l)	TURBID. (ntu)	COMMENTS
1315	16.01	6.61	0.42	43	0.31	50.3	
1322	16.03	6.54	0.41	41	0.47	—	
1330	16.02	6.52	0.41	43	0.33	24	
1336	16.02	6.53	0.41	42	0.36	19	

SAMPLE DATA:

SAMPLE BOTTLE ID TIME	LOCATION	PRESERVATION METHOD	SAMPLE CONTAINER #	TYPE	LABORATORY ANALYSIS
1340	CA-2	HCl	2	VOA	NH3 S VOCs
		HNO_3	1	250 mL	metals
		Non	1	1L	PAHs

NOTES: filtered Metals

SAMPLER

LOW FLOW SAMPLING LOG
CREDERE ASSOCIATES

PROJECT NAME: NEW ENGLAND YARD
DATE: 10, 6, 11
PROJECT NUMBER: 10001086
SAMPLE LOCATION ID: CA-3
LOCATION ACTIVITY START: 1500
END:

WELL DATA:

WELL DEPTH (ft): 13.17 [ ] MEASURED [ ] HISTORICAL
WATER DEPTH (ft): 7.15 [ ] MEASURED [ ] HISTORICAL

[ ] TOP OF WELL
[ ] TOP OF CASING
[ ] FROM GRADE
[ ] _____

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

WELL MATERIAL:
[ ] PVC
[ ] SS
[ ] _____

WELL LOCKED:
[ ] YES
[ ] NO

PROTECTIVE CASING SECURE:
[ ] YES
[ ] NO

CONCRETE COLLAR INTACT:
[ ] YES
[ ] NO

AMBIENT AIR VOC: _____ PPM
WELL MOUTH VOC: _____ PPM

EQUIPMENT DATA:

PURGING	SAMPLING		METER ID
[ ]	[ ]	PERISTALTIC PUMP	[ ] pH
[ ]	[ ]	SUBMERSIBLE	[ ] Specific Conductivity
[ ]	[ ]	BLADDER PUMP	[ ] Dissolved Oxygen
[ ]	[ ]	HAND PUMP	[ ] ORP
[ ]	[ ]	DEDICATED HDPE	[ ] Turbidity
[ ]	[ ]	NEW HDPE	
[ ]	[ ]	DEDICATED LDPE	
[ ]	[ ]	NEW LDPE	
	[ ]	FILTER	
[ ]	[ ]	_____	

METER ID: YSI / LAMOTTE 2020

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

FIELD ANALYSIS DATA:

PUMP ON: 1503 PUMP OFF: _____ STABLE FLOW RATE (ml/min): 185 [ ] MEASURED [ ] ESTIMATED

TIME	TEMP (°C)	pH	COND. (mS)	ORP (mV)	D.O. (mg/l)	TURBID. (ntu)	COMMENTS
1510	13.60	7.09	0.406	-136.4	0.48	—	
1515	13.44	7.08	0.405	-142.5	0.22	30.6	
1520	13.45	7.08	0.405	145.7	0.13	—	
1525	13.44	7.08	0.405	-146.7	0.11	25.2	
1532	13.43	7.07	0.406	-147.3	0.13	—	

SAMPLE DATA:

SAMPLE BOTTLE ID TIME	LOCATION	PRESERVATION METHOD	SAMPLE CONTAINER #	TYPE	LABORATORY ANALYSIS
1535	CA-3	HCl	2	VOA	NAPHS FOR C LIST VOCs
↓	↓	—	1	1L Amber	PAHs

NOTES:

SAMPLER

LOW FLOW SAMPLING LOG
CREDERE ASSOCIATES

Community Economy Environment
Credere Associates LLC

PROJECT NAME: LRPC - NEG
DATE: 10/6/11

PROJECT NUMBER: 10001086
LOCATION ACTIVITY START: 1350
END:

SAMPLE LOCATION ID: CA-4

WELL DATA:

WELL DEPTH (ft): 9.30 [✓] MEASURED [ ] HISTORICAL
WATER DEPTH (ft): 4.05 [✓] MEASURED [ ] HISTORICAL

[✓] TOP OF WELL [ ] TOP OF CASING [ ] FROM GRADE [ ]

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

WELL MATERIAL: [✓] PVC [ ] SS [ ]
WELL LOCKED: [ ] YES [✓] NO
PROTECTIVE CASING SECURE: [✓] YES [ ] NO
CONCRETE COLLAR INTACT: [✓] YES [ ] NO

AMBIENT AIR VOC: — PPM
WELL MOUTH VOC: — PPM

EQUIPMENT DATA:

PURGING	SAMPLING			METER ID
[✓]	[✓]	PERISTALTIC PUMP	[✓] pH	451
[ ]	[ ]	SUBMERSIBLE	[ ] Specific Conductivity	
[ ]	[ ]	BLADDER PUMP	[ ] Dissolved Oxygen	
[ ]	[ ]	HAND PUMP	[ ] ORP	
[ ]	[ ]	DEDICATED HDPE	[ ] Turbidity	Laundr Dood
[ ]	[ ]	NEW HDPE		
[ ]	[✓]	DEDICATED LDPE		
[ ]	[ ]	NEW LDPE		
	[ ]	FILTER		
[ ]	[ ]			

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

FIELD ANALYSIS DATA:

PUMP ON: 1351 PUMP OFF: STABLE FLOW RATE (ml/min): [✓] MEASURED [ ] ESTIMATED

TIME	TEMP (°C)	pH	COND. (mS)	ORP (mV)	D.O. (mg/l)	TURBID. (ntu)	COMMENTS
1428	18.17	7.31	0.749	-79	1.74	20	
1434	18.17	7.28	0.739	-89	1.58	19.6	
1440	18.21	7.21	0.749	-93	1.38	—	
1449	18.23	7.18	0.749	-92	1.53	—	
1455	18.27	7.19	0.762	-96	1.29	18.8	
1500	18.28	7.17	0.762	-94	1.38	17	
1505	18.29	7.18	0.761	-96	1.31	17.2	

SAMPLE DATA:

SAMPLE BOTTLE ID TIME	LOCATION	PRESERVATION METHOD	SAMPLE CONTAINER #	TYPE	LABORATORY ANALYSIS
1505	CA-4	HCl	2	VOA	NJHDES VOCs
	GW-DUP	NON	1	1 L	PAHs

NOTES:

SAMPLER

O:\Environmental Information\Logs\[Well Sampling Log - Low Flow2.xls]A

LOW FLOW SAMPLING LOG
CREDERE ASSOCIATES

PROJECT NAME: New England Yard

DATE: 10, 6, 11

PROJECT NUMBER: 10001086

LOCATION ACTIVITY START: 1205

SAMPLE LOCATION ID: CA-5

END:

WELL DATA:

WELL DEPTH (ft): 9.40 [X] MEASURED [ ] HISTORICAL

WATER DEPTH (ft): 1.66 [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 [ ] ____

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

WELL LOCKED: [ ] YES [X] NO

PROTECTIVE CASING SECURE: [X] YES [ ] NO

CONCRETE COLLAR INTACT: [X] YES [ ] NO

AMBIENT AIR VOC: / PPM

WELL MOUTH VOC: / PPM

EQUIPMENT DATA:

PURGING	SAMPLING			METER ID
[X]	[X]	PERISTALTIC PUMP	[X] pH	YSI
[ ]	[ ]	SUBMERSIBLE	[X] Specific Conductivity	
[ ]	[ ]	BLADDER PUMP	[X] Dissolved Oxygen	
[ ]	[ ]	HAND PUMP	[X] ORP	
[ ]	[ ]	DEDICATED HDPE	[X] Turbidity	Lamotte 2020
[ ]	[ ]	NEW HDPE		
[X]	[X]	DEDICATED LDPE		
[ ]	[ ]	NEW LDPE		
	[ ]	FILTER		
[ ]	[ ]	____		

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

FIELD ANALYSIS DATA:

PUMP ON: 1212 PUMP OFF: ____ STABLE FLOW RATE (ml/min): 200 [ ] MEASURED [X] ESTIMATED

TIME	TEMP (°C)	pH	COND. (mS)	ORP (mV)	D.O. (mg/l)	TURBID. (ntu)	COMMENTS
1241	15.62	6.47	1.074	136.9	2.67	~~[illegible]~~	
1247	15.60	6.53	1.073	135.8	2.36	15.0	
1252	15.72	6.54	1.066	134.4	2.47	—	
1300	15.62	6.54	1.034	137.7	2.37	11.6	
1306	15.62	6.54	1.075	140.3	2.37	-	

SAMPLE DATA:

SAMPLE BOTTLE ID TIME	SAMPLE BOTTLE ID LOCATION	PRESERVATION METHOD	SAMPLE CONTAINER #	SAMPLE CONTAINER TYPE	LABORATORY ANALYSIS
1310	CA-5	HCl	2	VOA	NHDES FULL LIST VOCs
↓	↓	—	1	1L AMBER	PAHs

NOTES:

SAMPLER

LOW FLOW SAMPLING LOG
CREDERE ASSOCIATES

Community Economy Environment
Credere Associates LLC

PROJECT NAME: LRPC - NEY
DATE: 10 / 6 / 11

PROJECT NUMBER: 10001086

LOCATION ACTIVITY
START: 1200
END: 1245

SAMPLE LOCATION ID: CA-6

WELL DATA:

WELL DEPTH (ft): 6.27 [X] MEASURED [ ] HISTORICAL
[X] TOP OF WELL [ ] TOP OF CASING [ ] FROM GRADE [ ]

WATER DEPTH (ft): 2.40 [X] MEASURED [ ] HISTORICAL

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

WELL MATERIAL: [X] PVC [ ] SS [ ]
WELL LOCKED: [ ] YES [X] NO
PROTECTIVE CASING SECURE: [X] YES [ ] NO
CONCRETE COLLAR INTACT: [X] YES [ ] NO
AMBIENT AIR VOC: — PPM
WELL MOUTH VOC: — PPM

EQUIPMENT DATA:

PURGING	SAMPLING		METER ID
[X]	[X]	PERISTALTIC PUMP	[ ] pH — 451
[ ]	[ ]	SUBMERSIBLE	[ ] Specific Conductivity —
[ ]	[ ]	BLADDER PUMP	[ ] Dissolved Oxygen — 1
[ ]	[ ]	HAND PUMP	[ ] ORP — 0
[ ]	[ ]	DEDICATED HDPE	[ ] Turbidity — Lamotte 2020
[ ]	[ ]	NEW HDPE	
[X]	[X]	DEDICATED LDPE	
[ ]	[ ]	NEW LDPE	
	[X]	FILTER 0.45 µm	
[ ]	[ ]		

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

FIELD ANALYSIS DATA:

PUMP ON: 1205 PUMP OFF: 1245 STABLE FLOW RATE (ml/min): 250 [X] MEASURED [ ] ESTIMATED

TIME	TEMP (°C)	pH	COND. (mS)	ORP (mV)	D.O. (mg/l)	TURBID. (ntu)	COMMENTS
1210	15.94	6.48	0.859	113	5.52	—	
1216	16.05	6.37	0.847	126	5.37	18	
1222	16.10	6.32	0.833	134	5.37	16	
1227	16.10	6.30	.826	137	5.42	6.29	
1232	16.11	6.28	.823	140	5.38	6	
1237	16.11	6.28	.827	140	5.39	7	

SAMPLE DATA:

SAMPLE BOTTLE ID TIME	SAMPLE BOTTLE ID LOCATION	PRESERVATION METHOD	SAMPLE CONTAINER #	SAMPLE CONTAINER TYPE	LABORATORY ANALYSIS
1240	CA-6	HCl ~~HNO3~~	2	VOA	VOCs
		None	1	1 L	SVOCs
		HNO_3	1	2oz mc	Metals

NOTES: F: Hard Metals Samples

SAMPLER

APPENDIX F

LABORATORY ANALYTICAL REPORTS

EMSL Analytical, Inc.
7 Constitution Way, Suite 107, Woburn, MA 01801
Phone: (781) 933-8411 Fax: (781) 933-8412 Email: bostonlab@emsl.com

Attn: **Judd Newcomb**
Credere Associates, LLC
776 Main Street
Westbrook, ME 04092

Fax: (207) 887-1051 Phone: (204) 828-1272
Project: **DPW NEY**

Customer ID: CRED25
Customer PO: 10001086
Received: 09/26/11 9:20 AM
EMSL Order: 131104722

EMSL Proj:
Analysis Date: 10/10/2011

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos			Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**		**% Non-Fibrous**	**% Type**
SH-1-A *131104722-0001*	- Asphalt Siding w/ Card Backing	Black Non-Fibrous Homogeneous	20%	Cellulose	80% Non-fibrous (other)	None Detected
SH-1-B *131104722-0002*	- Asphalt Siding w/ Card Backing	Black Non-Fibrous Homogeneous	20%	Cellulose	80% Non-fibrous (other)	None Detected
SH-1-C *131104722-0003*	- Asphalt Siding w/ Card Backing	Black Non-Fibrous Homogeneous	20%	Cellulose	80% Non-fibrous (other)	None Detected
SH-2-A *131104722-0004*	- Asphalt Roof Shingle	Black Fibrous Heterogeneous	25%	Cellulose	75% Non-fibrous (other)	None Detected
SH-2-B *131104722-0005*	- Asphalt Roof Shingle	Black Fibrous Heterogeneous	25%	Cellulose	75% Non-fibrous (other)	None Detected
SH-2-C *131104722-0006*	- Asphalt Roof Shingle	Black Fibrous Heterogeneous	25%	Cellulose	75% Non-fibrous (other)	None Detected
SH-3-A *131104722-0007*	- Asphalt Roof Paper	Black Fibrous Homogeneous	70%	Cellulose	30% Non-fibrous (other)	None Detected

Initial report from 10/10/2011 14:39:07

Analyst(s)

Steve Grise (27)

Renaldo Drakes, Laboratory Manager
or other approved signatory

Due to magnification limitations inherent in PLM, asbestos fibers in dimensions below the resolution capability of PLM may not be detected. Samples reported as <1% or none detected may require additional testing by TEM to confirm asbestos quantities. The above test report relates only to the items tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client.Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available available upong request.

Samples analyzed by EMSL Analytical, Inc. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-107T3 and VT AL357102

EMSL Analytical, Inc.
7 Constitution Way, Suite 107, Woburn, MA 01801
Phone: (781) 933-8411 Fax: (781) 933-8412 Email: bostonlab@emsl.com

Attn: **Judd Newcomb**
Credere Associates, LLC
776 Main Street
Westbrook, ME 04092

Fax: (207) 887-1051 Phone: (204) 828-1272
Project: **DPW NEY**

Customer ID: CRED25
Customer PO: 10001086
Received: 09/26/11 9:20 AM
EMSL Order: 131104722

EMSL Proj:
Analysis Date: 10/10/2011

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos			Asbestos
Sample	Description	Appearance	% Fibrous		% Non-Fibrous	% Type
SH-3-B *131104722-0008*	- Asphalt Roof Paper	Black Fibrous Homogeneous	70%	Cellulose	30% Non-fibrous (other)	None Detected
SH-3-C *131104722-0009*	- Asphalt Roof Paper	Black Fibrous Homogeneous	70%	Cellulose	30% Non-fibrous (other)	None Detected
HB-1-A *131104722-0010*	- Asphalt Siding w/ Card Backing	White/Black Fibrous Heterogeneous	35%	Cellulose	65% Non-fibrous (other)	None Detected
HB-1-B *131104722-0011*	- Asphalt Siding w/ Card Backing	White/Black Fibrous Heterogeneous	35%	Cellulose	65% Non-fibrous (other)	None Detected
HB-1-C *131104722-0012*	- Asphalt Siding w/ Card Backing	White/Black Fibrous Heterogeneous	35%	Cellulose	65% Non-fibrous (other)	None Detected
HB-2-A *131104722-0013*	- Asphalt Siding w/ Paper Backing	White/Black Fibrous Heterogeneous	25%	Cellulose	75% Non-fibrous (other)	None Detected
HB-2-B *131104722-0014*	- Asphalt Siding w/ Paper Backing	White/Black Fibrous Heterogeneous	25%	Cellulose	75% Non-fibrous (other)	None Detected

Initial report from 10/10/2011 14:39:07

Analyst(s)

Steve Grise (27)

Renaldo Drakes, Laboratory Manager
or other approved signatory

EMSL Analytical, Inc.
7 Constitution Way, Suite 107, Woburn, MA 01801
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Credere Associates, LLC
776 Main Street
Westbrook, ME 04092

Fax: (207) 887-1051 Phone: (204) 828-1272
Project: **DPW NEY**

Customer ID: CRED25
Customer PO: 10001086
Received: 09/26/11 9:20 AM
EMSL Order: 131104722

EMSL Proj:
Analysis Date: 10/10/2011

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos			Asbestos
Sample	Description	Appearance	% Fibrous		% Non-Fibrous	% Type
HB-2-C *131104722-0015*	- Asphalt Siding w/ Paper Backing	White/Black Fibrous Heterogeneous	25%	Cellulose	75% Non-fibrous (other)	None Detected
HB-3-A *131104722-0016*	- Asphalt Roof Shingle	Black Fibrous Heterogeneous	15%	Glass	85% Non-fibrous (other)	None Detected
HB-3-B *131104722-0017*	- Asphalt Roof Shingle	Black Fibrous Heterogeneous	15%	Glass	85% Non-fibrous (other)	None Detected
HB-3-C *131104722-0018*	- Asphalt Roof Shingle	Black Fibrous Heterogeneous	15%	Glass	85% Non-fibrous (other)	None Detected
VS-1-A *131104722-0019*	- Black Asphalt Roof Shingle	Black Non-Fibrous Homogeneous	15%	Glass	85% Non-fibrous (other)	None Detected
VS-1-B *131104722-0020*	- Black Asphalt Roof Shingle	Black Non-Fibrous Homogeneous	15%	Glass	85% Non-fibrous (other)	None Detected
VS-1-C *131104722-0021*	- Black Asphalt Roof Shingle	Black Non-Fibrous Homogeneous	15%	Glass	85% Non-fibrous (other)	None Detected

Initial report from 10/10/2011 14:39:07

Analyst(s)

Steve Grise (27)

Renaldo Drakes, Laboratory Manager
or other approved signatory

EMSL Analytical, Inc.
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Westbrook, ME 04092

Fax: (207) 887-1051 Phone: (204) 828-1272
Project: **DPW NEY**

Customer ID: CRED25
Customer PO: 10001086
Received: 09/26/11 9:20 AM
EMSL Order: 131104722

EMSL Proj:
Analysis Date: 10/10/2011

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos			Asbestos
Sample	Description	Appearance	% Fibrous		% Non-Fibrous	% Type
VS-2-A *131104722-0022*	- Red Asphalt Roof Shingle	Brown/Black Fibrous Heterogeneous	15%	Glass	85% Non-fibrous (other)	None Detected
VS-2-B *131104722-0023*	- Red Asphalt Roof Shingle	Brown/Black Fibrous Heterogeneous	15%	Glass	85% Non-fibrous (other)	None Detected
VS-2-C *131104722-0024*	- Red Asphalt Roof Shingle	Brown/Black Fibrous Heterogeneous	15%	Glass	85% Non-fibrous (other)	None Detected
SS-1-A *131104722-0025*	- Asphalt Roof Shingle	Black Fibrous Heterogeneous	25%	Cellulose	75% Non-fibrous (other)	None Detected
SS-1-B *131104722-0026*	- Asphalt Roof Shingle	Black Fibrous Heterogeneous	25%	Cellulose	75% Non-fibrous (other)	None Detected
SS-1-C *131104722-0027*	- Asphalt Roof Shingle	Black Fibrous Heterogeneous	25%	Cellulose	75% Non-fibrous (other)	None Detected

Initial report from 10/10/2011 14:39:07

Analyst(s)

Steve Grise (27)

Renaldo Drakes, Laboratory Manager
or other approved signatory

Due to magnification limitations inherent in PLM, asbestos fibers in dimensions below the resolution capability of PLM may not be detected. Samples reported as <1% or none detected may require additional testing by TEM to confirm asbestos quantities. The above test report relates only to the items tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client.Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available available upong request.

Samples analyzed by EMSL Analytical, Inc. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-107T3 and VT AL357102

THIS IS THE LAST PAGE OF THE REPORT.

Asbestos Chain of Custody

EMSL Order Number (*Lab Use Only*): 131104722

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LABORATORY • PRODUCTS • TRAINING

EMSL ANALYTICAL, INC.
7 CONSTITUTION WAY, STE 107
WOBURN, MA 01801
PHONE: (781) 933-8411
FAX: (781) 933-8412

Company : Credere Associates, LLC	**EMSL-Bill to:** ☒ Same ☐ Different If Bill to is Different note Instructions in Comments** *Third Party Billing requires written authorization from third party*
Street: 776 Main Street	
City: Westbrook / **State/Province: ME**	**Zip/Postal Code: 04092** / **Country: USA**
Report To (Name): JUDD NEWCOMB	**Fax #: 207-887-1051**
Telephone #: 207-828-1272 x16	**Email Address:** JNEWCOMB@CREDERELLC.com
Project Name/Number: DPW NEY	
Please Provide Results: ☐ Fax ☒ Email	**Purchase Order:** 1000086 / **U.S. State Samples Taken:** NH

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hours ☐ 6 Hours ☐ 24 Hrs ☐ 48 Hrs ☐ 3 Days ☐ 4 Days ☐ 5 Days ☒ 10 Days

**For TEM Air 3 hours/6 hours, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.*

PCM - Air
- ☐ NIOSH 7400
- ☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
- ☒ PLM EPA 600/R-93/116 (<1%)
- ☐ PLM EPA NOB (<1%)

Point Count
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)

Point Count w/Gravimetric
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)
- ☐ NYS 198.1 (friable in NY)
- ☐ NYS 198.6 NOB (non-friable-NY)
- ☐ NIOSH 9002 (<1%)

TEM - Air
- ☐ AHERA 40 CFR, Part 763
- ☐ NIOSH 7402
- ☐ EPA Level II
- ☐ ISO 10312

TEM - Bulk
- ☐ TEM EPA NOB
- ☐ NYS NOB 198.4 (non-friable-NY)
- ☐ Chatfield SOP
- ☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
- Fibers >10µm ☐ Waste ☐ Drinking
- All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
- ☐ Microvac - ASTM D 5755
- ☐ Wipe - ASTM D6480
- ☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
- ☐ PLM CARB 435 - A (0.25% sensitivity)
- ☐ PLM CARB 435 - B (0.1% sensitivity)
- ☐ TEM CARB 435 - B (0.1% sensitivity)
- ☐ TEM CARB 435 - C (0.01% sensitivity)
- ☐ EPA Protocol (Semi-Quantitative)
- ☐ EPA Protocol (Quantitative)

Other:
- ☐

☒ **Check For Positive Stop – Clearly Identify Homogenous Group**

Samplers Name: JUDD NEWCOMB **Samplers Signature:**

	Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
1	SH-1-A	Asphalt siding w/ Card backing	1	9/22/11 1200
2	-B	" "	1	
3	-C	" "	1	
4	SH-2-A	Asphalt Roof Shingle	2	1215
5	-B	" "	2	
6	-C	" "	2	
7	SH-3-A	Asphalt Roof Paper	3	1230
8	-B	" "	3	

Client Sample # (s): SH-1 ; SH-3 / HB-1 ; HB-3 / VS-1 ; VS-2 / SS-1 **Total # of Samples:** 27

Relinquished (Client): **Date:** 9/23/11 **Time:** 0800

Received (Lab): **Date:** **Time:**

Comments/Special Instructions:

RECEIVED
SEP 26 2011
BY:
9:20

FED EX 7952 1997 1581

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number (*Lab Use Only*):

131104722

EMSL ANALYTICAL, INC.
7 CONSTITUTION WAY, STE 107
WOBURN, MA 01801
PHONE: (781) 933-8411
FAX: (781) 933-8412

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

	Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
9	SH - 3 - C	Asphalt Roof Payer	3	9/22/11 1230
10	HB - 1 - A	Asphalt Siding w/ Card Backing	4	1245
11	- B	" "	4	↓
12	- C	" "	4	↓
13	HB - 2 - A	Asphalt Siding w/ Payer Backing	5	1300
14	- B	" "	5	↓
15	- C	" "	5	↓
16	HB - 3 - A	Asphalt Roof shingle	6	1315
17	- B	" "	6	↓
18	- C	" "	6	↓
19	VS - 1 - A	Asphalt Roof Shingle - Black	7	1330
20	- B	" "	7	↓
21	- C	" "	7	↓
22	VS - 2 - A	Asphalt Roof Shingle - Red	8	1345
23	- B	" "	8	↓
24	- C	" "	8	↓

***Comments/Special Instructions:**

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BY: RD
4:32 PM

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*:

131104722

EMSL ANALYTICAL, INC.
7 CONSTITUTION WAY, STE 107
WOBURN, MA 01801
PHONE: (781) 933-8411
FAX: (781) 933-8412

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

	Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
25	SS - 1 - A	Asphalt Roof Shingle	9	9/22/11 1400
26	- B	" "	9	" "
27	- C	" "	9	" "

***Comments/Special Instructions:**

RECEIVED
SEP 26 2011
BY: RD
9:20AM

Page 3 of 3 pages

Absolute Resource associates
124 Heritage Avenue #10 Portsmouth, NH 03801

Judd Newcomb
CREDERE Associates
776 Main Street
Westbrook, ME 04092

PO Number: 10001086
Job ID: 22594
Date Received: 10/11/11

Project: New England Yard

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

Sue Sylvester
Principal, General Manager

Date of Approval: 10/25/2011
Total number of pages: 43

Absolute Resource Associates Certifications

New Hampshire	1732	Massachusetts	M-NH902
Maine	NH903		

Project ID: New England Yard
Lab ID: 22594

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
CA-1	Water	10/6/2011 14:28	22594-001	
				PAHs in water by 8270
				Lead in water by 6010
				VOCs in water by 8260 Petro & Haz Waste
CA-2	Water	10/6/2011 13:40	22594-002	
				PAHs in water by 8270
				Lead in water by 6010
				VOCs in water by 8260 Petro & Haz Waste
CA-3	Water	10/6/2011 15:35	22594-003	
				PAHs in water by 8270
				VOCs in water by 8260 Petro & Haz Waste
CA-4	Water	10/6/2011 15:05	22594-004	
				PAHs in water by 8270
				VOCs in water by 8260 Petro & Haz Waste
CA-5	Water	10/6/2011 13:10	22594-005	
				PAHs in water by 8270
				VOCs in water by 8260 Petro & Haz Waste
CA-6	Water	10/6/2011 12:40	22594-006	
				Acid & Base/Neutral Extractables in water by 8270
				Silver in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Cadmium in water by 6010
				Chromium in water by 6010
				Mercury in water by 7470
				Lead in water by 6010
				Selenium in water by 6010
				VOCs in water by 8260 Petro & Haz Waste
DUP-GW	Water	10/6/2011 0:00	22594-007	
				PAHs in water by 8270
				VOCs in water by 8260 Petro & Haz Waste
DUP-GW-2	Water	10/6/2011 0:00	22594-008	
				Lead in water by 6010
TB	Water	10/6/2011 0:00	22594-009	
				VOCs in water by 8260 Petro & Haz Waste

Absolute Resource associates

Project ID: New England Yard
Job ID: 22594
Sample#: 22594-001
Sample ID: CA-1
Matrix: Water
Sampled: 10/6/11 14:28

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
chloromethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
vinyl chloride	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
bromomethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
chloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
diethyl ether	< 5	5	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
acetone	< 50	50	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
methylene chloride	< 5	5	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
carbon disulfide	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
isopropyl ether (DIPE)	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
ethyl t-butyl ether (ETBE)	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
t-butanol (TBA)	< 30	30	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
2-butanone (MEK)	< 10	10	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
2,2-dichloropropane	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
chloroform	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
bromochloromethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
tetrahydrofuran (THF)	< 10	10	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
1,1-dichloropropene	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
t-amyl-methyl ether (TAME)	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
carbon tetrachloride	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
benzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
trichloroethene	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
bromodichloromethane	< 0.6	0.6	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
1,4-dioxane	< 50	50	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
dibromomethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
toluene	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
2-hexanone	< 10	10	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
1,3-dichloropropane	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
tetrachloroethene	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
dibromochloromethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B

Absolute Resource associates

Project ID: New England Yard
Job ID: 22594
Sample#: 22594-001
Sample ID: CA-1
Matrix: Water
Sampled: 10/6/11 14:28

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
chlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
ethylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
m&p-xylenes	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
o-xylene	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
styrene	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
bromoform	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
isopropylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
1,2,3-trichloropropane	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
n-propylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
bromobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
1,3,5-trimethylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
2-chlorotoluene	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
4-chlorotoluene	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
tert-butylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
1,2,4-trimethylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
sec-butylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
1,3-dichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
4-isopropyltoluene	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
1,4-dichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
1,2-dichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
n-butylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
1,2,4-trichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
1,3,5-trichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
hexachlorobutadiene	< 0.5	0.5	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
naphthalene	**6**	5	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
1,2,3-trichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**99**	78-114	%	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
toluene-D8 SUR	**95**	88-110	%	1	LMM		1102315	10/14/11	14:53	SW5030B8260B
4-bromofluorobenzene SUR	**91**	86-115	%	1	LMM		1102315	10/14/11	14:53	SW5030B8260B

Absolute Resource associates

Project ID: New England Yard
Job ID: 22594
Sample#: 22594-002
Sample ID: CA-2
Matrix: Water
Sampled: 10/6/11 13:40

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
chloromethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
vinyl chloride	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
bromomethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
chloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
diethyl ether	< 5	5	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
acetone	< 50	50	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
methylene chloride	< 5	5	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
carbon disulfide	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
isopropyl ether (DIPE)	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
ethyl t-butyl ether (ETBE)	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
t-butanol (TBA)	< 30	30	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
2-butanone (MEK)	< 10	10	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
2,2-dichloropropane	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
chloroform	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
bromochloromethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
tetrahydrofuran (THF)	< 10	10	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
1,1-dichloropropene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
t-amyl-methyl ether (TAME)	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
carbon tetrachloride	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
benzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
trichloroethene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
bromodichloromethane	< 0.6	0.6	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
1,4-dioxane	< 50	50	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
dibromomethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
toluene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
2-hexanone	< 10	10	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
1,3-dichloropropane	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
tetrachloroethene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
dibromochloromethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B

Absolute Resource associates

Project ID: New England Yard
Job ID: 22594
Sample#: 22594-002
Sample ID: CA-2
Matrix: Water
Sampled: 10/6/11 13:40

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
chlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
ethylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
m&p-xylenes	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
o-xylene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
styrene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
bromoform	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
isopropylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
1,2,3-trichloropropane	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
n-propylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
bromobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
1,3,5-trimethylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
2-chlorotoluene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
4-chlorotoluene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
tert-butylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
1,2,4-trimethylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
sec-butylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
1,3-dichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
4-isopropyltoluene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
1,4-dichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
1,2-dichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
n-butylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
1,2,4-trichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
1,3,5-trichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
hexachlorobutadiene	< 0.5	0.5	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
naphthalene	< 5	5	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
1,2,3-trichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**93**	78-114	%	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
toluene-D8 SUR	**93**	88-110	%	1	LMM		1102315	10/14/11	19:08	SW5030B8260B
4-bromofluorobenzene SUR	**94**	86-115	%	1	LMM		1102315	10/14/11	19:08	SW5030B8260B

Absolute Resource associates

Project ID: New England Yard
Job ID: 22594
Sample#: 22594-003
Sample ID: CA-3
Matrix: Water
Sampled: 10/6/11 15:35

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
chloromethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
vinyl chloride	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
bromomethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
chloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
diethyl ether	< 5	5	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
acetone	< 50	50	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
methylene chloride	< 5	5	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
carbon disulfide	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
isopropyl ether (DIPE)	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
ethyl t-butyl ether (ETBE)	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
t-butanol (TBA)	< 30	30	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
2-butanone (MEK)	< 10	10	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
2,2-dichloropropane	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
chloroform	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
bromochloromethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
tetrahydrofuran (THF)	< 10	10	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
1,1-dichloropropene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
t-amyl-methyl ether (TAME)	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
carbon tetrachloride	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
benzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
trichloroethene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
bromodichloromethane	< 0.6	0.6	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
1,4-dioxane	< 50	50	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
dibromomethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
toluene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
2-hexanone	< 10	10	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
1,3-dichloropropane	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
tetrachloroethene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
dibromochloromethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B

Project ID: New England Yard
Job ID: 22594
Sample#: 22594-003
Sample ID: CA-3
Matrix: Water
Sampled: 10/6/11 15:35

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
chlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
ethylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
m&p-xylenes	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
o-xylene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
styrene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
bromoform	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
isopropylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
1,2,3-trichloropropane	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
n-propylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
bromobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
1,3,5-trimethylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
2-chlorotoluene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
4-chlorotoluene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
tert-butylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
1,2,4-trimethylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
sec-butylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
1,3-dichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
4-isopropyltoluene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
1,4-dichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
1,2-dichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
n-butylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
1,2,4-trichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
1,3,5-trichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
hexachlorobutadiene	< 0.5	0.5	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
naphthalene	< 5	5	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
1,2,3-trichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**94**	78-114	%	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
toluene-D8 SUR	**91**	88-110	%	1	LMM		1102315	10/14/11	19:39	SW5030B8260B
4-bromofluorobenzene SUR	**91**	86-115	%	1	LMM		1102315	10/14/11	19:39	SW5030B8260B

Absolute Resource associates

Project ID: New England Yard
Job ID: 22594
Sample#: 22594-004
Sample ID: CA-4
Matrix: Water
Sampled: 10/6/11 15:05

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
chloromethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
vinyl chloride	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
bromomethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
chloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
diethyl ether	< 5	5	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
acetone	< 50	50	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
methylene chloride	< 5	5	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
carbon disulfide	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
isopropyl ether (DIPE)	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
ethyl t-butyl ether (ETBE)	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
t-butanol (TBA)	< 30	30	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
2-butanone (MEK)	< 10	10	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
2,2-dichloropropane	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
chloroform	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
bromochloromethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
tetrahydrofuran (THF)	< 10	10	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
1,1-dichloropropene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
t-amyl-methyl ether (TAME)	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
carbon tetrachloride	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
benzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
trichloroethene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
bromodichloromethane	< 0.6	0.6	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
1,4-dioxane	< 50	50	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
dibromomethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
toluene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
2-hexanone	< 10	10	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
1,3-dichloropropane	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
tetrachloroethene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
dibromochloromethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B

Project ID: New England Yard
Job ID: 22594
Sample#: 22594-004
Sample ID: CA-4
Matrix: Water
Sampled: 10/6/11 15:05

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
chlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
ethylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
m&p-xylenes	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
o-xylene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
styrene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
bromoform	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
isopropylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
1,2,3-trichloropropane	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
n-propylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
bromobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
1,3,5-trimethylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
2-chlorotoluene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
4-chlorotoluene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
tert-butylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
1,2,4-trimethylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
sec-butylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
1,3-dichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
4-isopropyltoluene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
1,4-dichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
1,2-dichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
n-butylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
1,2,4-trichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
1,3,5-trichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
hexachlorobutadiene	< 0.5	0.5	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
naphthalene	< 5	5	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
1,2,3-trichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**94**	78-114	%	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
toluene-D8 SUR	**92**	88-110	%	1	LMM		1102315	10/14/11	20:10	SW5030B8260B
4-bromofluorobenzene SUR	**92**	86-115	%	1	LMM		1102315	10/14/11	20:10	SW5030B8260B

Absolute Resource associates

Project ID: New England Yard
Job ID: 22594
Sample#: 22594-005
Sample ID: CA-5
Matrix: Water
Sampled: 10/6/11 13:10

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
chloromethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
vinyl chloride	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
bromomethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
chloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
diethyl ether	< 5	5	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
acetone	< 50	50	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
methylene chloride	< 5	5	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
carbon disulfide	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
isopropyl ether (DIPE)	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
ethyl t-butyl ether (ETBE)	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
t-butanol (TBA)	< 30	30	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
2-butanone (MEK)	< 10	10	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
2,2-dichloropropane	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
chloroform	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
bromochloromethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
tetrahydrofuran (THF)	< 10	10	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
1,1-dichloropropene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
t-amyl-methyl ether (TAME)	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
carbon tetrachloride	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
benzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
trichloroethene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
bromodichloromethane	< 0.6	0.6	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
1,4-dioxane	< 50	50	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
dibromomethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
toluene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
2-hexanone	< 10	10	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
1,3-dichloropropane	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
tetrachloroethene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
dibromochloromethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B

Project ID: New England Yard
Job ID: 22594
Sample#: 22594-005
Sample ID: CA-5
Matrix: Water
Sampled: 10/6/11 13:10

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
chlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
ethylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
m&p-xylenes	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
o-xylene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
styrene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
bromoform	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
isopropylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
1,2,3-trichloropropane	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
n-propylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
bromobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
1,3,5-trimethylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
2-chlorotoluene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
4-chlorotoluene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
tert-butylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
1,2,4-trimethylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
sec-butylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
1,3-dichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
4-isopropyltoluene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
1,4-dichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
1,2-dichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
n-butylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
1,2,4-trichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
1,3,5-trichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
hexachlorobutadiene	< 0.5	0.5	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
naphthalene	< 5	5	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
1,2,3-trichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**100**	78-114	%	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
toluene-D8 SUR	**95**	88-110	%	1	LMM		1102315	10/14/11	20:42	SW5030B8260B
4-bromofluorobenzene SUR	**87**	86-115	%	1	LMM		1102315	10/14/11	20:42	SW5030B8260B

Absolute Resource associates

Project ID: New England Yard
Job ID: 22594
Sample#: 22594-006
Sample ID: CA-6
Matrix: Water
Sampled: 10/6/11 12:40

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
chloromethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
vinyl chloride	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
bromomethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
chloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
diethyl ether	< 5	5	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
acetone	< 50	50	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
methylene chloride	< 5	5	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
carbon disulfide	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
isopropyl ether (DIPE)	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
ethyl t-butyl ether (ETBE)	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
t-butanol (TBA)	< 30	30	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
2-butanone (MEK)	< 10	10	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
2,2-dichloropropane	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
chloroform	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
bromochloromethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
tetrahydrofuran (THF)	< 10	10	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
1,1-dichloropropene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
t-amyl-methyl ether (TAME)	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
carbon tetrachloride	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
benzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
trichloroethene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
bromodichloromethane	< 0.6	0.6	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
1,4-dioxane	< 50	50	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
dibromomethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
toluene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
2-hexanone	< 10	10	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
1,3-dichloropropane	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
tetrachloroethene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
dibromochloromethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B

Project ID: New England Yard
Job ID: 22594
Sample#: 22594-006
Sample ID: CA-6
Matrix: Water
Sampled: 10/6/11 12:40

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
chlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
ethylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
m&p-xylenes	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
o-xylene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
styrene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
bromoform	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
isopropylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
1,2,3-trichloropropane	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
n-propylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
bromobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
1,3,5-trimethylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
2-chlorotoluene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
4-chlorotoluene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
tert-butylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
1,2,4-trimethylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
sec-butylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
1,3-dichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
4-isopropyltoluene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
1,4-dichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
1,2-dichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
n-butylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
1,2,4-trichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
1,3,5-trichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
hexachlorobutadiene	< 0.5	0.5	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
naphthalene	< 5	5	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
1,2,3-trichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**95**	78-114	%	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
toluene-D8 SUR	**91**	88-110	%	1	LMM		1102315	10/14/11	21:13	SW5030B8260B
4-bromofluorobenzene SUR	**87**	86-115	%	1	LMM		1102315	10/14/11	21:13	SW5030B8260B

Absolute Resource associates

Project ID: New England Yard
Job ID: 22594
Sample#: 22594-007
Sample ID: DUP-GW
Matrix: Water
Sampled: 10/6/11 0:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
chloromethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
vinyl chloride	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
bromomethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
chloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
diethyl ether	< 5	5	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
acetone	< 50	50	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
methylene chloride	< 5	5	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
carbon disulfide	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
isopropyl ether (DIPE)	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
ethyl t-butyl ether (ETBE)	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
t-butanol (TBA)	< 30	30	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
2-butanone (MEK)	< 10	10	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
2,2-dichloropropane	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
chloroform	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
bromochloromethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
tetrahydrofuran (THF)	< 10	10	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
1,1-dichloropropene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
t-amyl-methyl ether (TAME)	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
carbon tetrachloride	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
benzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
trichloroethene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
bromodichloromethane	< 0.6	0.6	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
1,4-dioxane	< 50	50	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
dibromomethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
toluene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
2-hexanone	< 10	10	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
1,3-dichloropropane	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
tetrachloroethene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
dibromochloromethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B

Project ID: New England Yard
Job ID: 22594
Sample#: 22594-007
Sample ID: DUP-GW
Matrix: Water
Sampled: 10/6/11 0:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
chlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
ethylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
m&p-xylenes	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
o-xylene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
styrene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
bromoform	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
isopropylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
1,2,3-trichloropropane	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
n-propylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
bromobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
1,3,5-trimethylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
2-chlorotoluene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
4-chlorotoluene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
tert-butylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
1,2,4-trimethylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
sec-butylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
1,3-dichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
4-isopropyltoluene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
1,4-dichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
1,2-dichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
n-butylbenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
1,2,4-trichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
1,3,5-trichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
hexachlorobutadiene	< 0.5	0.5	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
naphthalene	< 5	5	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
1,2,3-trichlorobenzene	< 2	2	ug/L	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**97**	78-114	%	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
toluene-D8 SUR	**94**	88-110	%	1	LMM		1102315	10/14/11	21:45	SW5030B8260B
4-bromofluorobenzene SUR	**94**	86-115	%	1	LMM		1102315	10/14/11	21:45	SW5030B8260B

Absolute Resource associates

Project ID: New England Yard
Job ID: 22594
Sample#: 22594-009
Sample ID: TB
Matrix: Water
Sampled: 10/6/11 0:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
chloromethane	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
vinyl chloride	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
bromomethane	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
chloroethane	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
diethyl ether	< 5	5	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
acetone	< 50	50	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
methylene chloride	< 5	5	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
carbon disulfide	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
isopropyl ether (DIPE)	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
ethyl t-butyl ether (ETBE)	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
t-butanol (TBA)	< 30	30	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
2-butanone (MEK)	< 10	10	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
2,2-dichloropropane	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
chloroform	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
bromochloromethane	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
tetrahydrofuran (THF)	< 10	10	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
1,1-dichloropropene	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
t-amyl-methyl ether (TAME)	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
carbon tetrachloride	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
benzene	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
trichloroethene	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
bromodichloromethane	< 0.6	0.6	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
1,4-dioxane	< 50	50	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
dibromomethane	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
toluene	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
2-hexanone	< 10	10	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
1,3-dichloropropane	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
tetrachloroethene	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
dibromochloromethane	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B

Project ID: New England Yard
Job ID: 22594
Sample#: 22594-009
Sample ID: TB
Matrix: Water
Sampled: 10/6/11 0:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
chlorobenzene	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
ethylbenzene	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
m&p-xylenes	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
o-xylene	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
styrene	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
bromoform	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
isopropylbenzene	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
1,2,3-trichloropropane	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
n-propylbenzene	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
bromobenzene	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
1,3,5-trimethylbenzene	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
2-chlorotoluene	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
4-chlorotoluene	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
tert-butylbenzene	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
1,2,4-trimethylbenzene	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
sec-butylbenzene	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
1,3-dichlorobenzene	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
4-isopropyltoluene	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
1,4-dichlorobenzene	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
1,2-dichlorobenzene	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
n-butylbenzene	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
1,2,4-trichlorobenzene	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
1,3,5-trichlorobenzene	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
hexachlorobutadiene	< 0.5	0.5	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
naphthalene	< 5	5	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
1,2,3-trichlorobenzene	< 2	2	ug/L	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**86**	78-114	%	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
toluene-D8 SUR	**93**	88-110	%	1	LMM		1102331	10/18/11	18:05	SW5030B8260B
4-bromofluorobenzene SUR	**91**	86-115	%	1	LMM		1102331	10/18/11	18:05	SW5030B8260B

Project ID: New England Yard
Job ID: 22594
Sample#: 22594-001
Sample ID: CA-1
Matrix: Water
Sampled: 10/6/11 14:28

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	**1.4**	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	15:06	SW3510C8270D
2-methylnaphthalene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	15:06	SW3510C8270D
acenaphthylene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	15:06	SW3510C8270D
acenaphthene	**0.7**	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	15:06	SW3510C8270D
dibenzofuran	**0.5**	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	15:06	SW3510C8270D
fluorene	**0.8**	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	15:06	SW3510C8270D
phenanthrene	**0.9**	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	15:06	SW3510C8270D
anthracene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	15:06	SW3510C8270D
fluoranthene	**0.9**	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	15:06	SW3510C8270D
pyrene	**0.8**	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	15:06	SW3510C8270D
benzo(a)anthracene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	15:06	SW3510C8270D
chrysene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	15:06	SW3510C8270D
benzo(b)fluoranthene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	15:06	SW3510C8270D
benzo(k)fluoranthene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	15:06	SW3510C8270D
benzo(a)pyrene	**0.3**	0.2	ug/L	1	AJD	10/13/11	4624	10/19/11	15:06	SW3510C8270D
indeno(1,2,3-cd)pyrene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	15:06	SW3510C8270D
dibenzo(a,h)anthracene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	15:06	SW3510C8270D
benzo(g,h,i)perylene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	15:06	SW3510C8270D
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**70**	43-116	%	1	AJD	10/13/11	4624	10/19/11	15:06	SW3510C8270D
o-terphenyl SUR	**69**	33-141	%	1	AJD	10/13/11	4624	10/19/11	15:06	SW3510C8270D

Project ID: New England Yard
Job ID: 22594
Sample#: 22594-002
Sample ID: CA-2
Matrix: Water
Sampled: 10/6/11 13:40

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	**0.9**	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	17:03	SW3510C8270D
2-methylnaphthalene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	17:03	SW3510C8270D
acenaphthylene	**1.0**	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	17:03	SW3510C8270D
acenaphthene	**0.7**	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	17:03	SW3510C8270D
dibenzofuran	**1.1**	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	17:03	SW3510C8270D
fluorene	**1.4**	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	17:03	SW3510C8270D
phenanthrene	**4.6**	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	17:03	SW3510C8270D
anthracene	**1.1**	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	17:03	SW3510C8270D
fluoranthene	**2.7**	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	17:03	SW3510C8270D
pyrene	**2.6**	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	17:03	SW3510C8270D
benzo(a)anthracene	**1.1**	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	17:03	SW3510C8270D
chrysene	**1.0**	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	17:03	SW3510C8270D
benzo(b)fluoranthene	**1.0**	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	17:03	SW3510C8270D
benzo(k)fluoranthene	**0.6**	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	17:03	SW3510C8270D
benzo(a)pyrene	**0.8**	0.2	ug/L	1	AJD	10/13/11	4624	10/19/11	17:03	SW3510C8270D
indeno(1,2,3-cd)pyrene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	17:03	SW3510C8270D
dibenzo(a,h)anthracene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	17:03	SW3510C8270D
benzo(g,h,i)perylene	**0.6**	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	17:03	SW3510C8270D
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**72**	43-116	%	1	AJD	10/13/11	4624	10/19/11	17:03	SW3510C8270D
o-terphenyl SUR	**67**	33-141	%	1	AJD	10/13/11	4624	10/19/11	17:03	SW3510C8270D

Project ID: New England Yard
Job ID: 22594
Sample#: 22594-003
Sample ID: CA-3
Matrix: Water
Sampled: 10/6/11 15:35

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	**0.8**	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	14:28	SW3510C8270D
2-methylnaphthalene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	14:28	SW3510C8270D
acenaphthylene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	14:28	SW3510C8270D
acenaphthene	**0.6**	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	14:28	SW3510C8270D
dibenzofuran	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	14:28	SW3510C8270D
fluorene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	14:28	SW3510C8270D
phenanthrene	**0.7**	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	14:28	SW3510C8270D
anthracene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	14:28	SW3510C8270D
fluoranthene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	14:28	SW3510C8270D
pyrene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	14:28	SW3510C8270D
benzo(a)anthracene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	14:28	SW3510C8270D
chrysene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	14:28	SW3510C8270D
benzo(b)fluoranthene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	14:28	SW3510C8270D
benzo(k)fluoranthene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	14:28	SW3510C8270D
benzo(a)pyrene	< 0.2	0.2	ug/L	1	AJD	10/13/11	4624	10/19/11	14:28	SW3510C8270D
indeno(1,2,3-cd)pyrene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	14:28	SW3510C8270D
dibenzo(a,h)anthracene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	14:28	SW3510C8270D
benzo(g,h,i)perylene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	14:28	SW3510C8270D
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**68**	43-116	%	1	AJD	10/13/11	4624	10/19/11	14:28	SW3510C8270D
o-terphenyl SUR	**68**	33-141	%	1	AJD	10/13/11	4624	10/19/11	14:28	SW3510C8270D

Project ID: New England Yard
Job ID: 22594
Sample#: 22594-004
Sample ID: CA-4
Matrix: Water
Sampled: 10/6/11 15:05

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	15:44	SW3510C8270D
2-methylnaphthalene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	15:44	SW3510C8270D
acenaphthylene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	15:44	SW3510C8270D
acenaphthene	**0.6**	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	15:44	SW3510C8270D
dibenzofuran	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	15:44	SW3510C8270D
fluorene	**0.7**	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	15:44	SW3510C8270D
phenanthrene	**1.0**	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	15:44	SW3510C8270D
anthracene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	15:44	SW3510C8270D
fluoranthene	**1.4**	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	15:44	SW3510C8270D
pyrene	**1.4**	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	15:44	SW3510C8270D
benzo(a)anthracene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	15:44	SW3510C8270D
chrysene	**0.6**	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	15:44	SW3510C8270D
benzo(b)fluoranthene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	15:44	SW3510C8270D
benzo(k)fluoranthene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	15:44	SW3510C8270D
benzo(a)pyrene	**0.4**	0.2	ug/L	1	AJD	10/13/11	4624	10/19/11	15:44	SW3510C8270D
indeno(1,2,3-cd)pyrene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	15:44	SW3510C8270D
dibenzo(a,h)anthracene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	15:44	SW3510C8270D
benzo(g,h,i)perylene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	15:44	SW3510C8270D
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**56**	43-116	%	1	AJD	10/13/11	4624	10/19/11	15:44	SW3510C8270D
o-terphenyl SUR	**54**	33-141	%	1	AJD	10/13/11	4624	10/19/11	15:44	SW3510C8270D

Project ID: New England Yard
Job ID: 22594
Sample#: 22594-005
Sample ID: CA-5
Matrix: Water
Sampled: 10/6/11 13:10

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
naphthalene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	13:51	SW3510C8270D
2-methylnaphthalene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	13:51	SW3510C8270D
acenaphthylene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	13:51	SW3510C8270D
acenaphthene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	13:51	SW3510C8270D
dibenzofuran	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	13:51	SW3510C8270D
fluorene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	13:51	SW3510C8270D
phenanthrene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	13:51	SW3510C8270D
anthracene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	13:51	SW3510C8270D
fluoranthene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	13:51	SW3510C8270D
pyrene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	13:51	SW3510C8270D
benzo(a)anthracene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	13:51	SW3510C8270D
chrysene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	13:51	SW3510C8270D
benzo(b)fluoranthene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	13:51	SW3510C8270D
benzo(k)fluoranthene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	13:51	SW3510C8270D
benzo(a)pyrene	< 0.2	0.2	ug/L	1	AJD	10/13/11	4624	10/19/11	13:51	SW3510C8270D
indeno(1,2,3-cd)pyrene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	13:51	SW3510C8270D
dibenzo(a,h)anthracene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	13:51	SW3510C8270D
benzo(g,h,i)perylene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	13:51	SW3510C8270D
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**70**	43-116	%	1	AJD	10/13/11	4624	10/19/11	13:51	SW3510C8270D
o-terphenyl SUR	**69**	33-141	%	1	AJD	10/13/11	4624	10/19/11	13:51	SW3510C8270D

Project ID: New England Yard
Job ID: 22594
Sample#: 22594-006
Sample ID: CA-6
Matrix: Water
Sampled: 10/6/11 12:40

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
N-nitrosodimethylamine	< 2	2	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
aniline	< 2	2	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
phenol	< 2	2	ug/L	1	AJD	10/13/11	4624	10/20/11	10:48	SW3510C8270D
2-chlorophenol	< 5	5	ug/L	1	AJD	10/13/11	4624	10/20/11	10:48	SW3510C8270D
bis(2-chloroethyl)ether	< 2	2	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
1,3-dichlorobenzene	< 2	2	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
1,4-dichlorobenzene	< 2	2	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
1,2-dichlorobenzene	< 2	2	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
benzyl alcohol	< 2	2	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
2-methylphenol	< 2	2	ug/L	1	AJD	10/13/11	4624	10/20/11	10:48	SW3510C8270D
bis(2-chloroisopropyl) ether	< 2	2	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
hexachloroethane	< 2	2	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
N-nitroso-di-N-propylamine	< 2	2	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
4-methylphenol	< 2	2	ug/L	1	AJD	10/13/11	4624	10/20/11	10:48	SW3510C8270D
nitrobenzene	< 2	2	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
isophorone	< 5	5	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
2-nitrophenol	< 2	2	ug/L	1	AJD	10/13/11	4624	10/20/11	10:48	SW3510C8270D
2,4-dimethylphenol	< 2	2	ug/L	1	AJD	10/13/11	4624	10/20/11	10:48	SW3510C8270D
bis(2-chloroethoxy)methane	< 5	5	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
2,4-dichlorophenol	< 5	5	ug/L	1	AJD	10/13/11	4624	10/20/11	10:48	SW3510C8270D
1,2,4-trichlorobenzene	< 5	5	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
naphthalene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
benzoic acid	< 50	50	ug/L	1	AJD	10/13/11	4624	10/20/11	10:48	SW3510C8270D
4-chloroaniline	< 2	2	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
hexachlorobutadiene	< 2	2	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
4-chloro-3-methylphenol	< 2	2	ug/L	1	AJD	10/13/11	4624	10/20/11	10:48	SW3510C8270D
2-methylnaphthalene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
hexachlorocyclopentadiene	< 10	10	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
2,4,6-trichlorophenol	< 2	2	ug/L	1	AJD	10/13/11	4624	10/20/11	10:48	SW3510C8270D
2,4,5-trichlorophenol	< 2	2	ug/L	1	AJD	10/13/11	4624	10/20/11	10:48	SW3510C8270D
2-chloronaphthalene	< 5	5	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
2-nitroaniline	< 2	2	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
acenaphthylene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
dimethylphthalate	< 5	5	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
2,6-dinitrotoluene	< 2	2	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
2,4-dinitrotoluene	< 2	2	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
acenaphthene	**0.6**	0.5	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
3-nitroaniline	< 2	2	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
2,4-dinitrophenol	< 50	50	ug/L	1	AJD	10/13/11	4624	10/20/11	10:48	SW3510C8270D
dibenzofuran	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
4-nitrophenol	< 10	10	ug/L	1	AJD	10/13/11	4624	10/20/11	10:48	SW3510C8270D
fluorene	**0.7**	0.5	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
diethyl phthalate	< 5	5	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D

Project ID: New England Yard
Job ID: 22594
Sample#: 22594-006
Sample ID: CA-6
Matrix: Water
Sampled: 10/6/11 12:40

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
4-chlorophenyl phenyl ether	< 5	5	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
4-nitroaniline	< 5	5	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
4,6-dinitro-2-methylphenol	< 20	20	ug/L	1	AJD	10/13/11	4624	10/20/11	10:48	SW3510C8270D
azobenzene	< 2	2	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
N-nitrosodiphenylamine	< 2	2	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
4-bromophenyl phenyl ether	< 2	2	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
hexachlorobenzene	< 2	2	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
pentachlorophenol	< 10	10	ug/L	1	AJD	10/13/11	4624	10/20/11	10:48	SW3510C8270D
phenanthrene	**1.1**	0.5	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
anthracene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
carbazole	< 2	2	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
di-n-butylphthalate	< 5	5	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
fluoranthene	**1.6**	0.5	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
benzidine	< 30	30	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
pyrene	**1.6**	0.5	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
butyl benzyl phthalate	< 5	5	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
benzo(a)anthracene	**0.5**	0.5	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
chrysene	**0.7**	0.5	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
3,3'-dichlorobenzidine	< 30	30	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
bis(2-ethylhexyl)phthalate	< 5	5	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
di-n-octyl phthalate	< 2	2	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
benzo(b)fluoranthene	**0.6**	0.5	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
benzo(k)fluoranthene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
benzo(a)pyrene	**0.5**	0.2	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
indeno(1,2,3-cd)pyrene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
dibenzo(a,h)anthracene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
benzo(g,h,i)perylene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
Surrogate Recovery		**Limits**								
2-fluorophenol SUR	**29**	21-100	%	1	AJD	10/13/11	4624	10/20/11	10:48	SW3510C8270D
phenol-D5 SUR	**16**	10-102	%	1	AJD	10/13/11	4624	10/20/11	10:48	SW3510C8270D
2,4,6-tribromophenol SUR	**64**	10-123	%	1	AJD	10/13/11	4624	10/20/11	10:48	SW3510C8270D
nitrobenzene-D5 SUR	**68**	35-114	%	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
2-fluorobiphenyl SUR	**62**	43-116	%	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D
p-terphenyl-D14 SUR	**81**	33-141	%	1	AJD	10/13/11	4624	10/20/11	11:26	SW3510C8270D

Project ID: New England Yard
Job ID: 22594
Sample#: 22594-007
Sample ID: DUP-GW
Matrix: Water
Sampled: 10/6/11 0:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	13:13	SW3510C8270D
2-methylnaphthalene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	13:13	SW3510C8270D
acenaphthylene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	13:13	SW3510C8270D
acenaphthene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	13:13	SW3510C8270D
dibenzofuran	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	13:13	SW3510C8270D
fluorene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	13:13	SW3510C8270D
phenanthrene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	13:13	SW3510C8270D
anthracene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	13:13	SW3510C8270D
fluoranthene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	13:13	SW3510C8270D
pyrene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	13:13	SW3510C8270D
benzo(a)anthracene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	13:13	SW3510C8270D
chrysene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	13:13	SW3510C8270D
benzo(b)fluoranthene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	13:13	SW3510C8270D
benzo(k)fluoranthene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	13:13	SW3510C8270D
benzo(a)pyrene	< 0.2	0.2	ug/L	1	AJD	10/13/11	4624	10/19/11	13:13	SW3510C8270D
indeno(1,2,3-cd)pyrene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	13:13	SW3510C8270D
dibenzo(a,h)anthracene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	13:13	SW3510C8270D
benzo(g,h,i)perylene	< 0.5	0.5	ug/L	1	AJD	10/13/11	4624	10/19/11	13:13	SW3510C8270D
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**69**	43-116	%	1	AJD	10/13/11	4624	10/19/11	13:13	SW3510C8270D
o-terphenyl SUR	**68**	33-141	%	1	AJD	10/13/11	4624	10/19/11	13:13	SW3510C8270D

Project ID: New England Yard
Job ID: 22594

Sample#: 22594-001
Sample ID: CA-1
Matrix: Water
Sampled: 10/6/11 14:28

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
Lead	< 0.008	0.008	mg/L	1	BJS		1102281	10/13/11	15:44	SW3005A6010C

Sample#: 22594-002
Sample ID: CA-2
Matrix: Water
Sampled: 10/6/11 13:40

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
Lead	< 0.008	0.008	mg/L	1	BJS		1102281	10/13/11	15:50	SW3005A6010C

Sample#: 22594-006
Sample ID: CA-6
Matrix: Water
Sampled: 10/6/11 12:40

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
Arsenic	< 0.008	0.008	mg/L	1	BJS		1102281	10/13/11	14:06	SW3005A6010C
Barium	**0.06**	0.05	mg/L	1	BJS		1102281	10/13/11	14:06	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1102281	10/13/11	14:06	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1102281	10/13/11	14:06	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1102281	10/13/11	14:06	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	10/13/11	4630	10/14/11	9:23	SW7470A
Selenium	< 0.05	0.05	mg/L	1	BJS		1102281	10/13/11	14:06	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1102281	10/13/11	14:06	SW3005A6010C

Sample#: 22594-008
Sample ID: DUP-GW-2
Matrix: Water
Sampled: 10/6/11 0:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
Lead	< 0.008	0.008	mg/L	1	BJS		1102281	10/13/11	15:56	SW3005A6010C

Quality Control Report

124 Heritage Avenue Unit 10
Portsmouth, NH 03801
www.absoluteresourceassociates.com

Case Narrative
Lab # 22594

Sample Receiving and Chain of Custody Discrepancies

Samples were received in acceptable condition, at 2 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/D1102315 did not meet the acceptance criteria for dichlorodifluoromethane and 1,4-dioxane. These compounds showed high recovery. There is no impact to the data as these analytes were not detected in the associated samples. The LCS/D1102315 did not meet the acceptance criteria for bromomethane, 2-butanone (MEK), and 2,2-dichloropropane. Since <10% of the compounds were outside of the acceptance criteria, reanalysis is not required.

SVOC: The LCS/D4624 did not meet the acceptance criteria for phenol, hexachlorocyclopentadiene, and dimethylphthalate. 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
SW5030B8260B	BLK1102315	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					

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample		Result	Units Amt Added	%R	Limits		RPD	RPD Limit
SW5030B8260B	BLK1102315	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		<	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			98	%		78	114		
		toluene-D8 SUR			93	%		88	110		
		4-bromofluorobenzene SUR			95	%		86	115		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5030B8260B	LCS1102315	dichlorodifluoromethane			36	ug/L	20	181	*	70	130		
		chloromethane			22	ug/L	20	112		70	130		
		vinyl chloride			23	ug/L	20	117		70	130		
		bromomethane			13	ug/L	20	65	*	70	130		
		chloroethane			21	ug/L	20	103		70	130		
		trichlorofluoromethane			23	ug/L	20	116		70	130		
		diethyl ether			19	ug/L	20	93		70	130		
		acetone		<	50	ug/L	20	79					
		1,1-dichloroethene			20	ug/L	20	100		70	130		
		methylene chloride			20	ug/L	20	100		70	130		
		carbon disulfide			16	ug/L	20	81		70	130		
		methyl t-butyl ether (MTBE)			20	ug/L	20	102		70	130		
		trans-1,2-dichloroethene			19	ug/L	20	97		70	130		
		isopropyl ether (DIPE)			19	ug/L	20	95		70	130		
		ethyl t-butyl ether (ETBE)			19	ug/L	20	93		70	130		
		1,1-dichloroethane			19	ug/L	20	97		70	130		
		t-butanol (TBA)			130	ug/L	100	125		70	130		
		2-butanone (MEK)			13	ug/L	20	66	*	70	130		
		2,2-dichloropropane			13	ug/L	20	64	*	70	130		
		cis-1,2-dichloroethene			19	ug/L	20	94		70	130		
		chloroform			20	ug/L	20	100		70	130		
		bromochloromethane			18	ug/L	20	90		70	130		
		tetrahydrofuran (THF)			21	ug/L	20	103		70	130		
		1,1,1-trichloroethane			19	ug/L	20	94		70	130		
		1,1-dichloropropene			19	ug/L	20	96		70	130		
		t-amyl-methyl ether (TAME)			17	ug/L	20	86		70	130		
		carbon tetrachloride			17	ug/L	20	86		70	130		
		1,2-dichloroethane			21	ug/L	20	105		70	130		
		benzene			19	ug/L	20	96		70	130		
		trichloroethene			19	ug/L	20	95		70	130		
		1,2-dichloropropane			19	ug/L	20	94		70	130		
		bromodichloromethane			16	ug/L	20	82		70	130		
		1,4-dioxane			56	ug/L	40	140	*	70	130		
		dibromomethane			19	ug/L	20	96		70	130		
		4-methyl-2-pentanone (MIBK)			15	ug/L	20	76		70	130		
		cis-1,3-dichloropropene			15	ug/L	20	76		70	130		
		toluene			21	ug/L	20	104		70	130		
		trans-1,3-dichloropropene			14	ug/L	20	71		70	130		
		2-hexanone			18	ug/L	20	88		70	130		
		1,1,2-trichloroethane			20	ug/L	20	100		70	130		
		1,3-dichloropropane			22	ug/L	20	112		70	130		
		tetrachloroethene			21	ug/L	20	104		70	130		
		dibromochloromethane			18	ug/L	20	90		70	130		
		1,2-dibromoethane (EDB)			21	ug/L	20	106		70	130		
		chlorobenzene			21	ug/L	20	105		70	130		
		1,1,1,2-tetrachloroethane			20	ug/L	20	98		70	130		
		ethylbenzene			22	ug/L	20	110		70	130		
		m&p-xylenes			44	ug/L	40	109		70	130		
		o-xylene			22	ug/L	20	109		70	130		
		styrene			21	ug/L	20	104		70	130		
		bromoform			15	ug/L	20	76		70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030B8260B	LCS1102315	isopropylbenzene		19	ug/L	20	95	70	130		
		1,1,2,2-tetrachloroethane		24	ug/L	20	122	70	130		
		1,2,3-trichloropropane		25	ug/L	20	124	70	130		
		n-propylbenzene		23	ug/L	20	113	70	130		
		bromobenzene		22	ug/L	20	110	70	130		
		1,3,5-trimethylbenzene		22	ug/L	20	112	70	130		
		2-chlorotoluene		23	ug/L	20	117	70	130		
		4-chlorotoluene		23	ug/L	20	115	70	130		
		tert-butylbenzene		22	ug/L	20	111	70	130		
		1,2,4-trimethylbenzene		23	ug/L	20	117	70	130		
		sec-butylbenzene		21	ug/L	20	104	70	130		
		1,3-dichlorobenzene		21	ug/L	20	106	70	130		
		4-isopropyltoluene		20	ug/L	20	100	70	130		
		1,4-dichlorobenzene		21	ug/L	20	106	70	130		
		1,2-dichlorobenzene		22	ug/L	20	109	70	130		
		n-butylbenzene		21	ug/L	20	107	70	130		
		1,2-dibromo-3-chloropropane		19	ug/L	20	97	70	130		
		1,2,4-trichlorobenzene		18	ug/L	20	89	70	130		
		1,3,5-trichlorobenzene		20	ug/L	20	99	70	130		
		hexachlorobutadiene		21	ug/L	20	106	70	130		
		naphthalene		20	ug/L	20	99	70	130		
		1,2,3-trichlorobenzene		19	ug/L	20	97	70	130		
		dibromofluoromethane SUR		100	%			78	114		
		toluene-D8 SUR		96	%			88	110		
		4-bromofluorobenzene SUR		97	%			86	115		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD		RPD Limit
SW5030B8260B	LCSD1102315	dichlorodifluoromethane			36	ug/L	20	181	*	70	130	0		20
		chloromethane			22	ug/L	20	112		70	130	1		20
		vinyl chloride			24	ug/L	20	122		70	130	5		20
		bromomethane			15	ug/L	20	74		70	130	12		20
		chloroethane			21	ug/L	20	107		70	130	4		20
		trichlorofluoromethane			23	ug/L	20	117		70	130	1		20
		diethyl ether			20	ug/L	20	102		70	130	9		20
		acetone		<	50	ug/L	20	70				12		20
		1,1-dichloroethene			15	ug/L	20	77		70	130	26	*	20
		methylene chloride			20	ug/L	20	102		70	130	3		20
		carbon disulfide			17	ug/L	20	85		70	130	4		20
		methyl t-butyl ether (MTBE)			19	ug/L	20	96		70	130	6		20
		trans-1,2-dichloroethene			18	ug/L	20	90		70	130	8		20
		isopropyl ether (DIPE)			18	ug/L	20	92		70	130	3		20
		ethyl t-butyl ether (ETBE)			18	ug/L	20	90		70	130	3		20
		1,1-dichloroethane			20	ug/L	20	99		70	130	2		20
		t-butanol (TBA)			110	ug/L	100	111		70	130	12		20
		2-butanone (MEK)			12	ug/L	20	61	*	70	130	8		20
		2,2-dichloropropane			13	ug/L	20	63	*	70	130	2		20
		cis-1,2-dichloroethene			18	ug/L	20	88		70	130	6		20
		chloroform			20	ug/L	20	100		70	130	0		20
		bromochloromethane			18	ug/L	20	91		70	130	1		20
		tetrahydrofuran (THF)			20	ug/L	20	102		70	130	1		20
		1,1,1-trichloroethane			19	ug/L	20	94		70	130	0		20
		1,1-dichloropropene			20	ug/L	20	98		70	130	2		20
		t-amyl-methyl ether (TAME)			17	ug/L	20	84		70	130	3		20
		carbon tetrachloride			17	ug/L	20	86		70	130	0		20
		1,2-dichloroethane			21	ug/L	20	105		70	130	0		20
		benzene			19	ug/L	20	95		70	130	1		20
		trichloroethene			19	ug/L	20	95		70	130	0		20
		1,2-dichloropropane			19	ug/L	20	94		70	130	0		20
		bromodichloromethane			17	ug/L	20	85		70	130	4		20
		1,4-dioxane		<	50	ug/L	40	119		70	130	16		20
		dibromomethane			20	ug/L	20	98		70	130	1		20
		4-methyl-2-pentanone (MIBK)			15	ug/L	20	74		70	130	3		20
		cis-1,3-dichloropropene			15	ug/L	20	77		70	130	2		20
		toluene			20	ug/L	20	99		70	130	4		20
		trans-1,3-dichloropropene			14	ug/L	20	71		70	130	0		20
		2-hexanone			18	ug/L	20	89		70	130	0		20
		1,1,2-trichloroethane			20	ug/L	20	100		70	130	0		20
		1,3-dichloropropane			23	ug/L	20	113		70	130	0		20
		tetrachloroethene			21	ug/L	20	103		70	130	1		20
		dibromochloromethane			18	ug/L	20	89		70	130	1		20
		1,2-dibromoethane (EDB)			21	ug/L	20	106		70	130	0		20
		chlorobenzene			21	ug/L	20	104		70	130	1		20
		1,1,1,2-tetrachloroethane			19	ug/L	20	97		70	130	1		20
		ethylbenzene			21	ug/L	20	107		70	130	2		20
		m&p-xylenes			42	ug/L	40	106		70	130	3		20
		o-xylene			21	ug/L	20	107		70	130	2		20
		styrene			21	ug/L	20	103		70	130	1		20
		bromoform			15	ug/L	20	73		70	130	4		20

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030B8260B	LCSD1102315	isopropylbenzene		19	ug/L	20	94	70	130	2	20
		1,1,2,2-tetrachloroethane		24	ug/L	20	118	70	130	3	20
		1,2,3-trichloropropane		24	ug/L	20	122	70	130	2	20
		n-propylbenzene		23	ug/L	20	114	70	130	2	20
		bromobenzene		23	ug/L	20	114	70	130	3	20
		1,3,5-trimethylbenzene		23	ug/L	20	114	70	130	1	20
		2-chlorotoluene		24	ug/L	20	118	70	130	1	20
		4-chlorotoluene		23	ug/L	20	113	70	130	1	20
		tert-butylbenzene		23	ug/L	20	116	70	130	5	20
		1,2,4-trimethylbenzene		23	ug/L	20	115	70	130	2	20
		sec-butylbenzene		21	ug/L	20	107	70	130	3	20
		1,3-dichlorobenzene		21	ug/L	20	106	70	130	0	20
		4-isopropyltoluene		20	ug/L	20	102	70	130	2	20
		1,4-dichlorobenzene		21	ug/L	20	107	70	130	1	20
		1,2-dichlorobenzene		22	ug/L	20	110	70	130	1	20
		n-butylbenzene		22	ug/L	20	109	70	130	2	20
		1,2-dibromo-3-chloropropane		19	ug/L	20	97	70	130	0	20
		1,2,4-trichlorobenzene		18	ug/L	20	92	70	130	3	20
		1,3,5-trichlorobenzene		20	ug/L	20	100	70	130	1	20
		hexachlorobutadiene		22	ug/L	20	109	70	130	2	20
		naphthalene		20	ug/L	20	100	70	130	1	20
		1,2,3-trichlorobenzene		20	ug/L	20	101	70	130	4	20
		dibromofluoromethane SUR		101	%			78	114		
		toluene-D8 SUR		95	%			88	110		
		4-bromofluorobenzene SUR		98	%			86	115		

Method	QC ID	Parameter	Associated Sample		Result	Units Amt Added	%R	Limits	RPD	RPD Limit
SW3510C8270D	BLK4624	N-nitrosodimethylamine		<	2	ug/L				
		aniline		<	2	ug/L				
		phenol		<	2	ug/L				
		2-chlorophenol		<	5	ug/L				
		bis(2-chloroethyl)ether		<	2	ug/L				
		1,3-dichlorobenzene		<	2	ug/L				
		1,4-dichlorobenzene		<	2	ug/L				
		1,2-dichlorobenzene		<	2	ug/L				
		benzyl alcohol		<	2	ug/L				
		2-methylphenol		<	2	ug/L				
		bis(2-chloroisopropyl) ether		<	2	ug/L				
		hexachloroethane		<	2	ug/L				
		N-nitroso-di-N-propylamine		<	2	ug/L				
		4-methylphenol		<	2	ug/L				
		nitrobenzene		<	2	ug/L				
		isophorone		<	5	ug/L				
		2-nitrophenol		<	2	ug/L				
		2,4-dimethylphenol		<	2	ug/L				
		bis(2-chloroethoxy)methane		<	5	ug/L				
		2,4-dichlorophenol		<	5	ug/L				
		1,2,4-trichlorobenzene		<	5	ug/L				
		naphthalene		<	0.5	ug/L				
		benzoic acid		<	50	ug/L				
		4-chloroaniline		<	2	ug/L				
		hexachlorobutadiene		<	2	ug/L				
		4-chloro-3-methylphenol		<	2	ug/L				
		2-methylnaphthalene		<	0.5	ug/L				
		hexachlorocyclopentadiene		<	10	ug/L				
		2,4,6-trichlorophenol		<	2	ug/L				
		2,4,5-trichlorophenol		<	2	ug/L				
		2-chloronaphthalene		<	5	ug/L				
		2-nitroaniline		<	2	ug/L				
		acenaphthylene		<	0.5	ug/L				
		dimethylphthalate		<	5	ug/L				
		2,6-dinitrotoluene		<	2	ug/L				
		2,4-dinitrotoluene		<	2	ug/L				
		acenaphthene		<	0.5	ug/L				
		3-nitroaniline		<	2	ug/L				
		2,4-dinitrophenol		<	50	ug/L				
		dibenzofuran		<	0.5	ug/L				
		4-nitrophenol		<	10	ug/L				
		fluorene		<	0.5	ug/L				
		diethyl phthalate		<	5	ug/L				
		4-chlorophenyl phenyl ether		<	5	ug/L				
		4-nitroaniline		<	5	ug/L				
		4,6-dinitro-2-methylphenol		<	20	ug/L				
		azobenzene		<	2	ug/L				
		N-nitrosodiphenylamine		<	2	ug/L				
		4-bromophenyl phenyl ether		<	2	ug/L				
		hexachlorobenzene		<	2	ug/L				
		pentachlorophenol		<	10	ug/L				

Method	QC ID	Parameter	Associated Sample		Result	Units Amt Added	%R	Limits		RPD	RPD Limit
SW3510C8270D	BLK4624	phenanthrene		<	0.5	ug/L					
		anthracene		<	0.5	ug/L					
		carbazole		<	2	ug/L					
		di-n-butylphthalate		<	5	ug/L					
		fluoranthene		<	0.5	ug/L					
		benzidine		<	30	ug/L					
		pyrene		<	0.5	ug/L					
		butyl benzyl phthalate		<	5	ug/L					
		benzo(a)anthracene		<	0.5	ug/L					
		chrysene		<	0.5	ug/L					
		3,3'-dichlorobenzidine		<	30	ug/L					
		bis(2-ethylhexyl)phthalate		<	5	ug/L					
		di-n-octyl phthalate		<	2	ug/L					
		benzo(b)fluoranthene		<	0.5	ug/L					
		benzo(k)fluoranthene		<	0.5	ug/L					
		benzo(a)pyrene		<	0.2	ug/L					
		indeno(1,2,3-cd)pyrene		<	0.5	ug/L					
		dibenzo(a,h)anthracene		<	0.5	ug/L					
		benzo(g,h,i)perylene		<	0.5	ug/L					
		2-fluorophenol SUR			33	%		21	100		
		phenol-D5 SUR			19	%		10	102		
		2,4,6-tribromophenol SUR			59	%		10	123		
		nitrobenzene-D5 SUR			69	%		35	114		
		2-fluorobiphenyl SUR			65	%		43	116		
		p-terphenyl-D14 SUR			83	%		33	141		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW3510C8270D	LCS4624	N-nitrosodimethylamine			22	ug/L	40	55		40	140		
		aniline			18	ug/L	40	46		40	140		
		phenol			10	ug/L	40	26	*	30	130		
		2-chlorophenol			25	ug/L	40	63		30	130		
		bis(2-chloroethyl)ether			30	ug/L	40	74		40	140		
		1,3-dichlorobenzene			25	ug/L	40	62		40	140		
		1,4-dichlorobenzene			24	ug/L	40	60		40	140		
		1,2-dichlorobenzene			26	ug/L	40	64		40	140		
		benzyl alcohol			19	ug/L	40	46		30	130		
		2-methylphenol			20	ug/L	40	49		30	130		
		bis(2-chloroisopropyl) ether			27	ug/L	40	67		40	140		
		hexachloroethane			23	ug/L	40	58		40	140		
		N-nitroso-di-N-propylamine			28	ug/L	40	69		40	140		
		4-methylphenol			18	ug/L	40	45		30	130		
		nitrobenzene			28	ug/L	40	69		40	140		
		isophorone			29	ug/L	40	72		40	140		
		2-nitrophenol			27	ug/L	40	69		30	130		
		2,4-dimethylphenol			24	ug/L	40	61		30	130		
		bis(2-chloroethoxy)methane			30	ug/L	40	75		40	140		
		2,4-dichlorophenol			28	ug/L	40	70		30	130		
		1,2,4-trichlorobenzene			30	ug/L	40	74		40	140		
		naphthalene			27	ug/L	40	68		40	140		
		benzoic acid		<	50	ug/L							
		4-chloroaniline			30	ug/L	40	76		40	140		
		hexachlorobutadiene			26	ug/L	40	65		40	140		
		4-chloro-3-methylphenol			29	ug/L	40	73		30	130		
		2-methylnaphthalene			29	ug/L	40	71		40	140		
		hexachlorocyclopentadiene			13	ug/L	40	32	*	40	140		
		2,4,6-trichlorophenol			30	ug/L	40	74		30	130		
		2,4,5-trichlorophenol			29	ug/L	40	71		30	130		
		2-chloronaphthalene			28	ug/L	40	70		40	140		
		2-nitroaniline			30	ug/L	40	75		40	140		
		acenaphthylene			31	ug/L	40	78		40	140		
		dimethylphthalate			12	ug/L	40	29	*	40	140		
		2,6-dinitrotoluene			34	ug/L	40	85		40	140		
		2,4-dinitrotoluene			29	ug/L	40	74		40	140		
		acenaphthene			29	ug/L	40	74		40	140		
		3-nitroaniline			36	ug/L	40	91		40	140		
		2,4-dinitrophenol		<	50	ug/L	40		*				
		dibenzofuran			31	ug/L	40	78		40	140		
		4-nitrophenol			12	ug/L	40	31		30	130		
		fluorene			32	ug/L	40	79		40	140		
		diethyl phthalate			24	ug/L	40	60		40	140		
		4-chlorophenyl phenyl ether			31	ug/L	40	78		40	140		
		4-nitroaniline			28	ug/L	40	71		40	140		
		4,6-dinitro-2-methylphenol		<	20	ug/L							
		azobenzene			30	ug/L	40	74		40	140		
		N-nitrosodiphenylamine			42	ug/L	40	105		40	140		
		4-bromophenyl phenyl ether			29	ug/L	40	72		40	140		
		hexachlorobenzene			27	ug/L	40	67		40	140		
		pentachlorophenol			36	ug/L	40	89		30	130		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW3510C8270D	LCS4624	phenanthrene			34	ug/L	40	84	40	140		
		anthracene			32	ug/L	40	80	40	140		
		carbazole			34	ug/L	40	86	40	140		
		di-n-butylphthalate			30	ug/L	40	75	40	140		
		fluoranthene			32	ug/L	40	81	40	140		
		benzidine		<	30	ug/L						
		pyrene			41	ug/L	40	102	40	140		
		butyl benzyl phthalate			27	ug/L	40	68	40	140		
		benzo(a)anthracene			34	ug/L	40	86	40	140		
		chrysene			31	ug/L	40	78	40	140		
		3,3'-dichlorobenzidine		<	30	ug/L						
		bis(2-ethylhexyl)phthalate			35	ug/L	40	88	40	140		
		di-n-octyl phthalate			30	ug/L	40	75	40	140		
		benzo(b)fluoranthene			32	ug/L	40	79	40	140		
		benzo(k)fluoranthene			31	ug/L	40	77	40	140		
		benzo(a)pyrene			31	ug/L	40	78	40	140		
		indeno(1,2,3-cd)pyrene			28	ug/L	40	71	40	140		
		dibenzo(a,h)anthracene			23	ug/L	40	59	40	140		
		benzo(g,h,i)perylene			27	ug/L	40	67	40	140		
		2-fluorophenol SUR			33	%			21	100		
		phenol-D5 SUR			19	%			10	102		
		2,4,6-tribromophenol SUR			69	%			10	123		
		nitrobenzene-D5 SUR			72	%			35	114		
		2-fluorobiphenyl SUR			59	%			43	116		
		p-terphenyl-D14 SUR			93	%			33	141		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW3510C8270D	LCSD4624	N-nitrosodimethylamine			23	ug/L	40	57		40	140	3	20
		aniline			19	ug/L	40	48		40	140	4	20
		phenol			9	ug/L	40	22	*	30	130	17	20
		2-chlorophenol			27	ug/L	40	68		30	130	7	20
		bis(2-chloroethyl)ether			28	ug/L	40	70		40	140	6	20
		1,3-dichlorobenzene			25	ug/L	40	61		40	140	1	20
		1,4-dichlorobenzene			24	ug/L	40	60		40	140	0	20
		1,2-dichlorobenzene			25	ug/L	40	63		40	140	2	20
		benzyl alcohol			19	ug/L	40	48		30	130	3	20
		2-methylphenol			20	ug/L	40	49		30	130	0	20
		bis(2-chloroisopropyl) ether			26	ug/L	40	65		40	140	2	20
		hexachloroethane			24	ug/L	40	60		40	140	3	20
		N-nitroso-di-N-propylamine			27	ug/L	40	67		40	140	3	20
		4-methylphenol			18	ug/L	40	44		30	130	2	20
		nitrobenzene			28	ug/L	40	71		40	140	2	20
		isophorone			29	ug/L	40	72		40	140	0	20
		2-nitrophenol			31	ug/L	40	78		30	130	13	20
		2,4-dimethylphenol			25	ug/L	40	63		30	130	3	20
		bis(2-chloroethoxy)methane			30	ug/L	40	75		40	140	1	20
		2,4-dichlorophenol			31	ug/L	40	77		30	130	9	20
		1,2,4-trichlorobenzene			30	ug/L	40	75		40	140	1	20
		naphthalene			27	ug/L	40	68		40	140	0	20
		benzoic acid		<	50	ug/L							
		4-chloroaniline			31	ug/L	40	77		40	140	1	20
		hexachlorobutadiene			27	ug/L	40	67		40	140	3	20
		4-chloro-3-methylphenol			30	ug/L	40	75		30	130	3	20
		2-methylnaphthalene			29	ug/L	40	72		40	140	0	20
		hexachlorocyclopentadiene			13	ug/L	40	31	*	40	140	0	20
		2,4,6-trichlorophenol			32	ug/L	40	81		30	130	8	20
		2,4,5-trichlorophenol			30	ug/L	40	76		30	130	6	20
		2-chloronaphthalene			27	ug/L	40	69		40	140	2	20
		2-nitroaniline			29	ug/L	40	72		40	140	5	20
		acenaphthylene			31	ug/L	40	77		40	140	1	20
		dimethylphthalate			11	ug/L	40	28	*	40	140	4	20
		2,6-dinitrotoluene			33	ug/L	40	83		40	140	2	20
		2,4-dinitrotoluene			30	ug/L	40	74		40	140	1	20
		acenaphthene			29	ug/L	40	73		40	140	1	20
		3-nitroaniline			34	ug/L	40	86		40	140	6	20
		2,4-dinitrophenol		<	50	ug/L	40		*				20
		dibenzofuran			30	ug/L	40	75		40	140	3	20
		4-nitrophenol			12	ug/L	40	31		30	130	0	20
		fluorene			30	ug/L	40	75		40	140	5	20
		diethyl phthalate			24	ug/L	40	59		40	140	2	20
		4-chlorophenyl phenyl ether			30	ug/L	40	75		40	140	5	20
		4-nitroaniline			28	ug/L	40	70		40	140	2	20
		4,6-dinitro-2-methylphenol		<	20	ug/L							
		azobenzene			29	ug/L	40	74		40	140	0	20
		N-nitrosodiphenylamine			41	ug/L	40	103		40	140	2	20
		4-bromophenyl phenyl ether			28	ug/L	40	71		40	140	2	20
		hexachlorobenzene			26	ug/L	40	66		40	140	2	20
		pentachlorophenol			34	ug/L	40	84		30	130	6	20

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW3510C8270D	LCSD4624	phenanthrene			33	ug/L	40	82	40	140	2	20
		anthracene			32	ug/L	40	80	40	140	0	20
		carbazole			34	ug/L	40	86	40	140	0	20
		di-n-butylphthalate			30	ug/L	40	75	40	140	0	20
		fluoranthene			31	ug/L	40	78	40	140	4	20
		benzidine		<	30	ug/L						
		pyrene			38	ug/L	40	95	40	140	7	20
		butyl benzyl phthalate			24	ug/L	40	60	40	140	12	20
		benzo(a)anthracene			34	ug/L	40	85	40	140	1	20
		chrysene			30	ug/L	40	74	40	140	4	20
		3,3'-dichlorobenzidine		<	30	ug/L						
		bis(2-ethylhexyl)phthalate			29	ug/L	40	74	40	140	18	20
		di-n-octyl phthalate			25	ug/L	40	64	40	140	17	20
		benzo(b)fluoranthene			34	ug/L	40	85	40	140	8	20
		benzo(k)fluoranthene			28	ug/L	40	69	40	140	11	20
		benzo(a)pyrene			30	ug/L	40	76	40	140	2	20
		indeno(1,2,3-cd)pyrene			29	ug/L	40	73	40	140	3	20
		dibenzo(a,h)anthracene			24	ug/L	40	60	40	140	2	20
		benzo(g,h,i)perylene			28	ug/L	40	70	40	140	4	20
		2-fluorophenol SUR			34	%			21	100		
		phenol-D5 SUR			20	%			10	102		
		2,4,6-tribromophenol SUR			69	%			10	123		
		nitrobenzene-D5 SUR			74	%			35	114		
		2-fluorobiphenyl SUR			56	%			43	116		
		p-terphenyl-D14 SUR			90	%			33	141		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW3005A6010C	BLK1102281	Silver		<	0.005	mg/L						
		Arsenic		<	0.008	mg/L						
		Barium		<	0.05	mg/L						
		Cadmium		<	0.004	mg/L						
		Chromium		<	0.05	mg/L						
		Lead		<	0.01	mg/L						
		Selenium		<	0.05	mg/L						
SW3005A6010C	LCS1102281	Silver			0.25	mg/L	0.25	100	80	120		
		Arsenic			0.50	mg/L	0.5	99	80	120		
		Barium			0.50	mg/L	0.5	100	80	120		
		Cadmium			0.49	mg/L	0.5	98	80	120		
		Chromium			0.50	mg/L	0.5	100	80	120		
		Lead			0.49	mg/L	0.5	99	80	120		
		Selenium			0.50	mg/L	0.5	100	80	120		
SW3005A6010C	MS1102281	Silver	22583-001		0.21	mg/L	0.25	85	75	125		
		Arsenic	22583-001		0.49	mg/L	0.5	95	75	125		
		Barium	22583-001		0.53	mg/L	0.5	90	75	125		
		Cadmium	22583-001		0.46	mg/L	0.5	93	75	125		
		Chromium	22583-001		0.47	mg/L	0.5	95	75	125		
		Lead	22583-001		0.45	mg/L	0.5	90	75	125		
		Selenium	22583-001		0.50	mg/L	0.5	100	75	125		
SW3005A6010C	MSD1102281	Silver	22583-001		0.23	mg/L	0.25	92	75	125	8	20
		Arsenic	22583-001		0.52	mg/L	0.5	102	75	125	7	20
		Barium	22583-001		0.57	mg/L	0.5	97	75	125	7	20
		Cadmium	22583-001		0.50	mg/L	0.5	99	75	125	7	20
		Chromium	22583-001		0.51	mg/L	0.5	101	75	125	7	20
		Lead	22583-001		0.49	mg/L	0.5	98	75	125	8	20
		Selenium	22583-001		0.54	mg/L	0.5	109	75	125	9	20

PAGE 1 OF 1

Absolute Resource associates

124 Heritage Avenue #10
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

22594

Company Name: CREDERE

Company Address: 776 MAIN ST WESTBROOK ME 04092

Report To: JUDD NEWCOMB

Phone #: 207-232-5387

Invoice To: Same

Project Name: NEW ENGLAND YARD

Project #:

Project Location: (NH circled) MA ME VT ____ Other

Protocol: RCRA SDWA NPDES MCP (NHDES circled) OTHER

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

Quote # ____ ☐ NH GREE/ODD Fund Pricing

PO # 10001086

ANALYSIS REQUEST

☐ VOC 8260 ☒ VOC 8260 NHDES ☐ VOC 8260 MADEP
☐ VOC 624 ☐ VOC BTEX ☐ MtBE, only ☐ VOC 8021VT
☐ VPH MADEP ☐ MEGRO ☐ GRO 8015
☐ VOC 524.2 ☐ VOC 524.2 NH List ☐ Gases-List:
☐ TPH ☐ DRO 8015 ☐ MEDRO ☐ EPH MADEP ☐ TPH Fingerprint
☒ 8270PAH ☐ 8270ABN ☐ 625 ☐ EDB 504.1
☐ 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 (dissolved)
☐ Total Metals-list:
☒ Dissolved Metals-list: Pb
☐ Ammonia ☐ COD ☐ TKN ☐ TN ☐ TON
☐ 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: ☐ TOC ☐ Grain Size ☐ TCLP Herbicides
8270 ABN
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	Preservation: OTHER (Specify)	Sampling: DATE	Sampling: TIME	Sampling: SAMPLER	VOC 8260 NHDES	8270PAH	RCRA Metals (dissolved)	Dissolved Metals-list: Pb	8270 ABN	Grab (G) or Composite (C)
22594-01	CA-1	4	X			X	X					10/6/11	1428	JO	X	X		X		G
02	CA-2	4	↓			↓	X					↓	1340	JN	X	X		X		↓
03	CA-3	3	↓			↓						↓	1535	JO	X	X				↓
04	CA-4	3	↓			↓						↓	1505	JN	X	X				↓
05	CA-5	3	↓			↓						↓	1310	JO	X	X				↓
06	CA-6	4	↓			↓	X					↓	1240	JN	X		X	[crossed out]	X	↓
07	DUP-GW	3	↓			↓	[crossed out]					↓	—	JN	X	X				↓
08	DUP-GW-2	1	↓		[illegible]	[crossed out]	X					↓	—	JO				X		↓
09	TB		↓			↓						—								

TAT REQUESTED
Priority (24 hr)* ☐
Expedited (48 hr)* ☐
Standard (10 Business Days) ☒
*Date Needed ____

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

SPECIAL INSTRUCTIONS

REPORTING INSTRUCTIONS ☒ PDF (e-mail address) JNewcomb@CredereLLC.com
☐ HARD COPY REQUIRED ☐ FAX (FAX#) ____ ☐ OTHER (specify) ____

RECEIVED ON ICE ☒ YES ☐ NO
TEMPERATURE 2 °C

CUSTODY RECORD

Relinquished by	Date	Time	Received by	Date	Time
Relinquished by Sampler: [signature]	10/6/11	1830	Received by: Cold Storage [signature]	10/6/11	1830
Relinquished by: Cold Storage - [signature]	10/11/11	1100	Received by: [signature]	10/11/11	11
Relinquished by:	Date	Time	Received by Laboratory: / Way Bill#:	Date	Time

QSD-01 Revision 12/23/10

Absolute Resource associates
124 Heritage Avenue #10 Portsmouth, NH 03801

Judd Newcomb
CREDERE Associates
776 Main Street
Westbrook, ME 04092

PO Number: None
Job ID: 22468
Date Received: 9/23/11

Project: DPW-New England Yard 10001086

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

Sue Sylvester
Principal, General Manager

Date of Approval: 10/19/2011
Total number of pages: 69

Absolute Resource Associates Certifications

New Hampshire	1732	Massachusetts	M-NH902
Maine	NH903		

Project ID: DPW-New England Yard 10001086

Lab ID: 22468

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
Trip Blank	Solid	9/22/2011 0:00	22468-001	
				VOCs in solid by 8260 Petro & Haz Waste
CB-1	Solid	9/22/2011 12:00	22468-002	
				TPH in solids by 8100
				Acid & Base/Neutral Extractables in solid by 8270
				Soil Digestion for ICP Analysis
				Silver in solids by 6010
				Arsenic in solids by 6010
				Barium in solids by 6010
				Cadmium in solids by 6010
				Chromium in solids by 6010
				Mercury in solids by 7471
				Lead in solids by 6010
				Selenium in solids by 6010
				Percent Dry Matter for Sample Calc by SM2540B,G
				VOCs in solid by 8260 Petro & Haz Waste
CA-1 0-2'	Solid	9/22/2011 10:00	22468-003	
				TPH in solids by 8100
				PAHs in solid by 8270
				Solid Digestion for ICP Analysis
				Arsenic in solids by 6010
				Boron in solids by 6010
				Barium in solids by 6010
				Cadmium in solids by 6010
				Copper in solids by 6010
				Mercury in solids by 7471
				Nickel in solids by 6010
				Lead in solids by 6010
				Selenium in solids by 6010
				Vanadium in solids by 6010
				Percent Dry Matter for Sample Calc by SM2540B,G
CA-2 0-3'	Solid	9/22/2011 13:30	22468-004	
				TPH in solids by 8100
				PAHs in solid by 8270
				Solid Digestion for ICP Analysis
				Arsenic in solids by 6010
				Boron in solids by 6010
				Barium in solids by 6010
				Cadmium in solids by 6010
				Copper in solids by 6010
				Mercury in solids by 7471
				Nickel in solids by 6010
				Lead in solids by 6010
				Selenium in solids by 6010
				Vanadium in solids by 6010
				Percent Dry Matter for Sample Calc by SM2540B,G
				VOCs in solid by 8260 Petro & Haz Waste
CA-2 FLOOR	Solid	9/22/2011 14:30	22468-005	
				TPH in solids by 8100
				PAHs in solid by 8270
				Solid Digestion for ICP Analysis
				Arsenic in solids by 6010

Absolute Resource associates

Project ID: DPW-New England Yard 10001086

Lab ID: 22468

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
CA-2 FLOOR	Solid	9/22/2011 14:30	22468-005	
				Boron in solids by 6010
				Barium in solids by 6010
				Cadmium in solids by 6010
				Copper in solids by 6010
				Mercury in solids by 7471
				Nickel in solids by 6010
				Lead in solids by 6010
				Selenium in solids by 6010
				Vanadium in solids by 6010
				Percent Dry Matter for Sample Calc by SM2540B,G
				VOCs in solid by 8260 Petro & Haz Waste
CA-3 6-8'	Solid	9/22/2011 11:00	22468-006	
				TPH in solids by 8100
				PAHs in solid by 8270
				Solid Digestion for ICP Analysis
				Lead in solids by 6010
				Percent Dry Matter for Sample Calc by SM2540B,G
				VOCs in solid by 8260 Petro & Haz Waste
CA-4 6-8'	Solid	9/22/2011 10:30	22468-007	
				TPH in solids by 8100
				PAHs in solid by 8270
				Percent Dry Matter for Sample Calc by SM2540B,G
				VOCs in solid by 8260 Petro & Haz Waste
CA-5 2-3'	Solid	9/22/2011 9:00	22468-008	
				TPH in solids by 8100
				PAHs in solid by 8270
				Percent Dry Matter for Sample Calc by SM2540B,G
				VOCs in solid by 8260 Petro & Haz Waste
CA-6 0-3'	Solid	9/22/2011 14:00	22468-009	
				TPH in solids by 8100
				Acid & Base/Neutral Extractables in solid by 8270
				Soil Digestion for ICP Analysis
				Silver in solids by 6010
				Arsenic in solids by 6010
				Barium in solids by 6010
				Cadmium in solids by 6010
				Chromium in solids by 6010
				Mercury in solids by 7471
				Lead in solids by 6010
				Selenium in solids by 6010
				Percent Dry Matter for Sample Calc by SM2540B,G
				VOCs in solid by 8260 Petro & Haz Waste
SS-1	Solid	9/22/2011 9:20	22468-010	
				PCBs in soil by 8082
				TPH in solids by 8100
				PAHs in solid by 8270
				Solid Digestion for ICP Analysis
				Arsenic in solids by 6010
				Boron in solids by 6010
				Barium in solids by 6010
				Cadmium in solids by 6010

Absolute Resource associates

Project ID: DPW-New England Yard 10001086

Lab ID: 22468

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
SS-1	Solid	9/22/2011 9:20	22468-010	
				Copper in solids by 6010
				Mercury in solids by 7471
				Nickel in solids by 6010
				Lead in solids by 6010
				Selenium in solids by 6010
				Vanadium in solids by 6010
				Percent Dry Matter for Sample Calc by SM2540B,G
SS-2	Solid	9/22/2011 8:55	22468-011	
				PCBs in soil by 8082
				TPH in solids by 8100
				PAHs in solid by 8270
				Solid Digestion for ICP Analysis
				Arsenic in solids by 6010
				Boron in solids by 6010
				Barium in solids by 6010
				Cadmium in solids by 6010
				Copper in solids by 6010
				Mercury in solids by 7471
				Nickel in solids by 6010
				Lead in solids by 6010
				Selenium in solids by 6010
				Vanadium in solids by 6010
				Percent Dry Matter for Sample Calc by SM2540B,G
SS-3	Solid	9/22/2011 8:40	22468-012	
				PCBs in soil by 8082
				TPH in solids by 8100
				PAHs in solid by 8270
				Solid Digestion for ICP Analysis
				Arsenic in solids by 6010
				Boron in solids by 6010
				Barium in solids by 6010
				Cadmium in solids by 6010
				Copper in solids by 6010
				Mercury in solids by 7471
				Nickel in solids by 6010
				Lead in solids by 6010
				Selenium in solids by 6010
				Vanadium in solids by 6010
				Percent Dry Matter for Sample Calc by SM2540B,G
TP-1 4-6'	Solid	9/22/2011 11:15	22468-013	
				TPH in solids by 8100
				PAHs in solid by 8270
				Solid Digestion for ICP Analysis
				Arsenic in solids by 6010
				Boron in solids by 6010
				Barium in solids by 6010
				Cadmium in solids by 6010
				Copper in solids by 6010
				Mercury in solids by 7471
				Nickel in solids by 6010
				Lead in solids by 6010

Absolute Resource associates

Project ID: DPW-New England Yard 10001086

Lab ID: 22468

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
TP-1 4-6'	Solid	9/22/2011 11:15	22468-013	
				Selenium in solids by 6010
				Vanadium in solids by 6010
				Percent Dry Matter for Sample Calc by SM2540B,G
TP-2 4-6'	Solid	9/22/2011 10:35	22468-014	
				TPH in solids by 8100
				PAHs in solid by 8270
				Solid Digestion for ICP Analysis
				Arsenic in solids by 6010
				Boron in solids by 6010
				Barium in solids by 6010
				Cadmium in solids by 6010
				Copper in solids by 6010
				Mercury in solids by 7471
				Nickel in solids by 6010
				Lead in solids by 6010
				Selenium in solids by 6010
				Vanadium in solids by 6010
				Percent Dry Matter for Sample Calc by SM2540B,G
CA-3 0-2'	Solid	9/22/2011 15:00	22468-015	
				Solid Digestion for ICP Analysis
				Lead in solids by 6010
SS-DUP	Solid	9/22/2011 0:00	22468-016	
				PCBs in soil by 8082
				TPH in solids by 8100
				PAHs in solid by 8270
				Solid Digestion for ICP Analysis
				Arsenic in solids by 6010
				Boron in solids by 6010
				Barium in solids by 6010
				Cadmium in solids by 6010
				Copper in solids by 6010
				Mercury in solids by 7471
				Nickel in solids by 6010
				Lead in solids by 6010
				Selenium in solids by 6010
				Vanadium in solids by 6010
				Percent Dry Matter for Sample Calc by SM2540B,G
SB-DUP	Solid	9/22/2011 0:00	22468-017	
				Percent Dry Matter for Sample Calc by SM2540B,G
				VOCs in solid by 8260 Petro & Haz Waste

Absolute Resource associates

Project ID: DPW-New England Yard 10001086
Job ID: 22468
Sample#: 22468-001
Sample ID: Trip Blank
Matrix: Solid
Sampled: 9/22/11 0:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
dichlorodifluoromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
chloromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
vinyl chloride	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
bromomethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
chloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
trichlorofluoromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
diethyl ether	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
acetone	< 2	2	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
1,1-dichloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
methylene chloride	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
carbon disulfide	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
methyl t-butyl ether (MTBE)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
trans-1,2-dichloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
isopropyl ether (DIPE)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
ethyl t-butyl ether (ETBE)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
1,1-dichloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
t-butanol (TBA)	< 2	2	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
2-butanone (MEK)	< 0.3	0.3	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
2,2-dichloropropane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
cis-1,2-dichloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
chloroform	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
bromochloromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
tetrahydrofuran (THF)	< 0.5	0.5	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
1,1,1-trichloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
1,1-dichloropropene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
t-amyl-methyl ether (TAME)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
carbon tetrachloride	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
1,2-dichloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
benzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
trichloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
1,2-dichloropropane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
bromodichloromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
1,4-dioxane	< 2	2	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
dibromomethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
4-methyl-2-pentanone (MIBK)	< 0.4	0.4	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
cis-1,3-dichloropropene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
toluene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
trans-1,3-dichloropropene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
2-hexanone	< 0.5	0.5	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
1,1,2-trichloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
1,3-dichloropropane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
tetrachloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
dibromochloromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B

Project ID: DPW-New England Yard 10001086
Job ID: 22468
Sample#: 22468-001
Sample ID: Trip Blank
Matrix: Solid
Sampled: 9/22/11 0:00

Parameter	Result	Quant 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	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
chlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
1,1,1,2-tetrachloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
ethylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
m&p-xylenes	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
o-xylene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
styrene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
bromoform	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
isopropylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
1,1,2,2-tetrachloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
1,2,3-trichloropropane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
n-propylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
bromobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
1,3,5-trimethylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
2-chlorotoluene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
4-chlorotoluene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
tert-butylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
1,2,4-trimethylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
sec-butylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
1,3-dichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
4-isopropyltoluene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
1,4-dichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
1,2-dichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
n-butylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
1,2-dibromo-3-chloropropane (DBCP)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
1,2,4-trichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
1,3,5-trichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
hexachlorobutadiene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
naphthalene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
1,2,3-trichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**92**	78-114	%	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
toluene-D8 SUR	**97**	88-110	%	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
4-bromofluorobenzene SUR	**100**	86-115	%	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B
a,a,a-trifluorotoluene SUR	**92**	70-130	%	1	AJD	9/28/11	4576	10/1/11	4:47	SW5035A8260B

Absolute Resource associates

Project ID: DPW-New England Yard 10001086
Job ID: 22468
Sample#: 22468-002
Sample ID: CB-1
Matrix: Solid Percent Dry: 77.4% Results expressed on a dry weight basis.
Sampled: 9/22/11 12:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
dichlorodifluoromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
chloromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
vinyl chloride	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
bromomethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
chloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
trichlorofluoromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
diethyl ether	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
acetone	< 2	2	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
1,1-dichloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
methylene chloride	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
carbon disulfide	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
methyl t-butyl ether (MTBE)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
trans-1,2-dichloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
isopropyl ether (DIPE)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
ethyl t-butyl ether (ETBE)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
1,1-dichloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
t-butanol (TBA)	< 2	2	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
2-butanone (MEK)	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
2,2-dichloropropane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
cis-1,2-dichloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
chloroform	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
bromochloromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
tetrahydrofuran (THF)	< 0.4	0.4	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
1,1,1-trichloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
1,1-dichloropropene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
t-amyl-methyl ether (TAME)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
carbon tetrachloride	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
1,2-dichloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
benzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
trichloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
1,2-dichloropropane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
bromodichloromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
1,4-dioxane	< 2	2	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
dibromomethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
4-methyl-2-pentanone (MIBK)	< 0.4	0.4	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
cis-1,3-dichloropropene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
toluene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
trans-1,3-dichloropropene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
2-hexanone	< 0.4	0.4	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
1,1,2-trichloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
1,3-dichloropropane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
tetrachloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
dibromochloromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B

Absolute Resource associates

Project ID: DPW-New England Yard 10001086
Job ID: 22468
Sample#: 22468-002
Sample ID: CB-1
Matrix: Solid Percent Dry: 77.4% Results expressed on a dry weight basis.
Sampled: 9/22/11 12:00

Parameter	Result	Quant 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	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
chlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
1,1,1,2-tetrachloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
ethylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
m&p-xylenes	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
o-xylene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
styrene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
bromoform	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
isopropylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
1,1,2,2-tetrachloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
1,2,3-trichloropropane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
n-propylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
bromobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
1,3,5-trimethylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
2-chlorotoluene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
4-chlorotoluene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
tert-butylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
1,2,4-trimethylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
sec-butylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
1,3-dichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
4-isopropyltoluene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
1,4-dichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
1,2-dichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
n-butylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
1,2-dibromo-3-chloropropane (DBCP)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
1,2,4-trichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
1,3,5-trichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
hexachlorobutadiene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
naphthalene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
1,2,3-trichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**94**	78-114	%	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
toluene-D8 SUR	**96**	88-110	%	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
4-bromofluorobenzene SUR	**101**	86-115	%	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B
a,a,a-trifluorotoluene SUR	**72**	70-130	%	1	AJD	9/28/11	4576	10/1/11	5:20	SW5035A8260B

Absolute Resource associates

Project ID: DPW-New England Yard 10001086
Job ID: 22468
Sample#: 22468-004
Sample ID: CA-2 0-3'
Matrix: Solid Percent Dry: 83.7% Results expressed on a dry weight basis.
Sampled: 9/22/11 13:30

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
dichlorodifluoromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
chloromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
vinyl chloride	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
bromomethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
chloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
trichlorofluoromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
diethyl ether	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
acetone	< 2	2	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
1,1-dichloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
methylene chloride	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
carbon disulfide	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
methyl t-butyl ether (MTBE)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
trans-1,2-dichloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
isopropyl ether (DIPE)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
ethyl t-butyl ether (ETBE)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
1,1-dichloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
t-butanol (TBA)	< 2	2	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
2-butanone (MEK)	< 0.3	0.3	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
2,2-dichloropropane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
cis-1,2-dichloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
chloroform	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
bromochloromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
tetrahydrofuran (THF)	< 0.5	0.5	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
1,1,1-trichloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
1,1-dichloropropene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
t-amyl-methyl ether (TAME)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
carbon tetrachloride	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
1,2-dichloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
benzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
trichloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
1,2-dichloropropane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
bromodichloromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
1,4-dioxane	< 2	2	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
dibromomethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
4-methyl-2-pentanone (MIBK)	< 0.4	0.4	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
cis-1,3-dichloropropene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
toluene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
trans-1,3-dichloropropene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
2-hexanone	< 0.5	0.5	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
1,1,2-trichloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
1,3-dichloropropane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
tetrachloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
dibromochloromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B

Project ID: DPW-New England Yard 10001086
Job ID: 22468
Sample#: 22468-004
Sample ID: CA-2 0-3'
Matrix: Solid Percent Dry: 83.7% Results expressed on a dry weight basis.
Sampled: 9/22/11 13:30

Parameter	Result	Quant 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	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
chlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
1,1,1,2-tetrachloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
ethylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
m&p-xylenes	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
o-xylene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
styrene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
bromoform	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
isopropylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
1,1,2,2-tetrachloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
1,2,3-trichloropropane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
n-propylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
bromobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
1,3,5-trimethylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
2-chlorotoluene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
4-chlorotoluene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
tert-butylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
1,2,4-trimethylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
sec-butylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
1,3-dichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
4-isopropyltoluene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
1,4-dichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
1,2-dichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
n-butylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
1,2-dibromo-3-chloropropane (DBCP)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
1,2,4-trichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
1,3,5-trichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
hexachlorobutadiene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
naphthalene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
1,2,3-trichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**94**	78-114	%	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
toluene-D8 SUR	**97**	88-110	%	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
4-bromofluorobenzene SUR	**99**	86-115	%	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B
a,a,a-trifluorotoluene SUR	**92**	70-130	%	1	AJD	9/28/11	4576	10/1/11	5:53	SW5035A8260B

Absolute Resource associates

Project ID: DPW-New England Yard 10001086
Job ID: 22468
Sample#: 22468-005
Sample ID: CA-2 FLOOR
Matrix: Solid Percent Dry: 98.1% Results expressed on a dry weight basis.
Sampled: 9/22/11 14:30

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
dichlorodifluoromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
chloromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
vinyl chloride	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
bromomethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
chloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
trichlorofluoromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
diethyl ether	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
acetone	< 2	2	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
1,1-dichloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
methylene chloride	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
carbon disulfide	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
methyl t-butyl ether (MTBE)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
trans-1,2-dichloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
isopropyl ether (DIPE)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
ethyl t-butyl ether (ETBE)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
1,1-dichloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
t-butanol (TBA)	< 2	2	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
2-butanone (MEK)	< 0.3	0.3	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
2,2-dichloropropane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
cis-1,2-dichloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
chloroform	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
bromochloromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
tetrahydrofuran (THF)	< 0.5	0.5	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
1,1,1-trichloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
1,1-dichloropropene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
t-amyl-methyl ether (TAME)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
carbon tetrachloride	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
1,2-dichloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
benzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
trichloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
1,2-dichloropropane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
bromodichloromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
1,4-dioxane	< 2	2	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
dibromomethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
4-methyl-2-pentanone (MIBK)	< 0.4	0.4	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
cis-1,3-dichloropropene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
toluene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
trans-1,3-dichloropropene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
2-hexanone	< 0.5	0.5	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
1,1,2-trichloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
1,3-dichloropropane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
tetrachloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
dibromochloromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B

Project ID: DPW-New England Yard 10001086

Job ID: 22468

Sample#: 22468-005

Sample ID: CA-2 FLOOR

Matrix: Solid Percent Dry: 98.1% Results expressed on a dry weight basis.

Sampled: 9/22/11 14:30

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
1,2-dibromoethane (EDB)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
chlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
1,1,1,2-tetrachloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
ethylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
m&p-xylenes	**0.3**	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
o-xylene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
styrene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
bromoform	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
isopropylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
1,1,2,2-tetrachloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
1,2,3-trichloropropane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
n-propylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
bromobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
1,3,5-trimethylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
2-chlorotoluene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
4-chlorotoluene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
tert-butylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
1,2,4-trimethylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
sec-butylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
1,3-dichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
4-isopropyltoluene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
1,4-dichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
1,2-dichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
n-butylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
1,2-dibromo-3-chloropropane (DBCP)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
1,2,4-trichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
1,3,5-trichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
hexachlorobutadiene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
naphthalene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
1,2,3-trichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**99**	78-114	%	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
toluene-D8 SUR	**102**	88-110	%	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
4-bromofluorobenzene SUR	**107**	86-115	%	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B
a,a,a-trifluorotoluene SUR	**101**	70-130	%	1	AJD	9/28/11	4576	10/1/11	14:20	SW5035A8260B

Project ID: DPW-New England Yard 10001086
Job ID: 22468
Sample#: 22468-006
Sample ID: CA-3 6-8'
Matrix: Solid Percent Dry: 68.2% Results expressed on a dry weight basis.
Sampled: 9/22/11 11:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
dichlorodifluoromethane	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
chloromethane	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
vinyl chloride	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
bromomethane	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
chloroethane	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
trichlorofluoromethane	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
diethyl ether	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
acetone	< 5	5	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
1,1-dichloroethene	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
methylene chloride	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
carbon disulfide	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
methyl t-butyl ether (MTBE)	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
trans-1,2-dichloroethene	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
isopropyl ether (DIPE)	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
ethyl t-butyl ether (ETBE)	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
1,1-dichloroethane	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
t-butanol (TBA)	< 5	5	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
2-butanone (MEK)	< 0.6	0.6	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
2,2-dichloropropane	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
cis-1,2-dichloroethene	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
chloroform	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
bromochloromethane	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
tetrahydrofuran (THF)	< 1.0	1.0	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
1,1,1-trichloroethane	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
1,1-dichloropropene	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
t-amyl-methyl ether (TAME)	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
carbon tetrachloride	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
1,2-dichloroethane	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
benzene	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
trichloroethene	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
1,2-dichloropropane	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
bromodichloromethane	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
1,4-dioxane	< 5	5	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
dibromomethane	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
4-methyl-2-pentanone (MIBK)	< 0.9	0.9	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
cis-1,3-dichloropropene	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
toluene	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
trans-1,3-dichloropropene	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
2-hexanone	< 1.0	1.0	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
1,1,2-trichloroethane	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
1,3-dichloropropane	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
tetrachloroethene	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
dibromochloromethane	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B

Project ID: DPW-New England Yard 10001086
Job ID: 22468
Sample#: 22468-006
Sample ID: CA-3 6-8'
Matrix: Solid Percent Dry: 68.2% Results expressed on a dry weight basis.
Sampled: 9/22/11 11:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
1,2-dibromoethane (EDB)	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
chlorobenzene	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
1,1,1,2-tetrachloroethane	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
ethylbenzene	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
m&p-xylenes	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
o-xylene	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
styrene	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
bromoform	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
isopropylbenzene	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
1,1,2,2-tetrachloroethane	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
1,2,3-trichloropropane	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
n-propylbenzene	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
bromobenzene	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
1,3,5-trimethylbenzene	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
2-chlorotoluene	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
4-chlorotoluene	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
tert-butylbenzene	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
1,2,4-trimethylbenzene	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
sec-butylbenzene	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
1,3-dichlorobenzene	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
4-isopropyltoluene	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
1,4-dichlorobenzene	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
1,2-dichlorobenzene	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
n-butylbenzene	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
1,2-dibromo-3-chloropropane (DBCP)	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
1,2,4-trichlorobenzene	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
1,3,5-trichlorobenzene	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
hexachlorobutadiene	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
naphthalene	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
1,2,3-trichlorobenzene	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**100**	78-114	%	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
toluene-D8 SUR	**105**	88-110	%	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
4-bromofluorobenzene SUR	**100**	86-115	%	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B
a,a,a-trifluorotoluene SUR	**93**	70-130	%	1	AJD	9/28/11	4576	10/4/11	11:26	SW5035A8260B

Project ID: DPW-New England Yard 10001086
Job ID: 22468
Sample#: 22468-007
Sample ID: CA-4 6-8'
Matrix: Solid Percent Dry: 78.6% Results expressed on a dry weight basis.
Sampled: 9/22/11 10:30

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
dichlorodifluoromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
chloromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
vinyl chloride	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
bromomethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
chloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
trichlorofluoromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
diethyl ether	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
acetone	< 3	3	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
1,1-dichloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
methylene chloride	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
carbon disulfide	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
methyl t-butyl ether (MTBE)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
trans-1,2-dichloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
isopropyl ether (DIPE)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
ethyl t-butyl ether (ETBE)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
1,1-dichloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
t-butanol (TBA)	< 3	3	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
2-butanone (MEK)	< 0.3	0.3	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
2,2-dichloropropane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
cis-1,2-dichloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
chloroform	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
bromochloromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
tetrahydrofuran (THF)	< 0.5	0.5	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
1,1,1-trichloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
1,1-dichloropropene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
t-amyl-methyl ether (TAME)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
carbon tetrachloride	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
1,2-dichloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
benzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
trichloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
1,2-dichloropropane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
bromodichloromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
1,4-dioxane	< 3	3	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
dibromomethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
4-methyl-2-pentanone (MIBK)	< 0.5	0.5	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
cis-1,3-dichloropropene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
toluene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
trans-1,3-dichloropropene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
2-hexanone	< 0.5	0.5	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
1,1,2-trichloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
1,3-dichloropropane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
tetrachloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
dibromochloromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B

Project ID: DPW-New England Yard 10001086
Job ID: 22468
Sample#: 22468-007
Sample ID: CA-4 6-8'
Matrix: Solid Percent Dry: 78.6% Results expressed on a dry weight basis.
Sampled: 9/22/11 10:30

Parameter	Result	Quant 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	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
chlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
1,1,1,2-tetrachloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
ethylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
m&p-xylenes	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
o-xylene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
styrene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
bromoform	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
isopropylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
1,1,2,2-tetrachloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
1,2,3-trichloropropane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
n-propylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
bromobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
1,3,5-trimethylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
2-chlorotoluene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
4-chlorotoluene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
tert-butylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
1,2,4-trimethylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
sec-butylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
1,3-dichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
4-isopropyltoluene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
1,4-dichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
1,2-dichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
n-butylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
1,2-dibromo-3-chloropropane (DBCP)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
1,2,4-trichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
1,3,5-trichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
hexachlorobutadiene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
naphthalene	**1.0**	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
1,2,3-trichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**92**	78-114	%	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
toluene-D8 SUR	**97**	88-110	%	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
4-bromofluorobenzene SUR	**100**	86-115	%	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B
a,a,a-trifluorotoluene SUR	**98**	70-130	%	1	AJD	9/28/11	4576	10/1/11	7:32	SW5035A8260B

Project ID: DPW-New England Yard 10001086
Job ID: 22468
Sample#: 22468-008
Sample ID: CA-5 2-3'
Matrix: Solid Percent Dry: 86.9% Results expressed on a dry weight basis.
Sampled: 9/22/11 9:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
dichlorodifluoromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
chloromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
vinyl chloride	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
bromomethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
chloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
trichlorofluoromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
diethyl ether	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
acetone	< 2	2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
1,1-dichloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
methylene chloride	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
carbon disulfide	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
methyl t-butyl ether (MTBE)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
trans-1,2-dichloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
isopropyl ether (DIPE)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
ethyl t-butyl ether (ETBE)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
1,1-dichloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
t-butanol (TBA)	< 2	2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
2-butanone (MEK)	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
2,2-dichloropropane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
cis-1,2-dichloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
chloroform	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
bromochloromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
tetrahydrofuran (THF)	< 0.4	0.4	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
1,1,1-trichloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
1,1-dichloropropene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
t-amyl-methyl ether (TAME)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
carbon tetrachloride	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
1,2-dichloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
benzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
trichloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
1,2-dichloropropane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
bromodichloromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
1,4-dioxane	< 2	2	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
dibromomethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
4-methyl-2-pentanone (MIBK)	< 0.4	0.4	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
cis-1,3-dichloropropene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
toluene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
trans-1,3-dichloropropene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
2-hexanone	< 0.4	0.4	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
1,1,2-trichloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
1,3-dichloropropane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
tetrachloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
dibromochloromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B

Project ID: DPW-New England Yard 10001086
Job ID: 22468
Sample#: 22468-008
Sample ID: CA-5 2-3'
Matrix: Solid Percent Dry: 86.9% Results expressed on a dry weight basis.
Sampled: 9/22/11 9:00

Parameter	Result	Quant 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	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
chlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
1,1,1,2-tetrachloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
ethylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
m&p-xylenes	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
o-xylene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
styrene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
bromoform	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
isopropylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
1,1,2,2-tetrachloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
1,2,3-trichloropropane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
n-propylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
bromobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
1,3,5-trimethylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
2-chlorotoluene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
4-chlorotoluene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
tert-butylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
1,2,4-trimethylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
sec-butylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
1,3-dichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
4-isopropyltoluene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
1,4-dichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
1,2-dichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
n-butylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
1,2-dibromo-3-chloropropane (DBCP)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
1,2,4-trichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
1,3,5-trichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
hexachlorobutadiene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
naphthalene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
1,2,3-trichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**97**	78-114	%	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
toluene-D8 SUR	**104**	88-110	%	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
4-bromofluorobenzene SUR	**106**	86-115	%	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B
a,a,a-trifluorotoluene SUR	**87**	70-130	%	1	AJD	9/28/11	4576	10/4/11	11:57	SW5035A8260B

Project ID: DPW-New England Yard 10001086
Job ID: 22468
Sample#: 22468-009
Sample ID: CA-6 0-3'
Matrix: Solid Percent Dry: 92.6% Results expressed on a dry weight basis.
Sampled: 9/22/11 14:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
dichlorodifluoromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
chloromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
vinyl chloride	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
bromomethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
chloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
trichlorofluoromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
diethyl ether	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
acetone	< 2	2	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
1,1-dichloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
methylene chloride	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
carbon disulfide	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
methyl t-butyl ether (MTBE)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
trans-1,2-dichloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
isopropyl ether (DIPE)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
ethyl t-butyl ether (ETBE)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
1,1-dichloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
t-butanol (TBA)	< 2	2	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
2-butanone (MEK)	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
2,2-dichloropropane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
cis-1,2-dichloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
chloroform	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
bromochloromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
tetrahydrofuran (THF)	< 0.4	0.4	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
1,1,1-trichloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
1,1-dichloropropene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
t-amyl-methyl ether (TAME)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
carbon tetrachloride	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
1,2-dichloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
benzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
trichloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
1,2-dichloropropane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
bromodichloromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
1,4-dioxane	< 2	2	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
dibromomethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
4-methyl-2-pentanone (MIBK)	< 0.4	0.4	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
cis-1,3-dichloropropene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
toluene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
trans-1,3-dichloropropene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
2-hexanone	< 0.4	0.4	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
1,1,2-trichloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
1,3-dichloropropane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
tetrachloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
dibromochloromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B

Project ID: DPW-New England Yard 10001086
Job ID: 22468
Sample#: 22468-009
Sample ID: CA-6 0-3'
Matrix: Solid Percent Dry: 92.6% Results expressed on a dry weight basis.
Sampled: 9/22/11 14:00

Parameter	Result	Quant 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	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
chlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
1,1,1,2-tetrachloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
ethylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
m&p-xylenes	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
o-xylene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
styrene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
bromoform	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
isopropylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
1,1,2,2-tetrachloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
1,2,3-trichloropropane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
n-propylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
bromobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
1,3,5-trimethylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
2-chlorotoluene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
4-chlorotoluene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
tert-butylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
1,2,4-trimethylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
sec-butylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
1,3-dichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
4-isopropyltoluene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
1,4-dichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
1,2-dichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
n-butylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
1,2-dibromo-3-chloropropane (DBCP)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
1,2,4-trichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
1,3,5-trichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
hexachlorobutadiene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
naphthalene	**0.1**	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
1,2,3-trichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**94**	78-114	%	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
toluene-D8 SUR	**99**	88-110	%	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
4-bromofluorobenzene SUR	**98**	86-115	%	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B
a,a,a-trifluorotoluene SUR	**88**	70-130	%	1	AJD	9/28/11	4576	10/1/11	8:38	SW5035A8260B

Project ID: DPW-New England Yard 10001086
Job ID: 22468
Sample#: 22468-017
Sample ID: SB-DUP
Matrix: Solid Percent Dry: 92.4% Results expressed on a dry weight basis.
Sampled: 9/22/11 0:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
dichlorodifluoromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
chloromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
vinyl chloride	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
bromomethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
chloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
trichlorofluoromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
diethyl ether	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
acetone	< 2	2	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
1,1-dichloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
methylene chloride	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
carbon disulfide	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
methyl t-butyl ether (MTBE)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
trans-1,2-dichloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
isopropyl ether (DIPE)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
ethyl t-butyl ether (ETBE)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
1,1-dichloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
t-butanol (TBA)	< 2	2	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
2-butanone (MEK)	< 0.2	0.2	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
2,2-dichloropropane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
cis-1,2-dichloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
chloroform	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
bromochloromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
tetrahydrofuran (THF)	< 0.4	0.4	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
1,1,1-trichloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
1,1-dichloropropene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
t-amyl-methyl ether (TAME)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
carbon tetrachloride	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
1,2-dichloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
benzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
trichloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
1,2-dichloropropane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
bromodichloromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
1,4-dioxane	< 2	2	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
dibromomethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
4-methyl-2-pentanone (MIBK)	< 0.3	0.3	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
cis-1,3-dichloropropene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
toluene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
trans-1,3-dichloropropene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
2-hexanone	< 0.4	0.4	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
1,1,2-trichloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
1,3-dichloropropane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
tetrachloroethene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
dibromochloromethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B

Project ID: DPW-New England Yard 10001086
Job ID: 22468
Sample#: 22468-017
Sample ID: SB-DUP
Matrix: Solid Percent Dry: 92.4% Results expressed on a dry weight basis.
Sampled: 9/22/11 0:00

Parameter	Result	Quant 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	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
chlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
1,1,1,2-tetrachloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
ethylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
m&p-xylenes	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
o-xylene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
styrene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
bromoform	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
isopropylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
1,1,2,2-tetrachloroethane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
1,2,3-trichloropropane	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
n-propylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
bromobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
1,3,5-trimethylbenzene	**0.1**	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
2-chlorotoluene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
4-chlorotoluene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
tert-butylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
1,2,4-trimethylbenzene	**0.2**	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
sec-butylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
1,3-dichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
4-isopropyltoluene	**0.1**	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
1,4-dichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
1,2-dichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
n-butylbenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
1,2-dibromo-3-chloropropane (DBCP)	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
1,2,4-trichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
1,3,5-trichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
hexachlorobutadiene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
naphthalene	**0.7**	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
1,2,3-trichlorobenzene	< 0.1	0.1	ug/g	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**99**	78-114	%	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
toluene-D8 SUR	**106**	88-110	%	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
4-bromofluorobenzene SUR	**107**	86-115	%	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B
a,a,a-trifluorotoluene SUR	**90**	70-130	%	1	AJD	9/28/11	4576	10/4/11	12:28	SW5035A8260B

Project ID: DPW-New England Yard 10001086
Job ID: 22468
Sample#: 22468-002
Sample ID: CB-1
Matrix: Solid Percent Dry: 77.4% Results expressed on a dry weight basis.
Sampled: 9/22/11 12:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
N-nitrosodimethylamine	< 1.2	1.2	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
aniline	< 1.2	1.2	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
phenol	< 1.2	1.2	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
2-chlorophenol	< 2.9	2.9	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
bis(2-chloroethyl)ether	< 1.2	1.2	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
1,3-dichlorobenzene	< 1.2	1.2	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
1,4-dichlorobenzene	< 1.2	1.2	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
1,2-dichlorobenzene	< 1.2	1.2	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
benzyl alcohol	< 1.2	1.2	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
2-methylphenol	< 1.2	1.2	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
bis(2-chloroisopropyl) ether	< 1.2	1.2	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
hexachloroethane	< 1.2	1.2	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
N-nitroso-di-N-propylamine	< 1.2	1.2	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
4-methylphenol	< 1.2	1.2	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
nitrobenzene	< 1.2	1.2	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
isophorone	< 2.9	2.9	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
2-nitrophenol	< 1.2	1.2	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
2,4-dimethylphenol	< 1.2	1.2	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
bis(2-chloroethoxy)methane	< 1.2	1.2	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
2,4-dichlorophenol	< 2.9	2.9	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
1,2,4-trichlorobenzene	< 2.9	2.9	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
naphthalene	< 0.29	0.29	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
benzoic acid	< 29	29	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
4-chloroaniline	< 1.2	1.2	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
hexachlorobutadiene	< 1.2	1.2	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
4-chloro-3-methylphenol	< 1.2	1.2	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
2-methylnaphthalene	< 0.29	0.29	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
hexachlorocyclopentadiene	< 6	6	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
2,4,6-trichlorophenol	< 1.2	1.2	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
2,4,5-trichlorophenol	< 1.2	1.2	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
2-chloronaphthalene	< 2.9	2.9	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
2-nitroaniline	< 1.2	1.2	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
acenaphthylene	< 0.29	0.29	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
dimethylphthalate	< 2.9	2.9	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
2,6-dinitrotoluene	< 1.2	1.2	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
2,4-dinitrotoluene	< 1.2	1.2	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
acenaphthene	< 0.29	0.29	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
3-nitroaniline	< 1.2	1.2	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
2,4-dinitrophenol	< 29	29	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
dibenzofuran	< 0.29	0.29	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
4-nitrophenol	< 12	12	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
fluorene	< 0.29	0.29	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
diethyl phthalate	< 2.9	2.9	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D

Project ID: DPW-New England Yard 10001086
Job ID: 22468
Sample#: 22468-002
Sample ID: CB-1
Matrix: Solid Percent Dry: 77.4% Results expressed on a dry weight basis.
Sampled: 9/22/11 12:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
4-chlorophenyl phenyl ether	< 2.9	2.9	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
4-nitroaniline	< 2.9	2.9	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
4,6-dinitro-2-methylphenol	< 12	12	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
azobenzene	< 1.2	1.2	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
N-nitrosodiphenylamine	< 1.2	1.2	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
4-bromophenyl phenyl ether	< 1.2	1.2	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
hexachlorobenzene	< 1.2	1.2	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
pentachlorophenol	< 6	6	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
phenanthrene	< 0.29	0.29	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
anthracene	< 0.29	0.29	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
carbazole	< 1.2	1.2	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
di-n-butylphthalate	< 2.9	2.9	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
fluoranthene	**0.59**	0.29	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
benzidine	< 18	18	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
pyrene	**0.68**	0.29	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
butyl benzyl phthalate	< 2.9	2.9	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
benzo(a)anthracene	**0.45**	0.29	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
chrysene	**0.47**	0.29	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
3,3'-dichlorobenzidine	< 18	18	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
bis(2-ethylhexyl)phthalate	< 2.9	2.9	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
di-n-octyl phthalate	< 2.9	2.9	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
benzo(b)fluoranthene	**0.64**	0.29	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
benzo(k)fluoranthene	**0.31**	0.29	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
benzo(a)pyrene	**0.48**	0.29	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
indeno(1,2,3-cd)pyrene	< 0.29	0.29	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
dibenzo(a,h)anthracene	< 0.29	0.29	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
benzo(g,h,i)perylene	< 0.29	0.29	ug/g	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
Surrogate Recovery		**Limits**								
2-fluorophenol SUR	**58**	21-100	%	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
phenol-D5 SUR	**55**	10-102	%	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
2,4,6-tribromophenol SUR	**50**	10-123	%	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
nitrobenzene-D5 SUR	**56**	35-114	%	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
2-fluorobiphenyl SUR	**53**	43-116	%	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D
p-terphenyl-D14 SUR	**62**	33-141	%	5	AJD	9/28/11	4577	10/8/11	7:22	SW3546/8270D

Note: Dilution was required due to matrix interference, causing internal standard suppression.

Project ID: DPW-New England Yard 10001086
Job ID: 22468
Sample#: 22468-003
Sample ID: CA-1 0-2'
Matrix: Solid Percent Dry: 89.7% Results expressed on a dry weight basis.
Sampled: 9/22/11 10:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.6	0.6	ug/g	1	AJD	9/26/11	4570	10/9/11	15:36	SW3550B8270D
2-methylnaphthalene	< 0.6	0.6	ug/g	1	AJD	9/26/11	4570	10/9/11	15:36	SW3550B8270D
acenaphthylene	< 0.6	0.6	ug/g	1	AJD	9/26/11	4570	10/9/11	15:36	SW3550B8270D
acenaphthene	< 0.6	0.6	ug/g	1	AJD	9/26/11	4570	10/9/11	15:36	SW3550B8270D
dibenzofuran	< 0.6	0.6	ug/g	1	AJD	9/26/11	4570	10/9/11	15:36	SW3550B8270D
fluorene	< 0.6	0.6	ug/g	1	AJD	9/26/11	4570	10/9/11	15:36	SW3550B8270D
phenanthrene	< 0.6	0.6	ug/g	1	AJD	9/26/11	4570	10/9/11	15:36	SW3550B8270D
anthracene	< 0.6	0.6	ug/g	1	AJD	9/26/11	4570	10/9/11	15:36	SW3550B8270D
fluoranthene	< 0.6	0.6	ug/g	1	AJD	9/26/11	4570	10/9/11	15:36	SW3550B8270D
pyrene	< 0.6	0.6	ug/g	1	AJD	9/26/11	4570	10/9/11	15:36	SW3550B8270D
benzo(a)anthracene	< 0.6	0.6	ug/g	1	AJD	9/26/11	4570	10/9/11	15:36	SW3550B8270D
chrysene	< 0.6	0.6	ug/g	1	AJD	9/26/11	4570	10/9/11	15:36	SW3550B8270D
benzo(b)fluoranthene	< 0.6	0.6	ug/g	1	AJD	9/26/11	4570	10/9/11	15:36	SW3550B8270D
benzo(k)fluoranthene	< 0.6	0.6	ug/g	1	AJD	9/26/11	4570	10/9/11	15:36	SW3550B8270D
benzo(a)pyrene	< 0.6	0.6	ug/g	1	AJD	9/26/11	4570	10/9/11	15:36	SW3550B8270D
indeno(1,2,3-cd)pyrene	< 0.6	0.6	ug/g	1	AJD	9/26/11	4570	10/9/11	15:36	SW3550B8270D
dibenzo(a,h)anthracene	< 0.6	0.6	ug/g	1	AJD	9/26/11	4570	10/9/11	15:36	SW3550B8270D
benzo(g,h,i)perylene	< 0.6	0.6	ug/g	1	AJD	9/26/11	4570	10/9/11	15:36	SW3550B8270D
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**79**	43-116	%	1	AJD	9/26/11	4570	10/9/11	15:36	SW3550B8270D
o-terphenyl SUR	**78**	33-141	%	1	AJD	9/26/11	4570	10/9/11	15:36	SW3550B8270D

Project ID: DPW-New England Yard 10001086
Job ID: 22468
Sample#: 22468-004
Sample ID: CA-2 0-3'
Matrix: Solid Percent Dry: 83.7% Results expressed on a dry weight basis.
Sampled: 9/22/11 13:30

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 2.9	2.9	ug/g	5	AJD	9/26/11	4570	10/11/11	13:32	SW3550B8270D
2-methylnaphthalene	< 2.9	2.9	ug/g	5	AJD	9/26/11	4570	10/11/11	13:32	SW3550B8270D
acenaphthylene	< 2.9	2.9	ug/g	5	AJD	9/26/11	4570	10/11/11	13:32	SW3550B8270D
acenaphthene	< 2.9	2.9	ug/g	5	AJD	9/26/11	4570	10/11/11	13:32	SW3550B8270D
dibenzofuran	< 2.9	2.9	ug/g	5	AJD	9/26/11	4570	10/11/11	13:32	SW3550B8270D
fluorene	< 2.9	2.9	ug/g	5	AJD	9/26/11	4570	10/11/11	13:32	SW3550B8270D
phenanthrene	< 2.9	2.9	ug/g	5	AJD	9/26/11	4570	10/11/11	13:32	SW3550B8270D
anthracene	< 2.9	2.9	ug/g	5	AJD	9/26/11	4570	10/11/11	13:32	SW3550B8270D
fluoranthene	< 2.9	2.9	ug/g	5	AJD	9/26/11	4570	10/11/11	13:32	SW3550B8270D
pyrene	< 2.9	2.9	ug/g	5	AJD	9/26/11	4570	10/11/11	13:32	SW3550B8270D
benzo(a)anthracene	< 2.9	2.9	ug/g	5	AJD	9/26/11	4570	10/11/11	13:32	SW3550B8270D
chrysene	< 2.9	2.9	ug/g	5	AJD	9/26/11	4570	10/11/11	13:32	SW3550B8270D
benzo(b)fluoranthene	< 2.9	2.9	ug/g	5	AJD	9/26/11	4570	10/11/11	13:32	SW3550B8270D
benzo(k)fluoranthene	< 2.9	2.9	ug/g	5	AJD	9/26/11	4570	10/11/11	13:32	SW3550B8270D
benzo(a)pyrene	< 2.9	2.9	ug/g	5	AJD	9/26/11	4570	10/11/11	13:32	SW3550B8270D
indeno(1,2,3-cd)pyrene	< 2.9	2.9	ug/g	5	AJD	9/26/11	4570	10/11/11	13:32	SW3550B8270D
dibenzo(a,h)anthracene	< 2.9	2.9	ug/g	5	AJD	9/26/11	4570	10/11/11	13:32	SW3550B8270D
benzo(g,h,i)perylene	< 2.9	2.9	ug/g	5	AJD	9/26/11	4570	10/11/11	13:32	SW3550B8270D
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**83**	43-116	%	5	AJD	9/26/11	4570	10/11/11	13:32	SW3550B8270D
o-terphenyl SUR	**80**	33-141	%	5	AJD	9/26/11	4570	10/11/11	13:32	SW3550B8270D

Note: Dilution was required due to matrix interference, causing internal standard suppression.

Project ID: DPW-New England Yard 10001086
Job ID: 22468
Sample#: 22468-005
Sample ID: CA-2 FLOOR
Matrix: Solid Percent Dry: 98.1% Results expressed on a dry weight basis.
Sampled: 9/22/11 14:30

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 4.9	4.9	ug/g	10	AJD	9/26/11	4570	10/11/11	9:08	SW3550B8270D
2-methylnaphthalene	< 4.9	4.9	ug/g	10	AJD	9/26/11	4570	10/11/11	9:08	SW3550B8270D
acenaphthylene	< 4.9	4.9	ug/g	10	AJD	9/26/11	4570	10/11/11	9:08	SW3550B8270D
acenaphthene	< 4.9	4.9	ug/g	10	AJD	9/26/11	4570	10/11/11	9:08	SW3550B8270D
dibenzofuran	< 4.9	4.9	ug/g	10	AJD	9/26/11	4570	10/11/11	9:08	SW3550B8270D
fluorene	< 4.9	4.9	ug/g	10	AJD	9/26/11	4570	10/11/11	9:08	SW3550B8270D
phenanthrene	< 4.9	4.9	ug/g	10	AJD	9/26/11	4570	10/11/11	9:08	SW3550B8270D
anthracene	< 4.9	4.9	ug/g	10	AJD	9/26/11	4570	10/11/11	9:08	SW3550B8270D
fluoranthene	< 4.9	4.9	ug/g	10	AJD	9/26/11	4570	10/11/11	9:08	SW3550B8270D
pyrene	< 4.9	4.9	ug/g	10	AJD	9/26/11	4570	10/11/11	9:08	SW3550B8270D
benzo(a)anthracene	< 4.9	4.9	ug/g	10	AJD	9/26/11	4570	10/11/11	9:08	SW3550B8270D
chrysene	< 4.9	4.9	ug/g	10	AJD	9/26/11	4570	10/11/11	9:08	SW3550B8270D
benzo(b)fluoranthene	< 4.9	4.9	ug/g	10	AJD	9/26/11	4570	10/11/11	9:08	SW3550B8270D
benzo(k)fluoranthene	< 4.9	4.9	ug/g	10	AJD	9/26/11	4570	10/11/11	9:08	SW3550B8270D
benzo(a)pyrene	< 4.9	4.9	ug/g	10	AJD	9/26/11	4570	10/11/11	9:08	SW3550B8270D
indeno(1,2,3-cd)pyrene	< 4.9	4.9	ug/g	10	AJD	9/26/11	4570	10/11/11	9:08	SW3550B8270D
dibenzo(a,h)anthracene	< 4.9	4.9	ug/g	10	AJD	9/26/11	4570	10/11/11	9:08	SW3550B8270D
benzo(g,h,i)perylene	< 4.9	4.9	ug/g	10	AJD	9/26/11	4570	10/11/11	9:08	SW3550B8270D
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**111**	43-116	%	10	AJD	9/26/11	4570	10/11/11	9:08	SW3550B8270D
o-terphenyl SUR	**102**	33-141	%	10	AJD	9/26/11	4570	10/11/11	9:08	SW3550B8270D

Note: Dilution was required due to hydrocarbon interference in the sample.

Project ID: DPW-New England Yard 10001086
Job ID: 22468
Sample#: 22468-006
Sample ID: CA-3 6-8'
Matrix: Solid Percent Dry: 68.2% Results expressed on a dry weight basis.
Sampled: 9/22/11 11:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.7	0.7	ug/g	1	AJD	9/26/11	4570	10/9/11	16:14	SW3550B8270D
2-methylnaphthalene	< 0.7	0.7	ug/g	1	AJD	9/26/11	4570	10/9/11	16:14	SW3550B8270D
acenaphthylene	< 0.7	0.7	ug/g	1	AJD	9/26/11	4570	10/9/11	16:14	SW3550B8270D
acenaphthene	< 0.7	0.7	ug/g	1	AJD	9/26/11	4570	10/9/11	16:14	SW3550B8270D
dibenzofuran	< 0.7	0.7	ug/g	1	AJD	9/26/11	4570	10/9/11	16:14	SW3550B8270D
fluorene	< 0.7	0.7	ug/g	1	AJD	9/26/11	4570	10/9/11	16:14	SW3550B8270D
phenanthrene	< 0.7	0.7	ug/g	1	AJD	9/26/11	4570	10/9/11	16:14	SW3550B8270D
anthracene	< 0.7	0.7	ug/g	1	AJD	9/26/11	4570	10/9/11	16:14	SW3550B8270D
fluoranthene	< 0.7	0.7	ug/g	1	AJD	9/26/11	4570	10/9/11	16:14	SW3550B8270D
pyrene	< 0.7	0.7	ug/g	1	AJD	9/26/11	4570	10/9/11	16:14	SW3550B8270D
benzo(a)anthracene	< 0.7	0.7	ug/g	1	AJD	9/26/11	4570	10/9/11	16:14	SW3550B8270D
chrysene	< 0.7	0.7	ug/g	1	AJD	9/26/11	4570	10/9/11	16:14	SW3550B8270D
benzo(b)fluoranthene	< 0.7	0.7	ug/g	1	AJD	9/26/11	4570	10/9/11	16:14	SW3550B8270D
benzo(k)fluoranthene	< 0.7	0.7	ug/g	1	AJD	9/26/11	4570	10/9/11	16:14	SW3550B8270D
benzo(a)pyrene	< 0.7	0.7	ug/g	1	AJD	9/26/11	4570	10/9/11	16:14	SW3550B8270D
indeno(1,2,3-cd)pyrene	< 0.7	0.7	ug/g	1	AJD	9/26/11	4570	10/9/11	16:14	SW3550B8270D
dibenzo(a,h)anthracene	< 0.7	0.7	ug/g	1	AJD	9/26/11	4570	10/9/11	16:14	SW3550B8270D
benzo(g,h,i)perylene	< 0.7	0.7	ug/g	1	AJD	9/26/11	4570	10/9/11	16:14	SW3550B8270D
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**81**	43-116	%	1	AJD	9/26/11	4570	10/9/11	16:14	SW3550B8270D
o-terphenyl SUR	**77**	33-141	%	1	AJD	9/26/11	4570	10/9/11	16:14	SW3550B8270D

Project ID: DPW-New England Yard 10001086
Job ID: 22468
Sample#: 22468-007
Sample ID: CA-4 6-8'
Matrix: Solid Percent Dry: 78.6% Results expressed on a dry weight basis.
Sampled: 9/22/11 10:30

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 3.1	3.1	ug/g	5	AJD	9/26/11	4570	10/11/11	14:10	SW3550B8270D
2-methylnaphthalene	< 3.1	3.1	ug/g	5	AJD	9/26/11	4570	10/11/11	14:10	SW3550B8270D
acenaphthylene	< 3.1	3.1	ug/g	5	AJD	9/26/11	4570	10/11/11	14:10	SW3550B8270D
acenaphthene	< 3.1	3.1	ug/g	5	AJD	9/26/11	4570	10/11/11	14:10	SW3550B8270D
dibenzofuran	< 3.1	3.1	ug/g	5	AJD	9/26/11	4570	10/11/11	14:10	SW3550B8270D
fluorene	**3.9**	3.1	ug/g	5	AJD	9/26/11	4570	10/11/11	14:10	SW3550B8270D
phenanthrene	**30**	3.1	ug/g	5	AJD	9/26/11	4570	10/11/11	14:10	SW3550B8270D
anthracene	**5.0**	3.1	ug/g	5	AJD	9/26/11	4570	10/11/11	14:10	SW3550B8270D
fluoranthene	**34**	3.1	ug/g	5	AJD	9/26/11	4570	10/11/11	14:10	SW3550B8270D
pyrene	**38**	3.1	ug/g	5	AJD	9/26/11	4570	10/11/11	14:10	SW3550B8270D
benzo(a)anthracene	**15**	3.1	ug/g	5	AJD	9/26/11	4570	10/11/11	14:10	SW3550B8270D
chrysene	**19**	3.1	ug/g	5	AJD	9/26/11	4570	10/11/11	14:10	SW3550B8270D
benzo(b)fluoranthene	**14**	3.1	ug/g	5	AJD	9/26/11	4570	10/11/11	14:10	SW3550B8270D
benzo(k)fluoranthene	**15**	3.1	ug/g	5	AJD	9/26/11	4570	10/11/11	14:10	SW3550B8270D
benzo(a)pyrene	**13**	3.1	ug/g	5	AJD	9/26/11	4570	10/11/11	14:10	SW3550B8270D
indeno(1,2,3-cd)pyrene	**4.8**	3.1	ug/g	5	AJD	9/26/11	4570	10/11/11	14:10	SW3550B8270D
dibenzo(a,h)anthracene	< 3.1	3.1	ug/g	5	AJD	9/26/11	4570	10/11/11	14:10	SW3550B8270D
benzo(g,h,i)perylene	**4.3**	3.1	ug/g	5	AJD	9/26/11	4570	10/11/11	14:10	SW3550B8270D
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**75**	43-116	%	5	AJD	9/26/11	4570	10/11/11	14:10	SW3550B8270D
o-terphenyl SUR	**72**	33-141	%	5	AJD	9/26/11	4570	10/11/11	14:10	SW3550B8270D

Note: Dilution was required due to matrix interference, causing internal standard suppression.

Project ID: DPW-New England Yard 10001086
Job ID: 22468
Sample#: 22468-008
Sample ID: CA-5 2-3'
Matrix: Solid Percent Dry: 86.9% Results expressed on a dry weight basis.
Sampled: 9/22/11 9:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 5.5	5.5	ug/g	10	AJD	9/26/11	4570	10/11/11	16:41	SW3550B8270D
2-methylnaphthalene	< 5.5	5.5	ug/g	10	AJD	9/26/11	4570	10/11/11	16:41	SW3550B8270D
acenaphthylene	< 5.5	5.5	ug/g	10	AJD	9/26/11	4570	10/11/11	16:41	SW3550B8270D
acenaphthene	< 5.5	5.5	ug/g	10	AJD	9/26/11	4570	10/11/11	16:41	SW3550B8270D
dibenzofuran	< 5.5	5.5	ug/g	10	AJD	9/26/11	4570	10/11/11	16:41	SW3550B8270D
fluorene	< 5.5	5.5	ug/g	10	AJD	9/26/11	4570	10/11/11	16:41	SW3550B8270D
phenanthrene	< 5.5	5.5	ug/g	10	AJD	9/26/11	4570	10/11/11	16:41	SW3550B8270D
anthracene	< 5.5	5.5	ug/g	10	AJD	9/26/11	4570	10/11/11	16:41	SW3550B8270D
fluoranthene	< 5.5	5.5	ug/g	10	AJD	9/26/11	4570	10/11/11	16:41	SW3550B8270D
pyrene	< 5.5	5.5	ug/g	10	AJD	9/26/11	4570	10/11/11	16:41	SW3550B8270D
benzo(a)anthracene	< 5.5	5.5	ug/g	10	AJD	9/26/11	4570	10/11/11	16:41	SW3550B8270D
chrysene	< 5.5	5.5	ug/g	10	AJD	9/26/11	4570	10/11/11	16:41	SW3550B8270D
benzo(b)fluoranthene	< 5.5	5.5	ug/g	10	AJD	9/26/11	4570	10/11/11	16:41	SW3550B8270D
benzo(k)fluoranthene	< 5.5	5.5	ug/g	10	AJD	9/26/11	4570	10/11/11	16:41	SW3550B8270D
benzo(a)pyrene	< 5.5	5.5	ug/g	10	AJD	9/26/11	4570	10/11/11	16:41	SW3550B8270D
indeno(1,2,3-cd)pyrene	< 5.5	5.5	ug/g	10	AJD	9/26/11	4570	10/11/11	16:41	SW3550B8270D
dibenzo(a,h)anthracene	< 5.5	5.5	ug/g	10	AJD	9/26/11	4570	10/11/11	16:41	SW3550B8270D
benzo(g,h,i)perylene	< 5.5	5.5	ug/g	10	AJD	9/26/11	4570	10/11/11	16:41	SW3550B8270D
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**102**	43-116	%	10	AJD	9/26/11	4570	10/11/11	16:41	SW3550B8270D
o-terphenyl SUR	**91**	33-141	%	10	AJD	9/26/11	4570	10/11/11	16:41	SW3550B8270D

Note: Dilution was required due to matrix interference, causing internal standard suppression.

Project ID: DPW-New England Yard 10001086
Job ID: 22468
Sample#: 22468-009
Sample ID: CA-6 0-3'
Matrix: Solid Percent Dry: 92.6% Results expressed on a dry weight basis.
Sampled: 9/22/11 14:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
N-nitrosodimethylamine	< 2.1	2.1	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
aniline	< 2.1	2.1	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
phenol	< 2.1	2.1	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
2-chlorophenol	< 5.3	5.3	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
bis(2-chloroethyl)ether	< 2.1	2.1	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
1,3-dichlorobenzene	< 2.1	2.1	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
1,4-dichlorobenzene	< 2.1	2.1	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
1,2-dichlorobenzene	< 2.1	2.1	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
benzyl alcohol	< 2.1	2.1	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
2-methylphenol	< 2.1	2.1	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
bis(2-chloroisopropyl) ether	< 2.1	2.1	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
hexachloroethane	< 2.1	2.1	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
N-nitroso-di-N-propylamine	< 2.1	2.1	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
4-methylphenol	< 2.1	2.1	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
nitrobenzene	< 2.1	2.1	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
isophorone	< 5.3	5.3	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
2-nitrophenol	< 2.1	2.1	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
2,4-dimethylphenol	< 2.1	2.1	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
bis(2-chloroethoxy)methane	< 2.1	2.1	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
2,4-dichlorophenol	< 5.3	5.3	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
1,2,4-trichlorobenzene	< 5.3	5.3	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
naphthalene	< 0.53	0.53	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
benzoic acid	< 53	53	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
4-chloroaniline	< 2.1	2.1	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
hexachlorobutadiene	< 2.1	2.1	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
4-chloro-3-methylphenol	< 2.1	2.1	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
2-methylnaphthalene	< 0.53	0.53	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
hexachlorocyclopentadiene	< 11	11	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
2,4,6-trichlorophenol	< 2.1	2.1	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
2,4,5-trichlorophenol	< 2.1	2.1	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
2-chloronaphthalene	< 5.3	5.3	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
2-nitroaniline	< 2.1	2.1	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
acenaphthylene	< 0.53	0.53	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
dimethylphthalate	< 5.3	5.3	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
2,6-dinitrotoluene	< 2.1	2.1	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
2,4-dinitrotoluene	< 2.1	2.1	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
acenaphthene	**1.1**	0.53	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
3-nitroaniline	< 2.1	2.1	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
2,4-dinitrophenol	< 53	53	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
dibenzofuran	**0.79**	0.53	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
4-nitrophenol	< 21	21	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
fluorene	**1.3**	0.53	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
diethyl phthalate	< 5.3	5.3	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D

Absolute Resource associates

Project ID: DPW-New England Yard 10001086
Job ID: 22468
Sample#: 22468-009
Sample ID: CA-6 0-3'
Matrix: Solid Percent Dry: 92.6% Results expressed on a dry weight basis.
Sampled: 9/22/11 14:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
4-chlorophenyl phenyl ether	< 5.3	5.3	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
4-nitroaniline	< 5.3	5.3	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
4,6-dinitro-2-methylphenol	< 21	21	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
azobenzene	< 2.1	2.1	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
N-nitrosodiphenylamine	< 2.1	2.1	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
4-bromophenyl phenyl ether	< 2.1	2.1	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
hexachlorobenzene	< 2.1	2.1	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
pentachlorophenol	< 11	11	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
phenanthrene	**12**	0.53	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
anthracene	**2.8**	0.53	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
carbazole	< 2.1	2.1	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
di-n-butylphthalate	< 5.3	5.3	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
fluoranthene	**11**	0.53	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
benzidine	< 32	32	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
pyrene	**12**	0.53	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
butyl benzyl phthalate	< 5.3	5.3	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
benzo(a)anthracene	**5.5**	0.53	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
chrysene	**5.2**	0.53	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
3,3'-dichlorobenzidine	< 32	32	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
bis(2-ethylhexyl)phthalate	< 5.3	5.3	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
di-n-octyl phthalate	< 5.3	5.3	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
benzo(b)fluoranthene	**3.7**	0.53	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
benzo(k)fluoranthene	**3.7**	0.53	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
benzo(a)pyrene	**3.9**	0.53	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
indeno(1,2,3-cd)pyrene	**1.4**	0.53	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
dibenzo(a,h)anthracene	**0.83**	0.53	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
benzo(g,h,i)perylene	**1.5**	0.53	ug/g	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
Surrogate Recovery		**Limits**								
2-fluorophenol SUR	**30**	21-100	%	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
phenol-D5 SUR	**33**	10-102	%	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
2,4,6-tribromophenol SUR	**31**	10-123	%	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
nitrobenzene-D5 SUR	**30** *	35-114	%	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
2-fluorobiphenyl SUR	**34** *	43-116	%	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D
p-terphenyl-D14 SUR	**39**	33-141	%	10	AJD	9/28/11	4577	10/9/11	0:26	SW3546/8270D

**** The surrogate showed recovery outside the acceptance limits. Matrix interference suspected.***
Note: Dilution was required due to matrix interference, causing internal standard suppression.

Project ID: DPW-New England Yard 10001086
Job ID: 22468
Sample#: 22468-010
Sample ID: SS-1
Matrix: Solid Percent Dry: 92.9% Results expressed on a dry weight basis.
Sampled: 9/22/11 9:20

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	8:18	SW3550B8270D
2-methylnaphthalene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	8:18	SW3550B8270D
acenaphthylene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	8:18	SW3550B8270D
acenaphthene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	8:18	SW3550B8270D
dibenzofuran	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	8:18	SW3550B8270D
fluorene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	8:18	SW3550B8270D
phenanthrene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	8:18	SW3550B8270D
anthracene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	8:18	SW3550B8270D
fluoranthene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	8:18	SW3550B8270D
pyrene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	8:18	SW3550B8270D
benzo(a)anthracene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	8:18	SW3550B8270D
chrysene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	8:18	SW3550B8270D
benzo(b)fluoranthene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	8:18	SW3550B8270D
benzo(k)fluoranthene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	8:18	SW3550B8270D
benzo(a)pyrene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	8:18	SW3550B8270D
indeno(1,2,3-cd)pyrene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	8:18	SW3550B8270D
dibenzo(a,h)anthracene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	8:18	SW3550B8270D
benzo(g,h,i)perylene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	8:18	SW3550B8270D
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**82**	43-116	%	1	AJD	9/26/11	4570	10/5/11	8:18	SW3550B8270D
o-terphenyl SUR	**74**	33-141	%	1	AJD	9/26/11	4570	10/5/11	8:18	SW3550B8270D

Project ID: DPW-New England Yard 10001086
Job ID: 22468
Sample#: 22468-011
Sample ID: SS-2
Matrix: Solid Percent Dry: 92.4% Results expressed on a dry weight basis.
Sampled: 9/22/11 8:55

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 2.7	2.7	ug/g	5	AJD	9/26/11	4570	10/11/11	10:23	SW3550B8270D
2-methylnaphthalene	< 2.7	2.7	ug/g	5	AJD	9/26/11	4570	10/11/11	10:23	SW3550B8270D
acenaphthylene	< 2.7	2.7	ug/g	5	AJD	9/26/11	4570	10/11/11	10:23	SW3550B8270D
acenaphthene	< 2.7	2.7	ug/g	5	AJD	9/26/11	4570	10/11/11	10:23	SW3550B8270D
dibenzofuran	< 2.7	2.7	ug/g	5	AJD	9/26/11	4570	10/11/11	10:23	SW3550B8270D
fluorene	< 2.7	2.7	ug/g	5	AJD	9/26/11	4570	10/11/11	10:23	SW3550B8270D
phenanthrene	< 2.7	2.7	ug/g	5	AJD	9/26/11	4570	10/11/11	10:23	SW3550B8270D
anthracene	< 2.7	2.7	ug/g	5	AJD	9/26/11	4570	10/11/11	10:23	SW3550B8270D
fluoranthene	**3.9**	2.7	ug/g	5	AJD	9/26/11	4570	10/11/11	10:23	SW3550B8270D
pyrene	**3.5**	2.7	ug/g	5	AJD	9/26/11	4570	10/11/11	10:23	SW3550B8270D
benzo(a)anthracene	< 2.7	2.7	ug/g	5	AJD	9/26/11	4570	10/11/11	10:23	SW3550B8270D
chrysene	< 2.7	2.7	ug/g	5	AJD	9/26/11	4570	10/11/11	10:23	SW3550B8270D
benzo(b)fluoranthene	< 2.7	2.7	ug/g	5	AJD	9/26/11	4570	10/11/11	10:23	SW3550B8270D
benzo(k)fluoranthene	< 2.7	2.7	ug/g	5	AJD	9/26/11	4570	10/11/11	10:23	SW3550B8270D
benzo(a)pyrene	< 2.7	2.7	ug/g	5	AJD	9/26/11	4570	10/11/11	10:23	SW3550B8270D
indeno(1,2,3-cd)pyrene	< 2.7	2.7	ug/g	5	AJD	9/26/11	4570	10/11/11	10:23	SW3550B8270D
dibenzo(a,h)anthracene	< 2.7	2.7	ug/g	5	AJD	9/26/11	4570	10/11/11	10:23	SW3550B8270D
benzo(g,h,i)perylene	< 2.7	2.7	ug/g	5	AJD	9/26/11	4570	10/11/11	10:23	SW3550B8270D
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**93**	43-116	%	5	AJD	9/26/11	4570	10/11/11	10:23	SW3550B8270D
o-terphenyl SUR	**91**	33-141	%	5	AJD	9/26/11	4570	10/11/11	10:23	SW3550B8270D

Note: Dilution was required due to matrix interference, causing internal standard suppression.

Project ID: DPW-New England Yard 10001086

Job ID: 22468

Sample#: 22468-012

Sample ID: SS-3

Matrix: Solid Percent Dry: 93.4% Results expressed on a dry weight basis.

Sampled: 9/22/11 8:40

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	8:56	SW3550B8270D
2-methylnaphthalene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	8:56	SW3550B8270D
acenaphthylene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	8:56	SW3550B8270D
acenaphthene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	8:56	SW3550B8270D
dibenzofuran	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	8:56	SW3550B8270D
fluorene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	8:56	SW3550B8270D
phenanthrene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	8:56	SW3550B8270D
anthracene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	8:56	SW3550B8270D
fluoranthene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	8:56	SW3550B8270D
pyrene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	8:56	SW3550B8270D
benzo(a)anthracene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	8:56	SW3550B8270D
chrysene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	8:56	SW3550B8270D
benzo(b)fluoranthene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	8:56	SW3550B8270D
benzo(k)fluoranthene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	8:56	SW3550B8270D
benzo(a)pyrene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	8:56	SW3550B8270D
indeno(1,2,3-cd)pyrene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	8:56	SW3550B8270D
dibenzo(a,h)anthracene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	8:56	SW3550B8270D
benzo(g,h,i)perylene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	8:56	SW3550B8270D
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**79**	43-116	%	1	AJD	9/26/11	4570	10/5/11	8:56	SW3550B8270D
o-terphenyl SUR	**73**	33-141	%	1	AJD	9/26/11	4570	10/5/11	8:56	SW3550B8270D

Project ID: DPW-New England Yard 10001086
Job ID: 22468
Sample#: 22468-013
Sample ID: TP-1 4-6'
Matrix: Solid Percent Dry: 86.1% Results expressed on a dry weight basis.
Sampled: 9/22/11 11:15

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 2.7	2.7	ug/g	5	AJD	9/26/11	4570	10/11/11	17:18	SW3550B8270D
2-methylnaphthalene	< 2.7	2.7	ug/g	5	AJD	9/26/11	4570	10/11/11	17:18	SW3550B8270D
acenaphthylene	< 2.7	2.7	ug/g	5	AJD	9/26/11	4570	10/11/11	17:18	SW3550B8270D
acenaphthene	< 2.7	2.7	ug/g	5	AJD	9/26/11	4570	10/11/11	17:18	SW3550B8270D
dibenzofuran	< 2.7	2.7	ug/g	5	AJD	9/26/11	4570	10/11/11	17:18	SW3550B8270D
fluorene	< 2.7	2.7	ug/g	5	AJD	9/26/11	4570	10/11/11	17:18	SW3550B8270D
phenanthrene	< 2.7	2.7	ug/g	5	AJD	9/26/11	4570	10/11/11	17:18	SW3550B8270D
anthracene	< 2.7	2.7	ug/g	5	AJD	9/26/11	4570	10/11/11	17:18	SW3550B8270D
fluoranthene	**3.9**	2.7	ug/g	5	AJD	9/26/11	4570	10/11/11	17:18	SW3550B8270D
pyrene	**5.4**	2.7	ug/g	5	AJD	9/26/11	4570	10/11/11	17:18	SW3550B8270D
benzo(a)anthracene	**2.8**	2.7	ug/g	5	AJD	9/26/11	4570	10/11/11	17:18	SW3550B8270D
chrysene	**3.8**	2.7	ug/g	5	AJD	9/26/11	4570	10/11/11	17:18	SW3550B8270D
benzo(b)fluoranthene	**5.8**	2.7	ug/g	5	AJD	9/26/11	4570	10/11/11	17:18	SW3550B8270D
benzo(k)fluoranthene	**2.9**	2.7	ug/g	5	AJD	9/26/11	4570	10/11/11	17:18	SW3550B8270D
benzo(a)pyrene	**3.8**	2.7	ug/g	5	AJD	9/26/11	4570	10/11/11	17:18	SW3550B8270D
indeno(1,2,3-cd)pyrene	< 2.7	2.7	ug/g	5	AJD	9/26/11	4570	10/11/11	17:18	SW3550B8270D
dibenzo(a,h)anthracene	< 2.7	2.7	ug/g	5	AJD	9/26/11	4570	10/11/11	17:18	SW3550B8270D
benzo(g,h,i)perylene	< 2.7	2.7	ug/g	5	AJD	9/26/11	4570	10/11/11	17:18	SW3550B8270D
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**88**	43-116	%	5	AJD	9/26/11	4570	10/11/11	17:18	SW3550B8270D
o-terphenyl SUR	**83**	33-141	%	5	AJD	9/26/11	4570	10/11/11	17:18	SW3550B8270D

Note: Dilution was required due to matrix interference, causing internal standard suppression.

Project ID: DPW-New England Yard 10001086
Job ID: 22468
Sample#: 22468-014
Sample ID: TP-2 4-6'
Matrix: Solid Percent Dry: 75.1% Results expressed on a dry weight basis.
Sampled: 9/22/11 10:35

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 3.2	3.2	ug/g	5	AJD	9/26/11	4570	10/11/11	11:01	SW3550B8270D
2-methylnaphthalene	< 3.2	3.2	ug/g	5	AJD	9/26/11	4570	10/11/11	11:01	SW3550B8270D
acenaphthylene	< 3.2	3.2	ug/g	5	AJD	9/26/11	4570	10/11/11	11:01	SW3550B8270D
acenaphthene	< 3.2	3.2	ug/g	5	AJD	9/26/11	4570	10/11/11	11:01	SW3550B8270D
dibenzofuran	< 3.2	3.2	ug/g	5	AJD	9/26/11	4570	10/11/11	11:01	SW3550B8270D
fluorene	< 3.2	3.2	ug/g	5	AJD	9/26/11	4570	10/11/11	11:01	SW3550B8270D
phenanthrene	**9.7**	3.2	ug/g	5	AJD	9/26/11	4570	10/11/11	11:01	SW3550B8270D
anthracene	< 3.2	3.2	ug/g	5	AJD	9/26/11	4570	10/11/11	11:01	SW3550B8270D
fluoranthene	**20**	3.2	ug/g	5	AJD	9/26/11	4570	10/11/11	11:01	SW3550B8270D
pyrene	**20**	3.2	ug/g	5	AJD	9/26/11	4570	10/11/11	11:01	SW3550B8270D
benzo(a)anthracene	**11**	3.2	ug/g	5	AJD	9/26/11	4570	10/11/11	11:01	SW3550B8270D
chrysene	**12**	3.2	ug/g	5	AJD	9/26/11	4570	10/11/11	11:01	SW3550B8270D
benzo(b)fluoranthene	**13**	3.2	ug/g	5	AJD	9/26/11	4570	10/11/11	11:01	SW3550B8270D
benzo(k)fluoranthene	**5.5**	3.2	ug/g	5	AJD	9/26/11	4570	10/11/11	11:01	SW3550B8270D
benzo(a)pyrene	**9.9**	3.2	ug/g	5	AJD	9/26/11	4570	10/11/11	11:01	SW3550B8270D
indeno(1,2,3-cd)pyrene	**4.7**	3.2	ug/g	5	AJD	9/26/11	4570	10/11/11	11:01	SW3550B8270D
dibenzo(a,h)anthracene	< 3.2	3.2	ug/g	5	AJD	9/26/11	4570	10/11/11	11:01	SW3550B8270D
benzo(g,h,i)perylene	**5.1**	3.2	ug/g	5	AJD	9/26/11	4570	10/11/11	11:01	SW3550B8270D
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**132** *	43-116	%	5	AJD	9/26/11	4570	10/11/11	11:01	SW3550B8270D
o-terphenyl SUR	**123**	33-141	%	5	AJD	9/26/11	4570	10/11/11	11:01	SW3550B8270D

Note: Dilution was required due to matrix interference, causing internal standard suppression.
**** The surrogate showed recovery outside the acceptance limits. Matrix interference suspected.***

Project ID: DPW-New England Yard 10001086
Job ID: 22468
Sample#: 22468-016
Sample ID: SS-DUP
Matrix: Solid Percent Dry: 91.7% Results expressed on a dry weight basis.
Sampled: 9/22/11 0:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	9:34	SW3550B8270D
2-methylnaphthalene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	9:34	SW3550B8270D
acenaphthylene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	9:34	SW3550B8270D
acenaphthene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	9:34	SW3550B8270D
dibenzofuran	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	9:34	SW3550B8270D
fluorene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	9:34	SW3550B8270D
phenanthrene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	9:34	SW3550B8270D
anthracene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	9:34	SW3550B8270D
fluoranthene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	9:34	SW3550B8270D
pyrene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	9:34	SW3550B8270D
benzo(a)anthracene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	9:34	SW3550B8270D
chrysene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	9:34	SW3550B8270D
benzo(b)fluoranthene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	9:34	SW3550B8270D
benzo(k)fluoranthene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	9:34	SW3550B8270D
benzo(a)pyrene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	9:34	SW3550B8270D
indeno(1,2,3-cd)pyrene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	9:34	SW3550B8270D
dibenzo(a,h)anthracene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	9:34	SW3550B8270D
benzo(g,h,i)perylene	< 0.5	0.5	ug/g	1	AJD	9/26/11	4570	10/5/11	9:34	SW3550B8270D
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**80**	43-116	%	1	AJD	9/26/11	4570	10/5/11	9:34	SW3550B8270D
o-terphenyl SUR	**73**	33-141	%	1	AJD	9/26/11	4570	10/5/11	9:34	SW3550B8270D

Project ID: DPW-New England Yard 10001086

Job ID: 22468

Sample#: 22468-010

Sample ID: SS-1

Matrix: Solid Percent Dry: 92.9% Results expressed on a dry weight basis.

Sampled: 9/22/11 9:20

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
PCB-1016	< 0.03	0.03	ug/g	1	JLZ	9/28/11	4582	9/30/11	1:25	SW3540C8082A
PCB-1221	< 0.03	0.03	ug/g	1	JLZ	9/28/11	4582	9/30/11	1:25	SW3540C8082A
PCB-1232	< 0.03	0.03	ug/g	1	JLZ	9/28/11	4582	9/30/11	1:25	SW3540C8082A
PCB-1242	< 0.03	0.03	ug/g	1	JLZ	9/28/11	4582	9/30/11	1:25	SW3540C8082A
PCB-1248	< 0.03	0.03	ug/g	1	JLZ	9/28/11	4582	9/30/11	1:25	SW3540C8082A
PCB-1254	< 0.03	0.03	ug/g	1	JLZ	9/28/11	4582	9/30/11	1:25	SW3540C8082A
PCB-1260	< 0.03	0.03	ug/g	1	JLZ	9/28/11	4582	9/30/11	1:25	SW3540C8082A
Surrogate Recovery		**Limits**								
tetrachloro-m-xylene SUR	**38**	30-150	%	1	JLZ	9/28/11	4582	9/30/11	1:25	SW3540C8082A
decachlorobiphenyl SUR	**48**	30-150	%	1	JLZ	9/28/11	4582	9/30/11	1:25	SW3540C8082A

Sample#: 22468-011

Sample ID: SS-2

Matrix: Solid Percent Dry: 92.4% Results expressed on a dry weight basis.

Sampled: 9/22/11 8:55

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
PCB-1016	< 0.03	0.03	ug/g	1	JLZ	9/28/11	4582	9/30/11	18:58	SW3540C8082A
PCB-1221	< 0.03	0.03	ug/g	1	JLZ	9/28/11	4582	9/30/11	18:58	SW3540C8082A
PCB-1232	< 0.03	0.03	ug/g	1	JLZ	9/28/11	4582	9/30/11	18:58	SW3540C8082A
PCB-1242	< 0.03	0.03	ug/g	1	JLZ	9/28/11	4582	9/30/11	18:58	SW3540C8082A
PCB-1248	< 0.03	0.03	ug/g	1	JLZ	9/28/11	4582	9/30/11	18:58	SW3540C8082A
PCB-1254	< 0.03	0.03	ug/g	1	JLZ	9/28/11	4582	9/30/11	18:58	SW3540C8082A
PCB-1260	< 0.03	0.03	ug/g	1	JLZ	9/28/11	4582	9/30/11	18:58	SW3540C8082A
Surrogate Recovery		**Limits**								
tetrachloro-m-xylene SUR	**61**	30-150	%	1	JLZ	9/28/11	4582	9/30/11	18:58	SW3540C8082A
decachlorobiphenyl SUR	**61**	30-150	%	1	JLZ	9/28/11	4582	9/30/11	18:58	SW3540C8082A

Project ID: DPW-New England Yard 10001086

Job ID: 22468

Sample#: 22468-012

Sample ID: SS-3

Matrix: Solid Percent Dry: 93.4% Results expressed on a dry weight basis.

Sampled: 9/22/11 8:40

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
PCB-1016	< 0.03	0.03	ug/g	1	JLZ	9/28/11	4582	9/30/11	1:55	SW3540C8082A
PCB-1221	< 0.03	0.03	ug/g	1	JLZ	9/28/11	4582	9/30/11	1:55	SW3540C8082A
PCB-1232	< 0.03	0.03	ug/g	1	JLZ	9/28/11	4582	9/30/11	1:55	SW3540C8082A
PCB-1242	< 0.03	0.03	ug/g	1	JLZ	9/28/11	4582	9/30/11	1:55	SW3540C8082A
PCB-1248	< 0.03	0.03	ug/g	1	JLZ	9/28/11	4582	9/30/11	1:55	SW3540C8082A
PCB-1254	< 0.03	0.03	ug/g	1	JLZ	9/28/11	4582	9/30/11	1:55	SW3540C8082A
PCB-1260	< 0.03	0.03	ug/g	1	JLZ	9/28/11	4582	9/30/11	1:55	SW3540C8082A
Surrogate Recovery		**Limits**								
tetrachloro-m-xylene SUR	**48**	30-150	%	1	JLZ	9/28/11	4582	9/30/11	1:55	SW3540C8082A
decachlorobiphenyl SUR	**58**	30-150	%	1	JLZ	9/28/11	4582	9/30/11	1:55	SW3540C8082A

Sample#: 22468-016

Sample ID: SS-DUP

Matrix: Solid Percent Dry: 91.7% Results expressed on a dry weight basis.

Sampled: 9/22/11 0:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
PCB-1016	< 0.03	0.03	ug/g	1	JLZ	9/28/11	4582	9/30/11	2:26	SW3540C8082A
PCB-1221	< 0.03	0.03	ug/g	1	JLZ	9/28/11	4582	9/30/11	2:26	SW3540C8082A
PCB-1232	< 0.03	0.03	ug/g	1	JLZ	9/28/11	4582	9/30/11	2:26	SW3540C8082A
PCB-1242	< 0.03	0.03	ug/g	1	JLZ	9/28/11	4582	9/30/11	2:26	SW3540C8082A
PCB-1248	< 0.03	0.03	ug/g	1	JLZ	9/28/11	4582	9/30/11	2:26	SW3540C8082A
PCB-1254	< 0.03	0.03	ug/g	1	JLZ	9/28/11	4582	9/30/11	2:26	SW3540C8082A
PCB-1260	< 0.03	0.03	ug/g	1	JLZ	9/28/11	4582	9/30/11	2:26	SW3540C8082A
Surrogate Recovery		**Limits**								
tetrachloro-m-xylene SUR	**47**	30-150	%	1	JLZ	9/28/11	4582	9/30/11	2:26	SW3540C8082A
decachlorobiphenyl SUR	**60**	30-150	%	1	JLZ	9/28/11	4582	9/30/11	2:26	SW3540C8082A

Project ID: DPW-New England Yard 10001086

Job ID: 22468

Sample#: 22468-002

Sample ID: CB-1

Matrix: Solid Percent Dry: 77.4% Results expressed on a dry weight basis.

Sampled: 9/22/11 12:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
TPH C10-C36	**560**	260	ug/g	1	JLZ	9/26/11	4569	9/27/11	17:17	SW3550B8100m
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**94**	40-140	%	1	JLZ	9/26/11	4569	9/27/11	17:17	SW3550B8100m
o-terphenyl SUR	**89**	40-140	%	1	JLZ	9/26/11	4569	9/27/11	17:17	SW3550B8100m

Sample#: 22468-003

Sample ID: CA-1 0-2'

Matrix: Solid Percent Dry: 89.7% Results expressed on a dry weight basis.

Sampled: 9/22/11 10:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
TPH C10-C36	< 220	220	ug/g	1	JLZ	9/26/11	4569	9/27/11	15:57	SW3550B8100m
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**90**	40-140	%	1	JLZ	9/26/11	4569	9/27/11	15:57	SW3550B8100m
o-terphenyl SUR	**92**	40-140	%	1	JLZ	9/26/11	4569	9/27/11	15:57	SW3550B8100m

Sample#: 22468-004

Sample ID: CA-2 0-3'

Matrix: Solid Percent Dry: 83.7% Results expressed on a dry weight basis.

Sampled: 9/22/11 13:30

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
TPH C10-C36	**650**	230	ug/g	1	JLZ	9/26/11	4569	9/27/11	17:33	SW3550B8100m
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**79**	40-140	%	1	JLZ	9/26/11	4569	9/27/11	17:33	SW3550B8100m
o-terphenyl SUR	**88**	40-140	%	1	JLZ	9/26/11	4569	9/27/11	17:33	SW3550B8100m

Sample#: 22468-005

Sample ID: CA-2 FLOOR

Matrix: Solid Percent Dry: 98.1% Results expressed on a dry weight basis.

Sampled: 9/22/11 14:30

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
TPH C10-C36	**4000**	200	ug/g	1	JLZ	9/26/11	4569	9/27/11	17:49	SW3550B8100m
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**42**	40-140	%	1	JLZ	9/26/11	4569	9/27/11	17:49	SW3550B8100m
o-terphenyl SUR	**42**	40-140	%	1	JLZ	9/26/11	4569	9/27/11	17:49	SW3550B8100m

Project ID: DPW-New England Yard 10001086

Job ID: 22468

Sample#: 22468-006

Sample ID: CA-3 6-8'

Matrix: Solid Percent Dry: 68.2% Results expressed on a dry weight basis.

Sampled: 9/22/11 11:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
TPH C10-C36	**740**	290	ug/g	1	JLZ	9/26/11	4569	9/27/11	17:00	SW3550B8100m
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**93**	40-140	%	1	JLZ	9/26/11	4569	9/27/11	17:00	SW3550B8100m
o-terphenyl SUR	**92**	40-140	%	1	JLZ	9/26/11	4569	9/27/11	17:00	SW3550B8100m

Sample#: 22468-007

Sample ID: CA-4 6-8'

Matrix: Solid Percent Dry: 78.6% Results expressed on a dry weight basis.

Sampled: 9/22/11 10:30

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
TPH C10-C36	**2100**	250	ug/g	1	JLZ	9/26/11	4569	9/27/11	18:06	SW3550B8100m
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**75**	40-140	%	1	JLZ	9/26/11	4569	9/27/11	18:06	SW3550B8100m
o-terphenyl SUR	**75**	40-140	%	1	JLZ	9/26/11	4569	9/27/11	18:06	SW3550B8100m

Sample#: 22468-008

Sample ID: CA-5 2-3'

Matrix: Solid Percent Dry: 86.9% Results expressed on a dry weight basis.

Sampled: 9/22/11 9:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
TPH C10-C36	**3000**	220	ug/g	1	JLZ	9/26/11	4569	9/27/11	18:22	SW3550B8100m
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**80**	40-140	%	1	JLZ	9/26/11	4569	9/27/11	18:22	SW3550B8100m
o-terphenyl SUR	**95**	40-140	%	1	JLZ	9/26/11	4569	9/27/11	18:22	SW3550B8100m

Sample#: 22468-009

Sample ID: CA-6 0-3'

Matrix: Solid Percent Dry: 92.6% Results expressed on a dry weight basis.

Sampled: 9/22/11 14:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
TPH C10-C36	**870**	200	ug/g	1	JLZ	9/26/11	4569	9/27/11	18:38	SW3550B8100m
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**93**	40-140	%	1	JLZ	9/26/11	4569	9/27/11	18:38	SW3550B8100m
o-terphenyl SUR	**83**	40-140	%	1	JLZ	9/26/11	4569	9/27/11	18:38	SW3550B8100m

Project ID: DPW-New England Yard 10001086

Job ID: 22468

Sample#: 22468-010

Sample ID: SS-1

Matrix: Solid Percent Dry: 92.9% Results expressed on a dry weight basis.

Sampled: 9/22/11 9:20

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
TPH C10-C36	< 200	200	ug/g	1	JLZ	9/26/11	4569	9/27/11	14:50	SW3550B8100m
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**91**	40-140	%	1	JLZ	9/26/11	4569	9/27/11	14:50	SW3550B8100m
o-terphenyl SUR	**90**	40-140	%	1	JLZ	9/26/11	4569	9/27/11	14:50	SW3550B8100m

Sample#: 22468-011

Sample ID: SS-2

Matrix: Solid Percent Dry: 92.4% Results expressed on a dry weight basis.

Sampled: 9/22/11 8:55

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
TPH C10-C36	**500**	210	ug/g	1	JLZ	9/26/11	4569	9/27/11	18:55	SW3550B8100m
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**87**	40-140	%	1	JLZ	9/26/11	4569	9/27/11	18:55	SW3550B8100m
o-terphenyl SUR	**85**	40-140	%	1	JLZ	9/26/11	4569	9/27/11	18:55	SW3550B8100m

Sample#: 22468-012

Sample ID: SS-3

Matrix: Solid Percent Dry: 93.4% Results expressed on a dry weight basis.

Sampled: 9/22/11 8:40

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
TPH C10-C36	< 200	200	ug/g	1	JLZ	9/26/11	4569	9/27/11	15:06	SW3550B8100m
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**95**	40-140	%	1	JLZ	9/26/11	4569	9/27/11	15:06	SW3550B8100m
o-terphenyl SUR	**93**	40-140	%	1	JLZ	9/26/11	4569	9/27/11	15:06	SW3550B8100m

Sample#: 22468-013

Sample ID: TP-1 4-6'

Matrix: Solid Percent Dry: 86.1% Results expressed on a dry weight basis.

Sampled: 9/22/11 11:15

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
TPH C10-C36	**880**	220	ug/g	1	JLZ	9/26/11	4569	9/27/11	19:11	SW3550B8100m
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**79**	40-140	%	1	JLZ	9/26/11	4569	9/27/11	19:11	SW3550B8100m
o-terphenyl SUR	**76**	40-140	%	1	JLZ	9/26/11	4569	9/27/11	19:11	SW3550B8100m

Project ID: DPW-New England Yard 10001086

Job ID: 22468

Sample#: 22468-014

Sample ID: TP-2 4-6'

Matrix: Solid Percent Dry: 75.1% Results expressed on a dry weight basis.

Sampled: 9/22/11 10:35

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
TPH C10-C36	**850**	250	ug/g	1	JLZ	9/26/11	4569	9/27/11	19:27	SW3550B8100m
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**129**	40-140	%	1	JLZ	9/26/11	4569	9/27/11	19:27	SW3550B8100m
o-terphenyl SUR	**112**	40-140	%	1	JLZ	9/26/11	4569	9/27/11	19:27	SW3550B8100m

Sample#: 22468-016

Sample ID: SS-DUP

Matrix: Solid Percent Dry: 91.7% Results expressed on a dry weight basis.

Sampled: 9/22/11 0:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
TPH C10-C36	< 210	210	ug/g	1	JLZ	9/26/11	4569	9/27/11	15:23	SW3550B8100m
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**90**	40-140	%	1	JLZ	9/26/11	4569	9/27/11	15:23	SW3550B8100m
o-terphenyl SUR	**91**	40-140	%	1	JLZ	9/26/11	4569	9/27/11	15:23	SW3550B8100m

Project ID: DPW-New England Yard 10001086

Job ID: 22468

Sample#: 22468-002

Sample ID: CB-1

Matrix: Solid Percent Dry: 77.4% Results expressed on a dry weight basis.

Sampled: 9/22/11 12:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Arsenic	**2.8**	0.6	ug/g	1	BJS	9/26/11	4564	9/26/11	19:13	SW3051A6010C
Barium	**86**	3	ug/g	1	BJS	9/26/11	4564	9/26/11	19:13	SW3051A6010C
Cadmium	**0.5**	0.2	ug/g	1	BJS	9/26/11	4564	9/26/11	19:13	SW3051A6010C
Chromium	**290**	3	ug/g	1	BJS	9/26/11	4564	9/26/11	19:13	SW3051A6010C
Lead	**810**	0.6	ug/g	1	BJS	9/26/11	4564	9/26/11	19:13	SW3051A6010C
Mercury	< 0.19	0.19	ug/g	1	BJS	9/26/11	4568	9/26/11	17:05	SW7471B
Selenium	< 3	3	ug/g	1	BJS	9/26/11	4564	9/26/11	19:13	SW3051A6010C
Silver	< 0.4	0.4	ug/g	1	BJS	9/26/11	4564	9/26/11	19:13	SW3051A6010C

Sample#: 22468-003

Sample ID: CA-1 0-2'

Matrix: Solid Percent Dry: 89.7% Results expressed on a dry weight basis.

Sampled: 9/22/11 10:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Arsenic	**5.4**	0.6	ug/g	1	BJS	9/26/11	4564	9/30/11	14:45	SW3051A6010C
Barium	**34**	3	ug/g	1	BJS	9/26/11	4564	9/30/11	14:45	SW3051A6010C
Boron	< 3	3	ug/g	1	BJS	9/26/11	4564	9/30/11	14:45	SW3051A6010C
Cadmium	< 0.2	0.2	ug/g	1	BJS	9/26/11	4564	9/30/11	14:45	SW3051A6010C
Copper	**12**	3	ug/g	1	BJS	9/26/11	4564	9/30/11	14:45	SW3051A6010C
Lead	**17**	0.6	ug/g	1	BJS	9/26/11	4564	9/30/11	14:45	SW3051A6010C
Mercury	< 0.17	0.17	ug/g	1	BJS	9/26/11	4568	9/26/11	17:07	SW7471B
Nickel	**7**	3	ug/g	1	BJS	9/26/11	4564	9/30/11	14:45	SW3051A6010C
Selenium	< 3	3	ug/g	1	BJS	9/26/11	4564	9/30/11	14:45	SW3051A6010C
Vanadium	**26**	3	ug/g	1	BJS	9/26/11	4564	9/30/11	14:45	SW3051A6010C

Sample#: 22468-004

Sample ID: CA-2 0-3'

Matrix: Solid Percent Dry: 83.7% Results expressed on a dry weight basis.

Sampled: 9/22/11 13:30

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Arsenic	**3.4**	0.6	ug/g	1	BJS	9/26/11	4564	9/30/11	14:51	SW3051A6010C
Barium	**35**	3	ug/g	1	BJS	9/26/11	4564	9/30/11	14:51	SW3051A6010C
Boron	**6**	3	ug/g	1	BJS	9/26/11	4564	9/30/11	14:51	SW3051A6010C
Cadmium	< 0.2	0.2	ug/g	1	BJS	9/26/11	4564	9/30/11	14:51	SW3051A6010C
Copper	**17**	3	ug/g	1	BJS	9/26/11	4564	9/30/11	14:51	SW3051A6010C
Lead	**66**	0.6	ug/g	1	BJS	9/26/11	4564	9/30/11	14:51	SW3051A6010C
Mercury	< 0.18	0.18	ug/g	1	BJS	9/26/11	4568	9/26/11	17:08	SW7471B
Nickel	**6**	3	ug/g	1	BJS	9/26/11	4564	9/30/11	14:51	SW3051A6010C
Selenium	< 3	3	ug/g	1	BJS	9/26/11	4564	9/30/11	14:51	SW3051A6010C
Vanadium	**18**	3	ug/g	1	BJS	9/26/11	4564	9/30/11	14:51	SW3051A6010C

Project ID: DPW-New England Yard 10001086

Job ID: 22468

Sample#: 22468-005

Sample ID: CA-2 FLOOR

Matrix: Solid Percent Dry: 98.1% Results expressed on a dry weight basis.

Sampled: 9/22/11 14:30

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Arsenic	**6.4**	0.5	ug/g	1	BJS	9/26/11	4564	9/30/11	14:58	SW3051A6010C
Barium	**79**	3	ug/g	1	BJS	9/26/11	4564	9/30/11	14:58	SW3051A6010C
Boron	**35**	3	ug/g	1	BJS	9/26/11	4564	9/30/11	14:58	SW3051A6010C
Cadmium	**1.6**	0.2	ug/g	1	BJS	9/26/11	4564	9/30/11	14:58	SW3051A6010C
Copper	**86**	3	ug/g	1	BJS	9/26/11	4564	9/30/11	14:58	SW3051A6010C
Lead	**150**	0.5	ug/g	1	BJS	9/26/11	4564	9/30/11	14:58	SW3051A6010C
Mercury	< 0.15	0.15	ug/g	1	BJS	9/26/11	4568	9/26/11	17:10	SW7471B
Nickel	**9**	3	ug/g	1	BJS	9/26/11	4564	9/30/11	14:58	SW3051A6010C
Selenium	< 3	3	ug/g	1	BJS	9/26/11	4564	9/30/11	14:58	SW3051A6010C
Vanadium	**18**	3	ug/g	1	BJS	9/26/11	4564	9/30/11	14:58	SW3051A6010C

Sample#: 22468-006

Sample ID: CA-3 6-8'

Matrix: Solid Percent Dry: 68.2% Results expressed on a dry weight basis.

Sampled: 9/22/11 11:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Lead	**300**	0.7	ug/g	1	BJS	9/26/11	4564	9/26/11	19:21	SW3051A6010C

Sample#: 22468-009

Sample ID: CA-6 0-3'

Matrix: Solid Percent Dry: 92.6% Results expressed on a dry weight basis.

Sampled: 9/22/11 14:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Arsenic	**3.6**	0.5	ug/g	1	BJS	9/26/11	4564	9/26/11	19:29	SW3051A6010C
Barium	**14**	3	ug/g	1	BJS	9/26/11	4564	9/26/11	19:29	SW3051A6010C
Cadmium	< 0.2	0.2	ug/g	1	BJS	9/26/11	4564	9/26/11	19:29	SW3051A6010C
Chromium	**5**	3	ug/g	1	BJS	9/26/11	4564	9/26/11	19:29	SW3051A6010C
Lead	**15**	0.5	ug/g	1	BJS	9/26/11	4564	9/26/11	19:29	SW3051A6010C
Mercury	< 0.16	0.16	ug/g	1	BJS	9/26/11	4568	9/26/11	17:12	SW7471B
Selenium	< 3	3	ug/g	1	BJS	9/26/11	4564	9/26/11	19:29	SW3051A6010C
Silver	< 0.4	0.4	ug/g	1	BJS	9/26/11	4564	9/26/11	19:29	SW3051A6010C

Project ID: DPW-New England Yard 10001086

Job ID: 22468

Sample#: 22468-010

Sample ID: SS-1

Matrix: Solid Percent Dry: 92.9% Results expressed on a dry weight basis.

Sampled: 9/22/11 9:20

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Arsenic	**2.6**	0.5	ug/g	1	BJS	9/29/11	4586	9/30/11	15:05	SW3051A6010C
Barium	**8**	2	ug/g	1	BJS	9/29/11	4586	9/30/11	15:05	SW3051A6010C
Boron	< 2	2	ug/g	1	BJS	9/29/11	4586	9/30/11	15:05	SW3051A6010C
Cadmium	< 0.2	0.2	ug/g	1	BJS	9/29/11	4586	9/30/11	15:05	SW3051A6010C
Copper	**6**	2	ug/g	1	BJS	9/29/11	4586	9/30/11	15:05	SW3051A6010C
Lead	**13**	0.5	ug/g	1	BJS	9/29/11	4586	9/30/11	15:05	SW3051A6010C
Mercury	< 0.16	0.16	ug/g	1	BJS	9/26/11	4568	9/26/11	17:14	SW7471B
Nickel	**5**	2	ug/g	1	BJS	9/29/11	4586	9/30/11	15:05	SW3051A6010C
Selenium	< 2	2	ug/g	1	BJS	9/29/11	4586	9/30/11	15:05	SW3051A6010C
Vanadium	**7**	2	ug/g	1	BJS	9/29/11	4586	9/30/11	15:05	SW3051A6010C

Sample#: 22468-011

Sample ID: SS-2

Matrix: Solid Percent Dry: 92.4% Results expressed on a dry weight basis.

Sampled: 9/22/11 8:55

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Arsenic	**5.4**	0.6	ug/g	1	BJS	9/29/11	4586	9/30/11	15:25	SW3051A6010C
Barium	**34**	3	ug/g	1	BJS	9/29/11	4586	9/30/11	15:25	SW3051A6010C
Boron	**3**	3	ug/g	1	BJS	9/29/11	4586	9/30/11	15:25	SW3051A6010C
Cadmium	< 0.2	0.2	ug/g	1	BJS	9/29/11	4586	9/30/11	15:25	SW3051A6010C
Copper	**16**	3	ug/g	1	BJS	9/29/11	4586	9/30/11	15:25	SW3051A6010C
Lead	**25**	0.6	ug/g	1	BJS	9/29/11	4586	9/30/11	15:25	SW3051A6010C
Mercury	< 0.16	0.16	ug/g	1	BJS	9/26/11	4568	9/26/11	17:16	SW7471B
Nickel	**8**	3	ug/g	1	BJS	9/29/11	4586	9/30/11	15:25	SW3051A6010C
Selenium	< 3	3	ug/g	1	BJS	9/29/11	4586	9/30/11	15:25	SW3051A6010C
Vanadium	**22**	3	ug/g	1	BJS	9/29/11	4586	9/30/11	15:25	SW3051A6010C

Sample#: 22468-012

Sample ID: SS-3

Matrix: Solid Percent Dry: 93.4% Results expressed on a dry weight basis.

Sampled: 9/22/11 8:40

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Arsenic	**7.7**	0.5	ug/g	1	BJS	9/29/11	4586	9/30/11	15:31	SW3051A6010C
Barium	**37**	3	ug/g	1	BJS	9/29/11	4586	9/30/11	15:31	SW3051A6010C
Boron	< 3	3	ug/g	1	BJS	9/29/11	4586	9/30/11	15:31	SW3051A6010C
Cadmium	< 0.2	0.2	ug/g	1	BJS	9/29/11	4586	9/30/11	15:31	SW3051A6010C
Copper	**15**	3	ug/g	1	BJS	9/29/11	4586	9/30/11	15:31	SW3051A6010C
Lead	**9.0**	0.5	ug/g	1	BJS	9/29/11	4586	9/30/11	15:31	SW3051A6010C
Mercury	< 0.16	0.16	ug/g	1	BJS	9/26/11	4568	9/26/11	17:19	SW7471B
Nickel	**7**	3	ug/g	1	BJS	9/29/11	4586	9/30/11	15:31	SW3051A6010C
Selenium	< 3	3	ug/g	1	BJS	9/29/11	4586	9/30/11	15:31	SW3051A6010C
Vanadium	**20**	3	ug/g	1	BJS	9/29/11	4586	9/30/11	15:31	SW3051A6010C

Project ID: DPW-New England Yard 10001086

Job ID: 22468

Sample#: 22468-013

Sample ID: TP-1 4-6'

Matrix: Solid Percent Dry: 86.1% Results expressed on a dry weight basis.

Sampled: 9/22/11 11:15

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Arsenic	**7.5**	0.6	ug/g	1	BJS	9/29/11	4586	9/30/11	15:39	SW3051A6010C
Barium	**160**	3	ug/g	1	BJS	9/29/11	4586	9/30/11	15:39	SW3051A6010C
Boron	**49**	3	ug/g	1	BJS	9/29/11	4586	9/30/11	15:39	SW3051A6010C
Cadmium	**15**	0.2	ug/g	1	BJS	9/29/11	4586	9/30/11	15:39	SW3051A6010C
Copper	**320**	3	ug/g	1	BJS	9/29/11	4586	9/30/11	15:39	SW3051A6010C
Lead	**820**	0.6	ug/g	1	BJS	9/29/11	4586	9/30/11	15:39	SW3051A6010C
Mercury	**0.26**	0.17	ug/g	1	BJS	9/26/11	4568	9/26/11	17:21	SW7471B
Nickel	**22**	3	ug/g	1	BJS	9/29/11	4586	9/30/11	15:39	SW3051A6010C
Selenium	< 3	3	ug/g	1	BJS	9/29/11	4586	9/30/11	15:39	SW3051A6010C
Vanadium	**22**	3	ug/g	1	BJS	9/29/11	4586	9/30/11	15:39	SW3051A6010C

Sample#: 22468-014

Sample ID: TP-2 4-6'

Matrix: Solid Percent Dry: 75.1% Results expressed on a dry weight basis.

Sampled: 9/22/11 10:35

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Arsenic	**18**	0.7	ug/g	1	BJS	9/29/11	4586	9/30/11	15:46	SW3051A6010C
Barium	**200**	3	ug/g	1	BJS	9/29/11	4586	9/30/11	15:46	SW3051A6010C
Boron	**25**	3	ug/g	1	BJS	9/29/11	4586	9/30/11	15:46	SW3051A6010C
Cadmium	**0.7**	0.3	ug/g	1	BJS	9/29/11	4586	9/30/11	15:46	SW3051A6010C
Copper	**79**	3	ug/g	1	BJS	9/29/11	4586	9/30/11	15:46	SW3051A6010C
Lead	**260**	0.7	ug/g	1	BJS	9/29/11	4586	9/30/11	15:46	SW3051A6010C
Mercury	**0.44**	0.19	ug/g	1	BJS	9/26/11	4568	9/26/11	17:23	SW7471B
Nickel	**150**	3	ug/g	1	BJS	9/29/11	4586	9/30/11	15:46	SW3051A6010C
Selenium	< 3	3	ug/g	1	BJS	9/29/11	4586	9/30/11	15:46	SW3051A6010C
Vanadium	**24**	3	ug/g	1	BJS	9/29/11	4586	9/30/11	15:46	SW3051A6010C

Sample#: 22468-015

Sample ID: CA-3 0-2'

Matrix: Solid Percent Dry: 92% Results expressed on a dry weight basis.

Sampled: 9/22/11 15:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Lead	**190**	0.5	ug/g	1	BJS	9/26/11	4564	9/26/11	19:36	SW3051A6010C

Project ID: DPW-New England Yard 10001086

Job ID: 22468

Sample#: 22468-016

Sample ID: SS-DUP

Matrix: Solid Percent Dry: 91.7% Results expressed on a dry weight basis.

Sampled: 9/22/11 0:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Arsenic	**2.7**	0.5	ug/g	1	BJS	9/29/11	4586	9/30/11	15:57	SW3051A6010C
Barium	**9**	3	ug/g	1	BJS	9/29/11	4586	9/30/11	15:57	SW3051A6010C
Boron	< 3	3	ug/g	1	BJS	9/29/11	4586	9/30/11	15:57	SW3051A6010C
Cadmium	< 0.2	0.2	ug/g	1	BJS	9/29/11	4586	9/30/11	15:57	SW3051A6010C
Copper	**7**	3	ug/g	1	BJS	9/29/11	4586	9/30/11	15:57	SW3051A6010C
Lead	**13**	0.5	ug/g	1	BJS	9/29/11	4586	9/30/11	15:57	SW3051A6010C
Mercury	< 0.16	0.16	ug/g	1	BJS	9/26/11	4568	9/26/11	17:34	SW7471B
Nickel	**4**	3	ug/g	1	BJS	9/29/11	4586	9/30/11	15:57	SW3051A6010C
Selenium	< 3	3	ug/g	1	BJS	9/29/11	4586	9/30/11	15:57	SW3051A6010C
Vanadium	**8**	3	ug/g	1	BJS	9/29/11	4586	9/30/11	15:57	SW3051A6010C

Quality Control Report

124 Heritage Avenue Unit 10
Portsmouth, NH 03801
www.absoluteresourceassociates.com

Case Narrative
Lab # 22468

Sample Receiving and Chain of Custody Discrepancies

Samples were received in acceptable condition, at 2 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

SVOC: The surrogates, nitrobenzene-D5 and 2-fluorobiphenyl for sample 22468-009 was outside the acceptance limits as a result of interferences caused by the matrix.
PAH: The surrogate, 2-fluorobiphenyl for sample 22468-014 was outside the acceptance limits as a result of interferences caused by the matrix.

Laboratory Control Sample Results

VOC: The MLCS/D4576 did not meet the acceptance criteria for bromomethane, carbon disulfide, and 1,2-dibromo-3-chloropropane. Since <10% of the compounds were outside of the acceptance criteria, reanalysis is not required.
SVOC: The LCS/D4577 did not meet the acceptance criteria for dibenzo(a,h)anthracene due to degradation of the spiking solution.

Matrix Spike/Matrix Spike Duplicate/Duplicate Results

Not requested for this project.

Other

SVOC: The following samples required a re-analysis at a dilution due to internal standard interferences caused by matrix effect: 22468-002 through -005, -007 through -009, -011, -013, and -014.
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
SW5035A8260B	MLCS4576	dichlorodifluoromethane			1.3	ug/g	1	128		70	130		
		chloromethane			1.0	ug/g	1	102		70	130		
		vinyl chloride			1.1	ug/g	1	107		70	130		
		bromomethane			0.6	ug/g	1	62	*	70	130		
		chloroethane			1.1	ug/g	1	112		70	130		
		trichlorofluoromethane			1.0	ug/g	1	100		70	130		
		diethyl ether			1.0	ug/g	1	98		70	130		
		acetone		<	2.5	ug/g	1	87					
		1,1-dichloroethene			0.9	ug/g	1	87		70	130		
		methylene chloride			1.0	ug/g	1	102		70	130		
		carbon disulfide			0.6	ug/g	1	57	*	70	130		
		methyl t-butyl ether (MTBE)			1.0	ug/g	1	102		70	130		
		trans-1,2-dichloroethene			0.9	ug/g	1	95		70	130		
		isopropyl ether (DIPE)			1.0	ug/g	1	103		70	130		
		ethyl t-butyl ether (ETBE)			1.0	ug/g	1	100		70	130		
		1,1-dichloroethane			1.0	ug/g	1	95		70	130		
		t-butanol (TBA)			5.3	ug/g	5	106		70	130		
		2-butanone (MEK)			0.8	ug/g	1	80		70	130		
		2,2-dichloropropane			0.7	ug/g	1	70		70	130		
		cis-1,2-dichloroethene			1.0	ug/g	1	97		70	130		
		chloroform			1.0	ug/g	1	98		70	130		
		bromochloromethane			1.0	ug/g	1	99		70	130		
		tetrahydrofuran (THF)			0.9	ug/g	1	91		70	130		
		1,1,1-trichloroethane			0.9	ug/g	1	88		70	130		
		1,1-dichloropropene			0.9	ug/g	1	91		70	130		
		t-amyl-methyl ether (TAME)			1.0	ug/g	1	97		70	130		
		carbon tetrachloride			0.8	ug/g	1	76		70	130		
		1,2-dichloroethane			1.0	ug/g	1	101		70	130		
		benzene			1.0	ug/g	1	97		70	130		
		trichloroethene			1.0	ug/g	1	96		70	130		
		1,2-dichloropropane			0.9	ug/g	1	95		70	130		
		bromodichloromethane			0.8	ug/g	1	83		70	130		
		1,4-dioxane		<	2.5	ug/g	2	98		70	130		
		dibromomethane			1.0	ug/g	1	95		70	130		
		4-methyl-2-pentanone (MIBK)			0.7	ug/g	1	73		70	130		
		cis-1,3-dichloropropene			0.8	ug/g	1	82		70	130		
		toluene			1.0	ug/g	1	105		70	130		
		trans-1,3-dichloropropene			0.7	ug/g	1	74		70	130		
		2-hexanone			0.7	ug/g	1	74		70	130		
		1,1,2-trichloroethane			1.0	ug/g	1	104		70	130		
		1,3-dichloropropane			0.9	ug/g	1	91		70	130		
		tetrachloroethene			0.9	ug/g	1	90		70	130		
		dibromochloromethane			0.8	ug/g	1	77		70	130		
		1,2-dibromoethane (EDB)			0.9	ug/g	1	86		70	130		
		chlorobenzene			0.9	ug/g	1	95		70	130		
		1,1,1,2-tetrachloroethane			0.8	ug/g	1	83		70	130		
		ethylbenzene			0.9	ug/g	1	95		70	130		
		m&p-xylenes			1.9	ug/g	2	96		70	130		
		o-xylene			1.0	ug/g	1	99		70	130		
		styrene			1.0	ug/g	1	99		70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5035A8260B	MLCS4576	bromoform		0.7	ug/g	1	72		70	130		
		isopropylbenzene		0.9	ug/g	1	86		70	130		
		1,1,2,2-tetrachloroethane		0.9	ug/g	1	89		70	130		
		1,2,3-trichloropropane		0.9	ug/g	1	92		70	130		
		n-propylbenzene		0.9	ug/g	1	93		70	130		
		bromobenzene		1.0	ug/g	1	99		70	130		
		1,3,5-trimethylbenzene		0.9	ug/g	1	95		70	130		
		2-chlorotoluene		1.0	ug/g	1	99		70	130		
		4-chlorotoluene		1.0	ug/g	1	96		70	130		
		tert-butylbenzene		0.9	ug/g	1	94		70	130		
		1,2,4-trimethylbenzene		1.0	ug/g	1	96		70	130		
		sec-butylbenzene		0.9	ug/g	1	90		70	130		
		1,3-dichlorobenzene		1.0	ug/g	1	96		70	130		
		4-isopropyltoluene		0.9	ug/g	1	89		70	130		
		1,4-dichlorobenzene		1.0	ug/g	1	97		70	130		
		1,2-dichlorobenzene		1.0	ug/g	1	99		70	130		
		n-butylbenzene		0.9	ug/g	1	92		70	130		
		1,2-dibromo-3-chloropropane		0.6	ug/g	1	61	*	70	130		
		1,2,4-trichlorobenzene		0.9	ug/g	1	85		70	130		
		1,3,5-trichlorobenzene		0.9	ug/g	1	91		70	130		
		hexachlorobutadiene		0.9	ug/g	1	95		70	130		
		naphthalene		0.8	ug/g	1	80		70	130		
		1,2,3-trichlorobenzene		0.9	ug/g	1	88		70	130		
		dibromofluoromethane SUR		102	%				78	114		
		toluene-D8 SUR		105	%				88	110		
		4-bromofluorobenzene SUR		112	%				86	115		
		a,a,a-trifluorotoluene SUR		92	%				70	130		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5035A8260B	MLCSD4576	dichlorodifluoromethane			1.1	ug/g	1	112		70	130	13	30
		chloromethane			1.0	ug/g	1	101		70	130	2	30
		vinyl chloride			1.0	ug/g	1	103		70	130	4	30
		bromomethane			0.6	ug/g	1	64	*	70	130	2	30
		chloroethane			1.1	ug/g	1	106		70	130	5	30
		trichlorofluoromethane			0.9	ug/g	1	93		70	130	7	30
		diethyl ether			1.0	ug/g	1	97		70	130	2	30
		acetone		<	2.5	ug/g	1	73				17	30
		1,1-dichloroethene			0.8	ug/g	1	83		70	130	5	30
		methylene chloride			1.0	ug/g	1	104		70	130	2	30
		carbon disulfide			0.6	ug/g	1	55	*	70	130	4	30
		methyl t-butyl ether (MTBE)			1.0	ug/g	1	99		70	130	3	30
		trans-1,2-dichloroethene			0.9	ug/g	1	94		70	130	1	30
		isopropyl ether (DIPE)			1.0	ug/g	1	102		70	130	1	30
		ethyl t-butyl ether (ETBE)			1.0	ug/g	1	99		70	130	1	30
		1,1-dichloroethane			1.0	ug/g	1	96		70	130	0	30
		t-butanol (TBA)			5.8	ug/g	5	115		70	130	9	30
		2-butanone (MEK)			0.8	ug/g	1	76		70	130	4	30
		2,2-dichloropropane			0.7	ug/g	1	73		70	130	4	30
		cis-1,2-dichloroethene			1.0	ug/g	1	97		70	130	0	30
		chloroform			1.0	ug/g	1	97		70	130	0	30
		bromochloromethane			1.0	ug/g	1	100		70	130	1	30
		tetrahydrofuran (THF)			0.9	ug/g	1	87		70	130	4	30
		1,1,1-trichloroethane			0.9	ug/g	1	86		70	130	2	30
		1,1-dichloropropene			0.9	ug/g	1	92		70	130	1	30
		t-amyl-methyl ether (TAME)			1.0	ug/g	1	96		70	130	1	30
		carbon tetrachloride			0.7	ug/g	1	73		70	130	4	30
		1,2-dichloroethane			1.0	ug/g	1	99		70	130	2	30
		benzene			1.0	ug/g	1	99		70	130	2	30
		trichloroethene			1.0	ug/g	1	99		70	130	4	30
		1,2-dichloropropane			1.0	ug/g	1	95		70	130	0	30
		bromodichloromethane			0.8	ug/g	1	79		70	130	4	30
		1,4-dioxane		<	2.5	ug/g	2	111		70	130	13	30
		dibromomethane			1.0	ug/g	1	96		70	130	1	30
		4-methyl-2-pentanone (MIBK)			0.7	ug/g	1	73		70	130	1	30
		cis-1,3-dichloropropene			0.8	ug/g	1	82		70	130	0	30
		toluene			1.1	ug/g	1	108		70	130	3	30
		trans-1,3-dichloropropene			0.7	ug/g	1	75		70	130	1	30
		2-hexanone			0.7	ug/g	1	73		70	130	1	30
		1,1,2-trichloroethane			1.1	ug/g	1	107		70	130	3	30
		1,3-dichloropropane			0.9	ug/g	1	92		70	130	0	30
		tetrachloroethene			0.9	ug/g	1	90		70	130	0	30
		dibromochloromethane			0.8	ug/g	1	76		70	130	1	30
		1,2-dibromoethane (EDB)			0.9	ug/g	1	86		70	130	1	30
		chlorobenzene			1.0	ug/g	1	97		70	130	2	30
		1,1,1,2-tetrachloroethane			0.8	ug/g	1	83		70	130	0	30
		ethylbenzene			1.0	ug/g	1	95		70	130	0	30
		m&p-xylenes			1.9	ug/g	2	94		70	130	3	30
		o-xylene			1.0	ug/g	1	99		70	130	0	30
		styrene			1.0	ug/g	1	99		70	130	0	30
		bromoform			0.7	ug/g	1	71		70	130	1	30

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5035A8260B	MLCSD4576	isopropylbenzene		0.9	ug/g	1	88		70	130	2	30
		1,1,2,2-tetrachloroethane		0.9	ug/g	1	86		70	130	4	30
		1,2,3-trichloropropane		0.9	ug/g	1	89		70	130	3	30
		n-propylbenzene		0.9	ug/g	1	95		70	130	2	30
		bromobenzene		1.0	ug/g	1	100		70	130	2	30
		1,3,5-trimethylbenzene		1.0	ug/g	1	96		70	130	1	30
		2-chlorotoluene		1.0	ug/g	1	100		70	130	1	30
		4-chlorotoluene		1.0	ug/g	1	96		70	130	0	30
		tert-butylbenzene		1.0	ug/g	1	95		70	130	1	30
		1,2,4-trimethylbenzene		1.0	ug/g	1	96		70	130	0	30
		sec-butylbenzene		0.9	ug/g	1	90		70	130	0	30
		1,3-dichlorobenzene		1.0	ug/g	1	96		70	130	0	30
		4-isopropyltoluene		0.9	ug/g	1	90		70	130	1	30
		1,4-dichlorobenzene		1.0	ug/g	1	96		70	130	1	30
		1,2-dichlorobenzene		1.0	ug/g	1	97		70	130	2	30
		n-butylbenzene		0.9	ug/g	1	90		70	130	1	30
		1,2-dibromo-3-chloropropane		0.6	ug/g	1	57	*	70	130	7	30
		1,2,4-trichlorobenzene		0.8	ug/g	1	83		70	130	2	30
		1,3,5-trichlorobenzene		0.9	ug/g	1	91		70	130	0	30
		hexachlorobutadiene		0.9	ug/g	1	90		70	130	5	30
		naphthalene		0.8	ug/g	1	78		70	130	3	30
		1,2,3-trichlorobenzene		0.9	ug/g	1	88		70	130	0	30
		dibromofluoromethane SUR		98	%				78	114		
		toluene-D8 SUR		105	%				88	110		
		4-bromofluorobenzene SUR		110	%				86	115		
		a,a,a-trifluorotoluene SUR		95	%				70	130		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW3540C8082A	BLK4582	PCB-1016		<	0.02	ug/g						
		PCB-1221		<	0.02	ug/g						
		PCB-1232		<	0.02	ug/g						
		PCB-1242		<	0.02	ug/g						
		PCB-1248		<	0.02	ug/g						
		PCB-1254		<	0.02	ug/g						
		PCB-1260		<	0.02	ug/g						
		tetrachloro-m-xylene SUR			33	%			30	150		
		decachlorobiphenyl SUR			46	%			30	150		
SW3540C8082A	LCS4582	PCB-1016			0.18	ug/g	0.2	91	40	140		
		PCB-1221		<	0.02	ug/g						
		PCB-1232		<	0.02	ug/g						
		PCB-1242		<	0.02	ug/g						
		PCB-1248		<	0.02	ug/g						
		PCB-1254		<	0.02	ug/g						
		PCB-1260			0.15	ug/g	0.2	76	40	140		
		tetrachloro-m-xylene SUR			43	%			30	150		
		decachlorobiphenyl SUR			67	%			30	150		
SW3540C8082A	LCSD4582	PCB-1016			0.17	ug/g	0.2	83	40	140	9	30
		PCB-1221		<	0.02	ug/g						
		PCB-1232		<	0.02	ug/g						
		PCB-1242		<	0.02	ug/g						
		PCB-1248		<	0.02	ug/g						
		PCB-1254		<	0.02	ug/g						
		PCB-1260			0.14	ug/g	0.2	68	40	140	10	30
		tetrachloro-m-xylene SUR			46	%			30	150		
		decachlorobiphenyl SUR			57	%			30	150		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits	RPD	RPD Limit
SW3546/8270D	BLK4577	N-nitrosodimethylamine		<	0.2	ug/g					
		aniline		<	0.2	ug/g					
		phenol		<	0.2	ug/g					
		2-chlorophenol		<	0.5	ug/g					
		bis(2-chloroethyl)ether		<	0.2	ug/g					
		1,3-dichlorobenzene		<	0.2	ug/g					
		1,4-dichlorobenzene		<	0.2	ug/g					
		1,2-dichlorobenzene		<	0.2	ug/g					
		benzyl alcohol		<	0.2	ug/g					
		2-methylphenol		<	0.2	ug/g					
		bis(2-chloroisopropyl) ether		<	0.2	ug/g					
		hexachloroethane		<	0.2	ug/g					
		N-nitroso-di-N-propylamine		<	0.2	ug/g					
		4-methylphenol		<	0.2	ug/g					
		nitrobenzene		<	0.2	ug/g					
		isophorone		<	0.5	ug/g					
		2-nitrophenol		<	0.2	ug/g					
		2,4-dimethylphenol		<	0.2	ug/g					
		bis(2-chloroethoxy)methane		<	0.5	ug/g					
		2,4-dichlorophenol		<	0.5	ug/g					
		1,2,4-trichlorobenzene		<	0.5	ug/g					
		naphthalene		<	0.05	ug/g					
		benzoic acid		<	5.0	ug/g					
		4-chloroaniline		<	0.2	ug/g					
		hexachlorobutadiene		<	0.2	ug/g					
		4-chloro-3-methylphenol		<	0.2	ug/g					
		2-methylnaphthalene		<	0.05	ug/g					
		hexachlorocyclopentadiene		<	1.0	ug/g					
		2,4,6-trichlorophenol		<	0.2	ug/g					
		2,4,5-trichlorophenol		<	0.2	ug/g					
		2-chloronaphthalene		<	0.5	ug/g					
		2-nitroaniline		<	0.2	ug/g					
		acenaphthylene		<	0.05	ug/g					
		dimethylphthalate		<	0.5	ug/g					
		2,6-dinitrotoluene		<	0.2	ug/g					
		2,4-dinitrotoluene		<	0.2	ug/g					
		acenaphthene		<	0.05	ug/g					
		3-nitroaniline		<	0.2	ug/g					
		2,4-dinitrophenol		<	5.0	ug/g					
		dibenzofuran		<	0.05	ug/g					
		4-nitrophenol		<	1.0	ug/g					
		fluorene		<	0.05	ug/g					
		diethyl phthalate		<	0.5	ug/g					
		4-chlorophenyl phenyl ether		<	0.5	ug/g					
		4-nitroaniline		<	0.5	ug/g					
		4,6-dinitro-2-methylphenol		<	2.0	ug/g					
		azobenzene		<	0.2	ug/g					
		N-nitrosodiphenylamine		<	0.2	ug/g					
		4-bromophenyl phenyl ether		<	0.2	ug/g					
		hexachlorobenzene		<	0.2	ug/g					
		pentachlorophenol		<	1.0	ug/g					

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW3546/8270D	BLK4577	phenanthrene		<	0.05	ug/g						
		anthracene		<	0.05	ug/g						
		carbazole		<	0.2	ug/g						
		di-n-butylphthalate		<	0.5	ug/g						
		fluoranthene		<	0.05	ug/g						
		benzidine		<	3.0	ug/g						
		pyrene		<	0.05	ug/g						
		butyl benzyl phthalate		<	0.5	ug/g						
		benzo(a)anthracene		<	0.05	ug/g						
		chrysene		<	0.05	ug/g						
		3,3'-dichlorobenzidine		<	3.0	ug/g						
		bis(2-ethylhexyl)phthalate		<	0.5	ug/g						
		di-n-octyl phthalate		<	0.2	ug/g						
		benzo(b)fluoranthene		<	0.05	ug/g						
		benzo(k)fluoranthene		<	0.05	ug/g						
		benzo(a)pyrene		<	0.02	ug/g						
		indeno(1,2,3-cd)pyrene		<	0.05	ug/g						
		dibenzo(a,h)anthracene		<	0.05	ug/g						
		benzo(g,h,i)perylene		<	0.05	ug/g						
		2-fluorophenol SUR			52	%			21	100		
		phenol-D5 SUR			52	%			10	102		
		2,4,6-tribromophenol SUR			52	%			10	123		
		nitrobenzene-D5 SUR			71	%			35	114		
		2-fluorobiphenyl SUR			75	%			43	116		
		p-terphenyl-D14 SUR			80	%			33	141		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW3546/8270D	LCS4577	N-nitrosodimethylamine			1.9	ug/g	4	46	40	140		
		aniline			2.3	ug/g	4	57	40	140		
		phenol			2.4	ug/g	4	61	30	130		
		2-chlorophenol			2.6	ug/g	4	65	30	130		
		bis(2-chloroethyl)ether			2.4	ug/g	4	60	40	140		
		1,3-dichlorobenzene			2.0	ug/g	4	51	40	140		
		1,4-dichlorobenzene			2.5	ug/g	4	62	40	140		
		1,2-dichlorobenzene			2.2	ug/g	4	55	40	140		
		benzyl alcohol			2.7	ug/g	4	67	30	130		
		2-methylphenol			2.8	ug/g	4	71	30	130		
		bis(2-chloroisopropyl) ether			2.4	ug/g	4	60	40	140		
		hexachloroethane			2.4	ug/g	4	59	40	140		
		N-nitroso-di-N-propylamine			2.5	ug/g	4	63	40	140		
		4-methylphenol			2.7	ug/g	4	68	30	130		
		nitrobenzene			2.6	ug/g	4	65	40	140		
		isophorone			2.4	ug/g	4	59	40	140		
		2-nitrophenol			2.1	ug/g	4	53	30	130		
		2,4-dimethylphenol			2.6	ug/g	4	65	30	130		
		bis(2-chloroethoxy)methane			2.8	ug/g	4	71	40	140		
		2,4-dichlorophenol			2.7	ug/g	4	67	30	130		
		1,2,4-trichlorobenzene			2.6	ug/g	4	66	40	140		
		naphthalene			2.3	ug/g	4	58	40	140		
		benzoic acid		<	5.0	ug/g						
		4-chloroaniline			2.4	ug/g	4	61	40	140		
		hexachlorobutadiene			2.6	ug/g	4	65	40	140		
		4-chloro-3-methylphenol			3.1	ug/g	4	78	30	130		
		2-methylnaphthalene			2.67	ug/g	4	67	40	140		
		hexachlorocyclopentadiene			1.7	ug/g	4	43	40	140		
		2,4,6-trichlorophenol			2.6	ug/g	4	65	30	130		
		2,4,5-trichlorophenol			2.5	ug/g	4	62	30	130		
		2-chloronaphthalene			2.7	ug/g	4	68	40	140		
		2-nitroaniline			3.1	ug/g	4	77	40	140		
		acenaphthylene			2.6	ug/g	4	65	40	140		
		dimethylphthalate			3.2	ug/g	4	80	40	140		
		2,6-dinitrotoluene			2.7	ug/g	4	68	40	140		
		2,4-dinitrotoluene			2.8	ug/g	4	71	40	140		
		acenaphthene			2.5	ug/g	4	63	40	140		
		3-nitroaniline			2.7	ug/g	4	68	40	140		
		2,4-dinitrophenol		<	5.0	ug/g	4	63	30	130		
		dibenzofuran			3.0	ug/g	4	74	40	140		
		4-nitrophenol			1.9	ug/g	4	47	30	130		
		fluorene			3.0	ug/g	4	76	40	140		
		diethyl phthalate			3.4	ug/g	4	86	40	140		
		4-chlorophenyl phenyl ether			3.1	ug/g	4	77	40	140		
		4-nitroaniline			2.7	ug/g	4	67	40	140		
		4,6-dinitro-2-methylphenol		<	2.0	ug/g						
		azobenzene			3.3	ug/g	4	83	40	140		
		N-nitrosodiphenylamine			3.7	ug/g	4	93	40	140		
		4-bromophenyl phenyl ether			3.0	ug/g	4	76	40	140		
		hexachlorobenzene			3.0	ug/g	4	74	40	140		
		pentachlorophenol			1.5	ug/g	4	37	30	130		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW3546/8270D	LCS4577	phenanthrene			2.8	ug/g	4	69		40	140		
		anthracene			2.8	ug/g	4	71		40	140		
		carbazole			2.9	ug/g	4	72		40	140		
		di-n-butylphthalate			3.5	ug/g	4	88		40	140		
		fluoranthene			3.0	ug/g	4	75		40	140		
		benzidine		<	3.0	ug/g							
		pyrene			3.2	ug/g	4	80		40	140		
		butyl benzyl phthalate			3.3	ug/g	4	82		40	140		
		benzo(a)anthracene			2.9	ug/g	4	71		40	140		
		chrysene			2.3	ug/g	4	57		40	140		
		3,3'-dichlorobenzidine		<	3.0	ug/g							
		bis(2-ethylhexyl)phthalate			3.6	ug/g	4	90		40	140		
		di-n-octyl phthalate			3.5	ug/g	4	88		40	140		
		benzo(b)fluoranthene			3.1	ug/g	4	78		40	140		
		benzo(k)fluoranthene			2.5	ug/g	4	64		40	140		
		benzo(a)pyrene			3.1	ug/g	4	77		40	140		
		indeno(1,2,3-cd)pyrene			2.6	ug/g	4	66		40	140		
		dibenzo(a,h)anthracene			1.4	ug/g	4	34	*	40	140		
		benzo(g,h,i)perylene			2.4	ug/g	4	60		40	140		
		2-fluorophenol SUR			52	%				21	100		
		phenol-D5 SUR			75	%				10	102		
		2,4,6-tribromophenol SUR			69	%				10	123		
		nitrobenzene-D5 SUR			66	%				35	114		
		2-fluorobiphenyl SUR			70	%				43	116		
		p-terphenyl-D14 SUR			82	%				33	141		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW3546/8270D	LCSD4577	N-nitrosodimethylamine			1.8	ug/g	4	45	40	140	4	30
		aniline			2.3	ug/g	4	57	40	140	0	30
		phenol			2.4	ug/g	4	60	30	130	1	30
		2-chlorophenol			2.4	ug/g	4	59	30	130	9	30
		bis(2-chloroethyl)ether			2.0	ug/g	4	50	40	140	19	30
		1,3-dichlorobenzene			1.9	ug/g	4	47	40	140	8	30
		1,4-dichlorobenzene			2.2	ug/g	4	54	40	140	13	30
		1,2-dichlorobenzene			2.0	ug/g	4	51	40	140	9	30
		benzyl alcohol			2.3	ug/g	4	58	30	130	13	30
		2-methylphenol			2.6	ug/g	4	66	30	130	8	30
		bis(2-chloroisopropyl) ether			2.2	ug/g	4	54	40	140	11	30
		hexachloroethane			2.1	ug/g	4	51	40	140	13	30
		N-nitroso-di-N-propylamine			2.2	ug/g	4	56	40	140	12	30
		4-methylphenol			2.5	ug/g	4	62	30	130	10	30
		nitrobenzene			2.4	ug/g	4	60	40	140	8	30
		isophorone			2.2	ug/g	4	55	40	140	8	30
		2-nitrophenol			2.0	ug/g	4	49	30	130	8	30
		2,4-dimethylphenol			2.4	ug/g	4	60	30	130	9	30
		bis(2-chloroethoxy)methane			2.6	ug/g	4	64	40	140	10	30
		2,4-dichlorophenol			2.5	ug/g	4	61	30	130	8	30
		1,2,4-trichlorobenzene			2.4	ug/g	4	61	40	140	8	30
		naphthalene			2.1	ug/g	4	54	40	140	7	30
		benzoic acid		<	5.0	ug/g						
		4-chloroaniline			2.3	ug/g	4	57	40	140	6	30
		hexachlorobutadiene			2.3	ug/g	4	56	40	140	14	30
		4-chloro-3-methylphenol			2.8	ug/g	4	70	30	130	11	30
		2-methylnaphthalene			2.43	ug/g	4	61	40	140	9	30
		hexachlorocyclopentadiene			1.6	ug/g	4	40	40	140	8	30
		2,4,6-trichlorophenol			2.5	ug/g	4	62	30	130	5	30
		2,4,5-trichlorophenol			2.4	ug/g	4	59	30	130	5	30
		2-chloronaphthalene			2.7	ug/g	4	67	40	140	2	30
		2-nitroaniline			2.6	ug/g	4	66	40	140	16	30
		acenaphthylene			2.4	ug/g	4	61	40	140	7	30
		dimethylphthalate			2.9	ug/g	4	73	40	140	10	30
		2,6-dinitrotoluene			2.5	ug/g	4	63	40	140	7	30
		2,4-dinitrotoluene			2.6	ug/g	4	66	40	140	7	30
		acenaphthene			2.4	ug/g	4	60	40	140	5	30
		3-nitroaniline			2.5	ug/g	4	63	40	140	8	30
		2,4-dinitrophenol		<	5.0	ug/g	4	63	30	130	0	30
		dibenzofuran			2.8	ug/g	4	70	40	140	5	30
		4-nitrophenol			1.9	ug/g	4	46	30	130	2	30
		fluorene			2.8	ug/g	4	71	40	140	7	30
		diethyl phthalate			3.2	ug/g	4	80	40	140	7	30
		4-chlorophenyl phenyl ether			2.9	ug/g	4	73	40	140	5	30
		4-nitroaniline			2.5	ug/g	4	63	40	140	6	30
		4,6-dinitro-2-methylphenol		<	2.0	ug/g						
		azobenzene			3.2	ug/g	4	79	40	140	5	30
		N-nitrosodiphenylamine			3.5	ug/g	4	88	40	140	6	30
		4-bromophenyl phenyl ether			2.9	ug/g	4	72	40	140	5	30
		hexachlorobenzene			2.9	ug/g	4	72	40	140	3	30
		pentachlorophenol			1.6	ug/g	4	39	30	130	7	30

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW3546/8270D	LCSD4577	phenanthrene			2.6	ug/g	4	66		40	140	5	30
		anthracene			2.7	ug/g	4	67		40	140	6	30
		carbazole			2.7	ug/g	4	67		40	140	6	30
		di-n-butylphthalate			3.3	ug/g	4	83		40	140	6	30
		fluoranthene			2.8	ug/g	4	71		40	140	6	30
		benzidine		<	3.0	ug/g							
		pyrene			3.1	ug/g	4	77		40	140	4	30
		butyl benzyl phthalate			3.1	ug/g	4	79		40	140	5	30
		benzo(a)anthracene			2.8	ug/g	4	69		40	140	4	30
		chrysene			2.1	ug/g	4	53		40	140	6	30
		3,3'-dichlorobenzidine		<	3.0	ug/g							
		bis(2-ethylhexyl)phthalate			3.4	ug/g	4	86		40	140	4	30
		di-n-octyl phthalate			3.4	ug/g	4	85		40	140	3	30
		benzo(b)fluoranthene			2.7	ug/g	4	68		40	140	13	30
		benzo(k)fluoranthene			2.7	ug/g	4	67		40	140	5	30
		benzo(a)pyrene			2.9	ug/g	4	74		40	140	4	30
		indeno(1,2,3-cd)pyrene			2.5	ug/g	4	63		40	140	4	30
		dibenzo(a,h)anthracene			1.3	ug/g	4	33	*	40	140	2	30
		benzo(g,h,i)perylene			2.3	ug/g	4	57		40	140	4	30
		2-fluorophenol SUR			48	%				21	100		
		phenol-D5 SUR			63	%				10	102		
		2,4,6-tribromophenol SUR			64	%				10	123		
		nitrobenzene-D5 SUR			57	%				35	114		
		2-fluorobiphenyl SUR			63	%				43	116		
		p-terphenyl-D14 SUR			73	%				33	141		
SW3550B8100m	BLK4569	TPH C10-C36		<	200	ug/g							
		2-fluorobiphenyl SUR			90	%				40	140		
		o-terphenyl SUR			88	%				40	140		
SW3550B8100m	LCS4569	TPH C10-C36			2300	ug/g	2500	94		40	140		
		2-fluorobiphenyl SUR			87	%				40	140		
		o-terphenyl SUR			101	%				40	140		
SW3550B8100m	MS4569	TPH C10-C36	22468-010		2100	ug/g	2520	81		40	140		
		2-fluorobiphenyl SUR	22468-010		80	%				40	140		
		o-terphenyl SUR	22468-010		80	%				40	140		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW3550B8270D	BLK4570	naphthalene		<	0.50	ug/g						
		2-methylnaphthalene		<	0.50	ug/g						
		acenaphthylene		<	0.50	ug/g						
		acenaphthene		<	0.50	ug/g						
		dibenzofuran		<	0.50	ug/g						
		fluorene		<	0.50	ug/g						
		phenanthrene		<	0.50	ug/g						
		anthracene		<	0.50	ug/g						
		fluoranthene		<	0.50	ug/g						
		pyrene		<	0.50	ug/g						
		benzo(a)anthracene		<	0.50	ug/g						
		chrysene		<	0.50	ug/g						
		benzo(b)fluoranthene		<	0.50	ug/g						
		benzo(k)fluoranthene		<	0.50	ug/g						
		benzo(a)pyrene		<	0.50	ug/g						
		indeno(1,2,3-cd)pyrene		<	0.50	ug/g						
		dibenzo(a,h)anthracene		<	0.50	ug/g						
		benzo(g,h,i)perylene		<	0.50	ug/g						
		2-fluorobiphenyl SUR			102	%			43	116		
		o-terphenyl SUR			84	%			33	141		
SW3550B8270D	LCS4570	naphthalene			3.8	ug/g	4	96	40	140		
		2-methylnaphthalene			4.1	ug/g	4	102	40	140		
		acenaphthylene			4.1	ug/g	4	102	40	140		
		acenaphthene			4.0	ug/g	4	100	40	140		
		dibenzofuran		<	0.50	ug/g						
		fluorene			4.4	ug/g	4	110	40	140		
		phenanthrene			4.2	ug/g	4	105	40	140		
		anthracene			4.0	ug/g	4	100	40	140		
		fluoranthene			4.6	ug/g	4	116	40	140		
		pyrene			4.4	ug/g	4	110	40	140		
		benzo(a)anthracene			4.1	ug/g	4	102	40	140		
		chrysene			4.4	ug/g	4	109	40	140		
		benzo(b)fluoranthene			4.5	ug/g	4	113	40	140		
		benzo(k)fluoranthene			3.1	ug/g	4	78	40	140		
		benzo(a)pyrene			4.0	ug/g	4	101	40	140		
		indeno(1,2,3-cd)pyrene			3.9	ug/g	4	98	40	140		
		dibenzo(a,h)anthracene			3.8	ug/g	4	96	40	140		
		benzo(g,h,i)perylene			4.3	ug/g	4	108	40	140		
		2-fluorobiphenyl SUR			101	%			43	116		
		o-terphenyl SUR			95	%			33	141		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW3051A6010C	BLK4564	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						
SW3051A6010C	CRM4564	Silver			41	ug/g	38		25.1	51.9		
		Arsenic			410	ug/g	400		292	508		
		Barium			26	ug/g	25		0	51.3		
		Cadmium			16	ug/g	15		8.71	22		
		Chromium			15	ug/g	14		2.45	24.7		
		Lead			5200	ug/g	5100		3753	6469		
		Selenium			7.5	ug/g	6.6		0	18.4		
SW3051A6010C	CRMD4564	Silver			40	ug/g	38		25.1	51.9	2	35
		Arsenic			410	ug/g	400		292	508	1	35
		Barium			25	ug/g	25		0	51.3	2	35
		Cadmium			16	ug/g	15		8.71	22	0	35
		Chromium			14	ug/g	14		2.45	24.7	7	35
		Lead			5000	ug/g	5100		3753	6469	3	35
		Selenium			7.5	ug/g	6.6		0	18.4	0	35
SW3051A6010C	MS4564	Silver	22448-001		25	ug/g	24	98	75	125		
		Arsenic	22448-001		57	ug/g	49	95	75	125		
		Barium	22448-001		110	ug/g	49.2	121	75	125		
		Cadmium	22448-001		44	ug/g	49	90	75	125		
		Chromium	22448-001		78	ug/g	49	99	75	125		
		Lead	22448-001		120	ug/g	49.2	109	75	125		
		Selenium	22448-001		47	ug/g	49	92	75	125		
SW3051A6010C	MSD4564	Silver	22448-001		25	ug/g	24	99	75	125	1	35
		Arsenic	22448-001		62	ug/g	49	106	75	125	9	35
		Barium	22448-001		130	ug/g	49.2	157	75	125	15	35
		Cadmium	22448-001		45	ug/g	49	91	75	125	1	35
		Chromium	22448-001		78	ug/g	49	99	75	125	0	35
		Lead	22448-001		110	ug/g	49.2	93	75	125	7	35
		Selenium	22448-001		46	ug/g	49	90	75	125	2	35

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW3051A6010C	BLK4586	Arsenic		<	0.50	ug/g						
		Boron		<	2.5	ug/g						
		Barium		<	2.5	ug/g						
		Cadmium		<	0.20	ug/g						
		Copper		<	2.5	ug/g						
		Nickel		<	2.5	ug/g						
		Lead		<	0.50	ug/g						
		Selenium		<	2.5	ug/g						
		Vanadium		<	2.5	ug/g						
SW3051A6010C	CRM4586	Arsenic			400	ug/g	400		292	508		
		Barium			24	ug/g	25		0	51.3		
		Cadmium			15	ug/g	15		8.71	22		
		Copper			770	ug/g	730		592	866		
		Nickel			17	ug/g	17		6.2	27.5		
		Lead			5000	ug/g	5100		3753	6469		
		Selenium			6.9	ug/g	6.6		0	18.4		
		Vanadium			6.5	ug/g	6.5		0	17.1		
SW3051A6010C	CRMD4586	Arsenic			420	ug/g	400		292	508	5	35
		Barium			27	ug/g	25		0	51.3	8	35
		Cadmium			15	ug/g	15		8.71	22	0	35
		Copper			750	ug/g	730		592	866	3	35
		Nickel			17	ug/g	17		6.2	27.5	0	35
		Lead			5500	ug/g	5100		3753	6469	9	35
		Selenium			7.1	ug/g	6.6		0	18.4	4	35
		Vanadium			6.9	ug/g	6.5		0	17.1	7	35
SW3051A6010C	DUP4586	Arsenic	22468-010		2.2	ug/g					17	35
		Boron	22468-010	<	2.4	ug/g						35
		Barium	22468-010		9.1	ug/g					11	35
		Cadmium	22468-010	<	0.19	ug/g						35
		Copper	22468-010		5.8	ug/g					11	35
		Nickel	22468-010		4.3	ug/g					11	35
		Lead	22468-010		12	ug/g					6	35
		Selenium	22468-010	<	2.4	ug/g						35
		Vanadium	22468-010		7.3	ug/g					5	35
SW3051A6010C	MS4586	Arsenic	22468-010		26	ug/g	24	98	75	125		
		Boron	22468-010		25	ug/g	24	97	75	125		
		Barium	22468-010		32	ug/g	24	99	75	125		
		Cadmium	22468-010		24	ug/g	24	99	75	125		
		Copper	22468-010		32	ug/g	24	104	75	125		
		Nickel	22468-010		29	ug/g	24	100	75	125		
		Lead	22468-010		36	ug/g	24	95	75	125		
		Selenium	22468-010		24	ug/g	24	97	75	125		
		Vanadium	22468-010		31	ug/g	24	99	75	125		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW7471B	BLK4568	Mercury		<	0.02	ug/g						
SW7471B	CRM4568	Mercury			1.4	ug/g	1.1		0.49	1.76		
SW7471B	CRMD4568	Mercury			1.5	ug/g	1.1		0.49	1.76	4	35
SW7471B	MS4568	Mercury	22448-001		1.1	ug/g	0.65	124	75	125		
SW7471B	MS4568	Mercury	22468-011		0.45	ug/g	0.346	120	75	125		
SW7471B	MSD4568	Mercury	22448-001		1.0	ug/g	0.65	120	75	125	2	35

Absolute Resource associates
124 Heritage Avenue #10
Portsmouth, NH 03801
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CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

22468

Company Name: CREDERE

Company Address: 276 MAIN ST WESTBROOK ME 04092

Report To: JUDD NEWCOMB

Phone #: 207-828-1272 x16

Invoice To: Same

Project Name: DPW - NEW ENGLAND YARD

Project #: 10001086

Project Location: (NH) MA ME VT Other

Protocol: RCRA SDWA NPDES MCP (NHDES) OTHER

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

Quote # ☐ NH GREE/ODD Fund Pricing

PO #

ANALYSIS REQUEST

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	SOLID	OTHER	Preservation Method: HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER (Specify)	Sampling: DATE	TIME	SAMPLER	☐ VOC 8260 ☒ VOC 8260 NHDES	☐ VOC 624 ☐ VOC BTEX	☐ VPH MADEP ☐ MEGRO	☐ VOC 524.2 ☐ VOC 524.2 NH List	☒ TPH ☐ DRO 8015	☐ 8270PAH ☐ 8270ABN	☐ 8082 PCB ☐ 8081 Pesticides	☐ O&G 1664 ☐ Mineral O&G SM5520F	☐ pH ☐ BOD	☐ TSS ☐ TDS	☐ RCRA Metals ☐ Priority Pollutant Metals	☒ Total Metals-list: As, Ba, B, Cd, Cu, Pb, Hg, Ni, Se, V	☐ Dissolved Metals-list:	☐ Ammonia ☐ COD	☐ T-Phosphorus ☐ Phenols	☐ Cyanide ☐ Sulfide	☐ Nitrate	☐ Corrosivity ☐ Reactive CN	☐ TCLP Metals	Subcontract: ☐ TOC	8270 PAH	Pb	Grab (G) or Composite (C)
22468-01	TRIP BLANK	1	—	—						X		—	—		X																						1
02	CB-1	2		X						X		9/20/11	1200	JN	X				X	X						X												G
	CA-1																																				
03	CA-1 0-2'	1		X									1000	JN					X							X	X								X		
04	CA-2 0-3	2		X						X			1330	JN	X				X								X								X		
05	CA-2 FLOOR	2		X						X			1430	JB	X				X							X	X								X		
06	CA-3 6-8	2		X						X			1100	JN	X				X								X								X	X	
07	CA-4 6-8	2		X						X			1030	JN	X				X								X								X		
08	CA-5 2-3'	2		X						X			900	JN	X				X								X								X		
09	CA-6 0-3	2		X						X			1400	JN	X				X	X						X											
10	SS-1	1		X								↓	920	JO					X		X						X								X		

TAT REQUESTED
Priority (24 hr)* ☐
Expedited (48 hr)* ☐
Standard (10 Business Days) ☒
*Date Needed _____

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

SPECIAL INSTRUCTIONS

REPORTING INSTRUCTIONS ☐ PDF (e-mail address)_____
☐ HARD COPY REQUIRED ☐ FAX (FAX#)_____ ☐ OTHER (specify)_____

RECEIVED ON ICE ☒ YES ☐ NO
TEMPERATURE 2 °C

CUSTODY RECORD
QSD-01 Revision 12/23/10

		Date	Time		Date	Time
Relinquished by Sampler:	JM	9/23/11	1024	Received by:		
Relinquished by:				Received by:		
Relinquished by:				Received by Laboratory:		
				Way Bill#:	Lorrie King	9/23/11 10:29

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Absolute Resource associates
124 Heritage Avenue #10
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

22468

Company Name: CREDERE
Company Address: 776 MAIN ST WESTBROOK ME 04092
Report To: JUDD NEWCOMB
Phone #: 207-828-1272 x16
Invoice To: Same

Project Name: DPW NEW ENGLAND YARD
Project #: 10001086
Project Location: (NH) MA ME VT Other
Protocol: RCRA SDWA NPDES / MCP (NHDES) OTHER
Reporting Limits: (QAPP) GW-1 S-1 / EPA DW Other
Quote # ☐ NH GREE/ODD Fund Pricing
PO #

ANALYSIS REQUEST

☐ VOC 8260 ☒ VOC 8260 NHDES ☐ VOC 8260 MADEP
☐ VOC 624 ☐ VOC BTEX ☐ MtBE, only ☐ VOC 8021VT
☐ VPH MADEP ☐ MEGRO ☐ GRO 8015
☐ VOC 524.2 ☐ VOC 524.2 NH List ☐ Gases-List:
☒ TPH ☐ DRO 8015 ☐ MEDRO ☐ EPH MADEP ☐ TPH Fingerprint
☒ 8270PAH ☐ 8270ABN ☐ 625 ☐ EDB 504.1
☒ 8082 PCB ☐ 8081 Pesticides ☐ 608 Pest/PCB (3540)
☐ O&G 1664 ☐ Mineral O&G SM5520F
☐ pH ☐ BOD ☐ Conductivity ☐ Turbidity
☐ TSS ☐ TDS ☐ TS ☐ TVS ☐ Alkalinity
☐ RCRA Metals ☐ Priority Pollutant Metals ☐ TAL Metals
☒ Total Metals-list: As, Ba, Cd, Cu, Pb, Hg, Ni, Se, V
☐ Dissolved Metals-list:
☐ Ammonia ☐ COD ☐ TKN ☐ TN ☐ TON
☐ 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: ☐ TOC ☐ Grain Size ☐ TCLP Herbicides
Pb
Grab (G) or Composite (C)

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	SOLID	OTHER	Preservation Method: HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER (Specify)	Sampling: DATE	TIME	SAMPLER
11	SS-2	1		X								9/22/11	855	JO
12	SS-3	1		X									890	JO
13	TP-1 4-6'	1		X									1115	JO
14	TP-2 4-6	1		X									1035	JO
15	CA-3 0-2	1		X									1500	JO
16	SS-DUP	1		X									—	JO
17	SB-DUP	1		✓						✓			—	

✓ added 9/23/11 per Judd N

TAT REQUESTED
Priority (24 hr)* ☐
Expedited (48 hr)* ☐
Standard (10 Business Days) ☒
*Date Needed _____

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SPECIAL INSTRUCTIONS

REPORTING INSTRUCTIONS ☐ PDF (e-mail address)_____
☐ HARD COPY REQUIRED ☐ FAX (FAX#)_____ ☐ OTHER (specify)_____

RECEIVED ON ICE ☒ YES ☐ NO
TEMPERATURE 2 °C

CUSTODY RECORD
QSD-01 Revision 12/23/10

	Date	Time		Date	Time
Relinquished by Sampler:	9/23/11	1024	Received by:		
Relinquished by:			Received by:		
Relinquished by:			Received by Laboratory: Tammy King	9/23/11	10.24

Way Bill#:

69