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

Type of Submittal (Check One-Most Applicable)

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

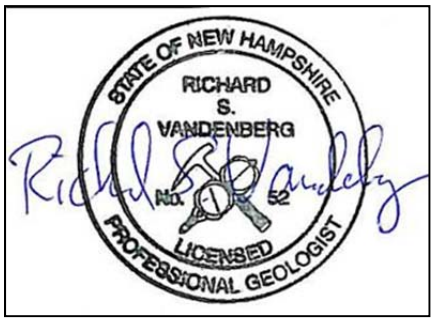
PHASE II ENVIRONMENTAL SITE ASSESSMENT REPORT

Former Mica Factory Property
8 (a.k.a. 5) Central Street
Bristol, New Hampshire
DES#200105002
Brownfields Grant #BF-96111801

Digitally signed by Silas Canavan
DN: cn=Silas Canavan, o=Credere Associates, ou, email=scanavan@crederellc.com, c=US
Date: 2011.08.24 08:26:40 -04'00'

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. 21
Contact: Silas Canavan, PE



August 23, 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

Phase II Environmental Site Assessment

Former Mica Factory Property
8 (a.k.a 5) Central Street
Bristol, New Hampshire
NHDES #200105002

Prepared for:

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

August 23, 2011

In Reference to:
Project No. 10001087

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

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

August 23, 2011

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

Subject: **Phase II Environmental Site Assessment**
Former Mica Factory Property
8 (a.k.a. 5) Central Street, Bristol, NH
NHDES Site # 200105002

Dear Mr. Koulet:

Attached is the Phase II Environmental Site Assessment for the Former Mica Factory property located at 8 (a.k.a. 5) Central Street in Bristol, NH. **Sections 11** and **12** of the attached report present our conclusions and recommendations regarding the subject property. Copies of this report have been forwarded to the New Hampshire Department of Environmental Services (NHDES) and the Town of Bristol.

Please do not hesitate to contact me at (207) 828-1272 ext. 21 if you have any questions, comments, or require additional information regarding this investigation.

Very truly,

CREDERE ASSOCIATES, LLC

Silas Canavan, P.E.
Civil/Environmental Engineer

cc: Michael Capone, Town of Bristol
Keith DuBois, NHDES

PHASE II ENVIRONMENTAL SITE ASSESSMENT
FORMER MICA FACTORY PROPERTY
BRISTOL, NH

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EXECUTIVE SUMMARY

Credere Associates, LLC (Credere) conducted a Phase II Environmental Site Assessment (ESA) at the Former Mica Factory property located at 8 (a.k.a. 5) Central Street in Bristol, New Hampshire (the subject property) in general conformance with the American Society for Testing Materials (ASTM) Standard Guide for Environmental Site Assessments: *Phase II Environmental Site Assessment Process* E 1903-97 (reapproved 2002). Phase II ESA activities were performed specifically to confirm or dismiss *recognized environmental conditions* (RECs) and other non-scope environmental concerns (NECs) identified during the Phase I ESA that was completed for the subject property in December 2010.

The Phase II ESA work included: collecting surficial soil samples inside the building's basement and outside the building to evaluate various RECs, performing dye testing of the floor drain system to locate its outlet, performing a lead-based paint screening of the building's exterior painted surfaces to determine the presence and location of lead-based paint, collecting bulk building materials samples for analysis of polychlorinated biphenyls (PCBs), and updating the previously conducted universal and hazardous waste inventory.

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

- REC-1, which was associated with the former industrial use of the subject property, was confirmed because lead, arsenic, and various polycyclic aromatic hydrocarbons (PAHs) were detected in collected surficial soil samples at concentrations that exceeded the New Hampshire Department of Environmental Services (NHDES) Soil Remediation Standards (SRS).
- REC-2, which was associated with the former use of the adjacent property as a printing press, was dismissed because no evidence of contamination associated with the former printing press was observed in surficial soil sample SS-5, which was collected in the alley between the subject property building and the former printing press building.
- REC-3, which was associated with potential past discharges of oil and/or hazardous substances to the floor drains, which may have impacted on-site environmental conditions, is inconclusive. Although the results of the Phase II ESA activities suggest that the floor drains outlet directly to the Newfound River, this could not be confirmed based on the information collected. The possibility remains that the floor drains outlet to a subsurface location.
- REC-4, which was associated with the former elevator in the subject property building, was dismissed because laboratory analysis indicated that PCB and total petroleum hydrocarbon (TPH) concentrations were not detected above the laboratory practical quantitation limit (PQL) in surficial soil sample SS-3. It should be noted that surficial soil sample SS-4 was not collected due to the lack of soil material on top of the bedrock/concrete basement floor. The laboratory analysis originally proposed for sample

SS-4 was performed on sample SS-3, which was located immediately downgradient from the former elevator.

- REC-5, which was associated with potential soil contamination from degraded lead-based paint on the exterior of the subject property building, was confirmed. Lead screening of the exterior building surfaces indicated the presence of lead-based paint and lead concentrations that exceeded the NHDES SRS were detected in surficial soil samples collected from directly adjacent to the exterior of the building.
- REC-6, which was associated with the imminent threat of release from the unsecured 5-gallon buckets of waste oil in the basement, was not addressed with sampling because there was no evidence of a past release from the containers. However, Credere recommends the above-mentioned material be consolidated and removed from the building.
- REC-7, which was associated with the presence of unknown staining on the floors of the subject property building, was dismissed because laboratory analysis of collected samples of the stained floor indicated that no PCB concentrations were detected above 1 mg/kg.
- NEC-1, which was associated with the presence of asbestos containing materials (ACMs) in the subject property building, was confirmed by previous investigations.
- NEC-2, which was associated with the presence of lead-based paint on the interior of the subject property building, was confirmed by previous investigations. Additional lead screening by Credere identified lead-based paint on the exterior of the building as well.
- NEC-3, which was associated with PCB-containing bulk products within the subject property building, was dismissed because no regulated concentrations of PCBs were identified in the sampled building materials.
- NEC-4, which was associated with the possible presence of mold in the subject property building, was presumptively confirmed based on visual observations.
- NEC-5, which was associated with the presence of bird guano in the subject property building, was presumptively confirmed based on visual observations.
- The previously conducted Pre-Demolition/Renovation Hazardous Building Materials Survey prepared by GZA in November 2001, was updated by Credere on April 12, 2011. The six (6) 55-gallon drums of obsolete chemicals and flammable waste and a portion of the fluorescent lamps and ballasts have been removed since the 2001 inventory was conducted. The remaining materials identified in the inventory are still present in the building.
- The ash pile observed in the basement during Phase II ESA activities represents a potential source of PAHs and may represent a health risk to subject property workers and users.

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

- The three (3) unsecured 5-gallon containers of waste oil in the northeast corner of the basement should be removed and disposed in accordance with applicable state and federal regulations.
- Additional assessment is necessary to confirm or dismiss the REC associated with the floor drains. It is recommended that the floor drains be sealed prior to demolition of the building. Following demolition, the floor drains should be excavated to determine the outlet location. If a break in the floor drain line or a subsurface outlet location is identified, the soil and groundwater in the vicinity of the outlet should be assessed for petroleum and hazardous substances following demolition of the building.
- If the building is to be renovated or demolished, removal of all identified ACMs should be performed by a licensed asbestos abatement professional in accordance with all applicable state and federal regulations.
- If the building is to be renovated or demolished, activities that pertain to lead-based paint should be conducted in accordance with the applicable state and federal regulations.
- If the building is to be renovated, a mold survey should be conducted to identify the presence of hazardous molds within the building, which, if present, should be properly managed. Conversely, if the building is to be razed, demolition activities should be conducted in such a manner as to protect human health from potential mold hazards.
- Bird guano identified within the building should be disposed in accordance with all applicable state and federal regulations prior to renovation or demolition of the building to protect human health from potential bird guano hazards.
- Universal and hazardous waste identified within the building should be removed and disposed in accordance with all applicable state and federal regulations.
- Contaminated soil and ash was identified at the subject property. Although the detected concentrations of PAHs, lead, and arsenic may be the result of background or other conditions that would not be regulated by the NHDES, they do exceed the applicable SRSs and represent a potential health risk. As such, Credere recommends that a remedial action plan be implemented to address this impacted media. Additional assessment of off-site soils in the vicinity of the subject property is also recommended to determine if the arsenic concentrations are consistent with background conditions, or are a result of subject property activities.

1. INTRODUCTION

This report presents the results of a Phase II Environmental Site Assessment (ESA) conducted by Credere Associates, LLC (Credere) at the Former Mica Factory property (the subject property) located at 8 (a.k.a. 5) Central Street in Bristol, New Hampshire as part of the Lakes Region Planning Commission's (LRPC) Brownfields Program. **Figure 1** shows the general location of the subject property in Bristol.

The Phase II ESA was completed in general conformance with the American Society for Testing Materials (ASTM) Standard Guide for Environmental Site Assessments: *Phase II Environmental Site Assessment Process* E 1903-97 (reapproved 2002).

The field program used during this Phase II ESA was completed in accordance with the U.S. Environmental Protection Agency (EPA)-approved Mica Factory Site-Specific Quality Assurance Project Plan (SSQAPP) Addendum. The SSQAPP is an addendum to the previously approved New Hampshire Generic QAPP RFA #08166 and #09036, which was prepared for all of Credere's EPA work in New Hampshire, and is included in **Appendix A**. Photographs taken during the completion of this Phase II ESA are included in **Appendix B**.

2. PROJECT BACKGROUND

2.1 SUBJECT PROPERTY DESCRIPTION

The subject property is composed of one 0.07-acre parcel of land located at 8 Central Street in Bristol, New Hampshire, at the intersection of Central Street and Spring Street. The subject property is located adjacent to the Newfound River and is occupied by one (1) vacant, four-story former mill building. The building has reportedly been vacant for at least 12 years. A lumber warehouse and a livery occupied the subject property prior to construction of the current building in 1894. After its initial construction, the building was used for shoe manufacturing. Following its use for shoe manufacturing, the building was used as a broom factory, then for approximately 60 years as a mica processing facility, and more recently used for retail and residential purposes.

2.2 SUMMARY OF PHASE I ESA WORK

A Phase I ESA was completed by Credere for the subject property in December 2010, in accordance with ASTM Standard Practice E 1527-05. The following represents the findings from this report.

Based on the information obtained as a part of the Phase I ESA, the following recognized environmental conditions (RECs) were identified at the subject property:

- REC-1 – The former industrial use of the subject property (including shoe manufacturing and mica processing) between 1897 to the 1960s represents a REC because hazardous substances were likely stored, used, and may have been disposed of on the subject property, impacting the environmental conditions of the subject property.
- REC-2 – The former use of the adjacent property to the east as a printing press represents a REC. Due to the close proximity of the printing press building to the subject property, hazardous substances may have been released and/or disposed of on the subject property. As such, the environmental conditions of the subject property may have been impacted.
- REC-3 – Two floor drains were observed in the basement of the building. The presence of these drains and the previous industrial usage of the building represent a REC because the drains may be conduits to the environment whereby any releases of petroleum products and/or hazardous substances may have impacted the environmental conditions at the subject property.
- REC-4 – The presence of an elevator in the building represents a REC. Though the mechanical components have been removed, lubrication and hydraulic fluids may have previously been released from the elevator and may have impacted the environmental conditions of the subject property.
- REC-5 – The possible presence of lead-based paint on the exterior of the building represents a REC. Due to the condition of the exterior paint (loose and flaking), it is possible that the environmental condition of the soil around the perimeter of the building has been impacted.

- REC-6 – Although no evidence of a prior release was observed, the presence of uncovered and unsecured small containers of petroleum products (several 5-gallon buckets of waste oil) in the basement represents a REC due to the imminent threat of release from these containers.
- REC-7 – The presence of unknown staining on the floors of the building represents a REC because the stains are indicative of a potential past release of petroleum products and/or hazardous substances which may have impacted the building structure; however, it is unlikely that releases causing these stains have impacted the environmental conditions of the subject property.

The following five (5) ASTM *non-scope environmental conditions* (NECs) were also noted during the Phase I ESA:

- NEC-1 – Previous reports indicate that asbestos containing materials have been identified within the building.
- NEC-2 – Previous reports indicate that lead-based paint has been identified within the building.
- NEC-3 – Potential ASTM non-scope polychlorinated biphenyl (PCB)-containing building materials and electrical equipment in the form of fluorescent lighting fixtures were observed in the building.
- NEC-4 – Based on the condition of the building and the collapsed roof, mold may be present in the building.
- NEC-5 – Bird guano was observed in the building representing a potential human health threat.

2.3 POTENTIAL FUTURE SUBJECT PROPERTY USE

The Town of Bristol is considering demolishing the existing building and developing the subject property into a riverfront park with automobile parking.

3. PHASE II SCOPE OF WORK

Credere performed this Phase II ESA to assess the subject property considering the anticipated recreational re-use scenario and the identified environmental conditions noted above. An SSQAPP Addendum was developed that outlined the work to be completed, methodologies to be used, and data quality objectives for the project (see **Appendix A**). The Phase II ESA tasks completed included the following:

1. Dye testing of floor drains was conducted to identify their discharge location(s).
2. Four (4) surficial soil samples were collected to evaluate identified RECs 1 through 5. Each sample was field screened with a photoionization detector (PID) and X-ray fluorescent meter (XRF) and submitted for off-site laboratory analysis in accordance with the SSQAPP.
3. Four (4) representative samples of stained wood flooring were collected from four separate areas of the subject property building to evaluate REC-7.
4. A survey was conducted to identify potential PCB-containing building materials. Based on the results of this survey, representative samples of potential PCB-containing bulk products were collected and submitted for off-site laboratory analysis of PCBs to evaluate NEC-3. Three (3) potential PCB-containing bulk products were identified within the building.
5. A lead-based paint screening was conducted for the exterior of the subject property building to identify surfaces containing lead-based paint to evaluate REC-5 and NEC-2.
6. The inventory list of hazardous and universal waste created by GZA GeoEnvironmental, Inc. (GZA) in 2001 was updated to reflect the April 12, 2011, subject property conditions.

Deviations from the scope of work described in the SSQAPP Addendum are summarized in **Section 9** of this report.

4. PHASE II FIELD ACTIVITIES

This sampling program was developed to investigate soil and building material conditions at the subject property to confirm or dismiss the RECs and NECs identified during the Phase I ESA (see SSQAPP Addendum in **Appendix A**). All laboratory analytical samples collected by Credere were submitted to Absolute Resource Associates 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 building, pertinent subject property features, and sample locations.

4.1 FLOOR DRAIN INVESTIGATION

During the Phase I ESA subject property reconnaissance two floor drains were identified in the basement of the subject property building. A potential floor drain outlet to the Newfound River was also observed during the Phase I ESA site reconnaissance on the exterior southern face of the foundation wall. On April 12, 2011, Credere conducted a floor drain dye test in an attempt to locate the outlet by pouring water containing a biodegradable fluorescent dye into the floor drain inlets and observing the potential outlet to the river.

4.2 SURFICIAL SOIL SAMPLING

On April 12, 2011, Credere collected four (4) surficial soil samples (SS-1, SS-2, SS-3, and SS-5) from the subject property to assess surficial soil conditions associated with the identified RECs. Proposed surficial soil sample SS-4 was not collected at the base of the elevator shaft because there was no soil over the bedrock/concrete floor in that location (**Photograph 2)**. See **Section 9** for additional discussion of deviations from the SSQAPP.

The rationale for each surficial soil sample is described below:

- Surficial soil sample SS-1 was collected from the area adjacent to the western exterior wall in a location that may have been impacted by historic industrial use of the subject property (REC-1) and by the flaking, potentially lead-based paint on the exterior of the building (REC-5). The collected sample was submitted for off-site laboratory analysis of volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and RCRA 8 metals.
- Surficial soil sample SS-2 was collected from the area around the inlet to the western floor drain (REC-3), which may have been impacted by the historic industrial use of the subject property (REC-1). The collected sample was submitted for off-site laboratory analysis of VOCs, PAHs, and RCRA 8 metals.
- Surficial soil sample SS-3 was collected from the area around the inlet to the eastern floor drain (REC-3), which may have been impacted by the historic industrial use of the subject property (REC-1). The collected sample was submitted for off-site laboratory analysis of VOCs, PAHs, and RCRA 8 metals to address REC-1 and REC-3. This

sample was also analyzed for total petroleum hydrocarbons (TPH) and PCBs to assess REC-4 because it was downgradient of proposed sample SS-4. REC-4 was associated with possible releases from the former elevator mechanical and hydraulic equipment.

- Surficial soil sample SS-5 was collected from the area adjacent to the eastern exterior wall in a location that may have been impacted by historical industrial use of the subject property (REC-1), by the historic use of the adjacent building to the east as a printing press (REC-2), and by the flaking, potentially lead-based paint on the exterior of the building (REC-5). The collected sample was submitted for off-site laboratory analysis of VOCs, RCRA 8 metals, PAHs, and PCBs.

All surficial soil samples were collected in accordance with standard operating procedures (SOPs) HWRB-11, HWRB-12, HWRB-15, DR#024, DR#025, VOCs/SOIL-200, and Credere-004. Any visible organic debris and/or grass or degraded asphalt was removed from samples prior to placement in laboratory glassware.

Surficial soil samples SS-1 and SS-5 were collected from the exterior perimeter of the building, approximately 0 to 1 feet below ground surface (bgs) using hand tools. Surficial soil samples SS-2 and SS-3 were collected from approximately 1-inch of soil accumulated above the bedrock and concrete basement floor.

Each collected soil sample was logged and visual and/or olfactory evidence of contamination was noted. Samples were then field screened for VOCs with a PID calibrated to a 100 parts per million (ppm) isobutylene standard with the instrument response factor set to 1.0 and for RCRA 8 metals with an X-ray fluorescence meter (XRF). Exploration locations and methodologies used are summarized in **Table 1**, PID field screening results are included in **Table 2,** and XRF field screening results are included in **Table 3**.

4.3 STAINED FLOOR SAMPLING

On April 12, 2011, Credere collected four (4) samples from areas with observed staining of the floor on the second and third stories of the subject property building (REC-7). Samples FS-1, FS-2, and FS-3 were each collected from separate stained areas on the second floor (**Figure 2**). Sample FS-4 was collected from the stained area on the third floor. The samples were collected in accordance with field SOP EPA SOP #001 and submitted for independent laboratory analysis of PCBs.

4.4 POTENTIAL PCB-CONTAINING BULK PRODUCT SAMPLING

On April 12, 2011, Credere inventoried suspect PCB-containing bulk products at the subject property. Examples of suspect products typically include, but are not limited to, paint, caulking, sealants, grout, mastic, glazing, insulation, transformers, capacitors, electrical equipment, used motor/hydraulic oil, fluorescent light ballasts, cable insulation, thermal insulation, adhesives and tapes, plastics, carbonless copy paper, floor finishes, gaskets, ceiling tile coatings, flooring sealants, roofing materials, and siding materials. Consistent with this inventory and the results of

previous investigations at similar sites, Credere identified three (3) potentially PCB-containing bulk products and collected one (1) sample of each material for laboratory analysis of PCBs in accordance with SOPs EIASOP Porous Sampling1, EPA SOP No. 2011, DR#12, and Credere-004. The following is a description of the collected suspect PCB-containing bulk product samples:

- Bulk product sample BM-1 was collected from the interior white paint at the building entrance.
- Bulk product sample BM-2 was collected from the red paint on the main entrance door.
- Bulk product sample BM-3 was collected from the white paint on the main entrance door.

4.5 LEAD-BASED PAINT SCREENING

On April 12, 2011, the lead content of paint on the exterior of the subject property building (REC-5) was screened onsite by Credere using a portable XRF. XRF measurements were taken in multiple locations on accessible portions of the building exterior. XRF measurement locations are depicted on **Figure 3**.

This lead screening is not sufficient to determine the suitability of the building for residential or child-occupied uses. If the subject property buildings are to be used in the future as residences or child-occupied facilities, a formal lead survey should be conducted by a NHDES Certified Lead Inspector.

4.6 UNIVERSAL AND HAZARDOUS WASTE SURVEY UPDATE

The previously conducted Pre-Demolition/Renovation Hazardous Building Materials Survey by GZA in November 2001, was updated through visual inspection by Credere on April 12, 2011. Credere identified remaining quantities of universal and hazardous wastes that were listed in the GZA survey and also noted any additional wastes observed.

5. SUMMARY OF REGULATORY STANDARDS

As a part of the subsurface investigation portion of this Phase II ESA, Credere collected soil and building material samples to confirm or dismiss the presence of contaminants associated with the RECs identified at the subject property, and to assess the potential for future risk which may result during anticipated recreational redevelopment. Sample results were compared to the applicable state and federal standards described below.

5.1 SOIL

Concentrations in soil samples were compared to New Hampshire's Soil Remediation Standards (SRS) detailed in NHDES Env-Or 600 Contaminated Site Management.

5.2 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. All construction work involving exposure or potential exposure to lead is covered by the OSHA Lead in Construction Standard 29 CFR 1926.62.

5.3 PCB-CONTAINING MATERIALS

Bulk products that contain concentrations of total PCBs equal to or in excess of 50 mg/kg are defined as PCB bulk product wastes in accordance with 40 CFR 761.3. These materials are regulated for disposal under 40 CFR 761.62. Bulk products that have been analyzed to contain total PCBs at a concentration of equal to or greater than 1 mg/kg but less than 50 mg/kg (and not as a result of dilution) are not regulated for disposal as long as they remain in use. However, if these materials are removed from use, they must be disposed of at a facility that is licensed to accept these materials in accordance with the applicable state regulations. Bulk products which have been analyzed to contain total PCBs at a concentration of less than 1 mg/kg are unrestricted for future use and/or disposal.

Bulk materials which have been analyzed to contain total PCB concentrations equal to or in excess of 1 mg/kg as a result of contact with a PCB bulk product waste are defined as a PCB remediation waste in accordance with 40 CFR 761.3. These materials must be disposed of under a special approval which meets the requirements presented at 40 CFR 761.79(h). Bulk materials which have been analyzed to contain total PCBs at concentrations of less than 1 mg/kg are unrestricted for future use and/or disposal.

6. PHASE II ESA RESULTS

The following subsections present the results of the data collected during the field work portion of this Phase II ESA.

6.1 FLOOR DRAIN INVESTIGATION

The western floor drain inlet was dye tested; however, the potential outlet was not visible due to high water levels in the river. No dye was noted in the area where the potential outlet was observed. Other observations made during the dye test, including dilution of the dye in the drain and fluctuation of the water level in the drain consistent with the level of the Newfound River, suggested that this floor drain discharges directly to the Newfound River. However, the outlet location could not be confirmed based on the information obtained from the dye test.

The eastern floor drain was clogged with sediment and debris and was not able to be dye tested. Credere believes it is likely that the eastern floor drain is connected to the same outlet as the western floor drain; however, the outlet location could not be confirmed based on the information obtained from the dye test.

6.2 SURFICIAL SOIL SAMPLE RESULTS

6.2.1 Field Screening Results

No visual and/or olfactory evidence of contamination was observed in the field in any of the surficial soil samples collected at the subject property. PID readings were non-detect for all surficial soil samples collected. XRF field screening indicated that concentrations of mercury and/or lead were detected in all surficial soil samples exceeding the NHDES SRS. Surficial soil sample field screening results are summarized in **Table 2** and **Table 3**.

6.2.2 Laboratory Results

Results of the four (4) surficial soil samples collected indicated that no samples contained VOCs above practical quantitation limits (PQLs).

TPH was not detected above the PQL (770 mg/kg) in sample SS-3, which was the only sample analyzed for TPH. It should be noted that sample SS-3 appeared to contain a significant amount of organic material, which likely triggered the high laboratory PQL. Because the PQL remained significantly lower than the SRS, Credere believes that this data is valid for the purpose of this Phase II ESA.

Arsenic, barium, cadmium, chromium, and lead were detected above the laboratory PQL in all surficial soil samples analyzed for RCRA 8 metals. Mercury was detected in samples SS-1, SS-2, and SS-3 only. Concentrations of lead detected in the collected surficial soil samples exceeded the applicable NHDES SRS. Concentrations of arsenic detected in samples SS-2 and SS-3 exceeded the applicable NHDES SRS.

Numerous PAHs were detected in surficial soil samples SS-1 and SS-3. Concentrations of benzo(a)anthracene and benzo(a)pyrene detected in both samples exceeded their respective NHDES SRS. The concentration of benzo(b)fluoranthene detected in surficial soil samples SS-3 exceeded its NHDES SRS. Additionally, the laboratory PQL for various PAHs in samples SS-2, SS-3, and SS-5 were higher than the NHDES SRS.

No PCBs were detected above the laboratory PQL for any of the surficial soil samples analyzed.

Surficial soil sample laboratory analytical results are summarized in **Table 4** and sample locations are depicted on **Figure 2**. Duplicate sample results are discussed in **Section 7.1** and are summarized in **Table 8**.

Descriptions of surficial soil samples are included in the surficial soil sampling logs located in **Appendix C**.

6.2.3 Additional Observations

A pile of ash was observed on the east side of the basement (**Photograph 3**). It is likely that this ash pile was used to stockpile ash removed from the former coal stove that was used to heat the building. Based on Credere's experience, concentrations of various PAHs in ash piles typically exceed the applicable NHDES SRS.

Small amounts of ash and minerals were also identified in surficial soil samples SS-2 and SS-3. It is likely that the ash in these samples was deposited during transport to the ash pile or by Aeolian dispersion (windows have been removed from the building) from the ash pile.

6.3 STAINED FLOORBOARD SAMPLING

The PCB Aroclor 1254 was detected above the laboratory PQL in floor sample FS-2. The detected concentration was below 1 mg/kg. No PCB concentrations were detected above the laboratory PQL in any of the other floor samples.

Floor sample laboratory analytical results are summarized in **Table 5** and sample locations are depicted on **Figure 2**.

6.4 POTENTIAL PCB-CONTAINING BULK PRODUCT SAMPLING

The PCB Aroclor 1254 was detected at the laboratory PQL in bulk product sample BM-1. The detected concentration was below 1 mg/kg. No PCB concentrations were detected above the laboratory PQL for any of the other bulk product samples.

Bulk product sample laboratory analytical results are summarized in **Table 6** and sample locations are depicted on **Figure 2**.

It should be noted that the bulk material samples collected and analyzed during Phase II activities are only those identified as being most likely to contain PCBs during Credere's inventory. This sampling effort was not intended to be considered a complete survey of PCBs within the building.

6.5 LEAD-BASED PAINT SCREENING

Lead screening indicated that lead-based paint was present on all exterior painted surfaces of the building with the exception of the white plywood covering the windows on the west side of the building. The grey exterior paint appeared to be consistently applied to the entire exterior of the building with the exception of the entrance and the white plywood window covers.

This lead screening was conducted only as a screening level survey for potential building demolition and as such is not sufficient to determine the suitability of the buildings for residential or child-occupied uses. If the subject property buildings are to be used in the future as residences or child-occupied facilities, a formal lead survey should be conducted by a NHDES Certified Lead Inspector.

Lead-based paint screening results are summarized in **Table 7** and screening locations are depicted on **Figure 3**.

6.6 UNIVERSAL AND HAZARDOUS WASTE SURVEY UPDATE

The previously conducted Pre-Demolition/Renovation Hazardous Building Materials Survey by GZA in November 2001, was updated through visual inspection by Credere on April 12, 2011. The six (6) 55-gallon drums of obsolete chemicals and flammable waste and a portion of the fluorescent lamps and ballasts have been removed since the 2001 inventory. The remaining materials identified in the inventory are still present in the building. The updated inventory of universal and hazardous waste is provided in the table below.

MATERIAL TYPE	LOCATION	APPROXIMATE QUANTIY (ORIGINAL)	APPROXIMATE QUANTITY (UPDATED)
Fluorescent Lamps	All Floors	100 linear feet	50 linear feet
Ballasts	All Floors	80	6
Mercury Switches	All Floors	2 to 5	2 to 5
Power Banks/Circuit Breakers	All Floors	5 to 10	5 to 10
Obsolete Chemicals	All Floors	Two 55-gallon drums	Five 5-gallon buckets
Flammable Wastes	All Floors	Four 55-gallon drums	Three 5-gallon buckets
Bird Guano	Top Three Floors	7,000 square feet	7,000 square feet
Lead Paint	All Floors	All Painted Surfaces	All Painted Surfaces
275-Gallon AST	Basement	0	1

7. QUALITY ANALYSIS/QUALITY CONTROL

The contracted laboratory, Absolute Resource Associates 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.

7.1 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 two (2) duplicate samples were collected during this Phase II ESA:

- SS-DUP (duplicate soil sample collected at surficial soil sample location SS-1 from 0 to 1 feet bgs)
- BM-DUP (duplicate bulk product sample collected at bulk product sample location BM-1)

Table 8 summarizes the duplicate sample results and RPDs.

Sample SS-DUP was submitted for laboratory analysis of VOCs, RCRA 8 metals, and PAHs. No VOC analytes were detected in the sample or duplicate sample; therefore, RPDs were not calculated for these samples.

RPDs for barium, lead, and mercury in these samples ranged from 5.1% to 12.7%, which were within the acceptable limit of 35%. The RPD for arsenic in these samples was 67.6%. Although this RPD is greater than the acceptable limit of 35%, the concentration of both samples falls within the statewide background concentration. Additionally, the concentrations of lead in the same samples exceeded the NHDES SRS; therefore, the material will have to be managed in accordance with the NHDES Contaminated Site Management Rules regardless of the level of arsenic. As such, it is not anticipated that this high RPD will affect the recommendations contained within this report.

All PAH analytes were non-detect or less than 5X the laboratory PQL in the sample; therefore, RPDs were not calculated for these samples.

Sample BM-DUP was submitted for laboratory analysis of PCBs. All PCB aroclors were non-detect or were less than 5X the laboratory PQL in the sample or duplicate sample; therefore, RPDs were not calculated for these samples.

7.2 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. Acceptable recovery values were within the recoveries specified by each of the analysis methods. Control samples for assessing bias were analyzed at a rate as specified in the analytical SOPs and specified analytical methods.

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 its 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

Sample 21283-002 and -003 (SS-2) did not meet the acceptance criteria for the extraction surrogate a,a,a-trifluorotoluene. This is likely a result of high moisture content in the sample.

PCBs

The percent recovery for the surrogate, decachlorobiphenyl, for 21283-008 (BM-2) was outside the acceptance criteria. Matrix interference is suspected. No additional sample remained for re-analysis.

The percent recovery for the surrogate, decachlorobiphenyl, for 21283-012 (FS-2) was outside the acceptance criteria. Re-analysis of the sample showed similar results. Matrix interference is suspected.

7.3 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:

VOCs

The MLCS/D4089 did not meet the acceptance criteria for dichlorodifluoromethane and 2,2-dichloropropane. These compounds are known to be problematic in the method. The MLCS/D4089 did not meet the acceptance criteria for t-butanol (TBA) 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.

Mercury

The relative percent difference between the LCS and LCSD4105 was outside the acceptance criteria for mercury. The percent recovery for this element in each QC parameter was within the acceptance criteria. No impact to the data suspected.

7.4 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.

7.5 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.

7.6 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.

8. CONCEPTUAL SITE MODEL

This Phase II ESA was designed to provide further understanding of the contaminants at the subject property and to aid in changing the subject property use from industrial to recreational. The following section is a description of the Conceptual Site Model (CSM), which incorporates information from this investigation.

8.1 SITE GROUNDWATER AND HYDROGEOLOGY

Due to exposed bedrock occupying most of the subject property, groundwater analysis was not conducted during this Phase II ESA. Although the localized topography slopes in two directions, it is likely that groundwater flows in a southerly direction towards the Newfound River. It should be noted that local groundwater flow can be highly varied due to precipitation events, stormwater runoff, infiltration/recharge, the presence of subsurface structures and utilities, and varying subsurface hydrogeologic conditions.

8.2 SURFACE WATER FLOW

Topography at the subject property generally slopes in two directions. The north side of the subject property slopes to the southeast, parallel to Central Street. The east and west sides of the subject property slope to the southwest toward the Newfound River. The building has a flat roof and occupies the majority of the subject property. Roof drains were not identified, so it is assumed that stormwater intercepted by the roof once flowed radially in each direction and onto the ground, and then followed the existing topography. Currently, the roof has partially collapsed and allows stormwater from the roof to fall into the building. Stormwater likely makes its way to the basement of the building where it is assumed that it discharges to the floor drain, the subsurface beneath the building, or directly to the Newfound River.

8.3 GEOLOGICAL CHARACTERISTICS

8.3.1 Surficial Geology

According to the *Geohydrology, Yield, and Water Quality Data of Stratified-Drift Aquifers in the Pemigewasset River Basin, Central New Hampshire*, United States Geological Survey (USGS), Water-Resources Investigations Report 94-4083, by John E. Cotton and Joseph R. Olimpio (1996), the surficial geology at the subject property consists of glacial till over bedrock, generally less than 30 feet thick. Surficial materials observed at the subject property during the soil sampling activities revealed predominantly dark brown fine sand with traces of gravel on the outside of the building. Surficial materials inside the building consisted of a thin (1”±) layer of sediment over bedrock accumulated around the floor drains. The remaining portion of the basement consisted of bedrock and concrete floor.

8.3.2 Bedrock Geology

According to the *Generalized Bedrock Geologic Map of New Hampshire* compiled by the USGS, the subject property is underlain by sharply interbedded quartzites, light-gray non-graphitic

metapelite, and fast-graded meta-turbidites of the lower to middle Silurian age. According to the USGS, the average depth to bedrock is 30 feet below ground surface (bgs), but can be up to 200-feet bgs in localized areas. However, exposed bedrock was observed in the basement of the building during the site reconnaissance.

8.4 CONTAMINANTS OF CONCERN

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

- Arsenic concentrations exceeding the applicable NHDES SRS were detected in surficial soil inside the building. These arsenic concentrations may be the result of spilled hazardous materials at the subject property, other industrial activities at the subject property, or may be the result of a background condition. The NHDES does not regulate soil containing arsenic associated with a background condition. However, the detected arsenic concentrations, which range from 14 to 17 mg/kg, exceed the risk-based SRS of 11 mg/kg.
- Lead concentrations exceeding the applicable NHDES SRS were detected in both interior and exterior soils at the subject property. These lead concentrations may be the result of spilled petroleum and/or hazardous substances. Alternatively, the detected lead concentrations may be associated with degraded lead-based paint both inside and outside of the building migrating to the soil below, or may be associated with the deposition of coal, coal ash, or wood ash. The NHDES does not regulate soil containing lead solely due the presence of the alternative sources listed above. The concentrations at which lead was detected exceeds the risk-based SRS of 400 mg/kg.
- Multiple PAH compounds including benzo(a)anthracene, benzo(b)fluoranthene, and benzo(a)pyrene were detected in both interior and exterior surficial soils. The presence of low level PAHs in all samples analyzed for PAHs suggests that they could be the result of spilled petroleum products, ash from the coal stove, or background conditions unrelated to subject property activities. Although the NHDES does not regulate soil containing PAHs associated with deposition of coal, coal ash, or wood ash (i.e. background conditions), these contaminants exceed their respective risk-based SRSs.
- Asbestos containing building materials and lead-based paint were identified in excess of applicable regulatory limits within the subject property buildings.
- Mold and bird guano present in the building represent a potential health concern to subject property workers and users.

To aid in a thorough understanding of the environmental concerns present at the subject property, a graphical presentation of the identified contaminants of concern and the migration pathways to potential 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 subject property. 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 subject property. 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 subject property for long durations but with low intensity exposure such as indoor office workers.
Site Worker:	Site workers are present at the subject property 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.

Summary:

Based on known subject property history, PAHs and arsenic have the potential to have been released to the environment through surficial releases associated with previous subject property usage, , or have the potential to be consistent with background conditions. Lead has the potential to have been released to the environment through surficial releases associated with subject property usage, degraded paint, and deposition of coal, coal ash, or wood ash. Primary impacted media includes surficial soil. PAHs, arsenic, and lead in surficial soils have the potential to migrate through Aeolian dispersion or groundwater flow and impact both on-site and off-site receptors. No evidence of the migration of PAHs, arsenic, and/or lead to groundwater was identified during these Phase II ESA activities. PAHs, lead, and arsenic have the potential to impact site worker, visitor, and terrestrial biota receptors on-site; and residential, commercial, and aquatic biota off-site.

Asbestos and lead-based paint have the potential to be released to the environment through degradation of building materials. Asbestos has the potential to affect indoor air and impact residential, commercial, site worker, and visitor receptors. Lead-based paint has the potential to affect indoor spaces and surficial soils and has the potential to migrate through pedestrian and Aeolian dispersion and stormwater runoff. Lead-based paint has the potential to impact all six receptors both on-site and off-site.

Mold and bird guano have the potential to affect indoor air and impact residential, commercial, site worker, and visitor receptors.

9. DEVIATIONS

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

1. Surficial soil sample SS-4 was not able to be collected due to the lack of soil on top of the bedrock/concrete basement floor, which is a deviation because it was proposed to be collected at the base of the elevator shaft. However, to account for this, TPH and PCB analysis, which was proposed for sample SS-4, was instead performed on sample SS-3. This location was chosen because it is immediately downgradient of the proposed SS-4 location. Due to the close proximity of SS-3 and SS-4, any past release from the elevator equipment would have likely impacted the material collected in sample SS-3 as well. Therefore, it is Credere's professional opinion that this deviation does not represent a data gap.

10. DATA GAPS

The lack of information regarding the floor drain outlet location represents a data gap. Although it is likely that the floor drains outlet directly to the Newfound River, this could not be confirmed based on the information obtained during the dye testing activities, thus representing a data gap. Additional investigation of the floor drains is warranted following demolition of the building to determine the outlet location and to assess the environmental conditions at the outlet location.

11. CONCLUSIONS

A summary of our conclusions in relation to the identified RECs, other environmental concerns, and the investigation results are presented below:

- REC-1, which was associated with the former industrial use of the subject property, was confirmed because lead, arsenic, and various PAHs were detected in collected surficial soil samples at concentrations that exceeded the NHDES SRS.
- REC-2, which was associated with the former use of the adjacent property as a printing press, was dismissed because no evidence of contamination associated with the former printing press was observed in surficial soil sample SS-5.
- REC-3, which was associated with potential past discharges of oil and/or hazardous substances to the floor drains, which may have impacted on-site environmental conditions, is inconclusive. Although the results of the Phase II ESA activities suggest that the floor drains outlet directly to the Newfound River, this could not be confirmed based on the information collected. The possibility remains that the floor drains outlet to a subsurface location.
- REC-4, which was associated with the former elevator in the subject property building, was dismissed because laboratory analysis indicated that PCB and TPH concentrations were not detected above the laboratory PQL in surficial soil sample SS-3, which was located immediately downgradient of the elevator shaft.
- REC-5, which was associated with potential soil contamination from degraded lead-based paint on the exterior of the subject property building, was confirmed. Lead screening of the exterior building surfaces indicated the presence of lead-based paint and lead concentrations that exceeded the NHDES SRS were detected in surficial soil samples collected from directly adjacent to the exterior of the building.
- REC-6, which was associated with the imminent threat of release from the unsecured 5-gallon buckets of waste oil in the basement, was not addressed with sampling because there was no evidence of a past release from the containers. However, Credere recommends the above-mentioned material be consolidated and removed from the building.
- REC-7, which was associated with the presence of unknown staining on the floors of the subject property building, was dismissed because laboratory analysis of collected samples of the stained floor indicated that no PCB concentrations were detected above 1 mg/kg.
- NEC-1, which was associated with the presence of ACMs in the subject property building, was confirmed by previous investigations.
- NEC-2, which was associated with the presence of lead-based paint on the interior of the subject property building, was confirmed by previous investigations. Additional lead screening by Credere identified lead-based paint on the exterior of the building as well.

- NEC-3, which was associated with PCB-containing bulk products within the subject property building, has been dismissed because no regulated concentrations of PCBs were identified in the sampled building materials.
- NEC-4, which was associated with the possible presence of mold in the subject property building, was presumptively confirmed based on visual observations.
- NEC-5, which was associated with the presence of bird guano in the subject property building, was presumptively confirmed based on visual observations.
- The previously conducted Pre-Demolition/Renovation Hazardous Building Materials Survey prepared by GZA in November 2001, was updated by Credere on April 12, 2011. The six (6) 55-gallon drums of obsolete chemicals and flammable waste and a portion of the fluorescent lamps and ballasts have been removed since the 2001 inventory was conducted. The remaining materials identified in the inventory are still present in the building.
- The ash pile observed in the basement during Phase II ESA activities represents a potential source of PAHs that exceed the NHDES SRS and may represent a health risk to subject property workers and users.

12. RECOMMENDATIONS

Based on observations and results of the investigation conducted at the Mica Factory property, Credere makes the following recommendations for the subject property:

- The three (3) unsecured 5-gallon containers of waste oil in the northeast corner of the basement should be removed and disposed in accordance with applicable state and federal regulations.
- Additional assessment is necessary to confirm or dismiss the REC associated with the floor drains. It is recommended that the floor drains be sealed prior to demolition of the building. Following demolition, the floor drains should be excavated to determine the outlet location. If a break in the floor drain line or a subsurface outlet location is identified, the soil and groundwater in the vicinity of the outlet should be assessed for petroleum and hazardous substances following demolition of the building.
- If the building is to be renovated or demolished, removal of all identified ACMs should be performed by a licensed asbestos abatement professional in accordance with all applicable state and federal regulations.
- If the building is to be renovated or demolished, activities that pertain to lead-based paint should be conducted in accordance with the applicable state and federal regulations.
- If the building is to be renovated, a mold survey should be conducted to identify the presence of hazardous molds within the building, which, if present, should be properly managed. Conversely, if the building is to be razed, demolition activities should be conducted in such a manner as to protect human health from potential mold hazards.
- Bird guano identified within the building should be disposed in accordance with all applicable state and federal regulations prior to renovation or demolition of the building to protect human health from potential bird guano hazards.
- Universal and hazardous waste identified within the building should be removed and disposed in accordance with all applicable state and federal regulations.
- Contaminated soil and ash was identified at the subject property. Although the detected concentrations of PAHs, lead, and arsenic may be the result of background or other conditions that would not be regulated by the NHDES, they do exceed the applicable SRSs and represent a potential health risk. As such, Credere recommends that a remedial action plan be implemented to address this impacted media. Additional assessment of off-site soils in the vicinity of the subject property is also recommended to determine if the arsenic concentrations are consistent with background conditions, or are a result of subject property activities.

13. SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

The following Environmental Professionals performed this Phase II ESA in conformance with ASTM Standard Guide E 1903-97 (reapproved 2002). 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 subject property. Any work completed on this Phase II ESA by an individual who is not considered an environmental professional was completed under the supervision or responsible charge of the environmental professional.

Silas Canavan, P.E.
Civil/Environmental Engineer

Jedd Steinglass
Senior Geologist

Richard S. Vandenberg, PG
Senior Geologist

14. 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 subject property.

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 subject property 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 subject property conditions that occurred at a time other than when the subject property 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.

TABLES

TABLE 1
FORMER MICA FACTORY PROPERTY
8 CENTRAL STREET - BRISTOL, NEW HAMPSHIRE
NHDES #200105002

SUMMARY OF EXPLORATION LOCATIONS AND SAMPLING METHODS

Location Name	Sample Depth (inches bgs)	Media Sampled	Type of Exploration	Sampling Method
SS-1	0-12	Surficial Soil	Surficial Soil Sample	Pre-cleaned Trowel
SS-2	0-1	Surficial Soil	Surficial Soil Sample	Pre-cleaned Trowel
SS-3	0-1	Surficial Soil	Surficial Soil Sample	Pre-cleaned Trowel
SS-4	Could not be sampled (no soil on top of concrete/bedrock floor)			
SS-5	0-12	Surficial Soil	Surficial Soil Sample	Pre-cleaned Trowel
BM-1	NA	Paint	Bulk Material Sample	Pre-cleaned Scraper
BM-2	NA	Paint	Bulk Material Sample	Pre-cleaned Scraper
BM-3	NA	Paint	Bulk Material Sample	Pre-cleaned Scraper
FS-1	0-0.5	Wood	Wood Floor Sample	Pre-Cleaned Drill Bit
FS-2	0-0.5	Wood	Wood Floor Sample	Pre-Cleaned Drill Bit
FS-3	0-0.5	Wood	Wood Floor Sample	Pre-Cleaned Drill Bit
FS-4	0-0.5	Wood	Wood Floor Sample	Pre-cleaned Drill Bit
Lead-Based Paint Screening Locations (1 through 17)	NA	Exterior Paint	X-Ray Fluorescent Meter Reading	Calibrated X-Ray Fluorescent Meter

Notes:

bgs - below ground surface

TABLE 2
FORMER MICA FACTORY PROPERTY
8 CENTRAL STREET - BRISTOL, NEW HAMPSHIRE
NHDES #200105002

SUMMARY OF PHOTOIONIZATION DETECTOR FIELD SCREENING RESULTS

Location	Sample Depth (inches bgs)	Sample Date	PID Results (ppmv)	Evidence of Petroleum Impact or Petroleum Saturated Soils
Surficial Soil Samples				
SS-1	0-12	4/12/2011	ND	No Evidence Observed
SS-2	0-1	4/12/2011	ND	No Evidence Observed
SS-3	0-1	4/12/2011	ND	No Evidence Observed
SS-5	0-12	4/12/2011	ND	No Evidence Observed

Notes:

Sample SS-4 could not be sampled (no soil on top of concrete/bedrock floor)

Samples were field screened using a Thermo OVM 580B PID; the PID was calibrated using 100 ppm isobutylene and a response factor of 1.0.

ND - VOCs not detected with PID

bgs - below ground surface

ppmv - parts per million by volume

TABLE 3
FORMER MICA FACTORY PROPERTY
8 CENTRAL STREET - BRISTOL, NEW HAMPSHIRE
NHDES #200105002

SUMMARY OF X-RAY FLUORESCENT FIELD SCREENING RESULTS FOR RCRA 8 METALS

Location	Sample Depth (inches bgs)	Sample Date	NHDES Soil Remediation Standard and Metal Concentration (mg/kg)							
			Cr	As	Se	Ag	Cd	Ba	Hg	Pb
			130	11	180	89	33	1,000	6	400
Surficial Soil Samples										
SS-1	0-12	4/12/2011	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	**718**
SS-2	0-1	4/12/2011	<LOD	<LOD	**5**	<LOD	<LOD	<LOD	**14**	**1,083**
SS-3	0-1	4/12/2011	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	**29**	**1,512**
SS-5	0-12	4/12/2011	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	**17**	**1,311**

NOTES:

Sample SS-4 could not be sampled (no soil on top of concrete/bedrock floor)

<LOD - Concentration less than instrument level of detection

Exceeds NHDES Soil Remediation Standards

bgs - below ground surface

TABLE 4
FORMER MICA FACTORY PROPERTY
8 CENTRAL STREET - BRISTOL, NEW HAMPSHIRE
NHDES #200105002

SUMMARY OF ANALYTICAL RESULTS FOR SURFICIAL SOIL SAMPLES

Parameter	Regulatory Standard	Subsurface Soil Sample Location, Date, and Depth (feet)			
	Soil Remediation[2] (mg/kg)	SS-1 4/12/2011 0-12"	SS-2 4/12/2011 0-1"	SS-3 4/12/2011 0-1"	SS-5 4/12/2011 0-12"
Volatile Organic Compounds (mg/kg) EPA Method 8260B[1]					
All Volatile Organic Compounds	Varies	ND	ND	ND	ND
Total Petroleum Hydrocarbons (mg/kg) EPA Method 8100M					
Total Petroleum Hydrocarbons	10,000	--	--	ND<770	--
Metals (mg/kg) EPA Method 6010C					
Arsenic	11	**9.4**	**14**	**17**	**7.3**
Barium	1,000	**84**	**580**	**1,000**	**250**
Cadmium	33	**0.6**	**4.5**	**6.0**	**0.8**
Chromium	130*	**10**	**28**	**43**	**22**
Lead	400	**810**	**5,500**	**8,400**	**3,100**
Mercury (inorganic)	6	**0.87**	**1.1**	**2.0**	ND<0.12
Selenium	180	ND<3	ND<7	ND<10	ND<4
Silver	89	ND<0.4	ND<0.9	ND<1.4	ND<0.5
Polycyclic Aromatic Hydrocarbons (mg/kg) EPA Method 8270D[1]					
Phenanthrene	960	**1.8**	ND<1.5	**5.4**	ND>1.0
Anthracene	1,000	ND<0.6	ND<1.5	ND<1.9	ND>1.0
Fluoranthene	960	**2.5**	ND<1.5	**6.5**	ND>1.0
Pyrene	720	**2.6**	ND<1.5	**6.4**	ND>1.0
Benzo[a]anthracene	1	**1.4**	ND<1.5	**3.2**	ND>1.0
Chrysene	120	**1.5**	ND<1.5	**4.1**	ND>1.0
Benzo[b]fluoranthene	1	**0.9**	ND<1.5	**2.6**	ND>1.0
Benzo[k]fluoranthene	12	**1.3**	ND<1.5	**2.5**	ND>1.0
Benzo[a]pyrene	0.7	**1.3**	ND<1.5	**3.1**	ND>1.0
Indeno(1,2,3-cd)pyrene	1	**0.7**	ND<1.5	ND<1.9	ND>1.0
Dibenzo(a,h)anthracene	0.7	ND<0.6	ND<1.5	ND<1.9	ND>1.0
Benzo(g,h,i)perylene	960	**0.7**	ND<1.5	ND<1.9	ND>1.0
Polychlorinated Biphenyls (mg/kg) EPA Method 8082[1]					
All Aroclors	1	--	--	ND<0.6	ND<0.3

NOTES:

Sample SS-4 could not be sampled (no soil on top of concrete/bedrock floor)

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

[2] New Hampshire Soil Remediation Standards from the Risk Characterization Management Policy Env-Or 606.19, Soil Remediation Criteria.

* = The regulatory threshold for chromium VI was used because it is the most stringent standard for chromium.

ND<0.2 = Not detected above quantitation limit (i.e. 0.2 mg/kg)

-- = Intentionally not sampled

Bold Exceeds laboratory quantitation limit

Laboratory quantitation limit exceeds regulatory standard

Exceeds NH DES Soil Remediation Standards.

TABLE 5
FORMER MICA FACTORY PROPERTY
8 CENTRAL STREET - BRISTOL, NEW HAMPSHIRE
NHDES #200105002

SUMMARY OF ANALYTICAL RESULTS FOR POTENTIAL PCB REMEDIATION WASTE SAMPLES

Parameter	Regulatory Standard				
	PCB Remediation Waste[2] (mg/kg)	FS-1	FS-2	FS-3	FS-4
		4/12/2011	4/12/2011	4/12/2011	4/12/2011
		Stained Wood Floor on 2nd Story	Stained Wood Floor on 2nd Story	Stained Wood Floor on 2nd Story	Stained Wood Floor on 3rd Story
[1]Polychlorinated Biphenyls (mg/kg) EPA Method 8082					
Aroclor 1254	-	ND<0.2	**0.2**	ND<0.2	ND<0.2
TOTAL PCBs	**1**	ND	**0.2**	ND	ND

NOTES:

[1] Only those PCB aroclors identified above detection limit are summarized.

[2] 40 CFR 761.3

PCB = Polychlorinated biphenyl

ND<0.1 = Not detected above quantitation limit (i.e. 0.1 mg/kg)

Bold = Exceeds laboratory quantitation limit

Exceeds Federal Regulatory Standard

TABLE 6
FORMER MICA FACTORY PROPERTY
8 CENTRAL STREET - BRISTOL, NEW HAMPSHIRE
NHDES #200105002

SUMMARY OF ANALYTICAL RESULTS FOR POTENTIAL PCB BULK PRODUCT SAMPLES

Parameter	Regulatory Standard	Building Materials Sample Identification Number, Date, and Description		
	PCB Bulk Product Waste[2] (mg/kg)	BM-1	BM-2	BM-3
		4/12/2011	4/12/2011	4/12/2011
		Interior White Paint at Entrance	Red Paint on Main Door	White Paint on Main Door
[1]Polychlorinated Biphenyls (mg/kg) EPA Method 8082				
Aroclor 1254	-	**0.4**	ND<0.4	ND<0.2
TOTAL PCBs	**50**	**0.4**	ND	ND

NOTES:

[1] Only those PCB aroclors identified above detection limit are summarized.

[2] 40 CFR 761.3

PCB = Polychlorinated biphenyl

ND<0.1 = Not detected above quantitation limit (i.e. 0.1 mg/kg)

Bold = Exceeds laboratory quantitation limit

Exceeds Federal Regulatory Standard

TABLE 7
FORMER MICA FACTORY PROPERTY
8 CENTRAL STREET - BRISTOL, NEW HAMPSHIRE
NHDES #200105002

LEAD-BASED PAINT SURVEY RESULTS

Reading No.	XRF Meter Mode	Pass Fail Standard	Lead Concentration (mg/cm^2)	+/-	Building Side	Component	Color
1	Standarization	Negative	0	0			
2	Standarization	Positive	1.01	0.05			
3	Lead Paint Inspection	Positive	5	0.57	North	Wall	Grey
4	Lead Paint Inspection	Positive	2.99	0.23	North	Wall	Grey
5	Lead Paint Inspection	Positive	5	0.44	North	Wall	Grey
6	Lead Paint Inspection	Positive	5	0.43	West	Wall	Grey
7	Lead Paint Inspection	Positive	5	0.61	West	Wall	Grey
8	Lead Paint Inspection	Positive	5	0.53	West	Wall	Grey
9	Lead Paint Inspection	Negative	0.02	0.03	West	Window Cover	White
10	Lead Paint Inspection	Negative	0.13	0.04	West	Window Cover	White
11	Lead Paint Inspection	Positive	5	0.62	East	Wall	Grey
12	Lead Paint Inspection	Positive	3.55	0.45	Entrance	Wall	White
13	Lead Paint Inspection	Positive	4.2	0.38	Entrance	Black	Trim
14	Lead Paint Inspection	Positive	3.21	0.31	Entrance	Wall	White
15	Lead Paint Inspection	Positive	4.09	0.4	Entrance	Wall	White
16	Lead Paint Inspection	Positive	5	0.64	Entrance	Door	Red
17	Lead Paint Inspection	Positive	4.03	0.32	South	Wall	Grey

NOTES:
See Figure 3 for XRF reading locations
XRF = X-Ray fluorescent
All readings taken with an INNOV-X α-4000 XRF
+/- = Probable variation
Positive = Lead concentration > 1.0 mg/cm^2

TABLE 8
FORMER MICA FACTORY PROPERTY
8 CENTRAL STREET - BRISTOL, NEW HAMPSHIRE
NHDES #200105002

SUMMARY OF DUPLICATE SAMPLE ANALYSES

Parameter	NHDES Threshold [1]	Quantitation Limit (mg/kg) or (ug/L)	5x Quantitation Limit	Sample [2]	Duplicate	Relative Percent Difference
VOCs						
SS-DUP, duplicate of SS-1						
All parameters ND						
Metals						
SS-DUP, duplicate of SS-1						
Arsenic	11	0.6	3.0	9.4	19	67.6%
Barium	1,000	3.0	15.0	84	74	12.7%
Lead	400	0.6	3.0	810	770	5.1%
Mercury	6	0.08	0.4	0.87	0.82	5.9%
All other parameters ND or below 5X quantitation limit						
PAHs						
DUP-SS; duplication of SS-1						
All parameters ND or below 5X quantitation limit						
PCBs						
BM-DUP, Duplicate of BM-3						
All other parameters ND or below 5X quantitation limit						

NOTES:

[1] New Hampshire Soil Remediation Standards Env-Or 606.19 or Env-Or 603.3 Ambient Groundwater Quality Standards.

[2] Only analytes above detection level and five times the quantitation limit are summarized herein.

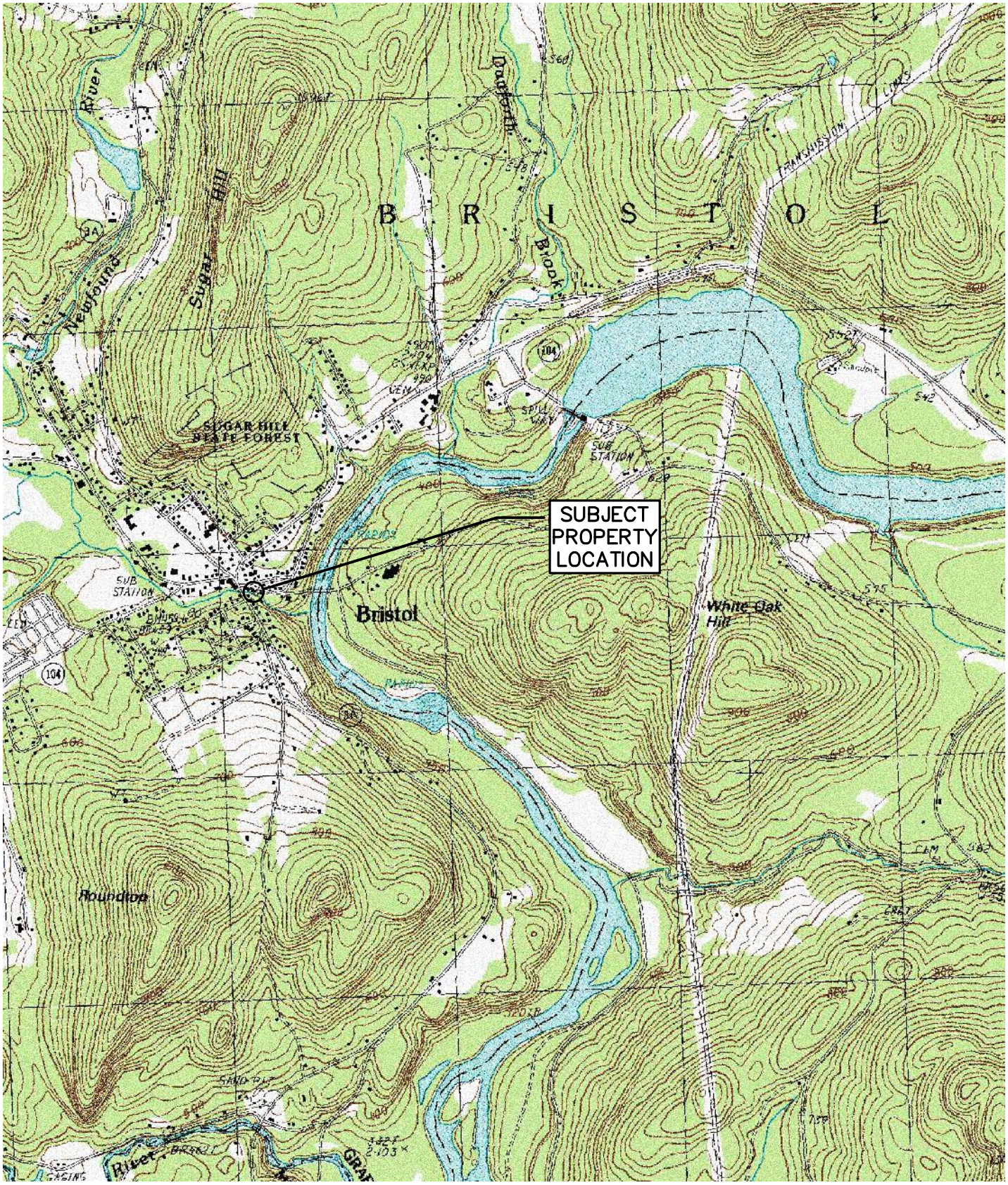
NA - Not applicable

NC - RPD Not calculated due to results being below five times the PQL

ND - All analyte concentrations were below the analytical method practical quantitation limit

Exceeds Relative Percent Difference quality control limit of 35% for samples as specified in the Generic QAPP

FIGURES



USGS 7.5 MINUTE BRISTOL, NH QUADRANGLE (1987)

DRAWN BY: SWC	DATE: 4/14/11
CHECKED BY: RSV/JSS	PROJECT: 10001087

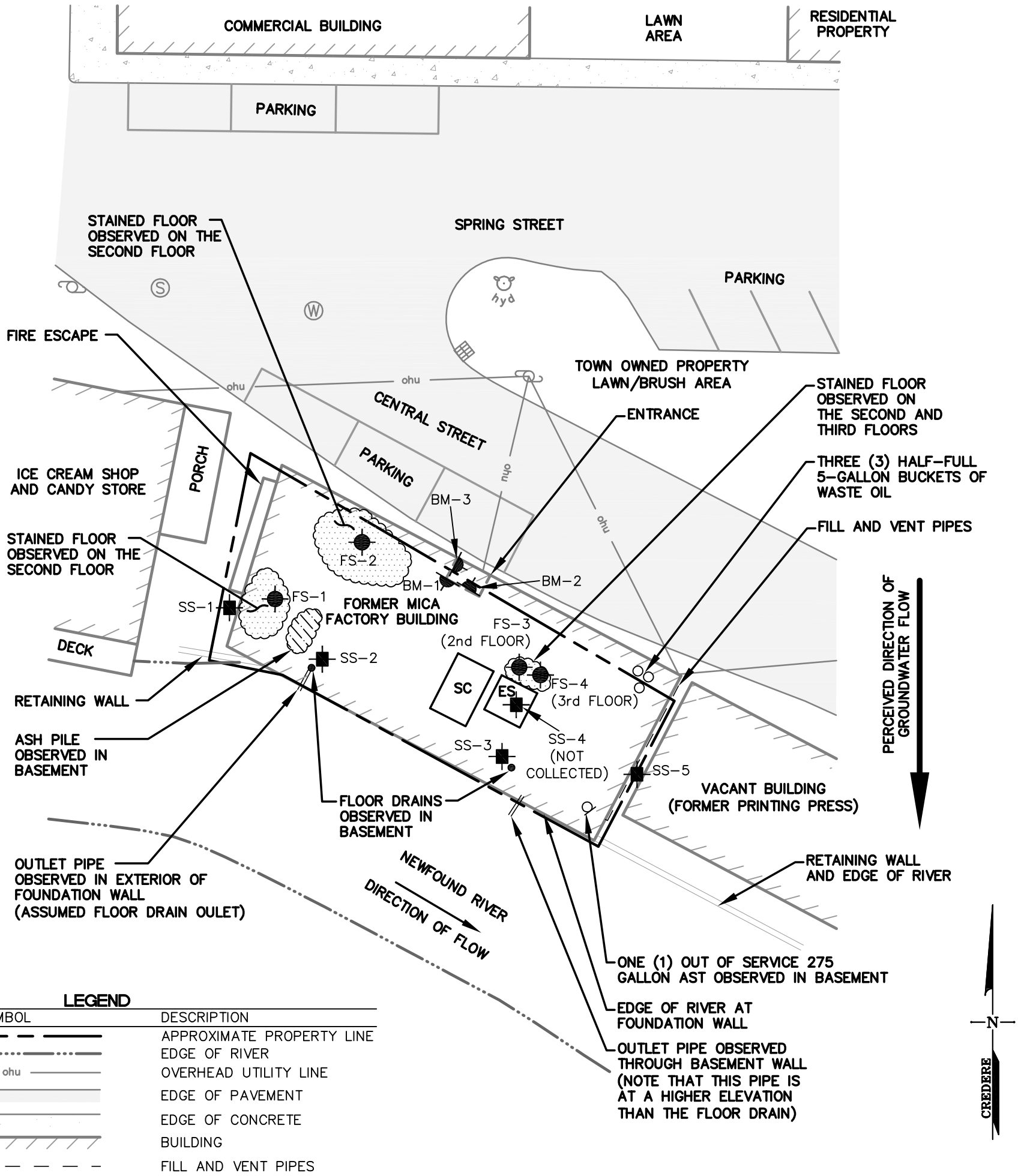
FIGURE 1 - SITE LOCATION MAP

Credere Associates, LLC
776 Main Street
Westbrook, Maine 04092
Tel. (207) 828-1272
Fax (207) 887-1051
www.crederellc.com

MICA FACTORY PROPERTY
8 CENTRAL STREET
BRISTOL, NH
NHDES #200105002

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

NORTH



LEGEND

SYMBOL	DESCRIPTION
	APPROXIMATE PROPERTY LINE
	EDGE OF RIVER
ohu	OVERHEAD UTILITY LINE
	EDGE OF PAVEMENT
	EDGE OF CONCRETE
	BUILDING
	FILL AND VENT PIPES
S	SEWER MANHOLE
W	WATER VALVE
hyd	FIRE HYDRANT
	FLOOR DRAIN
	UTILITY POLE
	CATCH BASIN
	ABOVEGROUND STORAGE TANK
O	5-GALLON BUCKET
ES	ELEVATOR SHAFT
SC	STAIRCASE
	SURFICIAL SOIL SAMPLE LOCATION
	FLOOR SAMPLE LOCATION
	BULK MATERIAL SAMPLE LOCATION
	FLOOR STAINING (2nd AND 3rd FLOORS)
	ASH PILE OBSERVED IN BASEMENT

NOTES:

1. INFORMATION ON THIS PLAN WAS OBTAINED FROM A SURVEY PROVIDED BY THE TOWN OF BRISTOL NAMED "SITE PLAN FOR JOHN J. SULDENSKI 'MICA MILL APARTMENTS'" DATED JANUARY 14, 2004 BY CENTRAL LAND SURVEYING, INC. OF BRISTOL, NH, AND AUGUST 26, 2010 FIELD OVSERVATIONS.
2. FLOOR SAMPLES WERE COLLECTED FROM STAINED FLOOR AREAS OBSERVED ON SECOND AND THIRD LEVELS OF THE BUILDING.

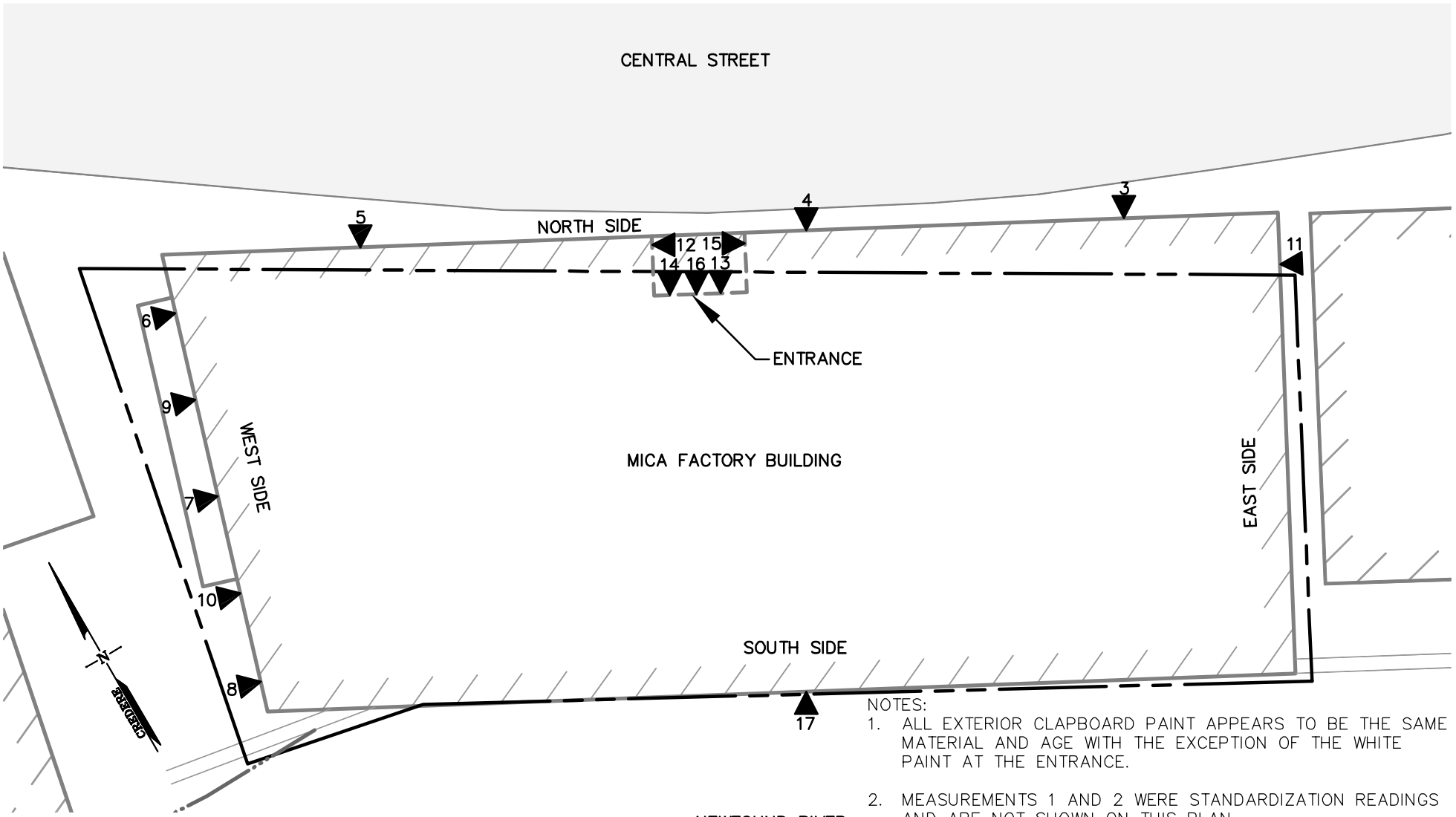
DRAWN BY: SWC	DATE: 4/14/11
CHECKED BY: RSV/JSS	PROJECT: 10001087

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

FIGURE 2
SAMPLE LOCATION PLAN

FORMER MICA FACTORY PROPERTY
8 CENTRAL STREET
BRISTOL, NH
NHDES #200105002

GRAPHIC SCALE
20 0 10 20
1 inch = 20 ft.



NOTES:

1. ALL EXTERIOR CLAPBOARD PAINT APPEARS TO BE THE SAME MATERIAL AND AGE WITH THE EXCEPTION OF THE WHITE PAINT AT THE ENTRANCE.
2. MEASUREMENTS 1 AND 2 WERE STANDARDIZATION READINGS AND ARE NOT SHOWN ON THIS PLAN.
3. SEE TABLE 7 FOR SCREENING RESULTS.
4. ALL MEASUREMENTS MADE WITH AN INNOV-X a-4000 X-RAY FLUORESCENCE METER.

LEGEND

SYMBOL	DESCRIPTION
	PROPERTY LINE
	EDGE OF RIVER
	EDGE OF PAVEMENT
	BUILDING
6	READING NUMBER AND LOCATION

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CHECKED BY:RSV/JSS	PROJECT: 10001087

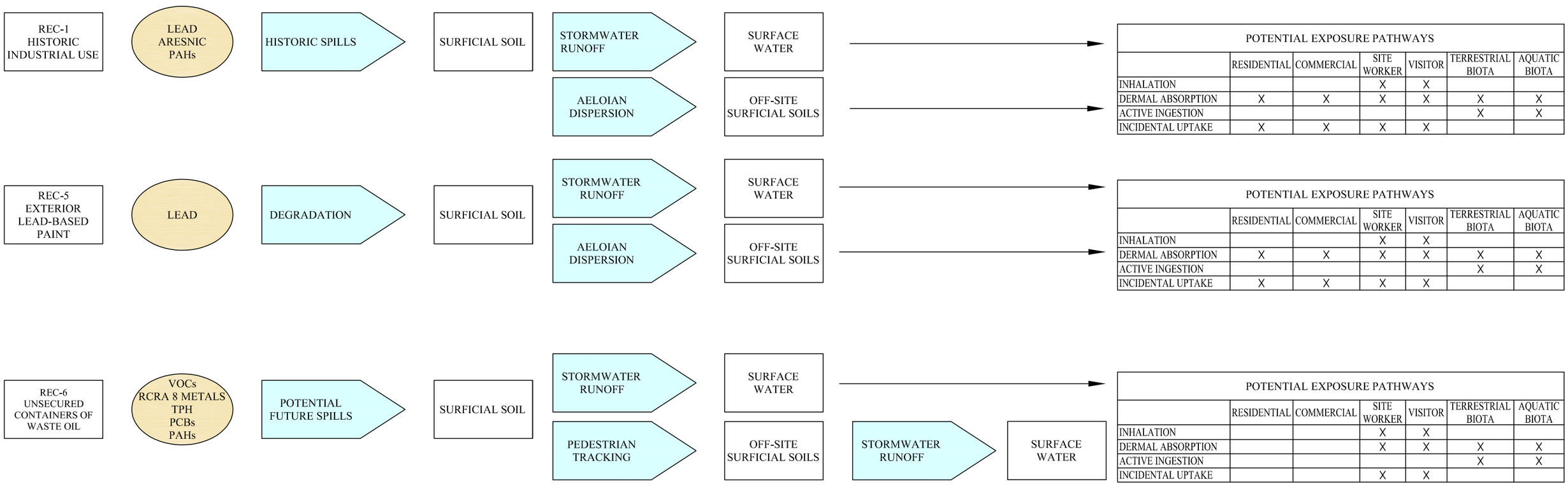
CREDERE ASSOCIATES, LLC
776 MAIN STREET
WESTBROOK, MAINE 04092
TEL: 207.828.1272
FAX: 207.887.1051
WWW.CREDERELLC.COM

FIGURE 3

EXTERIOR LEAD-BASED PAINT SCREENING PLAN

FORMER MICA FACTORY PROPERTY
8 CENTRAL STREET
BRISTOL, NH
NHDES #200105002

GRAPHIC SCALE
10 0 5 10
1 inch = 10 ft.



POTENTIAL EXPOSURE PATHWAYS

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

DRAWN BY: SWC	DATE: 4/14/11
CHECKED BY: JSS/RSV	PROJECT: 10001087

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776 Main Street
Westbrook, Maine 04092
Tel. (207) 828-1272
Fax (207) 887-1051
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FIGURE 4
CONCEPTUAL SITE MODEL
(SHEET 1 OF 2)

FORMER MICA FACTORY PROPERTY
8 CENTRAL STREET
BRISTOL, NH
NHDES #200105002

SOURCE	CONTAMINANTS OF CONCERN	PRIMARY MIGRATION PATHWAY	PRIMARY IMPACTED MEDIA	SECONDARY MIGRATION PATHWAY	SECONDARY IMPACTED MEDIA	TERTIARY MIGRATION PATHWAY	TERTIARY IMPACTED MEDIA
NEC-1 ACMs	ASBESTOS	DEGRADATION	INDOOR AIR				
NEC-3 INTERIOR LEAD-BASED PAINT	LEAD	DEGRADATION	INDOOR AIR				
			INDOOR SURFACES	PEDESTRIAN TRACKING	OFF-SITE SURFICIAL SOILS	STORMWATER RUNOFF	SURFACE WATER
NEC-4 MOLD	MOLD	AIRBORNE SPORES	INDOOR AIR				
NEC-4 BIRD GUANO	GUANO	DIRECT DEPOSITION	INDOOR SURFACES				

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			X	X		
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			X	X		
DERMAL ABSORPTION						
ACTIVE INGESTION						
INCIDENTAL UPTAKE			X	X		

POTENTIAL EXPOSURE PATHWAYS

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

DRAWN BY: SWC	DATE: 4/14/11
CHECKED BY: RSV/JSS	PROJECT: 10001087

Credere Associates, LLC
776 Main Street
Westbrook, Maine 04092
Tel. (207) 828-1272
Fax (207) 887-1051
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FIGURE 4
CONCEPTUAL SITE MODEL
(SHEET 2 OF 2)

FORMER MICA FACTORY PROPERTY
8 CENTRAL STREET
BRISTOL, NH
NHDES #200105002

APPENDICES

APPENDIX A

MICA FACTORY SITE-SPECIFIC QAPP ADDENDUM

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

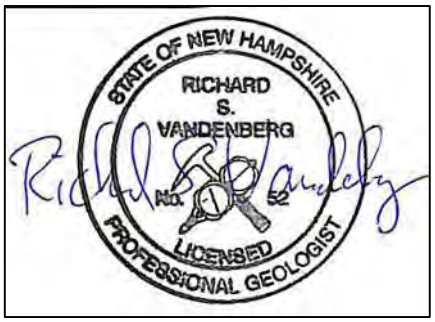
Type of Submittal (Check One-Most Applicable)

☐ 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

Mica Factory Property
8 (a.k.a. 5) Central Street
Bristol, New Hampshire
DES#200105002
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. 35
Contact: Rip Patten, PE

March 7, 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

Mica Factory Property
8 (a.k.a. 5) Central Street
Bristol, New Hampshire

Lakes Region Planning Commission's Brownfields Assessment Program
USEPA Brownfields Grant # BF96111801
NHDES #200105002

Prepared By:
Credere Associates, LLC
776 Main Street
Westbrook, Maine 04092
(207) 828-1272

March 7, 2011

Below is a listing of the names, titles, signatures, and signature dates of officials approving this Site-Specific Quality Assurance Project Plan:

M. Jerry Minor-Gordon — 3/8/2011
Ms. Jerry Minor-Gordon — Date
EPA Brownfields Project Officer

Nora A. Conlon — 3/22/2011
EPA Quality Assurance Officer — Date

3/14/11
Ms. Jennifer Marts, PG — Date
New Hampshire DES Project Manager

for Robert P. Monticciolo — 3/14/11
Mr. Vincent R. Perelli — Date
New Hampshire DES QA Manager

Richard S. Vandenberg — 3/7/11
Mr. Richard S. Vandenberg, PG — Date
Credere Associates, LLC Project QA Manager

Rob Patten — 3/7/11
Mr. Robert I Patten, PE, LEED-AP, LSP — Date
Credere Associates, LLC Project Manager

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2. INTRODUCTION

The Lakes Region Planning Commission (LRPC) has received a United States Environmental Protection Agency (USEPA) Brownfields Petroleum 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 reports, 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 Mica Factory property located at 8 (a.k.a 5) Central Street in Bristol, New Hampshire (the subject property). **Figure 1** shows the general location of the subject property in Bristol and **Figure 2** is a plan showing the locations of proposed subject property investigation and sampling work.

This SSQAPP presents the following information:

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

This SSQAPP was prepared to be used in concert with Credere Associates, LLC's (Credere's) June 2008 Generic Quality Assurance Project Plan (QAPP) 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. **Figure 3** shows the project organization chart for the project team.

3. FINDINGS OF THE PHASE I ESA

A Phase I ESA was completed by Credere for the subject property in November 2010. The following represents Credere's findings and recommendations from this report.

3.1 SUBJECT PROPERTY DESCRIPTION

The subject property is composed of one 0.07-acre parcel of land located at 8 (a.k.a. 5) Central Street in Bristol, New Hampshire at the intersection of Central Street and Spring Street. The subject property is located adjacent to the Newfound River and is occupied by one (1) vacant, four-story former mill building. The building has been vacant for at least 12 years. The subject property is referred to by the Town of Bristol as Map 114, Lot 123 and is currently owned by the Town of Bristol. The subject property is zoned Downtown Commercial (DC).

A lumber warehouse and a livery occupied the subject property prior to construction of the current building in 1894. After its initial construction, the building was used for shoe manufacturing. Following its use for shoe manufacturing, the building was used as a broom factory, then for approximately 60 years as a mica processing facility, and more recently used for retail and residential purposes.

The subject property is bound to the east by a vacant property (formerly a printing press), to the south by the Newfound River, to the west by a candy store and ice cream shop, and to the north by a fitness center and a residential property.

Potable water is provided to the subject property by the Bristol Public Works Department. According to representatives of the Bristol Public Works Department, all properties in the vicinity of the subject property are served by the public water supply. Wastewater from the subject property is currently discharged to the municipal sewer system. Electricity is provided to the subject property via overhead lines from Public Service of New Hampshire. Heat was originally provided by a wood fired steam system, but was later converted to an oil-fired heating system. One (1) 275-gallon heating oil aboveground storage tank (AST), which appeared to be empty, was observed in the basement of the building. This AST was likely used to service heating equipment which is no longer present in the building. Fill and vent pipes were observed entering the building through the eastern wall in the vicinity of the AST, but the pipes were not connected to the AST.

Figure 1 locates the property on the Bristol, New Hampshire 7.5 minute quadrangle prepared by the United States Geological Survey (USGS).

3.2 RECORDS REVIEW AND INTERVIEWS

Based on information obtained from Credere's review of local, state, federal, and historic records, and Credere's interviews with subject property contacts and local officials, the following

summarizes the pertinent findings of the records review and interview portions of the Phase I ESA.

The earliest record found relating to the subject property was a Sanborn Fire Insurance Map dated 1884. This map depicts the subject property as developed with two connected buildings present. One building was identified as a lumber warehouse while the use of the other building was not identified. A Sanborn map dated 1892 indicates the use of the subject property was a lumber warehouse and a livery. Records from the Bristol Historical Society indicate that the current building was constructed for use as a shoe manufacturing company in 1892. A Sanborn map dated 1897 confirms the presence of a new building which is identified as the "Bristol Shoe Co." This map also depicts an elevator and chimney present in the same locations as observed during the Phase I site reconnaissance. The map indicated that the building was heated with a steam system fueled by wood, and the electric lighting was powered by water. A Sanborn map dated 1902 indicated that the shoe manufacturing company was closed. According to interviews, a broom factory occupied the subject property for a short period of time after the use as a shoe manufacturing facility. A Sanborn map dated 1912 indicated that the building was occupied by the Monarch-Standard Micamining Co., but that the factory was not in operation. Sanborn maps and deed records indicated that the building was occupied by General Electric Mica Works from 1918 until 1963. According to deed records, the subject property was purchased and sold numerous times between 1963 and 1998. A letter dated 1995 from the Town of Bristol to the owner of the subject property at the time described the building as being used for storage. The deed records and other historical records did not identify or provide any indication of other uses of the subject property during this time period. According to interviews, the subject property was used as a hardware store, residential apartments, and was vacant during this time period. According to town records, between 1998 and 2010 the subject property was not continuously occupied and only used for storage and the unsolicited dumping of construction material. In 2010, the Town of Bristol acquired the subject property through a tax deed process.

According to available information, the mica processing procedure previously employed at the subject property consisted of cleaning the crude crystals extracted from the mine, splitting the mica into usable sheets, and then removing flaws from the sheets with a sharp knife. At the time of operation of this mica processing facility, this procedure was accomplished by hand as there was no machine created to process the mica mechanically. Processed mica sheets were then cut, stamped, punched, or ground into usable media. Mechanical equipment was likely used for cutting, stamping, punching, and grinding during the time frame of operation of this mica processing facility.

The subject property is listed as an active Brownfields site [New Hampshire Department of Environmental Services (NHDES) #200105002].

On May 2, 2001, the subject property was determined to be eligible for Petroleum Brownfields funding. Subsequent investigations were conducted to characterize the subject property in 2001. These investigations included a Brownfields Quality Assurance Project Plan dated 2001 by GZA GeoEnvironmental, Inc. (GZA). GZA reported that the building was in poor structural

condition. Miscellaneous chemicals, paints, large deposits of bird guano, several debris piles, and building materials potentially containing lead, asbestos, and polychlorinated biphenyls (PCBs) were observed throughout the building.

GZA conducted a Pre-Demolition/Renovation Hazardous Building Materials Survey at the subject property in November 2001 (included in the Phase I ESA **Appendix F**). The purpose of the survey was to identify asbestos-containing materials (ACMs), lead-based paints, and other building materials containing hazardous substances on the interior and exterior of the building. The survey results indicated that ACMs were identified in roofing materials and in floor tiles on the first floor of the building. Lead-based paint was also identified in paints throughout the interior of the structure. According to the report, no exterior paint samples were collected for analysis. Soil samples were also collected in the basement and outside of the building and analyzed only for asbestos. According to GZA, no asbestos was detected in the soil samples. The survey results also indicated the presence of other miscellaneous contaminants listed in the following table:

MATERIAL TYPE	LOCATION	APPROXIMATE QUANTITY
Fluorescent Lamps	All Floors	100 linear feet
Ballasts	All Floors	80
Mercury Switches	All Floors	2 to 5
Power Banks/Circuit Breakers	All Floors	5 to 10
Obsolete Chemicals	First Floor	Two 55-gallon drums
Flammable Wastes	First and Second Floors	Four 55-gallon drums
Bird Guano	Top Three Floors	7,000 square feet
Lead Paint	All Floors	All Painted Surfaces

On August 17, 2010, the subject property was again determined to be eligible for Brownfields funding, under which Credere's previous Phase I ESA was conducted.

3.3 PERTINENT OBSERVATIONS

3.3.1 Exterior Observations Recorded by Credere on August 26, 2010

The subject property is a rectangular shaped parcel of land. One (1) four story wooden building with a flat roof and painted wooden clapboard siding occupies the majority of the subject property. Portions of the subject property not occupied by the building are narrow alleys between the buildings to the east and west. The south side of the building foundation acts as the edge of the Newfound River.

Two pipes were observed on the exterior southern wall of the building. One pipe was observed protruding from the basement wall. The use of this pipe is unknown. The other pipe was observed flush with the foundation wall. Although additional investigation is needed, this pipe may be the outlet for the floor drains noted inside the building.

Fill and vent pipes, which likely formerly served the AST in the basement, were observed on the northeast corner of the building. The fill and vent pipes entered the building through the eastern wall and were no longer connected to the 275-gallon AST noted in the basement of the building. A metal fire escape is located on the west side of the building (see **Section 3.3.2**).

No evidence of drywells, pits, or lagoons was observed on the exterior portions of the subject property. No evidence of leachate or seeps was observed on the subject property. No evidence of a release was observed on the exterior portions of the subject property during the site visit. No evidence of petroleum exploration, abstraction, or refinery was observed on the subject property.

3.3.2 Interior Observations Recorded by Credere on August 26, 2010

The interior of the building consists of a full basement and four above-grade stories. An elevator shaft and a staircase are located in the middle of the building. The building is constructed of a wood frame with a stone and brick foundation. Though a structural assessment was not completed as part of the Phase I ESA, the building appears to be in very poor structural condition as evidenced by the fact that a portion of the roof has collapsed and steel cable bracing has been installed to help support the building. The basement floor consists of a combination of concrete, dirt, and exposed bedrock. The floors in the above-grade stories are wooden.

Two (2) floor drains were observed on the south side of the basement. Water on the floor at the time of the site reconnaissance prevented identification of staining in the vicinity of the floor drains. No olfactory evidence of releases of petroleum products or hazardous materials was observed in the vicinity of the floor drains. One (1) pipe was observed protruding through the south wall of the basement. This is one of the same pipes that were observed on the exterior of the southern wall. The purpose of this pipe is unknown.

One (1) 275-gallon AST, which appeared to be empty, was observed in the southeast corner of the basement. Fill and vent pipes were observed entering the building through the eastern wall in the vicinity of the AST, but the pipes were not connected to the AST. No visual or olfactory evidence of a release was observed on or around the AST.

Three (3) half-full 5-gallon pails of what appeared to be waste oil were observed in the northeast corner of the basement. These pails were unsealed and unsecured, thus representing a threat of release.

Stains caused by unknown substances were observed on the wooden floors on the second and third stories of the building.

Multiple fluorescent light bulbs, light ballasts, electrical switches, and circuit breakers were observed on all levels of the building.

It should be noted that the six (6) 55-gallon drums and the ACM floor tile identified during the GZA Hazardous Building Materials Survey on November 5, 2001, were not observed during Credere's site visit on August 26, 2010.

3.4 IDENTIFIED RECOGNIZED ENVIRONMENTAL CONDITIONS

Based on the information obtained as a part of the previous Phase I ESA, the following recognized environmental conditions (RECs) were identified at the subject property:

- REC-1 – The former industrial use of the subject property (including shoe manufacturing and mica processing) between 1897 to the 1960s represents a REC because hazardous substances were likely stored, used, and may have been disposed of on the subject property, impacting the environmental conditions of the subject property.

- REC-2 – The former use of the adjacent property to the east as a printing press represents a REC. Due to the close proximity of the printing press building to the subject property, hazardous substances may have been released and/or disposed of on the subject property. As such, the environmental conditions of the subject property may have been impacted.

- REC-3 – Two floor drains were observed in the basement of the building. The presence of these drains and the previous industrial usage of the building represent a REC because the drains may be conduits to the environment whereby any releases of petroleum products and/or hazardous substances may have impacted the environmental conditions at the subject property.

- REC-4 – The presence of an elevator in the building represents a REC. Though the mechanical components have been removed, lubrication and hydraulic fluids may have previously been released from the elevator and may have impacted the environmental conditions of the subject property.

- REC-5 – The possible presence of lead-based paint on the exterior of the building represents a REC. Due to the condition of the exterior paint (loose and flaking), it is possible that the environmental condition of the soil around the perimeter of the building has been impacted.

- REC-6 – Although no evidence of a prior release was observed, the presence of uncovered and unsecured small containers of petroleum products (several 5-gallon buckets of waste oil) in the basement represents a REC due to the imminent threat of release from the containers.

- REC-7 – The presence of unknown staining on the floors of the building represents a REC because the stains are indicative of a potential past release of petroleum products and/or hazardous substances which may have impacted the building structure; however, it is unlikely that releases causing these stains have impacted the environmental conditions of the subject property soil or groundwater.

The following ASTM *Non-Scope environmental conditions* (NECs) were also noted during this Phase I ESA:

- NEC-1 – Previous reports indicate that asbestos containing materials have been identified within the building.

- NEC-2 – Previous reports indicate that lead-based paint has been identified within the building.

- NEC-3 – Potential ASTM Non-Scope PCB-containing building materials and electrical equipment in the form of fluorescent lighting fixtures were observed in the building.

- NEC-4 – Based on the condition of the building and the collapsed roof, mold may be present in the building.

- NEC-5 – Bird guano was observed in the building representing a potential human health threat.

4. POTENTIAL REDEVELOPMENT SCENARIO

The Town of Bristol is considering demolishing the existing building and developing the subject property into a riverfront park with automobile parking.

5. CONCEPTUAL SITE MODEL

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

To aid in a thorough understanding of the environmental concerns present at the subject property, a graphical presentation of the identified contaminants of concern and the migration pathways to potential receptors is included as **Figure 4**.

5.1 SITE SETTING

The subject property is located directly adjacent to the Newfound River in a developed area of Bristol, New Hampshire. According to the USGS information consulted, the surficial geology of the subject property consists of a layer of glacial till generally less than 30 feet thick over bedrock. Exposed bedrock occupies the majority of the subject property and is assumed to be shallow in areas where it is not exposed. As such, no significant overburden groundwater aquifer is expected to be present at the subject property. The building at the subject property is currently unoccupied and the subject property is not used for residential, commercial, or recreational purposes. The anticipated use of the subject property is recreational following the razing of the subject property building.

Topography at the subject property generally slopes in two directions. The north side of the subject property slopes to the southeast, parallel to Central Street. The east and west sides of the subject property slope to the southwest toward the Newfound River. The building has a flat roof and occupies the majority of the subject property. Roof drains were not identified, so it is assumed that stormwater intercepted by the roof once flowed radially in each direction and onto the ground, and then followed the existing topography. Currently, the roof has partially collapsed and allows stormwater from the roof to fall into the building. Stormwater likely makes its way to the basement of the building where it is assumed that it discharges to the subsurface beneath the building or directly to the Newfound River.

Although the localized topography slopes in two directions, it is likely that groundwater flows in a southerly direction towards the Newfound River. It should be noted that local groundwater flow can be highly varied due to precipitation events, stormwater runoff, infiltration/recharge, the presence of subsurface structures and utilities, and varying subsurface hydrogeologic conditions.

5.2 DEFINITIONS OF EXPOSURE PATHWAYS AND POTENTIAL RECEPTORS

Exposure Pathways describe how a human or environmental receptor comes into contact with contaminants which may be present at the subject property. 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. 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 subject property. 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 subject property for long durations but with low intensity exposure such as indoor office workers.
Site Worker:	Site workers are present at the subject property 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.

Credere's supplemental Phase II investigation scope is designed to confirm or dismiss the identified RECs and NECs through the assessment of the identified potentially impacted media and the investigation of potential exposure pathways through focused field screening and laboratory analysis. Specific details of the proposed scope are presented below in **Section 6**.

6. SAMPLE DESIGN

A sampling program was developed to confirm or dismiss the RECs and NECs identified during the Phase I ESA and to provide additional characterization of the building materials for disposal. The following describes the rationale for the Phase II investigation work that is necessary to evaluate the RECs and NECs identified in the Phase I ESA.

REC-1: Four (4) surficial soil samples will be collected from certain areas of the subject property that may have been affected by the historic industrial use of the subject property and the adjacent property to the east. Two (2) of the samples will be collected from the dirt floor basement inside the building and two (2) of the samples will be collected from outside of the building.

REC-2: One (1) of the surficial soil samples collected as part of REC-1 will be collected from the area between the east side of the subject property building and the adjacent building to the east, which may have been affected by the former use of the adjacent building as a printing press.

REC-3: One (1) of the surficial soil samples collected as part of REC-1 will be collected in the area of each of the floor drain inlets for a total of two (2) samples to determine if releases of petroleum and/or hazardous substances to the floor drains at the subject property have impacted the environmental media in the basement of the building.

REC-4: One (1) surficial soil sample will be collected at the base of the elevator shaft to determine if fluids released from the elevator mechanical system have impacted the environmental media at the subject property.

REC-5: The exterior paint on the subject property building will be field screened with an X-ray fluorescence meter (XRF) to assess if potential lead-based paint on the exterior has impacted the soils around the building with lead. Two (2) of the surficial soil samples collected as part of REC-1 will be collected from the areas adjacent to the east and west sides of the building where chipped and flaking paint was observed.

REC-6: No evidence of a release from the 5-gallon buckets of waste oil was observed; therefore, no sampling in this area is proposed. However, an updated universal and hazardous waste survey will be completed and Credere will recommend that the unsecured 5-gallon buckets of waste oil in the basement of the subject property building be removed to eliminate the risk of a potential release from the buckets.

REC-7: Four samples of wood flooring will be collected from the areas with observed staining on the second and third stories of the subject property building. The stains represent evidence of a release to the building materials, but do not indicate a release to the subject property environmental media. As such, samples collected from the floors will

only be analyzed for the presence of PCBs to determine if they contain levels of PCBs that are regulated for disposal.

NEC-1: Asbestos containing materials within the subject property building have already been defined through previous investigations. No additional sampling is proposed.

NEC-2: Lead-based paint within the subject property building has already been defined through previous investigations. No additional sampling is proposed.

NEC-3: Up to five (5) samples of potentially PCB-containing building materials will be collected and analyzed for PCBs.

NEC-4: The subject property building is currently unoccupied and slated for demolition. Therefore, a mold survey of the building is not warranted at this time.

NEC-5: The subject property building is currently unoccupied and slated for demolition. Therefore, abatement of the bird guano will be required prior to demolition.

Based on the information above, Phase II field and investigation work will include the following activities:

1. Investigation of the floor drains in the building to determine the discharge location.
2. Collection of at least five (5) surficial soil samples for laboratory analysis in several REC locations across the subject property.
3. Collection of four (4) samples from the floorboards on the second and third floors of the subject property building in areas of observed floor staining.
4. Collection of up to five (5) samples of suspect bulk building materials for laboratory analysis of PCBs.
5. Conduct a lead-based paint survey of the paint on the exterior of the subject property building.
6. Update the inventory lists of hazardous materials and universal wastes created by GZA in November 2001.

The data collected from these activities will serve as the basis for evaluating subject property conditions and will determine if any additional subsurface investigation and/or remedial actions are necessary. **Figure 2** shows the proposed locations where media will be collected. **Table 1** and **Table 2** present summaries of the sampling and laboratory analyses planned for the subject property.

Sampling will be conducted in accordance with the standard operating procedures (SOPs) included in Credere's June 2008 Generic QAPP (RFA#08166). **Table 1** and **Table 2** include the

number and type of samples that will be collected, cross referenced with the appropriate SOP that will be used from Credere's June 2008 QAPP. Requirements relative to Chain of Custody, Data Management and Documentation, Data Validation, and Data Usability Assessments contained in the Generic QAPP will be followed.

It should be noted that soil borings, subsurface soil sampling, and groundwater sampling are not proposed for the subject property at this time. This is based on known subject property history and conditions, the proposed future use, and as the fact that exposed bedrock occupies the majority of the subject property and is assumed to be very shallow in areas where it is not exposed.

6.1 FLOOR DRAIN INVESTIGATION

Two (2) floor drains were identified in the basement (REC-3). A possible outlet pipe for the floor drains was identified on the south side of the building protruding from the foundation wall. A dye test will be conducted to determine if one or both of the floor drains discharge to this location. If dye testing reveals that the floor drains discharge to another location or is inconclusive, additional investigation may be required.

6.2 SURFICIAL SOIL SAMPLE COLLECTION AND LABORATORY ANALYSIS

At least five (5) surficial soil samples will be collected from the subject property. Surficial soil samples SS-1 through SS-5 will be collected using hand tools from 0 to 2-feet below ground surface (bgs). To provide additional laboratory quality assurance data, one representative blind co-located duplicate sample will be collected and submitted for analysis. Surficial soil samples will be submitted to an off-site laboratory for analysis in accordance with **Table 1**. **Figure 2** shows the location of each surficial soil sample. Proposed sample locations are described below:

- Surficial soil sample SS-1 will be collected from the area adjacent to the western exterior wall in a location that may have been impacted by historic industrial use of the subject property (REC-1) and by the flaking, potentially lead-based paint on the exterior of the building (REC-5).
- Surficial soil samples SS-2 and SS-3 will be collected from areas in the basement adjacent to the floor drains (REC-3) which may have been impacted by the historic industrial use of the subject property (REC-1).
- Surficial soil sample SS-4 will be collected from a location in the basement at the base of the elevator shaft that may have been impacted by possible releases from the mechanical and hydraulic elevator equipment (REC-4).
- Surficial soil sample SS-5 will be collected from the area adjacent to the eastern exterior wall in a location that may have been impacted by historical industrial use of the subject property (REC-1), by the historic use of the adjacent building to the east as a printing press (REC-2), and by the flaking, potentially lead-based paint on the exterior of the building (REC-5).

Each soil sample will be collected in accordance with the NHDES field SOP HWRD-11 and submitted for independent laboratory analysis in accordance with **Table 1.**

Each collected soil sample will be field screened for total volatile organic compounds (VOCs) using a photoionization device (PID) per NHDES Hazardous Waste & Remediation Bureau, Jar Headspace Technique for Field Screening Soil Samples, and for RCRA 8 metals using an XRF per Maine Department of Environmental Protection (DEP) SOP DR#024, Maine DEP SOP DR#025, and USEPA method 6200 (included in the June 2008 Generic QAPP). The use of the XRF and PID are for field screening purposes only. The purpose of using PID and XRF screening data is to provide real-time estimates of total VOCs and RCRA 8 metals concentrations.

Where soil field screening observations indicate the presence of potentially impacted soil, additional surficial soil samples may be collected in the vicinity to determine the horizontal extent of contamination. The number and locations of these additional soil samples will be dependent on field data, subject property constraints, and professional judgment. All decisions regarding delineation will be recorded in the field logbook, and all locations will be documented. All soil samples obtained for the purposes of contamination delineation will be collected and field-analyzed in accordance with Credere's standard SOPs outlined on **Table 1**. If Credere determines these additional sample locations should be analyzed for analytes not described in **Table 1**, the USEPA Quality Assurance Manager will be contacted, and an email update will be provided to the USEPA describing the sample analysis, methods, and SOPs.

6.3 STAINED FLOORBOARD SAMPLING

Four (4) samples will be collected from areas with observed staining of the floor on the second and third stories of the building (REC-7). Samples FS-1, FS-2, and FS-3 will each be collected from separate stained areas on the second floor. Sample FS-4 will be collected from the stained area on the third floor. The samples will be collected in accordance with field SOP USEPA SOP #001 and submitted for independent laboratory analysis in accordance with **Table 2**.

6.4 SUSPECT BUILDING MATERIAL SAMPLING

Credere will conduct a screening level inventory of suspect PCB-containing building materials at the subject property. While this is not an exhaustive list, some examples of PCB-containing building materials include: paint, caulking, sealants, grout, mastic, glazing, and insulation. Consistent with this inventory and the results of previous investigations at similar sites, up to five (5) distinct matrices which are most likely to contain PCBs will be selected and one (1) sample from each of these matrices will be collected and analyzed. The actual 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. To provide additional laboratory quality assurance data, one representative blind co-located duplicate sample will be collected and submitted for analysis. The minimum sample mass utilized during this survey will be 10 grams. All building material

samples will be collected in accordance with USEPA SOP #2011 and EIASOP_POROUSSAMPLING1 as attached to previously prepared Ernie's Auto Sales Property SSQAPP Addendum.

Based on this approach, the materials which present the highest degree of potential risk will be assessed. If the inventory identifies greater than five 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 in accordance with **Table 2**. Following the receipt of laboratory results, a determination can be made whether there is significant risk of regulated PCB building materials at the subject property and additional assessment, remediation, or no further action can be recommended.

6.5 LEAD-BASED PAINT SURVEY

Lead content of paint on the exterior of the subject property building will be screened onsite using a portable XRF (REC-5). The lead screening will not be sufficient to determine the suitability of the buildings for residential or child-occupied uses. If the subject property buildings are to be used in the future as residences or child-occupied facilities, a formal lead survey should be conducted by a NHDES Certified Lead Inspector.

6.6 UNIVERSAL AND/OR HAZARDOUS WASTE SURVEY UPDATE

Credere will visually update the itemized list of universal and hazardous wastes identified during the GZA Pre-Demolition/Renovation Hazardous Building Materials Survey conducted in November 2001.

7. REGULATORY STANDARDS

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, such as USEPA Regional Screening Levels (RSL) for Chemical Contaminants at Superfund Sites, RSL Table Updated April 2009 for soil, and/or published background soil concentrations. If standards or guidelines do not exist, action levels will be triggered if the sample analytical results exceed background levels or naturally occurring ambient conditions.

Manufactured building materials (such as paint, caulking, sealants, grout, mastic, glazing, and insulation) which have been analyzed to contain concentrations of total PCBs equal to or in excess of 50 ppm are defined as a PCB bulk product waste in accordance with 40 CFR 761.3. Once identified, these materials are regulated for disposal under 40 CFR 761.62. Manufactured building 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 for disposal as long as they remain in use. However, if these materials are removed from use, they are subject to the disposal requirements of 40 CFR 761.61(a)(5)(v)(A). Manufactured building materials which have been analyzed to contain total PCBs at a concentration of less than 1 ppm are generally unrestricted for future use and/or disposal.

Wooden flooring which has been analyzed to contain total PCB concentrations equal to or in excess of 1 ppm as a result of an unknown release is defined as a PCB remediation waste in accordance with 40 CFR 761.3 and is subject to the characterization and/or disposal requirements of 40 CFR 761.60 and 761.61. Wooden flooring which has been analyzed to contain total PCBs at concentrations of less than 1 ppm are generally unrestricted for future use and/or disposal.

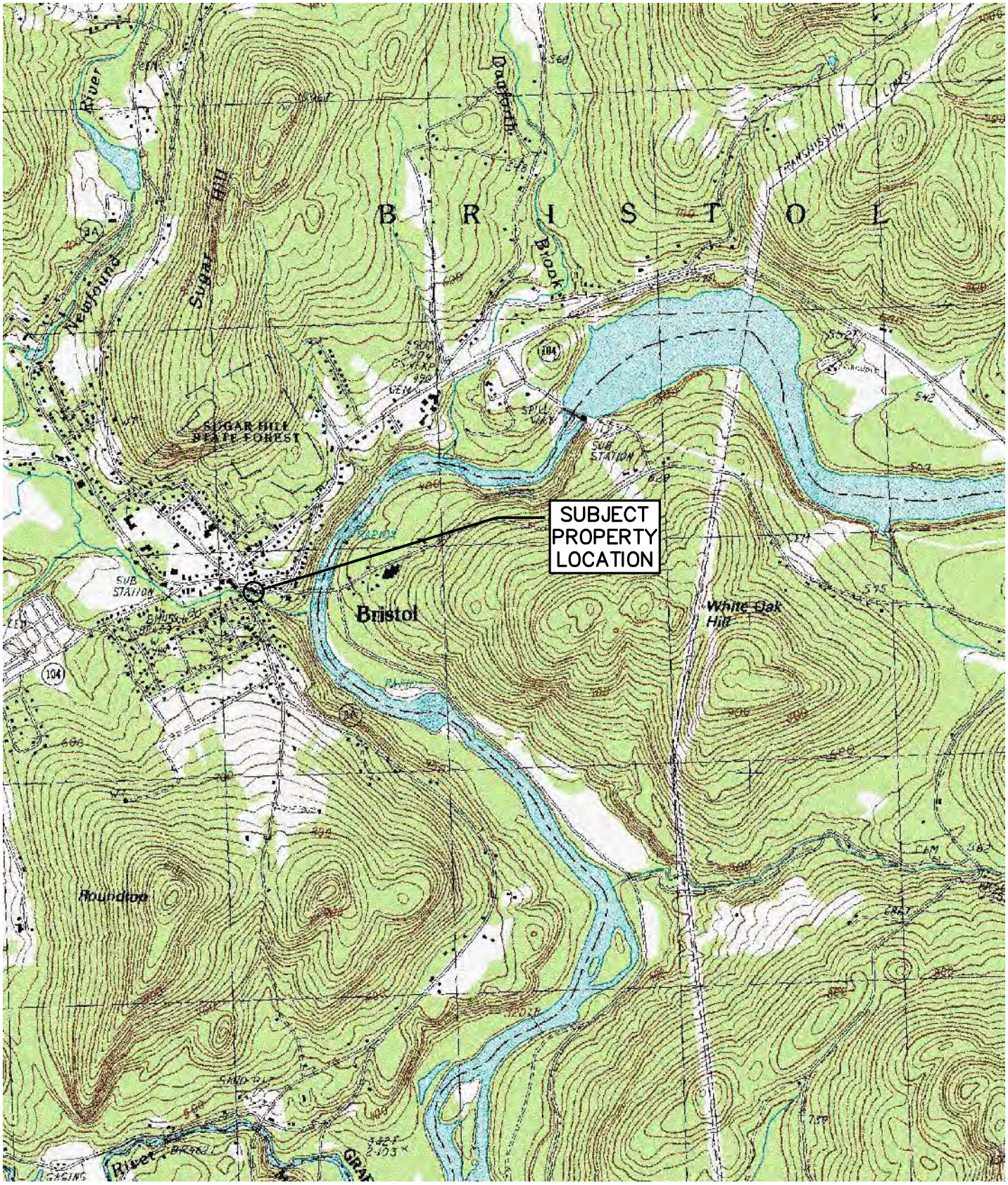
Concentrations of lead in paint as determined through the use of the XRF analyzer will be compared to the limit of 1.0 mg/cm^2 or 0.5% by weight. All construction work involving exposure or potential exposure to lead is covered by the Occupation Safety and Health Administration's Lead in Construction Standard 29 CFR 1926.62.

8. PROPOSED PROJECT SCHEDULE

The following schedule is proposed for the subject property Phase II investigation:

DATE	ACTION
December 16, 2010	Draft SSQAPP Delivered to NHDES and USEPA
March 7, 2011	Deliver Revised SSQAPP to NHDES and USEPA
March 21, 2011	Finalize SSQAPP
April 1, 2011	Initiate Phase II Investigation Activities
April 14, 2011	Receive Laboratory Analytical Results
May 14, 2011	Submit Draft Phase II ESA Report

FIGURES



USGS 7.5 MINUTE BRISTOL, NH QUADRANGLE (1987)

DRAWN BY: SWC	DATE: 9/13/10
CHECKED BY: RSV/JSS	PROJECT: 10001087

FIGURE 1 - SITE LOCATION MAP

Credere Associates, LLC
776 Main Street
Westbrook, Maine 04092
Tel. (207) 828-1272
Fax (207) 887-1051
www.crederellc.com

MICA FACTORY PROPERTY
8 CENTRAL STREET
BRISTOL, NH
NHDES #200105002

0 1,000 2,000 4,000 Feet
1" = 2,000'

NORTH

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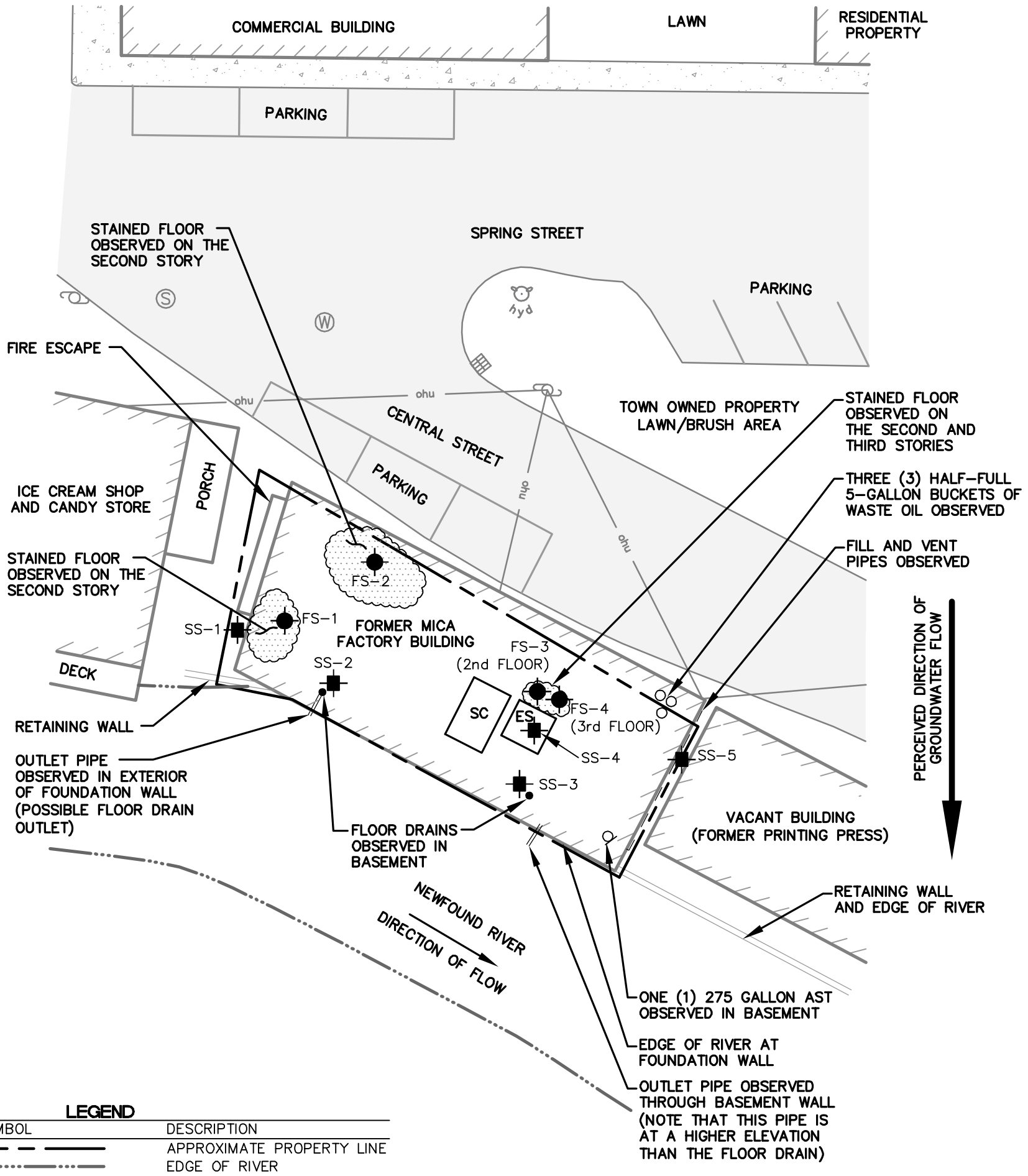

LEGEND

SYMBOL	DESCRIPTION
	APPROXIMATE PROPERTY LINE
	EDGE OF RIVER
ohu	OVERHEAD UTILITY LINE
	EDGE OF PAVEMENT
	EDGE OF CONCRETE
	BUILDING
S	SEWER MANHOLE
W	WATER VALVE
hyd	FIRE HYDRANT
	FLOOR DRAIN
	UTILITY POLE
	CATCH BASIN
	ABOVEGROUND STORAGE TANK
O	5-GALLON BUCKET
ES	ELEVATOR SHAFT
SC	STAIRCASE
	PROPOSED SURFICIAL SOIL SAMPLE LOCATION
	PROPOSED FLOOR SAMPLE LOCATION
	LOCATION OF FLOOR STAINING (2nd AND 3rd STORIES)

NOTES:

1. INFORMATION ON THIS PLAN WAS OBTAINED FROM A SURVEY PROVIDED BY THE TOWN OF BRISTOL NAMED "SITE PLAN FOR JOHN J. SULDENSKI 'MICA MILL APARTMENTS'" DATED JANUARY 14, 2004 BY CENTRAL LAND SURVEYING, INC. OF BRISTOL, NH, AND AUGUST 26, 2010 FIELD OVSERVATIONS.
2. FLOOR SAMPLES WILL BE COLLECTED FROM STAINED FLOOR AREAS OBSERVED ON SECOND AND THIRD LEVELS OF THE BUILDING.
3. BULK MATERIAL SAMPLES WILL BE COLLECTED FROM SUSPECT MATERIALS OBSERVED DURING SAMPLING ACTIVITIES.

DRAWN BY: SWC	DATE: 9/14/10
CHECKED BY:RSV/JSS	PROJECT: 10001087

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Tel. (207) 828-1272
Fax (207) 887-1051
www.crederellc.com

FIGURE 2
PROPOSED PHASE II INVESTIGATION PLAN

MICA FACTORY PROPERTY
8 CENTRAL STREET
BRISTOL, NH
NHDES #200105002

GRAPHIC SCALE

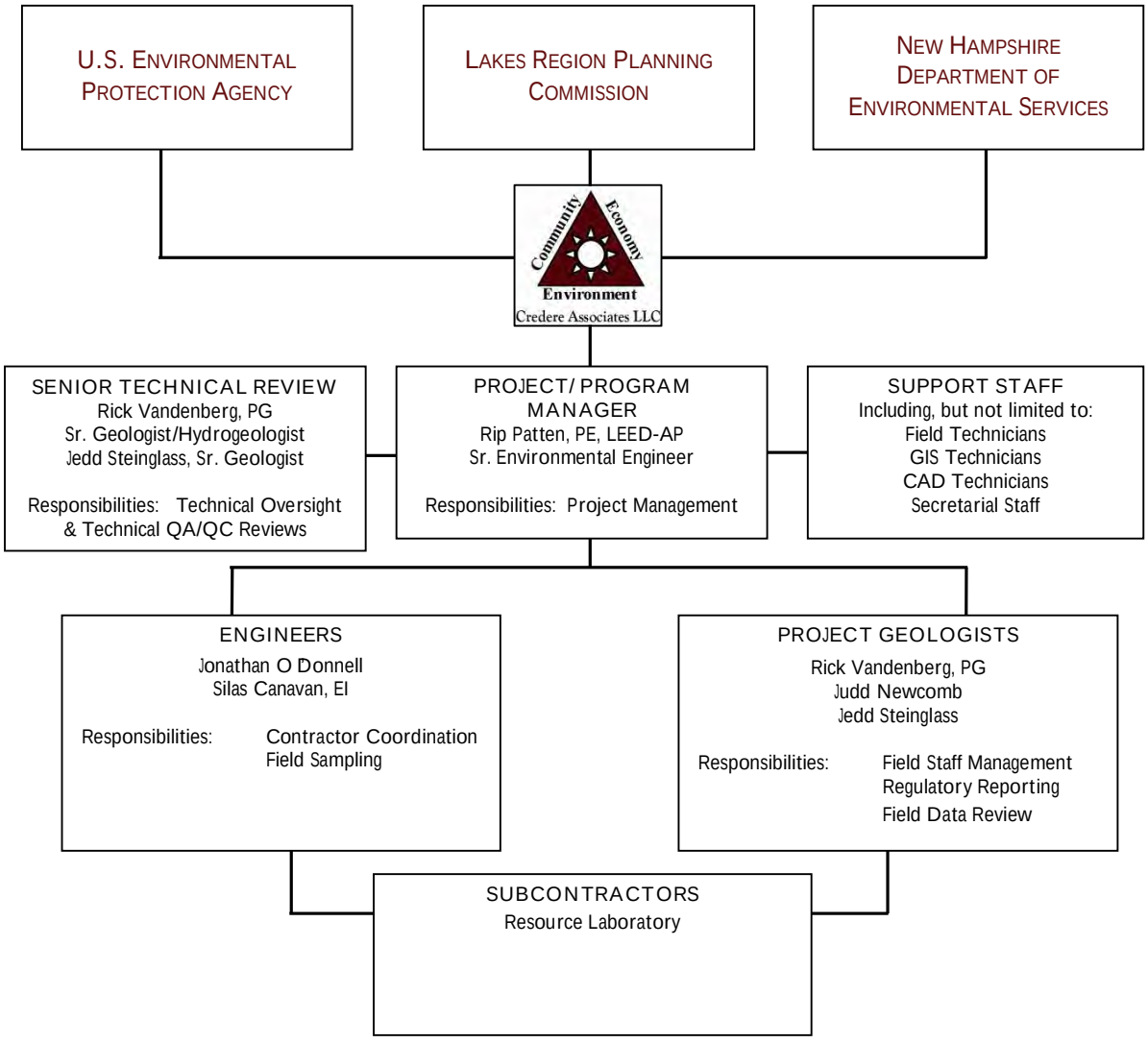
20 0 10 20 40 80

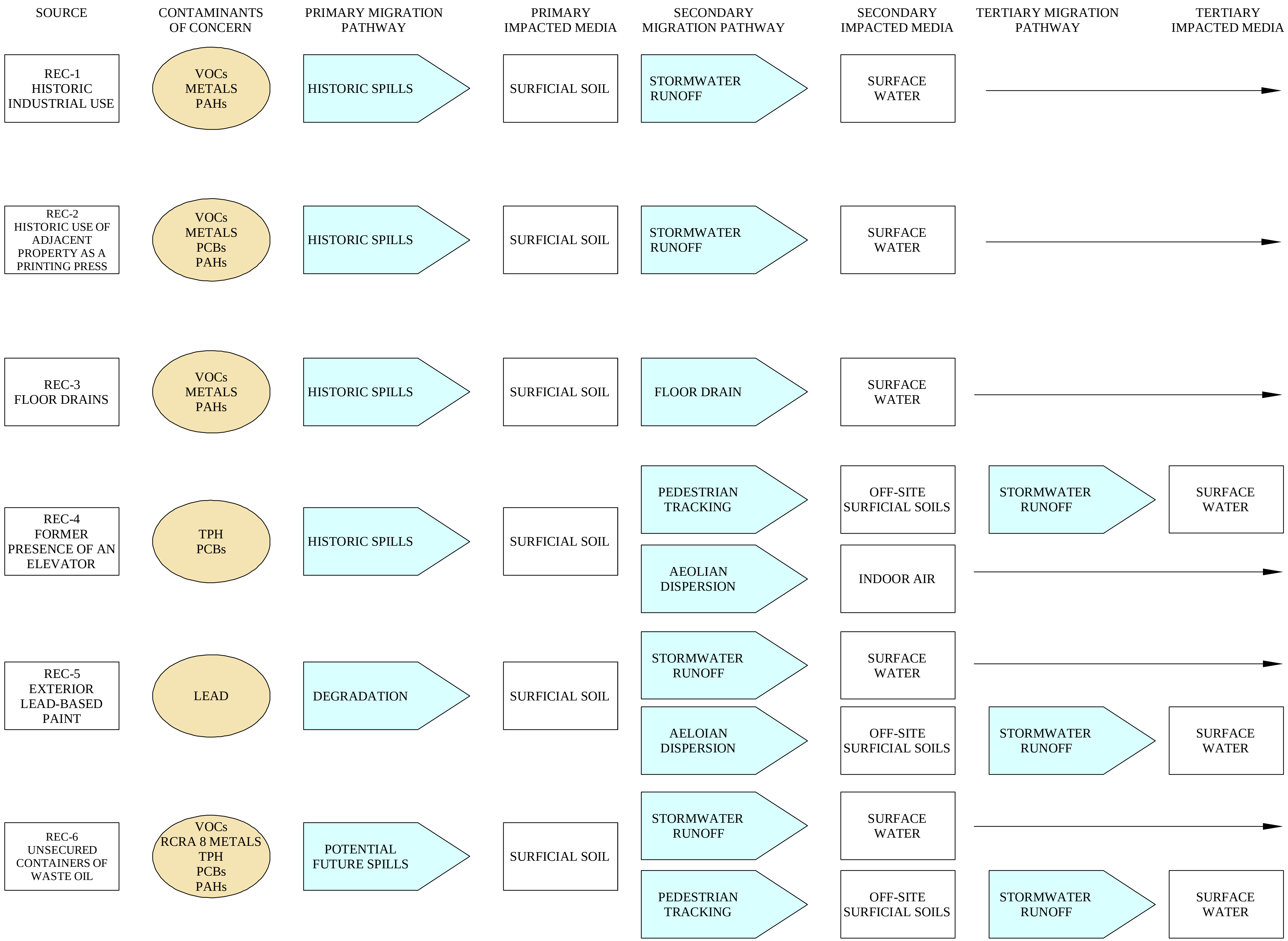
(IN FEET)
1 inch = 20 ft.

NORTH

Figure 3 - Credere Organization and Responsibility Chart

Mica Building Property
8 (a.k.a. 5) Central Street
Bristol, New Hampshire
NHDES #200105002





POTENTIAL EXPOSURE PATHWAYS (REC-1)

	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 (REC-2)

	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 (REC-3)

	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 (REC-4)

	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 (REC-5)

	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 (REC-6)

	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: SWC | DATE: 11/4/10
CHECKED BY: JSS/RSV | PROJECT: 10001087

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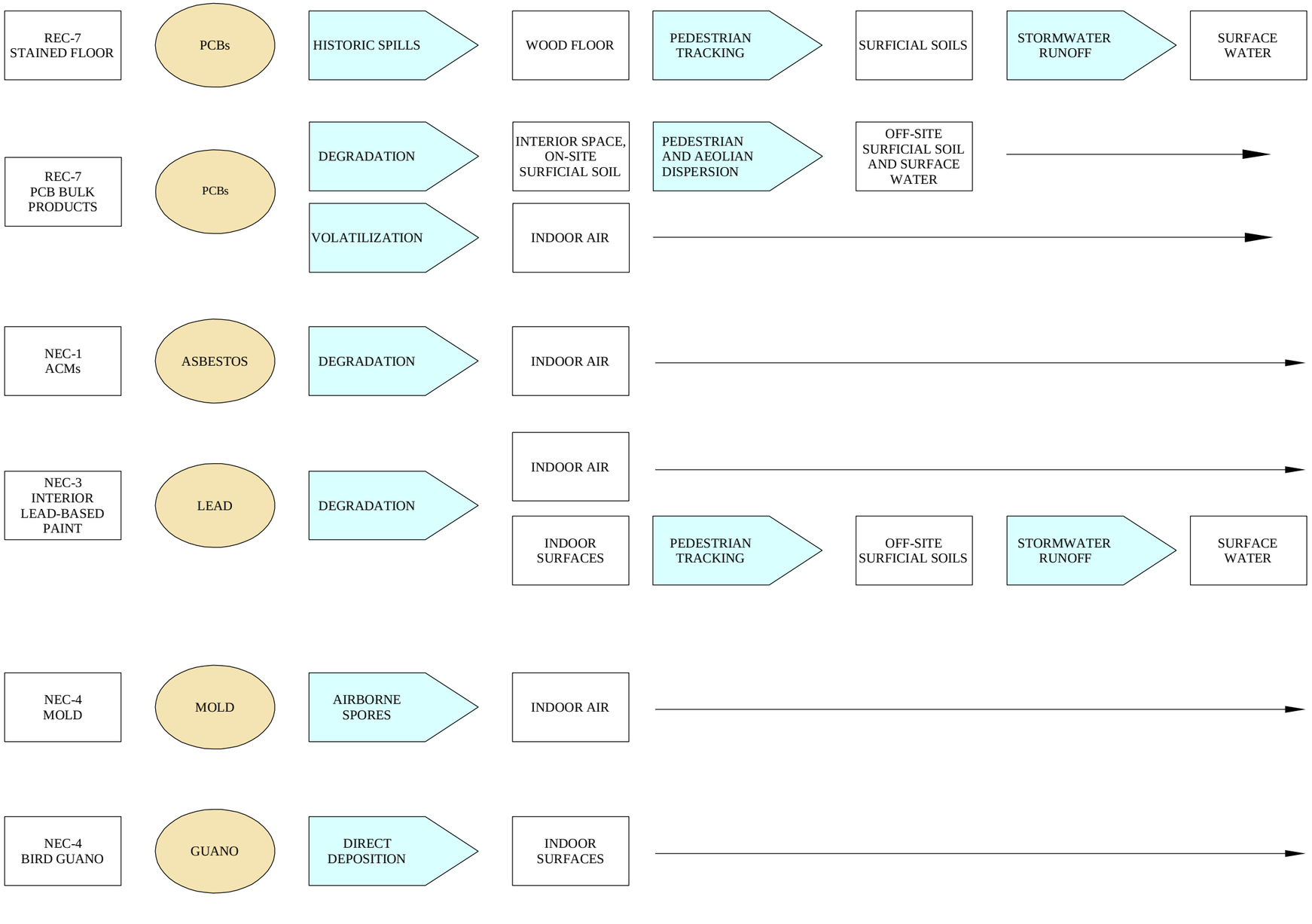
FIGURE 4
CONCEPTUAL SITE MODEL
(SHEET 1 OF 2)

MICA FACTORY PROPERTY
8 CENTRAL STREET
BRISTOL, NH
NHDES #200105002

J:\CREDERE\10001087\Mica Building\dwg\SSQAPP Figures.dwg plot date: 12/15/2010 3:44 PM



POTENTIAL EXPOSURE PATHWAYS

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

POTENTIAL EXPOSURE PATHWAYS

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

POTENTIAL EXPOSURE PATHWAYS

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

DRAWN BY: SWC	DATE: 11/4/10
CHECKED BY: RSV/JSS	PROJECT: 10001087

Credere Associates, LLC
776 Main Street
Westbrook, Maine 04092
Tel. (207) 828-1272
Fax (207) 887-1051
www.crederellc.com

FIGURE 4
CONCEPTUAL SITE MODEL
(SHEET 2 OF 2)

MICA FACTORY PROPERTY
8 CENTRAL STREET
BRISTOL, NH
NHDES #200105002

TABLES

Table 1: Surficial Soil Sample Reference Table
Mica Factory Property
8 Central Street
Bristol, NH
NHDES #200105002

Media to be Collected	Proposed Sample IDs	Associated RECs	Sample Design	Sample Depth (ft bgs)	Field SOPs to be Used	Field Analysis/ Observations	Minimum No. of Samples for Analysis	No. of Field Dups	Analytical Method	Sample Container information & Preservative (per location)	Lab SOPs	Laboratory To be Used
Surficial Soils	SS-1	REC-1 REC-5	One sample will be collected from the the area adjacent to the western exterior wall in a location that may have been impacted by historic industrial use of the subject property and adjacent to the flaking, potentially lead-based paint on the exterior of the building.	0-2	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	1	Surficial soils 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 indicate in this table	- **VOCs** by EPA Method 8260 - **RCRA 8 Metals** by EPA Method 6010 and 7470A - **PAHs** by EPA Method 8270	**VOCs** - (1) 40 ml VOA w/5 ml methanol, (1) 40 ml VOA for % solids **RCRA 8 Metals** - 4 oz. glass with Teflon-lined cap **PAHs** - 4 oz. amber glass with Teflon-lined cap	RL-5 RL-9 RL-13	Resource Laboratories, Portsmouth, NH
	SS-2 SS-3	REC-1 REC-3	Two samples will be collected from areas in the basement adjacent to the floor drains which may have been impacted by the historic industrial use of the subject property.				2					
	SS-4	REC-4	One sample will be collected from a location in the basement at the base of the elevator shaft that may have been impacted by possible releases from the mechanical and hydraulic equipment employed by the elevator.				1		- **TPH** by EPA Method 8015 - **PCBs** by EPA Method 8082	**TPH** - 4 oz. amber glass **PCBs** - 4 oz. glass with Teflon-lined cap	RL-4 RL-7	
	SS-5	REC-1 REC-2 REC-5	One sample will be collected from the area adjacent to the eastern exterior wall in a location that may have been impacted by historic industrial use of the subject property and by the historic use of the adjacent building to the east as a printing press.				1		- **VOCs** by EPA Method 8260 - **RCRA 8 Metals** by EPA Method 6010 and 7470A - **PAHs** by EPA Method 8270 - **PCBs** by EPA Method 8082	**VOCs** - (1) 40 ml VOA w/5 ml methanol, (1) 40 ml VOA for % solids **RCRA 8 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	RL-4 RL-5 RL-9 RL-13	

Table 2: Hazardous Building Material Sample Reference Table
Mica Factory Property
8 Central Street
Bristol, NH
NHDES #200105002

Media to be Collected	Proposed Sample IDs	Associated RECs	Sample Design	Field SOPs to be Used	No. of Samples for Analysis	No. of Field Dups	Analytical Method	Sample Container information & Preservative (per location)	Lab SOPs	Laboratory To be Used
Building Materials	FS-1 FS-2 FS-3 FS-4	REC-7	Four samples will be collected from areas with observed staining of the floor on the second and third stories of the building.	EPA SOP #001 Credere-004	4	Building material 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	- **PCBs** by EPA Method 8082	**PCBs** - 4 oz. glass with Teflon-lined cap	RL-4	Resource Laboratories, Portsmouth, NH
	As Needed: BM-1 BM-2 BM-3 BM-4 BM-5	NEC-3	Up to five distinct matrices which are most likely to contain PCBs will be selected and one sample from each of these matrices will be collected and analyzed.	EPA SOP No. 2011 for Chip, Wipe, and Sweep Sampling; EIASOP_POROUSSAMPLING1 Rev3; Credere-004	Up to 5					

APPENDIX B

PHOTOGRAPHS

Picture 1
Representative view of the subject property from Spring Street.

Picture 2
View of the base of the elevator shaft.

Picture 3
View of the ash pile in the basement of the building.

Picture 4
View of the unsecured buckets of waste oil in the basement.

APPENDIX C

SURFICIAL SOIL SAMPLE LOGS

CREDERE ASSOCIATES, LLC
SURFICIAL SOIL SAMPLING LOG
776 Main Street, Westbrook, Main 04092 - 207-828-1272

TEST PIT DATA:

PROJECT NAME: Mica Factory — DATE: 4/12/2011

PROJECT NUMBER: 10001087 — LOCATION ACTIVITY

SAMPLE LOCATION ID: SS-1 — START: 1200 / END: 1210

CREDERE REPRESENTATIVE: Silas Canavan

CONTRACTOR/FOREMAN: N/A

LABORATORY SAMPLE DATA:

SAMPLE ID	PRESERVATION	#	SAMPLE CONTAINER	LABORATORY ANALYSIS
SS-1	MeOH	1	VOA	VOC
	—	1	4oz amber	PAH, RCRA 8 Metals

NOTES: Sample collected from soil adjacent to west side of building.
DUP sample taken at this location (SS-DUP)

FIELD ANALYSIS DATA:

DEPTH	SAMPLE NUMBER	MOISTURE	PID (ppm)	SOIL DESCRIPTION / NOTES
0-2'		Dry	ND	Dark brown, fine SAND, little fine Gravel, dry.

CREDERE ASSOCIATES, LLC
SURFICIAL SOIL SAMPLING LOG
776 Main Street, Westbrook, Main 04092 - 207-828-1272

TEST PIT DATA:

PROJECT NAME: Mica Factory
DATE: 4/12/2011

PROJECT NUMBER: 10001087
LOCATION ACTIVITY

SAMPLE LOCATION ID: SS-2
START: 1210
END: 1218

CREDERE REPRESENTATIVE: Silas Canavan

CONTRACTOR/FOREMAN: N/A

LABORATORY SAMPLE DATA:

SAMPLE ID	PRESERVATION	#	SAMPLE CONTAINER	LABORATORY ANALYSIS
SS-2	MeOH	1	Voa	VOC
	—	1	4oz amber	PAH, RCRA 8 Metals

NOTES: Sample collected from sediment on concrete/bedrock floor of basement, around perimeter of floor drain

FIELD ANALYSIS DATA:

DEPTH	SAMPLE NUMBER	MOISTURE	PID (ppm)	SOIL DESCRIPTION / NOTES
0-1"		Moist	ND	Dark brown fibrous peat, trace white flecks (Maybe ash from ash pile identified above floor drain) Sample may be decomposed wood and other organic material.

CREDERE ASSOCIATES, LLC
SURFICIAL SOIL SAMPLING LOG
776 Main Street, Westbrook, Main 04092 - 207-828-1272

TEST PIT DATA:

PROJECT NAME: Mica Factory
DATE: 4/12/2011
PROJECT NUMBER: 10001087
LOCATION ACTIVITY
SAMPLE LOCATION ID: SS-3
START: 1218
END: 1228
CREDERE REPRESENTATIVE: Silas Canavan
CONTRACTOR/FOREMAN: N/A

LABORATORY SAMPLE DATA:

SAMPLE ID	PRESERVATION	#	SAMPLE CONTAINER	LABORATORY ANALYSIS
SS-3	MeOH	1	VOA	VOC
	—	2	4oz amber	TPH, PAH, PCB, RCRA 8 Metals

NOTES: Sample collected from ~~on~~ sediment on concrete/bedrock floor of basement around floor drain and in floor drain.

FIELD ANALYSIS DATA:

DEPTH	SAMPLE NUMBER	MOISTURE	PID (ppm)	SOIL DESCRIPTION / NOTES
0-1"		Moist	ND	Dark brown, fibrous PEAT, trace white flecks (Maybe ash from coal stove waste), trace mica flecks, ~~Moist~~. Sample may be decomposed wood and other organic material. * This sample also analyzed for TPH & PCBs because SS-4 could not be collected due to lack of material at base of elevator shaft.

CREDERE ASSOCIATES, LLC
SURFICIAL SOIL SAMPLING LOG
776 Main Street, Westbrook, Main 04092 - 207-828-1272

TEST PIT DATA:

PROJECT NAME: Mica Factory
DATE: 4/12/2011

PROJECT NUMBER: 10001087
LOCATION ACTIVITY

SAMPLE LOCATION ID: SS-4
START:
END:

CREDERE REPRESENTATIVE: Silas Canavan

CONTRACTOR/FOREMAN: N/A

LABORATORY SAMPLE DATA:

SAMPLE ID	PRESERVATION	#	SAMPLE CONTAINER	LABORATORY ANALYSIS

NOTES: Sample could not be collected due to lack of material at base of elevator shaft.

FIELD ANALYSIS DATA:

DEPTH	SAMPLE NUMBER	MOISTURE	PID (ppm)	SOIL DESCRIPTION / NOTES
				Original analysis ~~of~~ of TPH and PCBs for SS-4 analyzed in sample SS-3 instead due to downgradient location relative to SS-4.

CREDERE ASSOCIATES, LLC
SURFICIAL SOIL SAMPLING LOG
776 Main Street, Westbrook, Main 04092 - 207-828-1272

TEST PIT DATA:

PROJECT NAME: Mica Factory — DATE: 4/12/2011

PROJECT NUMBER: 10001087 — LOCATION ACTIVITY

SAMPLE LOCATION ID: SS-5 — START: 1228 — END: 1235

CREDERE REPRESENTATIVE: Silas Canavan

CONTRACTOR/FOREMAN: N/A

LABORATORY SAMPLE DATA:

SAMPLE ID	PRESERVATION	#	SAMPLE CONTAINER	LABORATORY ANALYSIS
SS-5	MeOH	1	VOA	VOC
	—	1	4oz amber	PAH, PCB, RCRA 8 metals

NOTES: Sample collected from soil adjacent to east side of building.

FIELD ANALYSIS DATA:

DEPTH	SAMPLE NUMBER	MOISTURE	PID (ppm)	SOIL DESCRIPTION / NOTES
0-1'		wet	ND	Dark Brown, fine SAND, trace fine gravel, wet.

APPENDIX D

LABORATORY ANALYTICAL RESULTS

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

Silas Canavan
CREDERE Associates
776 Main Street
Westbrook, ME 04092

PO Number: None
Job ID: 21283
Date Received: 4/13/11

Project: Mica Factory 10001087

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: 5/3/2011
Total number of pages: 42

Absolute Resource Associates Certifications

New Hampshire	1732	Massachusetts	M-NH902
Maine	NH903		

Project ID: Mica Factory 10001087

Lab ID: 21283

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
SS-1	Solid	4/12/2011 12:06	21283-001	
				PAHs 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-2	Solid	4/12/2011 12:15	21283-002	
				PAHs 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-3	Solid	4/12/2011 12:20	21283-003	
				PCBs in soil by 8082
				TPH in solids by 8100
				PAHs 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-5	Solid	4/12/2011 12:30	21283-004	
				PCBs in soil by 8082
				PAHs 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

Absolute Resource associates

Project ID: Mica Factory 10001087
Lab ID: 21283

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
SS-5	Solid	4/12/2011 12:30	21283-004	
				Selenium in solids by 6010
				Percent Dry Matter for Sample Calc by SM2540B,G
				VOCs in solid by 8260 Petro & Haz Waste
SS-DUP	Solid	4/12/2011	21283-005	
				PAHs 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
Trip Blank	Solid	4/12/2011	21283-006	
				VOCs in solid by 8260 Petro & Haz Waste
BM-1	Solid	4/12/2011 11:00	21283-007	
				PCBs in soil by 8082
BM-2	Solid	4/12/2011 11:25	21283-008	
				PCBs in soil by 8082
BM-3	Solid	4/12/2011 11:40	21283-009	
				PCBs in soil by 8082
BM-DUP	Solid	4/12/2011	21283-010	
				PCBs in soil by 8082
FS-1	Solid	4/12/2011 10:30	21283-011	
				PCBs in soil by 8082
FS-2	Solid	4/12/2011 10:35	21283-012	
				PCBs in soil by 8082
FS-3	Solid	4/12/2011 10:40	21283-013	
				PCBs in soil by 8082
FS-4	Solid	4/12/2011 10:45	21283-014	
				PCBs in soil by 8082

Absolute Resource associates

Project ID: Mica Factory 10001087
Job ID: 21283
Sample#: 21283-001
Sample ID: SS-1
Matrix: Solid Percent Dry: 81.8% Results expressed on a dry weight basis.
Sampled: 4/12/11 12:06

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	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
chloromethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
vinyl chloride	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
bromomethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
chloroethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
trichlorofluoromethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
diethyl ether	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
acetone	< 3	3	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
1,1-dichloroethene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
methylene chloride	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
carbon disulfide	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
methyl t-butyl ether (MTBE)	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
trans-1,2-dichloroethene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
isopropyl ether (DIPE)	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
ethyl t-butyl ether (ETBE)	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
1,1-dichloroethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
t-butanol (TBA)	< 3	3	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
2-butanone (MEK)	< 0.3	0.3	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
2,2-dichloropropane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
cis-1,2-dichloroethene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
chloroform	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
bromochloromethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
tetrahydrofuran (THF)	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
1,1,1-trichloroethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
1,1-dichloropropene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
t-amyl-methyl ether (TAME)	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
carbon tetrachloride	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
1,2-dichloroethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
benzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
trichloroethene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
1,2-dichloropropane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
bromodichloromethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
1,4-dioxane	< 3	3	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
dibromomethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
4-methyl-2-pentanone (MIBK)	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
cis-1,3-dichloropropene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
toluene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
trans-1,3-dichloropropene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
2-hexanone	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
1,1,2-trichloroethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
1,3-dichloropropane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
tetrachloroethene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
dibromochloromethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B

Absolute Resource associates

Project ID: Mica Factory 10001087
Job ID: 21283
Sample#: 21283-001
Sample ID: SS-1
Matrix: Solid Percent Dry: 81.8% Results expressed on a dry weight basis.
Sampled: 4/12/11 12:06

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	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
chlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
1,1,1,2-tetrachloroethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
ethylbenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
m&p-xylenes	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
o-xylene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
styrene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
bromoform	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
isopropylbenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
1,1,2,2-tetrachloroethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
1,2,3-trichloropropane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
n-propylbenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
bromobenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
1,3,5-trimethylbenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
2-chlorotoluene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
4-chlorotoluene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
tert-butylbenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
1,2,4-trimethylbenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
sec-butylbenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
1,3-dichlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
4-isopropyltoluene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
1,4-dichlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
1,2-dichlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
n-butylbenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
1,2-dibromo-3-chloropropane (DBCP)	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
1,2,4-trichlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
1,3,5-trichlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
hexachlorobutadiene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
naphthalene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
1,2,3-trichlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**98**	78-114	%	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
toluene-D8 SUR	**100**	88-110	%	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
4-bromofluorobenzene SUR	**100**	86-115	%	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B
a,a,a-trifluorotoluene SUR	**91**	70-130	%	1	LMM	4/14/11	4089	4/19/11	20:51	SW5035A8260B

Absolute Resource associates

Project ID: Mica Factory 10001087
Job ID: 21283
Sample#: 21283-002
Sample ID: SS-2
Matrix: Solid Percent Dry: 32.9% Results expressed on a dry weight basis.
Sampled: 4/12/11 12:15

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
dichlorodifluoromethane	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
chloromethane	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
vinyl chloride	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
bromomethane	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
chloroethane	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
trichlorofluoromethane	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
diethyl ether	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
acetone	< 12	12	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
1,1-dichloroethene	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
methylene chloride	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
carbon disulfide	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
methyl t-butyl ether (MTBE)	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
trans-1,2-dichloroethene	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
isopropyl ether (DIPE)	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
ethyl t-butyl ether (ETBE)	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
1,1-dichloroethane	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
t-butanol (TBA)	< 12	12	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
2-butanone (MEK)	< 1.4	1.4	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
2,2-dichloropropane	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
cis-1,2-dichloroethene	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
chloroform	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
bromochloromethane	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
tetrahydrofuran (THF)	< 2.4	2.4	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
1,1,1-trichloroethane	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
1,1-dichloropropene	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
t-amyl-methyl ether (TAME)	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
carbon tetrachloride	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
1,2-dichloroethane	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
benzene	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
trichloroethene	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
1,2-dichloropropane	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
bromodichloromethane	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
1,4-dioxane	< 12	12	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
dibromomethane	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
4-methyl-2-pentanone (MIBK)	< 2.2	2.2	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
cis-1,3-dichloropropene	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
toluene	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
trans-1,3-dichloropropene	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
2-hexanone	< 2.4	2.4	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
1,1,2-trichloroethane	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
1,3-dichloropropane	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
tetrachloroethene	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
dibromochloromethane	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B

Absolute Resource associates

Project ID: Mica Factory 10001087
Job ID: 21283
Sample#: 21283-002
Sample ID: SS-2
Matrix: Solid Percent Dry: 32.9% Results expressed on a dry weight basis.
Sampled: 4/12/11 12:15

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
1,2-dibromoethane (EDB)	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
chlorobenzene	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
1,1,1,2-tetrachloroethane	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
ethylbenzene	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
m&p-xylenes	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
o-xylene	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
styrene	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
bromoform	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
isopropylbenzene	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
1,1,2,2-tetrachloroethane	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
1,2,3-trichloropropane	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
n-propylbenzene	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
bromobenzene	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
1,3,5-trimethylbenzene	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
2-chlorotoluene	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
4-chlorotoluene	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
tert-butylbenzene	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
1,2,4-trimethylbenzene	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
sec-butylbenzene	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
1,3-dichlorobenzene	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
4-isopropyltoluene	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
1,4-dichlorobenzene	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
1,2-dichlorobenzene	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
n-butylbenzene	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
1,2-dibromo-3-chloropropane (DBCP)	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
1,2,4-trichlorobenzene	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
1,3,5-trichlorobenzene	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
hexachlorobutadiene	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
naphthalene	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
1,2,3-trichlorobenzene	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**97**	78-114	%	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
toluene-D8 SUR	**99**	88-110	%	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
4-bromofluorobenzene SUR	**102**	86-115	%	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B
a,a,a-trifluorotoluene SUR	**63** *	70-130	%	1	LMM	4/14/11	4089	4/19/11	21:24	SW5035A8260B

**** This surrogate showed recovery outside the acceptance limits. This is likely a result of high moisture content in the sample.***

Absolute Resource associates

Project ID: Mica Factory 10001087
Job ID: 21283
Sample#: 21283-003
Sample ID: SS-3
Matrix: Solid Percent Dry: 24.8% Results expressed on a dry weight basis.
Sampled: 4/12/11 12:20

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
dichlorodifluoromethane	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
chloromethane	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
vinyl chloride	< 1.2	1.2	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
bromomethane	< 1.2	1.2	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
chloroethane	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
trichlorofluoromethane	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
diethyl ether	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
acetone	< 120	120	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
1,1-dichloroethene	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
methylene chloride	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
carbon disulfide	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
methyl t-butyl ether (MTBE)	< 1.2	1.2	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
trans-1,2-dichloroethene	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
isopropyl ether (DIPE)	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
ethyl t-butyl ether (ETBE)	< 1.2	1.2	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
1,1-dichloroethane	< 1.2	1.2	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
t-butanol (TBA)	< 120	120	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
2-butanone (MEK)	< 14.9	14.9	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
2,2-dichloropropane	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
cis-1,2-dichloroethene	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
chloroform	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
bromochloromethane	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
tetrahydrofuran (THF)	< 24.8	24.8	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
1,1,1-trichloroethane	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
1,1-dichloropropene	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
t-amyl-methyl ether (TAME)	< 1.2	1.2	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
carbon tetrachloride	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
1,2-dichloroethane	< 1.2	1.2	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
benzene	< 1.2	1.2	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
trichloroethene	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
1,2-dichloropropane	< 1.2	1.2	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
bromodichloromethane	< 1.2	1.2	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
1,4-dioxane	< 50	50	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
dibromomethane	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
4-methyl-2-pentanone (MIBK)	< 22.3	22.3	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
cis-1,3-dichloropropene	< 1.2	1.2	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
toluene	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
trans-1,3-dichloropropene	< 1.2	1.2	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
2-hexanone	< 24.8	24.8	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
1,1,2-trichloroethane	< 1.2	1.2	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
1,3-dichloropropane	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
tetrachloroethene	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
dibromochloromethane	< 1.2	1.2	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B

Project ID: Mica Factory 10001087
Job ID: 21283
Sample#: 21283-003
Sample ID: SS-3
Matrix: Solid Percent Dry: 24.8% Results expressed on a dry weight basis.
Sampled: 4/12/11 12:20

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
1,2-dibromoethane (EDB)	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
chlorobenzene	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
1,1,1,2-tetrachloroethane	< 1.2	1.2	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
ethylbenzene	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
m&p-xylenes	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
o-xylene	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
styrene	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
bromoform	< 2.5	2.5	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
isopropylbenzene	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
1,1,2,2-tetrachloroethane	< 2.5	2.5	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
1,2,3-trichloropropane	< 1.2	1.2	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
n-propylbenzene	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
bromobenzene	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
1,3,5-trimethylbenzene	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
2-chlorotoluene	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
4-chlorotoluene	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
tert-butylbenzene	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
1,2,4-trimethylbenzene	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
sec-butylbenzene	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
1,3-dichlorobenzene	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
4-isopropyltoluene	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
1,4-dichlorobenzene	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
1,2-dichlorobenzene	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
n-butylbenzene	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
1,2-dibromo-3-chloropropane (DBCP)	< 1.2	1.2	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
1,2,4-trichlorobenzene	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
1,3,5-trichlorobenzene	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
hexachlorobutadiene	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
naphthalene	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
1,2,3-trichlorobenzene	< 5.0	5.0	ug/g	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**100**	78-114	%	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
toluene-D8 SUR	**99**	88-110	%	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
4-bromofluorobenzene SUR	**99**	86-115	%	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B
a,a,a-trifluorotoluene SUR	**53** *	70-130	%	5	LMM	4/14/11	4089	4/21/11	0:13	SW5035A8260B

Note: Dilution was required due to the foaming properties of the sample.
****This surrogate showed recovery outside the acceptance limits. This is likely a result of high moisture content in the sample.***

Absolute Resource associates

Project ID: Mica Factory 10001087
Job ID: 21283
Sample#: 21283-004
Sample ID: SS-5
Matrix: Solid Percent Dry: 51.8% Results expressed on a dry weight basis.
Sampled: 4/12/11 12:30

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	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
chloromethane	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
vinyl chloride	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
bromomethane	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
chloroethane	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
trichlorofluoromethane	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
diethyl ether	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
acetone	< 6	6	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
1,1-dichloroethene	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
methylene chloride	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
carbon disulfide	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
methyl t-butyl ether (MTBE)	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
trans-1,2-dichloroethene	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
isopropyl ether (DIPE)	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
ethyl t-butyl ether (ETBE)	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
1,1-dichloroethane	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
t-butanol (TBA)	< 6	6	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
2-butanone (MEK)	< 0.7	0.7	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
2,2-dichloropropane	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
cis-1,2-dichloroethene	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
chloroform	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
bromochloromethane	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
tetrahydrofuran (THF)	< 1.2	1.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
1,1,1-trichloroethane	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
1,1-dichloropropene	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
t-amyl-methyl ether (TAME)	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
carbon tetrachloride	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
1,2-dichloroethane	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
benzene	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
trichloroethene	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
1,2-dichloropropane	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
bromodichloromethane	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
1,4-dioxane	< 6	6	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
dibromomethane	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
4-methyl-2-pentanone (MIBK)	< 1.1	1.1	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
cis-1,3-dichloropropene	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
toluene	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
trans-1,3-dichloropropene	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
2-hexanone	< 1.2	1.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
1,1,2-trichloroethane	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
1,3-dichloropropane	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
tetrachloroethene	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
dibromochloromethane	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B

Project ID: Mica Factory 10001087
Job ID: 21283
Sample#: 21283-004
Sample ID: SS-5
Matrix: Solid Percent Dry: 51.8% Results expressed on a dry weight basis.
Sampled: 4/12/11 12:30

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	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
chlorobenzene	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
1,1,1,2-tetrachloroethane	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
ethylbenzene	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
m&p-xylenes	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
o-xylene	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
styrene	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
bromoform	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
isopropylbenzene	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
1,1,2,2-tetrachloroethane	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
1,2,3-trichloropropane	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
n-propylbenzene	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
bromobenzene	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
1,3,5-trimethylbenzene	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
2-chlorotoluene	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
4-chlorotoluene	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
tert-butylbenzene	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
1,2,4-trimethylbenzene	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
sec-butylbenzene	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
1,3-dichlorobenzene	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
4-isopropyltoluene	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
1,4-dichlorobenzene	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
1,2-dichlorobenzene	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
n-butylbenzene	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
1,2-dibromo-3-chloropropane (DBCP)	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
1,2,4-trichlorobenzene	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
1,3,5-trichlorobenzene	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
hexachlorobutadiene	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
naphthalene	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
1,2,3-trichlorobenzene	< 0.2	0.2	ug/g	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**98**	78-114	%	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
toluene-D8 SUR	**99**	88-110	%	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
4-bromofluorobenzene SUR	**97**	86-115	%	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B
a,a,a-trifluorotoluene SUR	**82**	70-130	%	1	LMM	4/14/11	4089	4/21/11	0:45	SW5035A8260B

Absolute Resource associates

Project ID: Mica Factory 10001087
Job ID: 21283
Sample#: 21283-005
Sample ID: SS-DUP
Matrix: Solid Percent Dry: 84% Results expressed on a dry weight basis.
Sampled: 4/12/11

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	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
chloromethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
vinyl chloride	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
bromomethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
chloroethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
trichlorofluoromethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
diethyl ether	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
acetone	< 2	2	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
1,1-dichloroethene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
methylene chloride	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
carbon disulfide	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
methyl t-butyl ether (MTBE)	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
trans-1,2-dichloroethene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
isopropyl ether (DIPE)	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
ethyl t-butyl ether (ETBE)	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
1,1-dichloroethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
t-butanol (TBA)	< 2	2	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
2-butanone (MEK)	< 0.3	0.3	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
2,2-dichloropropane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
cis-1,2-dichloroethene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
chloroform	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
bromochloromethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
tetrahydrofuran (THF)	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
1,1,1-trichloroethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
1,1-dichloropropene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
t-amyl-methyl ether (TAME)	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
carbon tetrachloride	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
1,2-dichloroethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
benzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
trichloroethene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
1,2-dichloropropane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
bromodichloromethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
1,4-dioxane	< 2	2	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
dibromomethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
4-methyl-2-pentanone (MIBK)	< 0.4	0.4	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
cis-1,3-dichloropropene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
toluene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
trans-1,3-dichloropropene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
2-hexanone	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
1,1,2-trichloroethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
1,3-dichloropropane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
tetrachloroethene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
dibromochloromethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B

Project ID: Mica Factory 10001087
Job ID: 21283
Sample#: 21283-005
Sample ID: SS-DUP
Matrix: Solid Percent Dry: 84% Results expressed on a dry weight basis.
Sampled: 4/12/11

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	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
chlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
1,1,1,2-tetrachloroethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
ethylbenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
m&p-xylenes	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
o-xylene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
styrene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
bromoform	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
isopropylbenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
1,1,2,2-tetrachloroethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
1,2,3-trichloropropane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
n-propylbenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
bromobenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
1,3,5-trimethylbenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
2-chlorotoluene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
4-chlorotoluene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
tert-butylbenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
1,2,4-trimethylbenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
sec-butylbenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
1,3-dichlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
4-isopropyltoluene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
1,4-dichlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
1,2-dichlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
n-butylbenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
1,2-dibromo-3-chloropropane (DBCP)	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
1,2,4-trichlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
1,3,5-trichlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
hexachlorobutadiene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
naphthalene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
1,2,3-trichlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**98**	78-114	%	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
toluene-D8 SUR	**98**	88-110	%	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
4-bromofluorobenzene SUR	**98**	86-115	%	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B
a,a,a-trifluorotoluene SUR	**85**	70-130	%	1	LMM	4/14/11	4089	4/21/11	1:18	SW5035A8260B

Absolute Resource associates

Project ID: Mica Factory 10001087
Job ID: 21283
Sample#: 21283-006
Sample ID: Trip Blank
Matrix: Solid
Sampled: 4/12/11

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	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
chloromethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
vinyl chloride	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
bromomethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
chloroethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
trichlorofluoromethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
diethyl ether	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
acetone	< 2	2	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
1,1-dichloroethene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
methylene chloride	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
carbon disulfide	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
methyl t-butyl ether (MTBE)	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
trans-1,2-dichloroethene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
isopropyl ether (DIPE)	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
ethyl t-butyl ether (ETBE)	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
1,1-dichloroethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
t-butanol (TBA)	< 2	2	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
2-butanone (MEK)	< 0.3	0.3	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
2,2-dichloropropane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
cis-1,2-dichloroethene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
chloroform	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
bromochloromethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
tetrahydrofuran (THF)	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
1,1,1-trichloroethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
1,1-dichloropropene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
t-amyl-methyl ether (TAME)	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
carbon tetrachloride	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
1,2-dichloroethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
benzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
trichloroethene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
1,2-dichloropropane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
bromodichloromethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
1,4-dioxane	< 2	2	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
dibromomethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
4-methyl-2-pentanone (MIBK)	< 0.4	0.4	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
cis-1,3-dichloropropene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
toluene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
trans-1,3-dichloropropene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
2-hexanone	< 0.5	0.5	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
1,1,2-trichloroethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
1,3-dichloropropane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
tetrachloroethene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
dibromochloromethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B

Project ID: Mica Factory 10001087
Job ID: 21283
Sample#: 21283-006
Sample ID: Trip Blank
Matrix: Solid
Sampled: 4/12/11

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	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
chlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
1,1,1,2-tetrachloroethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
ethylbenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
m&p-xylenes	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
o-xylene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
styrene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
bromoform	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
isopropylbenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
1,1,2,2-tetrachloroethane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
1,2,3-trichloropropane	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
n-propylbenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
bromobenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
1,3,5-trimethylbenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
2-chlorotoluene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
4-chlorotoluene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
tert-butylbenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
1,2,4-trimethylbenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
sec-butylbenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
1,3-dichlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
4-isopropyltoluene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
1,4-dichlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
1,2-dichlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
n-butylbenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
1,2-dibromo-3-chloropropane (DBCP)	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
1,2,4-trichlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
1,3,5-trichlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
hexachlorobutadiene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
naphthalene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
1,2,3-trichlorobenzene	< 0.1	0.1	ug/g	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**98**	78-114	%	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
toluene-D8 SUR	**98**	88-110	%	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
4-bromofluorobenzene SUR	**102**	86-115	%	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B
a,a,a-trifluorotoluene SUR	**85**	70-130	%	1	LMM	4/14/11	4089	4/19/11	19:12	SW5035A8260B

Project ID: Mica Factory 10001087
Job ID: 21283
Sample#: 21283-001
Sample ID: SS-1
Matrix: Solid Percent Dry: 81.8% Results expressed on a dry weight basis.
Sampled: 4/12/11 12:06

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	4/18/11	4092	4/19/11	10:38	SW3550B8270D
2-methylnaphthalene	< 0.6	0.6	ug/g	1	AJD	4/18/11	4092	4/19/11	10:38	SW3550B8270D
acenaphthylene	< 0.6	0.6	ug/g	1	AJD	4/18/11	4092	4/19/11	10:38	SW3550B8270D
acenaphthene	< 0.6	0.6	ug/g	1	AJD	4/18/11	4092	4/19/11	10:38	SW3550B8270D
dibenzofuran	< 0.6	0.6	ug/g	1	AJD	4/18/11	4092	4/19/11	10:38	SW3550B8270D
fluorene	< 0.6	0.6	ug/g	1	AJD	4/18/11	4092	4/19/11	10:38	SW3550B8270D
phenanthrene	**1.8**	0.6	ug/g	1	AJD	4/18/11	4092	4/19/11	10:38	SW3550B8270D
anthracene	< 0.6	0.6	ug/g	1	AJD	4/18/11	4092	4/19/11	10:38	SW3550B8270D
fluoranthene	**2.5**	0.6	ug/g	1	AJD	4/18/11	4092	4/19/11	10:38	SW3550B8270D
pyrene	**2.6**	0.6	ug/g	1	AJD	4/18/11	4092	4/19/11	10:38	SW3550B8270D
benzo(a)anthracene	**1.4**	0.6	ug/g	1	AJD	4/18/11	4092	4/19/11	10:38	SW3550B8270D
chrysene	**1.5**	0.6	ug/g	1	AJD	4/18/11	4092	4/19/11	10:38	SW3550B8270D
benzo(b)fluoranthene	**0.9**	0.6	ug/g	1	AJD	4/18/11	4092	4/19/11	10:38	SW3550B8270D
benzo(k)fluoranthene	**1.3**	0.6	ug/g	1	AJD	4/18/11	4092	4/19/11	10:38	SW3550B8270D
benzo(a)pyrene	**1.3**	0.6	ug/g	1	AJD	4/18/11	4092	4/19/11	10:38	SW3550B8270D
indeno(1,2,3-cd)pyrene	**0.7**	0.6	ug/g	1	AJD	4/18/11	4092	4/19/11	10:38	SW3550B8270D
dibenzo(a,h)anthracene	< 0.6	0.6	ug/g	1	AJD	4/18/11	4092	4/19/11	10:38	SW3550B8270D
benzo(g,h,i)perylene	**0.7**	0.6	ug/g	1	AJD	4/18/11	4092	4/19/11	10:38	SW3550B8270D
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**61**	43-116	%	1	AJD	4/18/11	4092	4/19/11	10:38	SW3550B8270D
o-terphenyl SUR	**78**	33-141	%	1	AJD	4/18/11	4092	4/19/11	10:38	SW3550B8270D

Project ID: Mica Factory 10001087
Job ID: 21283
Sample#: 21283-002
Sample ID: SS-2
Matrix: Solid Percent Dry: 32.9% Results expressed on a dry weight basis.
Sampled: 4/12/11 12:15

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 1.5	1.5	ug/g	1	AJD	4/18/11	4092	4/19/11	11:15	SW3550B8270D
2-methylnaphthalene	< 1.5	1.5	ug/g	1	AJD	4/18/11	4092	4/19/11	11:15	SW3550B8270D
acenaphthylene	< 1.5	1.5	ug/g	1	AJD	4/18/11	4092	4/19/11	11:15	SW3550B8270D
acenaphthene	< 1.5	1.5	ug/g	1	AJD	4/18/11	4092	4/19/11	11:15	SW3550B8270D
dibenzofuran	< 1.5	1.5	ug/g	1	AJD	4/18/11	4092	4/19/11	11:15	SW3550B8270D
fluorene	< 1.5	1.5	ug/g	1	AJD	4/18/11	4092	4/19/11	11:15	SW3550B8270D
phenanthrene	< 1.5	1.5	ug/g	1	AJD	4/18/11	4092	4/19/11	11:15	SW3550B8270D
anthracene	< 1.5	1.5	ug/g	1	AJD	4/18/11	4092	4/19/11	11:15	SW3550B8270D
fluoranthene	< 1.5	1.5	ug/g	1	AJD	4/18/11	4092	4/19/11	11:15	SW3550B8270D
pyrene	< 1.5	1.5	ug/g	1	AJD	4/18/11	4092	4/19/11	11:15	SW3550B8270D
benzo(a)anthracene	< 1.5	1.5	ug/g	1	AJD	4/18/11	4092	4/19/11	11:15	SW3550B8270D
chrysene	< 1.5	1.5	ug/g	1	AJD	4/18/11	4092	4/19/11	11:15	SW3550B8270D
benzo(b)fluoranthene	< 1.5	1.5	ug/g	1	AJD	4/18/11	4092	4/19/11	11:15	SW3550B8270D
benzo(k)fluoranthene	< 1.5	1.5	ug/g	1	AJD	4/18/11	4092	4/19/11	11:15	SW3550B8270D
benzo(a)pyrene	< 1.5	1.5	ug/g	1	AJD	4/18/11	4092	4/19/11	11:15	SW3550B8270D
indeno(1,2,3-cd)pyrene	< 1.5	1.5	ug/g	1	AJD	4/18/11	4092	4/19/11	11:15	SW3550B8270D
dibenzo(a,h)anthracene	< 1.5	1.5	ug/g	1	AJD	4/18/11	4092	4/19/11	11:15	SW3550B8270D
benzo(g,h,i)perylene	< 1.5	1.5	ug/g	1	AJD	4/18/11	4092	4/19/11	11:15	SW3550B8270D
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**52**	43-116	%	1	AJD	4/18/11	4092	4/19/11	11:15	SW3550B8270D
o-terphenyl SUR	**71**	33-141	%	1	AJD	4/18/11	4092	4/19/11	11:15	SW3550B8270D

Project ID: Mica Factory 10001087
Job ID: 21283
Sample#: 21283-003
Sample ID: SS-3
Matrix: Solid Percent Dry: 24.8% Results expressed on a dry weight basis.
Sampled: 4/12/11 12:20

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 1.9	1.9	ug/g	1	AJD	4/18/11	4092	4/19/11	11:53	SW3550B8270D
2-methylnaphthalene	< 1.9	1.9	ug/g	1	AJD	4/18/11	4092	4/19/11	11:53	SW3550B8270D
acenaphthylene	< 1.9	1.9	ug/g	1	AJD	4/18/11	4092	4/19/11	11:53	SW3550B8270D
acenaphthene	< 1.9	1.9	ug/g	1	AJD	4/18/11	4092	4/19/11	11:53	SW3550B8270D
dibenzofuran	< 1.9	1.9	ug/g	1	AJD	4/18/11	4092	4/19/11	11:53	SW3550B8270D
fluorene	< 1.9	1.9	ug/g	1	AJD	4/18/11	4092	4/19/11	11:53	SW3550B8270D
phenanthrene	**5.4**	1.9	ug/g	1	AJD	4/18/11	4092	4/19/11	11:53	SW3550B8270D
anthracene	< 1.9	1.9	ug/g	1	AJD	4/18/11	4092	4/19/11	11:53	SW3550B8270D
fluoranthene	**6.5**	1.9	ug/g	1	AJD	4/18/11	4092	4/19/11	11:53	SW3550B8270D
pyrene	**6.4**	1.9	ug/g	1	AJD	4/18/11	4092	4/19/11	11:53	SW3550B8270D
benzo(a)anthracene	**3.2**	1.9	ug/g	1	AJD	4/18/11	4092	4/19/11	11:53	SW3550B8270D
chrysene	**4.1**	1.9	ug/g	1	AJD	4/18/11	4092	4/19/11	11:53	SW3550B8270D
benzo(b)fluoranthene	**2.6**	1.9	ug/g	1	AJD	4/18/11	4092	4/19/11	11:53	SW3550B8270D
benzo(k)fluoranthene	**2.5**	1.9	ug/g	1	AJD	4/18/11	4092	4/19/11	11:53	SW3550B8270D
benzo(a)pyrene	**3.1**	1.9	ug/g	1	AJD	4/18/11	4092	4/19/11	11:53	SW3550B8270D
indeno(1,2,3-cd)pyrene	< 1.9	1.9	ug/g	1	AJD	4/18/11	4092	4/19/11	11:53	SW3550B8270D
dibenzo(a,h)anthracene	< 1.9	1.9	ug/g	1	AJD	4/18/11	4092	4/19/11	11:53	SW3550B8270D
benzo(g,h,i)perylene	< 1.9	1.9	ug/g	1	AJD	4/18/11	4092	4/19/11	11:53	SW3550B8270D
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**44**	43-116	%	1	AJD	4/18/11	4092	4/19/11	11:53	SW3550B8270D
o-terphenyl SUR	**54**	33-141	%	1	AJD	4/18/11	4092	4/19/11	11:53	SW3550B8270D

Project ID: Mica Factory 10001087
Job ID: 21283
Sample#: 21283-004
Sample ID: SS-5
Matrix: Solid Percent Dry: 51.8% Results expressed on a dry weight basis.
Sampled: 4/12/11 12:30

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 1.0	1.0	ug/g	1	AJD	4/18/11	4092	4/19/11	12:30	SW3550B8270D
2-methylnaphthalene	< 1.0	1.0	ug/g	1	AJD	4/18/11	4092	4/19/11	12:30	SW3550B8270D
acenaphthylene	< 1.0	1.0	ug/g	1	AJD	4/18/11	4092	4/19/11	12:30	SW3550B8270D
acenaphthene	< 1.0	1.0	ug/g	1	AJD	4/18/11	4092	4/19/11	12:30	SW3550B8270D
dibenzofuran	< 1.0	1.0	ug/g	1	AJD	4/18/11	4092	4/19/11	12:30	SW3550B8270D
fluorene	< 1.0	1.0	ug/g	1	AJD	4/18/11	4092	4/19/11	12:30	SW3550B8270D
phenanthrene	< 1.0	1.0	ug/g	1	AJD	4/18/11	4092	4/19/11	12:30	SW3550B8270D
anthracene	< 1.0	1.0	ug/g	1	AJD	4/18/11	4092	4/19/11	12:30	SW3550B8270D
fluoranthene	< 1.0	1.0	ug/g	1	AJD	4/18/11	4092	4/19/11	12:30	SW3550B8270D
pyrene	< 1.0	1.0	ug/g	1	AJD	4/18/11	4092	4/19/11	12:30	SW3550B8270D
benzo(a)anthracene	< 1.0	1.0	ug/g	1	AJD	4/18/11	4092	4/19/11	12:30	SW3550B8270D
chrysene	< 1.0	1.0	ug/g	1	AJD	4/18/11	4092	4/19/11	12:30	SW3550B8270D
benzo(b)fluoranthene	< 1.0	1.0	ug/g	1	AJD	4/18/11	4092	4/19/11	12:30	SW3550B8270D
benzo(k)fluoranthene	< 1.0	1.0	ug/g	1	AJD	4/18/11	4092	4/19/11	12:30	SW3550B8270D
benzo(a)pyrene	< 1.0	1.0	ug/g	1	AJD	4/18/11	4092	4/19/11	12:30	SW3550B8270D
indeno(1,2,3-cd)pyrene	< 1.0	1.0	ug/g	1	AJD	4/18/11	4092	4/19/11	12:30	SW3550B8270D
dibenzo(a,h)anthracene	< 1.0	1.0	ug/g	1	AJD	4/18/11	4092	4/19/11	12:30	SW3550B8270D
benzo(g,h,i)perylene	< 1.0	1.0	ug/g	1	AJD	4/18/11	4092	4/19/11	12:30	SW3550B8270D
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**99**	43-116	%	1	AJD	4/18/11	4092	4/19/11	12:30	SW3550B8270D
o-terphenyl SUR	**125**	33-141	%	1	AJD	4/18/11	4092	4/19/11	12:30	SW3550B8270D

Project ID: Mica Factory 10001087
Job ID: 21283
Sample#: 21283-005
Sample ID: SS-DUP
Matrix: Solid Percent Dry: 84% Results expressed on a dry weight basis.
Sampled: 4/12/11

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	**1.6**	0.6	ug/g	1	AJD	4/18/11	4092	4/19/11	13:07	SW3550B8270D
2-methylnaphthalene	< 0.6	0.6	ug/g	1	AJD	4/18/11	4092	4/19/11	13:07	SW3550B8270D
acenaphthylene	< 0.6	0.6	ug/g	1	AJD	4/18/11	4092	4/19/11	13:07	SW3550B8270D
acenaphthene	**0.9**	0.6	ug/g	1	AJD	4/18/11	4092	4/19/11	13:07	SW3550B8270D
dibenzofuran	**0.9**	0.6	ug/g	1	AJD	4/18/11	4092	4/19/11	13:07	SW3550B8270D
fluorene	**0.9**	0.6	ug/g	1	AJD	4/18/11	4092	4/19/11	13:07	SW3550B8270D
phenanthrene	**8.5**	0.6	ug/g	1	AJD	4/18/11	4092	4/19/11	13:07	SW3550B8270D
anthracene	**1.2**	0.6	ug/g	1	AJD	4/18/11	4092	4/19/11	13:07	SW3550B8270D
fluoranthene	**9.0**	0.6	ug/g	1	AJD	4/18/11	4092	4/19/11	13:07	SW3550B8270D
pyrene	**8.0**	0.6	ug/g	1	AJD	4/18/11	4092	4/19/11	13:07	SW3550B8270D
benzo(a)anthracene	**4.6**	0.6	ug/g	1	AJD	4/18/11	4092	4/19/11	13:07	SW3550B8270D
chrysene	**4.8**	0.6	ug/g	1	AJD	4/18/11	4092	4/19/11	13:07	SW3550B8270D
benzo(b)fluoranthene	**3.9**	0.6	ug/g	1	AJD	4/18/11	4092	4/19/11	13:07	SW3550B8270D
benzo(k)fluoranthene	**2.5**	0.6	ug/g	1	AJD	4/18/11	4092	4/19/11	13:07	SW3550B8270D
benzo(a)pyrene	**3.8**	0.6	ug/g	1	AJD	4/18/11	4092	4/19/11	13:07	SW3550B8270D
indeno(1,2,3-cd)pyrene	**1.6**	0.6	ug/g	1	AJD	4/18/11	4092	4/19/11	13:07	SW3550B8270D
dibenzo(a,h)anthracene	**0.7**	0.6	ug/g	1	AJD	4/18/11	4092	4/19/11	13:07	SW3550B8270D
benzo(g,h,i)perylene	**1.4**	0.6	ug/g	1	AJD	4/18/11	4092	4/19/11	13:07	SW3550B8270D
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**62**	43-116	%	1	AJD	4/18/11	4092	4/19/11	13:07	SW3550B8270D
o-terphenyl SUR	**79**	33-141	%	1	AJD	4/18/11	4092	4/19/11	13:07	SW3550B8270D

Project ID: Mica Factory 10001087

Job ID: 21283

Sample#: 21283-003

Sample ID: SS-3

Matrix: Solid Percent Dry: 24.8% Results expressed on a dry weight basis.

Sampled: 4/12/11 12:20

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
PCB-1016	< 0.6	0.6	ug/g	1	JLZ	4/18/11	4094	4/20/11	20:42	SW3540C8082A
PCB-1221	< 0.6	0.6	ug/g	1	JLZ	4/18/11	4094	4/20/11	20:42	SW3540C8082A
PCB-1232	< 0.6	0.6	ug/g	1	JLZ	4/18/11	4094	4/20/11	20:42	SW3540C8082A
PCB-1242	< 0.6	0.6	ug/g	1	JLZ	4/18/11	4094	4/20/11	20:42	SW3540C8082A
PCB-1248	< 0.6	0.6	ug/g	1	JLZ	4/18/11	4094	4/20/11	20:42	SW3540C8082A
PCB-1254	< 0.6	0.6	ug/g	1	JLZ	4/18/11	4094	4/20/11	20:42	SW3540C8082A
PCB-1260	< 0.6	0.6	ug/g	1	JLZ	4/18/11	4094	4/20/11	20:42	SW3540C8082A
Surrogate Recovery		**Limits**								
tetrachloro-m-xylene SUR	**79**	30-150	%	1	JLZ	4/18/11	4094	4/20/11	20:42	SW3540C8082A
decachlorobiphenyl SUR	**79**	30-150	%	1	JLZ	4/18/11	4094	4/20/11	20:42	SW3540C8082A

Sample#: 21283-004

Sample ID: SS-5

Matrix: Solid Percent Dry: 51.8% Results expressed on a dry weight basis.

Sampled: 4/12/11 12:30

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
PCB-1016	< 0.3	0.3	ug/g	1	JLZ	4/18/11	4094	4/20/11	21:13	SW3540C8082A
PCB-1221	< 0.3	0.3	ug/g	1	JLZ	4/18/11	4094	4/20/11	21:13	SW3540C8082A
PCB-1232	< 0.3	0.3	ug/g	1	JLZ	4/18/11	4094	4/20/11	21:13	SW3540C8082A
PCB-1242	< 0.3	0.3	ug/g	1	JLZ	4/18/11	4094	4/20/11	21:13	SW3540C8082A
PCB-1248	< 0.3	0.3	ug/g	1	JLZ	4/18/11	4094	4/20/11	21:13	SW3540C8082A
PCB-1254	< 0.3	0.3	ug/g	1	JLZ	4/18/11	4094	4/20/11	21:13	SW3540C8082A
PCB-1260	< 0.3	0.3	ug/g	1	JLZ	4/18/11	4094	4/20/11	21:13	SW3540C8082A
Surrogate Recovery		**Limits**								
tetrachloro-m-xylene SUR	**71**	30-150	%	1	JLZ	4/18/11	4094	4/20/11	21:13	SW3540C8082A
decachlorobiphenyl SUR	**86**	30-150	%	1	JLZ	4/18/11	4094	4/20/11	21:13	SW3540C8082A

Project ID: Mica Factory 10001087
Job ID: 21283

Sample#: 21283-007
Sample ID: BM-1
Matrix: Solid
Sampled: 4/12/11 11:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
PCB-1016	< 0.2	0.2	ug/g	1	JLZ	4/18/11	4094	4/20/11	21:43	SW3540C8082A
PCB-1221	< 0.2	0.2	ug/g	1	JLZ	4/18/11	4094	4/20/11	21:43	SW3540C8082A
PCB-1232	< 0.2	0.2	ug/g	1	JLZ	4/18/11	4094	4/20/11	21:43	SW3540C8082A
PCB-1242	< 0.2	0.2	ug/g	1	JLZ	4/18/11	4094	4/20/11	21:43	SW3540C8082A
PCB-1248	< 0.2	0.2	ug/g	1	JLZ	4/18/11	4094	4/20/11	21:43	SW3540C8082A
PCB-1254	**0.4**	0.2	ug/g	1	JLZ	4/18/11	4094	4/20/11	21:43	SW3540C8082A
PCB-1260	< 0.2	0.2	ug/g	1	JLZ	4/18/11	4094	4/20/11	21:43	SW3540C8082A
Surrogate Recovery		**Limits**								
tetrachloro-m-xylene SUR	**48**	30-150	%	1	JLZ	4/18/11	4094	4/20/11	21:43	SW3540C8082A
decachlorobiphenyl SUR	**53**	30-150	%	1	JLZ	4/18/11	4094	4/20/11	21:43	SW3540C8082A

Sample#: 21283-008
Sample ID: BM-2
Matrix: Solid
Sampled: 4/12/11 11:25

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
PCB-1016	< 0.4	0.4	ug/g	1	JLZ	4/20/11	4094	4/21/11	9:17	SW3540C8082A
PCB-1221	< 0.4	0.4	ug/g	1	JLZ	4/20/11	4094	4/21/11	9:17	SW3540C8082A
PCB-1232	< 0.4	0.4	ug/g	1	JLZ	4/20/11	4094	4/21/11	9:17	SW3540C8082A
PCB-1242	< 0.4	0.4	ug/g	1	JLZ	4/20/11	4094	4/21/11	9:17	SW3540C8082A
PCB-1248	< 0.4	0.4	ug/g	1	JLZ	4/20/11	4094	4/21/11	9:17	SW3540C8082A
PCB-1254	< 0.4	0.4	ug/g	1	JLZ	4/20/11	4094	4/21/11	9:17	SW3540C8082A
PCB-1260	< 0.4	0.4	ug/g	1	JLZ	4/20/11	4094	4/21/11	9:17	SW3540C8082A
Surrogate Recovery		**Limits**								
tetrachloro-m-xylene SUR	**40**	30-150	%	1	JLZ	4/20/11	4094	4/21/11	9:17	SW3540C8082A
decachlorobiphenyl SUR	**27** *	30-150	%	1	JLZ	4/20/11	4094	4/21/11	9:17	SW3540C8082A

**** The surrogate showed recovery outside the acceptance limits. No additional sample remained for re-analysis.***

Project ID: Mica Factory 10001087
Job ID: 21283

Sample#: 21283-009
Sample ID: BM-3
Matrix: Solid
Sampled: 4/12/11 11:40

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
PCB-1016	< 0.2	0.2	ug/g	1	JLZ	4/18/11	4094	4/20/11	22:14	SW3540C8082A
PCB-1221	< 0.2	0.2	ug/g	1	JLZ	4/18/11	4094	4/20/11	22:14	SW3540C8082A
PCB-1232	< 0.2	0.2	ug/g	1	JLZ	4/18/11	4094	4/20/11	22:14	SW3540C8082A
PCB-1242	< 0.2	0.2	ug/g	1	JLZ	4/18/11	4094	4/20/11	22:14	SW3540C8082A
PCB-1248	< 0.2	0.2	ug/g	1	JLZ	4/18/11	4094	4/20/11	22:14	SW3540C8082A
PCB-1254	< 0.2	0.2	ug/g	1	JLZ	4/18/11	4094	4/20/11	22:14	SW3540C8082A
PCB-1260	< 0.2	0.2	ug/g	1	JLZ	4/18/11	4094	4/20/11	22:14	SW3540C8082A
Surrogate Recovery		**Limits**								
tetrachloro-m-xylene SUR	**44**	30-150	%	1	JLZ	4/18/11	4094	4/20/11	22:14	SW3540C8082A
decachlorobiphenyl SUR	**49**	30-150	%	1	JLZ	4/18/11	4094	4/20/11	22:14	SW3540C8082A

Sample#: 21283-010
Sample ID: BM-DUP
Matrix: Solid
Sampled: 4/12/11

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
PCB-1016	< 0.2	0.2	ug/g	1	JLZ	4/18/11	4094	4/20/11	22:45	SW3540C8082A
PCB-1221	< 0.2	0.2	ug/g	1	JLZ	4/18/11	4094	4/20/11	22:45	SW3540C8082A
PCB-1232	< 0.2	0.2	ug/g	1	JLZ	4/18/11	4094	4/20/11	22:45	SW3540C8082A
PCB-1242	< 0.2	0.2	ug/g	1	JLZ	4/18/11	4094	4/20/11	22:45	SW3540C8082A
PCB-1248	< 0.2	0.2	ug/g	1	JLZ	4/18/11	4094	4/20/11	22:45	SW3540C8082A
PCB-1254	**0.3**	0.2	ug/g	1	JLZ	4/18/11	4094	4/20/11	22:45	SW3540C8082A
PCB-1260	< 0.2	0.2	ug/g	1	JLZ	4/18/11	4094	4/20/11	22:45	SW3540C8082A
Surrogate Recovery		**Limits**								
tetrachloro-m-xylene SUR	**76**	30-150	%	1	JLZ	4/18/11	4094	4/20/11	22:45	SW3540C8082A
decachlorobiphenyl SUR	**77**	30-150	%	1	JLZ	4/18/11	4094	4/20/11	22:45	SW3540C8082A

Project ID: Mica Factory 10001087
Job ID: 21283

Sample#: 21283-011
Sample ID: FS-1
Matrix: Solid
Sampled: 4/12/11 10:30

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
PCB-1016	< 0.2	0.2	ug/g	1	JLZ	4/18/11	4094	4/20/11	23:15	SW3540C8082A
PCB-1221	< 0.2	0.2	ug/g	1	JLZ	4/18/11	4094	4/20/11	23:15	SW3540C8082A
PCB-1232	< 0.2	0.2	ug/g	1	JLZ	4/18/11	4094	4/20/11	23:15	SW3540C8082A
PCB-1242	< 0.2	0.2	ug/g	1	JLZ	4/18/11	4094	4/20/11	23:15	SW3540C8082A
PCB-1248	< 0.2	0.2	ug/g	1	JLZ	4/18/11	4094	4/20/11	23:15	SW3540C8082A
PCB-1254	< 0.2	0.2	ug/g	1	JLZ	4/18/11	4094	4/20/11	23:15	SW3540C8082A
PCB-1260	< 0.2	0.2	ug/g	1	JLZ	4/18/11	4094	4/20/11	23:15	SW3540C8082A
Surrogate Recovery		**Limits**								
tetrachloro-m-xylene SUR	**55**	30-150	%	1	JLZ	4/18/11	4094	4/20/11	23:15	SW3540C8082A
decachlorobiphenyl SUR	**11** *	30-150	%	1	JLZ	4/18/11	4094	4/20/11	23:15	SW3540C8082A

**** The surrogate showed recovery outside the acceptance limits. Reanalysis of the sample showed similar results. Matrix interference suspected.***

Sample#: 21283-012
Sample ID: FS-2
Matrix: Solid
Sampled: 4/12/11 10:35

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
PCB-1016	< 0.2	0.2	ug/g	1	JLZ	4/20/11	4094	4/21/11	9:48	SW3540C8082A
PCB-1221	< 0.2	0.2	ug/g	1	JLZ	4/20/11	4094	4/21/11	9:48	SW3540C8082A
PCB-1232	< 0.2	0.2	ug/g	1	JLZ	4/20/11	4094	4/21/11	9:48	SW3540C8082A
PCB-1242	< 0.2	0.2	ug/g	1	JLZ	4/20/11	4094	4/21/11	9:48	SW3540C8082A
PCB-1248	< 0.2	0.2	ug/g	1	JLZ	4/20/11	4094	4/21/11	9:48	SW3540C8082A
PCB-1254	**0.2**	0.2	ug/g	1	JLZ	4/20/11	4094	4/21/11	9:48	SW3540C8082A
PCB-1260	< 0.2	0.2	ug/g	1	JLZ	4/20/11	4094	4/21/11	9:48	SW3540C8082A
Surrogate Recovery		**Limits**								
tetrachloro-m-xylene SUR	**59**	30-150	%	1	JLZ	4/20/11	4094	4/21/11	9:48	SW3540C8082A
decachlorobiphenyl SUR	**53**	30-150	%	1	JLZ	4/20/11	4094	4/21/11	9:48	SW3540C8082A

Project ID: Mica Factory 10001087
Job ID: 21283

Sample#: 21283-013
Sample ID: FS-3
Matrix: Solid
Sampled: 4/12/11 10:40

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
PCB-1016	< 0.2	0.2	ug/g	1	JLZ	4/20/11	4094	4/21/11	10:19	SW3540C8082A
PCB-1221	< 0.2	0.2	ug/g	1	JLZ	4/20/11	4094	4/21/11	10:19	SW3540C8082A
PCB-1232	< 0.2	0.2	ug/g	1	JLZ	4/20/11	4094	4/21/11	10:19	SW3540C8082A
PCB-1242	< 0.2	0.2	ug/g	1	JLZ	4/20/11	4094	4/21/11	10:19	SW3540C8082A
PCB-1248	< 0.2	0.2	ug/g	1	JLZ	4/20/11	4094	4/21/11	10:19	SW3540C8082A
PCB-1254	< 0.2	0.2	ug/g	1	JLZ	4/20/11	4094	4/21/11	10:19	SW3540C8082A
PCB-1260	< 0.2	0.2	ug/g	1	JLZ	4/20/11	4094	4/21/11	10:19	SW3540C8082A
Surrogate Recovery		**Limits**								
tetrachloro-m-xylene SUR	**63**	30-150	%	1	JLZ	4/20/11	4094	4/21/11	10:19	SW3540C8082A
decachlorobiphenyl SUR	**64**	30-150	%	1	JLZ	4/20/11	4094	4/21/11	10:19	SW3540C8082A

Sample#: 21283-014
Sample ID: FS-4
Matrix: Solid
Sampled: 4/12/11 10:45

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
PCB-1016	< 0.2	0.2	ug/g	1	JLZ	4/20/11	4094	4/21/11	10:49	SW3540C8082A
PCB-1221	< 0.2	0.2	ug/g	1	JLZ	4/20/11	4094	4/21/11	10:49	SW3540C8082A
PCB-1232	< 0.2	0.2	ug/g	1	JLZ	4/20/11	4094	4/21/11	10:49	SW3540C8082A
PCB-1242	< 0.2	0.2	ug/g	1	JLZ	4/20/11	4094	4/21/11	10:49	SW3540C8082A
PCB-1248	< 0.2	0.2	ug/g	1	JLZ	4/20/11	4094	4/21/11	10:49	SW3540C8082A
PCB-1254	< 0.2	0.2	ug/g	1	JLZ	4/20/11	4094	4/21/11	10:49	SW3540C8082A
PCB-1260	< 0.2	0.2	ug/g	1	JLZ	4/20/11	4094	4/21/11	10:49	SW3540C8082A
Surrogate Recovery		**Limits**								
tetrachloro-m-xylene SUR	**67**	30-150	%	1	JLZ	4/20/11	4094	4/21/11	10:49	SW3540C8082A
decachlorobiphenyl SUR	**70**	30-150	%	1	JLZ	4/20/11	4094	4/21/11	10:49	SW3540C8082A

Sample#: 21283-003
Sample ID: SS-3
Matrix: Solid Percent Dry: 24.8% Results expressed on a dry weight basis.
Sampled: 4/12/11 12:20

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
TPH C10-C36	< 770	770	ug/g	1	JLZ	4/18/11	4093	4/19/11	16:12	SW3550B8100m
Surrogate Recovery		**Limits**								
2-fluorobiphenyl SUR	**50**	40-140	%	1	JLZ	4/18/11	4093	4/19/11	16:12	SW3550B8100m
o-terphenyl SUR	**41**	40-140	%	1	JLZ	4/18/11	4093	4/19/11	16:12	SW3550B8100m

Project ID: Mica Factory 10001087

Job ID: 21283

Sample#: 21283-001

Sample ID: SS-1

Matrix: Solid Percent Dry: 81.8% Results expressed on a dry weight basis.

Sampled: 4/12/11 12:06

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Arsenic	**9.4**	0.6	ug/g	1	BJS	4/15/11	4090	4/15/11	17:33	SW3051A6010C
Barium	**84**	3	ug/g	1	BJS	4/15/11	4090	4/15/11	17:33	SW3051A6010C
Cadmium	**0.6**	0.2	ug/g	1	BJS	4/15/11	4090	4/15/11	17:33	SW3051A6010C
Chromium	**10**	3	ug/g	1	BJS	4/15/11	4090	4/15/11	17:33	SW3051A6010C
Lead	**810**	0.6	ug/g	1	BJS	4/15/11	4090	4/15/11	17:33	SW3051A6010C
Mercury	**0.87**	0.08	ug/g	1	BJS	4/19/11	4105	4/19/11	14:25	SW7471B
Selenium	< 3	3	ug/g	1	BJS	4/15/11	4090	4/15/11	17:33	SW3051A6010C
Silver	< 0.4	0.4	ug/g	1	BJS	4/15/11	4090	4/15/11	17:33	SW3051A6010C

Sample#: 21283-002

Sample ID: SS-2

Matrix: Solid Percent Dry: 32.9% Results expressed on a dry weight basis.

Sampled: 4/12/11 12:15

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Arsenic	**14**	1.3	ug/g	1	BJS	4/15/11	4090	4/15/11	17:41	SW3051A6010C
Barium	**580**	7	ug/g	1	BJS	4/15/11	4090	4/15/11	17:41	SW3051A6010C
Cadmium	**4.5**	0.5	ug/g	1	BJS	4/15/11	4090	4/15/11	17:41	SW3051A6010C
Chromium	**28**	7	ug/g	1	BJS	4/15/11	4090	4/15/11	17:41	SW3051A6010C
Lead	**5500**	1.3	ug/g	1	BJS	4/15/11	4090	4/15/11	17:41	SW3051A6010C
Mercury	**1.1**	0.18	ug/g	1	BJS	4/19/11	4105	4/19/11	14:47	SW7471B
Selenium	< 7	7	ug/g	1	BJS	4/15/11	4090	4/15/11	17:41	SW3051A6010C
Silver	< 0.9	0.9	ug/g	1	BJS	4/15/11	4090	4/15/11	17:41	SW3051A6010C

Sample#: 21283-003

Sample ID: SS-3

Matrix: Solid Percent Dry: 24.8% Results expressed on a dry weight basis.

Sampled: 4/12/11 12:20

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Arsenic	**17**	2.0	ug/g	1	BJS	4/15/11	4090	4/15/11	17:48	SW3051A6010C
Barium	**1000**	10	ug/g	1	BJS	4/15/11	4090	4/15/11	17:48	SW3051A6010C
Cadmium	**6.0**	0.8	ug/g	1	BJS	4/15/11	4090	4/15/11	17:48	SW3051A6010C
Chromium	**43**	10	ug/g	1	BJS	4/15/11	4090	4/15/11	17:48	SW3051A6010C
Lead	**8400**	2.0	ug/g	1	BJS	4/15/11	4090	4/15/11	17:48	SW3051A6010C
Mercury	**2.0**	0.25	ug/g	1	BJS	4/19/11	4105	4/19/11	14:45	SW7471B
Selenium	< 10	10	ug/g	1	BJS	4/15/11	4090	4/15/11	17:48	SW3051A6010C
Silver	< 1.4	1.4	ug/g	1	BJS	4/15/11	4090	4/15/11	17:48	SW3051A6010C

Project ID: Mica Factory 10001087

Job ID: 21283

Sample#: 21283-004

Sample ID: SS-5

Matrix: Solid Percent Dry: 51.8% Results expressed on a dry weight basis.

Sampled: 4/12/11 12:30

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Arsenic	**7.3**	0.7	ug/g	1	BJS	4/15/11	4090	4/15/11	18:31	SW3051A6010C
Barium	**250**	4	ug/g	1	BJS	4/15/11	4090	4/15/11	18:31	SW3051A6010C
Cadmium	**0.8**	0.3	ug/g	1	BJS	4/15/11	4090	4/15/11	18:31	SW3051A6010C
Chromium	**22**	4	ug/g	1	BJS	4/15/11	4090	4/15/11	18:31	SW3051A6010C
Lead	**3100**	0.7	ug/g	1	BJS	4/15/11	4090	4/15/11	18:31	SW3051A6010C
Mercury	< 0.12	0.12	ug/g	1	BJS	4/19/11	4105	4/19/11	14:44	SW7471B
Selenium	< 4	4	ug/g	1	BJS	4/15/11	4090	4/15/11	18:31	SW3051A6010C
Silver	< 0.5	0.5	ug/g	1	BJS	4/15/11	4090	4/15/11	18:31	SW3051A6010C

Sample#: 21283-005

Sample ID: SS-DUP

Matrix: Solid Percent Dry: 84% Results expressed on a dry weight basis.

Sampled: 4/12/11

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Arsenic	**19**	0.5	ug/g	1	BJS	4/15/11	4090	4/15/11	18:39	SW3051A6010C
Barium	**74**	3	ug/g	1	BJS	4/15/11	4090	4/15/11	18:39	SW3051A6010C
Cadmium	**0.6**	0.2	ug/g	1	BJS	4/15/11	4090	4/15/11	18:39	SW3051A6010C
Chromium	**9**	3	ug/g	1	BJS	4/15/11	4090	4/15/11	18:39	SW3051A6010C
Lead	**770**	0.5	ug/g	1	BJS	4/15/11	4090	4/15/11	18:39	SW3051A6010C
Mercury	**0.82**	0.07	ug/g	1	BJS	4/19/11	4105	4/19/11	14:42	SW7471B
Selenium	< 3	3	ug/g	1	BJS	4/15/11	4090	4/15/11	18:39	SW3051A6010C
Silver	< 0.4	0.4	ug/g	1	BJS	4/15/11	4090	4/15/11	18:39	SW3051A6010C

Quality Control Report

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

Case Narrative
Lab # 21283

Sample Receiving and Chain of Custody Discrepancies

Samples were received in acceptable condition, at 0 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

VOC: Sample 21283-002 and -003 did not meet the acceptance criteria for the extraction surrogate a,a,a-trifluorotoluene. This is likely a result of high moisture content in the sample.
PCB: The percent recovery for the surrogate, decachlorobiphenyl, for 21283-008 was outside the acceptance criteria. Matrix interference is suspected. No additional sample remained for re-analysis.
PCB: The percent recovery for the surrogate, decachlorobiphenyl, for 21283-012 was outside the acceptance criteria. Re-analysis of the sample showed similar results. Matrix interference is suspected.

Laboratory Control Sample Results

VOC: The MLCS/D4089 did not meet the acceptance criteria for dichlorodifluoromethane and 2,2-dichloropropane. These compounds are known to be problematic in the method. The MLCS/D4089 did not meet the acceptance criteria for t-butanol (TBA) 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.
Mercury: The relative percent difference between the LCS and LCSD4105 was outside the acceptance criteria for mercury. The percent recovery for this element in each QC parameter was within the acceptance criteria. No impact to the data suspected.

Matrix Spike/Matrix Spike Duplicate/Duplicate Results

Not requested for this project.

Other

EPH: The fractionation check sample (LCS) for the batch of silica gel in use for these samples met the method acceptance criteria.
VOC: Dilution was required due to the foaming properties of sample 21283-003.
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	MB4089	dichlorodifluoromethane		<	0.1	ug/g					
		chloromethane		<	0.1	ug/g					
		vinyl chloride		<	0.1	ug/g					
		bromomethane		<	0.2	ug/g					
		chloroethane		<	0.1	ug/g					
		trichlorofluoromethane		<	0.1	ug/g					
		diethyl ether		<	0.5	ug/g					
		acetone		<	2.5	ug/g					
		1,1-dichloroethene		<	0.1	ug/g					
		methylene chloride		<	0.2	ug/g					
		carbon disulfide		<	0.1	ug/g					
		methyl t-butyl ether (MTBE)		<	0.1	ug/g					
		trans-1,2-dichloroethene		<	0.1	ug/g					
		isopropyl ether (DIPE)		<	0.1	ug/g					
		ethyl t-butyl ether (ETBE)		<	0.1	ug/g					
		1,1-dichloroethane		<	0.1	ug/g					
		t-butanol (TBA)		<	2.5	ug/g					
		2-butanone (MEK)		<	0.5	ug/g					
		2,2-dichloropropane		<	0.1	ug/g					
		cis-1,2-dichloroethene		<	0.1	ug/g					
		chloroform		<	0.1	ug/g					
		bromochloromethane		<	0.1	ug/g					
		tetrahydrofuran (THF)		<	0.5	ug/g					
		1,1,1-trichloroethane		<	0.1	ug/g					
		1,1-dichloropropene		<	0.1	ug/g					
		t-amyl-methyl ether (TAME)		<	0.1	ug/g					
		carbon tetrachloride		<	0.1	ug/g					
		1,2-dichloroethane		<	0.1	ug/g					
		benzene		<	0.1	ug/g					
		trichloroethene		<	0.1	ug/g					
		1,2-dichloropropane		<	0.1	ug/g					
		bromodichloromethane		<	0.1	ug/g					
		1,4-dioxane		<	2.5	ug/g					
		dibromomethane		<	0.1	ug/g					
		4-methyl-2-pentanone (MIBK)		<	0.5	ug/g					
		cis-1,3-dichloropropene		<	0.1	ug/g					
		toluene		<	0.1	ug/g					
		trans-1,3-dichloropropene		<	0.1	ug/g					
		2-hexanone		<	0.5	ug/g					
		1,1,2-trichloroethane		<	0.1	ug/g					
		1,3-dichloropropane		<	0.1	ug/g					
		tetrachloroethene		<	0.1	ug/g					
		dibromochloromethane		<	0.1	ug/g					
		1,2-dibromoethane (EDB)		<	0.1	ug/g					
		chlorobenzene		<	0.1	ug/g					
		1,1,1,2-tetrachloroethane		<	0.1	ug/g					
		ethylbenzene		<	0.1	ug/g					
		m&p-xylenes		<	0.1	ug/g					
		o-xylene		<	0.1	ug/g					
		styrene		<	0.1	ug/g					

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5035A8260B	MB4089	bromoform		<	0.1	ug/g						
		isopropylbenzene		<	0.1	ug/g						
		1,1,2,2-tetrachloroethane		<	0.1	ug/g						
		1,2,3-trichloropropane		<	0.1	ug/g						
		n-propylbenzene		<	0.1	ug/g						
		bromobenzene		<	0.1	ug/g						
		1,3,5-trimethylbenzene		<	0.1	ug/g						
		2-chlorotoluene		<	0.1	ug/g						
		4-chlorotoluene		<	0.1	ug/g						
		tert-butylbenzene		<	0.1	ug/g						
		1,2,4-trimethylbenzene		<	0.1	ug/g						
		sec-butylbenzene		<	0.1	ug/g						
		1,3-dichlorobenzene		<	0.1	ug/g						
		4-isopropyltoluene		<	0.1	ug/g						
		1,4-dichlorobenzene		<	0.1	ug/g						
		1,2-dichlorobenzene		<	0.1	ug/g						
		n-butylbenzene		<	0.1	ug/g						
		1,2-dibromo-3-chloropropane		<	0.1	ug/g						
		1,2,4-trichlorobenzene		<	0.1	ug/g						
		1,3,5-trichlorobenzene		<	0.1	ug/g						
		hexachlorobutadiene		<	0.1	ug/g						
		naphthalene		<	0.2	ug/g						
		1,2,3-trichlorobenzene		<	0.1	ug/g						
		dibromofluoromethane SUR			99	%			78	114		
		toluene-D8 SUR			99	%			88	110		
		4-bromofluorobenzene SUR			98	%			86	115		
		a,a,a-trifluorotoluene SUR			87	%			70	130		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5035A8260B	MLCS4089	dichlorodifluoromethane			0.6	ug/g	1	60	*	70	130		
		chloromethane			0.8	ug/g	1	84		70	130		
		vinyl chloride			0.8	ug/g	1	83		70	130		
		bromomethane			0.7	ug/g	1	71		70	130		
		chloroethane			1.0	ug/g	1	97		70	130		
		trichlorofluoromethane			0.9	ug/g	1	88		70	130		
		diethyl ether			1.1	ug/g	1	107		70	130		
		acetone		<	2.5	ug/g	1	114					
		1,1-dichloroethene			0.7	ug/g	1	74		70	130		
		methylene chloride			1.0	ug/g	1	103		70	130		
		carbon disulfide			0.9	ug/g	1	86		70	130		
		methyl t-butyl ether (MTBE)			1.1	ug/g	1	106		70	130		
		trans-1,2-dichloroethene			0.9	ug/g	1	92		70	130		
		isopropyl ether (DIPE)			1.0	ug/g	1	100		70	130		
		ethyl t-butyl ether (ETBE)			1.0	ug/g	1	103		70	130		
		1,1-dichloroethane			1.0	ug/g	1	95		70	130		
		t-butanol (TBA)			7.2	ug/g	5	144	*	70	130		
		2-butanone (MEK)			1.2	ug/g	1	116		70	130		
		2,2-dichloropropane			0.6	ug/g	1	57	*	70	130		
		cis-1,2-dichloroethene			1.0	ug/g	1	98		70	130		
		chloroform			1.0	ug/g	1	99		70	130		
		bromochloromethane			1.0	ug/g	1	97		70	130		
		tetrahydrofuran (THF)			1.0	ug/g	1	102		70	130		
		1,1,1-trichloroethane			0.9	ug/g	1	93		70	130		
		1,1-dichloropropene			0.9	ug/g	1	94		70	130		
		t-amyl-methyl ether (TAME)			1.0	ug/g	1	105		70	130		
		carbon tetrachloride			0.7	ug/g	1	74		70	130		
		1,2-dichloroethane			1.0	ug/g	1	105		70	130		
		benzene			1.0	ug/g	1	99		70	130		
		trichloroethene			0.9	ug/g	1	89		70	130		
		1,2-dichloropropane			1.0	ug/g	1	95		70	130		
		bromodichloromethane			0.9	ug/g	1	91		70	130		
		1,4-dioxane			2.6	ug/g	2	132	*	70	130		
		dibromomethane			1.0	ug/g	1	100		70	130		
		4-methyl-2-pentanone (MIBK)			1.0	ug/g	1	98		70	130		
		cis-1,3-dichloropropene			0.9	ug/g	1	88		70	130		
		toluene			1.0	ug/g	1	103		70	130		
		trans-1,3-dichloropropene			0.8	ug/g	1	77		70	130		
		2-hexanone			0.9	ug/g	1	86		70	130		
		1,1,2-trichloroethane			1.1	ug/g	1	106		70	130		
		1,3-dichloropropane			1.0	ug/g	1	102		70	130		
		tetrachloroethene			1.0	ug/g	1	96		70	130		
		dibromochloromethane			0.8	ug/g	1	84		70	130		
		1,2-dibromoethane (EDB)			1.0	ug/g	1	96		70	130		
		chlorobenzene			1.0	ug/g	1	102		70	130		
		1,1,1,2-tetrachloroethane			0.9	ug/g	1	90		70	130		
		ethylbenzene			1.1	ug/g	1	110		70	130		
		m&p-xylenes			2.2	ug/g	2	111		70	130		
		o-xylene			1.1	ug/g	1	110		70	130		
		styrene			1.1	ug/g	1	108		70	130		
		bromoform			0.8	ug/g	1	85		70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5035A8260B	MLCS4089	isopropylbenzene		1.1	ug/g	1	110	70	130		
		1,1,2,2-tetrachloroethane		1.0	ug/g	1	105	70	130		
		1,2,3-trichloropropane		1.0	ug/g	1	102	70	130		
		n-propylbenzene		1.0	ug/g	1	100	70	130		
		bromobenzene		1.0	ug/g	1	102	70	130		
		1,3,5-trimethylbenzene		1.0	ug/g	1	102	70	130		
		2-chlorotoluene		1.0	ug/g	1	101	70	130		
		4-chlorotoluene		1.1	ug/g	1	105	70	130		
		tert-butylbenzene		1.0	ug/g	1	100	70	130		
		1,2,4-trimethylbenzene		1.0	ug/g	1	105	70	130		
		sec-butylbenzene		1.0	ug/g	1	96	70	130		
		1,3-dichlorobenzene		1.0	ug/g	1	102	70	130		
		4-isopropyltoluene		0.9	ug/g	1	92	70	130		
		1,4-dichlorobenzene		1.0	ug/g	1	98	70	130		
		1,2-dichlorobenzene		1.1	ug/g	1	107	70	130		
		n-butylbenzene		0.9	ug/g	1	90	70	130		
		1,2-dibromo-3-chloropropane		0.8	ug/g	1	77	70	130		
		1,2,4-trichlorobenzene		0.9	ug/g	1	87	70	130		
		1,3,5-trichlorobenzene		1.0	ug/g	1	97	70	130		
		hexachlorobutadiene		0.9	ug/g	1	85	70	130		
		naphthalene		0.9	ug/g	1	94	70	130		
		1,2,3-trichlorobenzene		0.9	ug/g	1	89	70	130		
		dibromofluoromethane SUR		98	%			78	114		
		toluene-D8 SUR		103	%			88	110		
		4-bromofluorobenzene SUR		111	%			86	115		
		a,a,a-trifluorotoluene SUR		88	%			70	130		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5035A8260B	MLCSD4089	dichlorodifluoromethane			0.6	ug/g	1	60	*	70	130	1	30
		chloromethane			0.8	ug/g	1	82		70	130	2	30
		vinyl chloride			0.8	ug/g	1	82		70	130	1	30
		bromomethane			0.9	ug/g	1	86		70	130	19	30
		chloroethane			1.0	ug/g	1	101		70	130	4	30
		trichlorofluoromethane			0.9	ug/g	1	92		70	130	5	30
		diethyl ether			1.1	ug/g	1	105		70	130	2	30
		acetone		<	2.5	ug/g	1	122				7	30
		1,1-dichloroethene			0.8	ug/g	1	76		70	130	4	30
		methylene chloride			1.0	ug/g	1	103		70	130	1	30
		carbon disulfide			0.9	ug/g	1	89		70	130	3	30
		methyl t-butyl ether (MTBE)			1.1	ug/g	1	107		70	130	2	30
		trans-1,2-dichloroethene			0.9	ug/g	1	94		70	130	2	30
		isopropyl ether (DIPE)			1.0	ug/g	1	103		70	130	4	30
		ethyl t-butyl ether (ETBE)			1.1	ug/g	1	106		70	130	3	30
		1,1-dichloroethane			1.0	ug/g	1	100		70	130	5	30
		t-butanol (TBA)			7.3	ug/g	5	147	*	70	130	2	30
		2-butanone (MEK)			1.1	ug/g	1	110		70	130	6	30
		2,2-dichloropropane			0.6	ug/g	1	58	*	70	130	2	30
		cis-1,2-dichloroethene			1.0	ug/g	1	102		70	130	4	30
		chloroform			1.0	ug/g	1	102		70	130	3	30
		bromochloromethane			0.9	ug/g	1	95		70	130	2	30
		tetrahydrofuran (THF)			1.1	ug/g	1	106		70	130	3	30
		1,1,1-trichloroethane			0.9	ug/g	1	93		70	130	0	30
		1,1-dichloropropene			1.0	ug/g	1	96		70	130	2	30
		t-amyl-methyl ether (TAME)			1.1	ug/g	1	109		70	130	4	30
		carbon tetrachloride			0.7	ug/g	1	73		70	130	1	30
		1,2-dichloroethane			1.1	ug/g	1	107		70	130	2	30
		benzene			1.0	ug/g	1	102		70	130	3	30
		trichloroethene			0.9	ug/g	1	94		70	130	5	30
		1,2-dichloropropane			1.0	ug/g	1	99		70	130	4	30
		bromodichloromethane			0.9	ug/g	1	90		70	130	1	30
		1,4-dioxane		<	2.5	ug/g	2	120		70	130	9	30
		dibromomethane			1.0	ug/g	1	100		70	130	0	30
		4-methyl-2-pentanone (MIBK)			1.1	ug/g	1	106		70	130	8	30
		cis-1,3-dichloropropene			0.9	ug/g	1	89		70	130	1	30
		toluene			1.1	ug/g	1	105		70	130	2	30
		trans-1,3-dichloropropene			0.8	ug/g	1	76		70	130	2	30
		2-hexanone			0.9	ug/g	1	90		70	130	5	30
		1,1,2-trichloroethane			1.0	ug/g	1	104		70	130	2	30
		1,3-dichloropropane			1.1	ug/g	1	105		70	130	3	30
		tetrachloroethene			1.0	ug/g	1	100		70	130	4	30
		dibromochloromethane			0.9	ug/g	1	88		70	130	4	30
		1,2-dibromoethane (EDB)			1.0	ug/g	1	100		70	130	4	30
		chlorobenzene			1.1	ug/g	1	108		70	130	6	30
		1,1,1,2-tetrachloroethane			0.9	ug/g	1	91		70	130	1	30
		ethylbenzene			1.1	ug/g	1	113		70	130	3	30
		m&p-xylenes			2.3	ug/g	2	115		70	130	4	30
		o-xylene			1.1	ug/g	1	113		70	130	3	30
		styrene			1.1	ug/g	1	113		70	130	4	30
		bromoform			0.9	ug/g	1	88		70	130	4	30

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5035A8260B	MLCSD4089	isopropylbenzene		1.2	ug/g	1	115	70	130	5	30
		1,1,2,2-tetrachloroethane		1.1	ug/g	1	108	70	130	3	30
		1,2,3-trichloropropane		1.1	ug/g	1	109	70	130	6	30
		n-propylbenzene		1.1	ug/g	1	109	70	130	8	30
		bromobenzene		1.1	ug/g	1	109	70	130	7	30
		1,3,5-trimethylbenzene		1.1	ug/g	1	110	70	130	8	30
		2-chlorotoluene		1.1	ug/g	1	114	70	130	12	30
		4-chlorotoluene		1.1	ug/g	1	110	70	130	5	30
		tert-butylbenzene		1.1	ug/g	1	111	70	130	10	30
		1,2,4-trimethylbenzene		1.1	ug/g	1	112	70	130	7	30
		sec-butylbenzene		1.0	ug/g	1	105	70	130	9	30
		1,3-dichlorobenzene		1.1	ug/g	1	110	70	130	8	30
		4-isopropyltoluene		1.0	ug/g	1	99	70	130	8	30
		1,4-dichlorobenzene		1.0	ug/g	1	104	70	130	6	30
		1,2-dichlorobenzene		1.2	ug/g	1	117	70	130	9	30
		n-butylbenzene		1.0	ug/g	1	95	70	130	6	30
		1,2-dibromo-3-chloropropane		0.8	ug/g	1	78	70	130	1	30
		1,2,4-trichlorobenzene		0.9	ug/g	1	93	70	130	7	30
		1,3,5-trichlorobenzene		1.0	ug/g	1	98	70	130	0	30
		hexachlorobutadiene		0.9	ug/g	1	92	70	130	7	30
		naphthalene		1.0	ug/g	1	105	70	130	10	30
		1,2,3-trichlorobenzene		1.0	ug/g	1	99	70	130	11	30
		dibromofluoromethane SUR		99	%			78	114		
		toluene-D8 SUR		100	%			88	110		
		4-bromofluorobenzene SUR		114	%			86	115		
		a,a,a-trifluorotoluene SUR		90	%			70	130		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW3540C8082A	BLK4094	PCB-1016		<	0.1	ug/g						
		PCB-1221		<	0.1	ug/g						
		PCB-1232		<	0.1	ug/g						
		PCB-1242		<	0.1	ug/g						
		PCB-1248		<	0.1	ug/g						
		PCB-1254		<	0.1	ug/g						
		PCB-1260		<	0.1	ug/g						
		tetrachloro-m-xylene SUR			58	%			30	150		
		decachlorobiphenyl SUR			77	%			30	150		
SW3540C8082A	LCS4094	PCB-1016			1.4	ug/g	2	71	40	140		
		PCB-1221		<	0.1	ug/g						
		PCB-1232		<	0.1	ug/g						
		PCB-1242		<	0.1	ug/g						
		PCB-1248		<	0.1	ug/g						
		PCB-1254		<	0.1	ug/g						
		PCB-1260			1.7	ug/g	2	85	40	140		
		tetrachloro-m-xylene SUR			58	%			30	150		
		decachlorobiphenyl SUR			81	%			30	150		
SW3540C8082A	LCSD4094	PCB-1016			1.3	ug/g	2	67	40	140	5	30
		PCB-1221		<	0.1	ug/g						
		PCB-1232		<	0.1	ug/g						
		PCB-1242		<	0.1	ug/g						
		PCB-1248		<	0.1	ug/g						
		PCB-1254		<	0.1	ug/g						
		PCB-1260			1.7	ug/g	2	83	40	140	2	30
		tetrachloro-m-xylene SUR			57	%			30	150		
		decachlorobiphenyl SUR			77	%			30	150		
SW3550B8100	BLK4093	TPH C10-C36		<	200	ug/g						
		2-fluorobiphenyl SUR			76	%			40	140		
		o-terphenyl SUR			68	%			40	140		
SW3550B8100	LCS4093	TPH C10-C36			2200	ug/g	2500	87	40	140		
		2-fluorobiphenyl SUR			94	%			40	140		
		o-terphenyl SUR			81	%			40	140		
SW3550B8100	MS4093	TPH C10-C36	21291-003		2400	ug/g	2963	80	40	140		
		2-fluorobiphenyl SUR	21291-003		89	%			40	140		
		o-terphenyl SUR	21291-003		69	%			40	140		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW3550B8270D	BLK4092	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			70	%			43	116		
		o-terphenyl SUR			94	%			33	141		
SW3550B8270D	DUP4092	naphthalene	21318-011	<	0.55	ug/g						30
		2-methylnaphthalene	21318-011	<	0.55	ug/g						30
		acenaphthylene	21318-011	<	0.55	ug/g						30
		acenaphthene	21318-011	<	0.55	ug/g						30
		dibenzofuran	21318-011	<	0.55	ug/g						30
		fluorene	21318-011	<	0.55	ug/g						30
		phenanthrene	21318-011		1.3	ug/g					24	30
		anthracene	21318-011	<	0.55	ug/g						30
		fluoranthene	21318-011		2.5	ug/g					6	30
		pyrene	21318-011		2.7	ug/g					11	30
		benzo(a)anthracene	21318-011		1.5	ug/g					3	30
		chrysene	21318-011		1.6	ug/g					5	30
		benzo(b)fluoranthene	21318-011		1.3	ug/g					11	30
		benzo(k)fluoranthene	21318-011		1.8	ug/g					70	30
		benzo(a)pyrene	21318-011		1.5	ug/g					3	30
		indeno(1,2,3-cd)pyrene	21318-011	<	0.55	ug/g						30
		dibenzo(a,h)anthracene	21318-011	<	0.55	ug/g						30
		benzo(g,h,i)perylene	21318-011	<	0.55	ug/g						30
		2-fluorobiphenyl SUR	21318-011		68	%			43	116		
		o-terphenyl SUR	21318-011		91	%			33	141		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW3550B8270D	LCS4092	naphthalene			3.1	ug/g	4	78	40	140		
		2-methylnaphthalene			2.9	ug/g	4	72	40	140		
		acenaphthylene			3.1	ug/g	4	77	40	140		
		acenaphthene			3.1	ug/g	4	78	40	140		
		dibenzofuran		<	0.50	ug/g						
		fluorene			3.0	ug/g	4	74	40	140		
		phenanthrene			3.0	ug/g	4	76	40	140		
		anthracene			2.9	ug/g	4	73	40	140		
		fluoranthene			2.7	ug/g	4	68	40	140		
		pyrene			3.3	ug/g	4	82	40	140		
		benzo(a)anthracene			3.6	ug/g	4	90	40	140		
		chrysene			3.7	ug/g	4	92	40	140		
		benzo(b)fluoranthene			2.8	ug/g	4	69	40	140		
		benzo(k)fluoranthene			3.4	ug/g	4	85	40	140		
		benzo(a)pyrene			3.2	ug/g	4	79	40	140		
		indeno(1,2,3-cd)pyrene			3.3	ug/g	4	83	40	140		
		dibenzo(a,h)anthracene			3.2	ug/g	4	80	40	140		
		benzo(g,h,i)perylene			3.2	ug/g	4	79	40	140		
		2-fluorobiphenyl SUR			74	%			43	116		
		o-terphenyl SUR			97	%			33	141		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW3550B8270D	MS4092	naphthalene	21318-001		4.1	ug/g	4.96	83		40	140		
		2-methylnaphthalene	21318-001		4.0	ug/g	4.96	81		40	140		
		acenaphthylene	21318-001		4.0	ug/g	4.96	80		40	140		
		acenaphthene	21318-001		4.1	ug/g	4.96	82		40	140		
		dibenzofuran	21318-001	<	0.62	ug/g							
		fluorene	21318-001		3.9	ug/g	4.96	78		40	140		
		phenanthrene	21318-001		4.2	ug/g	4.96	64		40	140		
		anthracene	21318-001		4.1	ug/g	4.96	77		40	140		
		fluoranthene	21318-001		3.8	ug/g	4.96	52		40	140		
		pyrene	21318-001		4.7	ug/g	4.96	73		40	140		
		benzo(a)anthracene	21318-001		4.7	ug/g	4.96	82		40	140		
		chrysene	21318-001		4.6	ug/g	4.96	79		40	140		
		benzo(b)fluoranthene	21318-001		4.8	ug/g	4.96	87		40	140		
		benzo(k)fluoranthene	21318-001		5.5	ug/g	4.96	101		40	140		
		benzo(a)pyrene	21318-001		4.2	ug/g	4.96	74		40	140		
		indeno(1,2,3-cd)pyrene	21318-001		1.9	ug/g	4.96	33	*	40	140		
		dibenzo(a,h)anthracene	21318-001		1.9	ug/g	4.96	36	*	40	140		
		benzo(g,h,i)perylene	21318-001		1.3	ug/g	4.96	21	*	40	140		
		2-fluorobiphenyl SUR	21318-001		69	%				43	116		
		o-terphenyl SUR	21318-001		94	%				33	141		
SW3550B8270D	MS4092	naphthalene	21318-011		3.6	ug/g	4.36	82		40	140		
		2-methylnaphthalene	21318-011		3.7	ug/g	4.36	84		40	140		
		acenaphthylene	21318-011		3.6	ug/g	4.36	80		40	140		
		acenaphthene	21318-011		3.7	ug/g	4.36	84		40	140		
		dibenzofuran	21318-011	<	0.55	ug/g							
		fluorene	21318-011		3.5	ug/g	4.36	80		40	140		
		phenanthrene	21318-011		4.8	ug/g	4.36	86		40	140		
		anthracene	21318-011		3.8	ug/g	4.36	83		40	140		
		fluoranthene	21318-011		5.8	ug/g	4.36	79		40	140		
		pyrene	21318-011		6.7	ug/g	4.36	98		40	140		
		benzo(a)anthracene	21318-011		5.6	ug/g	4.36	94		40	140		
		chrysene	21318-011		5.8	ug/g	4.36	98		40	140		
		benzo(b)fluoranthene	21318-011		6.9	ug/g	4.36	124		40	140		
		benzo(k)fluoranthene	21318-011		5.2	ug/g	4.36	101		40	140		
		benzo(a)pyrene	21318-011		5.2	ug/g	4.36	86		40	140		
		indeno(1,2,3-cd)pyrene	21318-011		2.1	ug/g	4.36	30	*	40	140		
		dibenzo(a,h)anthracene	21318-011		2.1	ug/g	4.36	41		40	140		
		benzo(g,h,i)perylene	21318-011		1.7	ug/g	4.36	19	*	40	140		
		2-fluorobiphenyl SUR	21318-011		71	%				43	116		
		o-terphenyl SUR	21318-011		95	%				33	141		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD		RPD Limit
SW3051A6010C	BLK4090	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	CRM4090	Silver			39	ug/g	38		25.1	51.9			
		Arsenic			420	ug/g	400		292	508			
		Barium			24	ug/g	25		0	51.3			
		Cadmium			17	ug/g	15		8.71	22			
		Chromium			13	ug/g	14		2.45	24.7			
		Lead			5100	ug/g	5100		3753	6469			
		Selenium			6.0	ug/g	6.6		0	18.4			
SW3051A6010C	CRMD4090	Silver			37	ug/g	38		25.1	51.9	5		20
		Arsenic			400	ug/g	400		292	508	7		20
		Barium			23	ug/g	25		0	51.3	3		20
		Cadmium			16	ug/g	15		8.71	22	6		20
		Chromium			14	ug/g	14		2.45	24.7	7		20
		Lead			5000	ug/g	5100		3753	6469	3		20
		Selenium			6.6	ug/g	6.6		0	18.4	9		20
SW3051A6010C	DUP4090	Lead	21274-003		4.2	ug/g					5		35
SW7471B	BLK4105	Mercury		<	0.02	ug/g							
SW7471B	CRM4105	Mercury			1.1	ug/g	1.1		0.49	1.76			
SW7471B	CRMD4105	Mercury			1.3	ug/g	1.1		0.49	1.76	21	*	20
SW7471B	MS4105	Mercury	21291-002		0.40	ug/g	0.173	104	75	125			

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

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST 21283

Company Name: CREDERE ASSOCIATES
Company Address: 776 Main St, Westbrook, ME
Report To: Silas Canavan
Phone #: 802-989-2337
Invoice To: Credere Associates

Project Name: Mica Factory
Project #: 10001087
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 # Brownfields ☐ 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
- ☐ 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:
- ☐ 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
- Grab (G) or Composite (C)

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	Matrix: SOLID	Matrix: OTHER	Pres.: HCl	Pres.: HNO_3	Pres.: H_2SO_4	Pres.: NaOH	Pres.: MeOH	Pres.: OTHER (Specify)	Sampling: DATE	Sampling: TIME	Sampling: SAMPLER	VOC 8260 NHDES	TPH	8270PAH	8082 PCB	RCRA Metals	Grab (G) or Composite (C)
21283-01	SS-1	2		X						X		4/12/11	1206	SC	X		X		X	G
-02	SS-2	2		|						|		|	1215	|	X		X		X	|
-03	SS-3	3		|						|		|	1220	|	X	X	X	X	X	|
-04	SS-5	2		|						|		|	1230	|	X		X	X	X	|
-05	SS-DUP	2								|					X		X		X	|
-06	TRIP BLANK	1								|		4/6/11			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) scanavan@crederellc.com
☐ HARD COPY REQUIRED ☐ FAX (FAX#)___ ☐ OTHER (specify)___

RECEIVED ON ICE ☒ YES ☐ NO
TEMPERATURE 0 °C

CUSTODY RECORD

Relinquished by Sampler:	Date	Time	Received by:	Date	Time
[signature]	4/13/11	10:52	[signature]	4/13/11	10:32
Relinquished by:	Date	Time	Received by:	Date	Time
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
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

21283

Company Name: CREDERE ASSOCIATES
Company Address: 776 MAIN ST, WESTBROOK, ME
Report To: Silas Canavan
Phone #: 802-989-2337
Invoice To: Credere Associates

Project Name: Mica Feeder
Project #: 10001087
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 # Brownfields ☐ NH GREE/ODD Fund Pricing
PO #

ANALYSIS REQUEST

☐ VOC 8260 ☐ VOC 8260 NHDES ☐ VOC 8260 MADEP
☐ VOC 624 ☐ VOC BTEX ☐ MBE, 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
X 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
☐ Total Metals-list:
☐ 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
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
21283-07	BM-1	1		X								4/12/11	1100	JC
-08	BM-2	|		|							|	1125	|
-09	BM-3	|		|							|	1140	|
-10	BM-DUP	|		|							|	[illegible]	|
-11	FS-1	|		|							|	1030	|
-12	FS-2	|		|							|	1035	|
-13	FS-3	|		|							|	1040	|
-14	FS-4	|		|							|	1045	|

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

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

SPECIAL INSTRUCTIONS

REPORTING INSTRUCTIONS ☒ PDF (e-mail address) SCanavan@credere llc.com
☐ HARD COPY REQUIRED ☐ FAX (FAX#) _____ ☐ OTHER (specify) _____

RECEIVED ON ICE ☒ YES ☐ NO
TEMPERATURE 0 °C

CUSTODY RECORD
QSD-01 Revision 12/23/10

	Date	Time		Date	Time
Relinquished by Sampler:	4/13/11	10:52	Received by:	4/13/11	1037
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by Laboratory: Way Bill#:	Date	Time