1 Fountain Square
Chattanooga, TN 37402
423 294 1011
unum.com

November 17, 2014

H. Curtis Spalding
Regional Administrator
U.S. Environmental Protection Agency
Region One
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Dear Mr. Spalding,

Unum Life Insurance Company of America ("UNUM") recently discovered that a small amount of caulking had fallen from the side of one of its buildings in Portland, Maine. Subsequent investigation indicated that some of this caulking contained PCBs, and some of the PCBs had entered soil beneath the landscaping stone that surrounds the building.

UNUM has prepared a risk-based work plan for managing this situation. That plan, prepared in accordance with the regulations promulgated at 40 C.F.R. § 761.61 (c), is attached and incorporated herein.

UNUM requests an opportunity to meet with you and your staff sometime within the next sixty days to discuss its plan.

Please call me with any questions.

Sincerely yours,

Richard Meadows

Copy (with enclosure):

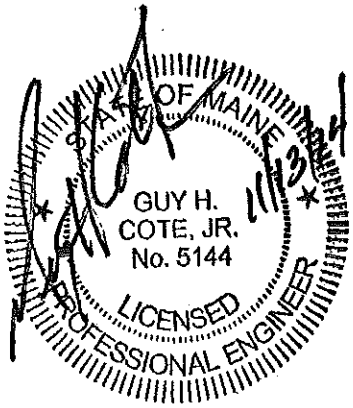
Patricia Aho
Commissioner
Maine Department of Environmental Protection
17 State House Station
28 Tyson Drive
Augusta, Maine 04333-0017

City of Portland, Public Health Division
389 Congress Street
Portland, Maine 04101

RISK-BASED CLEANUP PLAN FOR PCBs IN SOIL AND STONE

UNUM
PORTLAND, MAINE

November 14, 2014



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4 Blanchard Road, PO Box 85A, Cumberland Center, ME 04021 • Phone 207.829.5016 • Fax 207.829.5692 • www.smemaine.com

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RISK-BASED CLEANUP PLAN
FOR PCBs IN SOIL AND STONE
UNUM
PORTLAND, MAINE

1.0 INTRODUCTION AND BACKGROUND

Unum Life Insurance Company of America ("UNUM") owns and occupies an office building (herein referred to as HO-1), located at 2211 Congress Street, Portland, Maine. The HO-1 building was originally constructed in about 1970, with major additions to the building being completed in 1980. During recent renovations of HO-1, UNUM became aware of the possible presence of polychlorinated biphenyls (PCBs) in building materials. U.S.EPA guidance indicates that building materials used during the 1950s through the 1970s (particularly caulking around windows, doors, and expansion joints) may contain polychlorinated biphenyls (PCBs).

UNUM retained Darmody P.A. (Darmody) to provide guidance on compliance with PCB regulations and PCB remediation. Darmody retained Sevee and Maher Engineers Inc. (SME), of Cumberland, Maine, to prepare this Risk-Based Cleanup Plan and to conduct characterization work described herein.

On September 25, 2014, following an evaluation of the building for possible PCBs, preliminary testing, and a site walk, Darmody advised UNUM of the confirmed presence of PCBs in building materials and the possible release of greater than one pound of PCBs to the environment, in the form of non-liquid, naturally weathered caulking that had fallen from the building and landed in a stone apron surrounding HO-1. On September 26, 2014, UNUM, within 24 hours of receiving the advisement from Darmody, reported the release to the National Response Center.

Because of the unique occurrence of solid caulking that contains PCBs transferred from the side of a building and becoming intermixed with landscaping stone, a self-implementing cleanup of the sort described in 40 C.F.R. § 761.61(a), may not be appropriate. To better address the unique facts presented at this site, this document has been prepared to meet the requirements for a Risk-Based Cleanup as described in 40 CFR § 761.61(c). This plan describes the

approach to cleanup of PCBs in soil and stone outside of HO-1 in accordance with § 761.61(c) and provides background on PCB characterization data collected to date.

This Risk-Based Cleanup Plan includes the following items:

- Notification
- Site Characterization including the Nature and Extent of Contamination
- Summary of the sampling procedures
- The location and extent of the project area covered by this Plan
- A Cleanup Plan for the Project Area
- Written Certification (APPENDIX A)

The Site Owner Name, Address, and Contact information is as follows:

Site Owner:	UNUM
Site Address:	2211 Congress Street Portland, ME 04122
Site Contact:	Richard Meadows
Phone No:	423-294-1277
Darmody Contact:	Stephen Darmody
Phone No:	305-728-7037
SME Contact:	Erik Clapp, Ph.D. or Bob Steeves, P.E.
Phone No:	207-829-5016

2.0 NOTIFICATION

SME has prepared this document to enable UNUM to notify the U.S. EPA of the situation and submit a Risk Based Cleanup Plan (Plan) for managing the stone and soil at the UNUM HO-1 Site, Portland, Maine.

This Plan is being submitted in accordance with 40 CFR § 761.61.

UNUM requests a meeting with U.S. EPA Region 1 staff to discuss the details of the Plan.

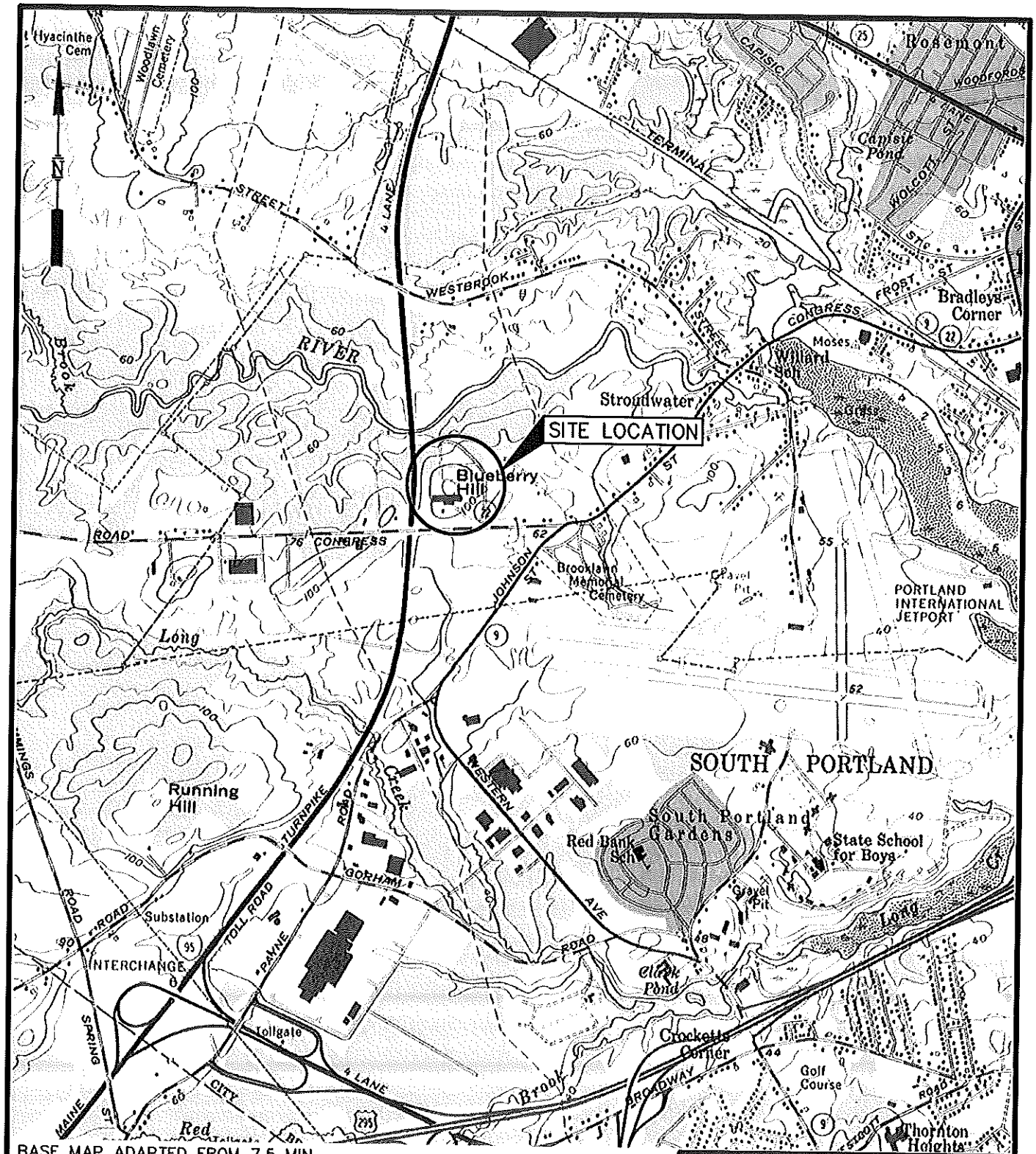
3.0 SITE CHARACTERIZATION AND NATURE OF CONTAMINATION

3.1 Site Description and Facility Setting

The UNUM site is located at 2211 Congress Street, Portland, Maine. The HO-1 building resides on a campus of 121 acres, which includes three large office buildings, an on-site daycare facility, and associated parking facilities. With the exception of the HO-1 building, all other buildings were constructed in the 1980s or later. The on-site daycare facility is located in a separate building, more than 1,400 feet from the HO-1 building and was constructed in the early 1990s. The daycare facility and its occupants are not considered to be sensitive receptors related to PCB exposure from HO-1.

The UNUM property is bordered by the Maine Turnpike (Interstate 95) to the west, Congress Street to the south, the Stroudwater River to the north, and undeveloped land to the east. A site location map is shown on Figure 1. The campus layout is shown on Figure 2.

The HO-1 building was originally constructed in about 1970, with major additions having been completed in 1980 and a new front entrance added in the mid-1990s. The HO-1 building encompasses approximately 300,000 square feet. The exterior of the building is poured concrete with a large portion of the building covered with glass window panels (aluminum curtain walls). Smaller portions of the building are clad with precast concrete panels. Where aluminum curtain walls meet concrete, and where concrete panels join together, caulking or sealant is present. Sealant is also present at concrete expansion joints. Where windows are sealed to the aluminum framing, the exterior is generally sealed with a factory-installed caulking while the interior is sealed with a rubber gasket. Windows that have been replaced or windows that have been installed in direct contact with concrete appear to have been sealed with caulking applied on-site. Photographs of the HO-1 Building are included as Figure 3.



BASE MAP ADAPTED FROM 7.5 MIN
USGS TOPOGRAPHIC QUADRANGLE
PORTLAND–WEST, ME – 1978

1000 0 2000 FEET

FIGURE 1
SITE LOCATION PLAN
UNUM
PORTLAND, MAINE

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DWG: SITELOC LMN: SITELOC CTB: SME-STD REV: 11/11/14

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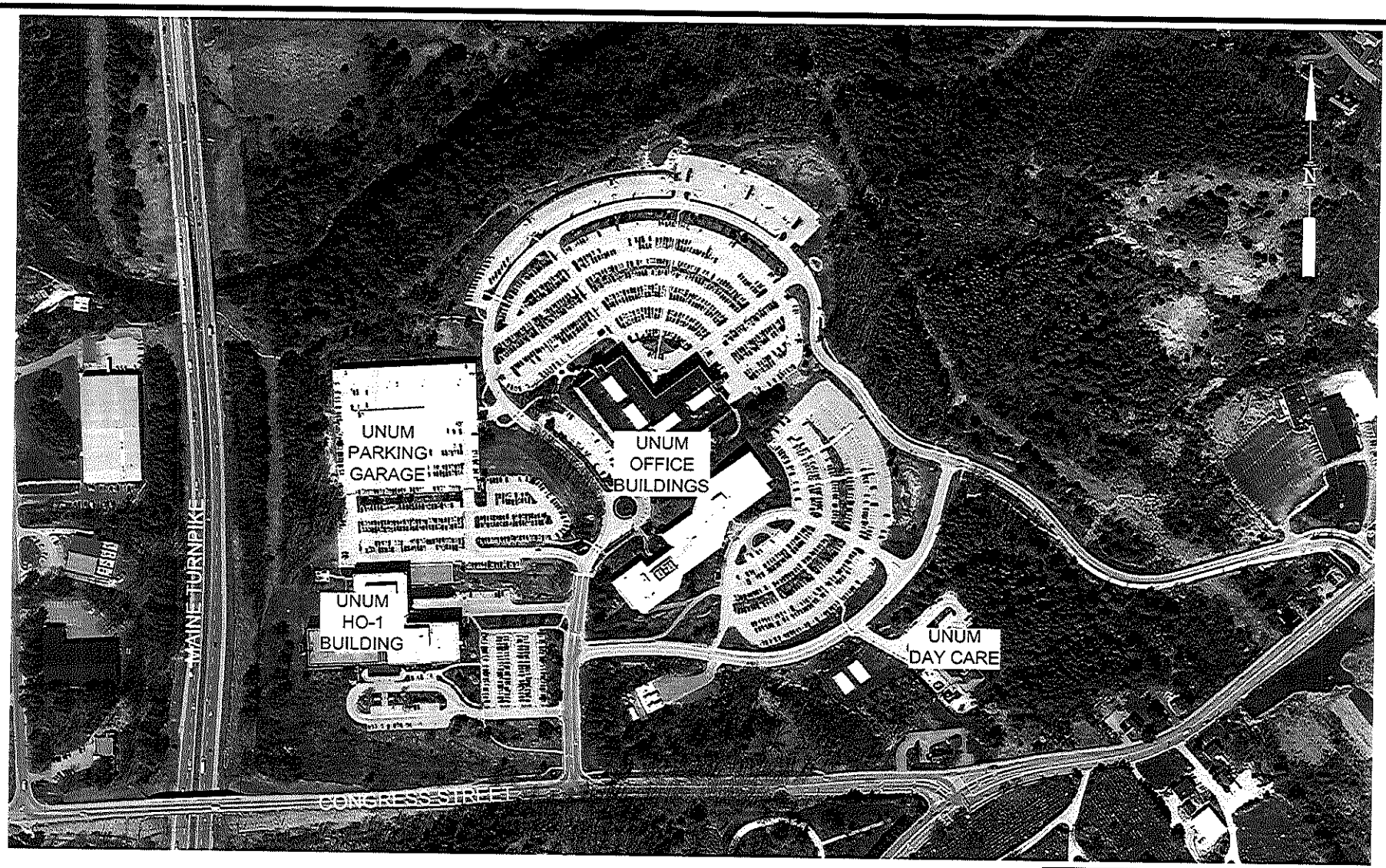

BASE MAP ADAPTED FROM GOOGLE EARTH PHOTO DATED 3/31/2012.

APPROXIMATE SCALE

200 0 400 FEET

DWG: SITELOC LMN: SITELOC CTB: SME-STD REV: 11/11/14

FIGURE 2
SITE LAYOUT
UNUM
PORTLAND, MAINE

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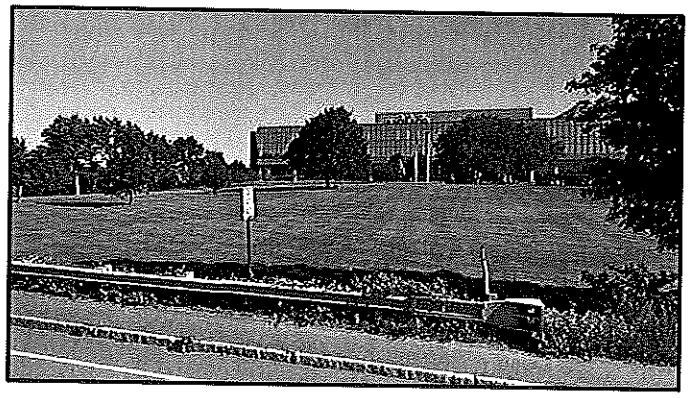
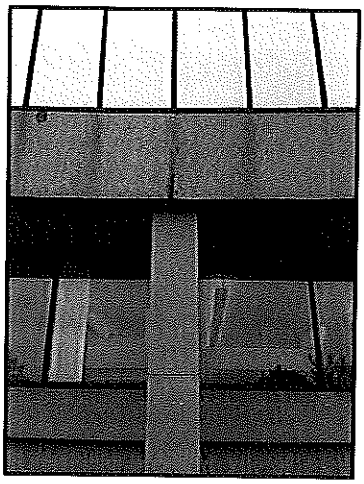
FIGURE 3

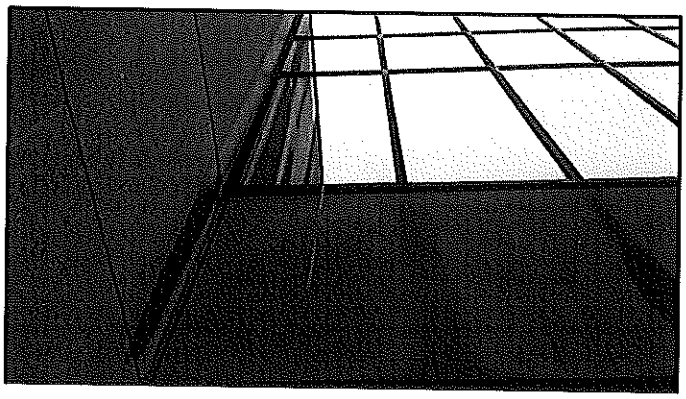
PHOTOGRAPHS OF HO-1 BUILDING
UNUM
PORTLAND, MAINE



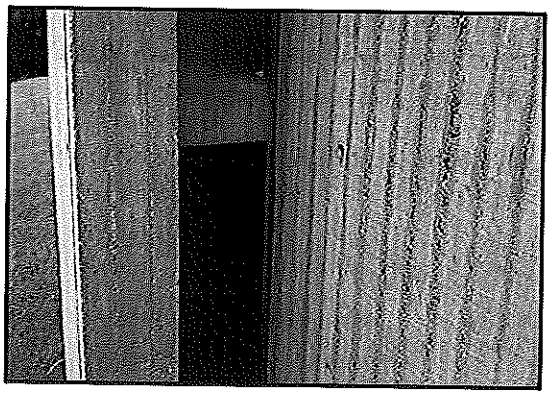
UNUM HO-1 Building from Congress Street



Aluminum curtain walls (windows) and precast concrete panels

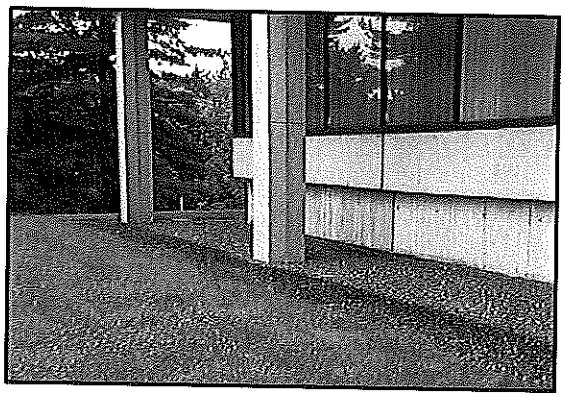


Aluminum curtain walls (windows) and precast concrete panels

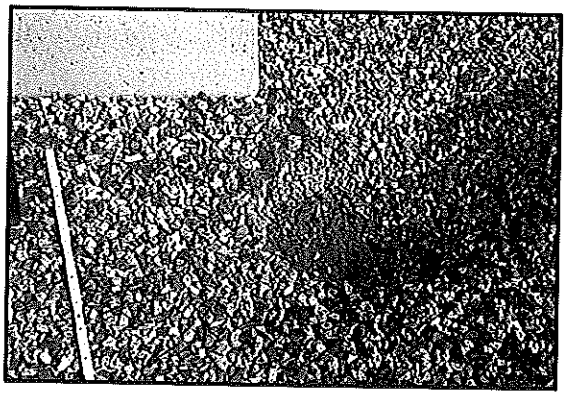


Typical window caulked to concrete

FIGURE 3 (cont'd)



Landscaping stone surrounding HO-1



Landscaping stone and underlying soil

3.2 Site Characterization

In February of 2014, SME was asked by Darmody to determine whether PCBs could be present in and around HO-1, at concentrations that could present a risk to human health or the environment. UNUM approved Darmody's request to conduct the assessment in two stages. The first phase of the assessment was to determine the quality of indoor air in the Building. The second phase was to determine whether soils surrounding the Building had been impacted by PCBs.

On February 9, 2014, SME conducted the first phase of the assessment, sampling the air in the interior of the building. The results (See Report: PCB Sampling Results, Indoor Air, Portland Maine Site, dated April 7, 2014, which is attached as Appendix B) confirmed that the concentration of PCBs in the air within the Building is well below guidelines established both by the U.S.EPA (2014 Public Health Levels for Adults) and Maine's Department of Environmental Protection (MEDEP) Bureau of Remediation and Waste Management indoor air targets (IATs). Darmody subsequently engaged Dr. Robert DeMott of Environ to determine whether the air inside the Building presents an undue risk to human health. Environ has reviewed the data and determined that the quality of the air inside the Building meets state and federal guidelines for PCBs and does not present an unacceptable risk to its occupants, even those occupants who work inside the building for twenty five years (see Environ, Potential Risks Associated with Inhalation of PCBs in Indoor Air, attached as Appendix C).

The second phase of the assessment was to conduct testing of the soils surrounding the Building. SME conducted the soil testing on June 5, 2014. A large portion of the building is surrounded by an apron of ¾-inch landscaping stone. Where stone is present, samples were collected from the soils lying beneath the stone. Where stone was absent, samples were collected directly from the soil. In areas that are covered with asphalt or concrete, no samples were collected.

In the course of sampling the soils, field personnel observed the presence of pieces of caulking within the landscaping stone. Some observed pieces of caulking were approximately 0.5 inches in diameter and greater than 12 inches in length. Eight to ten pieces of caulking were observed

on the surface of the stone at intermittent locations within the area evaluated. In one sampling location, several pieces of caulking were found buried within the stone. The caulking appears to have fallen from the building either from natural weathering or during building maintenance activities.

Upon discovery of the pieces of caulking within the drainage stone, Darmody requested that SME test the caulking for the presence of PCBs. Results of the soil testing and caulk testing are summarized in the following section.

3.3 Summary of Soil Testing

On June 5, 2014, a total of 10 samples were collected from the soils surrounding the Building, and were analyzed for the presence of PCBs. This testing was conducted principally to determine whether PCBs from building materials (window caulking and joint sealants) had impacted the soils surrounding the building. The initial testing was conducted at a sampling density considered sufficient for assessing the property for potential PCB impacts. The initial testing was not conducted using the sampling density specified for final determinations and remediation design per Subpart N of Title 40 C.F.R.

Samples were collected from the top 6 inches of soil. Where landscaping stone was present, the soil samples were collected from the top 6 inches of soil, located directly beneath the stone (e.g., the stone was set aside and the soil sample was collected). PCB concentrations in the soil samples ranged from 0.4 mg/Kg to 47.7 mg/Kg. Soil sample locations and PCB concentrations are shown on Figure 4. A description of the soil sample collection process and the analytical results are included in the report entitled: *Soil Sampling Results, Portland Maine Site, September 2014*. This report is included as Appendix D.

The soil samples collected from the exterior of the Building had detectable PCB concentrations that were all below the 50 mg/Kg concentration threshold at which PCB wastes are classified as hazardous in Maine. Of the ten soil samples taken, only two had concentrations of PCBs that exceeded either the Maine Remedial Action Guideline for Construction Worker exposure

(6.5 mg/Kg) or for Commercial Worker exposure (12 mg/Kg). Eight of the ten samples obtained had a concentration of PCBs of less than 5 mg/Kg, while four of the ten samples had a concentration of PCBs lower than 1 mg/Kg. PCBs detected in the soil were all reported to be consistent with the Aroclor 1254 profile (i.e., 54% chlorine by mass), which is consistent with SME's previous findings for PCBs in air within the Building.

At the direction of Darmody, a piece of caulking found at sample location SD-101, was collected and submitted to the laboratory for PCB analysis. The PCB concentration in this caulk sample was 179,000 mg/Kg. (A description of the caulk sampling procedure and analytical results are included in the SME letter to Darmody P.A., dated September 24, 2014 (Appendix E)). Because the concentration of PCBs in the caulking is greater than 50 mg/Kg, and the caulking is mixed with the stone and possibly the soil, both the Maine Hazardous Waste Rules and the Toxic Substances Control Act (TSCA) were considered in developing approaches to manage this material. TSCA generally governs the requisite cleanup and disposal.

4.0 CONCEPTUAL SITE MODEL

A Conceptual Site Model (CSM) is important in establishing plans for testing and remediation. This section presents a CSM for the exterior of the Building. Based on the testing results to date, including indoor air, soil, caulking within the stone, and previous building material testing, the primary source of PCBs is believed to be window caulking and building joint sealants. The exterior of the Building is a combination of mostly glass (with metal frames) and concrete. The glass is sealed to the metal framing with factory-installed caulking and the metal framing is sealed to the building with field-applied caulking. Regularly spaced expansion joints in the concrete portions of the building also contain sealant. Based on this information, there are several mechanisms that might account for PCBs in the soil and the stone. These mechanisms are:

- Caulking/sealant inadvertently falling to the ground during window and expansion joint maintenance.

- Caulking/sealant weathering from windows and expansion joints. These include pieces that fall from the building naturally, and particulates transferred by normal weathering processes.

- PCBs transferred from the surface of intact caulking/sealant associated with the windows and expansion joints via waterborne pathways. This includes dissolved or suspended PCBs carried from the building to the soil with precipitation or window cleaning.

The mechanisms listed above suggest multiple diffuse pathways of PCB transfer to the soils directly adjacent to the building. The soil data also indicate a diffuse source, because all 10 soil samples surrounding the building contain low levels of PCBs. The data also suggest that the stone apron may provide some protection to the underlying soil or may act to retard PCB movement into the soil. This hypothesis is based upon the finding that the highest concentration of PCBs (47.7 mg/Kg) was detected at SB-107, where there was no stone present.

5.0 PROPOSED PLAN FOR REMEDIATION OF EXTERIOR PCBs

The following describes the Risk-Based cleanup plan for the soil and stone outside of the HO-1 Building

5.1 Remediation Approach

The means by which PCBs contained in the stone and soil adjacent to the Building may be removed is prescribed by regulations issued under TSCA, 40 C.F.R. § 761.61. These regulations describe two cleanup approaches (Self-Implementing and Risk-Based) the requirements of which vary depending on the type of material involved and the possible exposure scenarios. For this remediation, UNUM proposes to use the Risk-Based cleanup approach described in 40 C.F.R. § 761.61(c).

5.2 Cleanup Criteria

UNUM prefers to have no land use restrictions on the property following remediation. The area outside of HO-1, where PCBs have been identified, is a low occupancy area, which is occupied for less than 6.7 hours per week, principally by people who are simply walking past it as they either enter or leave the building, and occasionally by maintenance personnel. For a low occupancy area such as this, a PCB concentration of 25 ppm is sufficient to allow unrestricted use of the land, 40 C.F.R. § 761.61(a)(4)(i)(B). The regulations specify a cleanup criterion of less than 1 mg/Kg for unrestricted use in a high occupancy area, 40 C.F.R. § 761.61(a)(4)(i)(A).

Based on the available guidance, the Site's zoning for commercial use, the current land use, and the high probability of continued commercial land use in the future, UNUM proposes using as a cleanup goal Maine's Remedial Action Guidelines (RAGs) for Sites With Hazardous Substances, Soil Construction Worker Exposure Scenario. This RAG prescribes a PCB concentration of 6.5 mg/Kg. No restrictions would be placed on soil that has a concentration of PCBs lower than 6.5 mg/Kg.

5.3 Remediation Methods

Remediation methods described below are based upon the Cleanup Criteria described in 5.2.

5.3.1 Excavation and Removal of Stone and Caulking. The most straightforward and efficient strategy for this remediation would be excavation of the stone and caulking (together), with off-site disposal of the mixture as hazardous waste. UNUM will assume that both the stone and the caulking meet the criteria for disposal as hazardous wastes, thereby eliminating the need for extensive testing, interpretation and reporting. Preliminary estimates indicate there are approximately 450 tons of stone that have solid pieces of caulking interspersed within it. UNUM has considered the possibility of separating the stone from the caulking before disposal; however, the development of methods and equipment to accomplish that, as well as conducting the testing required to demonstrate that the separation is successful, carry a high level of uncertainty, both with respect to cost and effectiveness.

5.3.2 Excavation and Disposal of Soil. Following removal of the stone and caulking, the underlying soil would be removed to ensure that all soil remaining on-site meets the cleanup goal. For the reasons explained above, UNUM proposes that after the stone is removed, the underlying soil be excavated as necessary to achieve a cleanup goal of 6.5 mg/Kg of PCBs. Based on the testing completed to date, it is likely that most of these soils would be disposed as a special waste. But additional testing is proposed to confirm that the soil being excavated and disposed of as a special waste has a PCB concentration of less than 50 mg/Kg. Additional soil testing is described in Section 5.4.

5.4 Additional Characterization Testing

The initial testing described above was conducted to assess the soils surrounding the Building for the presence of PCBs. Based on the results of the soil testing, and the identification of PCBs at concentrations above regulatory thresholds (see Figure 1), some level of remediation is proposed to manage the soils adjacent to the Building. Additional testing of the soil surrounding the building will be necessary in order to determine the optimal remedial approach and to

confirm the success of the remediation method selected. The procedures for the collection of samples for this purpose are included in Appendix F.

The following items summarize the possible future testing requirements:

5.4.1 Testing Stone Containing Caulk. If UNUM assumes that the caulking and the stone together are hazardous, no additional PCB characterization testing is required before these materials are removed. The facilities where these materials are disposed of will nevertheless require at least several samples for pertinent waste characterization parameters.

5.4.2 Testing Soil Beneath Stone. Characterization testing under 40 C.F.R. § 761.260 will employ discrete sampling using a 3-meter square grid (about 10 feet on each side). Based on the diffuse nature of the PCB source, and the results of the soil testing (8 of the 10 samples taken had PCB concentrations lower than 6.5 mg/Kg), an alternate characterization testing program is recommended under the Risk-Based Approach.

We recommend composite sampling with discrete sample backups for characterization of the soil. The discrete samples will be held in archive for future analyses, if necessary. Based on the width of the affected area (the stone apron is less than 10 feet or 3 meters wide in most areas), we recommend that samples be collected in a 10-foot (3-meter) grid that is one cell wide. The perimeter of the building where stone and soil are present is approximately 800 linear feet. Therefore, there would be approximately 80 grid cells along the perimeter of the building.

Discrete samples will be collected from each of the 80 grid cells. Aliquots from the 80 samples will be composited to create a total of approximately 16 samples for initial laboratory analyses (5 aliquots per composite), with discrete samples held in archive. If a composite sample exceeds 10 mg/Kg PCB concentration (analyzed as Aroclor mixtures) or $1/5^{th}$ of the 50 mg/Kg threshold, the discrete samples from that composite will be analyzed to determine whether any discrete sample exceeds a concentration of 50 mg/kg, for characterization for disposal. If composite sample results are below 10 mg/kg, all soil will be disposed as Maine special waste. If a discrete sample is greater than 50 mg/kg, that area, bounded by two discrete samples less than 50 mg/Kg, or a composite less than 10 mg/Kg, will be disposed as hazardous waste.

Likewise, it may be possible to limit the quantity of soil removed based on the sampling. If a composite sample exceeds 1.3 mg/Kg (1/5th of the 6.5 mg/Kg threshold), the discrete samples will be analyzed to determine if a discrete sample exceeds 6.5 mg/Kg (the cleanup goal). If composite sample results are less than 1.3 mg/Kg, soil in that area will not be removed and cleanup objectives will be met. If a discrete sample is greater than 6.5 mg/Kg, that area, bounded by two discrete samples less than 6.5 or a composite less than 1.3 mg/Kg, will be excavated for off-site disposal.

The soil samples will be extracted using U.S.EPA Method 3540 and will be analyzed using U.S.EPA Method 8082.

5.5 Verification Testing

After characterization testing for soil is complete and PCB impacted stone and soil are removed, verification sampling will be completed in accordance with 40 C.F.R. § 761.280 (Subpart O).

Because the regulations specify the use of a 1.5-meter sampling grid (about 5 feet on each side), verification sampling could require the analysis of more than 600 samples (800 linear feet is approximately 160 grids long. At 10 feet wide, the affected area is two grids wide plus excavation walls on two sides for a total of 160 grids long by 4 grids wide). Based on the diffuse nature of the PCB source, and the results of the soil testing (8 of 10 samples had PCB concentrations less than 6.5 mg/Kg), an alternate verification testing program is proposed under the Risk-Based Approach.

For verification testing, we propose a 3-meter grid and composite sampling. A three-meter grid results in approximately 240 samples (80 bottom samples along 800 linear feet and 80 samples along each of two sidewalls), if the entire area is excavated. If characterization testing allows for smaller areas of excavation, the number of verification samples would be reduced. Discrete samples will be collected from each of the 240 grid cells. Aliquots from the 240 samples will be composited to create a total of approximately 48 samples for initial laboratory analyses (5 aliquots per composite), with discrete samples held in archive. If the PCB concentration in a composite sample exceeds a PCB concentration of 1.3 mg/Kg PCB concentration (analyzed as

Aroclor mixtures), or 1/5th of the 6.5 mg/Kg threshold, the discrete samples will be analyzed to determine if a discrete sample exceeds 6.5 mg/Kg (the cleanup goal). Additional soil will be removed in areas with discrete samples exceeding the cleanup goal and verification testing will be repeated in that area. If composite sample results are less than 1.3 mg/Kg the cleanup objectives will be met.

Soil samples will be extracted using U.S.EPA Method 3540 and will be analyzed using U.S.EPA Method 8082.

5.6 Characterization of Building Caulking

Preliminary testing suggests that caulking and sealants on the exterior of HO-1 contain PCBs. However, there are different types and ages of caulking and sealants present. As part of the testing program for this remediation, samples will be collected to characterize PCB concentrations in these materials. Initially, a statistically representative number of samples will be collected from different types of caulking identified visually (i.e., color, texture, apparent age), to determine whether different caulks contain different concentrations of PCBs (factory installed caulk vs. field installed caulk, dark brown vs. light tan caulk, window caulk vs. joint sealant). A minimum of five samples will be collected from each type of caulking and sealant identified. The results will be compiled and will be evaluated to determine whether differences exist in the PCB concentrations.

Samples will be extracted using U.S.EPA Method 3540 and will be analyzed using U.S.EPA Method 8082.

5.7 Restoration and Prevention of Recurrence

Following satisfactory verification testing results, the excavated area will be restored. The excavation will be filled with clean sand to approximately 6-inches below grade. Approximately 6-inches of three-quarter-inch stone will be placed over the sand to restore the excavation to grade.

Because the potential exists for continued impacts from caulking remaining on the exterior of the building, prior to beginning the stone and soil remediation, and annually thereafter, loose or hanging caulking will be removed from the building to prevent this material from potentially transferring PCBs to the new stone and surrounding soil.

To further protect the restored stone and soil from additional PCB transfer, a "sacrificial" cover will be placed over the restored area. This cover can be removed and disposed as hazardous waste, at a later date, if it ever becomes necessary to do so. The cover will consist of:

- a geotextile placed over the restored stone;
- a thin layer (approximately 2 to 3 inches thick) of organic-rich material, such as peat, compost, or organic rich soil placed on top of the geotextile. This organic rich layer will bind and help retain PCB-containing particulate above the geotextile and adsorb dissolved phase PCBs, if any, that may continue to be released;
- a landscaping fabric placed over the organic layer; and
- a thin layer (approximately 2 inches thick) of ¾-inch stone will be placed over the landscaping fabric.

Additional verification sampling may be required after the removal of this "sacrificial" protective material. In addition, a Building Materials Management Plan will be developed to provide procedures to contain and dispose of PCB-containing caulks and sealants encountered during any future renovation and repair activities.

6.0 RETENTION OF RECORDS

All records related to characterization, disposal and confirmation testing will be assembled into a project report in accordance with 40 C.F.R. § 761.61(a)(9).

7.0 REMAINING BUILDING MATERIALS

Based on the results of the interior air sampling conducted in February of 2014, PCBs in building materials do not present an unacceptable risk to building occupants. Similarly, caulking and sealants on the exterior of HO-1 do not present an unacceptable risk to employees or on-site workers due to the absence of an exposure pathway. Therefore, no additional remedial actions are either necessary or proposed.

APPENDIX A

WRITTEN CERTIFICATION

TSCA CERTIFICATION
RISK-BASED CLEANUP PLAN FOR PCBS
BUILDING HO-1 SOIL AND STONE
PORTLAND, MAINE SITE

In accordance with 40 C.F.R. § 761.61(a)(3)(E), Unum Life Insurance Company of America ("UNUM"), the owner of the property and party responsible for the cleanup, is providing this certification related to the management of bulk PCB remediation waste associated with soil and landscaping stone outside of Building HO-1 at its Site in Portland, Maine.

UNUM certifies that:

> All sampling plans, sample collection procedures, sample preparation procedures, extraction procedures, and instrument/chemical analysis procedures used to assess or characterize the PCB contamination in soil and landscaping stone outside of Building HO-1, are on file at the offices of Sevee & Maher Engineers, Inc., 4 Blanchard Road, Cumberland Center, Maine 04021.

UNUM also certifies that the documents listed above, located at the offices of Sevee & Maher Engineers, Inc., are available for USEPA inspection.

BY: Unum Life Insurance Company of America

NAME: [signature]

TITLE: AVP Corporate Real Estate

DATE: 11/17/14

APPENDIX B

PCB SAMPLING RESULTS, INDOOR AIR (APRIL 2014)

SME
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April 7, 2014

13181.00

Stephen J. Darmody, Esq.
Darmody Carta, P.A.
201 Sevilla Avenue, Suite 305
Coral Gables, Florida 33134

Subject: PCB Investigation
UNUM Building HO-1
2211 Congress Street
Portland, Maine 04122

Dear Mr. Darmody:

Enclosed, please find three copies of our report summarizing indoor air sampling for Polychlorinated Biphenyls (PCB) at the above-referenced property.

Please feel free to contact us with any questions regarding the report.

Sincerely,

SEVEE & MAHER ENGINEERS, INC.

Erik M. Olapp, PhD.
Principal

Enclosed: 3 copies of Report

S:\DarmodyCarta\Portland\Docs\L\20140407sd.docx

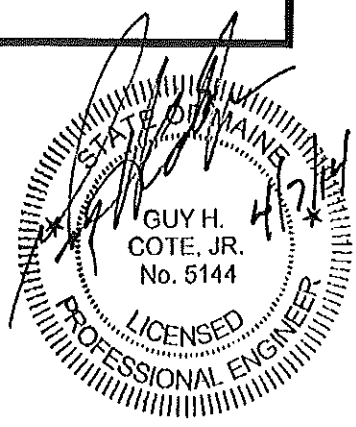
PCB SAMPLING RESULTS
INDOOR AIR
PORTLAND MAINE SITE

Prepared for

DARMODY CARTA, P.A.

PRIVILEGED AND CONFIDENTIAL
ATTORNEY WORK PRODUCT

April 7, 2014



SME
Sevee & Maher Engineers, Inc.

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PRIVILEGED AND CONFIDENTIAL
ATTORNEY WORK PRODUCT

PCB SAMPLING RESULTS
INDOOR AIR
PORTLAND MAINE SITE

APRIL 2014

1.0 INTRODUCTION AND BACKGROUND

This report has been prepared at the request of Darmody Carta, P.A. to summarize the findings of an indoor air survey. The work described herein was conducted in general accordance with the project scope of work (Phase-1), described in the January 9, 2014 letter proposal, (see Appendix D). This report presents the procedures used for sample collection, a tabulation of analytical results and a summary of observations derived from that data. Recommendations based on our findings are also presented.

The HO-1 Building (approximately 300,000 square feet) was originally constructed circa 1970, with major additions to the building constructed in the late 1970s. Based on U.S.EPA guidance, building materials used during the 1950s through the 1970s (particularly caulking around windows, doors, and expansion joints) have the potential to contain polychlorinated biphenyls (PCBs). For buildings constructed during this timeframe, indoor air testing is typically the first step conducted to determine whether building occupants may be exposed to PCBs through inhalation of vapors or dust. This investigation was conducted to determine whether PCBs are present in air and if so, at what concentrations.

Concentrations of PCBs in indoor air, as measured during this investigation, and as described herein, are below both the applicable health and safety regulatory thresholds and agency guidelines.

2.0 SAMPLING

2.1 Air Sample Locations

A total of 31 indoor air samples were collected with a sample density of approximately one sample per 10,000 square feet of building space. Seven to eight (7 to 8) samples were collected on each floor of the 4-floor building. Fourteen (14) samples were collected from various locations within the large open office areas where the majority of workers are stationed and where air is expected to be well homogenized by the building's HVAC systems. The remaining 17 samples were collected from locations selected to be representative of small offices, conference rooms, and common workspaces where airflow may be different than the large open spaces. Building air handling and heating systems were operated under conditions consistent with typical workdays.

Sample locations are listed on Table 1. Sample locations are illustrated on Figures 1 through 4.

2.2 Air Sample Collection and Laboratory Analysis

The air sampling program was conducted on February 9, 2014. Samples were collected in general accordance with U.S.EPA Method TO-10A, *Determination of Pesticides and PCBs in Ambient Air using Low Volume Polyurethane Foam (PUF) Sampling Followed by Gas Chromatographic/Multi-Detector Detection.* The following information provides additional details on sample collection:

- Each sample was collected continuously over an 8-hour period.
- Samples were collected at a flow rate of 3 Liters/min, for a total sample volume of 1,440 Liters.
- Total sample volumes were corrected for temperature and pressure in accordance with U.S.EPA Method TO-10A.
- The corrected sample volume was 1,406 Liters for each sample.

- SKC PCXR8 personal sampling pumps were utilized for the sample collection. These are suction pumps that draw air through the sampling media cartridge (PUF).
- Each sampling PUF cartridge was connected to the pump with dedicated silicone tubing.
- The PUF cartridge was secured within the breathing zone during sampling (3 to 5 feet above the floor).
- Prior to the start of sampling, each pump was calibrated with a Defender 510m Gas Flow Calibrator to allow for a precise sampling flow rate.
- Each sample pump had a built-in "rotameter" to monitor pump flow during sampling. The "rotameter" readings were also confirmed with Defender 510M readings.
- Pump flows were recorded periodically throughout the 8-hour sampling event to quantify variability in pumping rates, if any, throughout the day. During the sampling event, all pumping rates remained constant. Pump flow readings are included on the field collection sheets included in Appendix A.
- Ambient temperature and barometric pressure were recorded at regular intervals throughout the 8-hour sampling event in accordance with U.S.EPA Method TO-10A. Temperature and barometric pressure readings are included on the field collection sheets included in Appendix A.
- Duplicate samples were collected at three locations (AC-1, AC-16, and AC-26). The primary and duplicate PUF cartridges were placed next to each other with each PUF connected to a separate pump.
- At the end of the 8-hour sampling time period, the sample PUFs were collected, and sealed in foil-lined envelopes provided by the laboratory.
- Samples were placed in coolers, at 4 degrees Celsius, with the appropriate Chain-of-Custody documentation, and were transported overnight to the laboratory for analysis.
- One trip blank sample was kept in the sample cooler for quality control during the sampling event.

- Samples were analyzed by Alpha Analytical Laboratory, Westborough, Massachusetts for PCB homologs using U.S.EPA Method TO-10A.

3.0 ANALYTICAL RESULTS

Analytical results for the air samples are summarized in Table 1. Raw analytical data is compiled in tables included in Appendix B. Laboratory analytical reports are included as Appendix C.

Analytical results were compared to a number of health and safety thresholds and guidelines for PCBs in indoor air. As noted in Table 1, these thresholds and guidelines range from the American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV) (a guideline) at 500,000 nanograms per cubic meter (ng/m^3) to OSHA's Permissible Exposure Level (a regulatory threshold) at 100,000 ng/m^3 to the most stringent of the thresholds - Maine Department of Environmental Protection's (MEDEP) Indoor Air Target (IAT) concentration for Commercial Workers (a guideline) at 220 ng/m^3.

Indoor air concentrations for all sampling locations were below the MEDEP IATs. Sample concentrations were less than half of the IATs with the exception of two low occupancy locations where air exchanges are limited (the stairway on the eastern end of the building and the electrical utility room on the ground floor).

Additional observations from the analytical results include:

- Results from samples collected in the building addition constructed in the late 1970s had PCB air concentrations generally below detection (< 7 ng/m^3), with a single, low detection of 12 ng/m^3. This suggests that PCB materials are absent in this portion of the building.

- PCB concentrations in air throughout the original building (excluding the stairway and electrical room noted above) average 54 ng/m^3, with a range from 9 to 80 ng/m^3. Concentrations measured in representative small offices, conference rooms, and common workspaces, where airflow may be different than the large open spaces, were at or below the average for the building.

- PCB Homologs detected were primarily pentachlorobiphenyls and tetrachlorobiphenyls. This PCB composition is consistent with the composition of Arochlor-1254.

- Data quality meets or exceeds industry standards. Relative percent difference between samples and duplicates range from 0% to 4.3% indicating good data precision and reproducibility. Surrogate recoveries were within NELAC accepted laboratory acceptance criteria. LCS performance data were within NELAC accepted laboratory acceptance criteria. There were no PCB detections in the laboratory blanks or trip blank.

TABLE 1

PCB HOMOLOG CONCENTRATIONS
HO-1 BUILDING

Sample Location	Location Description		Total PCB Homolog (ng/m^3)
	Floor	Room	
AC-1	Ground	Loading Dock	46
AC-2	Ground	File Storage	24
AC-3	Ground	Utility Room	170
AC-4	Ground	Mail Room	47
AC-5	Ground	Men's Locker Room	9
AC-6	Ground	Gym	38
AC-7	Ground	Open Office Space	70
AC-8	Ground	Computer Room	48
AC-9	1st	Credit Union	54
AC-10	1st	Open Office Space	78
AC-11	1st	Open Office Space	79
AC-12	1st	Cafeteria	80
AC-13	1st	Computer Room	79
AC-14	1st	Stairway East	159
AC-15	1st	Security Office	51
AC-16	1st	Open Office-Addition	<7
AC-17	2nd	Single Office	47
AC-18	2nd	Open Office Space	49
AC-19	2nd	Open Office Space	41
AC-20	2nd	Open Office Space	68
AC-21	2nd	Open Office Space	76
AC-22	2nd	Conference Rm-Addition	<7
AC-23	2nd	Open Office-Addition	<7
AC-24	3rd	Conference Rm	48
AC-25	3rd	Open Office Space	50
AC-26	3rd	Open Office Space	47
AC-27	3rd	Open Office Space	61
AC-28	3rd	Open Office Space	49
AC-29	3rd	Single Office-Addition	<7
AC-30	3rd	Open Office-Addition	12
AC-31	3rd	Conference Rm-Addition	<7

Notes:
- All results are below Applicable Health and Safety Thresholds for PCBs (ng/m^3)
- 450 - EPA Public Health Levels, Indoor School Air (Age 19+ yrs.)
- 220 - MEDEP IATs (Commercial Worker)
- $1x10^6/5x10^5$ - OSHA PEL and ACGIH TLV (8hr TWA)
- 1,000 - NIOSH REL (10hr TWA)

Total PCB Concentration based on laboratory homolog results (ng/cartridge), a sustained flow rate of 3.0 L/min for 8 hours, and a total volume of 1440 L corrected to 1406 L based on temperature and pressure.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Indoor air concentrations for all sampling locations were below the most stringent of the applicable, published guidances regarding the presence of PCBs in indoor air (Maine's indoor air targets).

Based on the information reported herein, SME recommends the following actions:

1. The building owners should evaluate the sampling data and compare them to any internal corporate standards and policies.

2. The building owners should undertake the second phase of proposed sampling work (outdoor soil sampling), to determine whether PCBs have leached into surrounding soils.

3. The building owners should prepare a long-term plan that will include:
   a. Ongoing evaluation of the potential for occupant exposure to PCB materials (e.g., additional air surveys in the future).
   b. Provisions for handling and disposal of PCB materials that have concentrations greater than 50 ppm, if those materials are discovered, during maintenance and renovation activities.
   c. Delineation and remediation of contaminated soil surrounding the building, if found during the outdoor soil sampling.

5.0 DISCLAIMER

The conclusions and recommendations contained herein are limited to the data made available to Sevee & Maher Engineers, Inc. as of the date of this report. Should additional information become available, SME reserves the right to update and/or modify this report.

APPENDIX A

DATA COLLECTION SHEETS AND FIELD OBSERVATIONS

DO NOT DISTURB
AIR SAMPLING IN PROGRESS

Project: Darmody-Carta Portland

Date: 2/9/2014

Location: AC- 1

Personnel: TEW and EMC

Pump Model No. SKC Airchek 224-PCXR8

Pump Serial No. 12990 / 010479

Cartridge Type: Low Volume PUF

Cartridge Serial No. LP337 / ~~Alp~~ LP355

Sample ID:

Darmody Cartar
AC-XX1-X-002 AC-1
DATE: 2/9/14 TIME:
AAN-1-PUFF-4C-
SEVEE & MAHER ENGINEERS, INC.

Target Flow Rate: 3 L/min

Target Sample Volume: 1440

Sample Data

Start Time: 1037 End Time: 1837

Initial Flow Rate: Pump 3.5 L/min /Meas: 3 L/min ~~Paste~~

Laboratory Information

AVG. Sample Temp / Baro. Pres: 75.2 / 30.06

Sample Flow Rate: 3 L/min

Total Sample Volume: 1440

Oscilloscope Field Audit

Time	Pump Flow (L/min)	Measured Flow (L/min)	Temp. (F)	Baro. Pressure	Notes
1. 1232	3.5 / 3.3	3.22 / 3.31	73.5	30.11	Run Time 113
2. 1430	3.5 / 3.35	3.5 / 3.31	75.7	30.04	232
3. 1559	3.5 / 3.35	3.18 / 3.4	74.8	30.05	321
4 ~~[illegible]~~ 1704	3.5 / 3.3	- / -	76.8	30.04	386
5 1837	3.5 / 3.3	- / -	75.1	30.05	480 END.
6					
7					
8					

Sample Location Description: LOADING DOCK AREA, GROUND FLOOR, PLACED ALONG WEST WALL NEAR SCALE, AWAY FROM AIR HEATING FAN OVERHEAD.

PUMP WAS CALIBRATED TO 3 L/MIN FLOW RATE WITH BIOS DEFENDER 510M GASFLOW CALIBRATOR. PUMP FLOW AND MEASURED FLOW ONLY USED TO CONFIRM ANY CHANGES IN FLOW RATE OVER THE SAMPLE PERIOD, FOR ALL PUMPS USED FOR PROGRAM.

Duplicate Sample Taken: (Y) / N ID:

Darmody Cartar
AC-DP3-X-01G DUP-3
DATE: 2.9.14 TIME:
AAN-1-PUFF-4C-
SEVEE & MAHER ENGINEERS, INC

DO NOT DISTURB
AIR SAMPLING IN PROGRESS

Project: Darmody-Carta Portland
Location: AC- 2
Personnel: TEW and EMC
Pump Model No. SKC Airchek 224-PCXR8
Cartridge Type: Low Volume PUF
Sample ID: Darmody Cartar
AC-XX2-X-003 AC-2
DATE: 2/9/14 TIME:
AAN-1-PUFF-AC
SEVEE & MAHER ENGINEERS, INC.

Date: 2/9/2014

Pump Serial No. 002494
Cartridge Serial No. LP326
Target Flow Rate: 3 L/min
Target Sample Volume: 1440

Sample Data

Start Time: 1034 End Time: 1834
Initial Flow Rate: Pump see note /Meas: 3 L/min

Laboratory Information

AVG. Sample Temp / Baro. Pres: 75.8 / 30.07
Sample Flow Rate: 3 L/min
Total Sample Volume: 1440

Duct Indoor Field Audit

Time	Pump Flow (L/min)	Measured Flow (L/min)	Temp. (F)	Baro. Pressure	Notes
1. 1227	~~3.26~~	3.41	73.7	30.12	Pump Time 112
2. 1427	~~3.6~~ 3.5	3.38	75.7	30.04	232
3. 1557	3.5	3.35	74.7	30.06	322
4 1705	~~3.25~~	–	79.2	30.05	890
5 –	3.50				
6 1834	3.50	–	–	–	480 END
7					
8					

Sample Location Description: Ground Floor, Document Room / Records. Pumps in Center of Room.

Pump Initially calibrated to 3 L/min w/ Bubs Defender 510m

Duplicate Sample Taken: Y (N) ID:

DO NOT DISTURB
AIR SAMPLING IN PROGRESS

Project: Darmody-Carta Portland
Location: AC- 3
Personnel: TEW and EMC
Pump Model No. SKC Airchek 224-PCXR8
Cartridge Type: Low Volume PUF
Sample ID:

Darmody Cartar
AC-XX3-X-004 AC-3
DATE: 2-9-14 TIME:
AAN-1-PUFF-4C-
SEVEE & MAHER ENGINEERS, INC.

Date: 2/9/2014

Pump Serial No. A00200
Cartridge Serial No. LP338
Target Flow Rate: 3 L/min
Target Sample Volume: 1440

Sample Da...
Start Time: 1033 End Time: 1833
Initial Flow Rate: Pump See Note /Meas: 3 L/min

Laboratory Information
AVG. Sample Temp / Baro. Pres: 75.9 / 30.07
Sample Flow Rate: 3 L/min
Total Sample Volume: 1440

Discrepancy Field Audit

	Time	Pump Flow (L/min)	Measured Flow (L/min)	Temp. (F)	Baro. Pressure	Notes
1.	1224	3.7	2.97	740	30.12	Runtime 111
2.	1424	3.5	3.01	75.7	30.04	231
3.	1555	3.5	2.9	74.8	30.06	322
4	1707	3.6	-	78.9	30.04	394
5	1833	3.5	-	-	-	480 END
6						
7						
8						

Sample Location Description: Placed in Generator Room near door, ground floor

Pump calibrated to 3 L/min w/ BIOS Defendor 510m Prior to start.

Duplicate Sample Taken: Y / N ID:

DO NOT DISTURB
AIR SAMPLING IN PROGRESS

Project: Darmody-Carta Portland
Location: AC- 4
Personnel: TEW and EMC
Pump Model No. SKC Airchek 224-PCXR8
Cartridge Type: Low Volume PUF
Sample ID: Darmody Cartar
AC-XX4-X-005 AC-4
DATE: 2.9.14 TIME:
AAN-1-PUFF-4C-
SEVEE & MAHER ENGINEERS, INC

Date: 2/9/2014

Pump Serial No. 13476
Cartridge Serial No. LPX86
Target Flow Rate: 3 L/min
Target Sample Volume: 1440

Sample Data

Start Time: 1031 End Time: 1831
Initial Flow Rate: Pump See Note /Meas: 3 L/MIN

Laboratory Information

AVG. Sample Temp / Baro. Pres: 75.4 / 30.06
Sample Flow Rate: 3 L/MIN
Total Sample Volume: 1440

Dickinson **Field Audit**

Time	Pump Flow (L/min)	Measured Flow (L/min)	Temp. (F)	Baro. Pressure	Notes
1. 1221	3.4	2.94	73.7	30.12	Run Time:
2. 1422	3.6	3.26	75.7	30.04	:230
3. 1553	3.5	3.3	74.9	30.05	322
4 1709	3.4	-	77.9	30.04	397
5 1831	3.6	-	-	-	480 END
6					
7					
8					

Sample Location Description: Ground Floor Mail Room / Placed in Center of Room.

Pump Calibrated to 3 L/min w/ Bios Dispenser Flow Prior to Start:

Duplicate Sample Taken: Y / (N) ID:

DO NOT DISTURB
AIR SAMPLING IN PROGRESS

Project: Darmody-Carta Portland

Date: 2/9/2014

Location: AC-5

Personnel: TEW and EMC

Pump Model No. SKC Airchek 224-PCXR8

Pump Serial No. 903344

Cartridge Type: Low Volume PUF

Cartridge Serial No. LP342

Sample ID: Darmody Cartar
AC-XX5-X-006 AC-5
DATE: 2.9.14 TIME:
AAN-1-PUFF-4C-
SEVEE & MAHER ENGINEERS, INC.

Target Flow Rate: 3 L/min

Target Sample Volume: 1440

Sample Data

Start Time: 1028 End Time: 1828

Initial Flow Rate: Pump See note /Meas: 3 L/min

Laboratory Information

AVG. Sample Temp / Baro. Pres: 75.9 / 30.07

Sample Flow Rate: 3 L/min

Total Sample Volume: 1440

Discharge Field Audit

	Time	Pump Flow (L/min)	Measured Flow (L/min)	Temp. (F)	Baro. Pressure	Notes
1.	1214	3.25	3.14	75.1	30.12	Run time 105
2.	1416	3.25	3.10	75.7	30.04	228
3.	1550	3.25	3.10	75.6	30.06	321
4	1710	3.25	-	77.0	30.04	401
5	1828	3.25	-	-	-	480 END
6						
7						
8						

Sample Location Description: MENS LOCKER ROOM, GROUND FLOOR, CENTER OF ROOM

PUMP CALIBRATED TO 3 L/MIN W/ BIOS DEFENDER 510M PRIOR TO START.

Duplicate Sample Taken: Y / (N) ID:

DO NOT DISTURB
AIR SAMPLING IN PROGRESS

Project: Darmody-Carta Portland
Location: AC- 6
Personnel: TEW and EMC
Pump Model No. SKC Airchek 224-PCXR8
Cartridge Type: Low Volume PUF
Sample ID:
Darmody Cartar
AC-XX6-X-007 AC-6
DATE: 2-9-14 TIME: _____
AAN-1-PUFF-4C-
SEVEE & MAHER ENGINEERS, INC.

Date: 2/9/2014

Pump Serial No. 013498
Cartridge Serial No. LP359
Target Flow Rate: 3 L/min
Target Sample Volume: 1440

Sample Data

Start Time: 1029 End Time: 1829
Initial Flow Rate: Pump See Note /Meas: 3 L/MIN

Laboratory Information

AVG. Sample Temp / Baro. Pres: 75.5 / 30.07
Sample Flow Rate: 3 L/min
Total Sample Volume: 1440

Dashmaster **Field Audit**

	Time	Pump Flow (L/min)	Measured Flow (L/min)	Temp. (F)	Baro. Pressure	Notes
1.	1215	3.3	2.87	74.5	30.12	Run Time 106
2.	1419	3.3	2.84	75.7	30.04	229
3.	1551	3.5	2.80	75.4	30.06	321
4	1712	3.3	-	76.5	30.04	401
5	1829	3.3	-			480 END
6						
7						
8						

Sample Location Description: GYM - LOCATED NORTH WEST CORNER OF DOOR AND OUTSIDE BUILDING - GROUND FLOOR

Pump CALIBRATED TO 3 L/MIN w/ BIOS DEFENDER 510m PRIOR TO START

Duplicate Sample Taken: Y (N) ID:

DO NOT DISTURB
AIR SAMPLING IN PROGRESS

Project: Darmody-Carta Portland
Location: AC- 7
Personnel: TEW and EMC
Pump Model No. SKC Airchek 224-PCXR8
Cartridge Type: Low Volume PUF
Sample ID: Darmody Cartar
AC-XX7-X-008 AC-7
DATE: 2-9-14 TIME:
AAN-1-PUFF-4C-
SEVEE & MAHER ENGINEERS, INC.

Date: 2/9/2014

Pump Serial No. 013335
Cartridge Serial No. LP285
Target Flow Rate: 3 L/min
Target Sample Volume: 1440

Sample Data

Start Time: 1026 End Time: 1826
Initial Flow Rate: Pump_____ /Meas: 3 ~~min~~ L/min

Laboratory Information
AVG. Sample Temp / Baro. Pres: 75.4 / 30.07
Sample Flow Rate:_____
Total Sample Volume:_____

Discharge **Field Audit**

Time	Pump Flow (L/min)	Measured Flow (L/min)	Temp. (F)	Baro. Pressure	Notes
1. 1210	3.75	3.13	750	30.12	Runtime: 103
2. 1413	3.6	3.13	757	30.04	227
3. 1547	3.5	3.13	75.7	30.06	321
4 1713	3.5	-	75.0	30.04	407
5 1826	3.5				480
6					
7					
8					

Sample Location Description: Desk Cubicles - Ground Floor - Near South East outside wall of Building - See Figure

Pump Calibrated to 3 L/min w/ Bios Defender 510 Prior to Start

Duplicate Sample Taken: Y (N) ID:

DO NOT DISTURB
AIR SAMPLING IN PROGRESS

Project: Darmody-Carta Portland
Location: AC- 8
Personnel: TEW and EMC
Pump Model No. SKC Airchek 224-PCXR8
Cartridge Type: Low Volume PUF
Sample ID:

Darmody Cartar
AC-XX8-X-009 AC-8
DATE: 2-9-14 TIME: _____
AAN-1-PUFF-4C-
SEVEE & MAHER ENGINEERS, INC.

Date: 2/9/2014

Pump Serial No. 10617
Cartridge Serial No. LP357
Target Flow Rate: 3 L/min
Target Sample Volume: 1440

Sample Data
Start Time: 1025 End Time: 1825
Initial Flow Rate: Pump Set Note /Meas: 3 L/min

Laboratory Information
AVG. Sample Temp / Baro. Pres: 75.4 / 30.06
Sample Flow Rate: 3 L/min
Total Sample Volume: 1440

Field Audit (Discontinuous)

Time	Pump Flow (L/min)	Measured Flow (L/min)	Temp. (F)	Baro. Pressure	Notes
1. 1207	3.3	3.10	75.3	30.12	Run Time 102
2. 1411	3.3	3.04	75.7	30.04	Run Time 226
3. 1546	3.25	3.06	75.7	30.05	321
4 1715	3.3	--	74.9	30.04	404
5 1825	3.3	-	-	-	480
6					
7					
8					

Sample Location Description: Located in Computer Room NEAR East/Northeast Outside Wall

Pump Calibrated to 3 L/min w/Bios Det. 510m Prior to Start.

Duplicate Sample Taken: Y (N) ID:

DO NOT DISTURB
AIR SAMPLING IN PROGRESS

Project: Darmody-Carta Portland
Location: AC- 9
Personnel: TEW and EMC
Pump Model No. SKC Airchek 224-PCXR8
Cartridge Type: Low Volume PUF
Sample ID:

Darmody Carta
AC-XX9-X-00A AC-9
DATE: 2·9·14 TIME:
AAN-1-PUFF-4C-
SEVEE & MAHER ENGINEERS, INC.

Date: 2/9/2014

Pump Serial No. 010486
Cartridge Serial No. LPX90
Target Flow Rate: 3 L/min
Target Sample Volume: 1440

Sample Data

Start Time: 1022 End Time: 1822
Initial Flow Rate: Pump See Note /Meas: 3 L/MIN

Laboratory Information

AVG. Sample Temp / Baro. Pres: 75.9 / 30.05
Sample Flow Rate: 3 L/min
Total Sample Volume: 1440

Discharge **Field Audit**

	Time	Pump Flow (L/min)	Measured Flow (L/min)	Temp. (F)	Baro. Pressure	Notes
1.	1204	3.7	3.19	75.2	30.1	Pump Time 101
2.	1357	3.65	3.14	76.8	30.05	215
3.	1543	3.5	3.1	75.6	30.04	321
4	1701	3.25	-	75.8	30.02	398
5	1822	3.5	-	-	-	480 END.
6						
7						
8						

Sample Location Description: Located in Bank Building Assn Machine. 1st Floor "True Choice"

Pump Calibrated to 3 L/min w/Bios Definer 510 M Prior to Start.

Duplicate Sample Taken: Y / (N) ID:

DO NOT DISTURB
AIR SAMPLING IN PROGRESS

Project: Darmody-Carta Portland
Date: 2/9/2014
Location: AC-10
Personnel: TEW and EMC
Pump Model No. SKC Airchek 224-PCXR8
Pump Serial No. 13359
Cartridge Type: Low Volume PUF
Cartridge Serial No. LP358
Sample ID:
Darmody Cartar
AC-X10-X-00B AC-10
DATE: 2/9/14 TIME:
AAN-1-PUFF-4C-
SEVEE & MAHER ENGINEERS, INC.
Target Flow Rate: 3 L/min
Target Sample Volume: 1440

Sample Data
Start Time: 1019 End Time: 1820
Initial Flow Rate: Pump See Note /Meas: 3 L/min

Laboratory Information
AVG. Sample Temp / Baro. Pres: 75.1 / 30.06
Sample Flow Rate: 3 L/min
Total Sample Volume: 1443

Discharge **Field Audit**

Time	Pump Flow (L/min)	Measured Flow (L/min)	Temp. (F)	Baro. Pressure	Notes
1. 1200	3.3	3.00	73.5	30.10	Pump Time 99
2. 1350	3.3	2.96	75.4	30.06	208
3. 1539	3.4	2.95	75.5	30.04	320
4 1659	3.3	-	75.9	30.02	399
5 1820	3.3	-	-	-	481 END
6					
7					
8					

Sample Location Description: Within cubicle near south west outside wall ~~[illegible]~~ (town) 1st Floor

Pump Calibrated to 3 L/min w/Bios Def 510m Prior to Start

Duplicate Sample Taken: Y/N (N circled) ID:

DO NOT DISTURB
AIR SAMPLING IN PROGRESS

Project: Darmody-Carta Portland
Location: AC- 11
Personnel: TEW and EMC
Pump Model No. SKC Airchek 224-PCXR8
Cartridge Type: Low Volume PUF
Sample ID: Darmody Cartar
AC-X11-X-00C AC-11
DATE: 2/9/14 TIME:
AAN-1-PUFF 4C-
SEVEE & MAHER ENGINEERS, INC.

Date: 2/9/2014

Pump Serial No. A00198
Cartridge Serial No. LPK60
Target Flow Rate: 3 L/min
Target Sample Volume: 1440

Sample Data

Start Time: 1020 End Time: 1820
Initial Flow Rate: Pump _____ /Meas: 3 L/min

Laboratory Information

AVG. Sample Temp / Baro. Pres: 75.3 / 30.06
Sample Flow Rate: 3 L/min
Total Sample Volume: 1440

DISCHARGE **Field Audit**

	Time	Pump Flow (L/min)	Measured Flow (L/min)	Temp. (F)	Baro. Pressure	Notes
1.	1202	3.25	2.86	74.1	30.10	PUMP TIMER 100
2.	1350	3.25	2.83	75.7	30.06	209
3.	1538	3.20	2.83	75.7	30.05	317
4	1456	3.3	-	75.7	30.02	397
5	1820	3.3	-	-	-	480 END.
6						4/8 TOT
7						
8						

Sample Location Description: LOCATED WITHIN CUBICLE NEAR NORTH WEST OUTSIDE WALL 1ST FLOOR

Pump CALIBRATED TO 3 L/MIN W/BUBBLE FLOW PRIOR TO START

Duplicate Sample Taken: Y / N ID:

DO NOT DISTURB
AIR SAMPLING IN PROGRESS

Project: Darmody-Carta Portland
Location: AC- 12
Personnel: TEW and EMC
Pump Model No. SKC Airchek 224-PCXR8
Cartridge Type: Low Volume PUF
Sample ID: Darmody Cartar
AC-X12-X-00D AC-12
DATE: 2/9/14 TIME: ____
AAN-1-PUFF-4C-
SEVEE & MAHER ENGINEERS, INC.

Date: 2/9/2014
Pump Serial No. 027141
Cartridge Serial No. LP360
Target Flow Rate: 3 L/min
Target Sample Volume: 1440

Sample Data
Start Time: 1017 End Time: 1817
Initial Flow Rate: Pump See Above /Meas: 3 L/min

Laboratory Information
AVG. Sample Temp / Baro. Pres: 74.9 / 30.06
Sample Flow Rate: 3 L/min
Total Sample Volume: 1440

DISCHARGE **Field Audit**

	Time	Pump Flow (L/min)	Measured Flow (L/min)	Temp. (F)	Baro. Pressure	Notes
1.	1156	3.25	3.83	72.8	30.10	98 RUN TIME
2.	1346	3.15	2.86	75.5	30.06	207
3.	1536	3.0	2.81	76.0	30.04	318
4	1645	3.1	-	75.2	30.02	397
5	1817	3.1	-	-	-	480 END
6						
7						
8						

Sample Location Description: 1ST FLOOR CARPENTER CENTER OF EASTERN MOST

Pump CALIBRATION TO 3 L/MIN W/BIOS DUP SIGN PRIOR TO START.

Duplicate Sample Taken: Y (N) ID:

DO NOT DISTURB
AIR SAMPLING IN PROGRESS

Project: Darmody-Carta Portland

Date: 2/9/2014

Location: AC- 13

Personnel: TEW and EMC

Pump Model No. SKC Airchek 224-PCXR8

Pump Serial No. 13361

Cartridge Type: Low Volume PUF

Cartridge Serial No. LPX73

Sample ID:

Darmody Cartar
AC-X13-X-00E AC-13
DATE: 2/9/14 TIME:
AAN-1-PUFF-4C-
SEVEE & MAHER ENGINEERS, INC.

Target Flow Rate: 3 L/min

Target Sample Volume: 1440

Sample Data

Start Time: 1015 End Time: 1815

Initial Flow Rate: Pump See Above /Meas: 3 L/min

Laboratory Information

AVG. Sample Temp / Baro. Pres: 75.3 / 30.06

Sample Flow Rate: 3 L/min

Total Sample Volume: 1440

Discharge Field Audit

Time	Pump Flow (L/min)	Measured Flow (L/min)	Temp. (F)	Baro. Pressure	Notes
1. 1155	3.25	2.95	73.1	30.10	98 Run time
2. 1344	3.25	2.91	76.7	30.07	207
3. 1534	3.15	2.89	76.2	30.04	319
4 1654	3.25	-	75.2	30.02	397
5 1815	3.25	-	-	-	480 end
6					
7					
8					

Sample Location Description: Compressor at NorthEast Corner of main Building 1st Building. See Figure.

Pump calibrated to 3 L/min w/Bios Def-510m prior to start.

Duplicate Sample Taken: Y / (N) ID:

DO NOT DISTURB
AIR SAMPLING IN PROGRESS

Project: Darmody-Carta Portland　　　　Date: 2/9/2014

Location: AC- 14

Personnel: TEW and EMC

Pump Model No. SKC Airchek 224-PCXR8　　　　Pump Serial No. 13014

Cartridge Type: Low Volume PUF　　　　Cartridge Serial No. LP332

Sample ID:　　　　Target Flow Rate: 3 L/min

Darmody Cartar

AC-X14-X-00F　AC-14　　　　Target Sample Volume: 1440

DATE: 2/9/14 TIME:

AAN-1-PUFF-4C-

SEVEE & MAHER ENGINEERS, INC.

Sample Date:

Start Time: 1014　End Time: 1814

Initial Flow Rate: Pump See Note /Meas: 3 L/min

Laboratory Information

AVG. Sample Temp / Baro. Pres: 76.5 / 30.06

Sample Flow Rate: 3 L/min

Total Sample Volume: 1440

Field Audit (Dosimeter)

Time	Pump Flow (L/min)	Measured Flow (L/min)	Temp. (F)	Baro. Pressure	Notes
1. 1150	— *	2.86	75.4	30.10	95 pump time　No Ball meter
2. 1342	—	2.87	78.4	30.09	109
3. 1533	—	2.85	76.6	30.04	220* reset, Pump stopped trying to fix ball for flow rate, pump off approx 15 seconds.
4 1653	—	—	75.4	30.02	299
5 1814	-	-	-	-	~~380~~ 381 END
6					
7					
8					

Sample Location Description: In East Tower Stairwell 1st Floor Landing.

* Pump Calibrated to 3 L/min w/Bus out 510m Prior to Start.

Duplicate Sample Taken: Y / (N)　ID:

DO NOT DISTURB
AIR SAMPLING IN PROGRESS

Project: Darmody-Carta Portland
Location: AC- 15
Personnel: TEW and EMC
Pump Model No. SKC Airchek 224-PCXR8
Cartridge Type: Low Volume PUF
Sample ID: Darmody Cartar AC-X15-X-00G AC-15
DATE: 2/9/14 TIME:
AAN-1-PUFF-4C-
SEVEE & MAHER ENGINEERS, INC.

Date: 2/9/2014

Pump Serial No. 18383
Cartridge Serial No. LP356
Target Flow Rate: 3 L/min
Target Sample Volume: 1440

Sample Data

Start Time: 1017 End Time: 1817
Initial Flow Rate: Pump See Note * /Meas: 3 L/min

Laboratory Information

AVG. Sample Temp / Baro. Pres: 76.2 / 30.06
Sample Flow Rate: 3 L/min
Total Sample Volume: 1440

Field Audit (Direct)

	Time	Pump Flow (L/min)	Measured Flow (L/min)	Temp. (F)	Baro. Pressure	Notes
1.	1148	3.75	3.23	77.8	30.11	96 Run Time
2.	1353	3.75	3.21	76.1	30.05	221
3.	1541	3.35	3.20	75.5	30.04	329
4	1654	3.8	-	75.4	30.02	403
5	1817	3.75	-	-	-	480 END
6						
7						
8						

Sample Location Description: WITHIN SECURITY OFFICE IN FRONT OF PITOTS FOR BAGHOUSES NEAR BACK WALL (NORTH WALL) 1ST FLOOR.

* PUMP CALIBRATED TO 3 L/MIN W/ BIOS DEFLOW PRIOR TO START

Duplicate Sample Taken: Y (N) ID:

DO NOT DISTURB
AIR SAMPLING IN PROGRESS

Project: Darmody-Carta Portland
Location: AC- 16
Personnel: TEW and EMC
Pump Model No. SKC Airchek 224-PCXR8
Cartridge Type: Low Volume PUF
Sample ID: Darmody Cartar
AC-X16-X-00H AC-16
DATE: 2/9/14 TIME: _____
AAN-1-PUFF-4C-
SEVEE & MAHER ENGINEERS, INC.

Date: 2/9/2014

Pump Serial No. 12802 / 45916
Cartridge Serial No. LP3654 / and LP0351
Target Flow Rate: 3 L/min
Target Sample Volume: 1440

Sample Data

Start Time: 1010 End Time: 1810
Initial Flow Rate: Pump See More /Meas: 3 L/min Both

Laboratory Information

AVG. Sample Temp / Baro. Pres: 76.8 / 30.06
Sample Flow Rate: 3 L/min
Total Sample Volume: 1440

Field Audit (Discharger)

	Time	Pump Flow (L/min)	Measured Flow (L/min)	Temp. (F)	Baro. Pressure	Notes
1.	1142	3.7 / 3.25 (DUP)	2.02 / 2.96 (DUP)	74.4	30.12	Pump time: 91 Both
2.	1338	3.7 / 3.2	1.97 / 2.94	78.4	30.07	208
3.	1529	3.75 / 3.25	1.99 / 2.95	76.8	30.04	319
4	1650	3.8 / 3.25	- / -	75.6	30.01	400
5	1810	3.8 / 3.25	.	-	.	480 END
6						
7						
8						

Sample Location Description: WITHIN CUBICLE 1ST FLOOR, NORTH PORTION OF BUILDING. CUBE LOCATED ALONG EAST OUTSIDE WALL.

Pump CALIBRATED TO 3 L/min W/BIOS DEFLOW PRIOR TO START

Duplicate Sample Taken (Y) N ID:

Darmody Cartar
AC-DP2-X-01F DUP-2
DATE: 2-9-14 TIME: _____
AAN-1-PUFF-4C-
SEVEE & MAHER ENGINEERS, INC.

DO NOT DISTURB
AIR SAMPLING IN PROGRESS

Project: Darmody-Carta Portland
Location: AC-17
Personnel: TEW and EMC
Pump Model No. SKC Airchek 224-PCXR8
Cartridge Type: Low Volume PUF
Sample ID: Darmody Cartar
AC-X17-X-001 AC-17
DATE: 2/3/14 TIME:
AAN-1-PUFF-4C-
SEVEE & MAHER ENGINEERS, INC.

Date: 2/9/2014

Pump Serial No. 07763
Cartridge Serial No. LP317
Target Flow Rate: 3 L/min
Target Sample Volume: 1440

Sample Data

Start Time: 1006 End Time: 1806
Initial Flow Rate: Pump See Notes /Meas: 3 L/min

Laboratory Information

AVG. Sample Temp / Baro. Pres: 76.8 / 30.05
Sample Flow Rate: 3 L/min
Total Sample Volume: 1440

Discharge **Field Audit**

	Time	Pump Flow (L/min)	Measured Flow (L/min)	Temp. (F)	Baro. Pressure	Notes
1.	1138	3.3	3.18	76.2	30.1	Run Time 91
2.	1336	3.3	3.15	78.4	30.6	207
3.	1526	3.35	3.15	76.8	30.03	320
4	1648	3.3	-	75.8	3001	401
5	1806	3.3				480 END
6						
7						
8						

Sample Location Description: OFFICE SPACE 2ND FLOOR AND ALONG NORTH EAST OUTSIDE WALL OF ORIGINAL BUILDING.

Pump Calibrated to 3 L/min Prior to Start. w/ Bios Defi-510m.

Duplicate Sample Taken: Y /(N) ID:

DO NOT DISTURB
AIR SAMPLING IN PROGRESS

Project: Darmody-Carta Portland
Location: AC-18
Personnel: TEW and EMC
Pump Model No. SKC Airchek 224-PCXR8
Cartridge Type: Low Volume PUF
Sample ID: Darmody Cartar
AC-X18-X-00J AC-18
DATE: 2/9/14 TIME:
AAN-1-PUFF-4C-
SEVEE & MAHER ENGINEERS, INC.

Date: 2/9/2014

Pump Serial No. 903339
Cartridge Serial No. LP321
Target Flow Rate: 3 L/min
Target Sample Volume: 1440

Sample Data

Start Time: 1005 End Time: 1805
Initial Flow Rate: Pump Set Flow / Meas: 3 L/min

Laboratory Information

AVG. Sample Temp / Baro. Pres: 76.9 / 30.05
Sample Flow Rate: 3 L/min
Total Sample Volume: 1440

Discharge Field Audit

	Time	Pump Flow (L/min)	Measured Flow (L/min)	Temp. (F)	Baro. Pressure	Notes
1.	1136	3.4	3.03	76.7	30.1	Running 90
2.	1333	3.4	3.00	78.5	30.06	207
3.	1525	3.25	3.00	76.7	30.03	320
4	1648	3.30		75.8	30.01	407
5	1805	3.30				480 END.
6						
7						
8						

Sample Location Description: Location Along North East Outside Wall (Glass) of Discharge Building. 2nd Floor

Pump Calibrated to 3 L/min Prior to Start w/ Bubblum.

Duplicate Sample Taken: Y (N) ID:

DO NOT DISTURB
AIR SAMPLING IN PROGRESS

Project: Darmody-Carta Portland
Location: AC- 19
Personnel: TEW and EMC
Pump Model No. SKC Airchek 224-PCXR8
Cartridge Type: Low Volume PUF
Sample ID:

Darmody Carta
AC-X19-X-010 AC-19
DATE: 2/4/14 TIME:
AAN-1-PUFF-4C-
SEVEE & MAHER ENGINEERS, INC.

Date: 2/9/2014

Pump Serial No. 013495
Cartridge Serial No. LP366
Target Flow Rate: 3 L/min
Target Sample Volume: 1440

Sample Data

Start Time: 1023 End Time: 1803
Initial Flow Rate: Pump See Note /Meas: 3 L/min

Laboratory Information

AVG. Sample Temp / Baro. Pres: 76.8 / 30.07
Sample Flow Rate: 3 L/min
Total Sample Volume: 1440

Field Audit DISCONTINUED

Time	Pump Flow (L/min)	Measured Flow (L/min)	Temp. (F)	Baro. Pressure	Notes
1. 1134	3.3	3.03	76.5	30.1	RUN TIME 89
2. 1330	3.3	3.04	78.1	80.06	207
3. 1523	3.25	3.02	76.6	30.03	320
4 1647	3.30		75.8	30.01	403
5 1803	3.26				480 END.
6					
7					
8					

Sample Location Description: LOCATED ALONG SOUTH EAST WALL (GLASS) OF ORIGINAL BUILDING, 2ND FLOOR

PUMP CALIBRATED TO 3 L/min PRIOR TO START of BISSION.

Duplicate Sample Taken: Y / (N) ID:

DO NOT DISTURB
AIR SAMPLING IN PROGRESS

Project: Darmody-Carta Portland
Location: AC- 20
Personnel: TEW and EMC
Pump Model No. SKC Airchek 224-PCXR8
Cartridge Type: Low Volume PUF
Sample ID: Darmody Carta
AC-X20-X-011 AC-20
DATE: 2/9/14 TIME:
AAN-1-PUFF-4C-
SEVEE & MAHER ENGINEERS, INC.

Date: 2/9/2014
Pump Serial No. 903347
Cartridge Serial No. LP362
Target Flow Rate: 3 L/min
Target Sample Volume: 1440

Sample Data
Start Time: 1006 End Time: 1801
Initial Flow Rate: Pump See Note /Meas: 3 L/min

Laboratory Information
AVG. Sample Temp / Baro. Pres: 76.2 / 30.05
Sample Flow Rate: 3 L/min
Total Sample Volume: 1440

Discharge **Field Audit**

Time	Pump Flow (L/min)	Measured Flow (L/min)	Temp. (F)	Baro. Pressure	Notes
1. 1131	3.3	2.33	75.5	30.10	Run Time 88
2. 1328	3.3	3.1	76.9	30.06	205
3. 1521	3.45	3.13	76.6	30.03	320
4 1446	3.3	-	75.8	30.01	403
5 1801	3.3	-			480 END
6					
7					
8					

Sample Location Description: 2ND FLOOR ALONG FIRE SOUTH OUTSIDE WALL (GLASS) OF ORIGINAL BUILDING

Pump CALIBRATED TO 3 L/min PRIOR TO START. W/BIOS FLOW.

Duplicate Sample Taken: Y (N) ID:

DO NOT DISTURB
AIR SAMPLING IN PROGRESS

Project: Darmody-Carta Portland
Location: AC-21
Personnel: TEW and EMC
Pump Model No. SKC Airchek 224-PCXR8
Cartridge Type: Low Volume PUF
Sample ID: Darmody Cartar AC-X21-X-012 AC-21 DATE: 2/9/14 TIME: AAN-1-PUFF-4C- SEVEE & MAHER ENGINEERS, INC.

Date: 2/9/2014
Pump Serial No. 90836
Cartridge Serial No. LPX35
Target Flow Rate: 3 L/min
Target Sample Volume: 1440

Sample Data
Start Time: 959 End Time: 1754
Initial Flow Rate: Pump See Notes /Meas: 3 L/min

Laboratory Information
AVG. Sample Temp / Baro. Pres: 76.5 / 30.05
Sample Flow Rate: 3 L/min
Total Sample Volume: 1440

Oscillating **Field Audit**

Time	Pump Flow (L/min)	Measured Flow (L/min)	Temp. (F)	Baro. Pressure	Notes
1. 1130	3.5	3.21	75.9	30.1	Duration 90
2. 1325	3.5	3.21	77.5	30.06	205
3. 1520	3.45	3.18	76.8	30.03	321
4 1615	3.5		75.2	30.01	405
5 1754					480 END
6					
7					
8					

Sample Location Description: 2ND FLOOR ALONG NORTH-WEST OUTSIDE WALL OF ORIGINAL BUILDING.

Pump CALIBRATED TO 3 L/MIN PRIOR TO START w/ BIOS DEF-570M.

Duplicate Sample Taken: Y (N) ID:

DO NOT DISTURB
AIR SAMPLING IN PROGRESS

Project: Darmody-Carta Portland
Location: AC-22
Personnel: TEW and EMC
Pump Model No. SKC Airchek 224-PCXR8
Cartridge Type: Low Volume PUF
Sample ID: Darmody Carta
AC-X22-X-013 AC-22
DATE: 2/4/14 TIME:
AAN-1-PUFF-4C-
SEVEE & MAHER ENGINEERS, INC.

Date: 2/9/2014
Pump Serial No. 13514
Cartridge Serial No. LP345
Target Flow Rate: 3 L/min
Target Sample Volume: 1440

Sample Data
Start Time: 957 End Time: 1757
Initial Flow Rate: Pump See Mem. /Meas: 3 L/min

Laboratory Information
AVG. Sample Temp / Baro. Pres: 77.0 / 30.05
Sample Flow Rate: 3 L/min
Total Sample Volume: 1440

Discharge Field Audit

	Time	Pump Flow (L/min)	Measured Flow (L/min)	Temp. (F)	Baro. Pressure	Notes
1.	1125	3.25	3.14	76.6	30.10	87 DUM TIME
2.	1323	3.25	3.14	78.4	30.07	204
3.	1518	3.25	3.15	77.2	30.03	321
4	1641	3.25		75.8	30.01	406
5	1757	3.25				480 END.
6						
7						
8						

Sample Location Description: COMPUTER ROOM 2ND FLOOR IN MAIN BUILDING ADDITION (NORTH) WITHIN CONTROL AREA NEAR SPIRAL STAIR CASE SEE FIGURE.

Pump Calibrated to 3 L/min PRIOR TO START W/ BIOS SOP.

Duplicate Sample Taken: Y (N) ID:

DO NOT DISTURB
AIR SAMPLING IN PROGRESS

Project: Darmody-Carta Portland
Location: AC- 23
Personnel: TEW and EMC
Pump Model No. SKC Airchek 224-PCXR8
Cartridge Type: Low Volume PUF
Sample ID:

Darmody Cartar
AC-X23-X-014 AC-23
DATE: 2·9·14 TIME:
AAN-1·PUFF·4C·
SEVEE & MAHER ENGINEERS, INC.

Date: 2/9/2014

Pump Serial No. 06739
Cartridge Serial No. LPX89
Target Flow Rate: 3 L/min
Target Sample Volume: 1440

Sample Data

Start Time: 956 End Time: 1756
Initial Flow Rate: Pump See Note /Meas: 3 L/min

Laboratory Information

AVG. Sample Temp / Baro. Pres: 77.1 / 30.05
Sample Flow Rate: 3 L/min
Total Sample Volume: 1440

Field Audit (Discrepancy)

Time	Pump Flow (L/min)	Measured Flow (L/min)	Temp. (F)	Baro. Pressure	Notes
1. 1123	3.5	2.98	77.0	30.12	elapsed time: 87
2. 1320	3.3	3.00	78.4	30.07	205
3. 1516	3.25	3.00	77.4	30.03	321
4 1643	3.5	–	75.6	30.01	406
5 1756	3.5				480 END
6					
7					
8					

Sample Location Description: 2ND FLOOR WITHIN CUBICLE NORTH NORTH-DIVISION WALL (GLASS) OF NORTH ADDITION SECTION OF MAIN BUILDING.

Pump CALIBRATED TO 3 L/MIN PRIOR TO START, w/ BIOS 510m.

Duplicate Sample Taken: Y (N) ID:

DO NOT DISTURB
AIR SAMPLING IN PROGRESS

Project: Darmody-Carta Portland
Location: AC-24
Personnel: TEW and EMC
Pump Model No. SKC Airchek 224-PCXR8
Cartridge Type: Low Volume PUF
Sample ID: Darmody Carta
AC-X24-X-015 AC-24
DATE: 2-9-14 TIME:
AAN-1-PUFF-4C-
SEVEE & MAHER ENGINEERS, INC.

Date: 2/9/2014

Pump Serial No. 13477
Cartridge Serial No. LP266
Target Flow Rate: 3 L/min
Target Sample Volume: 1440

Sample Data
Start Time: 953 End Time: 1753
Initial Flow Rate: Pump See More /Meas: 3 L/min

Laboratory Information
AVG. Sample Temp / Baro. Pres: 77.1 / 30.04
Sample Flow Rate:
Total Sample Volume:

Discharge **Field Audit**

Time	Pump Flow (L/min)	Measured Flow (L/min)	Temp. (F)	Baro. Pressure	Notes
1. 1119	3.3	3.25	77.2	30.11	elapsed time 85
2. 1316	3.3	3.24	78.4	30.05	203
3. 1512	3.3	3.24	77.6	30.02	320
4 1640	3.3	-	75.1	29.99	406
5 1753	3.3				480 END.
6					
7					
8					

Sample Location Description: CONFERENCE ROOM 3RD FLOOR WITHIN EAST PORTION OF ORIGINAL BUILDING IN CENTER OF AREA.

Pump CALIBRATED TO 3 L/MIN PRIOR TO START W/ BUBBLOM.

Duplicate Sample Taken: Y (N) ID:

DO NOT DISTURB
AIR SAMPLING IN PROGRESS

Project: Darmody-Carta Portland
Location: AC- 25
Personnel: TEW and EMC
Pump Model No. SKC Airchek 224-PCXR8
Cartridge Type: Low Volume PUF
Sample ID: Darmody Cartar
AC-X25-X-016 AC-25
DATE: 2.9.14 TIME:
AAN-1-PUFF-4C-
SEVEE & MAHER ENGINEERS, INC

Date: 2/9/2014

Pump Serial No. 13415
Cartridge Serial No. CP327
Target Flow Rate: 3 L/min
Target Sample Volume: 1440

Sample Data

Start Time: 948 End Time: 1748
Initial Flow Rate: Pump See Motor /Meas: 3 L/min

Laboratory Information

AVG. Sample Temp / Baro. Pres: 76.6 / 30.05
Sample Flow Rate: 3 L/min
Total Sample Volume: 1440

Discharge **Field Audit**

	Time	Pump Flow (L/min)	Measured Flow (L/min)	Temp. (F)	Baro. Pressure	Notes
1.	1110	3.25	3.08	75.9	30.1	82 elapsed
2.	1310	3.25	2.90	76.3	30.05	202
3.	1507	3.25	2.90	77.0	30.01	318
4	1638	3.25	—	75.0	30.00	408
5	1748	3.25			-	4180 END
6						
7						
8						

Sample Location Description: 3RD FLOOR ALONG SOUTH OUTSIDE WALL OF ORIGINAL BUILDING SOUTH EAST PORTION.

Pumps CALIBRATED TO 3 L/min PRIOR TO START W/BIOS 510m

Duplicate Sample Taken: Y (N) ID:

DO NOT DISTURB
AIR SAMPLING IN PROGRESS

Project: Darmody-Carta Portland
Location: AC- 26
Personnel: TEW and EMC
Pump Model No. SKC Airchek 224-PCXR8
Cartridge Type: Low Volume PUF
Sample ID: Darmody Cartar
AC-X26-X-017 AC-26
DATE: 2-9-14 TIME: _____
AAN-1-PUFF-4C-
SEVEE & MAHER ENGINEERS, INC.

Date: 2/9/2014

Pump Serial No. 10491 / DUP 00191
Cartridge Serial No. LP363 / DUP LP322
Target Flow Rate: 3 L/min
Target Sample Volume: 1440

Sample Data
Start Time: 952 End Time: 1752
Initial Flow Rate: Pump See Note /Meas: 3 L/min / 3 L/min

Laboratory Information
AVG. Sample Temp / Baro. Pres: 76.7 / 30.05
Sample Flow Rate: 3 L/min
Total Sample Volume: 1440

Field Audit

	Time	Pump Flow (L/min)	Measured Flow (L/min)	Temp. (F)	Baro. Pressure	Notes
1.	1113	3.75 / ~~3.5~~	~~3.01~~ 2.25	77.1	30.11	elapsed 81
2.	1313	3.75 / 3.5	2.96 / 2.21	77.4	30.06	201
3.	1509	3.75 / 3.5	2.96 / 2.24	77.3	30.02	318
4	1639	3.75 / 3.5	- / -	74.9	30.0	406
5	1752	3.75 / 3.5	- / -			480 END.
6						
7						
8						

Sample Location Description: 3RD FLOOR LOCATED ALONG OUTSIDE WALL (GLASS) NORTH-EAST OF ORIGINAL BUILDING. SEE FIGURE.

PUMP CALIBRATED TO 3 L/MIN PRIOR TO START WITH BUBBLOM.

Duplicate Sample Taken (Y) N ID:

Darmody Cartar
AC-DP1-X-01E DUP-1
DATE: 2-9-14 TIME: _____
AAN-1-PUFF-4C-
SEVEE & MAHER ENGINEERS, INC.

DO NOT DISTURB
AIR SAMPLING IN PROGRESS

Project: Darmody-Carta Portland
Location: AC-27
Personnel: TEW and EMC
Pump Model No. SKC Airchek 224-PCXR8
Cartridge Type: Low Volume PUF
Sample ID: Darmody Carlar AC-X27-X-018 AC-27
DATE: 2-9-14 TIME:
AAN-1-PUFF-4C-
SEVEE & MAHER ENGINEERS, INC.

Date: 2/9/2014

Pump Serial No. 13366
Cartridge Serial No. LP361
Target Flow Rate: 3 L/min
Target Sample Volume: 1440

Sample Data
Start Time: 947 End Time: 1747
Initial Flow Rate: Pump See Note /Meas: 3 L/min

Laboratory Information
AVG. Sample Temp / Baro. Pres: 75.6 / 30.04
Sample Flow Rate: 3 L/min
Total Sample Volume: 1440

Discharge **Field Audit**

	Time	Pump Flow (L/min)	Measured Flow (L/min)	Temp. (F)	Baro. Pressure	Notes
1.	1107	3.25	3.07	74.9	30.09	80 elapsed time
2.	1308	3.25	3.08	75.5	30.05	201
3.	1504	3.25	3.08	76.6	30.02	317
4	1687	3.25	-	75.4	30.00	409
5	1747	3.32	-			480 END
6						
7						
8						

Sample Location Description: 3rd Floor South outside wall South west area

Pump Calibrated to 3 L/min Prior to Start w/ Bios 610m.

Duplicate Sample Taken: Y / (N) ID:

DO NOT DISTURB
AIR SAMPLING IN PROGRESS

Project: Darmody-Carta Portland

Date: 2/9/2014

Location: AC- 28

Personnel: TEW and EMC

Pump Model No. SKC Airchek 224-PCXR8

Pump Serial No. 3334

Cartridge Type: Low Volume PUF

Cartridge Serial No. LPX 99

Sample ID: Darmody Cartar
AC-X28-X-019 AC-28
DATE: 2-9-14 TIME:
AAN-1-PUFF-4C-
SEVEE & MAHER ENGINEERS, INC.

Target Flow Rate: 3 L/min

Target Sample Volume: 1440

Sample Data

Start Time: 945 End Time: 1745

Initial Flow Rate: Pump See Note /Meas: 3 L/min

Laboratory Information

AVG. Sample Temp / Baro. Pres: 75.4 / 30.04

Sample Flow Rate: 3 L/min

Total Sample Volume: 1440

Field Audit (Dischared)

Time	Pump Flow (L/min)	Measured Flow (L/min)	Temp. (F)	Baro. Pressure	Notes
1. 1105	3.5	2.86	74.0	30.1	elapsed time 80
2. 1206	3.5	2.89	75.4	30.05	201
3. 1501	3.5	2.86	76.3	30.02	315
4 1635	3.5	–	75.9	30.00	409
5 1745	3.5	–			480 end
6					
7					
8					

Sample Location Description: 3rd floor original building. along North West outside wall (glass)

Calibrated Pump to 3 L/min Prior to Start w/Bios 510m

Duplicate Sample Taken: Y / (N) ID:

DO NOT DISTURB
AIR SAMPLING IN PROGRESS

Project: Darmody-Carta Portland
Location: AC- 29
Personnel: TEW and EMC
Pump Model No. SKC Airchek 224-PCXR8
Cartridge Type: Low Volume PUF
Sample ID: Darmody Carter
AC-X29-X-01A AC-29
DATE: 2.9.14 TIME:
AAN-1-PUFF-4C-
SEVEE & MAHER ENGINEERS, INC.

Date: 2/9/2014

Pump Serial No. 13257
Cartridge Serial No. LP666
Target Flow Rate: 3 L/min
Target Sample Volume: 1440

Sample Data

Start Time: 944 End Time: 1744
Initial Flow Rate: Pump See Motes. /Meas: 3 L/min

Laboratory Information

AVG. Sample Temp / Baro. Pres: 75.1 / 30.04
Sample Flow Rate: 3 L/min
Total Sample Volume: 1440

Field Audit

Time	Pump Flow (L/min)	Measured Flow (L/min)	Temp. (F)	Baro. Pressure	Notes
1. 1101	3.20	2.79	73.1	30.10	76 MIN elapsed
2. 1204	3.10	2.83	75.4	30.05	200
3. 1457	3.10	2.84	75.9	30.01	313
4 1634	3.20	-	74.1	30.00	409
5 1744	3.2	-			480 END
6					
7					
8					

Sample Location Description: 3RD FLOOR OFFICE ALCOVE WEST OUTSIDE WALL WITHIN NORTH ADDITION OF MAIN BUILDING.

Pump CALIBRATED TO 3 L/MIN PRIOR TO START w/ BIOS 510m.

Duplicate Sample Taken: Y (N) ID:

DO NOT DISTURB
AIR SAMPLING IN PROGRESS

Project: Darmody-Carta Portland
Location: AC- 36
Personnel: TEW and EMC
Pump Model No. SKC Airchek 224-PCXR8
Cartridge Type: Low Volume PUF
Sample ID: Darmody Cartar
AC-X30-X-01B AC-30
DATE: 2-9-14 TIME:
AAN-1-PUFF-4C-
SEVEE & MAHER ENGINEERS, INC.

Date: 2/9/2014
Pump Serial No. 13512
Cartridge Serial No. LPX34
Target Flow Rate: 3 L/min
Target Sample Volume: 1440

Sample Data
Start Time: 941 End Time: 1741
Initial Flow Rate: Pump See Note /Meas: 3

Laboratory Information
AVG. Sample Temp / Baro. Pres: 75.1 / 30.04
Sample Flow Rate: 3 L/min
Total Sample Volume: 1440

Discharge **Field Audit**

Time	Pump Flow (L/min)	Measured Flow (L/min)	Temp. (F)	Baro. Pressure	Notes
1. 1058	3.25	2.94	72.6	30.1	elapsed time 77
2. 1202	3.25	3.01	75.4	30.05	200
3. 1454	3.25	3.14	76.0	30.01	313
4 1632	3.25	-	76.2	30.00	410
5 1741	3.25				480 END
6					
7					
8					

Sample Location Description: 3RD FLOOR IN CUBICLE ALONG NORTH OUTSIDE WALL OF NORTH ADDITION OF MAIN BUILDING. See Figure

Pump Calibrated to 3 L/min Prior to Start w/Bios flow

Duplicate Sample Taken: Y (N) ID:

DO NOT DISTURB
AIR SAMPLING IN PROGRESS

Project: Darmody-Carta Portland
Location: AC-31
Personnel: TEW and EMC
Pump Model No. SKC Airchek 224-PCXR8
Cartridge Type: Low Volume PUF
Sample ID: Darmody Cartar AC-X31-X-01C AC-31
DATE: 2-9-14 TIME:
AAN-1-PUFF-4C-
SEVEE & MAHER ENGINEERS, INC.

Date: 2/9/2014

Pump Serial No. 7738
Cartridge Serial No. LPX84
Target Flow Rate: 3 L/min
Target Sample Volume: 1440

Sample Data

Start Time: 939 End Time: 1739
Initial Flow Rate: Pump See Above /Meas: 3 L/min

Laboratory Information

AVG. Sample Temp / Baro. Pres: 75.5 / 30.03
Sample Flow Rate: 3 L/min
Total Sample Volume: 1440

DISCHARGE **Field Audit**

Time	Pump Flow (L/min)	Measured Flow (L/min)	Temp. (F)	Baro. Pressure	Notes
1. 1055	3.25	3.03	71.4	30.1	75 min elapsed
2. 1259	3.25	3.04	75.1	30.06	199
3. 1451	3.25	3.04	76.1	30.02	313
4 1630	3.25	-	74.3	30.00	412
5 1739	3.25	-	78.2	30.00	480 stop
6					
7					
8					

Sample Location Description: Conference Room 3RD floor in North addition.
Central Comp. Room east of open spiral stair case

Pump Calibrated to 3 L/min Prior to Start of Session

Darmody Cartar BT-XXX-X-01H QCBT
DATE: 2-9-14 TIME:
AAN-1-PUFF-4C-
SEVEE & MAHER ENGINEERS, INC.

Duplicate Sample Taken: Y (N) ID:

AIR ANALYSIS - SORBENT MEDIA
CHAIN OF CUSTODY

Westborough, MA TEL: 508-898-9220 FAX: 508-822-3288
Mansfield, MA TEL: 508-822-9300 508-822-3288

Client Information
Client: Sevee & Maher
Address: 4 Blanchard Rd.
Cumberland ME 04021
Phone: 207 829 5016
Fax:
Email: EMC @ SMEMAINE.COM

Project Information
Project Name: Darmody Carta
Project Location: Portland
Project #: 13181
(Use Project name as Project #) ☐
Project Manager: Erik Clapp
ALPHA Quote #:

Turn-Around Time
Standard ☒ Due Date:
Rush (only if pre approved) ☐ Time:

These samples have been previously analyzed by Alpha ☐

Report Information - Data Deliverables
☐ FAX
☒ ADEx
Criteria Checker:
Other Formats:
☒ EMAIL
☐ Add'l Deliverables
Report to: (if different than Project Manager)

Billing Information
☒ Same as Client Info
PO # 13181

Regulatory Requirements/Report Limits

State/Fed	Program	Criteria

Other Project Specific Requirements/ Comments/Detection Limits

For PCBs, selection is REQUIRED:
☐ Congeners
☒ Homologs
☐ Aroclors (Low Vol only)

NOTE: For metals, please specify elements of interest and media type.
☐ PM-10
☐ TSP
☐ MCE

All Columns Below Must Be Filled Out / **ANALYSIS**

Sample ID	Collection Date	Start Time	End Time	Flow Rate (L/min)	Total Volume (L)	Sample Matrix*	Sampler's Initials	Media ID# (1)	TO-13A	PCBs (High Vol)	PCBs (Low Vol) TO-10A	TO-11A	Hg via NIOSH 6009 Mod.	Metals	TO-17		Sample Comments (i.e. PID)
BT-XXX-X-02H	2/9/14	0930	1840	—	—	AA	TEW	LP364			1						Avg. Temp
AC-XX1-X-002	↓	1037	1837	3.0	1440	↓	↓	LP337			1						For all samples
AC-XX2-X-003	↓	1034	1834	3.0	1440	↓	↓	LP326			1						During sampling
AC-XX3-X-004	↓	1033	1833	3.0	1440	↓	↓	LP338			1						76.0°F
AC-XX4-X-005	↓	1031	1831	3.0	1440	↓	↓	LPX86			1						Avg. Barometric
AC-XX5-X-006	↓	1028	1828	3.0	1440	↓	↓	LP342			1						Pressure During
AC-XX6-X-007	↓	1029	1829	3.0	1440	↓	↓	LP359			1						Sampling 30.05 in
AC-XX7-X-008	↓	1026	1826	3.0	1440	↓	↓	LP285			1						
AC-XX8-X-009	↓	1025	1825	3.0	1440	↓	↓	LP357			1						
AC-XX9-X-00A	↓	1022	1822	3.0	1440	↓	↓	LPX90			1						
								Media Type	P	P	(P)	D	T	F	T		

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	2/10/14 1251	[signature]	2/10/14 1251

Media Code
D = DNPH Cartridge
F = Filter
P = PUF Cartridge
T = Sorbent Tube
O = Other

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

AIR ANALYSIS - SORBENT MEDIA
CHAIN OF CUSTODY

Page 2 of 5

Westborough, MA TEL: 508-898-9220 FAX: 508-822-3288
Mansfield, MA TEL: 508-822-9300 508-822-3288

Client Information

Client: Sevee & Maher
Address:
See Page 1
Phone:
Fax:
Email:

Project Information

Project Name: Dermody Carta
Project Location: Portland
Project #: 13181
(Use Project name as Project #): ☐
Project Manager: Erik Clapp
ALPHA Quote #:

Turn-Around Time

Standard: ☒ Due Date:
Rush (only if pre approved): ☐ Time:

These samples have been previously analyzed by Alpha: ☐

Report Information - Data Deliverables

☐ FAX
☒ ADEx
Criteria Checker:
Other Formats:
☒ EMAIL
☐ Add'l Deliverables

Report to: (if different than Project Manager)

Billing Information

☒ Same as Client Info
PO # 13181

Regulatory Requirements/Report Limits

State/Fed	Program	Criteria

Other Project Specific Requirements/ Comments/Detection Limits

For PCBs, selection is REQUIRED:
☐ Congeners
☒ Homologs
☐ Aroclors (Low Vol only)

All Columns Below Must Be Filled Out

ANALYSIS

NOTE: For metals, please specify elements of interest and media type.
☐ PM-10
☐ TSP
☐ MCE

Sample ID	Collection: Date	Start Time	End Time	Flow Rate (L/min)	Total Volume (L)	Sample Matrix*	Sampler's Initials	Media ID# (1)	TO-13A	PCBs (High Vol)	PCBs (Low Vol) TO-10A	TO-11A	Hg via NIOSH 6009 Mod.	Metals	TO-17		Sample Comments (i.e. PID)
AC-X10-X-00B	2/9/14	1019	1820	3.0	1443	AA	TEW	LP358			1						See Page 1
AC-X11-X-00C		1020	1820	3.0	1440			LPX60			1						
AC-X12-X-00D		1017	1817	3.0	1440			LP360			1						
AC-X13-X00E		1015	1815	3.0	1440			LPX73			1						
AC-X14-X-00F		1014	1814	3.0	1440			LP332			1						
AC-X15-X-00G		1012	1812	3.0	1440			LP356			1						
AC-X16-X00H		1010	1810	3.0	1440			LP354			1						
AC-X17-X-00I		1006	1806	3.0	1440			LP317			1						
AC-X18-X-00J		1005	1805	3.0	1440			LP321			1						
AC-X19-X-010		1003	1803	3.0	1440			LP365			1						
								Media Type	P	P	P	D	T	F	T		

Media Code
D = DNPH Cartridge
F = Filter
P = PUF Cartridge
T = Sorbent Tube
O = Other

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	2/10/14 12:57	[signature]	2/10/14 1251

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

AIR ANALYSIS - SORBENT MEDIA
CHAIN OF CUSTODY

Westborough, MA TEL: 508-898-9220 FAX: 508-822-3288
Mansfield, MA TEL: 508-822-9300 508-822-3288

Client Information
Client: SEVEE & MAHER
Address:
See Page 1
Phone:
Fax:
Email:

Project Information
Project Name: DARMOOR CARTA
Project Location: PORTLAND
Project # 13181
(Use Project name as Project #) ☐
Project Manager: ERIK CLAPP
ALPHA Quote #:

Turn-Around Time
Standard ☒ Due Date:
Rush (only if pre approved) ☐ Time:

Report Information - Data Deliverables
☐ FAX
☒ ADEx
Criteria Checker:
Other Formats:
☒ EMAIL
☐ Add'l Deliverables
Report to: (if different than Project Manager)

Billing Information
☒ Same as Client Info
PO # 13181

Regulatory Requirements/Report Limits

State/Fed	Program	Criteria

These samples have been previously analyzed by Alpha ☐

Other Project Specific Requirements/ Comments/Detection Limits

For PCBs, selection is REQUIRED:
☐ Congeners
☒ Homologs
☐ Aroclors (Low Vol only)

All Columns Below Must Be Filled Out

Sample ID	Collection Date	Start Time	End Time	Flow Rate (L/min)	Total Volume (L)	Sample Matrix*	Sampler's Initials	Media ID# (1)	TO-13A	PCBs (High Vol)	PCBs (Low Vol) TO-10A	TO-11A	Hg via NIOSH 6009 Mod.	Metals	TO-17		Sample Comments (i.e. PID)
AC-X20-X-011	2/6/14	1001	1801	3.0	1440	AA	TEW	LP362			1						See Page 1
AC-X21-X-012		0959	1759	3.0	1440			LPX35			1						
AC-X22-X-013		0957	1757	3.0	1440			LP345			1						
AC-X23-X-014		0956	1756	3.0	1440			LPX89			1						
AC-X24-X-015		0953	1753	3.0	1440			LP266			1						
AC-X25-X-016		0948	1748	3.0	1440			LP327			1						
AC-X26-X-017		0952	1752	3.0	1440			LP363			1						
AC-X27-X-018		0947	1747	3.0	1440			LP361			1						
AC-X28-X-019		0945	1745	3.0	1440			LPX99			1						
AC-X29-X-01A		0944	1744	3.0	1440			LP666			1						
AIR BLANK-X-020																	
								Media Type	P	P	P	D	T	F	T		

NOTE: For metals, please specify elements of interest and media type.
☐ PM-10
☐ TSP
☐ MCE

Media Code
D = DNPH Cartridge
F = Filter
P = PUF Cartridge
T = Sorbent Tube
O = Other

Relinquished By:	Date/Time	Received By:	Date/Time
	2/10/14 12:51		2/12/14 12:51

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

AIR ANALYSIS - SORBENT MEDIA
CHAIN OF CUSTODY

Page 4 of 5

Westborough, MA TEL: 508-898-9220 FAX: 508-822-3288
Mansfield, MA TEL: 508-822-9300 508-822-3288

Client Information

Client: SEVEE & MAHER
Address: 41 BANCHARD
CUMBERLAND ME
Phone: 207 824 5014
Fax:
Email: EMC@SMCIVILME.com

Project Information

Project Name: DARMODY CARTER
Project Location: PORTLAND
Project #: 13181
(Use Project name as Project #)
Project Manager: ERIK CLAPP
ALPHA Quote #:

Turn-Around Time

Standard [X] Due Date:
Rush (only if pre approved) [ ] Time:

These samples have been previously analyzed by Alpha [ ]

Report Information - Data Deliverables

[ ] FAX
[X] ADEx
Criteria Checker:
Other Formats:
[X] EMAIL
[ ] Add'l Deliverables

Report to: (if different than Project Manager)

Billing Information

[X] Same as Client Info
PO # 13181

Regulatory Requirements/Report Limits

State/Fed	Program	Criteria

Other Project Specific Requirements/ Comments/Detection Limits

For PCBs, selection is REQUIRED:

[ ] Congeners
[X] Homologs
[ ] Aroclors (Low Vol only)

ANALYSIS

All Columns Below Must Be Filled Out

Sample ID	Collection Date	Start Time	End Time	Flow Rate (L/min)	Total Volume (L)	Sample Matrix*	Sampler's Initials	Media ID# (1)	TO-13A	PCBs (High Vol)	PCBs (Low Vol) TO-10A	TO-11A	Hg via NIOSH 6009 Mod.	Metals	TO-17	Sample Comments (i.e. PID)
AC-X30-X-01B	2/6/14	0941	1741	3.0	1440	AA	TELS	LPX341			1					See Page 1
AC-X31-X-01C		0939	1739	3.0	1440			LPX841			1					
AC-DP1-X-01E		—	—	3.0	1440			LP322			1					
AC-DP2-X-02F		—	—	3.0	1440			LP351			1					
AC-DP3-X-01G		—	—	3.0	1440			LP355			1					
	PLEASE SEE PAGE 5 OF 5 FOR CODES/METHOD INFO.															
Media Type									P	P	P	D	T	F	T	

NOTE: For metals, please specify elements of interest and media type.
[ ] PM-10
[ ] TSP
[ ] MCE

Media Code
D = DNPH Cartridge
F = Filter
P = PUF Cartridge
T = Sorbent Tube
O = Other

Relinquished By:	Date/Time	Received By:	Date/Time
	2/10/14 12:51		2/10/14 1251

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

APPENDIX B

DATA SUMMARY TABLES

REPORT PREPARED: 3/7/2014 08:15

FOR: Darmody Carta

SUMMARY REPORT

February 2014 Air Samples

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(QCBT) Date	Type	Sample ID	Total Homologs NG/M3	Monochlorobiphenyls NG/M3	Dichlorobiphenyls NG/M3	Trichlorobiphenyls NG/M3	Tetrachlorobiphenyls NG/M3	Pentachlorobiphenyls NG/M3	Hexachlorobiphenyls NG/M3	Heptachlorobiphenyls NG/M3	Octachlorobiphenyls NG/M3	Nonachlorobiphenyls NG/M3	Decachlorobiphenyl NG/M3
QCBT													
2/9/2014	XX	BTX00X001H	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-1													
2/9/2014	XX	ACX01X002	45.8	7.11 U	7.11 U	7.11 U	21.19	24.61	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
2/9/2014	XD	ACDP3X01G	47.01	7.11 U	7.11 U	7.11 U	21.62	25.39	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-2													
2/9/2014	XX	AC02X003	24.32	7.11 U	7.11 U	7.11 U	15.08	9.25	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-3													
2/9/2014	XX	AC03X004	169.99	7.11 U	8.18	15.65	53.2	74.68	18.14	7.11 U	7.11 U	7.11 U	7.11 U
AC-4													
2/9/2014	XX	AC04X005	47.44	7.11 U	7.11 U	7.11 U	19.99	27.45	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-5													
2/9/2014	XX	AC05X006	8.96	7.11 U	7.11 U	7.11 U	8.96	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-6													
2/9/2014	XX	AC06X007	38.34	7.11 U	7.11 U	10.88	17.35	10.1	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-7													
2/9/2014	XX	AC07X008	70.2	7.11 U	7.11 U	7.11 U	28.38	41.82	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-8													
2/9/2014	XX	AC08X009	48.36	7.11 U	7.11 U	7.11 U	18.14	30.23	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-9													
2/9/2014	XX	AC09X00A	54.48	7.11 U	7.11 U	7.11 U	20.48	34	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-10													
2/9/2014	XX	AC10X00B	77.52	7.11 U	7.11 U	7.11 U	30.73	46.59	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-11													
2/9/2014	XX	AC11X00C	78.95	7.11 U	7.11 U	7.11 U	27.6	41.54	9.96	7.11 U	7.11 U	7.11 U	7.11 U
AC-12													
2/9/2014	XX	AC12X00D	80.37	7.11 U	7.11 U	7.11 U	33.93	46.3	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-13													
2/9/2014	XX	AC13X00E	78.95	7.11 U	7.11 U	7.11 U	22.4	47.72	8.61	7.11 U	7.11 U	7.11 U	7.11 U
AC-14													
2/9/2014	XX	AC14X00F	159.32	7.11 U	7.11 U	9.74	57.61	79.66	12.02	7.11 U	7.11 U	7.11 U	7.11 U
AC-15													
2/9/2014	XX	AC15X00G	51	7.11 U	7.11 U	7.11 U	18.71	32.29	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-16													
2/9/2014	XX	AC16X00H	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
2/9/2014	XD	ACDP2X01F	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-17													
2/9/2014	XX	AC17X001	47.23	7.11 U.	7.11 U	7.11 U	18.99	28.24	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U

APPENDIX B

DATA SUMMARY TABLES

REPORT PREPARED: 3/7/2014 08:15
FOR: Dannody Carla

SUMMARY REPORT

February 2014 Air Samples

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(QCBT)

Date	Type	Sample ID	Total Homologs NG/M3	Monochlorobiphenyls NG/M3	Dichlorobiphenyls NG/M3	Trichlorobiphenyls NG/M3	Tetrachlorobiphenyls NG/M3	Pentachlorobiphenyls NG/M3	Hexachlorobiphenyls NG/M3	Heptachlorobiphenyls NG/M3	Octachlorobiphenyls NG/M3	Nonachlorobiphenyls NG/M3	Decachlorobiphenyl NG/M3
QCBT													
2/9/2014	XX	BT0000001H	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-1													
2/9/2014	XX	ACQC1X002	45.8	7.11 U	7.11 U	7.11 U	21.19	24.61	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
2/9/2014	XD	ACDP3X01G	47.01	7.11 U	7.11 U	7.11 U	21.62	25.39	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-2													
2/9/2014	XX	ACQC2X003	24.32	7.11 U	7.11 U	7.11 U	15.08	9.25	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-3													
2/9/2014	XX	ACQC3X004	169.99	7.11 U	8.18	15.65	53.2	74.68	18.14	7.11 U	7.11 U	7.11 U	7.11 U
AC-4													
2/9/2014	XX	ACQC4X005	47.44	7.11 U	7.11 U	7.11 U	19.99	27.45	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-5													
2/9/2014	XX	ACQC5X006	8.96	7.11 U	7.11 U	7.11 U	8.96	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-6													
2/9/2014	XX	ACQC6X007	38.34	7.11 U	7.11 U	10.88	17.35	10.1	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-7													
2/9/2014	XX	ACQC7X008	70.2	7.11 U	7.11 U	7.11 U	28.38	41.82	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-8													
2/9/2014	XX	ACQC8X009	46.36	7.11 U	7.11 U	7.11 U	16.14	30.23	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-9													
2/9/2014	XX	ACQC9X00A	54.48	7.11 U	7.11 U	7.11 U	20.48	34	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-10													
2/9/2014	XX	ACX10X00B	77.52	7.11 U	7.11 U	7.11 U	30.73	46.59	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-11													
2/9/2014	XX	ACX11X00C	78.95	7.11 U	7.11 U	7.11 U	27.6	41.54	9.96	7.11 U	7.11 U	7.11 U	7.11 U
AC-12													
2/9/2014	XX	ACX12X00D	80.37	7.11 U	7.11 U	7.11 U	33.93	46.3	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-13													
2/9/2014	XX	ACX13X00E	78.95	7.11 U	7.11 U	7.11 U	22.4	47.72	8.61	7.11 U	7.11 U	7.11 U	7.11 U
AC-14													
2/9/2014	XX	ACX14X00F	159.32	7.11 U	7.11 U	9.74	57.61	79.66	12.02	7.11 U	7.11 U	7.11 U	7.11 U
AC-15													
2/9/2014	XX	ACX15X00G	51	7.11 U	7.11 U	7.11 U	18.71	32.29	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-16													
2/9/2014	XX	ACX16X00H	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
2/9/2014	XD	ACDP2X01F	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-17													
2/9/2014	XX	ACX17X00I	47.23	7.11 U	7.11 U	7.11 U	18.99	28.24	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(AC-31)

Date	Type	Sample ID	Total Homologs NG/M3	Monochlorobiphenyls NG/M3	Dichlorobiphenyls NG/M3	Trichlorobiphenyls NG/M3	Tetrachlorobiphenyls NG/M3	Pentachlorobiphenyls NG/M3	Hexachlorobiphenyls NG/M3	Heptachlorobiphenyls NG/M3	Octachlorobiphenyls NG/M3	Nonachlorobiphenyls NG/M3	Decachlorobiphenyl NG/M3

Notes: TYPE - Sample Type Qualifier where D = Duplicate Sample.

Blank Cells appear when a parameter was not analyzed.

Concentration Qualifier Notes:

U - Not Detected above the reported sample detection limit.

APPENDIX C

LABORATORY ANALYTICAL DATA PACKAGES

ALPHA ANALYTICAL

ANALYTICAL REPORT

Lab Number:	L1403176
Client:	Sevee & Maher Engineers, Inc. P.O. Box 85A 4 Blanchard Road Cumberland Center, ME 04021
ATTN:	Erik Clapp
Phone:	(207) 829-5016
Project Name:	DARMODY CARTA
Project Number:	Not Specified
Report Date:	02/21/14

Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1403176-32	AC-X31-X-01C	PORTLAND	02/09/14 17:39
L1403176-33	AC-DP1-X-01E	PORTLAND	02/09/14 00:00
L1403176-34	AC-DP2-X-01F	PORTLAND	02/09/14 00:00
L1403176-35	AC-DP3-X-01G	PORTLAND	02/09/14 00:00

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

Case Narrative (continued)

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Elizabeth Porta

Title: Technical Director/Representative

Date: 02/21/14

PCBS

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

SAMPLE RESULTS

Lab ID:	L1403176-02	Date Collected:	02/09/14 18:37
Client ID:	AC-XX1-X-002	Date Received:	02/10/14
Sample Location:	PORTLAND	Field Prep:	Not Specified
Matrix:	Air Media	Extraction Method:	EPA 3540C
Analytical Method:	105,8270D-SIM/NOAA-M	Extraction Date:	02/11/14 14:30
Analytical Date:	02/13/14 23:59		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	29.8		ng/cart	10.0	--	1
Pentachlorobiphenyls	34.6		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	64.4		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	99		50-125
Cl8-BZ#202-C13	90		50-125

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

SAMPLE RESULTS

Lab ID:	L1403176-04	Date Collected:	02/09/14 18:33
Client ID:	AC-XX3-X-004	Date Received:	02/10/14
Sample Location:	PORTLAND	Field Prep:	Not Specified
Matrix:	Air Media	Extraction Method:	EPA 3540C
Analytical Method:	105,8270D-SIM/NOAA-M	Extraction Date:	02/11/14 14:30
Analytical Date:	02/14/14 01:52		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	11.5		ng/cart	10.0	--	1
Trichlorobiphenyls	22.0		ng/cart	10.0	--	1
Tetrachlorobiphenyls	74.8		ng/cart	10.0	--	1
Pentachlorobiphenyls	105		ng/cart	10.0	--	1
Hexachlorobiphenyls	25.5		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	239		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	100		50-125
Cl8-BZ#202-C13	95		50-125

Project Name: DARMODY CARTA
Project Number: Not Specified
Lab Number: L1403176
Report Date: 02/21/14

SAMPLE RESULTS

Lab ID:	L1403176-06	Date Collected:	02/09/14 18:28
Client ID:	AC-XX5-X-006	Date Received:	02/10/14
Sample Location:	PORTLAND	Field Prep:	Not Specified
Matrix:	Air Media	Extraction Method:	EPA 3540C
Analytical Method:	105,8270D-SIM/NOAA-M	Extraction Date:	02/11/14 14:30
Analytical Date:	02/14/14 05:18		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	12.6		ng/cart	10.0	--	1
Pentachlorobiphenyls	ND		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	12.6		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	99		50-125
Cl8-BZ#202-C13	91		50-125

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

SAMPLE RESULTS

Lab ID:	L1403176-08	Date Collected:	02/09/14 18:26
Client ID:	AC-XX7-X-008	Date Received:	02/10/14
Sample Location:	PORTLAND	Field Prep:	Not Specified
Matrix:	Air Media	Extraction Method:	EPA 3540C
Analytical Method:	105,8270D-SIM/NOAA-M	Extraction Date:	02/11/14 14:30
Analytical Date:	02/14/14 07:11		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	39.9		ng/cart	10.0	--	1
Pentachlorobiphenyls	58.8		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	98.7		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	102		50-125
Cl8-BZ#202-C13	95		50-125

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

SAMPLE RESULTS

Lab ID: L1403176-10
Client ID: AC-XX9-X-00A
Sample Location: PORTLAND
Matrix: Air Media
Analytical Method: 105,8270D-SIM/NOAA-M
Analytical Date: 02/14/14 09:04
Analyst: JS

Date Collected: 02/09/14 18:22
Date Received: 02/10/14
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 02/11/14 14:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	28.8		ng/cart	10.0	--	1
Pentachlorobiphenyls	47.8		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	76.6		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	102		50-125
Cl8-BZ#202-C13	95		50-125

Serial_No:02211416:51

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

SAMPLE RESULTS

Lab ID: L1403176-12
Client ID: AC-X11-X-00C
Sample Location: PORTLAND
Matrix: Air Media
Analytical Method: 105,8270D-SIM/NOAA-M
Analytical Date: 02/14/14 10:57
Analyst: JS

Date Collected: 02/09/14 18:20
Date Received: 02/10/14
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 02/11/14 14:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	38.8		ng/cart	10.0	--	1
Pentachlorobiphenyls	58.4		ng/cart	10.0	--	1
Hexachlorobiphenyls	14.0		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	111		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	101		50-125
Cl8-BZ#202-C13	91		50-125

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

SAMPLE RESULTS

Lab ID:	L1403176-14	Date Collected:	02/09/14 18:15
Client ID:	AC-X13-X-00E	Date Received:	02/10/14
Sample Location:	PORTLAND	Field Prep:	Not Specified
Matrix:	Air Media	Extraction Method:	EPA 3540C
Analytical Method:	105,8270D-SIM/NOAA-M	Extraction Date:	02/11/14 14:30
Analytical Date:	02/14/14 12:50		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	31.5		ng/cart	10.0	--	1
Pentachlorobiphenyls	67.1		ng/cart	10.0	--	1
Hexachlorobiphenyls	12.1		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	111		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	96		50-125
Cl8-BZ#202-C13	88		50-125

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

SAMPLE RESULTS

Lab ID: L1403176-16
Client ID: AC-X15-X-00G
Sample Location: PORTLAND
Matrix: Air Media
Analytical Method: 105,8270D-SIM/NOAA-M
Analytical Date: 02/14/14 21:05
Analyst: JS

Date Collected: 02/09/14 18:12
Date Received: 02/10/14
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 02/12/14 16:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	26.3		ng/cart	10.0	--	1
Pentachlorobiphenyls	45.4		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	71.7		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	96		50-125
Cl8-BZ#202-C13	87		50-125

Project Name: DARMODY CARTA
Project Number: Not Specified
Lab Number: L1403176
Report Date: 02/21/14

SAMPLE RESULTS

Lab ID:	L1403176-18	Date Collected:	02/09/14 18:06
Client ID:	AC-X17-X-00I	Date Received:	02/10/14
Sample Location:	PORTLAND	Field Prep:	Not Specified
Matrix:	Air Media	Extraction Method:	EPA 3540C
Analytical Method:	105,8270D-SIM/NOAA-M	Extraction Date:	02/12/14 16:45
Analytical Date:	02/14/14 22:58		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	26.7		ng/cart	10.0	--	1
Pentachlorobiphenyls	39.7		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	66.4		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	101		50-125
Cl8-BZ#202-C13	92		50-125

Project Name: DARMODY CARTA
Project Number: Not Specified
Lab Number: L1403176
Report Date: 02/21/14

SAMPLE RESULTS

Lab ID:	L1403176-20	Date Collected:	02/09/14 18:03
Client ID:	AC-X19-X-010	Date Received:	02/10/14
Sample Location:	PORTLAND	Field Prep:	Not Specified
Matrix:	Air Media	Extraction Method:	EPA 3540C
Analytical Method:	105,8270D-SIM/NOAA-M	Extraction Date:	02/12/14 16:45
Analytical Date:	02/15/14 00:51		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	21.2		ng/cart	10.0	--	1
Pentachlorobiphenyls	36.5		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	57.7		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	97		50-125
Cl8-BZ#202-C13	87		50-125

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

SAMPLE RESULTS

Lab ID: L1403176-22
Client ID: AC-X21-X-012
Sample Location: PORTLAND
Matrix: Air Media
Analytical Method: 105,8270D-SIM/NOAA-M
Analytical Date: 02/15/14 02:44
Analyst: JS

Date Collected: 02/09/14 17:59
Date Received: 02/10/14
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 02/12/14 16:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	34.6		ng/cart	10.0	--	1
Pentachlorobiphenyls	72.7		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	107		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	103		50-125
Cl8-BZ#202-C13	94		50-125

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

SAMPLE RESULTS

Lab ID: L1403176-24
Client ID: AC-X23-X-014
Sample Location: PORTLAND
Matrix: Air Media
Analytical Method: 105,8270D-SIM/NOAA-M
Analytical Date: 02/15/14 06:08
Analyst: JS

Date Collected: 02/09/14 17:56
Date Received: 02/10/14
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 02/12/14 16:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	ND		ng/cart	10.0	--	1
Pentachlorobiphenyls	ND		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	ND		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	100		50-125
Cl8-BZ#202-C13	93		50-125

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

SAMPLE RESULTS

Lab ID:	L1403176-26	Date Collected:	02/09/14 17:48
Client ID:	AC-X25-X-016	Date Received:	02/10/14
Sample Location:	PORTLAND	Field Prep:	Not Specified
Matrix:	Air Media	Extraction Method:	EPA 3540C
Analytical Method:	105,8270D-SIM/NOAA-M	Extraction Date:	02/12/14 16:45
Analytical Date:	02/19/14 10:38		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	25.0		ng/cart	10.0	--	1
Pentachlorobiphenyls	45.0		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	70.0		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	96		50-125
Cl8-BZ#202-C13	90		50-125

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

SAMPLE RESULTS

Lab ID:	L1403176-28
Client ID:	AC-X27-X-018
Sample Location:	PORTLAND
Matrix:	Air Media
Analytical Method:	105,8270D-SIM/NOAA-M
Analytical Date:	02/19/14 14:34
Analyst:	JS

Date Collected:	02/09/14 17:47
Date Received:	02/10/14
Field Prep:	Not Specified
Extraction Method:	EPA 3540C
Extraction Date:	02/12/14 16:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	23.4		ng/cart	10.0	--	1
Pentachlorobiphenyls	61.7		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	85.1		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	100		50-125
Cl8-BZ#202-C13	91		50-125

Project Name: DARMODY CARTA
Project Number: Not Specified
Lab Number: L1403176
Report Date: 02/21/14

SAMPLE RESULTS

Lab ID:	L1403176-30	Date Collected:	02/09/14 17:44
Client ID:	AC-X29-X-01A	Date Received:	02/10/14
Sample Location:	PORTLAND	Field Prep:	Not Specified
Matrix:	Air Media	Extraction Method:	EPA 3540C
Analytical Method:	105,8270D-SIM/NOAA-M	Extraction Date:	02/12/14 16:45
Analytical Date:	02/15/14 11:46		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	ND		ng/cart	10.0	--	1
Pentachlorobiphenyls	ND		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	ND		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	101		50-125
Cl8-BZ#202-C13	92		50-125

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

SAMPLE RESULTS

Lab ID: L1403176-32
Client ID: AC-X31-X-01C
Sample Location: PORTLAND
Matrix: Air Media
Analytical Method: 105,8270D-SIM/NOAA-M
Analytical Date: 02/15/14 13:39
Analyst: JS

Date Collected: 02/09/14 17:39
Date Received: 02/10/14
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 02/12/14 16:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	ND		ng/cart	10.0	--	1
Pentachlorobiphenyls	ND		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	ND		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	100		50-125
Cl8-BZ#202-C13	90		50-125

Project Name: DARMODY CARTA
Project Number: Not Specified
Lab Number: L1403176
Report Date: 02/21/14

SAMPLE RESULTS

Lab ID:	L1403176-34	Date Collected:	02/09/14 00:00
Client ID:	AC-DP2-X-01F	Date Received:	02/10/14
Sample Location:	PORTLAND	Field Prep:	Not Specified
Matrix:	Air Media	Extraction Method:	EPA 3540C
Analytical Method:	105,8270D-SIM/NOAA-M	Extraction Date:	02/12/14 16:45
Analytical Date:	02/15/14 15:32		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	ND		ng/cart	10.0	--	1
Pentachlorobiphenyls	ND		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	ND		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	108		50-125
Cl8-BZ#202-C13	94		50-125

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 105,8270D-SIM/NOAA-M
Analytical Date: 02/13/14 19:16
Analyst: JS

Extraction Method: EPA 3540C
Extraction Date: 02/11/14 14:30

Parameter	Result	Qualifier	Units	RL	MDL
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab for sample(s): 01-15 Batch: WG669812-1					
Monochlorobiphenyls	ND		ng/cart	10.0	--
Dichlorobiphenyls	ND		ng/cart	10.0	--
Trichlorobiphenyls	ND		ng/cart	10.0	--
Tetrachlorobiphenyls	ND		ng/cart	10.0	--
Pentachlorobiphenyls	ND		ng/cart	10.0	--
Hexachlorobiphenyls	ND		ng/cart	10.0	--
Heptachlorobiphenyls	ND		ng/cart	10.0	--
Octachlorobiphenyls	ND		ng/cart	10.0	--
Nonachlorobiphenyls	ND		ng/cart	10.0	--
Decachlorobiphenyl	ND		ng/cart	10.0	--
Total Homologs	ND		ng/cart	10.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	96		50-125
Cl8-BZ#202-C13	89		50-125

Lab Control Sample Analysis
Batch Quality Control

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab Associated sample(s): 01-15 Batch: WG669812-2								
Cl1-BZ#1	116		-		40-140	-		30
CL1-BZ#3	118		-		40-140	-		30
Cl2-BZ#4/#10	127		-		40-140	-		30
Cl2-BZ#5/#8	104		-		40-140	-		30
Cl3-BZ#19	109		-		40-140	-		30
Cl3-BZ#18	100		-		40-140	-		30
Cl2-BZ#15	95		-		40-140	-		30
Cl4-BZ#54	106		-		40-140	-		30
Cl3-BZ#29	92		-		40-140	-		30
Cl4-BZ#50	111		-		40-140	-		30
Cl3-BZ#28/#31	99		-		40-140	-		30
Cl4-BZ#45	118		-		40-140	-		30
Cl4-BZ#52	97		-		40-140	-		30
Cl4-BZ#43/#49	104		-		40-140	-		30
Cl4-Bz#47/#48	99		-		40-140	-		30
Cl5-BZ#104	98		-		40-140	-		30
Cl4-BZ#44	96		-		40-140	-		30
Cl3-BZ#37	85		-		40-140	-		30
Cl4-BZ#74	99		-		40-140	-		30
Cl6-BZ#155	107		-		40-140	-		30
Cl4-BZ#70	95		-		40-140	-		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab Associated sample(s): 01-15 Batch: WG669812-2								
Cl7-BZ#182/#187	92		-		40-140	-		30
Cl7-BZ#183	100		-		40-140	-		30
Cl6-BZ#167/#128	92		-		40-140	-		30
Cl5-BZ#126	64		-		40-140	-		30
Cl7-BZ#174	94		-		40-140	-		30
Cl8-BZ#202	97		-		40-140	-		30
Cl7-BZ#177	88		-		40-140	-		30
Cl6-BZ#156	84		-		40-140	-		30
Cl6-BZ#157	86		-		40-140	-		30
Cl7-BZ#180	96		-		40-140	-		30
Cl7-BZ#170/#190	75		-		40-140	-		30
Cl8-BZ#201	92		-		40-140	-		30
Cl6-BZ#169	88		-		40-140	-		30
Cl9-BZ#208	100		-		40-140	-		30
Cl7-BZ#189	91		-		40-140	-		30
Cl8-BZ#195	89		-		40-140	-		30
Cl8-BZ#194	95		-		40-140	-		30
Cl8-BZ#205	93		-		40-140	-		30
Cl9-BZ#206	89		-		40-140	-		30
Cl10-BZ#209	90		-		40-140	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab Associated sample(s): 16-35 Batch: WG670083-2								
Cl1-BZ#1	115		-		40-140	-		30
CL1-BZ#3	119		-		40-140	-		30
Cl2-BZ#4/#10	126		-		40-140	-		30
Cl2-BZ#5/#8	108		-		40-140	-		30
Cl3-BZ#19	112		-		40-140	-		30
Cl3-BZ#18	102		-		40-140	-		30
Cl2-BZ#15	99		-		40-140	-		30
Cl4-BZ#54	110		-		40-140	-		30
Cl3-BZ#29	97		-		40-140	-		30
Cl4-BZ#50	115		-		40-140	-		30
Cl3-BZ#28/#31	107		-		40-140	-		30
Cl4-BZ#45	122		-		40-140	-		30
Cl4-BZ#52	104		-		40-140	-		30
Cl4-BZ#43/#49	113		-		40-140	-		30
Cl4-Bz#47/#48	107		-		40-140	-		30
Cl5-BZ#104	104		-		40-140	-		30
Cl4-BZ#44	104		-		40-140	-		30
Cl3-BZ#37	94		-		40-140	-		30
Cl4-BZ#74	107		-		40-140	-		30
Cl6-BZ#155	113		-		40-140	-		30
Cl4-BZ#70	107		-		40-140	-		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab Associated sample(s): 16-35 Batch: WG670083-2								
Cl7-BZ#182/#187	102		-		40-140	-		30
Cl7-BZ#183	110		-		40-140	-		30
Cl6-BZ#167/#128	103		-		40-140	-		30
Cl5-BZ#126	76		-		40-140	-		30
Cl7-BZ#174	107		-		40-140	-		30
Cl8-BZ#202	104		-		40-140	-		30
Cl7-BZ#177	99		-		40-140	-		30
Cl6-BZ#156	99		-		40-140	-		30
Cl6-BZ#157	99		-		40-140	-		30
Cl7-BZ#180	105		-		40-140	-		30
Cl7-BZ#170/#190	88		-		40-140	-		30
Cl8-BZ#201	105		-		40-140	-		30
Cl6-BZ#169	109		-		40-140	-		30
Cl9-BZ#208	108		-		40-140	-		30
Cl7-BZ#189	112		-		40-140	-		30
Cl8-BZ#195	100		-		40-140	-		30
Cl8-BZ#194	107		-		40-140	-		30
Cl8-BZ#205	107		-		40-140	-		30
Cl9-BZ#206	98		-		40-140	-		30
Cl10-BZ#209	95		-		40-140	-		30

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

REFERENCES

105 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997 in conjunction with NOAA Technical Memorandum NMFS-NWFSC-59: Extraction, Cleanup and GC/MS Analysis of Sediments and Tissues for Organic Contaminants, March 2004 and the Determination of Pesticides and PCBs in Water and Oil/Sediment by GC/MS: Method 680, EPA 01A0005295, November 1985.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

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Serial_No:02211416:51

AIR ANALYSIS - SORBENT MEDIA
CHAIN OF CUSTODY

Page 1 — 1 of 5

Date Rec'd in Lab: 2/10/14 — ALPHA Job #: L1403176

Westborough, MA TEL: 508-898-9220 FAX: 508-822-3288
Mansfield, MA TEL: 508-822-9300 508-822-3288

Client Information
- Client: Sevee & Maher
- Address: 4 Blanchard Rd
- Cumberland ME 04021
- Phone: 207 829 5016
- Fax:
- Email: EMC@smemaine.com

Project Information
- Project Name: Darmody Carey
- Project Location: Portland
- Project #: 13181
- (Use Project name as Project #) ☐
- Project Manager: Erik Clapp
- ALPHA Quote #:

Turn-Around Time
- Standard ☒ — Due Date: 2/17/14
- Rush (only if pre approved) ☐ — Time:

Report Information - Data Deliverables
- ☐ FAX
- ☒ ADEx
- Criteria Checker:
- Other Formats:
- ☒ EMAIL
- ☐ Add'l Deliverables
- Report to: (if different than Project Manager)

Billing Information
- ☒ Same as Client Info
- PO #: 13181

Regulatory Requirements/Report Limits

State/Fed	Program	Criteria

These samples have been previously analyzed by Alpha ☐

Other Project Specific Requirements/ Comments/Detection Limits

For PCBs, selection is REQUIRED:
- ☐ Congeners
- ☒ Homologs
- ☐ Aroclors (Low Vol only)

NOTE: For metals, please specify elements of interest and media type.
- ☐ PM-10
- ☐ TSP
- ☐ MCE

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	Date	Start Time	End Time	Flow Rate (L/min)	Total Volume (L)	Sample Matrix*	Sampler's Initials	Media ID# (1)	TO-13A	PCBs (High Vol)	PCBs (Low Vol) TO-10A	TO-11A	Hg via NIOSH 6009 Mod.	Metals	TO-17	Sample Comments (i.e. PID)
01	BT-XXX-X-02H	2/9/14	0930	1840	—	—	AA	TEW	LP364			1					Avg. Temp
02	AC-XX1-X-002	↓	1037	1837	3.0	1440	↓	↓	LP337			1					For all samples
03	AC-XX2-X-003	↓	1034	1834	3.0	1440	↓	↓	LP326			1					during sampling
04	AC-XX3-X-004	↓	1033	1833	3.0	1440	↓	↓	LP338			1					76.0 F
05	AC-XX4-X-005	↓	1031	1831	3.0	1440	↓	↓	LPX86			1					Avg. Barometric
06	AC-XX5-X-006	↓	1028	1828	3.0	1440	↓	↓	LP342			1					Pressure during
07	AC-XX6-X-007	↓	1029	1829	3.0	1440	↓	↓	LP359			1					Sampling 80.05 in
08	AC-XX7-X-008	↓	1026	1826	3.0	1440	↓	↓	LP285			1					
09	AC-XX8-X-009	↓	1025	1825	3.0	1440	↓	↓	LP357			1					
10	AC-XX9-X-00A	↓	1022	1822	3.0	1440	↓	↓	LPX90			1					
									Media Type	P	P	(P)	D	T	F	T	

SAMPLE MATRIX CODES: AA = Ambient Air (Indoor/Outdoor) SV = Soil Vapor/Landfill Gas/SVE Other = Please Specify — (1) Required for PUF cartridges, PM-10 and TSP filters and sorbent tubes

Media Code
- D = DNPH Cartridge
- F = Filter
- P = PUF Cartridge
- T = Sorbent Tube
- O = Other

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	2/10/14 1251	[signature]	2/10/14 1251
[signature]	2/10/14 1650	[signature]	2/10/14 16:50
[signature]	2/11/14 02:00	Mansfield Lab	2/11/14 02:00

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 101-13 (rev 01-OCT-2013)

2 of 5

AIR ANALYSIS - SORBENT MEDIA
CHAIN OF CUSTODY

Page 3 — 3 of 5

Date Rec'd in Lab: 2/10/14 — ALPHA Job #: L1403176

Westborough, MA TEL: 508-898-9220 FAX: 508-822-3288
Mansfield, MA TEL: 508-822-9300 508-822-3288

Client Information

Client: Sevee & Maher
Address: See Page 1
Phone: See Page 1
Fax:
Email:

Project Information

Project Name: Darmody Carta
Project Location: Portland
Project #: 13181
(Use Project name as Project #) ☐
Project Manager: Erik Clapp
ALPHA Quote #:

Turn-Around Time

Standard ☒ Due Date: 2/17/14
Rush (only if pre approved) ☐ Time:

Report Information - Data Deliverables

☐ FAX
☒ ADEx
Criteria Checker:
Other Formats:
☒ EMAIL
☐ Add'l Deliverables
Report to: (if different than Project Manager)

Billing Information

☒ Same as Client Info
PO # 13181

Regulatory Requirements/Report Limits

State/Fed	Program	Criteria

These samples have been previously analyzed by Alpha ☐

Other Project Specific Requirements/ Comments/Detection Limits

For PCBs, selection is REQUIRED:
☐ Congeners
☒ Homologs
☐ Aroclors (Low Vol only)

NOTE: For metals, please specify elements of interest and media type.
☐ PM-10
☐ TSP
☐ MCE

All Columns Below Must Be Filled Out — ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Start Time	End Time	Flow Rate (L/min)	Total Volume (L)	Sample Matrix*	Sampler's Initials	Media ID# (1)	TO-13A	PCBs (High Vol)	PCBs (Low Vol) TO-10A	TO-11A	Hg via NIOSH 6009 Mod.	Metals	TO-17	Sample Comments (i.e. PID)
[illegible]21	AC-X20-X-011	2/6/14	1001	1801	3.0	1440	AA	TELS	LP362			1					See Page 1
[illegible]22	AC-X21-X-012	↓	0959	1759	3.0	1440	↓	↓	LPX35			1					
[illegible]23	AC-X22-X-013	↓	0957	1757	3.0	1440	↓	↓	LP345			1					
[illegible]24	AC-X23-X-014	↓	0956	1756	3.0	1440	↓	↓	LPX89			1					
[illegible]25	AC-X24-X-015	↓	0953	1753	3.0	1440	↓	↓	LP266			1					
[illegible]26	AC-X25-X-016	↓	0948	1748	3.0	1440	↓	↓	LP327			1					
[illegible]27	AC-X26-X-017	↓	0952	1752	3.0	1440	↓	↓	LP363			1					
[illegible]28	AC-X27-X-018	↓	0947	1747	3.0	1440	↓	↓	LP361			1					
[illegible]29	AC-X28-X-019	↓	0945	1745	3.0	1440	↓	↓	LPX99			1					
[illegible]30	AC-X29-X-01A	↓	0944	1744	3.0	1440	↓	↓	LP666			1					
SAMPLE MATRIX CODE	AA = Ambient Air (Indoor/Outdoor) SV = Soil Vapor/Landfill Gas Other = Please Specify			(1) Required for PUF cartridges, filters and TSP filters, sorbent tubes					Media Type	P	P	(P)	D	T	F	T	

Media Code
D = DNPH Cartridge
F = Filter
P = PUF Cartridge
T = Sorbent Tube
O = Other

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	2/10/14 12:51	[signature]	2/10/14 1251
[signature]	2/10/14 1650	[signature]	2/10/14 16:50
[signature]	2/11/14 02:00	Mansfield lab	2/11/14 02:00

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 101-13 (rev 01-OCT-2013)

L1403178 Serial_No:02271416:51

ANALTICAL METHOD LIST FOR SELECTED SAMPLES

Darmody Cartar

Code	Name	# Bottles	Bottle Size	Preservative	Filtered	Hold Time (days)
Round: 00						
AAN-1	PCB Homologs via EPA method TO-10A(determination of pesticides and PCBS in ambient air using low volume polyurethane foam(PUF) sampling followed by gas chromatographic/multidetecter detection)	1	PUFF	4C	No	7

APPENDIX D

DARMODY-CARTA PROPOSAL LETTER

SME
Sevee & Maher Engineers, Inc.

ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE

PRIVILEGED AND CONFIDENTIAL
ATTORNEY WORK PRODUCT

January 9, 2014

13181.00
20140109sd_prop.docx

Stephen J. Darmody, Esq.
Darmody Carta, P.A.
201 Sevilla Avenue, Suite 305
Coral Gables, FL 33134

Subject: PCB Investigation
UNUM Building HO-1
2211 Congress Street
Portland, Maine 04122

Dear Mr. Darmody:

Sevee & Maher Engineers, Inc. (SME) is pleased to provide this proposal for conducting Polychlorinated Biphenyl (PCB) investigation activities at the above-referenced property (the Site). It is our understanding that the presence of PCBs was detected in the form of caulking and sealants during construction activities at the Site. Based on the preliminary analytical results of sampling undertaken by UNUM and provided to SME by Darmody Carta, P.A., it appears as if a majority of the bulk product potentially containing PCBs consists of caulking around loading bay doors and in vertical expansion joints.

The investigation SME proposes here is intended to evaluate the potential for human exposure to any PCB-containing materials that may be present in HO-1, and to further characterize and locate those materials if a risk is identified. We are therefore proposing a phased approach to evaluate potential exposure scenarios to PCBs in the workplace. This phased approach is consistent with Environmental Protection Agency (EPA) guidance for addressing PCB bulk product waste, which essentially:

1. Determines whether a risk for exposure exists,
2. Identifies the source of the potential exposure, if any is identified, and
3. Prepares a plan for remediation / mitigation of any source that may be discovered.

4 Blanchard Road, PO Box 85A, Cumberland Center, Maine 04021 • Phone 207.829.5016 • Fax 207.829.5692 • www.smemaine.com

collection of eight to ten surficial soil samples surrounding the building. The sample locations will be biased toward locations immediately below or adjacent to suspected PCB-containing building materials. Samples will be submitted to a certified laboratory for analysis via EPA Method 8082 with soxhlet extraction (EPA Method 3540).

Analytical results will be compared to EPA Toxic Substance Control Act (TSCA) PCB remediation standards and Maine Department of Environmental Protection (MEDEP) Soil Remediation Action Guidelines.

Similar to Phase I, sampling personnel will not be required to wear any specific PPE, with the exception of nitrile protective gloves during sampling. Sampling personnel will otherwise wear attire typical of maintenance or landscaping subcontractors, and will be trained on appropriate communication with facility employees, as directed by UNUM management.

SME estimates that the sampling portion of Phase II will be completed by May 15, 2014, after the spring thaw, and the analytical results of that sampling will be received by May 30, 2014. A detailed report will be prepared for Darmody Carta, P.A., describing the soil analytical results and any recommendations for remediation or abatement.

Phase III: Full Characterization of Building Materials

Should the analytical results of either Phase I or Phase II indicate the presence of a potential pathway for humans to be exposed to PCBs, SME will conduct a full inventory of all potential PCB bulk products. Based on the inventory, a representative number of samples will be collected from each potential PCB-containing building material type. This may include:

- window caulking
- caulking from building expansion joints
- caulking in concrete floor joints
- caulking along seams between concrete and steel in penthouse utility room areas.
- steel coating materials in penthouse utility room areas
- paint samples in stairways

Following receipt of analytical results, SME will evaluate them and then determine whether removal and abatement are required. If they are, SME will prepare recommendations for the requisite removal and abatement activities.

Privileged – Attorney Work Product

ATTACHMENT A
SEVEE & MAHER ENGINEERS, INC.

FEE SCHEDULE

Effective January 1, 2013

PRINCIPAL/SENIOR CONSULTANT	$120/hr
ENGINEER/SCIENTIST	$105/hr
FIELD ENGINEER	$85/hr
SENIOR TECHNICIAN	$85/hr
CADD	$75/hr
TECHNICIAN	$70/hr
CLERICAL	$45/hr
VEHICLE USE	$0.55/mi
DIRECT EXPENSES	Cost + 5%
COMMUNICATIONS	2% of labor
SUBCONTRACTS	Cost + 10%

Invoices will be submitted every 30 days. Payment shall be made to Sevee & Maher within 30 days of receipt of invoice. A 1.5% finance charge will be assessed on all past due invoices.

SME observation and testing of portions of the work of other parties on the Project shall not relieve other parties from their responsibilities for performing their work in accordance with applicable plans, and specifications.

Project Suspension/Abandonment

If the Project is suspended or abandoned in whole or in part for more than three months, SME will be compensated for all services performed prior to receipt of written notice from the Client of such suspension or abandonment, together with payment of reimbursable expenses then due. If the Project is resumed after being suspended for more than three months, SME's compensation shall be equitably adjusted.

Dispute Resolution

In an effort to resolve any conflicts that arise during the design and construction of the Project or following the completion of the Project, the Client and SME agree that all disputes between them arising out of or relating to this Agreement or the Project shall be submitted to nonbinding mediation.

The Client and SME further agree to include a similar mediation provision in all agreements with independent contractors and consultants retained for the Project and to require all independent contractors and consultants also to include a similar mediation provision in all agreements with their subcontractors, subconsultants, suppliers and fabricators, thereby providing for mediation as the primary method for dispute resolution among the parties to all those agreements.

Compliance with Applicable Law

The Consultant shall exercise usual and customary professional care in its efforts to comply with applicable laws, codes, and regulations in effect as of the date of the letter proposal. Design changes made necessary by newly enacted laws, codes and regulations after this date shall entitle the Consultant to a reasonable adjustment in the schedule and additional compensation in accordance with the Additional Services provisions of this Agreement.

Attachment B
Schedule of Contract Conditions

Scope of Services

Sevee & Maher Engineers, Inc. (SME) shall perform the professional services designated and described in the letter agreement dated December 20, 2013 between SME and Darmody Carta, P.A., (hereafter referred to as the Client) which constitutes a part of this Schedule.

Ownership of Documents

All documents, including Drawings, Specifications, estimates, field notes, and other data, prepared or furnished under the scope of services described in the letter agreement are instruments of service in respect to the Project and shall remain the property of SME whether or not the Project is completed. Client may make copies thereof as is necessary to occupy and operate the Project by Client or others, however, such documents are not intended or represented to be suitable for additions, extensions, or completion of the Project by another engineer, use on any other project or use by anyone other than the client. Any reuse without written verification or adaptation by SME for the specific purpose intended is at Client's sole risk and without liability or legal exposure to SME or their independent contractors or consultants.

Opinions of Cost

In providing estimates of probable construction cost, the Client understands that SME has no control over the cost or availability of labor, equipment, or materials, or over market conditions or the Contractor's method of pricing, and that SME estimates of probable construction costs are made on the basis of SME's professional judgment and experience. SME makes no warranty, express or implied, that the bids or the negotiated cost of the Work will not vary from SME's estimate of probable construction cost.

Health and Safety

SME shall be responsible for, and its employees shall follow, health and safety precautions which meet federal, state, and local standards, statues, and regulations. SME shall not specify construction procedures, manage or supervise construction, or implement or be responsible for health and safety procedures for other than its own employees or subconsultants. SME shall not share any responsibility for the acts, errors, or omissions of its subconsultants or other parties on the Project nor have control or change of, or be responsible for, construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs.

SME observation and testing of portions of the work of other parties on the Project shall not relieve such other parties from their responsibilities for performing their work in accordance with applicable health and safety requirements. SME and their subcontractors will be held harmless for any accidental damage to buried utilities, buried structures, or other below- or above-grade infrastructure at the work site.

Risk Allocation

The Client hereby agrees to limit SME's total liability for any claims or damages of any nature whatsoever to a maximum amount equal to the total compensation received by SME under this agreement.

Privileged – Attorney Work Product

BUDGET

Compensation for the services described in the Scope of Work shall be made to SME based on time and materials expended in accordance with the attached Fee Schedule. For the sampling activities described in Phase I, SME recommends that Darmody Carta, P.A., establish a budget of $29,500. For the sampling activities described in Phase II, SME recommends that Darmody Carta, P.A., establish a budget of $ 8,500. Compensation for the Phase I and Phase II work will not exceed $38,000 without prior authorization. Costs and a schedule to conduct the Phase III building material characterization activities will be provided to Darmody Carta, P.A., if those activities become necessary. Darmody Carta, P.A., will review SME's invoices and submit them to its client for approval. Darmody Carta, P.A., will pay SME after it receives the necessary funds from its client. .

AUTHORIZATION

Your signature below constitutes authorization to proceed on the work described herein in accordance with the Schedule of Contract Conditions provided in Attachment B. Please sign and return this document to us for our files.

Should questions arise or additional information be desired, please do not hesitate to contact Bob Steeves or me at 207.829.5016.

Sincerely,

SEVEE & MAHER ENGINEERS, INC.

Erik M. Clapp, PhD.
Principal

ACCEPTED and AGREED TO:

Darmody Carta PA
Signature

By _____
Printed Name

JAN 13, 2014
Date

Attachments:

Attachment A Fee Schedule
Attachment B Schedule of Contract Conditions

Privileged – Attorney Work Product

We describe below a three-phased approach. If the analytical results of both the Phase I and Phase II sampling activities indicate that no pathway exists for human exposure to PCBs, the full characterization of building materials described in Phase III may not be necessary.

SCOPE OF WORK

Phase I: Indoor Air Assessment

The most likely exposure pathway for PCBs contained in building materials is inhalation. SME will therefore initially collect indoor air samples to determine if concentrations of PCBs in the indoor air are within acceptable, published health and safety levels. To accomplish this, six to eight indoor air samples will be collected on each of the four main building levels. The final number and location of samples collected on each floor will be determined based on accessibility and the layout of the floors, and in consultation with UNUM's Health and Safety staff. Sampling locations will also be influenced by any available analytical data. Samples will be collected over an 8-hour period during normal office hours, 9:00 AM through 5:00 PM, to ensure that the analytical results are representative of the most common employee exposure scenario.

Samples will be collected and analyzed for PCB homologs via EPA Method TO-10A (Determination of Pesticides and PCBs in Ambient Air using Low Volume Polyurethane Foam (PUF) Sampling Followed by Gas Chromatographic/Multi-Detector Detection). Sample analysis will be conducted by a certified laboratory.

During sample collection, SME sampling personnel will not require any specific personal protective equipment (PPE). Rather, sampling personnel will wear attire typical of maintenance or technical subcontractors, and will be trained on appropriate communications with facility employees, as directed by UNUM management.

SME estimates that the sampling portion of Phase I will be completed by January 31, 2014, and the analytical results of that sampling should be received by February 14, 2014. Following receipt of analytical results, SME will evaluate them and prepare a report to be provided to Darmody Carta, P.A., detailing the findings of the indoor air assessment and any recommendations resulting from the findings.

Phase II: Exterior Soil Sampling

Following inhalation, the second potential pathway for human exposure to PCBs is direct contact with soil surrounding the building, which may have become contaminated with PCBs leaching from building materials. This exposure pathway will be evaluated through the

Serial_No:02211416:51

AIR ANALYSIS - SORBENT MEDIA
CHAIN OF CUSTODY

Page 4 of 5

Date Rec'd in Lab: 2/10/14

ALPHA Job #: L1403176

Westborough, MA TEL: 508-898-9220 FAX: 508-822-3288
Mansfield, MA TEL: 508-822-9300 508-822-3288

Client Information
Client: SEVEE & MAHER
Address: 41 BRACKETT
CUMBERLAND ME
Phone: 207 829 5014
Fax:
Email: EMC@SMENGINEERS.COM

Project Information
Project Name: DARMODY CATRA
Project Location: TOPSHAM
Project #: 13181
(Use Project name as Project #)
Project Manager: ERIK CLAPP
ALPHA Quote #:

Turn-Around Time
Standard ☒ Due Date: 2/17/14
Rush (only if pre approved) ☐ Time:

Report Information - Data Deliverables
☐ FAX
☒ ADEx
Criteria Checker:
Other Formats:
☒ EMAIL
☐ Add'l Deliverables

Report to: (if different than Project Manager)

Billing Information
☒ Same as Client Info
PO # 13181

Regulatory Requirements/Report Limits

State/Fed	Program	Criteria

These samples have been previously analyzed by Alpha ☐

Other Project Specific Requirements/ Comments/Detection Limits

For PCBs, selection is REQUIRED:
☐ Congeners
☒ Homologs
☐ Aroclors (Low Vol only)

ANALYSIS

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection: Date	Start Time	End Time	Flow Rate (L/min)	Total Volume (L)	Sample Matrix*	Sampler's Initials	Media ID# (1)	TO-13A	PCBs (High Vol)	PCBs (Low Vol) TO-10A	TO-11A	Hg via NIOSH 6009 Mod.	Metals	TO-17		Sample Comments (i.e. PID)
03	AC-X30-X-008	2/9/14	0941	1741	3.0	1440	AA	TEW	LPX34			1						SEE PAGE 1
04	AC-X31-X-01C	"	0939	1739	3.0	1440	"	"	LAX84			1						
05	AC-DP1-X-01G	"	—	—	3.0	1440	"	"	LP322			1						
06	AC-DP2-X-01F	"	—	—	3.0	1440	"	"	LP351			1						
07	AC-DP3-X-016	"	—	—	3.0	1440	"	"	LP355			1						
		PLEASE SEE PAGE 6 OF 5 FOR CODES/METHOD INFO.																

*SAMPLE MATRIX CODES: AA = Ambient Air (Indoor/Outdoor), SV = Soil Vapor/Landfill Gas/SVE, (Other = please specify); DW = Drinking Water, GW = Groundwater, WW = Wastewater, SW = Surface Water, (Other = please specify)

Media Type	P	P	P	D	T	F	T	

NOTE: For metals, please specify elements of interest and media type.
☐ PM-10
☐ TSP
☐ MCE

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Media Code
D = DNPH Cartridge
F = Filter
P = PUF Cartridge
T = Sorbent Tube
O = Other

Relinquished By:	Date/Time	Received By:	Date/Time
	2/10/14 12:57		2/10/14 12:57
	2/10/14 1650		2/10/14 16:50
	2/11/14 0210	Manchester Lab	2/10/14 02:10

Form No: 101-13 (rev 01-OCT-2013)

3 of 5

AIR ANALYSIS - SORBENT MEDIA
CHAIN OF CUSTODY

Page 2 — 2 of 5

Date Rec'd in Lab: 2/10/14 — ALPHA Job #: L1403176

Westborough, MA TEL: 508-898-9220 FAX: 508-822-3288
Mansfield, MA TEL: 508-822-9300 508-822-3288

Client Information
Client: Sevee & Maher
Address: See Page 1
Phone:
Fax:
Email:

Project Information
Project Name: Darmody Carta
Project Location: Portland
Project #: 13181
(Use Project name as Project #) ☐
Project Manager: Erik Clapp
ALPHA Quote #:

Turn-Around Time
Standard ☒ Due Date: 2/17/14
Rush (only if pre approved) ☐ Time:

Report Information - Data Deliverables
☐ FAX
☒ ADEx
Criteria Checker:
Other Formats:
☒ EMAIL
☐ Add'l Deliverables
Report to: (if different than Project Manager)

Billing Information
☒ Same as Client Info
PO #: 13181

Regulatory Requirements/Report Limits

State/Fed	Program	Criteria

These samples have been previously analyzed by Alpha ☐

Other Project Specific Requirements/ Comments/Detection Limits

For PCBs, selection is REQUIRED:
☐ Congeners
☒ Homologs
☐ Aroclors (Low Vol only)

NOTE: For metals, please specify elements of interest and media type.
☐ PM-10
☐ TSP
☐ MCE

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Start Time	End Time	Flow Rate (L/min)	Total Volume (L)	Sample Matrix*	Sampler's Initials	Media ID# (1)	TO-13A	PCBs (High Vol)	PCBs (Low Vol) TO-10A	TO-11A	Hg via NIOSH 6009 Mod.	Metals	TO-17		Sample Comments (i.e. PID)
[illegible]	AC-X20-X-00B	2/9/14	1019	1820	3.0	1443	AA	TEL	LP358			1						See Page 1
[illegible]	AC-X11-X-00C	↓	1020	1820	3.0	1440	↓	↓	LPX60			1						
[illegible]	AC-X12-X-00D	↓	1017	1817	3.0	1440	↓	↓	LP360			1						
[illegible]	AC-X13-X-00E	↓	1016	1816	3.0	1440	↓	↓	LPX73			1						
[illegible]	AC-X14-X-00F	↓	1014	1814	3.0	1440	↓	↓	LP332			1						
[illegible]	AC-X15-X-00G	↓	1012	1812	3.0	1440	↓	↓	LP356			1						
[illegible]	AC-X16-X00H	↓	1010	1810	3.0	1440	↓	↓	LP354			1						
[illegible]	AC-X17-X-00I	↓	1006	1806	3.0	1440	↓	↓	LP317			1						
[illegible]	AC-X18-X-00J	↓	1005	1806	3.0	1440	↓	↓	LP321			1						
[illegible]	AC-X19-X-010	↓	1003	1803	3.0	1440	↓	↓	LP365			1						
								Media Type		P	P	(P)	D	T	F	T		

SAMPLE MATRIX CODES [illegible]

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	2/10/14 12:57	[signature]	2/10/14 12:51
[signature]	2/10/14 1650	[signature]	2/10/14 16:50
[signature]	2/11/14 02:00	Mansfield lab	2/11/14 02:00

Media Code
D = DNPH Cartridge
F = Filter
P = PUF Cartridge
T = Sorbent Tube
O = Other

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 101-13 (rev 01-OCT-2013)

Certification Information

Last revised December 11, 2013

The following analytes are not included in our NELAP Scope of Accreditation:

Westborough Facility
EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.
EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.
EPA 8330A/B: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT.
EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 625: 4-Chloroaniline, 4-Methylphenol.
SM4500: Soil: Total Phosphorus, TKN, NO2, NO3.
EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility
EPA 8270D: Biphenyl.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water
EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water
EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;
EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;
EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, EPA 350.1: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N, **SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.**

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

Project Name:	DARMODY CARTA	**Lab Number:**	L1403176
Project Number:	Not Specified	**Report Date:**	02/21/14

Data Qualifiers

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1403176-28A	PUF Air Cartridge - High or Low	A	N/A	4.4	Y	Absent	A2-PCBHOMS-8270SIML(7)
L1403176-29A	PUF Air Cartridge - High or Low	A	N/A	4.4	Y	Absent	A2-PCBHOMS-8270SIML(7)
L1403176-30A	PUF Air Cartridge - High or Low	A	N/A	4.4	Y	Absent	A2-PCBHOMS-8270SIML(7)
L1403176-31A	PUF Air Cartridge - High or Low	A	N/A	4.4	Y	Absent	A2-PCBHOMS-8270SIML(7)
L1403176-32A	PUF Air Cartridge - High or Low	A	N/A	4.4	Y	Absent	A2-PCBHOMS-8270SIML(7)
L1403176-33A	PUF Air Cartridge - High or Low	A	N/A	4.4	Y	Absent	A2-PCBHOMS-8270SIML(7)
L1403176-34A	PUF Air Cartridge - High or Low	A	N/A	4.4	Y	Absent	A2-PCBHOMS-8270SIML(7)
L1403176-35A	PUF Air Cartridge - High or Low	A	N/A	4.4	Y	Absent	A2-PCBHOMS-8270SIML(7)

*Values in parentheses indicate holding time in days

Lab Control Sample Analysis

Batch Quality Control

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab Associated sample(s): 16-35 Batch: WG670083-2								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Cl3-BZ#19-C13	97				50-125
Cl8-BZ#202-C13	93				50-125

Lab Control Sample Analysis
Batch Quality Control

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab Associated sample(s): 16-35 Batch: WG670083-2								
Cl4-BZ#66	105		-		40-140	-		30
Cl5-BZ#95	95		-		40-140	-		30
Cl4-BZ#56/#60	98		-		40-140	-		30
Cl5-BZ#101/#84	115		-		40-140	-		30
Cl5-BZ#99	110		-		40-140	-		30
Cl6-BZ#154	101		-		40-140	-		30
Cl5-BZ#110	97		-		40-140	-		30
Cl4-BZ#81	104		-		40-140	-		30
Cl5-BZ#87	111		-		40-140	-		30
Cl6-BZ#151	103		-		40-140	-		30
Cl4-BZ#77	103		-		40-140	-		30
Cl5-BZ#123	102		-		40-140	-		30
Cl6-BZ#149	106		-		40-140	-		30
Cl7-BZ#188	97		-		40-140	-		30
Cl5-BZ#118	98		-		40-140	-		30
Cl6-BZ#146	97		-		40-140	-		30
Cl5-BZ#114	102		-		40-140	-		30
Cl6-BZ#153	96		-		40-140	-		30
Cl6-BZ#138/#163	92		-		40-140	-		30
Cl6-BZ#158	106		-		40-140	-		30
Cl5-BZ#105	96		-		40-140	-		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab Associated sample(s): 01-15 Batch: WG669812-2								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Cl3-BZ#19-C13	92				50-125
Cl8-BZ#202-C13	87				50-125

Lab Control Sample Analysis
Batch Quality Control

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab Associated sample(s): 01-15 Batch: WG669812-2								
Cl4-BZ#66	93		-		40-140	-		30
Cl5-BZ#95	89		-		40-140	-		30
Cl4-BZ#56/#60	89		-		40-140	-		30
Cl5-BZ#101/#84	106		-		40-140	-		30
Cl5-BZ#99	100		-		40-140	-		30
Cl6-BZ#154	95		-		40-140	-		30
Cl5-BZ#110	87		-		40-140	-		30
Cl4-BZ#81	92		-		40-140	-		30
Cl5-BZ#87	101		-		40-140	-		30
Cl6-BZ#151	96		-		40-140	-		30
Cl4-BZ#77	91		-		40-140	-		30
Cl5-BZ#123	89		-		40-140	-		30
Cl6-BZ#149	98		-		40-140	-		30
Cl7-BZ#188	88		-		40-140	-		30
Cl5-BZ#118	89		-		40-140	-		30
Cl6-BZ#146	88		-		40-140	-		30
Cl5-BZ#114	92		-		40-140	-		30
Cl6-BZ#153	86		-		40-140	-		30
Cl6-BZ#138/#163	77		-		40-140	-		30
Cl6-BZ#158	93		-		40-140	-		30
Cl5-BZ#105	82		-		40-140	-		30

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 105,8270D-SIM/NOAA-M
Analytical Date: 02/14/14 19:12
Analyst: JS

Extraction Method: EPA 3540C
Extraction Date: 02/12/14 16:45

Parameter	Result	Qualifier	Units	RL	MDL
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab for sample(s): 16-35 Batch: WG670083-1					
Monochlorobiphenyls	ND		ng/cart	10.0	--
Dichlorobiphenyls	ND		ng/cart	10.0	--
Trichlorobiphenyls	ND		ng/cart	10.0	--
Tetrachlorobiphenyls	ND		ng/cart	10.0	--
Pentachlorobiphenyls	ND		ng/cart	10.0	--
Hexachlorobiphenyls	ND		ng/cart	10.0	--
Heptachlorobiphenyls	ND		ng/cart	10.0	--
Octachlorobiphenyls	ND		ng/cart	10.0	--
Nonachlorobiphenyls	ND		ng/cart	10.0	--
Decachlorobiphenyl	ND		ng/cart	10.0	--
Total Homologs	ND		ng/cart	10.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	93		50-125
Cl8-BZ#202-C13	84		50-125

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

SAMPLE RESULTS

Lab ID: L1403176-35
Client ID: AC-DP3-X-01G
Sample Location: PORTLAND
Matrix: Air Media
Analytical Method: 105,8270D-SIM/NOAA-M
Analytical Date: 02/15/14 16:28
Analyst: JS

Date Collected: 02/09/14 00:00
Date Received: 02/10/14
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 02/12/14 16:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	30.4		ng/cart	10.0	--	1
Pentachlorobiphenyls	35.7		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	66.1		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	110		50-125
Cl8-BZ#202-C13	96		50-125

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

SAMPLE RESULTS

Lab ID: L1403176-33
Client ID: AC-DP1-X-01E
Sample Location: PORTLAND
Matrix: Air Media
Analytical Method: 105,8270D-SIM/NOAA-M
Analytical Date: 02/15/14 14:35
Analyst: JS

Date Collected: 02/09/14 00:00
Date Received: 02/10/14
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 02/12/14 16:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	23.5		ng/cart	10.0	--	1
Pentachlorobiphenyls	33.1		ng/cart	10.0	--	1
Hexachlorobiphenyls	11.4		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	68.0		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	97		50-125
Cl8-BZ#202-C13	87		50-125

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

SAMPLE RESULTS

Lab ID: L1403176-31
Client ID: AC-X30-X-01B
Sample Location: PORTLAND
Matrix: Air Media
Analytical Method: 105,8270D-SIM/NOAA-M
Analytical Date: 02/15/14 12:43
Analyst: JS

Date Collected: 02/09/14 17:41
Date Received: 02/10/14
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 02/12/14 16:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	17.0		ng/cart	10.0	--	1
Pentachlorobiphenyls	ND		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	17.0		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	104		50-125
Cl8-BZ#202-C13	92		50-125

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

SAMPLE RESULTS

Lab ID: L1403176-29
Client ID: AC-X28-X-019
Sample Location: PORTLAND
Matrix: Air Media
Analytical Method: 105,8270D-SIM/NOAA-M
Analytical Date: 02/15/14 10:50
Analyst: JS

Date Collected: 02/09/14 17:45
Date Received: 02/10/14
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 02/12/14 16:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	21.5		ng/cart	10.0	--	1
Pentachlorobiphenyls	47.3		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	68.8		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	103		50-125
Cl8-BZ#202-C13	92		50-125

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

SAMPLE RESULTS

Lab ID: L1403176-27
Client ID: AC-X26-X-017
Sample Location: PORTLAND
Matrix: Air Media
Analytical Method: 105,8270D-SIM/NOAA-M
Analytical Date: 02/15/14 08:57
Analyst: JS

Date Collected: 02/09/14 17:52
Date Received: 02/10/14
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 02/12/14 16:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	25.2		ng/cart	10.0	--	1
Pentachlorobiphenyls	40.8		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	66.0		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	99		50-125
Cl8-BZ#202-C13	87		50-125

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

SAMPLE RESULTS

Lab ID: L1403176-25
Client ID: AC-X24-X-015
Sample Location: PORTLAND
Matrix: Air Media
Analytical Method: 105,8270D-SIM/NOAA-M
Analytical Date: 02/15/14 07:05
Analyst: JS

Date Collected: 02/09/14 17:53
Date Received: 02/10/14
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 02/12/14 16:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	25.0		ng/cart	10.0	--	1
Pentachlorobiphenyls	42.1		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	67.1		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	98		50-125
Cl8-BZ#202-C13	91		50-125

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

SAMPLE RESULTS

Lab ID: L1403176-23
Client ID: AC-X22-X-013
Sample Location: PORTLAND
Matrix: Air Media
Analytical Method: 105,8270D-SIM/NOAA-M
Analytical Date: 02/15/14 05:12
Analyst: JS

Date Collected: 02/09/14 17:57
Date Received: 02/10/14
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 02/12/14 16:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	ND		ng/cart	10.0	--	1
Pentachlorobiphenyls	ND		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	ND		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	100		50-125
Cl8-BZ#202-C13	91		50-125

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

SAMPLE RESULTS

Lab ID: L1403176-21
Client ID: AC-X20-X-011
Sample Location: PORTLAND
Matrix: Air Media
Analytical Method: 105,8270D-SIM/NOAA-M
Analytical Date: 02/15/14 01:47
Analyst: JS

Date Collected: 02/09/14 18:01
Date Received: 02/10/14
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 02/12/14 16:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	29.4		ng/cart	10.0	--	1
Pentachlorobiphenyls	66.4		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	95.8		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	99		50-125
Cl8-BZ#202-C13	89		50-125

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

SAMPLE RESULTS

Lab ID: L1403176-19
Client ID: AC-X18-X-00J
Sample Location: PORTLAND
Matrix: Air Media
Analytical Method: 105,8270D-SIM/NOAA-M
Analytical Date: 02/14/14 23:54
Analyst: JS

Date Collected: 02/09/14 18:05
Date Received: 02/10/14
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 02/12/14 16:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	25.6		ng/cart	10.0	--	1
Pentachlorobiphenyls	43.6		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	69.2		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	92		50-125
Cl8-BZ#202-C13	84		50-125

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

SAMPLE RESULTS

Lab ID: L1403176-17
Client ID: AC-X16-X-00H
Sample Location: PORTLAND
Matrix: Air Media
Analytical Method: 105,8270D-SIM/NOAA-M
Analytical Date: 02/14/14 22:02
Analyst: JS

Date Collected: 02/09/14 18:10
Date Received: 02/10/14
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 02/12/14 16:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	ND		ng/cart	10.0	--	1
Pentachlorobiphenyls	ND		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	ND		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	97		50-125
Cl8-BZ#202-C13	90		50-125

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

SAMPLE RESULTS

Lab ID: L1403176-15
Client ID: AC-X14-X-00F
Sample Location: PORTLAND
Matrix: Air Media
Analytical Method: 105,8270D-SIM/NOAA-M
Analytical Date: 02/14/14 13:47
Analyst: JS

Date Collected: 02/09/14 18:14
Date Received: 02/10/14
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 02/11/14 14:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	13.7		ng/cart	10.0	--	1
Tetrachlorobiphenyls	81.0		ng/cart	10.0	--	1
Pentachlorobiphenyls	112		ng/cart	10.0	--	1
Hexachlorobiphenyls	16.9		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	224		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	104		50-125
Cl8-BZ#202-C13	92		50-125

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

SAMPLE RESULTS

Lab ID:	L1403176-13	Date Collected:	02/09/14 18:17
Client ID:	AC-X12-X-00D	Date Received:	02/10/14
Sample Location:	PORTLAND	Field Prep:	Not Specified
Matrix:	Air Media	Extraction Method:	EPA 3540C
Analytical Method:	105,8270D-SIM/NOAA-M	Extraction Date:	02/11/14 14:30
Analytical Date:	02/14/14 11:54		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	47.7		ng/cart	10.0	--	1
Pentachlorobiphenyls	65.1		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	113		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	106		50-125
Cl8-BZ#202-C13	93		50-125

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

SAMPLE RESULTS

Lab ID: L1403176-11
Client ID: AC-X10-X-00B
Sample Location: PORTLAND
Matrix: Air Media
Analytical Method: 105,8270D-SIM/NOAA-M
Analytical Date: 02/14/14 10:00
Analyst: JS

Date Collected: 02/09/14 18:20
Date Received: 02/10/14
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 02/11/14 14:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	43.2		ng/cart	10.0	--	1
Pentachlorobiphenyls	65.5		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	109		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	99		50-125
Cl8-BZ#202-C13	89		50-125

Project Name: DARMODY CARTA
Project Number: Not Specified
Lab Number: L1403176
Report Date: 02/21/14

SAMPLE RESULTS

Lab ID:	L1403176-09	Date Collected:	02/09/14 18:25
Client ID:	AC-XX8-X-009	Date Received:	02/10/14
Sample Location:	PORTLAND	Field Prep:	Not Specified
Matrix:	Air Media	Extraction Method:	EPA 3540C
Analytical Method:	105,8270D-SIM/NOAA-M	Extraction Date:	02/11/14 14:30
Analytical Date:	02/14/14 08:07		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	25.5		ng/cart	10.0	--	1
Pentachlorobiphenyls	42.5		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	68.0		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	94		50-125
Cl8-BZ#202-C13	85		50-125

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

SAMPLE RESULTS

Lab ID:	L1403176-07	Date Collected:	02/09/14 18:29
Client ID:	AC-XX6-X-007	Date Received:	02/10/14
Sample Location:	PORTLAND	Field Prep:	Not Specified
Matrix:	Air Media	Extraction Method:	EPA 3540C
Analytical Method:	105,8270D-SIM/NOAA-M	Extraction Date:	02/11/14 14:30
Analytical Date:	02/14/14 06:14		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	15.3		ng/cart	10.0	--	1
Tetrachlorobiphenyls	24.4		ng/cart	10.0	--	1
Pentachlorobiphenyls	14.2		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	53.9		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	95		50-125
Cl8-BZ#202-C13	87		50-125

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

SAMPLE RESULTS

Lab ID: L1403176-05
Client ID: AC-XX4-X-005
Sample Location: PORTLAND
Matrix: Air Media
Analytical Method: 105,8270D-SIM/NOAA-M
Analytical Date: 02/14/14 04:21
Analyst: JS

Date Collected: 02/09/14 18:31
Date Received: 02/10/14
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 02/11/14 14:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	28.1		ng/cart	10.0	--	1
Pentachlorobiphenyls	38.6		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	66.7		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	96		50-125
Cl8-BZ#202-C13	89		50-125

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

SAMPLE RESULTS

Lab ID: L1403176-03
Client ID: AC-XX2-X-003
Sample Location: PORTLAND
Matrix: Air Media
Analytical Method: 105,8270D-SIM/NOAA-M
Analytical Date: 02/14/14 00:55
Analyst: JS

Date Collected: 02/09/14 18:34
Date Received: 02/10/14
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 02/11/14 14:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	21.2		ng/cart	10.0	--	1
Pentachlorobiphenyls	13.0		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	34.2		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	104		50-125
Cl8-BZ#202-C13	94		50-125

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

SAMPLE RESULTS

Lab ID: L1403176-01
Client ID: BT-XXX-X-01H
Sample Location: PORTLAND
Matrix: Air Media
Analytical Method: 105,8270D-SIM/NOAA-M
Analytical Date: 02/13/14 23:02
Analyst: JS

Date Collected: 02/09/14 18:40
Date Received: 02/10/14
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 02/11/14 14:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	ND		ng/cart	10.0	--	1
Pentachlorobiphenyls	ND		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	ND		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	96		50-125
Cl8-BZ#202-C13	89		50-125

ORGANICS

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name: DARMODY CARTA
Project Number: Not Specified

Lab Number: L1403176
Report Date: 02/21/14

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1403176-01	BT-XXX-X-01H	PORTLAND	02/09/14 18:40
L1403176-02	AC-XX1-X-002	PORTLAND	02/09/14 18:37
L1403176-03	AC-XX2-X-003	PORTLAND	02/09/14 18:34
L1403176-04	AC-XX3-X-004	PORTLAND	02/09/14 18:33
L1403176-05	AC-XX4-X-005	PORTLAND	02/09/14 18:31
L1403176-06	AC-XX5-X-006	PORTLAND	02/09/14 18:28
L1403176-07	AC-XX6-X-007	PORTLAND	02/09/14 18:29
L1403176-08	AC-XX7-X-008	PORTLAND	02/09/14 18:26
L1403176-09	AC-XX8-X-009	PORTLAND	02/09/14 18:25
L1403176-10	AC-XX9-X-00A	PORTLAND	02/09/14 18:22
L1403176-11	AC-X10-X-00B	PORTLAND	02/09/14 18:20
L1403176-12	AC-X11-X-00C	PORTLAND	02/09/14 18:20
L1403176-13	AC-X12-X-00D	PORTLAND	02/09/14 18:17
L1403176-14	AC-X13-X-00E	PORTLAND	02/09/14 18:15
L1403176-15	AC-X14-X-00F	PORTLAND	02/09/14 18:14
L1403176-16	AC-X15-X-00G	PORTLAND	02/09/14 18:12
L1403176-17	AC-X16-X-00H	PORTLAND	02/09/14 18:10
L1403176-18	AC-X17-X-00I	PORTLAND	02/09/14 18:06
L1403176-19	AC-X18-X-00J	PORTLAND	02/09/14 18:05
L1403176-20	AC-X19-X-010	PORTLAND	02/09/14 18:03
L1403176-21	AC-X20-X-011	PORTLAND	02/09/14 18:01
L1403176-22	AC-X21-X-012	PORTLAND	02/09/14 17:59
L1403176-23	AC-X22-X-013	PORTLAND	02/09/14 17:57
L1403176-24	AC-X23-X-014	PORTLAND	02/09/14 17:56
L1403176-25	AC-X24-X-015	PORTLAND	02/09/14 17:53
L1403176-26	AC-X25-X-016	PORTLAND	02/09/14 17:48
L1403176-27	AC-X26-X-017	PORTLAND	02/09/14 17:52
L1403176-28	AC-X27-X-018	PORTLAND	02/09/14 17:47
L1403176-29	AC-X28-X-019	PORTLAND	02/09/14 17:45
L1403176-30	AC-X29-X-01A	PORTLAND	02/09/14 17:44
L1403176-31	AC-X30-X-01B	PORTLAND	02/09/14 17:41

SUMMARY REPORT

February 2014 Air Samples

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(AC-18) Date	Type	Sample ID	Total Homologs NG/M3	Monochlorobiphenyls NG/M3	Dichlorobiphenyls NG/M3	Trichlorobiphenyls NG/M3	Tetrachlorobiphenyls NG/M3	Pentachlorobiphenyls NG/M3	Hexachlorobiphenyls NG/M3	Heptachlorobiphenyls NG/M3	Octachlorobiphenyls NG/M3	Nonachlorobiphenyls NG/M3	Decachlorobiphenyl NG/M3
AC-18													
2/9/2014	XX	ACX18X00J	49.22	7.11 U	7.11 U	7.11 U	16.21	31.01	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-19													
2/9/2014	XX	ACX19X010	41.04	7.11 U	7.11 U	7.11 U	15.08	25.96	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-20													
2/9/2014	XX	ACX20X011	68.14	7.11 U	7.11 U	7.11 U	20.91	47.23	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-21													
2/9/2014	XX	ACX21X012	76.1	7.11 U	7.11 U	7.11 U	24.61	51.71	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-22													
2/9/2014	XX	ACX22X013	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-23													
2/9/2014	XX	ACX23X014	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-24													
2/9/2014	XX	ACX24X015	47.72	7.11 U	7.11 U	7.11 U	17.78	28.94	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-25													
2/9/2014	XX	ACX25X016	49.79	7.11 U	7.11 U	7.11 U	17.78	32.01	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-26													
2/9/2014	XX	ACX26X017	46.94	7.11 U	7.11 U	7.11 U	17.92	29.02	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
2/9/2014	XD	ACDP1X01E	48.36	7.11 U	7.11 U	7.11 U	16.71	23.54	8.11	7.11 U	7.11 U	7.11 U	7.11 U
AC-27													
2/9/2014	XX	ACX27X018	60.53	7.11 U	7.11 U	7.11 U	16.64	43.88	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-28													
2/9/2014	XX	ACX28X019	48.93	7.11 U	7.11 U	7.11 U	15.29	33.64	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-29													
2/9/2014	XX	ACX29X01A	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-30													
2/9/2014	XX	ACX30X01B	12.09	7.11 U	7.11 U	7.11 U	12.09	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U
AC-31													
2/9/2014	XX	ACX31X01C	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U	7.11 U

APPENDIX C

ENVIRON, POTENTIAL RISKS ASSOCIATED WITH INHALATION OF PCBs IN INDOOR AIR

PRIVILEGED AND CONFIDENTIAL
ATTORNEY WORK PRODUCT

Privileged and Confidential
Attorney Work Product

ENVIRON

TECHNICAL MEMORANDUM

To: Darmody PA

From: Robert DeMott, Principal Toxicologist

Date: September 18, 2014

Subject: Potential Risks Associated with Inhalation of PCBs in Indoor Air – UNUM building.

This Technical Memorandum provides an analysis of the potential risks associated with inhalation exposure to polychlorinated biphenyls (PCBs) detected in indoor air at the UNUM HO-1 building located at 2211 Congress Street, Portland, Maine.

Based on indoor air levels detected during testing in April, 2014, which are well below occupational exposure limits and below both MEDEP indoor air target levels and USEPA's public health levels, we estimate that potential exposures to PCBs in building air are likely within a factor of two times background exposure levels, and that potential risks from inhalation exposure to PCBs in Building HO-1 are within USEPA's acceptable risk range.

Background

PCBs are a class of man-made chemicals that consists of 1 – 10 chlorine atoms attached to a biphenyl molecule (Figure 1). The class includes a total of 209 possible compounds (referred to as congeners). PCBs were manufactured as mixtures of individual congeners (called Aroclors) that were categorized by a four digit code where the last two digits refer to the approximate chlorine content of most of the mixtures. For example Aroclor 1254 consists of a mixture of PCB congeners with an average chlorine content of 54%.

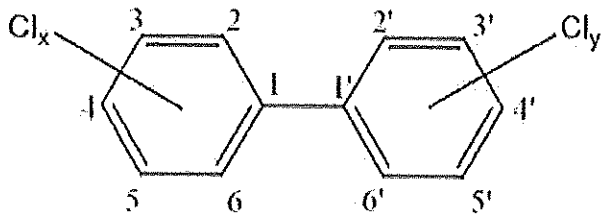

Figure 1. Basic Structure of PCB molecule

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PCBs were used in a variety of building materials including caulking, grout, adhesives, paints and other surface coatings as well as light ballasts and electrical wiring from approximately 1950 to 1978. Concentrations in these various products were reported to vary from low parts per million to percent levels (AIHA, 2013).

Although PCBs have very low vapor pressures (ATSDR, 2000), they are frequently detected at low levels, in the vapor phase and sorbed to dusts, in older buildings constructed with PCB-containing materials (Thomas et al., 2012; AIHA, 2013). Recent sampling has shown that PCB-containing caulk may have been used in the installation of windows at the HO-1building.

Data Evaluation

Indoor air samples were collected in April, 2014 and analyzed for total PCBs (Compendium Method TO-10, PCB Homologs by 8270D-GC/MS-SIM, Low Volume). Concentrations are reported in Table A1 (provided at the end of this memo) and summarized in Table 1 below. The total PCB measurement represents the sum of individual congeners detected.

Table 1. Summary of Indoor Air PCB Concentrations

Floor	No. of Samples	No. of Detects	Range of Detects (ng/m^3)	Average (ng/m^3)	95% UCL[a] (ng/m^3)
Ground	8	8	9 – 170	56.5	123
First	8	7	51 - 159	82.9	140
Second	7	5	41 – 76	56.2	62.6
Third	8	6	12 – 61	44.5	46.4
Overall	**31**	**26**	**9 – 170**	**60.8**	**82.3**

a – Recommended 95% Upper Confidence Limit (UCL) using USEPA ProUCL software package (ver. 5.0.00)

A Kruskal-Wallis one-way analysis of variance test (Systat 11) revealed no significant difference between measured indoor air concentrations by floor ($p = 0.082$) suggesting that measurements on each floor can be combined to provide an overall 95% upper confidence limit (95% UCL) about the mean of 82.3 ng/m^3. The 95% UCL represents an upper bound estimate of the average indoor air PCB concentration that an employee might be exposed to and is the recommended metric for estimating long-term excess cancer risk.

Exposure Assessment

For inhalation exposures, the incremental lifetime cancer risk (*ILCR*) is estimated by comparing a time-weighted average indoor air concentration to a concentration-based toxicity benchmark referred to as a unit risk (UR) factor. For potential carcinogens, the indoor air concentration is averaged over 70 years and the time-weighted average ambient air concentrations is calculated using equation (1).

$$EPC = \frac{C_a \; x \; F_d \; x \; EF \; x \; ED}{AT_c} \quad (1)$$

where:

EPC	=	Exposure point concentration (µg/m^3)
C_a	=	Concentration in air, 95% UCL (µg/m^3)
F_d	=	Fraction of the day exposed (hr/24 hr)
EF	=	Exposure frequency (days/year)
ED	=	Exposure duration (years)
AT_c	=	Averaging time for carcinogens (= 70 years x 365 days/year)

Based on a chronic exposure of 8 hours per day, 250 days per year for 25 years, which are the default exposure assumptions assumed by the State of Maine under a commercial exposure scenario (MEDEP, 2013), the time-weighted average exposure point concentration is 0.027 µg/m^3 as indicated in the equation below.

$$EPC = \frac{82.3\left(ug/m^3\right) x \; 8/24 \; x \; 250\left(days/year\right) x \; 25\left(years\right)}{25{,}550\left(days\right)} = 0.027\left(ug/m^3\right) \quad (2)$$

Toxicity Assessment

The toxicity assessment provides a description of the relationship between a dose and the anticipated likelihood of an adverse health effect. For risk assessment purposes, potential adverse effects are separated into two categories: carcinogenic and non-carcinogenic effects. This division relates to USEPA policy that the mechanisms of action for these endpoints differ in all cases. The USEPA generally assumes that potential carcinogens do not exhibit a response threshold (*i.e.,* dose below which no effect occurs). For PCBs, the generally accepted mechanisms of action that have been proposed for potential carcinogenic effects do not correspond to the no-threshold default assumption. However, this assumption is more protective and remains the USEPA-recommended approach for risk assessment of PCBs, regardless of the actual mechanism of action. Non-cancer effects are universally recognized as threshold phenomena and adverse effects are not expected circumstances of exposure leading to resulting doses below the threshold dose.

Potential carcinogenic effects resulting from human exposure to substances are estimated quantitatively using cancer slope factors (CSFs), which represent the theoretical increased risk per milligram of constituent intake per kilogram body weight per day $(mg/kg\text{-}day)^{-1}$, or inhalation unit risk factors (URFs), which are the theoretical increased risk at a defined exposure concentration. CSFs or URs are used to estimate a theoretical upper-bound lifetime probability of an individual developing cancer as a result of a particular exposure to a potential carcinogen.

The USEPA Integrated Risk Information System (IRIS) classifies PCBs as a B2 probable human carcinogen based on animal carcinogenicity data and has developed a tiered approach for assessing the cancer potency of PCB mixtures (USEPA, 1997).

Table 2. Tiered Approach to PCB Cancer Potency

Category	Criteria for Use	Upper Bound Slope Factor $[(mg/kg)/day]^{-1}$	Unit Risk Factor $(\mu g/m^3)^{-1}$
High Risk and Persistence	Food chain exposure Dust or aerosol inhalation Dermal exposure Presence of persistent congeners Early life exposures	2.0	5.7×10^{-4}
Low Risk and Persistence	Ingestion of water-soluble congeners Inhalation of evaporated congeners Dermal exposures	0.4	1.1×10^{-4}
Lowest Risk and Persistence	Mixtures containing < 0.5% of congeners with > 4 chlorine atoms	0.07	2.0×10^{-5}

For inhalation of evaporated congeners, USEPA recommends converting the middle tier slope factor of 0.4 $[(mg/kg)/day]^{-1}$ to a unit risk factor of 1.1×10^{-4} $(\mu g/m^3)^{-1}$ by multiplying by an assumed inhalation rate of 20 m^3/day and dividing by an average adult body weight of 70 kg (USEPA, 1997).

Risk Characterization

Theoretical excess cancer risks for receptors are expressed as an estimated upper-bound probability of additional lifetime cancer risk due to exposure to site-related constituents. Thus, these estimates do not reflect a receptor's overall risk of cancer but rather are an upper bound estimate of the incremental risk that could theoretically be attributed to exposure to the constituent of concern – in this case PCBs.

The Incremental Lifetime Cancer Risk (*ILCR*) is calculated by multiplying the exposure point concentration by the unit risk factor as shown in equations 3 and 4.

$$ILCR = EPC * URF \quad (3)$$

$$ILCR = 0.027\ \left({}^{ug}/_{m^3}\right) * 1.1\,x\,10^{-4}\ \left({}^{ug}/_{m^3}\right)^{-1} = 3\,x\,10^{-6} \quad (4)$$

Thus, for a typical worker employed in the same building for 25 years, the estimated incremental lifetime cancer risk is 3 x 10^{-6}, or three in one million.

USEPA Superfund guidance (USEPA, 1991) directs that risk managers consider excess cancer risks within the range of one-in-ten thousand (1 x 10^{-4}) and one-in-one million (1 x 10^{-6}) to be acceptable depending upon site-specific considerations. This range of risk is referred to as the "acceptable risk range" under the USEPA National Contingency Plan. Under this federal policy, regulators have discretion to require risk management measures. Incremental risks greater than 1 x10^{-4} generally oblige regulators to require some form of risk management. In contrast, incremental risks less than 1 x 10^{-6} are widely considered to be *de minimis* risks, not requiring any type of management. A risk level of one in a million is often referred to as a "point of departure" or a level of risk where the estimated level of risk and its attendant exposure assumptions and estimated exposure concentrations are taken into account and the need for risk management is evaluated. In Maine, the risk level of 1 x 10^{-5} is the target risk level when a single substance is being evaluated, for example when evaluating the soil vapor intrusion pathway (MEDEP, 2010; 2013).

Comparison to MEDEP IAT

The State of Maine Department of Environmental Protection (MEDEP) Bureau of Remediation and Waste Management has developed indoor air targets (IATs) to evaluate the soil vapor intrusion pathway as part of site closure activities (MEDEP, 2010). The IATs have been developed for both chronic and subchronic exposure scenarios to protect against adverse human health effects from exposure to indoor air under residential and commercial land use. If average indoor air levels are below the IAT, then no action is required to mitigate any exposures via the soil vapor intrusion pathway.

For commercial land use, the IATs are based on an assumed chronic exposure of 8 hours per day, 250 days per year for 25 years (MEDEP, 2013). For PCBs, the IAT is calculated to be 220 ng/m^3. As a conservative approach, Maine uses the "high risk and persistence" unit risk factor of 5.7 x 10^{-4} ($\mu g/m^3$)$^{-1}$ to derive their IAT.

The 95% UCL concentration detected in Building HO-1 (82.3 ng/m^3) is a factor of two lower than the IAT. In addition, as shown in Table A1, all measured PCB concentrations from the building are below the MEDEP IAT.

Comparison to USEPA Public Health Goals

The USEPA has also calculated threshold levels for PCBs in indoor air (in schools) in the form of public health levels (USEPA, 2014). Unlike the MEDEP IAT, the USEPA public health levels include potential exposures to PCBs from all other major sources (e.g. outdoor air, indoor dust, outside soils,

and diet), and were calculated for all ages of children from toddlers in daycare to adolescents in high school as well as for adult school employees.

Another difference is that the USEPA public health levels are based on potential non-carcinogenic effects from PCBs and are calculated to maintain PCB exposures below a reference dose (RfD) of 20 ng PCB/kg body weight per day. The RfD is an estimate of the daily maximum level of exposure to human populations (including sensitive sub-populations) that is likely to be without an appreciable risk of adverse effects during a lifetime (USEPA, 1989). In this case, the public health goals are based on an oral RfD of 20 ng PCB/kg body weight per day developed for Aroclor 1254.

For non-school sources, USEPA estimates the largest single source of PCB exposure for most individuals in uncontaminated buildings is diet, which contributes roughly 50 to 60% to total PCB exposure, although PCB concentrations in food have been decreasing (USEPA, 2014). Overall, non-school sources result in PCB exposures that are well below the RfD.

School sources of PCBs that were considered include school indoor and outdoor air, indoor dust, and nearby outside soils. Using estimates of exposure for sources other than indoor air in schools, EPA calculated the school indoor air PCB concentration that would result in a total exposure equal to the reference dose. For adults, this value is 450 ng/m^3, which is well above the values detected in Building HO-1 (Table A1).

Comparison to Occupational Exposure Limits

The US Occupational Safety & Health Administration (OSHA) sets enforceable permissible exposure limits (PELs) to protect workers against adverse health effects associated with inhalation exposures to hazardous substances in the workplace. The PELs are 8-hour time-weighted average concentrations derived generally to protect against potential non-cancer effects. OSHA has established PELs for Aroclor 1242 and Aroclor 1254 of 1,000,000 and 500,000 ng/m^3, respectively based on the Threshold Limit Values (TLVs) established by the American Conference of Governmental Industrial Hygienists (ACGIH).

The National Institute for Occupational Safety and Health (NIOSH) has set a Recommended Exposure Limit (REL) of 1,000 ng/m^3 for a 10-hour workday, 40-hour workweek based on potential carcinogenic effects (NIOSH, 1986). Indoor air levels detected in Building HO-1 are well below occupational exposure levels (Table A1).

Comparison to PCBs in the Diet

Adult total diet studies performed in the mid- to late-1990s estimate average dietary PCB intake on the order of 3 to 5 ng/kg/day (ATSDR, 2000 – Table 6.25). For comparison, assuming a typical average inhalation rate of 20 m^3/day, the PCB intake for a 70 kg adult over an 8-hour work day at a 95% UCL indoor air PCB concentration of 82.3 ng/m^3 would be 7.8 ng/kg/day. This comparison demonstrates that exposures to indoor air at the HO-1 building are only about two times the average PCB intake from the diet. This range of routine ambient exposure has not been recognized as producing adverse

health effects and individuals are also exposed to other routine background sources of PCBs including outdoor air, soil and dust. Overall, the results of the indoor air testing suggest that potential exposures to PCBs in building air are likely within a factor of two times background exposure levels. This degree of change or variation is small relative to the protectiveness incorporated into the risk assessment process through intentionally conservative assumptions and ten-fold adjustments used to account for various types of uncertainties.

Conclusions

Indoor air levels detected in Building HO-1 are well below current occupational exposure limits. They are also below the more protective MEDEP indoor air target levels and USEPA public health levels developed for use as screening values to consider the need for further evaluation. Also, we estimate that potential risks from inhalation exposure to PCBs based on the air sampling from the building are within USEPA's acceptable risk range and below the target level used by MEDEP for developing its screening values. Further, exposure to PCBs from building air would be similar to the ambient exposure range experienced by the general population, expected to be within a factor of two times background levels from the diet and other routine sources.

Based on these characterizations of the potential exposures from the building, we conclude there is no risk of short-term or acute effects from PCBs in indoor air. Also, with regard to potential changes in long-term, lifetime risks, the estimated risks fall in a range USEPA frequently considers a negligible increase, and for which neither USEPA nor MEDEP would necessarily require any action.

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Table A1. PCB Concentrations Detected in Building HO-1 on (insert date)			
Sample Location	Floor	Room	Concentration (ng/m^3)
AC-1	Ground	Loading Dock	46
AC-2	Ground	File Storage	24
AC-3	Ground	Utility Room	170
AC-4	Ground	Mail Room	47
AC-5	Ground	Men's Locker room	9
AC-6	Ground	Gym	38
AC-7	Ground	Open Office Space	70
AC-8	Ground	Computer Room	48
AC-9	First	Credit Union	54
AC-10	First	Open Office Space	78
AC-11	First	Open Office Space	79
AC-12	First	Cafeteria	80
AC-13	First	Computer Room	79
AC-14	First	Stairway East	159
AC-15	First	Security Office	51
AC-16	First	Open Office-Addition	< 7
AC-17	Second	Single Office	47
AC-18	Second	Open Office Space	49
AC-19	Second	Open Office Space	41
AC-20	Second	Open Office Space	68
AC-21	Second	Open Office Space	76
AC-22	Second	Conference Room-Addition	< 7
AC-23	Second	Open Office-Addition	< 7
AC-24	Third	Conference Room	48
AC-25	Third	Open Office Space	50
AC-26	Third	Open Office Space	47
AC-27	Third	Open Office Space	61
AC-28	Third	Open Office Space	49
AC-29	Third	Single Office-Addition	< 7
AC-30	Third	Open Office-Addition	12
AC-31	Third	Conference Room-Addition	< 7

APPENDIX D

SOIL SAMPLING RESULTS (SEPTEMBER 2014)

SOIL SAMPLING RESULTS
PORTLAND, MAINE SITE

Prepared for

DARMODY P.A.

PRIVILEGED AND CONFIDENTIAL
ATTORNEY WORK PRODUCT

September 24, 2014

SME
Sevee & Maher Engineers, Inc.

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SOIL SAMPLING RESULTS
PORTLAND, MAINE SITE

SEPTEMBER 2014

1.0 INTRODUCTION AND BACKGROUND

This report has been prepared at the request of Darmody Carta, P.A. The work described herein was conducted in general accordance with the project scope of work (Phase-2), described in the January 9, 2014 letter proposal, regarding the PCB Investigation at the UNUM Building HO-1, 2211 Congress Street, Portland, Maine, 04122. This report presents the testing results, outlines the procedures used for sample collection, and provides conclusions and recommendations based on our findings.

The HO-1 Building (encompassing approximately 300,000 square feet) was originally constructed circa 1970, with major additions to the building in the late 1970s. Based on U.S.EPA guidance, building materials used during the 1950s through the 1970s (particularly caulking around windows, doors and expansion joints) may potentially contain polychlorinated biphenyls (PCBs). As part of an assessment for buildings constructed during this time frame, U.S.EPA recommends that soil testing be conducted to determine if personnel may be exposed to unsafe levels of PCBs through direct contact with soil surrounding the building, which may have become contaminated with PCBs leaching from the building materials. Accordingly, soil sampling was undertaken at the HO-1 building.

2.0 SAMPLING

On June 5, 2014, a total of 10 samples were collected from soils beneath windows and building seams, the most likely potential sources of PCBs capable of leaching to soils at the Site. Sample locations are listed on Table 1, and illustrated on Figure 1.

The following information provides details on sample collection:

- Each sample was collected from soil below the rain water drip line of the building, in the crushed stone apron surrounding the building.
- With the exception of SD-107, all locations had crushed stone overlying sandy soil. The depth of the stone was 0.3 to 0.7 feet. At SD-107, sandy loam alone was present at the ground surface.
- During sampling, the crushed stone was set aside to access the underlying soil.
- Once stone was removed, the soil sample was collected from a depth of 0 to 0.5 feet below the soil surface.
- Samples were collected with dedicated soil sampling tools (i.e., a separate set of decontaminated sampling tools was utilized for each sample location).
- Samples were placed in laboratory-supplied 4-ounce glass jars.
- For field quality control, a duplicate sample was collected at location SD-104.
- A laboratory control sample (MS/MSD) was collected at location SD-103.
- Samples were placed in coolers, on ice (approximately 4 degrees Celsius), with the appropriate Chain-of-Custody documentation, and were transported to the laboratory for analysis.
- Samples were analyzed by Alpha Analytical Laboratory, Westborough, Massachusetts for PCB Aroclors using U.S.EPA Analytical Method 8082, preceded by Extraction Method 3540 (Soxhlet).

3.0 ANALYTICAL RESULTS

Analytical results for soil samples are summarized in Table-1 and illustrated on Figure-1. Laboratory analytical reports are included as Appendix A. Analytical results for all soil samples were below 50 mg/kg (the threshold for classification as a Maine Hazardous Waste and for required disposal as a U.S.EPA TSCA waste). Two locations (SD-101 and SD-107) have soil PCB concentrations above the Maine Remedial Action Guidelines (RAGs) for the Construction Workers exposure scenario (6.5 mg/kg) and the Commercial Worker exposure scenario (12 mg/kg). PCBs detected in the soil were all characterized as Aroclor 1254 (i.e., 54% chlorine by mass), consistent with previous findings within the HO-1 building.

TABLE 1

PCB AROCLOR CONCENTRATIONS
HO-1 BUILDING
EXTERIOR SOIL

Sample Location	Location Description	Total PCB Aroclor (mg/kg)
SD-100	East end of HO-1. Sandy soil beneath stone.	3.46
SD-101	East end of HO-1. Sandy soil beneath stone.	9.8
SD-102	Southeast Corner of HO-1. Sandy soil beneath stone.	5.14
SD-103	South Side of HO-1. Sandy soil beneath stone.	2.34
SD-104	South Side of HO-1. Sandy soil beneath stone.	1.24
DP-1	Duplicate Sample collected at SD-104	1.21
SD-105	South Side of HO-1. Sandy soil beneath stone.	0.901
SD-106	West end of HO-1. Sandy soil beneath stone.	0.928
SD-107	West end of HO-1. Sandy loam. No stone.	47.7
SD-108	North Side of HO-1. Sandy soil beneath stone.	0.583
SD-109	North Side of HO-1. Sandy soil beneath stone.	0.407

Notes:
All PCB detections were Aroclor 1254.
All results were below 50 mg/kg (the threshold where PCBs become a Maine hazardous waste)
Maine Remedial Action Guidelines:
- Construction Worker: 6.5 mg/kg
- Commercial Worker: 12 mg/kg

4.0 CONCLUSIONS AND RECOMMENDATIONS

Soil samples collected from the exterior of the HO-1 building were found to contain PCBs, but at low concentrations, below those that would require U.S.EPA involvement. However, PCB concentrations exceed levels that the Maine Department of Environmental Protection (MEDEP) would consider to pose a health risk to construction workers and to commercial workers based on their standard assumptions (Maine RAGs). More realistic exposure scenarios may result in different conclusions regarding the health risks associated with PCBs present at low concentrations in certain site soils.

Based on the information reported herein, SME recommends that we meet to discuss the next steps to further evaluate, and, if necessary, mitigate any perceived potential human and environmental risks.

APPENDIX A

LABORATORY ANALYTICAL DATA PACKAGES

ANALYTICAL REPORT

Lab Number:	L1412302
Client:	Sevee & Maher Engineers, Inc. P.O. Box 85A 4 Blanchard Road Cumberland Center, ME 04021
ATTN:	Erik Clapp
Phone:	(207) 829-5016
Project Name:	DARMODY CARTA
Project Number:	13181
Report Date:	06/13/14

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: DARMODY CARTA
Project Number: 13181

Lab Number: L1412302
Report Date: 06/13/14

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

ORGANICS

Serial_No:06131414:04

Project Name: DARMODY CARTA
Project Number: 13181

Lab Number: L1412302
Report Date: 06/13/14

SAMPLE RESULTS

Lab ID:	L1412302-01 D	Date Collected:	06/05/14 13:35
Client ID:	SD-100-X-03F	Date Received:	06/06/14
Sample Location:	SOUTH PORTLAND, ME	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3540C
Analytical Method:	1,8082A	Extraction Date:	06/07/14 03:23
Analytical Date:	06/11/14 13:50	Cleanup Method1:	EPA 3665A
Analyst:	JT	Cleanup Date1:	06/09/14
Percent Solids:	92%	Cleanup Method2:	EPA 3660B
		Cleanup Date2:	06/09/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	216	--	10	A
Aroclor 1221	ND		ug/kg	216	--	10	A
Aroclor 1232	ND		ug/kg	216	--	10	A
Aroclor 1242	ND		ug/kg	216	--	10	A
Aroclor 1248	ND		ug/kg	144	--	10	A
Aroclor 1254	3460		ug/kg	216	--	10	B
Aroclor 1260	ND		ug/kg	144	--	10	A
Aroclor 1262	ND		ug/kg	72.2	--	10	A
Aroclor 1268	ND		ug/kg	72.2	--	10	A
PCBs, Total	3460		ug/kg	72.2	--	10	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	A
Decachlorobiphenyl	0	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	B
Decachlorobiphenyl	0	Q	30-150	B

Project Name: DARMODY CARTA
Project Number: 13181

Lab Number: L1412302
Report Date: 06/13/14

SAMPLE RESULTS

Lab ID: L1412302-03 D
Client ID: SD-102-X-03H
Sample Location: SOUTH PORTLAND, ME
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 06/11/14 11:49
Analyst: JT
Percent Solids: 94%

Date Collected: 06/05/14 14:02
Date Received: 06/06/14
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 06/07/14 03:23
Cleanup Method1: EPA 3665A
Cleanup Date1: 06/09/14
Cleanup Method2: EPA 3660B
Cleanup Date2: 06/09/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	415	--	20	A
Aroclor 1221	ND		ug/kg	415	--	20	A
Aroclor 1232	ND		ug/kg	415	--	20	A
Aroclor 1242	ND		ug/kg	415	--	20	A
Aroclor 1248	ND		ug/kg	277	--	20	A
Aroclor 1254	5140		ug/kg	415	--	20	B
Aroclor 1260	ND		ug/kg	277	--	20	A
Aroclor 1262	ND		ug/kg	138	--	20	A
Aroclor 1268	ND		ug/kg	138	--	20	A
PCBs, Total	5140		ug/kg	138	--	20	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	A
Decachlorobiphenyl	0	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	B
Decachlorobiphenyl	0	Q	30-150	B

Project Name: DARMODY CARTA
Project Number: 13181
Lab Number: L1412302
Report Date: 06/13/14

SAMPLE RESULTS

Lab ID:	L1412302-05 D	Date Collected:	06/05/14 14:25
Client ID:	SD-104-X-03J	Date Received:	06/06/14
Sample Location:	SOUTH PORTLAND, ME	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3540C
Analytical Method:	1,8082A	Extraction Date:	06/07/14 03:23
Analytical Date:	06/11/14 12:13	Cleanup Method1:	EPA 3665A
Analyst:	JT	Cleanup Date1:	06/09/14
Percent Solids:	91%	Cleanup Method2:	EPA 3660B
		Cleanup Date2:	06/09/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	109	--	5	A
Aroclor 1221	ND		ug/kg	109	--	5	A
Aroclor 1232	ND		ug/kg	109	--	5	A
Aroclor 1242	ND		ug/kg	109	--	5	A
Aroclor 1248	ND		ug/kg	72.4	--	5	A
Aroclor 1254	1240		ug/kg	109	--	5	B
Aroclor 1260	ND		ug/kg	72.4	--	5	A
Aroclor 1262	ND		ug/kg	36.2	--	5	A
Aroclor 1268	ND		ug/kg	36.2	--	5	A
PCBs, Total	1240		ug/kg	36.2	--	5	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	93		30-150	A
Decachlorobiphenyl	106		30-150	A
2,4,5,6-Tetrachloro-m-xylene	100		30-150	B
Decachlorobiphenyl	99		30-150	B

Project Name: DARMODY CARTA
Project Number: 13181

Lab Number: L1412302
Report Date: 06/13/14

SAMPLE RESULTS

Lab ID:	L1412302-07 D	Date Collected:	06/05/14 14:38
Client ID:	SD-106-X-041	Date Received:	06/06/14
Sample Location:	SOUTH PORTLAND, ME	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3540C
Analytical Method:	1,8082A	Extraction Date:	06/07/14 03:23
Analytical Date:	06/11/14 12:38	Cleanup Method1:	EPA 3665A
Analyst:	JT	Cleanup Date1:	06/09/14
Percent Solids:	98%	Cleanup Method2:	EPA 3660B
		Cleanup Date2:	06/09/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	40.9	--	2	A
Aroclor 1221	ND		ug/kg	40.9	--	2	A
Aroclor 1232	ND		ug/kg	40.9	--	2	A
Aroclor 1242	ND		ug/kg	40.9	--	2	A
Aroclor 1248	ND		ug/kg	27.2	--	2	A
Aroclor 1254	928		ug/kg	40.9	--	2	B
Aroclor 1260	ND		ug/kg	27.2	--	2	A
Aroclor 1262	ND		ug/kg	13.6	--	2	A
Aroclor 1268	ND		ug/kg	13.6	--	2	A
PCBs, Total	928		ug/kg	13.6	--	2	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	93		30-150	A
Decachlorobiphenyl	97		30-150	A
2,4,5,6-Tetrachloro-m-xylene	103		30-150	B
Decachlorobiphenyl	98		30-150	B

Project Name: DARMODY CARTA
Project Number: 13181

Lab Number: L1412302
Report Date: 06/13/14

SAMPLE RESULTS

Lab ID:	L1412302-09 D	Date Collected:	06/05/14 14:50
Client ID:	SD-108-X-043	Date Received:	06/06/14
Sample Location:	SOUTH PORTLAND, ME	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3540C
Analytical Method:	1,8082A	Extraction Date:	06/07/14 03:23
Analytical Date:	06/11/14 13:03	Cleanup Method1:	EPA 3665A
Analyst:	JT	Cleanup Date1:	06/09/14
Percent Solids:	94%	Cleanup Method2:	EPA 3660B
		Cleanup Date2:	06/09/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	41.1	--	2	A
Aroclor 1221	ND		ug/kg	41.1	--	2	A
Aroclor 1232	ND		ug/kg	41.1	--	2	A
Aroclor 1242	ND		ug/kg	41.1	--	2	A
Aroclor 1248	ND		ug/kg	27.4	--	2	A
Aroclor 1254	583		ug/kg	41.1	--	2	B
Aroclor 1260	ND		ug/kg	27.4	--	2	A
Aroclor 1262	ND		ug/kg	13.7	--	2	A
Aroclor 1268	ND		ug/kg	13.7	--	2	A
PCBs, Total	583		ug/kg	13.7	--	2	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	89		30-150	A
Decachlorobiphenyl	94		30-150	A
2,4,5,6-Tetrachloro-m-xylene	100		30-150	B
Decachlorobiphenyl	97		30-150	B

Project Name: DARMODY CARTA
Project Number: 13181

Lab Number: L1412302
Report Date: 06/13/14

SAMPLE RESULTS

Lab ID: L1412302-11 D
Client ID: SD-DP1-X-048
Sample Location: SOUTH PORTLAND, ME
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 06/11/14 13:15
Analyst: JT
Percent Solids: 92%

Date Collected: 06/05/14 00:00
Date Received: 06/06/14
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 06/07/14 03:23
Cleanup Method1: EPA 3665A
Cleanup Date1: 06/09/14
Cleanup Method2: EPA 3660B
Cleanup Date2: 06/09/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	107	--	5	A
Aroclor 1221	ND		ug/kg	107	--	5	A
Aroclor 1232	ND		ug/kg	107	--	5	A
Aroclor 1242	ND		ug/kg	107	--	5	A
Aroclor 1248	ND		ug/kg	71.6	--	5	A
Aroclor 1254	1210		ug/kg	107	--	5	B
Aroclor 1260	ND		ug/kg	71.6	--	5	A
Aroclor 1262	ND		ug/kg	35.8	--	5	A
Aroclor 1268	ND		ug/kg	35.8	--	5	A
PCBs, Total	1210		ug/kg	35.8	--	5	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	90		30-150	A
Decachlorobiphenyl	105		30-150	A
2,4,5,6-Tetrachloro-m-xylene	103		30-150	B
Decachlorobiphenyl	97		30-150	B

Matrix Spike Analysis
Batch Quality Control

Project Name: DARMODY CARTA
Project Number: 13181

Lab Number: L1412302
Report Date: 06/13/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits	Column
PCB by GC - Westborough Lab Associated sample(s): 01-11 QC Batch ID: WG695917-4 WG695917-5 QC Sample: L1412302-04 Client ID: SD-103-X-03I													
Aroclor 1016	ND	226	200	89		243	107		40-140	19		50	A
Aroclor 1260	ND	226	324	144	Q	387	170	Q	40-140	18		50	A

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	83		82		30-150	A
Decachlorobiphenyl	87		88		30-150	A
2,4,5,6-Tetrachloro-m-xylene	93		101		30-150	B
Decachlorobiphenyl	99		109		30-150	B

INORGANICS
&
MISCELLANEOUS

Project Name: DARMODY CARTA
Project Number: 13181

Lab Number: L1412302
Report Date: 06/13/14

SAMPLE RESULTS

Lab ID: L1412302-02
Client ID: SD-101-X-03G
Sample Location: SOUTH PORTLAND, ME
Matrix: Soil

Date Collected: 06/05/14 13:54
Date Received: 06/06/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	93.7		%	0.100	NA	1	-	06/06/14 21:46	30,2540G	RT

Project Name: DARMODY CARTA
Project Number: 13181

Lab Number: L1412302
Report Date: 06/13/14

SAMPLE RESULTS

Lab ID: L1412302-04
Client ID: SD-103-X-03I
Sample Location: SOUTH PORTLAND, ME
Matrix: Soil

Date Collected: 06/05/14 14:15
Date Received: 06/06/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	91.1		%	0.100	NA	1	-	06/06/14 21:46	30,2540G	RT

Project Name: DARMODY CARTA
Project Number: 13181

Lab Number: L1412302
Report Date: 06/13/14

SAMPLE RESULTS

Lab ID: L1412302-06
Client ID: SD-105-X-040
Sample Location: SOUTH PORTLAND, ME
Matrix: Soil

Date Collected: 06/05/14 14:33
Date Received: 06/06/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	96.0		%	0.100	NA	1	-	06/06/14 21:46	30,2540G	RT

Project Name: DARMODY CARTA
Project Number: 13181

Lab Number: L1412302
Report Date: 06/13/14

SAMPLE RESULTS

Lab ID: L1412302-08
Client ID: SD-107-X-042
Sample Location: SOUTH PORTLAND, ME
Matrix: Soil

Date Collected: 06/05/14 14:44
Date Received: 06/06/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	84.0		%	0.100	NA	1	-	06/06/14 21:46	30,2540G	RT

Project Name: DARMODY CARTA
Project Number: 13181

Lab Number: L1412302
Report Date: 06/13/14

SAMPLE RESULTS

Lab ID: L1412302-10
Client ID: SD-109-X-044
Sample Location: SOUTH PORTLAND, ME
Matrix: Soil

Date Collected: 06/05/14 15:06
Date Received: 06/06/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	96.7		%	0.100	NA	1	-	06/06/14 21:46	30,2540G	RT

Project Name: DARMODY CARTA
Project Number: 13181

Lab Duplicate Analysis
Batch Quality Control

Lab Number: L1412302
Report Date: 06/13/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-11 QC Batch ID: WG695882-1 QC Sample: L1412301-01 Client ID: DUP Sample						
Solids, Total	71.2	72.6	%	2		20

Project Name: DARMODY CARTA
Project Number: 13181
Lab Number: L1412302
Report Date: 06/13/14

GLOSSARY

Acronyms

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI - Not Ignitable.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

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

Terms

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

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

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

Report Format: Data Usability Report

Project Name: DARMODY CARTA
Project Number: 13181

Lab Number: L1412302
Report Date: 06/13/14

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

revised 6/13/14 CW

CHAIN OF CUSTODY

PAGE 1 OF 3 & TAT

Serial No:06131414:04

Date Rec'd in Lab: 6/6/14

ALPHA Job #: L1412302

ALPHA GEOTECHNICAL

8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220

320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Client Information

Client: Sevee & Maher

Address: 41 Blanchard Rd

Cumberland ME 04021

Phone: 207 829 5016

Email: EMC@SMEMAINE.COM

Project Information

Project Name: Dairy Queen

Project Location: South Portland ME

Project #: 13181

Project Manager: Melissa Colli

ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)

Date Due: 6-13-14

Report Information - Data Deliverables

☒ ADEx ☒ EMAIL

Billing Information

☒ Same as Client info PO #: 13181

Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods

☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)

☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)

☐ Yes ☐ No NPDES RGP

☐ Other State /Fed Program _____ Criteria _____

Additional Project Information:

PCB 8082 w/Soxhlet Extraction Reported as Aroclors

ANALYSIS

VOC: ☐ 8260 ☐ 624 ☐ 524.2

SVOC: ☐ ABN ☐ PAH

METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15

METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13

EPH: ☐ Ranges & Targets ☐ Ranges Only

VPH: ☐ Ranges & Targets ☐ Ranges Only

☐ PCB ☐ PEST

TPH: ☐ Quant Only ☐ Fingerprint

PCB 8082 (Soxhlet Extraction)

SAMPLE INFO

Filtration ☐ Field ☐ Lab to do

Preservation ☐ Lab to do

Sample Comments

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	PCB 8082 (Soxhlet Extraction)	TOTAL # BOTTLES	Sample Comments
L2302-01	SD-100-X-03F	6-5-14	13:35	Soil	TEL		1	
-02	SD-101-X-03G		13:54				1	
-03	SD-102-X-03H		14:02				1	
-04	SD-103-X-03I		14:15				3	Perform MS/MSD
-05	SD-104-X-03J		14:25				1	
-06	SD-105-X-04Q		14:33				1	
-07	SD-106-X-041		14:38				1	
-08	SD-107-X-042		14:44				1	
-09	SD-108-X-043		14:50				1	
-10	SD-109-X-044		15:06				1	
					Container Type		A	
					Preservative		A	

Container Type
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

Preservative
A= None
B= HCl
C= HNO_3
D= H_2SO_4
E= NaOH
F= MeOH
G= $NaHSO_4$
H= $Na_2S_2O_3$
I= Ascorbic Acid
J= NH_4Cl
K= Zn Acetate
O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
	6-6-14/0900		6/6/14 0900
	6/6/14 1216		6/6/14 1216
	6/6/14 1845		6/6/14 18:45

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

CHAIN OF CUSTODY

PAGE 2 OF 3

ALPHA ANALYTICAL

8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220
320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Date Rec'd in Lab: 6/6/14

ALPHA Job #: L1412302

Serial_No:06131414:04

Client Information

Client: Sevee & Maher

Address: See Page 1

Phone:

Email:

Project Information

Project Name: Darmody

Project Location: S. Portland ME

Project #: 13181

Project Manager:

ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due: 6·13·14

Report Information - Data Deliverables

☒ ADEx ☒ EMAIL

Billing Information

☒ Same as Client info PO #: 13181

Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☐ No NPDES RGP
☐ Other State /Fed Program ______ Criteria ______

Additional Project Information:

PCB 8082 w/Soxhlet Extraction Reported as Aroclors.

ANALYSIS: VOC: ☐ 8260 ☐ 624 ☐ 524.2; SVOC: ☐ ABN ☐ PAH; METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15; METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13; EPH: ☐ Ranges & Targets ☐ Ranges Only; VPH: ☐ Ranges & Targets ☐ Ranges Only; ☐ PCB ☐ PEST; TPH: ☐ Quant Only ☐ Fingerprint; PCB8082/Soxhlet Extraction

SAMPLE INFO — Filtration: ☐ Field ☐ Lab to do; Preservation: ☐ Lab to do

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	PCB8082/Soxhlet Extraction	Sample Comments	TOTAL # BOTTLES
12302-11	SD-DP1-X-048	6-5-14	—	Soil	TEW	1		

	PCB8082/Soxhlet Extraction
Container Type	A
Preservative	A

Container Type: P= Plastic, A= Amber glass, V= Vial, G= Glass, B= Bacteria cup, C= Cube, O= Other, E= Encore, D= BOD Bottle

Preservative: A= None, B= HCl, C= HNO_3, D= H_2SO_4, E= NaOH, F= MeOH, G= $NaHSO_4$, H = $Na_2S_2O_3$, I= Ascorbic Acid, J = NH_4Cl, K= Zn Acetate, O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	6-6-14/0900	[signature]	6/6/14 0900
[signature]	6/6/14 1216	[signature]	6/6/14 2216
[signature]	6/6/14 1845	[signature]	6/6/14 18:45

CHAIN OF CUSTODY

PAGE 1 OF 3 ☒TEW

Date Rec'd in Lab: 6/6/14

Serial_No:06131414:04

ALPHA Job #: L1412302

ALPHA ANALYTICAL

8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220
320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Client Information

Client: Sevee & Maher

Address: 4 Blanchard Rd

Cumberland ME 04021

Phone: 207 829 5016

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Project Information

Project Name: Darmody Carta

Project Location: South Portland ME

Project #: 13181

Project Manager: Melissa Gulli

ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due: 6-13-14

Report Information - Data Deliverables

☒ ADEx ☒ EMAIL

Billing Information

☒ Same as Client info PO #: 13181

Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☐ No NPDES RGP
☐ Other State /Fed Program ________ Criteria ________

Additional Project Information:

PCB 8082 w/Soxhlet Extraction Reported as Aroclors

ANALYSIS: VOC: ☐ 8260 ☐ 624 ☐ 524.2; SVOC: ☐ ABN ☐ PAH; METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15; METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13; EPH: ☐ Ranges & Targets ☐ Ranges Only; VPH: ☐ Ranges & Targets ☐ Ranges Only; ☐ PCB ☐ PEST; TPH: ☐ Quant Only ☐ Fingerprint; PCB 8082/Soxhlet Extraction

SAMPLE INFO — Filtration ☐ Field ☐ Lab to do; Preservation ☐ Lab to do

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	PCB 8082/Soxhlet Extraction	Sample Comments	TOTAL # BOTTLES
12302-01	SD-100-X-03F	6-5-14		Soil	TEW	1		
-02	SD-101-X-03G	↓		↓	↓	1		
-03	SD-102-X-03H	↓		↓	↓	1		
-04	SD-103-X-03I	↓		↓	↓	3	Perform MS/MSD	
-05	SD-104-X-03J	↓		↓	↓	1		
-06	SD-105-X-040	↓		↓	↓	1		
-07	SD-106-X-041	↓		↓	↓	1		
-08	SD-107-X-042	↓		↓	↓	1		
-09	SD-108-X-043	↓		↓	↓	1		
-10	SD-109-X-044	↓		↓	↓	1		

Container Type	A
Preservative	A

Container Type: P= Plastic, A= Amber glass, V= Vial, G= Glass, B= Bacteria cup, C= Cube, O= Other, E= Encore, D= BOD Bottle

Preservative: A= None, B= HCl, C= HNO_3, D= H_2SO_4, E= NaOH, F= MeOH, G= $NaHSO_4$, H = $Na_2S_2O_3$, I= Ascorbic Acid, J = NH_4Cl, K= Zn Acetate, O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	6-6-14/0900	[signature]	6/6/14 0900
[signature]	6/6/14 1216	Lee Payne	6/6/14 1216
Lee Payne	6/6/14 1845	[signature]	6/6/14 1845

FORM NO: 01-01 (rev. 12-Mar-2012)

Certification Information

Last revised April 15, 2014

The following analytes are not included in our NELAP Scope of Accreditation:

Westborough Facility
EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.
EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.
EPA 8330A/B: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT.
EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 625: 4-Chloroaniline, 4-Methylphenol.
SM4500: Soil: Total Phosphorus, TKN, NO2, NO3.
EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility
EPA 8270D: Biphenyl.
EPA 2540D: TSS
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water
EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7:** Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate.
Microbiology: SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.

Non-Potable Water
EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;
EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;
EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, EPA 350.1: Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.
Microbiology: SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.

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

Project Name:	DARMODY CARTA	**Lab Number:**	L1412302
Project Number:	13181	**Report Date:**	06/13/14

Data Qualifiers

H	- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
I	- The lower value for the two columns has been reported due to obvious interference.
M	- Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
NJ	- Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
P	- The RPD between the results for the two columns exceeds the method-specified criteria.
Q	- The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
R	- Analytical results are from sample re-analysis.
RE	- Analytical results are from sample re-extraction.
S	- Analytical results are from modified screening analysis.
J	- Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
ND	- Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

Project Name: DARMODY CARTA
Project Number: 13181

Lab Number: L1412302
Report Date: 06/13/14

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1412302-01A	Amber 120ml unpreserved	A	N/A	3.2	Y	Absent	TS(7),PCB-8082LL-3540C(14)
L1412302-02A	Amber 120ml unpreserved	A	N/A	3.2	Y	Absent	TS(7),PCB-8082LL-3540C(14)
L1412302-03A	Amber 120ml unpreserved	A	N/A	3.2	Y	Absent	TS(7),PCB-8082LL-3540C(14)
L1412302-04A	Amber 120ml unpreserved	A	N/A	3.2	Y	Absent	TS(7),PCB-8082LL-3540C(14)
L1412302-04B	Amber 120ml unpreserved	A	N/A	3.2	Y	Absent	TS(7),PCB-8082LL-3540C(14)
L1412302-04C	Amber 120ml unpreserved	A	N/A	3.2	Y	Absent	TS(7),PCB-8082LL-3540C(14)
L1412302-05A	Amber 120ml unpreserved	A	N/A	3.2	Y	Absent	TS(7),PCB-8082LL-3540C(14)
L1412302-06A	Amber 120ml unpreserved	A	N/A	3.2	Y	Absent	TS(7),PCB-8082LL-3540C(14)
L1412302-07A	Amber 120ml unpreserved	A	N/A	3.2	Y	Absent	TS(7),PCB-8082LL-3540C(14)
L1412302-08A	Amber 120ml unpreserved	A	N/A	3.2	Y	Absent	TS(7),PCB-8082LL-3540C(14)
L1412302-09A	Amber 120ml unpreserved	A	N/A	3.2	Y	Absent	TS(7),PCB-8082LL-3540C(14)
L1412302-10A	Amber 120ml unpreserved	A	N/A	3.2	Y	Absent	TS(7),PCB-8082LL-3540C(14)
L1412302-11A	Amber 120ml unpreserved	A	N/A	3.2	Y	Absent	TS(7),PCB-8082LL-3540C(14)

*Values in parentheses indicate holding time in days

Project Name: DARMODY CARTA
Project Number: 13181

Lab Number: L1412302
Report Date: 06/13/14

SAMPLE RESULTS

Lab ID: L1412302-11
Client ID: SD-DP1-X-048
Sample Location: SOUTH PORTLAND, ME
Matrix: Soil

Date Collected: 06/05/14 00:00
Date Received: 06/06/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	92.1		%	0.100	NA	1	-	06/06/14 21:46	30,2540G	RT

Project Name: DARMODY CARTA
Project Number: 13181

Lab Number: L1412302
Report Date: 06/13/14

SAMPLE RESULTS

Lab ID: L1412302-09
Client ID: SD-108-X-043
Sample Location: SOUTH PORTLAND, ME
Matrix: Soil

Date Collected: 06/05/14 14:50
Date Received: 06/06/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	94.2		%	0.100	NA	1	-	06/06/14 21:46	30,2540G	RT

Project Name: DARMODY CARTA
Project Number: 13181

Lab Number: L1412302
Report Date: 06/13/14

SAMPLE RESULTS

Lab ID: L1412302-07
Client ID: SD-106-X-041
Sample Location: SOUTH PORTLAND, ME
Matrix: Soil

Date Collected: 06/05/14 14:38
Date Received: 06/06/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	97.5		%	0.100	NA	1	-	06/06/14 21:46	30,2540G	RT

Project Name: DARMODY CARTA
Project Number: 13181

Lab Number: L1412302
Report Date: 06/13/14

SAMPLE RESULTS

Lab ID: L1412302-05
Client ID: SD-104-X-03J
Sample Location: SOUTH PORTLAND, ME
Matrix: Soil

Date Collected: 06/05/14 14:25
Date Received: 06/06/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	91.1		%	0.100	NA	1	-	06/06/14 21:46	30,2540G	RT

Project Name: DARMODY CARTA
Project Number: 13181

Lab Number: L1412302
Report Date: 06/13/14

SAMPLE RESULTS

Lab ID: L1412302-03
Client ID: SD-102-X-03H
Sample Location: SOUTH PORTLAND, ME
Matrix: Soil

Date Collected: 06/05/14 14:02
Date Received: 06/06/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	93.9		%	0.100	NA	1	-	06/06/14 21:46	30,2540G	RT

Project Name: DARMODY CARTA
Project Number: 13181

Lab Number: L1412302
Report Date: 06/13/14

SAMPLE RESULTS

Lab ID: L1412302-01
Client ID: SD-100-X-03F
Sample Location: SOUTH PORTLAND, ME
Matrix: Soil

Date Collected: 06/05/14 13:35
Date Received: 06/06/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	91.8		%	0.100	NA	1	-	06/06/14 21:46	30,2540G	RT

Lab Control Sample Analysis
Batch Quality Control

Project Name: DARMODY CARTA
Project Number: 13181

Lab Number: L1412302
Report Date: 06/13/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
PCB by GC - Westborough Lab Associated sample(s): 01-11 Batch: WG695917-2 WG695917-3									
Aroclor 1016	84		70		40-140	18		50	A
Aroclor 1260	85		69		40-140	21		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	89		69		30-150	A
Decachlorobiphenyl	93		75		30-150	A
2,4,5,6-Tetrachloro-m-xylene	94		75		30-150	B
Decachlorobiphenyl	94		76		30-150	B

Project Name: DARMODY CARTA
Project Number: 13181

Lab Number: L1412302
Report Date: 06/13/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 06/09/14 18:01
Analyst: JT

Extraction Method: EPA 3540C
Extraction Date: 06/07/14 03:23
Cleanup Method1: EPA 3665A
Cleanup Date1: 06/09/14
Cleanup Method2: EPA 3660B
Cleanup Date2: 06/09/14

Parameter	Result	Qualifier	Units	RL	MDL	Column
PCB by GC - Westborough Lab for sample(s): 01-11 Batch: WG695917-1						
Aroclor 1016	ND		ug/kg	19.4	--	A
Aroclor 1221	ND		ug/kg	19.4	--	A
Aroclor 1232	ND		ug/kg	19.4	--	A
Aroclor 1242	ND		ug/kg	19.4	--	A
Aroclor 1248	ND		ug/kg	12.9	--	A
Aroclor 1254	ND		ug/kg	19.4	--	A
Aroclor 1260	ND		ug/kg	12.9	--	A
Aroclor 1262	ND		ug/kg	6.46	--	A
Aroclor 1268	ND		ug/kg	6.46	--	A
PCBs, Total	ND		ug/kg	6.46	--	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	73		30-150	A
2,4,5,6-Tetrachloro-m-xylene	79		30-150	B
Decachlorobiphenyl	86		30-150	B
Decachlorobiphenyl	84		30-150	A

Project Name: DARMODY CARTA
Project Number: 13181

Lab Number: L1412302
Report Date: 06/13/14

SAMPLE RESULTS

Lab ID: L1412302-10
Client ID: SD-109-X-044
Sample Location: SOUTH PORTLAND, ME
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 06/09/14 17:36
Analyst: JT
Percent Solids: 97%

Date Collected: 06/05/14 15:06
Date Received: 06/06/14
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 06/07/14 03:23
Cleanup Method1: EPA 3665A
Cleanup Date1: 06/09/14
Cleanup Method2: EPA 3660B
Cleanup Date2: 06/09/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	20.2	--	1	A
Aroclor 1221	ND		ug/kg	20.2	--	1	A
Aroclor 1232	ND		ug/kg	20.2	--	1	A
Aroclor 1242	ND		ug/kg	20.2	--	1	A
Aroclor 1248	ND		ug/kg	13.5	--	1	A
Aroclor 1254	407		ug/kg	20.2	--	1	A
Aroclor 1260	ND		ug/kg	13.5	--	1	A
Aroclor 1262	ND		ug/kg	6.74	--	1	A
Aroclor 1268	ND		ug/kg	6.74	--	1	A
PCBs, Total	407		ug/kg	6.74	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	101		30-150	A
Decachlorobiphenyl	108		30-150	A
2,4,5,6-Tetrachloro-m-xylene	104		30-150	B
Decachlorobiphenyl	105		30-150	B

Project Name: DARMODY CARTA
Project Number: 13181

Lab Number: L1412302
Report Date: 06/13/14

SAMPLE RESULTS

Lab ID: L1412302-08 D
Client ID: SD-107-X-042
Sample Location: SOUTH PORTLAND, ME
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 06/11/14 14:02
Analyst: JT
Percent Solids: 84%

Date Collected: 06/05/14 14:44
Date Received: 06/06/14
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 06/07/14 03:23
Cleanup Method1: EPA 3665A
Cleanup Date1: 06/09/14
Cleanup Method2: EPA 3660B
Cleanup Date2: 06/09/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	2330	--	100	A
Aroclor 1221	ND		ug/kg	2330	--	100	A
Aroclor 1232	ND		ug/kg	2330	--	100	A
Aroclor 1242	ND		ug/kg	2330	--	100	A
Aroclor 1248	ND		ug/kg	1550	--	100	A
Aroclor 1254	47700		ug/kg	2330	--	100	B
Aroclor 1260	ND		ug/kg	1550	--	100	A
Aroclor 1262	ND		ug/kg	777	--	100	A
Aroclor 1268	ND		ug/kg	777	--	100	A
PCBs, Total	47700		ug/kg	777	--	100	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	A
Decachlorobiphenyl	0	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	B
Decachlorobiphenyl	0	Q	30-150	B

Project Name: DARMODY CARTA
Project Number: 13181

Lab Number: L1412302
Report Date: 06/13/14

SAMPLE RESULTS

Lab ID: L1412302-06 D
Client ID: SD-105-X-040
Sample Location: SOUTH PORTLAND, ME
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 06/11/14 12:26
Analyst: JT
Percent Solids: 96%

Date Collected: 06/05/14 14:33
Date Received: 06/06/14
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 06/07/14 03:23
Cleanup Method1: EPA 3665A
Cleanup Date1: 06/09/14
Cleanup Method2: EPA 3660B
Cleanup Date2: 06/09/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	102	--	5	A
Aroclor 1221	ND		ug/kg	102	--	5	A
Aroclor 1232	ND		ug/kg	102	--	5	A
Aroclor 1242	ND		ug/kg	102	--	5	A
Aroclor 1248	ND		ug/kg	67.9	--	5	A
Aroclor 1254	901		ug/kg	102	--	5	B
Aroclor 1260	ND		ug/kg	67.9	--	5	A
Aroclor 1262	ND		ug/kg	34.0	--	5	A
Aroclor 1268	ND		ug/kg	34.0	--	5	A
PCBs, Total	901		ug/kg	34.0	--	5	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	83		30-150	A
Decachlorobiphenyl	98		30-150	A
2,4,5,6-Tetrachloro-m-xylene	93		30-150	B
Decachlorobiphenyl	94		30-150	B

Project Name: DARMODY CARTA
Project Number: 13181

Lab Number: L1412302
Report Date: 06/13/14

SAMPLE RESULTS

Lab ID:	L1412302-04 D	Date Collected:	06/05/14 14:15
Client ID:	SD-103-X-03I	Date Received:	06/06/14
Sample Location:	SOUTH PORTLAND, ME	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3540C
Analytical Method:	1,8082A	Extraction Date:	06/07/14 03:23
Analytical Date:	06/11/14 12:01	Cleanup Method1:	EPA 3665A
Analyst:	JT	Cleanup Date1:	06/09/14
Percent Solids:	91%	Cleanup Method2:	EPA 3660B
		Cleanup Date2:	06/09/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	109	--	5	A
Aroclor 1221	ND		ug/kg	109	--	5	A
Aroclor 1232	ND		ug/kg	109	--	5	A
Aroclor 1242	ND		ug/kg	109	--	5	A
Aroclor 1248	ND		ug/kg	72.8	--	5	A
Aroclor 1254	2340		ug/kg	109	--	5	B
Aroclor 1260	ND		ug/kg	72.8	--	5	A
Aroclor 1262	ND		ug/kg	36.4	--	5	A
Aroclor 1268	ND		ug/kg	36.4	--	5	A
PCBs, Total	2340		ug/kg	36.4	--	5	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	81		30-150	A
Decachlorobiphenyl	83		30-150	A
2,4,5,6-Tetrachloro-m-xylene	97		30-150	B
Decachlorobiphenyl	88		30-150	B

Project Name: DARMODY CARTA
Project Number: 13181

Lab Number: L1412302
Report Date: 06/13/14

SAMPLE RESULTS

Lab ID: L1412302-02 D
Client ID: SD-101-X-03G
Sample Location: SOUTH PORTLAND, ME
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 06/11/14 11:36
Analyst: JT
Percent Solids: 94%

Date Collected: 06/05/14 13:54
Date Received: 06/06/14
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 06/07/14 03:23
Cleanup Method1: EPA 3665A
Cleanup Date1: 06/09/14
Cleanup Method2: EPA 3660B
Cleanup Date2: 06/09/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	1020	--	50	A
Aroclor 1221	ND		ug/kg	1020	--	50	A
Aroclor 1232	ND		ug/kg	1020	--	50	A
Aroclor 1242	ND		ug/kg	1020	--	50	A
Aroclor 1248	ND		ug/kg	681	--	50	A
Aroclor 1254	9800		ug/kg	1020	--	50	B
Aroclor 1260	ND		ug/kg	681	--	50	A
Aroclor 1262	ND		ug/kg	340	--	50	A
Aroclor 1268	ND		ug/kg	340	--	50	A
PCBs, Total	9800		ug/kg	340	--	50	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	A
Decachlorobiphenyl	0	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	B
Decachlorobiphenyl	0	Q	30-150	B

PCBS

Project Name: DARMODY CARTA
Project Number: 13181

Lab Number: L1412302
Report Date: 06/13/14

Case Narrative (continued)

PCBs

L1412302-01, -02, -03, and -08: The surrogate recoveries are below the acceptance criteria for 2,4,5,6-tetrachloro-m-xylene and decachlorobiphenyl (all at 0%) due to the dilutions required to quantitate the samples. Re-extraction was not required; therefore, the results of the original analyses are reported.

The WG695917-4/-5 MS/MSD recoveries, performed on L1412302-04, are outside the acceptance criteria for aroclor 1260 (144%/170%). The unacceptable percent recoveries are attributed to the elevated concentrations of target compounds present in the sample utilized for the MS/MSD.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Michelle M. Morris

Title: Technical Director/Representative

Date: 06/13/14

Project Name: DARMODY CARTA
Project Number: 13181

Lab Number: L1412302
Report Date: 06/13/14

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1412302-01	SD-100-X-03F	SOUTH PORTLAND, ME	06/05/14 13:35
L1412302-02	SD-101-X-03G	SOUTH PORTLAND, ME	06/05/14 13:54
L1412302-03	SD-102-X-03H	SOUTH PORTLAND, ME	06/05/14 14:02
L1412302-04	SD-103-X-03I	SOUTH PORTLAND, ME	06/05/14 14:15
L1412302-05	SD-104-X-03J	SOUTH PORTLAND, ME	06/05/14 14:25
L1412302-06	SD-105-X-040	SOUTH PORTLAND, ME	06/05/14 14:33
L1412302-07	SD-106-X-041	SOUTH PORTLAND, ME	06/05/14 14:38
L1412302-08	SD-107-X-042	SOUTH PORTLAND, ME	06/05/14 14:44
L1412302-09	SD-108-X-043	SOUTH PORTLAND, ME	06/05/14 14:50
L1412302-10	SD-109-X-044	SOUTH PORTLAND, ME	06/05/14 15:06
L1412302-11	SD-DP1-X-048	SOUTH PORTLAND, ME	06/05/14 00:00

APPENDIX E

LETTER TO DARMODY PA REGARDING PCBs IN CAULK SAMPLE (SEPTEMBER 24, 2014)

SME
Sevee & Maher Engineers, Inc.

ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE

September 24, 2014 13181.00

Stephen J. Darmody, Esq.
Darmody Carta, P.A.
201 Sevilla Avenue, Suite 305
Coral Gables, Florida 33134

Subject: PCB Analysis of Discarded Caulk
UNUM Building HO-1
2211 Congress Street
Portland, Maine 04122

Dear Mr. Darmody:

On June 5, 2014, Sevee and Maher Engineers Inc. (SME) conducted a soil sampling program at the above referenced property. The purpose of the program was to determine if Polychlorinated Biphenyls (PCBs) are present in shallow soil, beneath windows and building joints, sealed with materials that could potentially contain PCBS. The base of the building is surrounded by a washed-stone (approximately ¾-inch) apron for splash and erosion protection. The stone is approximately four to six-inches deep. Soil samples were collected from beneath the stone.

During the soil sampling event, at one sampling location, discarded building caulk was found within the stone apron material. The material appeared to be similar to window caulk and/or building joint caulk on the building, above the sampling location. At your request, SME collected a sample of the caulk and submitted the sample to Alpha Analytical Laboratory (Alpha) as sample CK-101-X-XXX, for PCB analysis (EPA Method 8082, Extraction Method 3540C). The Alpha report of analytical results is included as Attachment A.

A PCB concentration of 179,000 mg/kg (ppm) was reported for the caulk sample.

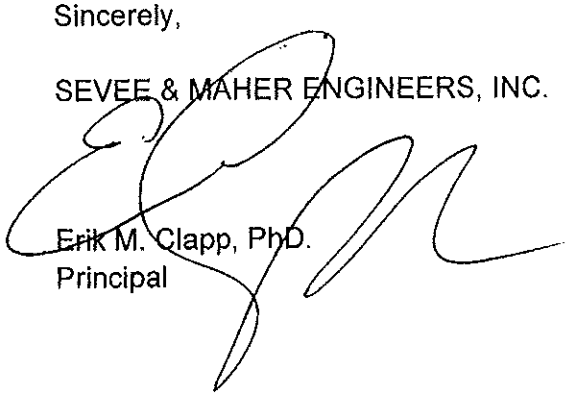
We recommend that this data be shared with the property owners, and that we consider a meeting to discuss appropriate actions.

4 Blanchard Road, PO Box 85A, Cumberland Center, Maine 04021 • Phone 207.829.5016 • Fax 207.829.5692 • www.smemaine.com

Please feel free to contact us with any questions regarding the report.

Sincerely,

SEVEE & MAHER ENGINEERS, INC.



Erik M. Clapp, PhD.
Principal

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ATTORNEY WORK PRODUCT

APPENDIX F

TESTING SAMPLE COLLECTION AND ANALYTICAL PROCEDURES

ATTACHMENT F
SAMPLE COLLECTION AND ANALYTICAL PROCEDURES
BUILDING HO-1 SOIL AND STONE REMEDIATION
UNUM

Soil samples will be collected using the following procedures for both characterization and verification sampling:

- A 3 meter sampling grid will be established in accordance with 40 CFR §761 Subpart O.
- For verification testing, a 3 meter grid will be established along the excavation walls. Samples will be collected from the vertical midpoint of the excavation wall.
- For each sample location:
  - a 4 oz discrete sample and a 2 oz aliquot for a composite sample will be collected.
  - Composite soil samples will be a composite of about five aliquots.
  - a dedicated stainless steel spoon, 2 oz stainless steel cup, spatula, and an aluminum pan will be utilized.
  - At each sample node, the dedicated spoon will be used to dig approximately one-inch into the soil. The soil will be scooped into a 2 oz cup. 4 cups will be filled and dumped into an aluminum pan. The samples in the aluminum pan will be mixed thoroughly. Then, a 4 oz sample jar will be filled as the discrete sample for that location and will be stored in archive for future analyses, if necessary. One 2 oz cup will then be filled from the aluminum plan and will dumped into a separate aluminum pan to be used as a composite sample.
  - Once all composite subsamples are collected and placed in the separate aluminum pan, the sample will be thoroughly mixed. The thoroughly mixed composite sample will then be placed into a 4 oz jar.
  - The sample jars will be placed in a cooler with ice and will be kept at 4 degrees C until delivered to the laboratory.
  - The dedicated spoon, cup, spatula, and aluminum pan will be disposed of, along with all PPE, as Maine Special Waste.

Concrete samples, if necessary will be collected in general accordance with the U.S. EPA, Region 1, SOP for Sampling Porous Surfaces for PCBs (May 2011).

Samples will be analyzed by Alpha Analytical of Westborough, MA. Samples will be analyzed for PCBs using US EPA SW846 Method 8082. Samples will be prepared using extraction method SW846 3540 (Soxhlet).

N (APPROXIMATE)

SD-108 (0.583)

SD-109 (0.407)

SD-100 (3.46)

SD-107 (47.7)

SD-106 (0.928)

SD-105 (0.901)

SD-104 (1.24/1.21)

SD-103 (2.34)

SD-102 (5.14)

SD-101 (9.8)

LEGEND

SD-100 SOIL SAMPLE LOCATION

(3.46) PCB CONCENTRATION IN SOIL (mg/kg)

20 0 40 FEET
(APPROXIMATE)

FIGURE 4
PCB-SOIL SAMPLE LOCATIONS
UNUM
PORTLAND, MAINE

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DWG:PCB-SOIL SAMPLES LMN: PCB-SOIL CTB: SME-STD REV: 11/13/2014

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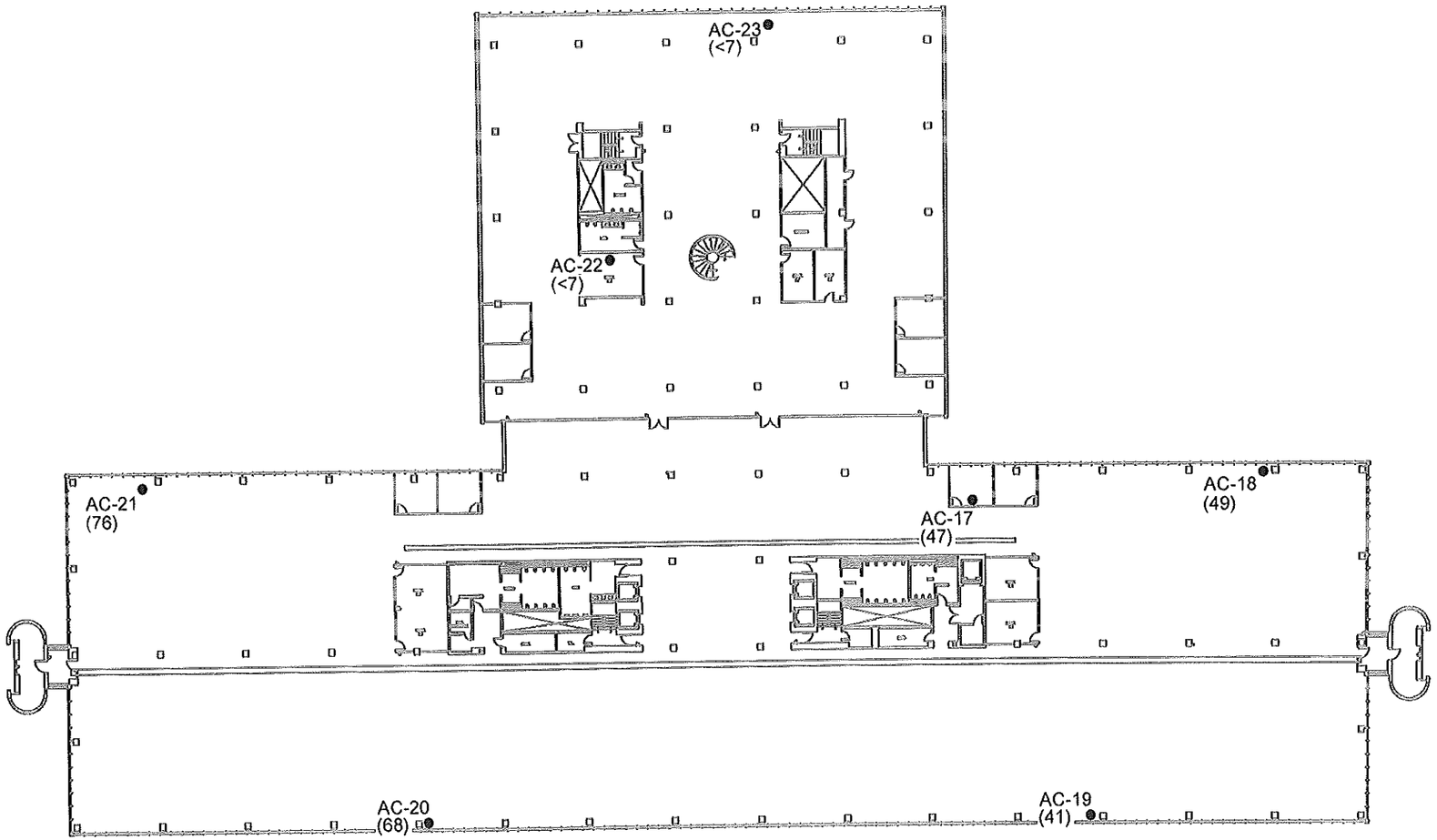
N
(APPROXIMATE)



LEGEND

- ● AC-1 — PCB AIR SAMPLE LOCATION AND ID
- (46) — PCB CONCENTRATION IN AIR (ng/m³)

20 0 40 FEET
(APPROXIMATE)

FIGURE 3
PCB–AIR SAMPLE LOCATIONS
HO1 SECOND FLOOR
DARMODY–CARTA PROJECT
FEBRUARY 9, 2014

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DWG: PCB–AIR SAMPLES LMN: NONE CTB: SME–STD REV: 4/4/2014

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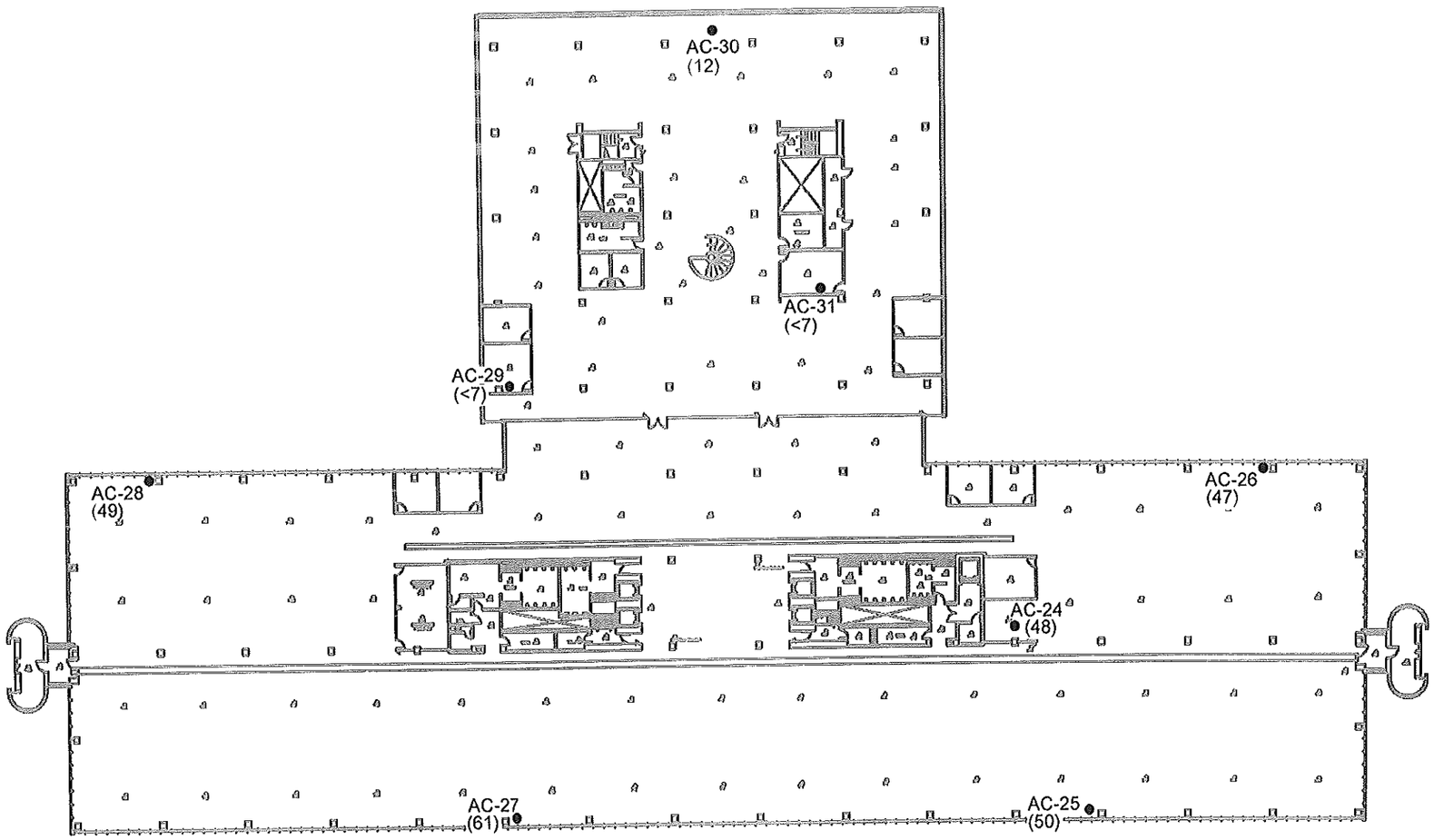
N (APPROXIMATE)



LEGEND

- ● AC-1 — PCB AIR SAMPLE LOCATION AND ID
- (46) — PCB CONCENTRATION IN AIR (ng/m³)

20 0 40 FEET
(APPROXIMATE)

FIGURE 4
PCB–AIR SAMPLE LOCATIONS
HO1 THIRD FLOOR
DARMODY–CARTA PROJECT
FEBRUARY 9, 2014

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DWG: PCB–AIR SAMPLES LMN: NONE CTB: SME–STD REV: 4/4/2014

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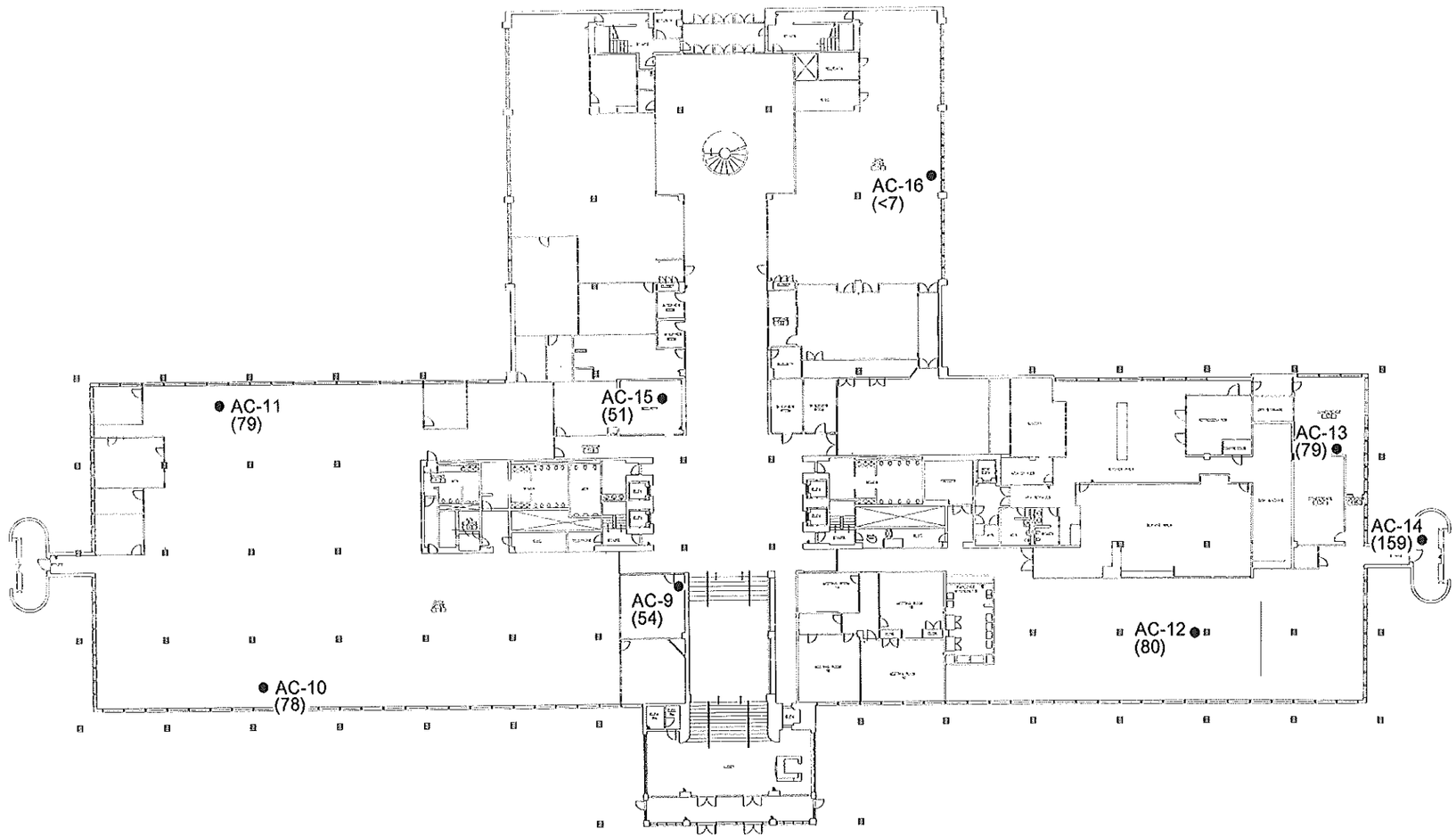
N (APPROXIMATE)

LEGEND

- ● AC-1 — PCB AIR SAMPLE LOCATION AND ID
- (46) — PCB CONCENTRATION IN AIR (ng/m³)



20 0 40 FEET
(APPROXIMATE)

FIGURE 2
PCB–AIR SAMPLE LOCATIONS
HO1 FIRST FLOOR
DARMODY–CARTA PROJECT
FEBRUARY 9, 2014

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DWG: PCB–AIR SAMPLES LMN: NONE CTB: SME–STD REV: 4/4/2014

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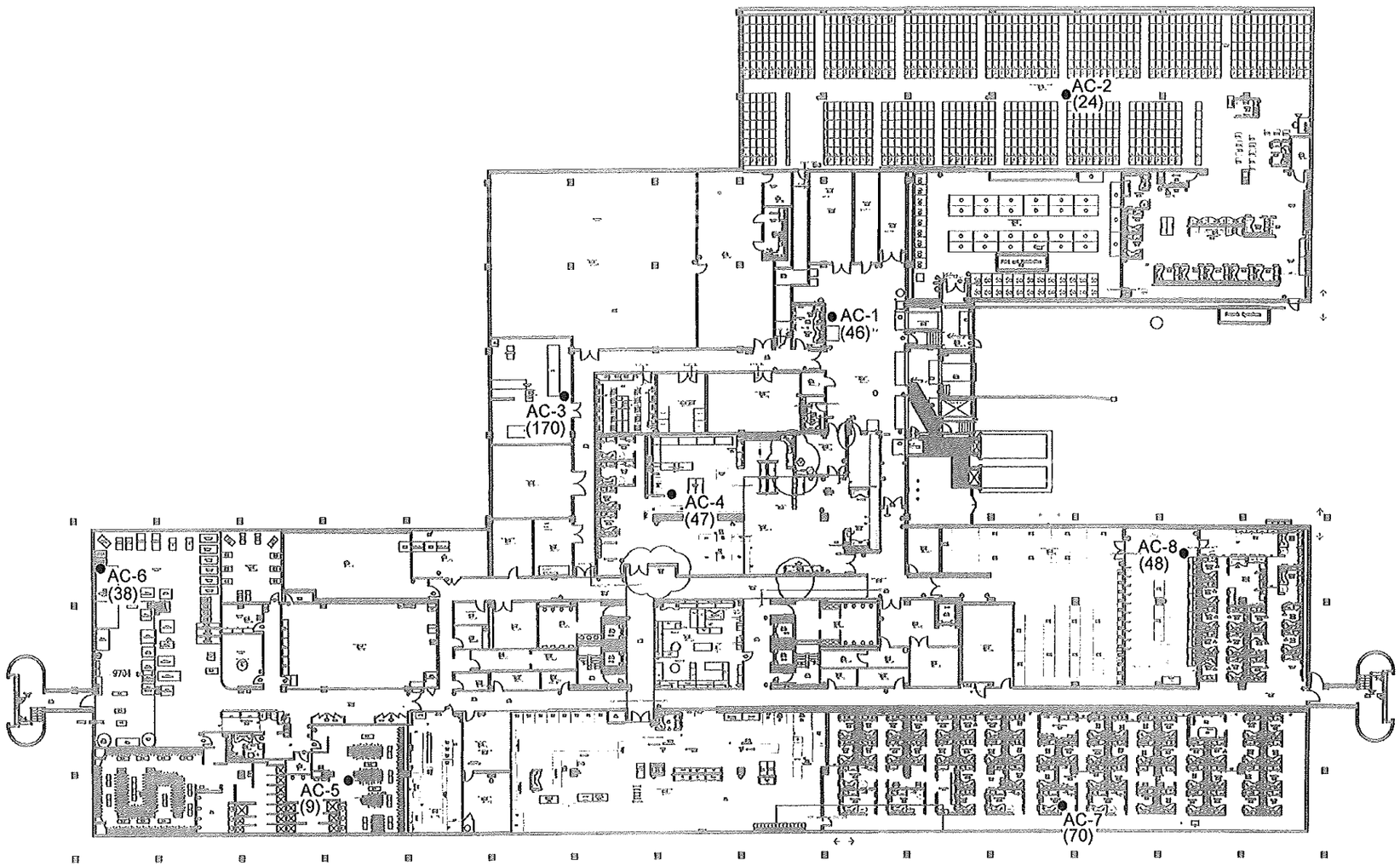
N (APPROXIMATE)



LEGEND

- ● AC-1 — PCB AIR SAMPLE LOCATION AND ID
- (46) — PCB CONCENTRATION IN AIR (ng/m³)

20 0 40 FEET
(APPROXIMATE)

FIGURE 1
PCB–AIR SAMPLE LOCATIONS
HO1 GROUND FLOOR
DARMODY–CARTA PROJECT
FEBRUARY 9, 2014

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DWG: PCB–AIR SAMPLES LMN: NONE CTB: SME–STD REV: 4/4/2014

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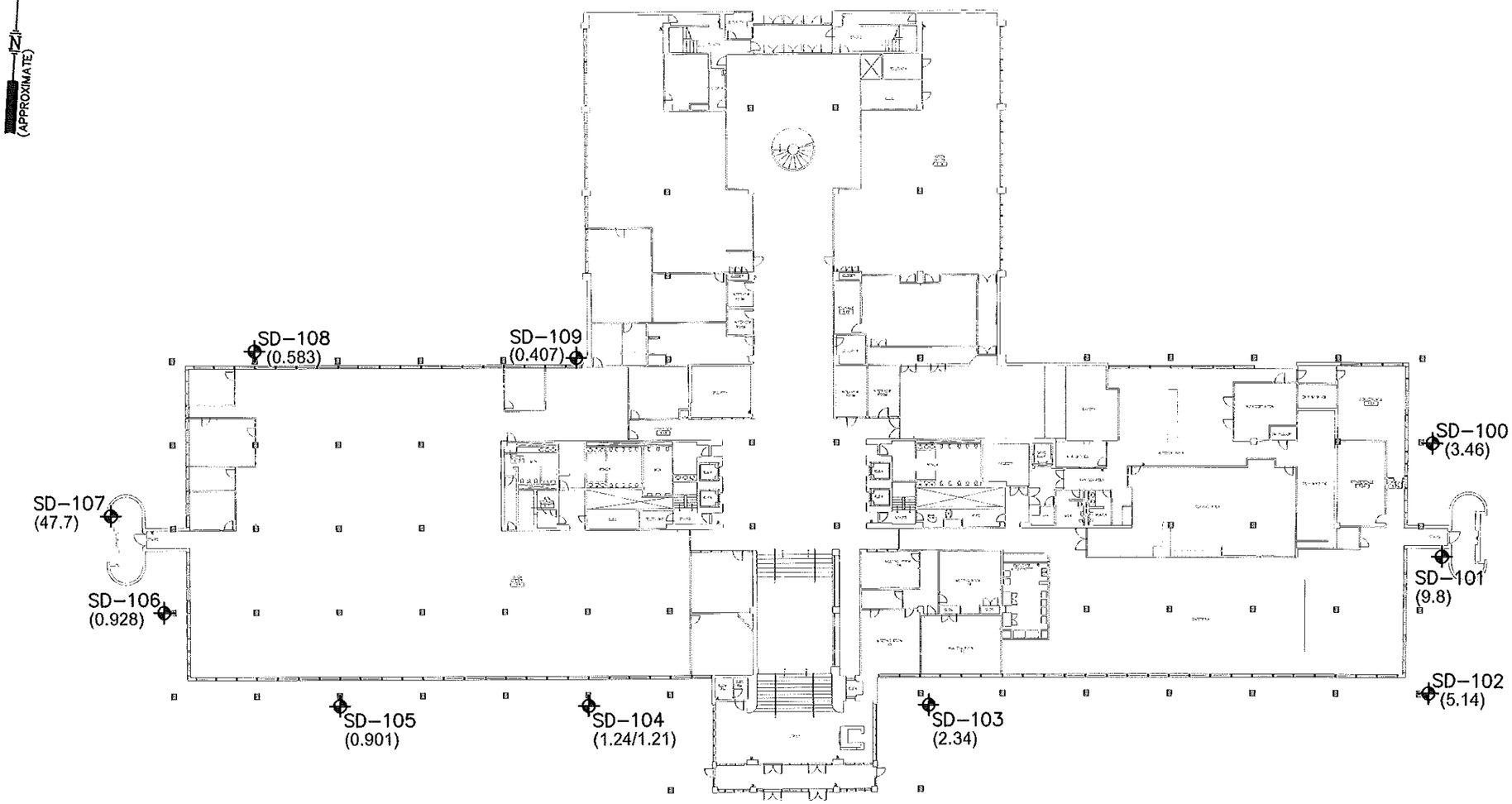
N (APPROXIMATE)



LEGEND

SD-100 SOIL SAMPLE LOCATION

(3.46) PCB CONCENTRATION IN SOIL (mg/kg)

20 0 40 FEET
(APPROXIMATE)

FIGURE 1
SOIL SAMPLE LOCATIONS
DARMODY P.A. PROJECT
JUNE 5, 2014

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DWG: PCB-AIR SAMPLES LMN: PCB-SOIL CTB: SME-STD REV: 9/24/2014

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