OAK POINT ASSOCIATES architecture engineering planning

ADDENDUM No. 2

Date: Jan 16, 2026

Project: 221 State Street Building Renovations
Augusta, Maine

This addendum is issued prior to receipt of the bids and does hereby become a part of the contract documents, and in case of conflict, it shall supersede original project manual and drawings.

Each bidder shall be responsible for issuing information contained herein to sub-contractors and suppliers to ensure that their proposal covers all work required by the contract documents including this addendum.

GENERAL

General

1. Q. Are hazardous materials reports available to bidders?

   A. Hazardous materials reports are included with this Addendum 2 (attached).

END OF ADDENDUM NO. 2

November 17, 2025

Ms. Barbara Wilk
OHS Compliance Assistance Specialist
Safety and Environmental Services
Maine Bureau of General Services
Department of Administrative and Financial Services
77 State House Station
111 Sewal Street - 4th Floor
Augusta, Maine 04333-0077
barbara.wilk@maine.gov

Re: Hazardous Materials Assessment | Former DHHS Building | 221 State Street | Augusta, Maine

Dear Ms. Wilk:

At your request, Haley Ward, Inc. (Haley Ward) completed a Hazardous Materials Assessment (HMA) of the former Department of Health and Human Services (DHHS) building located at 221 State Street in Augusta, Maine. The HMA included a supplemental Asbestos Identification Survey, polychlorinated biphenyl (PCB) containing building materials screening, and potential hazardous materials inventory of the interior and exterior of the DHHS portion of the 221 State Street building.

The DHHS portion of the building consists of a three-story masonry structure, with storage areas and mechanical spaces on the first floor, and office spaces throughout the second and third floors. Heating, Ventilation, Air Conditioning (HVAC) Units, which service the building, are located on the roof of the building.

SUPPLEMENTAL ASBESTOS IDENTIFICATION SURVEY

The supplemental Asbestos Identification Survey was conducted in accordance with Maine Department of Environmental Protection (MDEP) Asbestos Management Regulations (06-096 C.M.R. Chapter 425, 2011) and was completed to provide the Bureau of General Services (BGS) with information regarding the presence of asbestos-containing materials (ACM) within the interior and on the exterior of the building potentially impacted by the planned renovation project. Ms. Deborah Kasik (Haley Ward), an asbestos inspector licensed by the MDEP (AI#-0177), completed the field survey on September 24-25, 2025, and roof sampling, performed on October 2, 2025. A copy of Ms. Kasik's Asbestos Inspector certification is included as **Attachment A**.

Completion of the Asbestos Identification Survey included:

- Review of previously completed ACM assessments and sampling performed at the building, including the following (and copies of which are attached as **Attachment B**):
    - Asbestos Identification Survey DHS Building – URS Corporation May 16, 2002;
    - Asbestos Identification Survey DHS Building – URS Corporation August 7, 2007;
    - Limited Hazardous Materials Assessment – CES, Inc. October 24, 2019;
    - Limited Asbestos Identification Survey – CES, Inc. December 16, 2019;
    - Air Quality Management Services, Inc. (October 2022); and
    - Asbestos Abatement Notifications (1997 through 2019).
- Visual identification of previously unidentified/unsampled suspect ACM on the interior and exterior of the building.
- Collection of 81 bulk samples of identified suspect ACM.
- Quantification of identified ACM.

As with any scientific study, an Asbestos Identification Survey is subject to a variety of limitations. Limitations to be considered in interpreting the results of the survey performed within this building include:

- Variations in building materials used during construction and subsequent renovations.
- Inaccessible areas within wall cavities, below sub-floors, and above solid ceilings.
- Condition of the structure at the time of the survey.

Previously identified ACM within the building included:

- Pipe insulation and associated mud insulated pipe fittings.
- Mud insulated pipe fitting insulation associated with fiberglass-insulated piping.
- Four types of floor tile and associated adhesives.

The October 2019 hazardous materials review completed by CES, Inc. (CES), identified the following previously unidentified suspect ACM within the building:

- One type of ceiling tile;
- Wall and Ceiling plaster;
- Glue daubs (on the ceiling);
- Cove base adhesive;
- Window/door caulk;
- Window glazing;
- Asphalt vapor barrier; and
- Roofing material,

The December 2019 Limited Asbestos Identification Survey (CES) was completed to determine if the suspect ACM ceiling tile identified during the October 2019 assessment was

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asbestos-containing. Nine bulk samples of the suspect ceiling tile were collected throughout the interior of the building. Laboratory analysis determined that the ceiling tile was non-asbestos.

On October 2, 2025, Haley Ward completed an Asbestos Identification Survey to sample the previously unidentified suspect ACM, observed during the October 2019 assessment. The following is a summary of field findings and laboratory analytical results of the survey:

Eighty-one samples of suspect ACM were collected, including:

- Window glazing (interior and exterior);
- Four types of window caulking (interior and exterior);
- Plaster wall material (skim coat and brown coat);
- Cove base adhesive;
- Glue daubs on ceilings;
- Black adhesive beneath ceramic tile;
- Vapor barrier;
- One type of ceiling tile;
- Built-up asphalt roofing;
- Concrete ceiling deck;
- Caulk on exterior ducts;
- Skim coat in window wells;
- Two types of floor tile and associated adhesives;
- One type of sheet flooring;
- Carpet adhesive;
- Gypsum wall and ceiling material;
- Vapor barrier on roof insulation;
- Vapor barrier on masonry walls; and
- Asphalt paper on insulation.

In addition to the suspect ACM noted above, the Ethylene Propylene Diene Monomer (EPDM) membrane roofing system was also sampled, at the request of BGS, for the presence of ACM. Core samples taken of the roofing system determined the roofing system is composed of EPDM membrane over six inches of insulation with a paper vapor barrier over asphalt roofing on a concrete roof deck.

Bulk samples of suspect ACM collected during the survey were submitted to EMSL Analytical, Inc. (EMSL) of South Portland, Maine, for analysis. Bulk samples were analyzed using the MDEP required analytical methods: "PLM-EPA 600/R-93/116" (for surfacing, thermal system insulation, and cementitious materials), and "PLM NOB-EPA 600/R-93/116" (for non-friable organically bound materials (NOBs)) (e.g., floor tile, adhesives, and roofing) with "gravimetric reduction." EMSL's laboratory is certified to perform asbestos analysis by both the National Voluntary Laboratory Accreditation Program (NVLAP) and the American Industrial Hygiene Association (AIHA). EMSL is a MDEP licensed Asbestos Analytical Laboratory. Copies of EMSL's

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laboratory certifications are included as **Attachment C.** Laboratory analytical results and chain of custodies are included as **Attachment D**.

According to the MDEP Asbestos Management Regulations, bulk samples shall be analyzed until a positive result is obtained or all samples have been analyzed. The MDEP defines ACM as "any material containing asbestos in quantities greater than or equal to (≥) one percent by volume as determined by weight, visual evaluation, and/or point count analysis."

ACM identified by laboratory analysis included:

- Exterior white/gray window caulk;
- Exterior white door caulk;
- Exterior gray door caulk;
- Cove base adhesive (1st Floor Rm 159);
- Black flooring adhesive beneath ceramic tiles in restrooms;
- Exterior caulk on rooftop HVAC units; and
- Nine-inch by nine-inch (9x9) black (green) floor tile and associated adhesive.

Previously identified ACM within the building included:

- Pipe insulation and associated mud insulated pipe fittings;
- Mud insulated pipe fittings associated with fiberglass-insulated piping; and
- Four types of floor tile and associated adhesives.

A summary of identified ACM, including estimated quantities, locations, and abatement cost estimates are presented in **Table 1**. The locations of identified ACM and sample locations are included on **Figure H101 through Figure H104**.

Estimated abatement costs for the identified ACM do not include material replacement costs, regulatory agency notification fees, or a contingency fee. The estimate assumes the abatement contractor will be responsible for preparing the asbestos abatement design. Regulatory agency notification fees associated with this project will vary depending on phasing and project schedule. Actual abatement costs may vary depending upon the quantity of ACM to be abated and abatement methods used. The budgetary cost estimate provided is conservative since the timing of and/or approach to abatement has not been established.

POTENTIAL HAZARDOUS MATERIALS/WASTES AND UNIVERSAL WASTES

The following potentially Hazardous Materials/Wastes and Universal Wastes were identified within the building:

- Fluorescent light tubes;
- Suspect Polychlorinated biphenyl (PCB)-containing light ballasts;
- Mercury-containing thermostats; and
- Emergency exit signs.

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A summary of potential hazardous materials/wastes and universal wastes is presented in **Table 2.**

When removed for disposal, fluorescent light tubes are considered Universal Waste and must be properly handled, packaged, and disposed of under current MDEP Universal Waste Rules, 06-096 C.M.R. Chapter 858 (2018).

Fluorescent light fixture ballasts contain capacitors that may contain PCB-containing dielectric fluid; however, it is unknown whether PCB ballasts (a Universal Waste when removed) are present. The recommended best management practice is to remove each light fixture and evaluate each ballast to confirm the presence or absence of PCBs. Non-PCB light ballasts will be clearly labeled as not containing PCBs, and these may be disposed of as solid waste when removed. If no such labeling is present, the ballasts should be treated as PCB-containing and should be segregated and handled as Universal Waste. Leaking PCB-containing ballasts should be segregated and handled as Hazardous Waste.

Mercury-containing thermostats and emergency exit signs, when removed, should be recycled or disposed of as required by current regulations.

PCB CAULK/SEALANT SCREENING

PCBs were used as a plasticizer in caulk and in elastic sealant materials, primarily from 1950 through 1978. These caulk/sealants were commonly used in windows and associated window systems, door frames, stairways, masonry columns, and other masonry building materials. PCBs were not used in these materials after 1978. Consistent with U.S. Environmental Protection Agency (USEPA) guidelines, PCB containing caulk/sealant has a PCB content of ≥ 50.0 parts per million (ppm) and, at these levels, the caulk/sealant containing PCBs is not an authorized use under the PCB regulations and must be removed in accordance with the Toxic Substance Control Act (TSCA).

Haley Ward collected six representative samples of caulk associated with the window and door systems including:

- Interior window glazing;
- Exterior window glazing;
- White w/gray caulk associated with windows;
- White caulk associated with metal doors;
- Gray caulk associated with doors; and
- Cream caulk associated with windows.

The collected samples were submitted to Pace Analytical (Pace) for laboratory analysis for the presence of PCBs using USEPA Method SW-846 3540C (Soxhlet extraction).

Laboratory analysis of the submitted samples did not identify the presence of PCBs at concentrations greater than or equal to (≥) 50.0 parts per million (ppm).

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SUMMARY OF LABORATORY ANALYTICAL RESULTS

SAMPLE NUMBER	MATERIAL TYPE	PCB CONCENTRATION (PPM)
PCB-001A	Interior Window Glazing	ND
PCB-001B	Interior Window Glazing	4.92
PCB-001C	Interior Window Glazing	6.80
PCB-002A	Exterior Window Caulk (white/gray)	0.59
PCB-002B	Exterior Window Caulk (white/gray)	2.81
PCB-002C	Exterior Window Caulk (white/gray)	1.96
PCB-003A	Exterior Door Caulk (white)	0.24
PCB-003B	Exterior Door Caulk (white)	0.23
PCB-003C	Exterior Door Caulk (white)	0.53
PCB-004A	Exterior Window Glazing	8.55
PCB-004B	Exterior Window Glazing	3.50
PCB-004C	Exterior Window Glazing	8.25
PCB-005A	Exterior Door Caulk (gray)	ND
PCB-005B	Exterior Door Caulk (gray)	0.73
PCB-005C	Exterior Door Caulk (gray)	ND
PCB-006A	Exterior Window Caulk (cream)	ND
PCB-006B	Exterior Window Caulk (cream)	3.99

ppm = parts per million.
ND = Not Detected at concentrations greater than the laboratory Method minimum reporting limit/

Laboratory analytical results are included as **Attachment E**. Sample numbers and locations are included on **Figures H201 through H203.**

Materials with PCB concentrations of less than (<) 1.0 ppm are not considered to be PCB-containing/contaminated under current federal regulations and do not require special handling and/or disposal (as defined by 40 CFR 761.3). Materials with PCB concentrations of greater than or equal to (≥) 50.0 ppm are considered to be hazardous waste and are regulated under current federal regulations. Materials with PCB concentrations of ≥ 1.0 ppm are regulated under current federal regulations, if the source of the PCB contamination is known, and the concentration of PCBs in the source material is ≥ 50.0 ppm. Materials with PCB concentrations of > 1.0 ppm but < 50.0 ppm are considered to be special wastes by the MDEP and must be disposed of in an approved landfill.

Building materials with PCB concentrations ≥ 50.0 ppm were not identified in the sampled materials. PCBs were identified at concentrations > 1.0 ppm and < 50.0 ppm. However, a source material with a PCB concentration of ≥ 50.0 ppm was not identified. These materials, when removed, are considered to be special wastes and must be disposed of in an approved landfill that accepts special wastes.

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This report was prepared by Haley Ward for the sole use of the Bureau of General Services and should not be reproduced without their full, written authorization. Please contact either of the undersigned at (207) 989-4824 if you have any questions related to this project or if additional services are required.

Sincerely,
Haley Ward, Inc.

Deborah A. Kasik
Project Scientist
MDEP Asbestos Inspector AI-0177

Dennis B. Kingman, Jr., CHMM
Vice President/Senior Project Manager II

DAK/DBK/kjf
Attachments

TABLE 1

TABLE 1
ESTIMATED ABATEMENT COSTS
IDENTIFIED ASBESTOS-CONTAINING MATERIALS
DHHS BUILDING
221 STATE STREET, AUGUSTA, MAINE

IDENTIFIED ASBESTOS-CONTAINING MATERIAL	TOTAL ESTIMATED QUANTITY	UNIT COST	ESTIMATED ABATEMENT COST
FIRST FLOOR			
Nine-inch by nine-inch (9x9) floor tile and associated adhesive	2,665 SF (Square Feet)	$15/SF	$39,975
9X9 floor tile and associated adhesive beneath carpeting	320 SF	$20/SF	$6,400
9x9 floor tile and associated adhesive beneath non-ACM sheet flooring	96 SF	$15/SF	$1,440
Floor tile adhesive	64 SF	$20/SF	$1,280
Pipe insulation and associated mud insulated pipe fittings above ceiling tiles	425 LF (Linear Feet)	$50/LF	$21,250
Pipe insulation and associated mud insulated pipe fittings	520 LF	$50/LF	$26,000
Mud insulated pipe fittings associated with fiberglass-insulated piping	25 EA (Each)	$50/EA	$1,250
ACM cove base adhesive (1st Floor Rm. 159)	40 LF	$15/LF	$600
SECOND FLOOR			
9X9 floor tile and associated adhesive	2,254 SF	$15/SF	$33,810
9X9 floor tile and associated adhesive beneath carpeting	8,533 SF	$20/SF	$170,660
Pipe insulation and associated mud insulated pipe fittings above ceiling tiles	510 LF	$50/LF	$25,500
Presumed pipe insulation and associated mud insulated pipe fittings within wall cavity	360 LF	$50/LF	$18,000
Mud insulated pipe fittings associated with fiberglass-insulated piping	31 EA	$50/EA	$1,550
THIRD FLOOR			
9X9 floor tile and associated adhesive	495 SF	$15/SF	$7,425
9X9 floor tile and associated adhesive beneath carpeting	12,800 SF	$20/SF	$256,000
Mud insulated pipe fittings associated with fiberglass-insulated piping (accessible and above ceiling tiles)	30 EA	$50/EA	$1,500
Black flooring adhesive beneath non-ACM ceramic tiles	400 SF	$20/SF	$8,000
EXTERIOR			
Caulk on rooftop HVAC units	20 LF	$15/LF	$300
Window Caulk	86 EA	$200/EA	$17,200
Door Caulk	8 EA	$200/EA	$1,600
TOTAL:			$639,740

TABLE 2

TABLE 2
HAZARDOUS MATERIALS INVENTORY
DHHS BUILDING
221 STATE STREET
AUGUSTA, MAINE

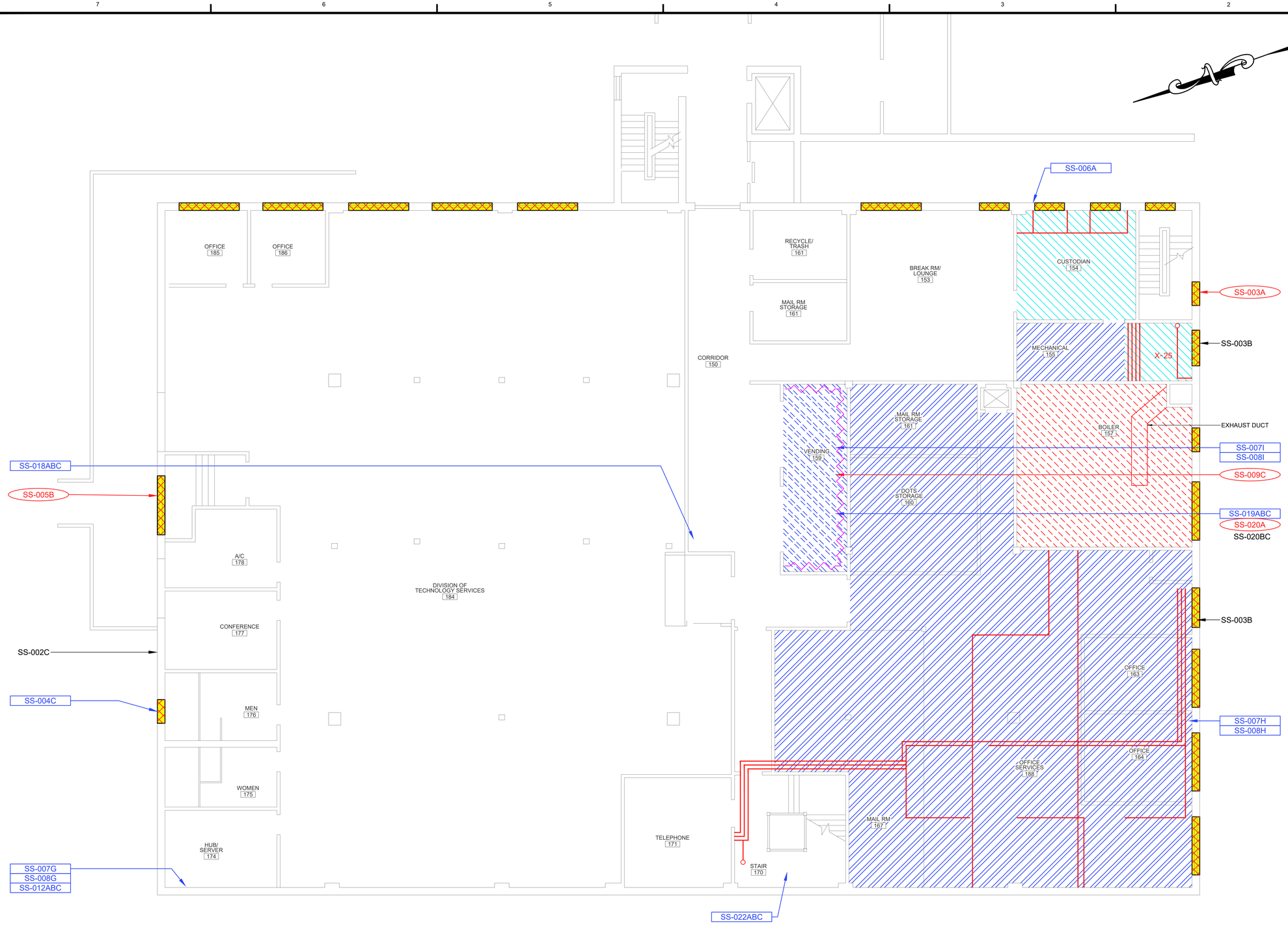
Identified Hazardous Materials	Quantity (Each)	Quantity Per Unit	Total Estimated Quantity	Unit Cost	Estimated Remediation Cost
Fluorescent Light Tubes - 2 foot*	8	2 LF/EA	16	$0.30	$ 5
Fluorescent Light Tubes - 4 foot	1,460	4 LF/EA	5,840	$0.30	$ 1,752
Suspect PCB-Containing Light Ballasts	600	1 EA	600	$4.50	$ 2,700
Mercury-containing Thermostat	17	1 EA	17	$6.00	$ 102
Exit Light Signs/Batteries	5	1 EA	5	$4.50	$ 23
Sub-Total					**$ 4,582**
Transportation (per pickup)	3	-	-	$1,250	$ 3,750
Labor (Man-Days)	5	-	-	$650	$ 3,250
Sub-Total					**$ 7,000**
TOTAL					**$ 11,582**

Note:
*U-shaped bulbs counted as two each due to size
LF = Linear Feet
EA = Each
lb= Pound

FIGURES

H101 – ACM First Floor Plan
H102 – ACM Second Floor Plan
H103 – ACM Third Floor Plan
H104 – Roof Plan

H201 – PCB First Floor Exterior Plan
H202 – PCB Second Floor Exterior Plan
H203 – PCB Third Floor Exterior Plan



FIRST FLOOR PLAN

SCALE: NOT TO SCALE

PLAN REFERENCE:

FLOOR PLAN DERIVED FROM DRAWINGS BY OTHERS PROVIDED TO HALEY WARD, INC AND ARE NOT WARRANTED AS TO ACCURACY AND ARE INTENDED TO BE SCHEMATIC.

ASBESTOS LEGEND

- S-001A — SAMPLE NUMBER AND LOCATION TESTING POSITIVE FOR ASBESTOS
- S-002A — SAMPLE NUMBER AND LOCATION TESTING NEGATIVE FOR ASBESTOS
- S-001B — SAMPLE NUMBER AND LOCATION NOT ANALYZED (POSITIVE STOP)
- NON-ACM FLOOR TILE WITH ASSOCIATED ACM ADHESIVE
- ACM FLOOR TILE WITH ASSOCIATED ACM ADHESIVE
- ACM FLOOR TILE WITH ASSOCIATED ACM ADHESIVE BENEATH SHEET FLOORING
- ACM PIPE INSULATION ABOVE CEILING
- ACM INSULATED PIPE
- ACM INSULATED VERTICAL PIPE RISER
- X-1 — ACM INSULATED PIPE FITTING
- WINDOW GLAZING / DOOR CAULKING
- ACM COVEBASE

REV.	DATE	DESCRIPTION	BY	CHK.

DRAWING ISSUE STATUS

NOT FOR CONSTRUCTION

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PROJECT

DHHS OFFICES
BUREAU OF GENERAL SERVICES
221 STATE STREET, AUGUSTA, ME.

TITLE

FIRST FLOOR PLAN
HAZARDOUS MATERIAL ASSESSMENT

DATE	SCALE
2025.10.31	AS NOTED

DRAWN BY	DESIGNED BY	CHECKED BY
MEB	DAK	DAK

PROJECT No. 10377.050

DRAWING No. **H101** REV.

FILE LOCATION: P:\ME\10377-BUREAU_OF_GENERAL_SERVICES\600 - 221 STATE STREET HAZARDOUS MATERIALS ASSESSMENT - DB\600 CAD_FILES\ENVIRONMENTAL\10377.050 H101.DWG, 2025.10.31, 4:52 PM

SECOND FLOOR PLAN

SCALE: NOT TO SCALE

PLAN REFERENCE:

FLOOR PLAN DERIVED FROM DRAWINGS BY OTHERS PROVIDED TO HALEY WARD, INC AND ARE NOT WARRANTED AS TO ACCURACY AND ARE INTENDED TO BE SCHEMATIC.

ASBESTOS LEGEND

- S-002A — SAMPLE NUMBER AND LOCATION TESTING NEGATIVE FOR ASBESTOS
- NON-ACM FLOOR TILE WITH ASSOCIATED ACM ADHESIVE
- ACM FLOOR TILE WITH ASSOCIATED ACM ADHESIVE
- ACM FLOOR TILE WITH ASSOCIATED ACM ADHESIVE UNDER CARPET
- ACM INSULATED PIPE
- AREA OF PRESUMED PIPE INSULATION
- WINDOW GLAZING / DOOR CAULKING

REV.	DATE	DESCRIPTION	BY	CHK.

DRAWING ISSUE STATUS

NOT FOR CONSTRUCTION

HALEY WARD
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PROJECT

DHHS OFFICES
BUREAU OF GENERAL SERVICES
221 STATE STREET, AUGUSTA, ME.

TITLE

SECOND FLOOR PLAN
HAZARDOUS MATERIAL ASSESSMENT

DATE	SCALE
2025.10.31	AS NOTED

DRAWN BY	DESIGNED BY	CHECKED BY
MEB	DAK	DAK

PROJECT No. 10377.050

DRAWING No. **H102** REV.

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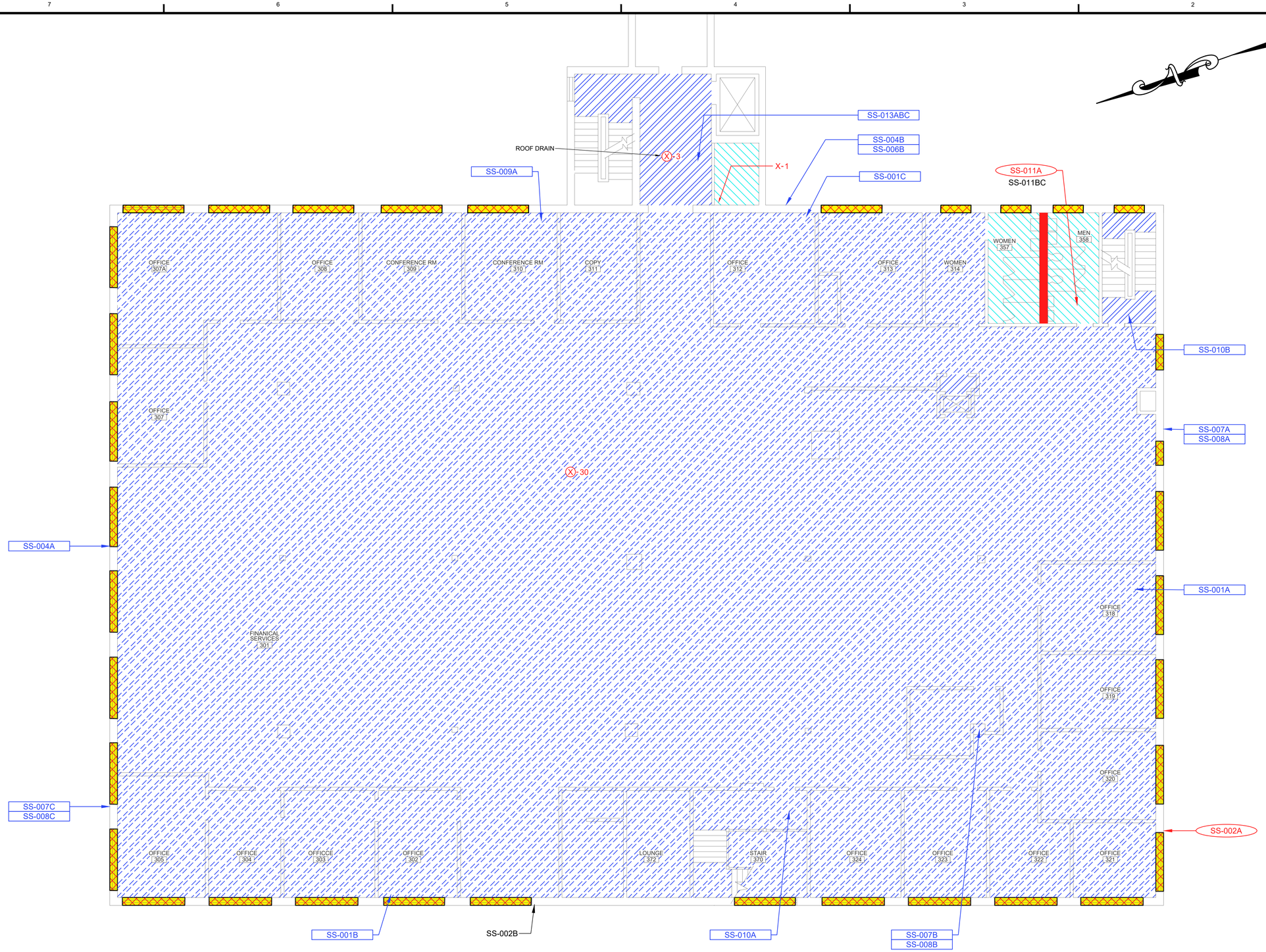

THIRD FLOOR PLAN

SCALE: NOT TO SCALE

PLAN REFERENCE:

FLOOR PLAN DERIVED FROM DRAWINGS BY OTHERS PROVIDED TO HALEY WARD, INC AND ARE NOT WARRANTED AS TO ACCURACY AND ARE INTENDED TO BE SCHEMATIC.

ASBESTOS LEGEND

S-001A	SAMPLE NUMBER AND LOCATION TESTING POSITIVE FOR ASBESTOS
S-002A	SAMPLE NUMBER AND LOCATION TESTING NEGATIVE FOR ASBESTOS
S-001B	SAMPLE NUMBER AND LOCATION NOT ANALYZED (POSITIVE STOP)
	NON-ACM FLOOR TILE WITH ASSOCIATED ACM ADHESIVE
	ACM FLOOR TILE WITH ASSOCIATED ACM ADHESIVE
	ACM FLOOR TILE WITH ASSOCIATED ACM ADHESIVE UNDER CARPET
	AREA OF PRESUMED PIPE INSULATION
X-1	ACM INSULATED PIPE FITTING ABOVE CEILING
X-1	ACM INSULATED PIPE FITTING
	WINDOW GLAZING / DOOR CAULKING

REV.	DATE	DESCRIPTION	BY	CHK.

DRAWING ISSUE STATUS

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PROJECT

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BUREAU OF GENERAL SERVICES
221 STATE STREET, AUGUSTA, ME.

TITLE

THIRD FLOOR PLAN
HAZARDOUS MATERIAL ASSESSMENT

DATE	SCALE
2025.10.31	AS NOTED

DRAWN BY	DESIGNED BY	CHECKED BY
MEB	DAK	DAK

PROJECT No. 10377.050

DRAWING No. **H103** REV.

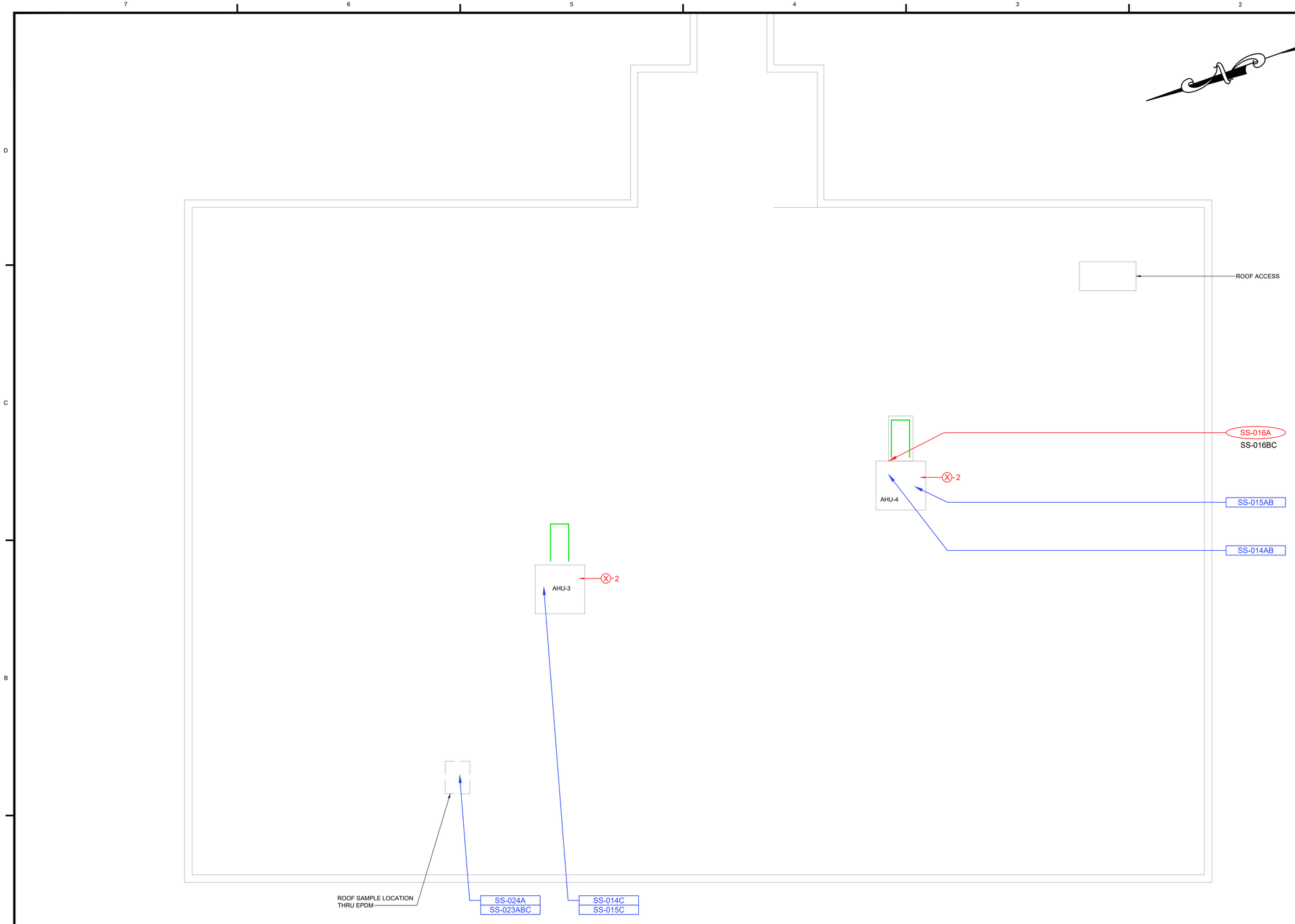
FILE LOCATION: P:\ME\10377-BUREAU_OF_GENERAL_SERVICES\550 - 221 STATE STREET HAZARDOUS MATERIALS ASSESSMENT - DBK\02-CAD_FILES\ENVIRONMENTAL\10377.050 H103.DWG, 2025.10.31 - 4:32 PM

PLAN REFERENCE:

FLOOR PLAN DERIVED FROM DRAWINGS BY OTHERS PROVIDED TO HALEY WARD, INC AND ARE NOT WARRANTED AS TO ACCURACY AND ARE INTENDED TO BE SCHEMATIC.

ASBESTOS LEGEND

SS-001A	SAMPLE NUMBER AND LOCATION TESTING POSITIVE FOR ASBESTOS
SS-002A	SAMPLE NUMBER AND LOCATION TESTING NEGATIVE FOR ASBESTOS
SS-001B	SAMPLE NUMBER AND LOCATION NOT ANALYZED (POSITIVE STOP)
X-1	ACM INSULATED PIPE FITTING ABOVE CEILING
X-1	ACM INSULATED PIPE FITTING
	ACM CAULKING



ROOF PLAN

SCALE: NOT TO SCALE

REV.	DATE	DESCRIPTION	BY	CHK.

DRAWING ISSUE STATUS

NOT FOR CONSTRUCTION

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PROJECT

DHHS OFFICES
BUREAU OF GENERAL SERVICES
221 STATE STREET, AUGUSTA, ME.

TITLE

ROOF PLAN
HAZARDOUS MATERIAL ASSESSMENT

DATE	SCALE
2025.10.31	AS NOTED

DRAWN BY	DESIGNED BY	CHECKED BY
MEB	DAK	DAK

PROJECT No.: 10377.050

DRAWING No.: **H104** REV.:

FILE LOCATION: P:\ME\10377-BUREAU_OF_GENERAL_SERVICES\0900 - 221 STATE STREET HAZARDOUS MATERIALS ASSESSMENT - DBKO\CAD_FILES\ENVIRONMENTAL\10377-000 H104.DWG, 2025.10.31, 4:32 PM

PLAN REFERENCE:

FLOOR PLAN DERIVED FROM DRAWINGS BY OTHERS PROVIDED TO HALEY WARD, INC AND ARE NOT WARRANTED AS TO ACCURACY AND ARE INTENDED TO BE SCHEMATIC.

PCB LEGEND

PCB-002	PCB CAULK / GLAZING SAMPLE NUMBER AND LOCATION
"D#"	DOOR NUMBERS

FIRST FLOOR PLAN

SCALE: NOT TO SCALE

REV.	DATE	DESCRIPTION	BY	CHK.

DRAWING ISSUE STATUS

NOT FOR CONSTRUCTION

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PROJECT

DHHS OFFICES
BUREAU OF GENERAL SERVICES
221 STATE STREET, AUGUSTA, ME.

TITLE

FIRST FLOOR PLAN
PCB-CONTAINING BUILDING
MATERIAL SCREENING

DATE: 2025.10.31		SCALE: AS NOTED
DRAWN BY: MEB	DESIGNED BY: DAK	CHECKED BY: DAK
PROJECT No.: 10377.050		
DRAWING No.: **H201**		REV.

FILE LOCATION: P:\ME\10377-BUREAU_OF_GENERAL_SERVICES\050 - 221 STATE STREET HAZARDOUS MATERIALS ASSESSMENT - DBK\03-CAD_FILES\ENVIRONMENTAL\10377.050 H201.DWG, 2025.10.31, 4:32 PM

SECOND FLOOR PLAN

SCALE: NOT TO SCALE

PLAN REFERENCE:

FLOOR PLAN DERIVED FROM DRAWINGS BY OTHERS PROVIDED TO HALEY WARD, INC AND ARE NOT WARRANTED AS TO ACCURACY AND ARE INTENDED TO BE SCHEMATIC.

PCB LEGEND

PCB-002	PCB CAULK / GLAZING SAMPLE NUMBER AND LOCATION

REV.	DATE	DESCRIPTION	BY	CHK.

DRAWING ISSUE STATUS

NOT FOR CONSTRUCTION

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PROJECT

DHHS OFFICES
BUREAU OF GENERAL SERVICES
221 STATE STREET, AUGUSTA, ME.

TITLE

SECOND FLOOR PLAN
PCB-CONTAINING BUILDING
MATERIAL SCREENING

DATE	SCALE
2025.10.31	AS NOTED

DRAWN BY	DESIGNED BY	CHECKED BY
MEB	DAK	DAK

PROJECT No.: 10377.050

DRAWING No.: **H202** REV.:

FILE LOCATION: P:\ME\10377-BUREAU_OF_GENERAL_SERVICES\550 - 221 STATE STREET HAZARDOUS MATERIALS ASSESSMENT - DBK\GI-CAD_FILES\ENVIRONMENTAL\10377.050 H202.DWG, 2025.10.31 - 4:33 PM

THIRD FLOOR PLAN

SCALE: NOT TO SCALE

PLAN REFERENCE:

FLOOR PLAN DERIVED FROM DRAWINGS BY OTHERS PROVIDED TO HALEY WARD, INC AND ARE NOT WARRANTED AS TO ACCURACY AND ARE INTENDED TO BE SCHEMATIC.

PCB LEGEND

PCB-002	PCB CAULK / GLAZING SAMPLE NUMBER AND LOCATION

REV.	DATE	DESCRIPTION	BY	CHK.

DRAWING ISSUE STATUS

NOT FOR CONSTRUCTION

HALEY WARD
WWW.HALEYWARD.COM
One Merchants Plaza, Suite 701
Bangor, Maine 04401
207.989.4824

PROJECT

DHHS OFFICES
BUREAU OF GENERAL SERVICES
221 STATE STREET, AUGUSTA, ME.

TITLE

THIRD FLOOR PLAN
PCB-CONTAINING BUILDING
MATERIAL SCREENING

DATE	SCALE
2025.10.31	AS NOTED

DRAWN BY	DESIGNED BY	CHECKED BY
MEB	DAK	DAK

PROJECT No. 10377.050

DRAWING No. **H203** REV.

FILE LOCATION: P:\ME\10377-BUREAU_OF_GENERAL_SERVICES\650 - 221 STATE STREET HAZARDOUS MATERIALS ASSESSMENT - DB\02-CAD_FILES\ENVIRONMENTAL\10377.050 H203.DWG, 2025.10.31, 4:33 PM

ATTACHMENT A

ASBESTOS INSPECTOR CERTIFICATION

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JANET T. MILLS
GOVERNOR

MELANIE LOYZIM
COMMISSIONER

November 24, 2024

Haley Ward, Inc.
One Merchant's Plaza Suite 701
Bangor, Maine 04401

Dear Licensee:

Asbestos application(s) for individual certification of the **two** employee(s) listed below have been received and **approved**. Individual certification numbers are listed below and wallet card(s) are enclosed. Card(s) are property of the individual to whom each is issued. Your responsibility as a licensee is to ensure delivery of the cards to persons in your employment. This letter should be retained for your company files as record of certification. Please attach 1 updated passport size photo with every application.

Remember, in Maine all **certified employees** working on an asbestos abatement project, whether conducting removal/repair, air monitoring, design, inspection, or analysis functions, **must work for a State of Maine licensed asbestos firm** and carry his/her wallet card(s) on the job site.

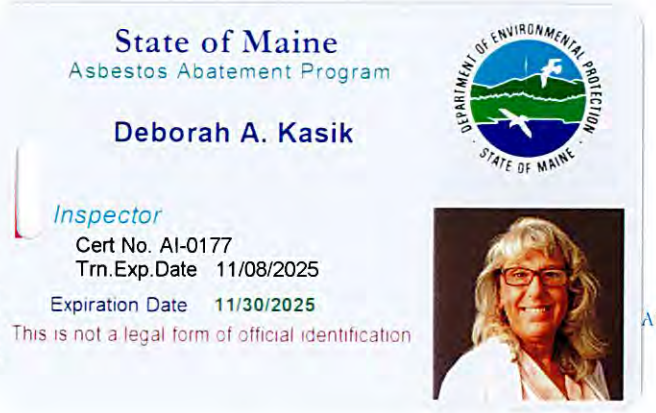
As a reminder, prior to renewing your asbestos certification, the State of Maine **requires** an annual refresher course to be taken before submitting a renewal application. A certificate shall expire one year from the last day of the month from the date of issuance, **or on the last day of the month that the training certificate expires**, whichever is sooner.

All our asbestos forms can be found at https://www.maine.gov/dep/waste/asbestos/forms.html
Thank you for your cooperation and your completed application(s).

Name	Category	Certification #	Exp. Date
Deborah A. Kasik	Inspector	AI-0177	11/30/2025
Dennis B. Kingman, Jr.	Inspector	AI-0034	11/30/2025

Sincerely,

Sandra J. Moody, Environmental Specialist
Division of Remediation
Bureau of Remediation and Waste Management



AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826

BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORT
312 C
PORT
(207) 8

website: www.maine.gov/dep

ATTACHMENT B

PREVIOUS HAZARDOUS MATERIALS ASSESSMENT REPORTS

Asbestos Identification Survey DHS Building – URS Corporation May 16, 2002

Asbestos Identification Survey DHS Building – URS Corporation August 7, 2007

Limited Hazardous Materials Assessment – CES, Inc. October 24, 2019

Limited Asbestos Identification Survey – CES, Inc. December 16, 2019

Air Quality Management Services, Inc. (October 2022)

Asbestos Abatement Notifications (1997 through 2019)

December 16, 2019

Ms. Jill M. Instasi
Senior Project Manager
State of Maine Bureau of Real Estate Management
77 State House Station
Augusta, Maine 04333-0077

Re: Limited Asbestos Identification Survey | Former DHHS Offices | 221 State Street | Augusta, Maine

Dear Ms. Instasi:

At the request of the State of Maine Bureau of Real Estate Management (BREM), CES, Inc. (CES) completed a 'limited' asbestos identification survey at the former Department of Health and Human Services (DHHS) offices located at 221 State Street in Augusta, Maine. The limited asbestos identification survey, conducted on December 5, 2019, was completed to determine if suspended ceiling tiles present throughout the DHHS offices, identified during the October 16, 2019 visual asbestos assessment of the DHHS portion of the building, are asbestos containing. Similar-type ceiling tiles are present and had been previously sampled and identified as asbestos-containing in the Health and Environmental Testing Laboratory (HETL) portion of the building. At the time of the initial sampling, it was assumed that the ceiling tile present within the DHHS offices was the same and considered asbestos containing. Because the DHHS portion of the building is considered to be a separate functional space (due to construction age and renovation activity), it was determined that the ceiling tiles in the DHHS portion are not homogeneous to the ceiling tiles in the HETL portion, and should be sampled separately to determine if they are asbestos-containing.

The former DHHS portion of the building consists of a three-story, masonry structure constructed in 1951 and is currently used as storage. The structure was unoccupied at the time of this limited asbestos identification survey.

LIMITED ASBESTOS IDENTIFICATION SURVEY

This limited asbestos identification survey was completed in accordance with the Maine Department of Environmental Protection (MDEP) Chapter 425 Asbestos Management Regulations (April 3, 2011 revision) and was completed to provide BREM with information regarding the presence of asbestos in one type of suspended ceiling tile (pin dot/swirl design ceiling tiles) which are present throughout the three floors of the DHHS portion of the building.

Sensible Solutions | www.cesincusa.com
465 South Main Street
PO Box 639
Brewer, Maine 04412
T 207.989.4824
F 207.989.4881

Ms. Deborah Kasik (CES), an asbestos inspector licensed by MDEP (AI#-0177), performed the limited asbestos identification survey on December 5, 2019. A copy of Ms. Kasik's Asbestos Inspector certification is included in **Attachment A**.

Completion of the limited asbestos identification survey included:

- Collection of nine representative bulk samples of suspect ceiling tiles from throughout the interior of the former DHHS building in accordance with MDEP regulations;
- Indication of sample locations on **Figures H101-H103**; and
- Quantification of ACM identified by laboratory analysis.

As with any scientific study, an asbestos identification survey is subject to a variety of limitations. Limitations to be considered in interpreting the results of the survey performed on this building includes the following:

- Condition of the structure at the time of the survey; and
- This survey was limited to the collection and laboratory analysis of one type of suspect asbestos-containing material (ACM). Additional suspect ACM are present within the subject areas but were not sampled as part of this limited investigation.

Bulk samples of suspect ACM collected during the survey were submitted to EMSL Analytical, Inc. (EMSL) of South Portland, Maine for analysis. Bulk samples collected during this survey were analyzed using the MDEP required analytical methods: "PLM-EPA 600/R-93/116" (for surfacing, thermal system insulation, and cementitious materials). Samples were analyzed at the South Portland, Maine EMSL laboratory, which is certified to perform asbestos analysis by both the National Voluntary Laboratory Accreditation Program (NVLAP) and the American Industrial Hygiene Association (AIHA). EMSL is a MDEP licensed Asbestos Analytical Laboratory. A copy of EMSL's laboratory certifications is included in **Attachment B**. Laboratory analytical results and chain of custodies are included as **Attachment C**.

According to the MDEP Chapter 425 Asbestos Management Regulations, bulk samples shall be analyzed until a positive result is obtained or all samples have been analyzed. The MDEP defines ACM as "any material containing asbestos in quantities greater than or equal to one percent (%) by volume as determined by weight, visual evaluation, and/or point count analysis."

Laboratory analytical results did not identify the sampled ceiling tiles (pin dot/swirl design) as asbestos-containing.

This report was prepared by CES for the sole use of BREM and should not be reproduced without their full, written authorization. Please contact either of the undersigned at (207) 989-4824 if you have any questions related to this project or if additional services are required.

Sincerely,
CES, Inc.

Deborah A. Kasik
Project Scientist
MDEP Asbestos Inspector AI-0177

Dennis B. Kingman, Jr., CHMM
Vice President/Senior Project Manager II

DAK/DBK/cmc
Attachments

Sensible Solutions | www.cesincusa.com

465 South Main Street
PO Box 639
Brewer, Maine 04412
T 207.989.4824
F 207.989.4881

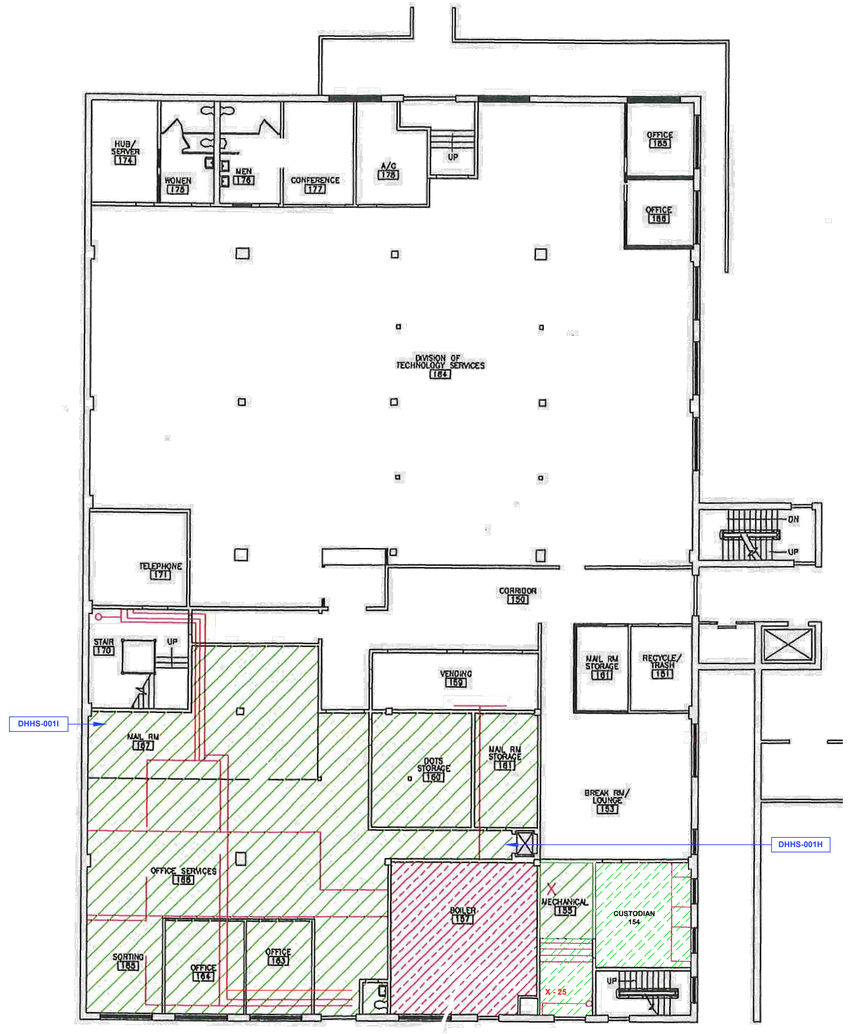
FIGURES

PLAN REFERENCE:

FLOOR PLAN DERIVED FROM DRAWINGS BY OTHERS PROVIDED TO CES, INC AND ARE NOT WARRANTED AS TO ACCURACY AND ARE INTENDED TO BE SCHEMATIC.

ASBESTOS LEGEND

- PIPE INSULATION ABOVE CEILING
- ACM FLOOR TILE WITH ACM MASTIC
- ACM ADHESIVE ONLY
- ACM INSULATED HORIZONTAL PIPES
- ACM INSULATED VERTICAL PIPE RISER
- X - 3 — ACM INSULATED PIPE FITTING VISIBLE IN A FUNCTIONAL AREA
- DHHS-002A — SAMPLE NUMBER AND LOCATION TESTING NEGATIVE FOR ASBESTOS



www.cesincusa.com
Brewer
465 South Main Street
PO Box 639
Brewer, ME
T.207-989-4824
F.207-989-4881

CES INC
Engineers • Environmental Scientists • Surveyors

PROJECT TITLE
STATE OF MAINE, BUREAU OF REAL ESTATE MANAGEMENT
FORMER DHHS BUILDING, 211 STATE ST., AUGUSTA, ME

SHEET TITLE
LIMITED ASBESTOS IDENTIFICATION SURVEY
FIRST FLOOR

REV	DESCRIPTION	DATE	DRAWN BY	CHECKED BY

ISSUE STATUS
NOT FOR CONSTRUCTION

SCALE	NTS
DATE	2019.12.13
DRAWN BY	JNB
CHECKED BY	DAK
DESIGNED BY	
APPROVED BY	
JOB NUMBER	10289.014

SHEET NUMBER
H101

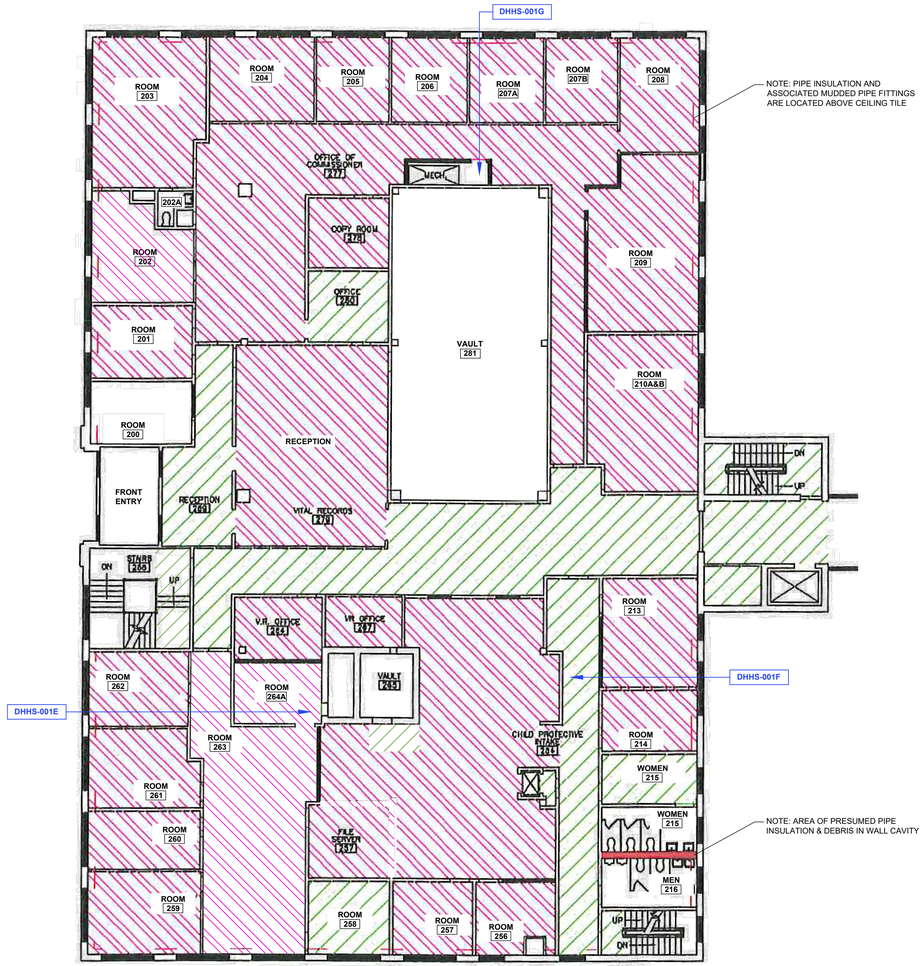
P:\10289-STATE_OF_MAINE\014-STATEST AUGUSTA PCB SCREENING DHHS BLDG-BEK\02-CAD_DRAWINGS\CIVIL\DISK_DWGS\10289.014-H-AA.DWG

PLAN REFERENCE:

FLOOR PLAN DERIVED FROM DRAWINGS BY OTHERS PROVIDED TO CES, INC AND ARE NOT WARRANTED AS TO ACCURACY AND ARE INTENDED TO BE SCHEMATIC.

ASBESTOS LEGEND

- ACM FLOOR TILE WITH ACM MASTIC
- ACM FLOOR TILE AND MASTIC BELOW CARPET
- ACM INSULATED HORIZONTAL PIPES
- DHHS-002A — SAMPLE NUMBER AND LOCATION TESTING NEGATIVE FOR ASBESTOS



www.cesincusa.com
Brewer
465 South Main Street
PO Box 639
Brewer, ME
T.207-989-4824
F.207-989-4881

CES INC
Engineers • Environmental Scientists • Surveyors

PROJECT TITLE
STATE OF MAINE, BUREAU OF REAL ESTATE MANAGEMENT
FORMER DHHS BUILDING, 211 STATE ST., AUGUSTA, ME

SHEET TITLE
LIMITED ASBESTOS IDENTIFICATION SURVEY
SECOND FLOOR

REV	DESCRIPTION	DATE	DRAWN BY	CHECKED BY

ISSUE STATUS
NOT FOR CONSTRUCTION

SCALE	NTS
DATE	2019.12.13
DRAWN BY	JNB
CHECKED BY	DAK
DESIGNED BY	
APPROVED BY	
JOB NUMBER	10289.014

SHEET NUMBER
H102

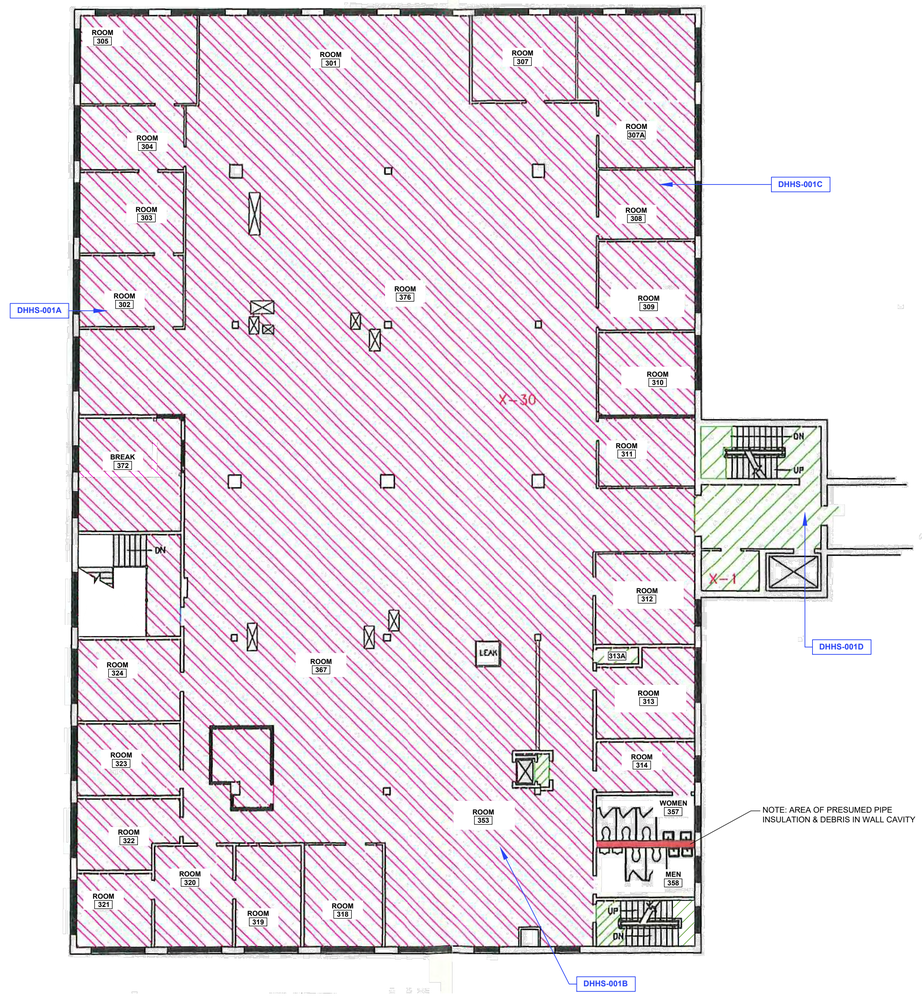
P:\10289-STATE_OF_MAINE\914-STATEST AUGUSTA PCB SCREENING DHHS BLDG\DBK\02-CAD_DRAWINGS\CIVIL\DISK_DWGS\10289-914-H-AA.DWG

PLAN REFERENCE:

FLOOR PLAN DERIVED FROM DRAWINGS BY OTHERS PROVIDED TO CES, INC AND ARE NOT WARRANTED AS TO ACCURACY AND ARE INTENDED TO BE SCHEMATIC.

ASBESTOS LEGEND

- ACM FLOOR TILE WITH ACM MASTIC
- ACM FLOOR TILE AND MASTIC BELOW CARPET
- X - 3 — ACM INSULATED PIPE FITTING VISIBLE IN A FUNCTIONAL AREA
- DHHS-002A — SAMPLE NUMBER AND LOCATION TESTING NEGATIVE FOR ASBESTOS



www.cesincusa.com
Brewer
465 South Main Street
PO Box 639
Brewer, ME
T.207-989-4824
F.207-989-4881

CES INC
Engineers • Environmental Scientists • Surveyors

PROJECT TITLE
STATE OF MAINE, BUREAU OF REAL ESTATE MANAGEMENT
FORMER DHHS BUILDING, 211 STATE ST., AUGUSTA, ME

SHEET TITLE
LIMITED ASBESTOS IDENTIFICATION SURVEY
THIRD FLOOR

REV	DESCRIPTION	DATE	DRAWN BY	CHECKED BY

ISSUE STATUS
NOT FOR CONSTRUCTION

SCALE	NTS
DATE	2019.12.13
DRAWN BY	JNB
CHECKED BY	DAK
DESIGNED BY	
APPROVED BY	
JOB NUMBER	10289.014
SHEET NUMBER	H103

P:\10289-STATE_OF_MAINE\01-STATEST AUGUSTA PCB SCREENING DHHS BLDG-SMA\02-CAD_DRAWINGS\CIVIL\DGN_DWGS\10289.014-H-AA.DWG

ATTACHMENTS

ATTACHMENT A

ASBESTOS INSPECTOR CERTIFICATION

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JANET T. MILLS
GOVERNOR

GERALD D. REID
COMMISSIONER

December 4, 2019

CES, Inc.
465 South Main Street
Brewer, Maine 04412

Dear Licensee:

Asbestos application(s) for individual certification of the **two** employee(s) listed below have been received and **approved**. Individual certification numbers are listed below and wallet card(s) are enclosed. Card(s) are property of the individual to whom each is issued. Your responsibility as a licensee is to ensure delivery of the cards to persons in your employment. This letter should be retained for your company files as record of certification. Please attach 1 updated passport size photo with every application.

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All our asbestos forms can be found at https://www.maine.gov/dep/waste/asbestos/forms.html
Thank you for your cooperation and your completed application(s).

Name	Category	Certification #	Exp. Date
Dennis B. Kingman, Jr.	Inspector	AI-0034	11/30/2020
Deborah A. Kasik	Inspector	AI-0177	11/30/2020

Sincerely,

Sandra J. Moody, Environmental Specialist
Division of Remediation
Bureau of Remediation and Waste Management

State of Maine
Asbestos Abatement Program

Deborah A. Kasik

Inspector
Cert No. AI-0177
Trn.Exp.Date 11/21/2020
Expiration Date 11/30/2020
This is not a legal form of official identification

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826

BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO
PORTLAND,
(207) 822-630

website: www.maine.gov/dep

Environmental Safety
Professionals

21 Sylvan Drive
Brewer, Maine
(207)-989-6848

This is to Certify that

Deborah Kasik

has successfully completed the 4-hour Training, passed
the final exam and hand-on proficiencies for

Asbestos Inspector; Annual Review

Conducted under TSCA Title II and CMR 425.5(E) by

Environmental Safety Professionals

Course Date: November 21, 2019
Expiration: November 21, 2020

Exam Date: November 21, 2019
Exam Score: 96

AI19-13
Certificate No.

Instructor:

Chris Atwood, CSP, OHST

ATTACHMENT B

ASBESTOS ANALYTICAL LABORATORY CERTIFICATIONS

AIHA Laboratory Accreditation Programs, LLC

acknowledges that

EMSL Analytical, Inc.

200 Route 130 North, Cinnaminson, NJ 08077

Laboratory ID: 100194

along with all premises from which key activities are performed, as listed above, has fulfilled the requirements of the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC accreditation to the ISO/IEC 17025:2005 international standard, *General Requirements for the Competence of Testing and Calibration Laboratories* in the following:

LABORATORY ACCREDITATION PROGRAMS

✓	**INDUSTRIAL HYGIENE**	Accreditation Expires: November 01, 2020
✓	**ENVIRONMENTAL LEAD**	Accreditation Expires: November 01, 2020
✓	**ENVIRONMENTAL MICROBIOLOGY**	Accreditation Expires: November 01, 2020
☐	**FOOD**	Accreditation Expires:
☐	**UNIQUE SCOPES**	Accreditation Expires:

Specific Field(s) of Testing (FoT)/Method(s) within each Accreditation Program for which the above named laboratory maintains accreditation is outlined on the attached **Scope of Accreditation**. Continued accreditation is contingent upon successful on-going compliance with ISO/IEC 17025:2005 and AIHA-LAP, LLC requirements. This certificate is not valid without the attached **Scope of Accreditation**. Please review the AIHA-LAP, LLC website (www.aihaaccreditedlabs.org) for the most current Scope.

Beth Bair

Elizabeth Bair
Chairperson, Analytical Accreditation Board

Cheryl O. Morton

Cheryl O. Morton
Managing Director, AIHA Laboratory Accreditation Programs, LLC

Revision 17 – 09/11/2018

Date Issued: 11/30/2018

AIHA Laboratory Accreditation Programs, LLC
SCOPE OF ACCREDITATION

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077

Laboratory ID: **100194**
Issue Date: 02/19/2019

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

Industrial Hygiene Laboratory Accreditation Program (IHLAP)

Initial Accreditation Date: 02/01/1989

IHLAP Scope Category	Field of Testing (FoT) (FoTs cover all relevant IH matrices)	Technology sub-type/ Detector	Published Reference Method/Title of In-house Method	Method Description or Analyte *(for internal methods only)*
Chromatography Core	Gas Chromatography	GC/FID	NIOSH 1003 Modified	
			NIOSH 1005 Modified	
			NIOSH 1400 Modified	
			NIOSH 1500 Modified	
			NIOSH 1501 Modified	
			NIOSH 1550 Modified	
			NIOSH 1603 Modified	
			NIOSH 2000 Modified	
		GC/ECD	NIOSH 5502 Modified	
			NIOSH 5503 Modified	
			NIOSH 5510 Modified	
			OSHA 1010 Modified	
	GC/MS		EPA TO-15	
	Gas Chromatography (Diffusive Samplers)		NIOSH 1501 Modified	
	Ion Chromatography (IC)		NIOSH 6004 Modified	
			NIOSH 6011	
			NIOSH 7903	
			OSHA ID-214	
			OSHA ID-215 Modified Version 2	
	Liquid Chromatography	HPLC/FL	NIOSH 2016 Modified	
		HPLC/UV	NIOSH 5506 Modified	
		LC/MS	NIOSH 9111 Modified	

IHLAP Scope Category	Field of Testing (FoT) (FoTs cover all relevant IH matrices)	Technology sub-type/ Detector	Published Reference Method/Title of In-house Method	Method Description or Analyte *(for internal methods only)*
Spectrometry Core	Atomic Absorption	CVAA	NIOSH 6009 Modified	
			OSHA ID-140 Modified	
			OSHA ID-145	
		FAA	NIOSH 7082	
		GFAA	NIOSH 7105	
	Inductively-Coupled Plasma	ICP/MS	NIOSH 7300 Modified	
		ICP/AES	NIOSH 7300 Modified	
	X-ray Diffraction (XRD)		NIOSH 7500 Modified	
			OSHA ID-142 Modified	
	UV/VIS (Colorimetric)		NIOSH 6010 Modified	
Asbestos/Fiber Microscopy Core	Polarized Light Microscopy (PLM)		EPA 600/R-93/116	
	Phase Contrast Microscopy (PCM)		NIOSH 7400	
	Transmission Electron Microscopy (TEM)		EPA AHERA - 40 CFR Part 763	EPA AHERA Method (40 CFR 763, Subpart E, Appendix A, Mandatory Method
			NIOSH 7402	
Miscellaneous Core	Gravimetric		NIOSH 0500	
			NIOSH 0600	
			NIOSH 5524	
	Thermo-optical Analysis (TOA)		NIOSH 5040	
Beryllium Testing	Inductively-Coupled Plasma	ICP/MS	NIOSH 7300	
			NIOSH 7303	

A complete listing of currently accredited Industrial Hygiene laboratories is available on the AIHA-LAP, LLC website at: http://www.aihaaccreditedlabs.org

United States Department of Commerce
National Institute of Standards and Technology

Certificate of Accreditation to ISO/IEC 17025:2017

NVLAP LAB CODE: 500094-0

EMSL Analytical, Inc.

South Portland, ME

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

Asbestos Fiber Analysis

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2019-10-01 through 2020-09-30

Effective Dates

For the National Voluntary Laboratory Accreditation Program

NVLAP® National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

EMSL Analytical, Inc.
161 John Roberts Road
South Portland, ME 04106
Mr. Zackary Carbee
Phone: 207-517-6921
Email: zcarbee@emsl.com
http://www.emsl.com

ASBESTOS FIBER ANALYSIS — NVLAP LAB CODE 500094-0

Bulk Asbestos Analysis

Code	*Description*
18/A01	EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

Airborne Asbestos Analysis

Code	*Description*
18/A02	U.S. EPA's "Interim Transmission Electron Microscopy Analytical Methods-Mandatory and Nonmandatory-and Mandatory Section to Determine Completion of Response Actions" as found in 40 CFR, Part 763, Subpart E, Appendix A.

For the National Voluntary Laboratory Accreditation Program

State of Maine
Department of Environmental Protection

LICENSE

EMSL Analytical, Inc.

Asbestos Analytical Laboratory
(Bulk)

License Number: LB-0039

Expiration Date: 10/31/2020

State of Maine
Department of Environmental Protection

LICENSE

EMSL Analytical, Inc.

Asbestos Analytical Laboratory
(Air)

License Number: LA-0038 **Expiration Date:** 10/31/2020

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JANET T. MILLS
Governor

GERALD D. REID
Commissioner

September 10, 2019

Attn: Anastasia Krakhaleva, Quality Assurance Specialist
EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

Dear Ms. Krakhaleva,

This is to confirm that the Maine Department of Environmental Protection is in receipt of your request to add the following labs to your licensing of Analytical Laboratories: Boston, MA., E. Weymouth, MA and South Portland, Maine.

LA-0038 for Asbestos Analytical Laboratory (Air), expires on 10/31/2020
LB-0039 for Asbestos Analytical Laboratory (Bulk), expires on 10/31/2020

Remember each laboratory must have certified individual(s) within the lab to perform analyses.

If you need any further assistance please feel free to contact me at (207) 287-7751 or e-mail at sandy.j.moody@maine.gov.

Sincerely,

Sandra J. Moody, Environmental Specialist
Division of Remediation
Bureau of Remediation and Waste Management

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826
RAY BLDG., HOSPITAL ST.

BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04679-2094
(207) 764-0477 FAX: (207) 760-3143

web site: www.maine.gov/dep

PORTLAND - INDIVIDUAL ANALYST CERTIFICATIONS

State of Maine

November 11, 2019

Employee Name	*Lab Location*	*State Certified*	*Certification No.*	*Type of Cert.*	*Exp. Date*
Zachary Carbee	S. Portland	Maine	BA-0174	Asbestos PLM Analyst	8/31/2020
Stephen Severn	S. Portland	Maine	AA-0497	Asbestos PCM Analyst	10/28/2020
Stephen Severn	S. Portland	Maine	BA-0178	Asbestos PLM Analyst	10/28/2020
Thomas Stegerman	S. Portland	Maine	BA-0197	Asbestos PLM Analyst	10/28/2020
Samantha Voigt	S. Portland	Maine	BA-0188	Asbestos PLM Analyst	8/31/2020

ATTACHMENT C

ASBESTOS LABORATORY ANALYTICAL RESULTS

EMSL Analytical, Inc.

161 John Roberts Road South Portland, ME 04106

Tel/Fax: (207) 517-6921 / (207) 517-6922

http://www.EMSL.com / portlandlab@emsl.com

EMSL Order:	621901907
Customer ID:	CESI62
Customer PO:	
Project ID:	

Attention:	Deb Kasik	**Phone:**	(207) 989-4824
	CES/Summit Environmental Consultants	**Fax:**	(207) 989-4881
	465 S. Main Street	**Received Date:**	12/06/2019 10:00 AM
	PO Box 639	**Analysis Date:**	12/06/2019
	Brewer, ME 04412	**Collected Date:**	12/05/2019
Project:	10289.014		

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

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
DHHS-001A *621901907-0001*	3rd Floor Rm 302 - CT 4 x 2 Pindot Swirl	Gray Fibrous Homogeneous	50% Cellulose 45% Min. Wool	5% Non-fibrous (Other)	None Detected
DHHS-001B *621901907-0002*	3rd Floor Rm 353 Near Stairs - CT 4 x 2 Pindot Swirl	Gray Fibrous Homogeneous	50% Cellulose 45% Min. Wool	5% Non-fibrous (Other)	None Detected
DHHS-001C *621901907-0003*	3rd Floor Rm 308 - CT 4 x 2 Pindot Swirl	Gray Fibrous Homogeneous	50% Cellulose 45% Min. Wool	5% Non-fibrous (Other)	None Detected
DHHS-001D *621901907-0004*	3rd Floor Hall Near Elevator - CT 4 x 2 Pindot Swirl	Gray Fibrous Homogeneous	50% Cellulose	50% Non-fibrous (Other)	None Detected
DHHS-001E *621901907-0005*	2nd Floor Rm 264A - CT 4 x 2 Pindot Swirl	Gray Fibrous Homogeneous	50% Cellulose 45% Min. Wool	5% Non-fibrous (Other)	None Detected
DHHS-001F *621901907-0006*	2nd Floor Hall Outside Rm 213 - CT 4 x 2 Pindot Swirl	Gray Fibrous Homogeneous	50% Cellulose 45% Min. Wool	5% Non-fibrous (Other)	None Detected
DHHS-001G *621901907-0007*	2nd Floor Rm 277 Near Elec. Panel - CT 4 x 2 Pindot Swirl	Gray Fibrous Homogeneous	50% Cellulose 45% Min. Wool	5% Non-fibrous (Other)	None Detected
DHHS-001H *621901907-0008*	1st Floor Hall Near Freight Elev. - CT 4 x 2 Pindot Swirl	Gray Fibrous Homogeneous	50% Cellulose 45% Min. Wool	5% Non-fibrous (Other)	None Detected
DHHS-001I *621901907-0009*	1st Floor Rm 167 - CT 4 x 2 Pindot Swirl	Gray Fibrous Homogeneous	50% Cellulose 45% Min. Wool	5% Non-fibrous (Other)	None Detected

Report Comment: **ME CERT # BA-0178, BA-0188**

Analyst(s)

Stephen Severn (5)

Samantha Voigt (4)

Zackary Carbee, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method"), but augmented with procedures outlined in the 1993 ("final") version of the method. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. All samples received in acceptable condition unless otherwise noted. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. EMSL recommends gravimetric reduction for all non-friable organically bound materials prior to analysis. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. South Portland, ME NVLAP Lab Code 500094-0, MA AA000236, VT AL197271, ME LM-0039, CT PH-0346

Initial report from: 12/09/2019 08:43:36

OrderID: 621901907

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (*Lab Use Only*): 621901907

EMSL Analytical, Inc.
161 John Roberts Road
South Portland, ME 04106
PHONE: (207) 517-6921
FAX: (207) 517-6922

Company: CES, INC	**EMSL-Bill to:** ☐ Same ☑ Different If Bill to is Different note instructions in Comments** *Third Party Billing requires written authorization from third party*
Street: 465 S MAIN STREET	
City: BREWER **State/Province:** ME	**Zip/Postal Code:** 04412 **Country:** US
Report To (Name): DEB KASIK	**Telephone #:** 207989-4824
Email Address: dkasik@cesincusa.com	**Fax #:** 207 989-4881 **Purchase Order:**
Project Name/Number: 10289.014	**Please Provide Results:** ☐ Fax ☑ Email ☐ Mail
U.S. State Samples Taken: ME	**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour ☐ 6 Hour ☑ 24 Hour ☐ 48 Hour ☐ 72 Hour ☑ 96 Hour ☐ 1 Week ☐ 2 Week

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

PLM - Bulk (reporting limit)	TEM – Bulk
■ PLM EPA 600/R-93/116 (<1%)	☐ TEM EPA NOB – EPA 600/R-93/116 Section 2.5.5.1
■ PLM EPA NOB (<1%)	☐ NY ELAP Method 198.4 (TEM)
Point Count ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ Chatfield Protocol (semi-quantitative)
Point Count w/Gravimetric ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ TEM % by Mass – EPA 600/R-93/116 Section 2.5.5.2
☐ NIOSH 9002 (<1%)	☐ TEM Qualitative via Filtration Prep Technique
☐ NY ELAP Method 198.1 (friable in NY)	☐ TEM Qualitative via Drop Mount Prep Technique
☐ NY ELAP Method 198.6 NOB (non-friable-NY)	**Other**
☐ OSHA ID-191 Modified	☐
☐ Standard Addition Method	

■ **Check For Positive Stop – Clearly Identify Homogenous Group** **Date Sampled:** 12/5/19

Samplers Name: Deb Kasik **Samplers Signature:** Deborah A Kasik

Sample #	HA #	Sample Location	Material Description
621901907-001A		3rd floor Rm 302	CT 4x2 pindot swirl
B		" " Rm 353 near stairs	"
C		" " Rm 308	"
D		3rd floor Hall near Elevator	"
E		2nd floor Rm 264A	"
F		" " Wall outside Rm 213	"
G		" " Rm 277 near elec. panel	"
H		1st floor Hall near freight elev.	"
I		1st floor Rm 167	"

DIFFS

Client Sample # (s): - **Total # of Samples:** 9

Relinquished (Client): Deborah A Kasik **Date:** 12/5/19 **Time:** 5:00pm

Received (Lab): Steph S. **Date:** 12/6/19 **Time:** 10AM

Comments/Special Instructions:
NOB PER MAINE DEP
BillTo: CES, INC,
Prefix 'DHHS'

Page 1 of 1 pages E Fedex (1 of 1)

RECEIVED
DEC 06 2019
By SRS

October 24, 2019

Mr. Richard B. Borelli, AIA, NCARB
WBRC Architects and Engineers
30 Danforth Street
Suite 306
Portland, Maine 04101

Re: Limited Hazardous Materials Assessment | 211 State Street | Former State of Maine Department of Health and Human Services | Augusta, Maine

Dear Mr. Borelli:

At the request of WBRC Architects and Engineers (WBRC), CES, Inc. (CES) completed a Limited Hazardous Materials Assessment of the former State of Maine Department of Health and Human Services (DHHS)/Health and Environmental Testing Laboratory (HETL) building located at 211 State Street in Augusta, Maine.

This limited Hazardous Materials Assessment conducted on October 16, 2019, included the completion of a visual asbestos assessment and a Lead-Based Paint (LBP) determination of the DHHS portion of the building.

The former DHHS portion of the building consists of a three-story, masonry structure constructed in 1951 and is currently used as storage. The structure was unoccupied at the time of the assessment.

The following is a summary of CES's field findings and observations:

LIMITED ACM ASSESSMENT

CES conducted a visual asbestos assessment of the interior and exterior of the DHHS portion of the building to confirm that previously identified asbestos-containing materials (ACM) were still present within the structure; identify previously unidentified suspect ACM; and to update the existing survey to reflect current site conditions. The visual assessment was performed by Ms. Deborah Kasik (CES), an asbestos inspector licensed by the Maine Department of Environmental Protection (MDEP) on October 16, 2019. A copy of Ms. Kasik's Asbestos Inspector certification is included in **Attachment A**.

465 South Main Street
PO Box 639
Brewer, Maine 04412
T 207.989.4824
F 207.989.4881

Completion of the limited visual asbestos assessment included:

- Review of available, previously completed asbestos identification survey (URS, 2002);
- Visual identification, verification, and documentation of both previously identified and previously unidentified suspect ACM on the interior and exterior of the DHHS portion of the structure; and
- Quantification of identified suspect ACM.

As with any scientific study, a limited visual asbestos assessment is subject to a variety of limitations. Limitations to be considered in interpreting the results of the survey performed on this building include the following:

- Variations in building materials used during construction and subsequent renovations;
- Inaccessible areas within wall cavities and above solid ceilings;
- At the direction of the client, only the DHHS portion of the building was included in this assessment; and
- Condition of the structure at the time of the survey.

ACM identified during previously completed ACM assessments for the structure included:

- Four types of floor tiles and associated adhesives;
- Pipe insulation and associated mudded pipe fittings; and
- Mudded pipe fitting insulation associated with fiberglass-insulated piping.

Copies of the previously completed ACM assessments are included as **Attachment B.**

Additional suspect ACM identified during the assessment included:

- One type of ceiling tile;
- Plaster wall and ceiling material;
- Glue daubs;
- Covebase adhesive;
- Window caulking;
- Window glazing; and
- Asphalt vapor barrier.

Collection and analysis of bulk samples of identified suspect ACM was outside of the scope of work for this assessment and were not collected. Until such a time that these suspect materials are sampled and analyzed for the presence of asbestos, these suspect materials must be assumed to be asbestos containing.

An inventory and associated budgetary cost estimates for removal of previously identified ACM are included in **Table 1**. This budgetary cost estimate does not include cost for removal of previously unidentified suspect ACM within the building. In addition, these costs do not include material replacement costs, regulatory agency notification fees, or a contingency. Estimates assume the contractor will be responsible to prepare the asbestos abatement design(s). Regulatory agency notification fees associated with this project will vary depending on phasing and project schedule. Actual abatement costs may vary depending upon the scope of the renovation work, the quantity of ACM impacted by the renovations and the abatement methods utilized.

State and federal regulations require that identified ACM which may be impacted by planned renovation/demolition activity be removed by a licensed asbestos abatement contractor in accordance with applicable state and federal regulations prior to disturbance by such planned activities. In accordance with 40 CFR 61, *National Emissions Standards for Hazardous Air Pollutants* (NESHAP), and 06-096 MDEP Chapter 425, Asbestos Management Regulations (effective date: April 3, 2011), a contractor conducting any renovation and/or demolition activity that would disturb regulated ACM must: (1) notify the U.S. Environmental Protection Agency (USEPA) Administrator and MDEP of such activities, (2) use proper removal procedures, (3) use proper engineering controls to limit emissions of asbestos fibers, and (4) utilize proper waste disposal. If any hidden suspect ACM (behind walls, in chases, above permanent ceilings, etc.) is uncovered during the renovation or demolition activities, work must be stopped, and the material tested for asbestos content. All ACM must be disposed of in accordance with all applicable state and federal requirements.

Additionally, notification requirements as required by OSHA 29 CFR Parts 1910.1001 and 1926.1101, must be adhered to as part of routine communication with employees and outside contractors. Potential contractors bidding on the renovation work must first be informed of the results of the survey. Notification regarding the presence of the ACM must also be provided to employees who occupy an area containing ACM.

LEAD-BASED PAINT DETERMINATION

A LBP determination of the structure was conducted by Ms. Deborah A. Kasik (CES), a MDEP certified Lead Risk Assessor on October 16, 2019. The purpose of the determination was to identify LBP, if present, on the interior and exterior surfaces of the building.

The LBP determination was performed in accordance with the established protocols outlined in the MDEP Lead Management Regulations, Chapter 424, Section 7, as applicable to this project. The testing provides information on the LBP content and assessment of condition for the surfaces tested.

The LBP testing was conducted utilizing a portable X-Ray Fluorescence (XRF) Lead Paint Analyzer (RMD LPA-1), which non-destructively tests for the presence of LBP. The determination as to whether a component contains LBP is based upon the MDEP Lead Management Regulations (Chapter 424). MDEP defines a component as lead-containing if the XRF result is greater than or equal to (≥) 1.0 milligrams per square centimeter (mg/cm^2). A visual assessment of the existing condition of the identified LBP was also completed at the time of the determination. The following is a summary of identified LBP:

Interior:

- Stairway baseboards and mopboards
- Structural steel; and
- Access ladder to the roof.

Exterior:

- Metal window sashes.

The condition of the identified LBP on the interior and exterior of the building ranged from fair to poor condition.

Under current federal and state regulations for non-residential structures, LBP and lead-containing components do not have to be removed from a structure prior to demolition, renovation, or removal of specific building components. However, the following regulations/requirements must be followed in relation to disturbance of LBP during renovation or demolition:

- OSHA 29 CFR 1926.62 requires that an employer protect their personnel from exposure to lead dust during construction or renovation. While primarily an issue for the renovation or abatement contractor, the Owner is responsible to notify all parties involved in the work of the knowledge or presumption that painted surfaces may contain lead.
- The MDEP requires that building components with LBP be disposed in a licensed Construction and Demolition (C&D) Landfill, and that a manifest documenting the transport and disposal of this material be provided to the Owner.
- LBP removed (e.g., scrapped, chipped) from surfaces must be analyzed using a Toxicity Characteristic Leaching Procedure (TCLP) test to determine whether the residue is considered a hazardous waste. If TCLP results indicate levels of leachable lead in excess of 5.0 parts per million (ppm), the resulting waste must be disposed of as a hazardous material.

OTHER POTENTIAL HAZARDOUS BUILDING MATERIALS

Polychlorinated Biphenyl (PCB) Containing Building Materials

Polychlorinated biphenyls (PCBs) were used as a plasticizer in caulk and in elastic sealant materials, primarily from 1950 through 1978. The caulk/sealants were used in windows and associated window systems, door frames, stairways, masonry columns, and other masonry building materials. PCBs were not allowed in manufacturing these materials after 1978. Based on the date of construction of the DHHS portion of the building (1951), Consistent with U.S, Environmental Protection Agency (USEPA) guidelines, PCB containing caulk has a PCB content of equal to or greater than (≥) 50.0 parts per million (ppm).

A visual assessment of the building envelope, including the masonry components, and window and door systems was completed to identify suspect caulk/glazing materials. During the assessment five distinct types of caulk/glazing associated with the building window and door systems was identified including:

- White caulk – around the perimeter of the window and door units;
- White glazing – windows;
- Cream caulk – around the perimeter of a window unit (first floor);
- Tan caulk – around the perimeter of a window unit (first floor); and
- Gray caulk – around perimeter of a door unit (first floor).

With the exception of the window and door systems, caulk/glazing was not identified on the masonry components and other surfaces of the building envelope. A summary of identified materials and associated estimate for removal and disposal of these materials is included as **Table 2**.

Collection and analysis of identified suspect PCB-containing caulk/glazing was outside of the scope of work for this assessment and was not completed. Until such time that these suspect materials are tested/sampled and analyzed for the presence of PCBs, these suspect materials must be assumed to be PCB-containing at concentrations of ≥ 50.0 ppm. At or above this threshold concentration, caulk/glazing containing PCBs is not an authorized use under the USEPA regulations and must be removed in accordance with the TSCA 40 CFR 761 requirements.

Mold Assessment

CES observed areas of historical water infiltration which has impacted wall surfaces (paint delamination) and stained ceiling tiles within the building. Locations of historical water infiltration include, but are not limited to:

- First floor – break room (wall surface);
- First floor – sprinkler room in men's bathroom (wall surface);
- Second floor - Room 202A (utility closet; wall surfaces, door, and flooring material);
- Second floor – Room 203 Bathroom (odor);
- Second floor – Room 208 (ceiling tile); and
- Third floor – Room 300 (wall surface).

The sink in the utility room located on the second floor was observed to be dripping at the time of the assessment. CES observed mold growth on both the walls and door system (louvred door vent) within this room and recommends that the leak be fixed and that the affected materials in this room be removed and replaced. The presence of mold and the water leak may account for the odor observed in the bathroom of Room 203, which is adjacent to the utility closet. The delaminated paint should be addressed once the plaster substrate has been evaluated for the presence of asbestos. Ambient air testing for mold was not performed as part of this assessment. Based on the planned renovation of the building, any costs associated with remediation of identified mold impacted materials will be included in renovation costs and not result in additional associated expenses.

A photographic log showing typical conditions observed on the interior and exterior of the building is included as **Attachment C**.

SUMMARY

CES completed a Limited Hazardous Materials Assessment (HMA) of the building located at 211 State Street in Augusta, Maine. The HMA was limited to the former DHHS portion of the building. The limited HMA included a visual assessment of the interior and exterior of the DHHS portion of the building to verify/dispute the presence of previously identified ACM, assess the presence of suspect ACM, LBP, and PCB-containing caulk/glazing. ACM was verified to remain within the building in accordance with the previous assessment report and was found to be in good-fair condition. A summary of previously identified ACM and associated budgetary removal costs is included as **Table 1**. Previously unidentified suspect ACM have been summarized in this report and would require sampling prior to impact through any renovation/demolition process. Because of the uncertainty of whether these previously unidentified suspect ACM are actually asbestos containing, a cost estimate for the abatement of these materials has not been provided. However, should these materials be determined to be ACM, it is expected that additional costs associated with abatement of these materials would increase the estimated abatement budget by 75 to 100 percent. LBP was identified on the interior and exterior of the DHHS portion of the building and includes structural I-beams, roof access ladder, and stair components. A summary of identified suspect PCB-containing materials and associated estimate for removal and disposal of these materials is summarized in **Table 2**.

Should it be determined that renovation or demolition activities will occur at the DHHS building, CES recommends supplemental sampling of suspect ACM and PCB-containing caulk/glazing be completed to determine the presence, location, and quantity of these materials on the interior and exterior of the structure. The estimated cost to complete this supplemental suspect PCB and ACM sampling is $ 12,500.00

This report was prepared by CES for the sole use of WBRC Architects and should not be reproduced without their full, written authorization. Please contact either of the undersigned at (207) 989-4824 if you have any questions related to this project or if additional services are required.

Sincerely,
CES, Inc.

Deborah A. Kasik
MDEP Asbestos Inspector AI-0177
Lead Risk Assessor LR-0003

Dennis B. Kingman, Jr., CHMM
Vice President/Senior Project Manager II

DAK/DBK/cmc
Attachments

FIGURES

PLAN REFERENCE:

FLOOR PLAN DERIVED FROM DRAWINGS BY OTHERS PROVIDED TO CES, INC AND ARE NOT WARRANTED AS TO ACCURACY AND ARE INTENDED TO BE SCHEMATIC.

ASBESTOS LEGEND

- PIPE INSULATION ABOVE CEILING
- ACM FLOOR TILE WITH ACM MASTIC
- ACM ADHESIVE ONLY
- ACM INSULATED HORIZONTAL PIPES
- o ACM INSULATED VERTICAL PIPE RISER
- X - 3 ACM INSULATED PIPE FITTING VISIBLE IN A FUNCTIONAL AREA

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CES INC
Engineers • Environmental Scientists • Surveyors

PROJECT TITLE
WBRC ARCHITECTS
FORMER DHHS BUILDING, 211 STATE ST., AUGUSTA, ME

SHEET TITLE
ASBESTOS ASSESSMENT
FIRST FLOOR

REV	DESCRIPTION	DATE	DRAWN BY	CHECKED BY

ISSUE STATUS
NOT FOR CONSTRUCTION

SCALE:	NTS
DATE:	2019.10.22
DRAWN BY:	JNB
CHECKED BY:	DAK
DESIGNED BY:	
APPROVED BY:	
JOB NUMBER:	10622.007
SHEET NUMBER:	H101

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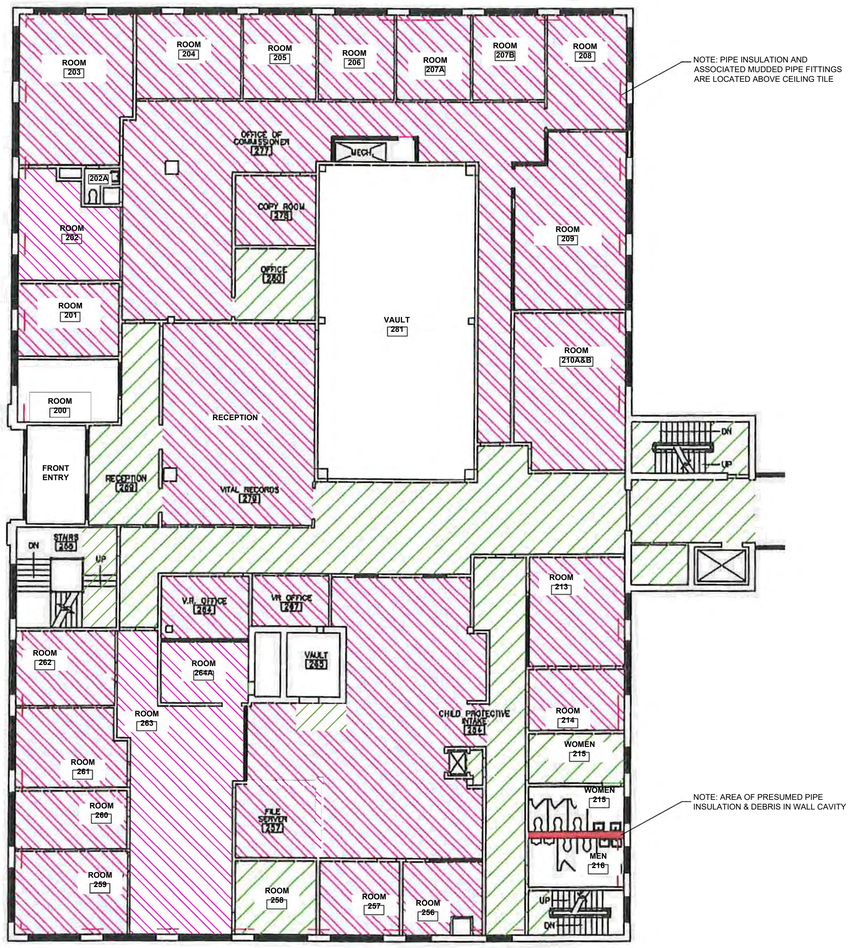
PLAN REFERENCE:

FLOOR PLAN DERIVED FROM DRAWINGS BY OTHERS PROVIDED TO CES, INC AND ARE NOT WARRANTED AS TO ACCURACY AND ARE INTENDED TO BE SCHEMATIC.

ASBESTOS LEGEND

- ACM FLOOR TILE WITH ACM MASTIC
- ACM FLOOR TILE AND MASTIC BELOW CARPET
- ACM INSULATED HORIZONTAL PIPES



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CES INC
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PROJECT TITLE
WBRC ARCHITECTS
FORMER DHHS BUILDING, 211 STATE ST., AUGUSTA, ME

SHEET TITLE
ASBESTOS ASSESSMENT
SECOND FLOOR

REV	DESCRIPTION	DATE	DRAWN BY	CHECKED BY

ISSUE STATUS
NOT FOR CONSTRUCTION

SCALE:	NTS
DATE:	2019.10.22
DRAWN BY:	JNB
CHECKED BY:	DAK
DESIGNED BY:	
APPROVED BY:	
JOB NUMBER:	10622.007
SHEET NUMBER:	H102

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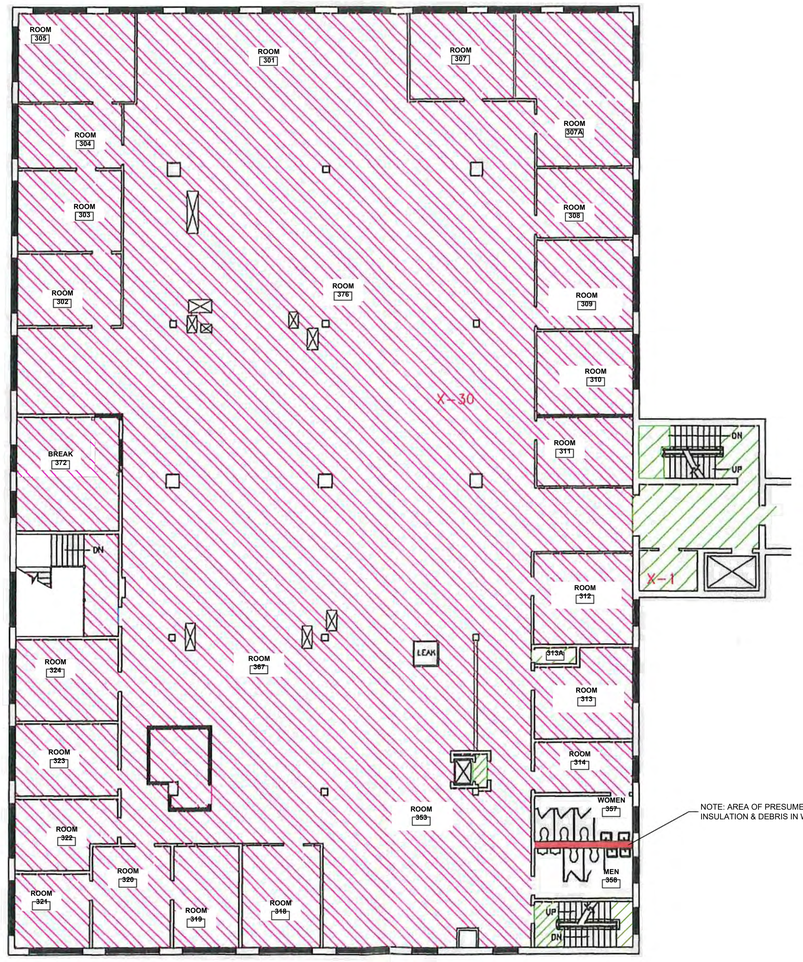
PLAN REFERENCE:

FLOOR PLAN DERIVED FROM DRAWINGS BY OTHERS PROVIDED TO CES, INC AND ARE NOT WARRANTED AS TO ACCURACY AND ARE INTENDED TO BE SCHEMATIC.

ASBESTOS LEGEND

- ACM FLOOR TILE WITH ACM MASTIC
- ACM FLOOR TILE AND MASTIC BELOW CARPET
- X - 3 — ACM INSULATED PIPE FITTING VISIBLE IN A FUNCTIONAL AREA



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CES INC
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PROJECT TITLE
WBRC ARCHITECTS
FORMER DHHS BUILDING, 211 STATE ST., AUGUSTA, ME

SHEET TITLE
ASBESTOS ASSESSMENT
THIRD FLOOR

REV	DESCRIPTION	DATE	DRAWN BY	CHECKED BY

ISSUE STATUS
NOT FOR CONSTRUCTION

SCALE:	NTS
DATE:	2019.10.22
DRAWN BY	JNB
CHECKED BY	DAK
DESIGNED BY	
APPROVED BY	
JOB NUMBER	10622.007
SHEET NUMBER	H103

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TABLES

TABLE 1

PREVIOUSLY IDENTIFIED ACM AND ASSOCIATED BUDGETARY REMOVAL COSTS

TABLE 1
ESTIMATED ABATEMENT COSTS
PREVIOUSLY IDENTIFIED ASBESTOS CONTAINING MATERIALS
DHHS BUILDING
211 STATE STREET, AUGUSTA, MAINE

IDENTIFIED ASBESTOS-CONTAINING MATERIALS	TOTAL ESTIMATED QUANTITY	UNIT COST	ESTIMATED ABATEMENT COST
THIRD FLOOR			
Nine-inch by nine-inch (9x9) floor tile and associated adhesive	495	$6/SF (Square Foot)	$ 2,970
Nine-inch by nine-inch (9x9) floor tile and associated adhesive beneath carpeting	12,800 SF	$8/SF	$ 102,400
Mud insulated pipe fittings on fiberglass piping (accessible and above ceiling tiles)	30	$75 Each (EA)	$ 2,250
SECOND FLOOR			
Nine-inch by nine-inch (9x9) floor tile and associated adhesive	2,254 SF	$6/SF	$ 13,524
Nine-inch by nine-inch (9x9) floor tile and associated adhesive beneath carpeting	8,553	$8/SF	$ 68,424
Pipe insulation and associated mud insulated pipe fittings above ceiling tiles	510 LF	$50/LF (Linear Foot)	$ 25,500
Presumed pipe insulation and associated mud insulated pipe fittings within wall cavity	360 LF	$50/LF	$ 18,000
Mud insulated pipe fittings on fiberglass piping	31 EA	$75/EA	$ 2,325
FIRST FLOOR			
Nine-inch by nine-inch (9x9) floor tile and associated adhesive	2,665 SF	$6/SF	$ 15,990
Nine-inch by nine-inch (9x9) floor tile and associated adhesive beneath carpeting	320 SF	$8/SF	$ 2,560
Floor tile adhesive	64 SF	$6/SF	$ 384
Pipe insulation and associated mud insulated pipe fittings above ceiling tiles	425 LF	$25/LF	$ 10,625
Pipe insulation and associated mud insulated pipe fittings	520 LF	$25/LF	$ 13,000
Mud insulated pipe fittings on fiberglass piping	25 EA	$75/EA	$ 1,875
TOTAL			**$ 279,827**

SF = Square Feet
LF = Linear Feet
EA = Each

TABLE 2

SUMMARY OF IDENTIFIED SUSPECT PCB CONTAINING MATERIALS AND ASSOCIATED ESTIMATES FOR REMOVAL AND DISPOSAL

TABLE 2
SUSPECT PCB-CONTAINING
CAULK/GLAZING INVENTORY/COST ESTIMATE
DHHS BUILDING
211 STATE STREET, AUGUSTA, ME

PCB-CONTAINING CAULK REMEDIATION	APPROXIMATE QUANTITY (EA)	MANDAY COST PER WINDOW	TOTAL ESTIMATED EFFORT	COST PER UNIT	ESTIMATED COST RANGE
DHHS BUILDING					
Window and Door Units	97	1.0 Manday/Unit	97	$ 1,400.00	$135,800
Sub-Total A					**$135,800**
Consultation Fees	1			$ 30,000.00	$30,000
Waste Disposal	1	-	-	$ 75,000.00	$75,000
Sub-Total B					**$105,000**
TOTAL					**$240,800**
TOTAL ESTIMATED COST RANGE					**$217,000 - $265,000**

ATTACHMENTS

ATTACHMENT A

ASBESTOS INSPECTOR CERTIFICATION(S)
LEAD RISK ASSESSOR CERTIFICATION

R.J. Enterprises, Inc.

This is to certify that:

Deborah Kasik

has completed the requisite 4 -hour refresher training, and has passed an examination for the

Asbestos Inspector Refresher

course pursuant to Title II of the Toxic Substance Control Act, 15 U.S.C. 2646
and Maine State Regulations 06-096 CMR 425.5 (E)

11/02/18	**11/02/19**	
Date(s) of Training	*Expiration Date*	*Elizabeth Storer, Director of Training*
11/02/18	100%.	
Exam Date	*Exam Score*	*Elizabeth Storer, Training Instructor*
AIR-18-11-1-4		**TP-0031**
Certificate Number		*Training Provider ID #*

State of Maine
Asbestos Abatement Program

Deborah A. Kasik

Inspector
Cert No. AI-0177
Trn.Exp.Date 11/02/2019

Expiration Date 11/30/2019

This is not a legal form of official identification

51 River Road, Brunswick, ME 0401

email info@rjenterprisesinc.net

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JANET T. MILLS
GOVERNOR

GERALD D. REID
COMMISSIONER

May 8, 2019

Attn: Deborah A. Kasik
CES, Inc.
PO Box 639
Brewer, Maine 04412

Dear Ms. Kasik,

Your lead application for certification has been received and **approved**. You have been granted certification as a **Lead Risk Assessor LR-0003**. Enclosed is your wallet card, with an expiration date of **May 31, 2020**. All employees working on a lead abatement project must carry this photo ID wallet card. The card is property of the individual to whom it is issued. Your responsibility as a licensee is to ensure delivery of the card to person in your employment. This letter should be retained for your company files as record of certification. Please attach 1 updated passport size photo with every application.

Thank you for your cooperation and your completed application(s). Applications can now be found on our DEP webpage at the following:
http://www.maine.gov/dep/rwm/lead/forms/index.htm

If you have any questions on this certification or on any other aspect of DEP's lead abatement licensing program, please call Sandy Moody (207) 287-7751 or email sandy.j.moody@maine.gov

Sincerely,

Sandra J. Moody

Sandra J. Moody, Environmental Specialist
Division of Remediation
Bureau of Remediation and Waste Management

Enclosure

State of Maine
Lead Abatement Program

Deborah A. Kasik

Risk Assessor
Cert No. LR-0003
Trn.Exp.Date 05/08/2020
Expiration Date 05/31/2020
This is not a legal form of official identification

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826
RAY BLDG., HOSPITAL ST.

BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04679-2094
(207) 764-0477 FAX: (207) 760-3143

web site: www.maine.gov/dep

ATTACHMENT B

PREVIOUS ASBESTOS ASSESSMENT REPORT
URS 2002

URS

URS Corporation
115 Water Street, Suite 3
Hallowell, Maine 04347

ASBESTOS IDENTIFICATION SURVEY
DHS BUILDING
AUGUSTA, MAINE

Prepared for:

Mr. Joe Silva
Bureau of General Services
77 State House Station
Augusta, ME 04333-0077

JOB NO.: 28407
May 16, 2002

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1.0 INTRODUCTION

URS Corporation (URS) was retained by the State of Maine; Bureau of General Services (BGS) to conduct an asbestos identification survey at the Department of Human Services (DHS) Building, located in Augusta, Maine. The objective of the field survey was to locate and identify asbestos-containing materials (ACM) in the interior of the building.

1.1 ASBESTOS-CONTAINING MATERIALS

Mr. Michael Haughton, (URS), an asbestos inspector licensed in the State of Maine performed the field survey during the period of April 9, 2002 through April 12, 2002. During the survey, the inspector reviewed the 1987 Hall-Kimbrell asbestos identification survey and the 1999 ICON Environmental asbestos identification survey, information regarding the facility that was provided to them by BGS, visually identified interior suspect ACM and collected bulk samples of suspect ACM in accordance with the Maine Department of Environmental Protection (DEP) regulations. Forty- two bulk samples of suspect ACM building materials were collected during the field survey. Quantity estimates and locations of identified ACM were based upon information provided by BGS and from field observations

Following the completion of the survey work, the bulk samples of suspect ACM were submitted to the URS's Salem, NH laboratory for analysis. The URS laboratory is certified to perform asbestos analysis by both the National Voluntary Laboratory Accreditation Program (NVLAP) and the American Industrial Hygiene (AIHA). The method used to analyze the bulk samples collected during this survey was the recommended EPA procedure of Polarized Light Microscopy (PLM) with dispersion staining. Analytical results are presented in Appendix A. The protocol for analysis of bulk samples is presented in Appendix D.

2.0 SURVEY LIMITATIONS

The information presented in this report represents the conditions observed at the time of the site investigation. Survey data, observations and recommendations presented in this report are based upon industry-accepted methodologies used to conduct this investigation and the professional judgment of the investigator. URS Corporation is not responsible for changes in condition observed after the field investigation was completed.

As with any scientific study, facility asbestos identification surveys are subject to a variety of limitations. Limitations to be considered in interpreting the results of this survey include the following:

- Asbestos survey may not be able to identify all ACM throughout a facility. A thorough study should be capable of identifying approximately 95 percent of accessible (by non-destructive methods) ACM present. The survey and analytical protocol used for this project is presented in Appendix B and C.
- Areas not accessible at the time of the scheduled survey were not surveyed.
- This survey was conducted using non-destructive sampling methods.
- Thermal system insulation identified during the 1987 Hall-Kimbrell asbestos identification survey was not re-sampled during this survey. Samples of thermal system insulation were only collected if the material could not be referenced to the original survey or if the suspect material appeared to have been installed after the 1987 survey.
- Cost figures used in developing abatement costs were estimated, based on historical information. These costs should be considered estimates and used for budgetary purposes only. For cost projections in future years, an adjustment that considers inflation and the state of the abatement industry must be applied.

3.0 OBSERVATIONS AND FINDINGS

The DHS Building is a three-story brick, masonry structure consisting of a basement and three upper floors. During the walk-through survey of the building, the URS surveyors reviewed existing drawing plans, identified interior suspect ACM and determined quantities of suspect ACM. The asbestos inspector collected bulk samples of suspect ACM in accordance with Maine DEP regulations. Suspect ACM sampled during the survey included ceiling tile, flooring material and flooring material adhesives, pipe insulation, sheetrock and associated joint compound and laboratory fume hoods.

The following sections of this report contain brief descriptions of the building areas by floor and a summary of the types of ACM identified in those areas. An inventory of ACM materials and their locations is included in Table 1. The location of the identified ACM within the building is shown in Figures 1 through 4

BASEMENT

The Basement consists of a boiler room, mechanical space, lounge area, laboratories, restrooms and stairwells. Suspect ACM identified in the basement included twelve-inch by twelve-inch floor tile and associated floor tile mastic (four types), nine-inch by nine-inch floor tile and associated floor tile mastic, pipe insulation, mud-insulated pipe fittings, ceiling tile (two types) and sheet rock and associated joint compound. Materials identified as ACM included nine-inch by nine-inch off-white floor tile and associated mastic, twelve-inch by twelve-inch dark off-white floor tile with gray design and associated mastic, pipe insulation, mud-insulated pipefittings and two-foot by four-foot white ceiling tile with pin dot design.

FIRST FLOOR

The first floor consists of laboratories located in the east wing and office areas located in the west wing, entryway, reception area, restrooms and stairwells. Suspect ACM identified on the first floor includes twelve-inch by twelve-inch green floor tile and associated floor tile mastic, nine-inch by nine-inch floor tile and associated floor tile mastic (two types) ceiling tile (three types), pipe insulation, mud-insulated pipe fittings, laboratory fume hoods, sheet rock and associated joint compound. Material identified as ACM included nine-inch by nine-inch brown and off-white floor tile and associated mastic, pipe insulation, mud-insulated pipe fittings and laboratory fume hoods.

SECOND FLOOR

The second floor consists of east and west office wings, common areas, restrooms and stairwells. Suspect ACM identified on the second floor includes twelve-inch by twelve-inch white floor tile and associated floor tile mastic, nine-inch by nine-inch floor tile and associated floor tile mastic, ceiling tile, pipe insulation, mud-insulated pipe fittings and sheet rock and associated joint compound. Material identified as ACM included nine-inch by nine-inch off-white floor tile and associated floor tile mastic located under carpets, nine-inch by nine-inch floor tile brown and associated floor tile mastic, pipe insulation and mud-insulated pipe fittings.

THIRD FLOOR

The third floor consists of a west office wing, common areas, restrooms and stairwells. Suspect ACM identified on the third floor includes nine-inch by nine-inch floor tile and associated floor tile mastic, pipe insulation, mud-insulated pipe fittings and sheet rock and associated joint compound. Material identified as ACM included nine-inch by nine-inch unknown color floor tile and associated floor tile mastic located under carpets, nine-inch by nine-inch brown floor tile and associated floor tile mastic, pipe insulation and mud-insulated pipe fittings.

PENTHOUSE

The Penthouse consists of an area used to house a mechanical HVAC system. Suspect ACM identified in the Penthouse includes exterior transite siding, pipe insulation and mud-insulated pipe fittings. Materials identified as ACM include exterior transite siding, pipe insulation and mud-insulated pipe fittings.

4.0 RECOMMENDATIONS

The ACM identified throughout the facility was found to range from fair to good condition, with the exception of the nine-inch by nine-inch floor tile located in the Custodian's Closet located on the second floor and the pipe insulation located in the Penthouse. These materials were observed to be in poor condition and should be removed.

Asbestos fibers are potential health hazards when they become airborne. As long as this material remains intact, undamaged, and in good condition, the material may be managed in place. However, current regulations require that asbestos-containing building materials be either removed if the materials will be disturbed by renovation, demolition, or other building maintenance activities. An Operation and Maintenance (O&M) plan should be implemented to manage the materials in place until such a time when they have been removed. ACM identified during this survey that will be impacted by the planned renovation project should be removed prior to the initiation of the actual renovation work. Upon finalization of the renovation plans the actual extent of impact to the existing ACM can be determined. ACM abatement should be performed using approved methods in accordance with applicable regulations established by the U.S. Environmental Protection Agency (EPA), OSHA and Maine DEP. The ACM impacted by planned renovation activities must be removed by a State of Maine licensed asbestos abatement contractor.

5.0 BUDGETARY COST ESTIMATES

URS has developed preliminary cost estimates for abatement of ACM identified during the survey. These estimates do not include material replacement costs or associated design and project monitoring fees or regulatory agency notification fees. Actual abatement costs will vary depending upon the quantity of material removed at any one time. These cost estimates assume that the ACM will be removed in a friable state.

ACM ABATEMENT COSTS
DHS BUILDING
AUGUSTA, MAINE

ACM	Approximate Quantity	Unit Cost	Cost
Pipe Insulation	3,525 Linear Feet (LF)	$15.00/LF	$ 52,875
Ceiling Tile	900 Square Feet (SF)	$ 10.00/SF	$ 9,000
Floor Tile	23,405 SF	$ 2.50/SF	$ 58,512
Floor Tile Mastic	8,025 SF	$5/SF	$40,125
Exterior Transite Siding	2,000 SF	$3/SF	$6,000
Fume Hoods	7 Each (EA)	$500/EA	$3,500
Mud Insulated Pipe Fittings	470 EA	$25/EA	$11,750
Total Estimated Cost Range			**$175,000 - $200,000**

URS has estimated asbestos abatement project duration of between 75 working days of eight – hour contractor shifts, using an 8-person crew.

6.0 REPORT CERTIFICATION

This report was prepared and reviewed by URS Corporation for the sole use of the State of Maine Bureau of General Services and it's constituents and should not be reproduced without full, written authorization from the Bureau of General Services.

Inspector:

Michael Haughton

AI-0167
Maine DEP License No.

May 16, 2002
Date

Quality Control:

Dennis B. Kingman, Jr.

Senior Project Manager
Title

Date

TABLES

TABLE 1

ASBESTOS-CONTAINING MATERIALS
DHS BUILDING
AUGUSTA, MAINE

BASEMENT

Location	Material Type	Sample Number	Asbestos Percent and Type	Estimated Quantity of ACM	Condition	Recommended Response Action
Mechanical Room	Pipe Insulation	HK114702	35% Chrysotile	550 LF	Good	O & M
	Mud Insulated Pipe Fittings	HK114703	15% Chrysotile	60 EA	Good	O & M
Ernie's Room	Pipe Insulation	HK114702	35% Chrysotile	225 LF	Good	O & M
	Mud Insulated Pipe Fittings	HK114703	15% Chrysotile	12 EA	Good	O & M
Laboratories	Pipe Insulation	HK114702	35% Chrysotile	300 LF	Good	O & M
	Mud Insulated Pipe Fittings	HK114703	15% Chrysotile	130 EA	Good	O & M
		08	5% Amosite	900 SF	Good	
	Ceiling Tile	01	2% Chrysotile	600 SF	Good	O & M
	Floor Tile and Associated Mastic	02	1% Chrysotile			O & M
Evidence Room	Pipe Insulation	HK114702	35% Chrysotile	100 LF	Good	O & M
	Mud Insulated Pipe Fittings	HK114703	15% Chrysotile	20 EA	Good	O & M
Corridor	Pipe Insulation	HK114702	35% Chrysotile	200 LF	Good	O & M
	Mud Insulated Pipe Fittings	HK114703	15% Chrysotile	50 EA	Good	O & M
	Floor Tile and Associated Mastic	01 02	2% Chrysotile 1% Chrysotile	750 SF	Good	O & M

Location	Material Type	Sample Number	Asbestos Percent and Type	Estimated Quantity of ACM	Condition	Recommended Response Action
Supply Room	Pipe Insulation Mud Insulated Pipe Fittings	HK114702 HK114703	35% Chrysotile 15% Chrysotile	200 LF 30 EA	Good Good	O & M O & M
Boiler Room	Pipe Insulation Mud Insulated Pipe Fittings	HK114696 HK114690	35% Chrysotile 15% Chrysotile	200 LF 16 EA	Good Good	O & M O & M
Storage Room	Pipe Insulation Mud Insulated Pipe Fittings	HK114696 HK114690	35% Chrysotile 15% Chrysotile	325 LF 30 EA	Good Good	O & M O & M
Break Room	Pipe Insulation Mud Insulated Pipe Fittings	HK114702 HK114703	35% Chrysotile 15% Chrysotile	75 SF 30 EA	Good Good	O & M O & M

FIRST FLOOR

Location	Material Type	Sample Number	Asbestos Percent and Type	Estimated Quantity of ACM	Condition	Recommended Response Action
Laboratories	Pipe Insulation	HK114702	35% Chrysotile	350 LF	Good	O & M
	Mud Insulated Pipe Fittings	HK114703	15% Chrysotile	50 EA	Good	O & M
	Floor Tile and Associated Mastic	11 12	3% Chrysotile 1% Chrysotile	1600 SF	Good	O & M
	Fume Hoods			7 EA	Good	O & M
Corridor	Floor Tile and Associated Mastic	11 12	3% Chrysotile 1% Chrysotile	600 SF	Good	O & M
Administration Room	Floor Tile and Associated Mastic	11 12	3% Chrysotile 1% Chrysotile	100 SF	Good	O & M
Boiler Room	Pipe Insulation	HK114702	35% Chrysotile	300 LF	Good	O & M
Mechanical Room	Pipe Insulation	HK114702	35% Chrysotile	125 LF	Good	O & M
	Floor Tile and Associated Floor Tile Mastic	11 12	3% Chrysotile 1% Chrysotile	75 SF	Good	O & M
Mail Room	Pipe Insulation	HK114702	35% Chrysotile	200 LF	Good	O & M
	Floor Tile and Associated Floor Tile Mastic	IATL96216 IATL96217	10% Chrysotile 3% Chrysotile	2,000SF	Good	O & M

SECOND FLOOR

Location	Material Type	Sample Number	Asbestos Percent and Type	Estimated Quantity of ACM	Condition	Recommended Response Action
East Office Wing	Floor Tile located under carpet	11	3% Chrysotile	1,800 SF	Good	O & M
	Mud Insulated Pipe Fittings	HK114703	15% Chrysotile	30 EA	Good	O & M
Custodian's Closet	Floor Tile and Associated Mastic	IATL96216	10% Chrysotile	80 SF	Poor	Remove
West Office Wing	Floor Tile located under carpet	IATL96216	10% Chrysotile	3,500 SF	Good	O & M
	Floor Tile and Associated Mastic	11	3% Chrysotile	2,000 SF	Good	O & M
	Pipe Insulation	12	1% Chrysotile			
		HK114702	35% Chrysotile	300 LF	Good	O & M
Corridor	Floor Tile and Associated Floor	11	3% Chrysotile	300 SF	Good	O & M
	Tile Mastic	12	1% Chrysotile			

THIRD FLOOR

Location	Material Type	Sample Number	Asbestos Percent and Type	Estimated Quantity of ACM	Condition	Recommended Response Action
West Office Wing	Floor Tile located under carpet Mud Fitting	IATL96216 HK114703	10% Chrysotile 15% Chrysotile	10,000 SF 30 EA	Good Good	O & M O & M

PENTHOUSE

Location	Material Type	Sample Number	Asbestos Percent and Type	Estimated Quantity of ACM	Condition	Recommended Response Action
Attic	Transite Siding			2,000 SF	Good	O & M
Penthouse	Pipe Insulation	HK114702	35% Chrysotile	75 LF	Poor	Remove

FIGURES

APPENDIX A

POLAR LIGHT MICROSCOPY ANALYTICAL DATA

URS Corporation
5 Industrial Way
Salem, NH 03079
Tel: 603.893.0616
Fax: 603.893.6240

Dennis Kingman
URS Corporation
115 Water Street, Suite 3
Hallowell, ME 04347

URS Project #	: 03956
Laboratory Batch #	: 15032
Date Samples Received	: 4/10/02
Date Samples Analyzed	: 4/10/02
Date of Final Report	: 4/10/02

SAMPLE IDENTIFICATION:

Forty-Two bulk samples from the Bureau of General Services; HETL 1st Floor/Basement project; submitted by Michael Haughton.

These bulk samples were delivered to URS Corporation, Salem, New Hampshire for asbestos content determination.

ANALYTICAL METHOD:

Analytical procedures were performed in accordance with the U.S. Environmental Protection Agency (EPA) Recommended Method for the Determination of Asbestos in Bulk Samples by Polarized Light Microscopy and Dispersion Staining (PLM/DS)(EPA-600/M4-82-020, EPA-600/ R-93-116) and the New York Department of Health Environmental Laboratory Approval Program (NYDOH-ELAP 198.1) with the exception of resinously bound materials (please refer to the comments at the end of this report). This report relates only to those samples actually analyzed, and may not be indicative of other similar appearing materials existing at this, or other sites.

Quantification of asbestos content was determined by Calibrated Visual Estimation.

The EPA requires that friable samples with analytical results of 10% or less asbestos, by visual estimation, be treated as asbestos-containing material unless these quantities are verified using the point counting method. The point counting method is a systematic technique for estimating concentration, also using PLM. The point counting method, however, does not increase the analyst's ability to detect fibers. If you would like any of your friable samples with an asbestos content of less 10% to be point counted, please contact our office. Point counting is not required for those samples in which no asbestos is detected during analysis by PLM.

New York State regulations require that a matrix reduction be performed on all NOB (Non-Organically Bound) samples (i.e.: floor tile, adhesives, roofing materials, etc.). The URS Asbestos Laboratory complies with this directive by applying solvent and low level heat to all resinously bound materials (regardless of state or country origin) to release bound asbestos fibers from the resinous matrix without altering their optical properties. However, this procedure is not covered by the EPA methodologies (EPA-600/ M4-82-020 & EPA-600/ R-93-116) and is therefore a departure from documented protocols.

In any given material, fibers with a small diameter (<0.25µm) may not be detected by the PLM method. Floor tile and other resinously bound material may yield a false negative if the asbestos fibers are too small to be resolved using PLM. Additional analytical methods may be required. URS recommends using Transmission Electron Microscopy (TEM) for a more definitive analysis.

New York state regulations require that all friable samples in which asbestos is detected be point counted (using the NYDOH-ELAP stratified point counting method). New York state regulations also require TEM confirmation of NOB (Non Organically Bound) samples found to have No Asbestos Detected by PLM. These regulations apply only to samples taken within the State of New York.

URS will retain all samples for a minimum of three months. Further analysis or return of samples must be requested within this three month period to guarantee their availability.

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Use of the NVLAP and AIHA Logo in no way constitutes or implies product certification, approval, or endorsement by the National Institute of Standards and Technology or the American Industrial Hygiene Association.

If you have any questions regarding this report, please do not hesitate to contact ns.

Douglas R. Lawson, Ph.D, CIH
Laboratory Director

Jeffrey D. Waite
Laboratory Supervisor

NVLAP Lab ID#: 101433-0
NYDOH-ELAP #: 11020

2068

URS

Laboratory Bulk Asbestos Analysis Results

Client/ Project Title : Bureau of General Services; HETL 1st Floor/Basement
Project Number : 03956
Laboratory Batch : 15032

Date Received : 4/10/2002
Date Reported : 4/10/2002
Analyst : JDW

			Asbestos Type(s) Detected				Non-Asbestos Materials				
Lab ID #	Client ID #/ Description	Color	% Chrysotile	% Amosite	% Crocidolite	% Other	% Cellulose	% Fiber Glass/ Mineral Wool	% Other Fibrous Material (OFM)	% Non-Fibrous Material	**Comments** Analysis Methods Per EPA-600/M4-82-020, EPA-600/R-93-116, & NYDOH-ELAP 198.1 NAD - No Asbestos Detected
001	01A, Floor Tile	White	2				1			97	
002	01B, Floor Tile										Sample Not Analyzed / Positive Stop
003	01C, Floor Tile										Sample Not Analyzed / Positive Stop
004	02A, Mastic	Black	<1				2			>97	
005	02B, Mastic	Black	<1				3			>96	
006	02C, Mastic	Black	<1				3			>96	
007	03A, Ceiling Tile	Gry/Wht					35	35		30	No Asbestos Detected
008	03B, Ceiling Tile	Gry/Wht					35	35		30	No Asbestos Detected
009	03C, Ceiling Tile	Gry/Wht					35	35		30	No Asbestos Detected
010	04A, Floor Tile	Gray					1			99	NAD; Mastic (Black) Positive 2%
011	04B, Floor Tile	Gray					2			98	No Asbestos Detected
012	04C, Floor Tile	Gray					1			99	No Asbestos Detected
013	05A, Floor Tile	Tan	2				1			97	Black Mastic Positive 2%
014	05B, Floor Tile										Sample Not Analyzed / Positive Stop
015	05C, Floor Tile										Sample Not Analyzed / Positive Stop
016	06A, Floor Tile	Green					2			98	No Asbestos Detected
017	06B, Floor Tile	Green					3			97	No Asbestos Detected
018	06C, Floor Tile	Green					2			98	No Asbestos Detected
019	07A, Linoleum	Brown					2	10	8	80	NAD; Gypsum 8%
020	07B, Linoleum	Brown					2	8	10	80	NAD; Gypsum 10%

URS

Laboratory Bulk Asbestos Analysis Results

Client/ Project Title : Bureau of General Services; HETL 1st Floor/Basement
Project Number : 03956
Laboratory Batch : 15032

Date Received : 4/10/2002
Date Reported : 4/10/2002
Analyst : JDW

			Asbestos Type(s) Detected				Non-Asbestos Materials				
Lab ID #	Client ID #/ Description	Color	% Chrysotile	% Amosite	% Crocidolite	% Other	% Cellulose	% Fiber Glass/ Mineral Wool	% Other Fibrous Material (OFM)	% Non-Fibrous Material	**Comments** Analysis Methods Per EPA-600/M4-82-020, EPA-600/R-93-116, & NYDOH-ELAP 198.1 NAD - No Asbestos Detected
021	07C, Linoleum	Brown					2	10	8	80	NAD; Gypsum 8%
022	08A, Ceiling Tile	Gry/Pink	2	5			28	35		30	
023	08B, Ceiling Tile										Sample Not Analyzed / Positive Stop
024	08C, Ceiling Tile										Sample Not Analyzed / Positive Stop
025	09A, Sheetrock/Joint Compound	Gry/Wht					23	1		76	No Asbestos Detected
026	09B, Sheetrock/Joint Compound	Gry/Wht					24	1		75	No Asbestos Detected
027	09C, Sheetrock/Joint Compound	Gry/Wht					23	1		76	No Asbestos Detected
028	010A, Floor Tile	Gray					1			99	No Asbestos Detected
029	010B, Floor Tile	Gray					1			99	No Asbestos Detected
030	010C, Floor Tile	Gray					1			99	No Asbestos Detected
031	011A, Floor Tile	Gray	3							97	
032	011B, Floor Tile										Sample Not Analyzed / Positive Stop
033	011C, Floor Tile										Sample Not Analyzed / Positive Stop
034	012A, Mastic	Black	<1				2			>97	
035	012B, Mastic	Black	<1				3			>96	
036	012C, Mastic	Black	<1				2			>97	
037	013A, Floor Tile	White	2				1			97	
038	013B, Floor Tile										Sample Not Analyzed / Positive Stop
039	013C, Floor Tile										Sample Not Analyzed / Positive Stop
040	PC-01A, Pipe Covering	Blue		23			10			67	

URS

Laboratory Bulk Asbestos Analysis Results

Client/ Project Title : Bureau of General Services; HETL 1st Floor/Basement
Project Number : 03956
Laboratory Batch : 15032

Date Received : 4/10/2002
Date Reported : 4/10/2002
Analyst : JDW

			Asbestos Type(s) Detected				Non-Asbestos Materials				
Lab ID #	Client ID #/ Description	Color	% Chrysotile	% Amosite	% Crocidolite	% Other	% Cellulose	% Fiber Glass/ Mineral Wool	% Other Fibrous Material (OFM)	% Non-Fibrous Material	**Comments** Analysis Methods Per EPA-600/M4-82-020, EPA-600/R-93-116, & NYDOH-ELAP 198.1 NAD - No Asbestos Detected
041	PC-01B, Pipe Covering										Sample Not Analyzed / Positive Stop
042	PC-01C, Pipe Covering										Sample Not Analyzed / Positive Stop

8119

~~Attn~~ Positive Stop.

URS Corporation
Bulk Sample Chain Of Custody

Call w/ Results

Laboratory Batch# B15032

URS Corporation 7 University Drive Augusta, Maine 04330 Tel # 207-623-9188 Fax# 207-622-6085	Project Number: await for # Client: Bureau of General Services (See Back Of Page) Location: HCTC (Basement) Project Manager: Kirkman Date Results Due: 4/10/02

Samples Taken By: HOUGHTON | Date Samples Taken: 4/9/02

Lab #	Sample #	Sample Location/ Description	Asbestos Type	%
	01A	9X9 off-white FT w/		
	01B	↓		
	01C	↓		
	02A	Associated Black MASTIC		
	02B	↓		
	02C	↓		
	03A	2X4 white CT w/ fisure Design		
	03B	↓		
	03C	↓		
	04A	12X12 off-white FT w/ gray Design		
	04B	↓		
	04C	↓		
	05A	12X12 Cream FT w/ ~~gray & purple~~ LIGHT brown Design		
	05B	↓		
	05C	↓		
	06A	12X12 Green FT w/ gray & purple Design		
	06B	↓		
	06C	↓		
	07A	Brown Linoleum w/ white & Black Design		
	07B	↓		
	07C	↓		
	08A	2X4 White CT w/ pin-dot design		
	08B	↓		
	08C	↓		
	09A	Sheetrock/joint compound		
	09B	↓		
	09C	↓		
	10A	12X12 Light Gray FT w/ orange & green Design		
	10B	↓		
	10C	↓		

Asbestos Types: CH=Chrysotile AM=Amosite CR=Crocidolite TR=Tremolite
AN=Anthophyllite AC=Actinolite
ND=No Asbestos Detected NA=Not Analyzed NEMTA=Not Enough Material To Analyze

Relinquished By: M. Paul Hoyt	Date:	Received By: John G. Hazard	Date: 4/10/02
Company URS, Corp	Time:	Company: URS Salem, NH	Time: 10 AM

URS Corporation
IH Sample Chain Of Custody

Laboratory Batch# B15032

URS Corporation 115 Water Street, Suite 3 Hallowell, Maine 04347 Tel # 207-623-9188 Fax# 207-622-6085	Project Number: Client: Bureau of General Services (See Back Of Page) Location: 1ST Floor HETL Project Manager: Rumsey Date Results Due: 4/10/02

Samples Taken By: MLH	Date Samples Taken: 4/9/02

Lab #	Sample #	Sample Location/ Description	Analysis	Results
	11A	9x9 Brown FT w/ white dark brown design		
	11B			
	11C			
	12A	Associated Black Mastic		
	12B			
	12C			
	13A	9x9 off-white FT w/ Burn design		
	13B			
	13C			
	PC-01A	Blue colored pipe covering located in Basement area		
	PC-01B			
	PC-01C			

ND=None Detected NA=Not Analyzed NEMTA=Not Enough Material To Analyze

Relinquished By: [signature] Company: URS, Corp	Date: 4/9/02 Time:	Received By: [signature] Company: URS Salem NH	Date: 4/10/02 Time: 10 am

APPENDIX B

SURVEY, SAMPLING AND ANALYTICAL PROTOCOL

APPENDIX B

SURVEY, SAMPLING AND ANALYTICAL PROTOCOL
SURVEY PROTOCOL

The first step in developing a comprehensive facility asbestos management plan is to conduct a building survey to identify the locations and quantities of suspect ACM and to determine the conditions of those materials.

The scope of work for this survey included details of how the survey was to be conducted, the information to be gathered, and the form and content of the survey report.

The facility survey was conducted by one or more DEP-certified URS asbestos surveyors. The specifics of the survey included the following:

- Reviewing any existing asbestos survey reports.
- Visually inspecting accessible building areas to determine the location of suspect ACM.
- Sampling and evaluating suspect ACM to determine its accessibility and limit the occupancy of the surrounding building area to employees.
- Compiling and reporting survey data by functional area.
- Quantifying homogeneous materials, including both friable and non-friable suspect ACM.
- Gathering information during the survey concerning locations, quantities, and types of materials.

BULK SAMPLING PROTOCOL

During the survey of this facility, bulk samples of suspect ACM were collected for laboratory analysis. The bulk samples were collected and categorized according to the homogeneous building materials being evaluated. The designation of homogeneous building materials was made by the URS surveyor. Once suspect homogeneous materials were identified, bulk samples were collected in accordance with the EPA protocol as outlined in the Asbestos Hazard Emergency Response Act (AHERA) regulations. If a single sample of a homogeneous material was found to contain asbestos, then that homogeneous material was identified as containing asbestos throughout the building. Homogeneous flooring materials were determined by similarity of floor tile size, color, and age, if determinable.

Sampling techniques generally involved one of two different sampling procedures.

1. Core samples were collected from certain materials, such as pipe covering and fittings, to sample these potentially multi-layered materials. Disposable core boring devices were used for this purpose to minimize potential cross contamination of samples.

2. Ceiling tile, floor tile, and similar materials were sampled by breaking off a portion of the desired material from an inconspicuous location.

Samples were given a unique sample number, which included the project number, and were placed in sample containers for transportation to URS's laboratory for analysis. The location of each sample was noted on the building drawing. Information regarding the sample location was also entered onto URS's Chain-of-Custody forms. The quantity, location and physical condition of each material were recorded on URS's field data sheets.

Sample locations (from insulation materials) were covered with duct tape or encapsulant after sampling. Locations in unoccupied portions of buildings were labeled. Sample points on fireproofing, plaster, ceiling tile and transite in the buildings were not necessarily labeled or repaired.

ANALYTICAL PROTOCOL

Samples collected during this facility asbestos survey were transported to URS's accredited laboratory for microscopic analysis. URS's analytical laboratory is accredited by the National Institute for Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP) for bulk asbestos analysis as required under EPA AHERA regulations. URS's laboratory is also accredited by the American Industrial Hygiene Association (AIHA) for asbestos air sample analysis. Chain-of-Custody was maintained by the laboratory through the use of URS's Chain-of-Custody forms. After being logged in by the laboratory and prepared for analysis, samples were analyzed following the EPA-recommended method of bulk sample analysis by polarized light microscopy with dispersion staining. A description of this analytical method is contained in Appendix D of this document.

In preparing the bulk materials for analysis, a small representative portion of each sample was selected from the bulk material collected in the field and mounted on a glass slide. If the bulk material appeared to have a uniform consistency, a minimum of two slides were prepared for viewing. If, however, the bulk material appeared to contain layers, a separate set of slides was prepared for each layer and results for each layer determined independently. Analytical results for layered samples were reported as an average of the asbestos composition of the material as a whole. In some situations multiple slides were prepared from particularly complex samples, such as floor tile, which were suspected to contain low percentages of asbestos. In cases where replicate samples of a homogeneous material were collected, they were analyzed until one was found to be positive (which meant the entire homogeneous area was deemed positive) or until each sample was analyzed to prove a negative result.

Sample results were reported either as "none detected" (ND) if no asbestos was found, or by type and percent composition if any form of asbestos was observed. EPA, OSHA, and DEP all recognize a level of greater than one percent asbestos by weight content or visual estimation as the minimum level for requiring a material to be treated as asbestos-containing. The identification of the presence or absence of asbestos in a material involves several specific analytical procedures. The percentage composition, on the other hand, is simply a visual approximation on the part of the analyst and may vary based on the way the sample slide is prepared and the specific analyst performing the identification. Estimating an accurate percentage composition of low-level asbestos-containing materials is very difficult. Therefore, samples identified positively as having an asbestos content of less than 10 percent by visual estimation are required to be re-analyzed by the point counting procedure described in the EPA "Interim Method for the Determination of Asbestos in Bulk Insulation Samples," method number EPA-600/M4-82-020, December 1982. A more definitive analysis can be obtained by transmission electron microscopy (TEM) analysis and is often used for confirming or denying the presence of asbestos in floor tile samples (in particular 12-inch by 12-inch tile) when previously analyzed via PLM and initially determined to be non-detected for asbestos.

It should be noted here that the analysis of a debris sample is a qualitative analysis for the presence or absence of asbestos in that particular sample. The EPA interim PLM method for analyzing bulk samples was intended to be used for analyzing asbestos-containing manufactured products or materials with near uniform concentrations of asbestos and not for the analysis of debris or other possibly contaminated materials which are not uniform in nature. Therefore percentage composition for soils, debris or dust samples is not indicated in this report. Further, a negative finding in these samples indicates only that the debris actually sampled was not found to contain asbestos. No inference should be made from any negative result concerning other debris, which was not specifically sampled.

Approximately ten percent of the samples collected during the field survey were reanalyzed as part of URS's quality control (QC) program. These QC samples were analyzed in URS's laboratory by an analyst different from the one who performed the initial analyses.

After the completion of both the initial and quality control analytical procedures, samples are stored in URS's sample storage area files and are maintained there for at least one year. At the end of one year URS will offer the client the opportunity to either have the samples properly disposed of by URS or have them returned for retention by the client.

APPENDIX C

POLARIZED LIGHT MICROSCOPY ANALYTICAL METHODS

APPENDIX C

POLARIZED LIGHT MICROSCOPIC ANALYTICAL METHOD

Polarized Light Microscopy (PLM) is the only analytical method for asbestos identification, which depends upon the unique optical crystallographic properties of the various crystals, phases in the sample. These properties—refractive indices, dispersion of refractive indices, birefringence, sign of elongation and extinction angle are unique to the crystalline state and, therefore, unequivocally identify chrysotile, lizardite, antigorite, anthophyllite, tremolite, actinolite, grunerite, cummingtonite, and riebeckite whether fibrous or non-fibrous.

PLM includes the classical optical crystallographic methods and the more recent dispersion staining procedures. Dispersion staining is, in effect, just a way of using optical crystallography for the study of transparent particles. It supplements the classical methods and, in some cases, makes the use of PLM for the study of crystals easier. For example, with one polar isotropic, substances show a single characteristic dispersion staining color, but anisotropic substances show different colors corresponding to the different refractive indices in different orientations. Chrysotile, for example, shows blue and blue-magenta colors, crosswise and lengthwise, respectively, for each fibrous crystal when mounted in Cargille high dispersion liquid n25=1.550 and observed by central stop dispersion staining (DS). The actual analysis begins by adding a Cargille refractive index liquid (nD-1.550, high dispersion) to a 0.5-1 mg slide sample. The particles should be dispersed in this liquid by teasing aggregates apart using two fine needles before covering with a cover slip.

A. Chrysotile

In liquid nD-1.550, chrysotile has distinctive fine flexible fibrils (often curly) plus straight bundles of such fibrils and distinctive dispersion staining colors usually blue-magenta parallel to the fiber axis and blue perpendicular (central stop colors). Different samples of chrysotile, however, may vary somewhat in the wavelength at which particle and liquid have the same refractive index. Parallel to the length ranges from about 440 to 560 nm and perpendicular to the length from about 560 to 660 nm.

The presence of chrysotile and other fibrous particles is sometimes secured by tiny particles of mortar. This is especially troublesome because most of these particles are so different in refractive index from the mounting liquid; they appear bright white and central stop dispersion staining. Trying to see the asbestos is like trying to see while driving at night with an oncoming stream of cars with high beam headlights. Often one can be confident the particles are covering obscured fibers because of their pattern-the Milky Way effect.

Sometimes a stray fibril may poke its way out into the liquid to show dispersion staining colors. It is always helpful in situations like this to examine the "milky way" with crossed polars since the underlying fibers often then become visible and recognizable as fibers. Crossed polars also help to locate smaller fibers and small percentages of fibers. Each sample should be quickly

scanned with crossed polars as well as dispersion staining before reporting the absence of asbestos fibers.

A mortar coating can sometimes be removed from the fibers by holding one end on the slide with one needle (lying flat) and scraping with a second needle along a fiber bundle, either before or after adding the mounting fluid. It may also be possible to remove enough mortar to see some dispersion staining colors by pressing the cover slip down hard on the particles (in the liquid) with a pencil eraser and sliding the cover slip in a circular pattern with the eraser. Another technique is to tease and scrape a fiber bundle out straight, cover with a cover slip and add the liquid so that it runs down the length of the fiber washing away much of the loosened mortar.

B. Amosite and Crocidolite

Amosite and crocidolite both have very pale yellow to white borders by central stop DS in liquid nD=1.550HD because their refractive indices are so much higher. Crocidolite usually shows a blue absorption color. If no anisotropic fibers with refractive indices much higher than 1.550 are present, no asbestos other than chrysotile can be present.

If higher index particles are observed in liquid nD=1.550HD a second sample is mounted in nD=1.605HD. Likely compounds visible in this liquid include tremolite, anthophyllite, actinolite, and wollastonite.

If higher index particles are observed in liquid nD=1.605, a third sample is mounted in Cargille liquid nD-1.680 and examined with DS. Most amosites used in buildings will show a wavelength of about 460 nm (golden yellow) parallel to the length and about 600 nm (blue-magenta) to >660 nm (pale blue) perpendicular to the length depending on fiber orientation. A perpendicular lambda 0 of >660 nm corresponds to the alpha vibration direction, which usually shows parallel extinction; a lambda 0=600 nm perpendicular to the length corresponds to beta (also no a parallel extinction view). As with most silicate minerals substitutional solid solution, in this case Fe2+ with Mg2+, can cause alpha, beta, and gamma to vary. Higher or lower values of refractive index for any one of the three vibration directions will mean correspondingly higher or lower values for all three.

Although the refractive indices of amosite and other amphiboles may vary over a wide range, most are not from commercial sources. Nearly all Amosite used commercially in insulation has the optical properties given above.

If, in liquid nD=1.680, low birefringent fibers show lambda 0 colors close together in the yellow to golden magenta, crocidolite is strongly indicated. If they show a negative sign of elongation (higher lambda 0 parallel to the length), and blue absorption colors with pleochroism (blue parallel and gray-blue perpendicular to the fiber length) crocidolite is present. Further confirmation can be obtained by mounting a third sample in Cargille refractive index liquid nD=1.70. Crocidolite will show central stop colors close to 600 nm (blue magenta) parallel to the length and about 520 (red magenta) perpendicular. Again, some parallel movement of the alpha, beta, and gamma colors should be expected for crocidolites from different sources.

We should emphasize that DS is a method for rapid refractive index determination. To be certain the observed colors mean a particular asbestos is present, one must be certain the DS data are consistent with particle orientation, i.e., the relationship between the optical properties and the crystallographic axes.

C. Other Asbestiform Minerals

When analyzing insulation, one usually skips the nD=1.605 liquid but if during examination anomalous results are observed with the 1.550 nD 1.680 liquids, that is, highly fibrous fibers with lambda colors in other than the prescribed ranges for chrysotile, amosite, and crocidolite, then fibrous tremolite, actinolite, or anthophyllite may be present. These are rarely found, however, in insulation. When these anomalous results are obtained, you should characterize the fibers in those liquids as to refractive indices relative to those liquids and extinction angles. If all of the fibers show parallel extinction and pale blue colors in 1.680, they are anthophyllite (if the possibility of organic fibers is first eliminated). Amosite shows parallel extinction as well, but good lambda colors in the visible in 1.680 identify this asbestos mineral. Tremolite will show strong colors in al orientations in nD=1.605 high dispersion liquid.

Actinolite has morphology and optics similar to tremolite except that the indices are all higher. Actinolite may also show pleochroism (green to colorless). It is best studied in high dispersion liquid nD=1.630HS in which alpha and gamma on the oblique extinction view show magenta and golden yellow, respectively. On the parallel extinction view, gamma (lengthwise) shows 0 ca. 470 nm or golden magenta and B (perpendicular) shows 0 ca. 495 nm also golden magenta although with more red. Ferroactinolites have been higher iron content and correspondingly higher refractive indices.

Tremolite, actinolite, and ferroactinolite are portions of a continuous solid solution series in the same manner as the amosite minerals, cummingtonite and grunerite. The name to use for a given amphibole, therefore, depends directly on the optical properties. An unusually asbestiform mineral is picrolite described as a fibrous form of antigorite. Its refractive indices are higher than chrysotile, which it closely resembles.

D. Interfering Substances

A few common substances show dispersion staining colors similar to those of chrysotile and some are elongated as well. These include two polymorphs of chrysotile: Antigorite and lizardite, quartz, talc, paper fibers and hairs. All of these show dispersion staining colors in 1.550 and all except talc and paper fibers show colors somewhat similar to chrysotile.

Quartz, although usually glassy flakes, shows blue and magenta central stop colors very similar to chrysotile in the 1.550 liquid. The shape is very different, however, and only a few views are oriented to show the magenta color.

Animal hairs, including human, also have refractive indices in the same range as chrysotile and, if finely fibrillated by electric razor for example, can be confusingly similar. Such fibrillated fibers are, however, rare; they also usually show melanin pigmented particles and indices

sufficiently different from chrysotile to avoid confusion. Paper fibers also show a crosswise index close to 1.550 (but lower) and the lengthwise index is much higher, hence shows a yellow central stop color. The morphology of paper fibers is also distinctive unless they are very tiny slivers broken away from larger fibers.

APPENDIX D

DEFINITIONS AND REGULATIONS

APPENDIX D

DEFINITIONS AND REGULATIONS

Abatement: A range of procedures to control fiber release from ACM. Abatement options include removal, repair and encapsulation, enclosure, or operations and maintenance activities.

Accessible: With regard to ACM it means that the material is subject to disturbance by building occupants including custodial or maintenance personnel in the course of their normal activities.

Accredited: When referring to a person or laboratory, this means that such person or laboratory is accredited in accordance with Section 206 of Title II of the Toxic Substances Control Act. Accreditation is given to laboratories which analyze bulk material samples for asbestos and satisfy the proficiency requirements established by the National Institute for Science and Testing (NIST).

Asbestos: The term asbestos includes chrysotile, amosite, crocidolite, tremolite, anthophyllite, and/or actinolite including any of these minerals, which have been chemically treated and/or altered.

Asbestos-Containing Material (ACM): Material composed of asbestos of any type and in an amount greater than one percent by weight or visual estimation, either alone or mixed with other fibrous or non-fibrous materials (e.g., surfacing, thermal system insulation, miscellaneous material).

Asbestos-Containing Building Material (ACBM): ACM that is a building material (e.g. flooring, wall boards, ceilings, insulation, etc.)

Friable Asbestos Material: Material that contains more than one percent asbestos by weight or visual estimation that can be crumbled, pulverized, or reduced to powder by hand pressure when dry.

Non-friable Asbestos Material: Material that contains asbestos such that the fibers have been locked-in by a bonding agent, coating, binder, or other material such that the asbestos will not release fibers during any reasonably appropriate use, handling, storage, transportation, or processing.

Operations and Maintenance (O&M) Program: A program of work practices designed to maintain undamaged ACM in good condition and to repair ACM and clean-up asbestos fibers which may be inadvertently released during fiber release episodes.

Removal: The complete removal of ACM from a damaged area, a functional space, or a homogeneous area in a building.

Repair: Returning damaged ACM to an undamaged condition so as to prevent fiber release.

Response Action: A method, including removal, encapsulation, enclosure, or operations and maintenance (including repair), that protects against the release of fibers from friable ACM.

Routine Maintenance Area: An area, such as a boiler room or mechanical room, that is not normally occupied by non-maintenance individuals and in which maintenance employees or contracted workers regularly conduct maintenance activities. Routine maintenance areas with ACRSM present require AAsbestos-Caution≅ stickers be appropriately posted.

Small-Scale Short Duration (SSSD) Projects: Asbestos abatement activities impacting less than 3 linear feet or 3 square feet of ACM.

Surfacing ACM: Surfacing asbestos-containing materials such as sprayed-on or trowel-applied fireproofing.

Surfacing Material: Material that is sprayed-on, troweled-on, or otherwise applied to surfaces. Examples include acoustical plaster on ceilings and fireproofing materials on structural members.

Thermal System Insulation (TSI): Material in a building applied to pipes, fittings, boilers, breeching, tanks, ducts, or other components to improve the thermal characteristics of the component by preventing heat loss or gain, or preventing water condensation.

Visible Asbestos-Containing Material: Any quantity of ACM, which is visible to the unaided eye, including dust and other types of debris.

REGULATIONS

REGULATORY OVERVIEW

Over the past two decades, the regulatory community has become increasingly aware of the potential hazards of inhaled asbestos fibers. Regulations have been developed by federal, state, and local agencies to protect workers and the general public from the release of asbestos fibers. Departments of the federal government responsible for the regulation of asbestos include:

- The U.S. Department of Labor (DOL) through the Occupational Safety and Health Administration (OSHA) has developed two standards designed to protect employees at their work sites. These two standards are the Asbestos Regulations for General Industry (29 CFR 1910.1001) and Asbestos Regulations for the Construction Industry (29 CFR 1926.1101). These OSHA regulations apply only to employers and employees. Employees involved in performing Operations and Maintenance (O&M) activities who might potentially come into contact with asbestos-containing materials would clearly be addressed by the regulations. Second, employees who might inadvertently be exposed to asbestos-containing materials during the normal course of their work activities would also be covered by these regulations. Third, construction-related activities (e.g. asbestos abatement) are also covered.

- The U.S. Department of Transportation (DOT) regulates the transport of commercial asbestos and asbestos waste and dictates labeling of waste bags and transport vehicles. The primary responsibility under DOT regulations lies with the waste hauler. However, it is incumbent upon the building owner to determine that waste hauled from its facilities is properly bagged and labeled, that the waste arrives at an approved landfill, that a proper manifest is completed: documented and maintained with abatement records, and that the hauler is properly licensed to haul asbestos waste.

- The U.S. Environmental Protection Agency (EPA) has promulgated a series of regulations which focus on asbestos issues. Pertinent stipulations in these regulations are as follows:

Clean Air Act (CAA)

The EPA regulates asbestos under the National Emission Standards for Hazardous Air Pollutants (NESHAP), which is listed as Section 112 of the Clean Air Act (CAA). Under NESHAP, a hazardous pollutant has been defined as "an air pollutant to which no ambient air quality standard is applicable and which, in the judgment of the Administrator, causes or contributes to air pollution which may reasonably be anticipated to result in an increase in mortality or an increase in serious irreversible or incapacitating reversible illness." The NESHAP program currently regulates arsenic, benzene, beryllium, mercury, radionuclides, and vinyl chloride along with asbestos. The purpose of the asbestos NESHAP is to protect the public from exposure to asbestos in the ambient air. The asbestos NESHAP program

pertains primarily to demolition and renovation of buildings containing asbestos building materials. (The asbestos NESHAP also regulates manufacturing and fabricating operations, spray application of asbestos, waste disposal for asbestos mills, inactive waste disposal sites, and established standards for asbestos mills and roadways.) The specific provisions of NESHAP for demolition or renovation of buildings with asbestos containing are broken down into categories of notification, work practices, waste handling, and waste disposal.

The building owner would be responsible for compliance with NESHAP regulations primarily during abatement activities. Issues such as work practices, waste handling, and waste disposal are normally specified in the project's plans and specifications. Verifying adherence to these plans and specifications during the abatement process would be the building owner's responsibility.

Resource Conservation Recovery Act (RCRA)

The disposal of asbestos was originally regulated under RCRA in 1976. However, in that same year, asbestos, because it does not migrate in soil or pose any threat to ground water, was not listed by RCRA, and the authority for asbestos control was transferred to NESHAP. Therefore, the current RCRA regulations pertain only to facility siting and general landfill operations. The facility siting/licensing issue that would involve the building owner is the determination by the building owner staff that the facility where asbestos waste is disposed of is an EPA licensed facility.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

This act is most commonly referred to as "Superfund." The authority of CERCLA, as clarified in the Superfund Amendments Reauthorization Act (SARA), regulates asbestos as a hazardous substance. Reportable quantities (RQs) have been established to deal with releases or threats of releases of hazardous substances from vessels and from facilities including trucks and landfills. The trigger RQ for a release, or threat of release, of asbestos is one pound.

Superfund issues relative to the removal of ACM relate primarily to improper disposal of asbestos waste. The building owner is responsible for ensuring that a manifest for the waste is completed and signed by the licensed landfill facility and returned to the building owner for inclusion in their permanent records.

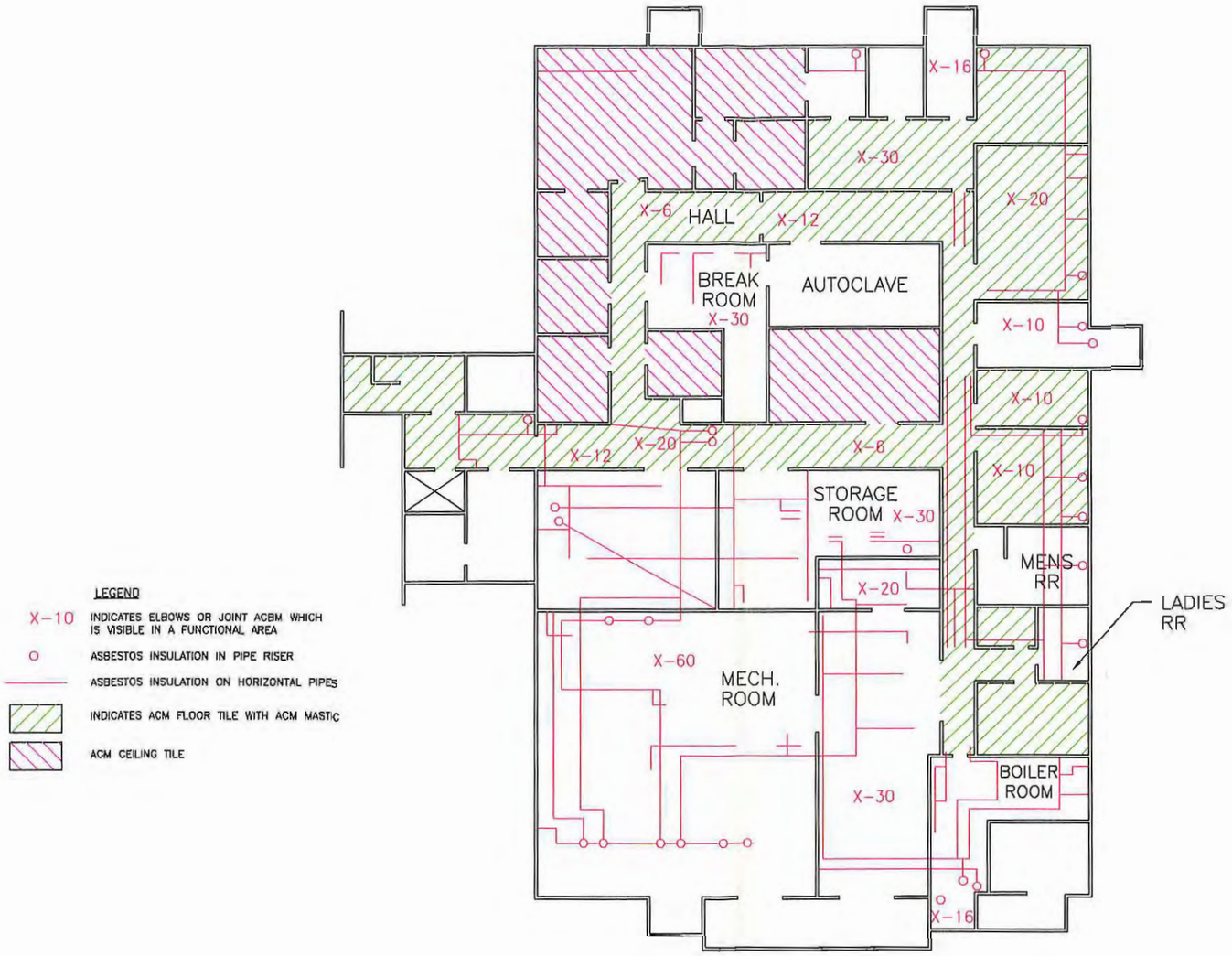
Asbestos Hazard Emergency Response Act (AHERA)

The 1988 Asbestos in Schools Rule (more commonly referred to as AHERA) required Local Education Agencies (LEAs) to develop and implement Management Plans for their ACBM. Response actions (i.e., removal encapsulation, enclosure, or O&M) were developed for ACBM identified in public and private schools (K-12). AHERA requires LEAs to conduct reinspection every three years and periodic surveillance every six months as part of their

O&M Program. Only Accredited and Certified professionals may conduct response actions. In particular, aggressive final clearance sampling is required to be performed by independent industrial hygienists.

Maine Regulations

The Maine Department of Environmental Protection (DEP) Chapter 425 Asbestos Management Regulations (effective date of January 1, 1994) define the minimum work practice requirements for asbestos abatement contractors for any project in excess of 3 square feet or 3 linear feet. The removal of non-friable ACM during demolition is also discussed. For removal of these materials under demolition conditions, friable ACM work practices would apply. Abatement work also requires conformance to OSHA Regulation 29 CFR, Part 1926.1101. In addition to the mandatory requirements of this regulation, federal OSHA officials regulating Maine asbestos abatement contractors interpret Appendix F, Work Practices and Engineering Controls for Major Asbestos Removal, Renovation and Demolition Operations, as mandatory to abatement work including traditionally non-friable materials such as roof systems. While stated as "non-mandatory," OSHA has determined that the standard will apply under their interpretation of "whenever feasible." DEP Chapter 425 Asbestos Management Regulations are currently being revised by DEP personnel with industry input.



LEGEND

X-10	INDICATES ELBOWS OR JOINT ACBM WHICH IS VISIBLE IN A FUNCTIONAL AREA
o	ASBESTOS INSULATION IN PIPE RISER
——	ASBESTOS INSULATION ON HORIZONTAL PIPES
	INDICATES ACM FLOOR TILE WITH ACM MASTIC
	ACM CEILING TILE

BASEMENT

CLIENT:	BUREAU OF GENERAL SERVICES
PROJECT:	DHS ASBESTOS SURVEY
	URS Corporation
TITLE:	BASEMENT
PROJECT NO:	28786-009
DESIGN: MCH	SCALE: NONE
APPROVED: DBK	DATE: 05/09/02
DRAWN: LRH	FILE NO: A393
FIGURE NO:	1

FIRST FLOOR

LEGEND

- X — INDICATES ELBOWS OR JOINT ACBM WHICH IS VISIBLE IN A FUNCTIONAL AREA
- ○ — ASBESTOS INSULATION IN PIPE RISER
- ——— ASBESTOS INSULATION ON HORIZONTAL PIPES
- □ — FUME HOOD
- PIPE INSULATION ABOVE CEILING
- INDICATES ACM FLOOR TILE WITH ACM MASTIC
- ACM FLOOR TILE AND MASTIC BELOW CARPET

CLIENT:	BUREAU OF GENERAL SERVICES		
PROJECT:	DHS ASBESTOS SURVEY		
	URS Corporation		
TITLE: FIRST FLOOR			PROJECT NO: 28786-009
DESIGN: MCH	SCALE: NONE		FIGURE NO: 2
APPROVED: DBK	DATE: 05/03/02		
DRAWN: LRH	FILE NO: A390		

SECOND FLOOR

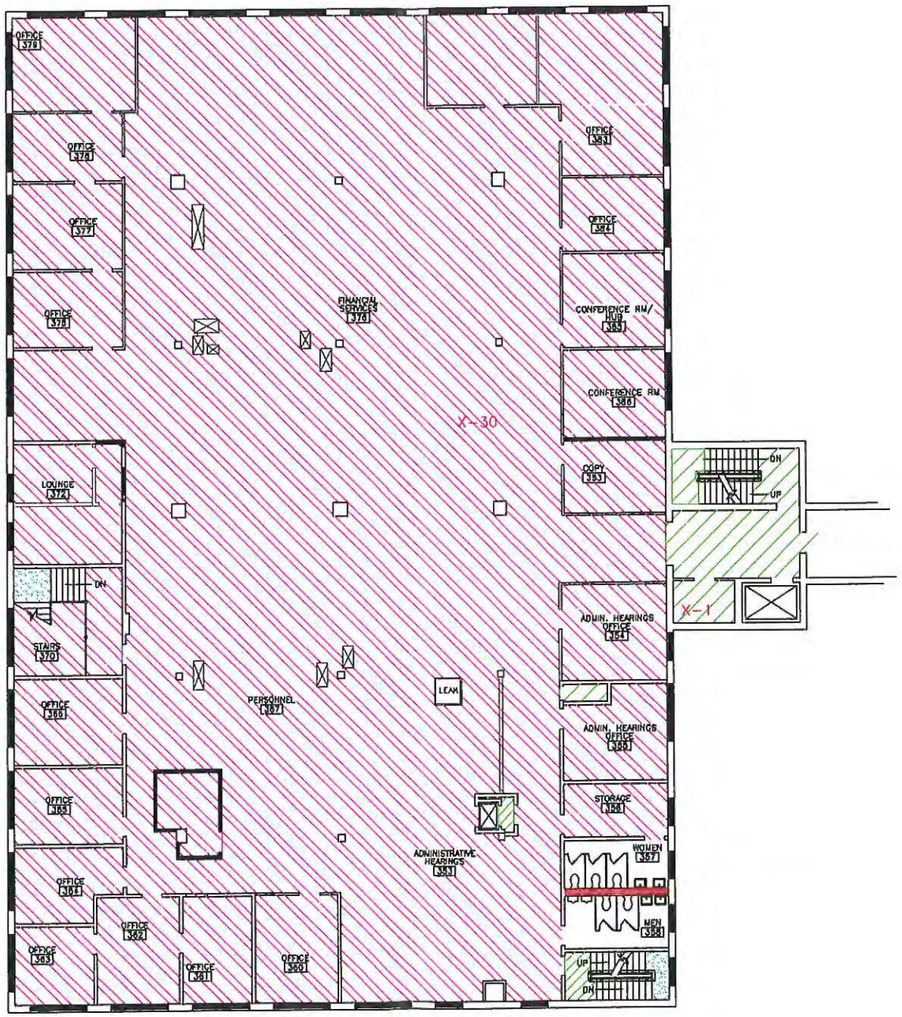
LEGEND

X	INDICATES ELBOWS OR JOINT ACBM WHICH IS VISIBLE IN A FUNCTIONAL AREA
O	ASBESTOS INSULATION IN PIPE RISER
	ASBESTOS INSULATION ON HORIZONTAL PIPES
	ACM FLOOR TILE AND MASTIC
	ACM FLOOR TILE AND MASTIC BELOW CARPET

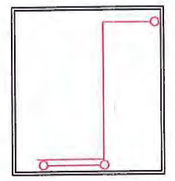
CLIENT:	BUREAU OF GENERAL SERVICES		
PROJECT:	DHS ASBESTOS SURVEY		
URS Corporation			
TITLE: SECOND FLOOR			PROJECT NO: 28786-009
DESIGN: MCH	SCALE: NONE		FIGURE NO: 3
APPROVED: DBK	DATE: 05/03/02		
DRAWN: LRH	FILE NO: A391		

LEGEND

- ACM FLOOR TILE AND MASTIC
- ACM FLOOR TILE AND MASTIC BELOW CARPET
- ACM PIPE INSULATION BELOW CEILING
- ASBESTOS MASTIC BELOW PAINT
- X-30 ACM MUD FITTING ON FIBERGLASS PIPE
- O ASBESTOS INSULATION IN PIPE RISER
- ASBESTOS INSULATION ON HORIZONTAL PIPES



THIRD FLOOR



PENTHOUSE

CLIENT:	BUREAU OF GENERAL SERVICES
PROJECT:	DHS ASBESTOS SURVEY
	URS Corporation
TITLE:	THIRD FLOOR AND PENTHOUSE
PROJECT NO:	28786-009
DESIGN: MCH	SCALE: NONE
APPROVED: DBK	DATE: 05/09/02
DRAWN: LRH	FILE NO: A392
FIGURE NO:	4

URS Corporation
115 Water Street, Suite 3
Hallowell, Maine 04347

ASBESTOS IDENTIFICATION SURVEY
DHS BUILDING
AUGUSTA, MAINE

Prepared for:

Mr. Joe Silva
Bureau of General Services
77 State House Station
Augusta, ME 04333-0077

JOB NO.: 28407
August 7, 2007

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Figure 3 DHS Building Second Floor
Figure 4 DHS Building Third Floor and Penthouse

Appendices

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Appendix B Survey, Sampling and Analytical Protocol
Appendix C Polarized Light Microscopy Analytical Methods
Appendix D Definitions and Regulations

1.0 INTRODUCTION

URS Corporation (URS) was retained by the State of Maine; Bureau of General Services (BGS) to conduct an asbestos identification survey at the Department of Human Services (DHS) Building, located in Augusta, Maine. The objective of the field survey was to locate and identify asbestos-containing materials (ACM) in the interior of the building.

1.1 ASBESTOS-CONTAINING MATERIALS

Mr. Michael Haughton, (URS), an asbestos inspector licensed in the State of Maine performed the field survey during the period of April 9, 2002 through April 12, 2002. During the survey, the inspector reviewed the 1987 Hall-Kimbrell asbestos identification survey and the 1999 ICON Environmental asbestos identification survey, information regarding the facility that was provided to them by BGS, visually identified interior suspect ACM and collected bulk samples of suspect ACM in accordance with the Maine Department of Environmental Protection (DEP) regulations. Forty- two bulk samples of suspect ACM building materials were collected during the field survey. Quantity estimates and locations of identified ACM were based upon information provided by BGS and from field observations

Following the completion of the survey work, the bulk samples of suspect ACM were submitted to the URS's Salem, NH laboratory for analysis. The URS laboratory is certified to perform asbestos analysis by both the National Voluntary Laboratory Accreditation Program (NVLAP) and the American Industrial Hygiene (AIHA). The method used to analyze the bulk samples collected during this survey was the recommended EPA procedure of Polarized Light Microscopy (PLM) with dispersion staining. Analytical results are presented in Appendix A. The protocol for analysis of bulk samples is presented in Appendix D.

2.0 SURVEY LIMITATIONS

The information presented in this report represents the conditions observed at the time of the site investigation. Survey data, observations and recommendations presented in this report are based upon industry-accepted methodologies used to conduct this investigation and the professional judgment of the investigator. URS Corporation is not responsible for changes in condition observed after the field investigation was completed.

As with any scientific study, facility asbestos identification surveys are subject to a variety of limitations. Limitations to be considered in interpreting the results of this survey include the following:

- Asbestos survey may not be able to identify all ACM throughout a facility. A thorough study should be capable of identifying approximately 95 percent of accessible (by non-destructive methods) ACM present. The survey and analytical protocol used for this project is presented in Appendix B and C.
- Areas not accessible at the time of the scheduled survey were not surveyed.
- This survey was conducted using non-destructive sampling methods.
- Thermal system insulation identified during the 1987 Hall-Kimbrell asbestos identification survey was not re-sampled during this survey. Samples of thermal system insulation were only collected if the material could not be referenced to the original survey or if the suspect material appeared to have been installed after the 1987 survey.
- Cost figures used in developing abatement costs were estimated, based on historical information. These costs should be considered estimates and used for budgetary purposes only. For cost projections in future years, an adjustment that considers inflation and the state of the abatement industry must be applied.

3.0 OBSERVATIONS AND FINDINGS

The DHS Building is a three-story brick, masonry structure consisting of a basement and three upper floors. During the walk-through survey of the building, the URS surveyors reviewed existing drawing plans, identified interior suspect ACM and determined quantities of suspect ACM. The asbestos inspector collected bulk samples of suspect ACM in accordance with Maine DEP regulations. Suspect ACM sampled during the survey included ceiling tile, flooring material and flooring material adhesives, pipe insulation, sheetrock and associated joint compound and laboratory fume hoods.

The following sections of this report contain brief descriptions of the building areas by floor and a summary of the types of ACM identified in those areas. An inventory of ACM materials and their locations is included in Table 1. The location of the identified ACM within the building is shown in Figures 1 through 4

BASEMENT

The Basement consists of a boiler room, mechanical space, lounge area, laboratories, restrooms and stairwells. Suspect ACM identified in the basement included twelve-inch by twelve-inch floor tile and associated floor tile mastic (four types), nine-inch by nine-inch floor tile and associated floor tile mastic, pipe insulation, mud-insulated pipe fittings, ceiling tile (two types) and sheet rock and associated joint compound. Materials identified as ACM included nine-inch by nine-inch off-white floor tile and associated mastic, twelve-inch by twelve-inch dark off-white floor tile with gray design and associated mastic, pipe insulation, mud-insulated pipefittings and two-foot by four-foot white ceiling tile with pin dot design.

FIRST FLOOR

The first floor consists of laboratories located in the east wing and office areas located in the west wing, entryway, reception area, restrooms and stairwells. Suspect ACM identified on the first floor includes twelve-inch by twelve-inch green floor tile and associated floor tile mastic, nine-inch by nine-inch floor tile and associated floor tile mastic (two types) ceiling tile (three types), pipe insulation, mud-insulated pipe fittings, laboratory fume hoods, sheet rock and associated joint compound. Material identified as ACM included nine-inch by nine-inch brown and off-white floor tile and associated mastic, pipe insulation, mud-insulated pipe fittings and laboratory fume hoods.

SECOND FLOOR

The second floor consists of east and west office wings, common areas, restrooms and stairwells. Suspect ACM identified on the second floor includes twelve-inch by twelve-inch white floor tile and associated floor tile mastic, nine-inch by nine-inch floor tile and associated floor tile mastic, ceiling tile, pipe insulation, mud-insulated pipe fittings and sheet rock and associated joint compound. Material identified as ACM included nine-inch by nine-inch off-white floor tile and associated floor tile mastic located under carpets, nine-inch by nine-inch floor tile brown and associated floor tile mastic, pipe insulation and mud-insulated pipe fittings.

THIRD FLOOR

The third floor consists of a west office wing, common areas, restrooms and stairwells. Suspect ACM identified on the third floor includes nine-inch by nine-inch floor tile and associated floor tile mastic, pipe insulation, mud-insulated pipe fittings and sheet rock and associated joint compound. Material identified as ACM included nine-inch by nine-inch unknown color floor tile and associated floor tile mastic located under carpets, nine-inch by nine-inch brown floor tile and associated floor tile mastic, pipe insulation and mud-insulated pipe fittings.

PENTHOUSE

The Penthouse consists of an area used to house a mechanical HVAC system. Suspect ACM identified in the Penthouse includes exterior transite siding, pipe insulation and mud-insulated pipe fittings. Materials identified as ACM include exterior transite siding, pipe insulation and mud-insulated pipe fittings.

4.0 RECOMMENDATIONS

The ACM identified throughout the facility was found to range from fair to good condition, with the exception of the nine-inch by nine-inch floor tile located in the Custodian's Closet located on the second floor and the pipe insulation located in the Penthouse. These materials were observed to be in poor condition and should be removed.

Asbestos fibers are potential health hazards when they become airborne. As long as this material remains intact, undamaged, and in good condition, the material may be managed in place. However, current regulations require that asbestos-containing building materials be either removed if the materials will be disturbed by renovation, demolition, or other building maintenance activities. An Operation and Maintenance (O&M) plan should be implemented to manage the materials in place until such a time when they have been removed. ACM identified during this survey that will be impacted by the planned renovation project should be removed prior to the initiation of the actual renovation work. Upon finalization of the renovation plans the actual extent of impact to the existing ACM can be determined. ACM abatement should be performed using approved methods in accordance with applicable regulations established by the U.S. Environmental Protection Agency (EPA), OSHA and Maine DEP. The ACM impacted by planned renovation activities must be removed by a State of Maine licensed asbestos abatement contractor.

5.0 BUDGETARY COST ESTIMATES

URS has developed preliminary cost estimates for abatement of ACM identified during the survey. These estimates do not include material replacement costs or associated design and project monitoring fees or regulatory agency notification fees. Actual abatement costs will vary depending upon the quantity of material removed at any one time. These cost estimates assume that the ACM will be removed in a friable state.

ACM ABATEMENT COSTS
DHS BUILDING
AUGUSTA, MAINE

ACM	Approximate Quantity	Unit Cost	Cost
Pipe Insulation	3,525 Linear Feet (LF)	$15.00/LF	$ 52,875
Ceiling Tile	900 Square Feet (SF)	$ 10.00/SF	$ 9,000
Floor Tile	23,405 SF	$ 2.50/SF	$ 58,512
Floor Tile Mastic	8,025 SF	$5/SF	$40,125
Exterior Transite Siding	2,000 SF	$3/SF	$6,000
Fume Hoods	7 Each (EA)	$500/EA	$3,500
Mud Insulated Pipe Fittings	470 EA	$25/EA	$11,750
Total Estimated Cost Range			**$175,000 - $200,000**

URS has estimated asbestos abatement project duration of between 75 working days of eight – hour contractor shifts, using an 8-person crew.

6.0 REPORT CERTIFICATION

This report was prepared and reviewed by URS Corporation for the sole use of the State of Maine Bureau of General Services and it's constituents and should not be reproduced without full, written authorization from the Bureau of General Services.

Inspector:

_____
Michael Haughton

AI-0167
Maine DEP License No.

_____
Date

Quality Control:

_____
Dennis B. Kingman, Jr.

Senior Project Manager
Title

_____
Date

TABLE 1

ASBESTOS-CONTAINING MATERIALS
DHS BUILDING
AUGUSTA, MAINE

BASEMENT

Location	Material Type	Sample Number	Asbestos Percent and Type	Estimated Quantity of ACM	Condition	Recommended Response Action
Mechanical Room	Pipe Insulation Mud Insulated Pipe Fittings	HK114702 HK114703	35% Chrysotile 15% Chrysotile	550 LF 60 EA	Good Good	O & M O & M
Ernie's Room	Pipe Insulation Mud Insulated Pipe Fittings	HK114702 HK114703	35% Chrysotile 15% Chrysotile	225 LF 12 EA	Good Good	O & M O & M
Laboratories	Pipe Insulation Mud Insulated Pipe Fittings Ceiling Tile Floor Tile and Associated Mastic	HK114702 HK114703 08 01 02	35% Chrysotile 15% Chrysotile 5% Amosite 2% Chrysotile 1% Chrysotile	300 LF 130 EA 900 SF 600 SF	Good Good Good Good	O & M O & M O & M O & M
Evidence Room	Pipe Insulation Mud Insulated Pipe Fittings	HK114702 HK114703	35% Chrysotile 15% Chrysotile	100 LF 20 EA	Good Good	O & M O & M
Corridor	Pipe Insulation Mud Insulated Pipe Fittings Floor Tile and Associated Mastic	HK114702 HK114703 01 02	35% Chrysotile 15% Chrysotile 2% Chrysotile 1% Chrysotile	200 LF 50 EA 750 SF	Good Good Good	O & M O & M O & M

Location	Material Type	Sample Number	Asbestos Percent and Type	Estimated Quantity of ACM	Condition	Recommended Response Action
Supply Room	Pipe Insulation Mud Insulated Pipe Fittings	HK114702 HK114703	35% Chrysotile 15% Chrysotile	200 LF 30 EA	Good Good	O & M O & M
Boiler Room	Pipe Insulation Mud Insulated Pipe Fittings	HK114696 HK114690	35% Chrysotile 15% Chrysotile	200 LF 16 EA	Good Good	O & M O & M
Storage Room	Pipe Insulation Mud Insulated Pipe Fittings	HK114696 HK114690	35% Chrysotile 15% Chrysotile	325 LF 30 EA	Good Good	O & M O & M
Break Room	Pipe Insulation Mud Insulated Pipe Fittings	HK114702 HK114703	35% Chrysotile 15% Chrysotile	75 SF 30 EA	Good Good	O & M O & M

FIRST FLOOR

Location	Material Type	Sample Number	Asbestos Percent and Type	Estimated Quantity of ACM	Condition	Recommended Response Action
Laboratories	Pipe Insulation Mud Insulated Pipe Fittings Floor Tile and Associated Mastic Fume Hoods	HK114702 HK114703 11 12	35% Chrysotile 15% Chrysotile 3% Chrysotile 1% Chrysotile	350 LF 50 EA 1600 SF 7 EA	Good Good Good Good	O & M O & M O & M O & M
Corridor	Floor Tile and Associated Mastic	11 12	3% Chrysotile 1% Chrysotile	600 SF	Good	O & M
Administration Room	Floor Tile and Associated Mastic	11 12	3% Chrysotile 1% Chrysotile	100 SF	Good	O & M
Boiler Room	Pipe Insulation	HK114702	35% Chrysotile	300 LF	Good	O & M
Mechanical Room	Pipe Insulation Floor Tile and Associated Floor Tile Mastic	HK114702 11 12	35% Chrysotile 3% Chrysotile 1% Chrysotile	125 LF 75 SF	Good Good	O & M O & M
Mail Room	Pipe Insulation Floor Tile and Associated Floor Tile Mastic	HK114702 IATL96216 IATL96217	35% Chrysotile 10% Chrysotile 3% Chrysotile	200 LF 2,000SF	Good Good	O & M O & M

SECOND FLOOR

Location	Material Type	Sample Number	Asbestos Percent and Type	Estimated Quantity of ACM	Condition	Recommended Response Action
East Office Wing	Floor Tile located under carpet	11	3% Chrysotile	1,800 SF	Good	O & M
	Mud Insulated Pipe Fittings	HK114703	15% Chrysotile	30 EA	Good	O & M
Custodian's Closet	Floor Tile and Associated Mastic	IATL96216	10% Chrysotile	80 SF	Poor	Remove
West Office Wing	Floor Tile located under carpet	IATL96216	10% Chrysotile	3,500 SF	Good	O & M
	Floor Tile and Associated Mastic	11	3% Chrysotile	2,000 SF	Good	O & M
	Pipe Insulation	12	1% Chrysotile			
		HK114702	35% Chrysotile	300 LF	Good	O & M
Corridor	Floor Tile and Associated Floor Tile Mastic	11	3% Chrysotile	300 SF	Good	O & M
		12	1% Chrysotile			

THIRD FLOOR

Location	Material Type	Sample Number	Asbestos Percent and Type	Estimated Quantity of ACM	Condition	Recommended Response Action
West Office Wing	Floor Tile located under carpet Mud Fitting	IATL96216 HK114703	10% Chrysotile 15% Chrysotile	10,000 SF 30 EA	Good Good	O & M O & M

PENTHOUSE

Location	Material Type	Sample Number	Asbestos Percent and Type	Estimated Quantity of ACM	Condition	Recommended Response Action
Attic	Transite Siding			2,000 SF	Good	O & M
Penthouse	Pipe Insulation	HK114702	35% Chrysotile	75 LF	Poor	Remove

APPENDIX C

POLARIZED LIGHT MICROSCOPY ANALYTICAL METHODS

APPENDIX D

DEFINITIONS AND REGULATIONS

Abatement: A range of procedures to control fiber release from ACM. Abatement options include removal, repair and encapsulation, enclosure, or operations and maintenance activities.

Accessible: With regard to ACM it means that the material is subject to disturbance by building occupants including custodial or maintenance personnel in the course of their normal activities.

Accredited: When referring to a person or laboratory, this means that such person or laboratory is accredited in accordance with Section 206 of Title II of the Toxic Substances Control Act. Accreditation is given to laboratories which analyze bulk material samples for asbestos and satisfy the proficiency requirements established by the National Institute for Science and Testing (NIST).

Asbestos: The term asbestos includes chrysotile, amosite, crocidolite, tremolite, anthophyllite, and/or actinolite including any of these minerals, which have been chemically treated and/or altered.

Asbestos-Containing Material (ACM): Material composed of asbestos of any type and in an amount greater than one percent by weight or visual estimation, either alone or mixed with other fibrous or non-fibrous materials (e.g., surfacing, thermal system insulation, miscellaneous material).

Asbestos-Containing Building Material (ACBM): ACM that is a building material (e.g. flooring, wall boards, ceilings, insulation, etc.)

Friable Asbestos Material: Material that contains more than one percent asbestos by weight or visual estimation that can be crumbled, pulverized, or reduced to powder by hand pressure when dry.

Non-friable Asbestos Material: Material that contains asbestos such that the fibers have been locked-in by a bonding agent, coating, binder, or other material such that the asbestos will not release fibers during any reasonably appropriate use, handling, storage, transportation, or processing.

Operations and Maintenance (O&M) Program: A program of work practices designed to maintain undamaged ACM in good condition and to repair ACM and clean-up asbestos fibers which may be inadvertently released during fiber release episodes.

Removal: The complete removal of ACM from a damaged area, a functional space, or a homogeneous area in a building.

Repair: Returning damaged ACM to an undamaged condition so as to prevent fiber release.

Response Action: A method, including removal, encapsulation, enclosure, or operations and maintenance (including repair), that protects against the release of fibers from friable ACM.

Routine Maintenance Area: An area, such as a boiler room or mechanical room, that is not normally occupied by non-maintenance individuals and in which maintenance employees or contracted workers regularly conduct maintenance activities. Routine maintenance areas with ACRSM present require □Asbestos-Caution□ stickers be appropriately posted.

Small-Scale Short Duration (SSSD) Projects: Asbestos abatement activities impacting less than 3 linear feet or 3 square feet of ACM.

Surfacing ACM: Surfacing asbestos-containing materials such as sprayed-on or trowel-applied fireproofing.

Surfacing Material: Material that is sprayed-on, troweled-on, or otherwise applied to surfaces. Examples include acoustical plaster on ceilings and fireproofing materials on structural members.

Thermal System Insulation (TSI): Material in a building applied to pipes, fittings, boilers, breeching, tanks, ducts, or other components to improve the thermal characteristics of the component by preventing heat loss or gain, or preventing water condensation.

Visible Asbestos-Containing Material: Any quantity of ACM, which is visible to the unaided eye, including dust and other types of debris.

REGULATIONS

REGULATORY OVERVIEW

Over the past two decades, the regulatory community has become increasingly aware of the potential hazards of inhaled asbestos fibers. Regulations have been developed by federal, state, and local agencies to protect workers and the general public from the release of asbestos fibers. Departments of the federal government responsible for the regulation of asbestos include:

- The U.S. Department of Labor (DOL) through the Occupational Safety and Health Administration (OSHA) has developed two standards designed to protect employees at their work sites. These two standards are the Asbestos Regulations for General Industry (29 CFR 1910.1001) and Asbestos Regulations for the Construction Industry (29 CFR 1926.1101). These OSHA regulations apply only to employers and employees. Employees involved in performing Operations and Maintenance (O&M) activities who might potentially come into contact with asbestos-containing materials would clearly be addressed by the regulations. Second, employees who might inadvertently be exposed to asbestos-containing materials during the normal course of their work activities would also be covered by these regulations. Third, construction-related activities (e.g. asbestos abatement) are also covered.

- The U.S. Department of Transportation (DOT) regulates the transport of commercial asbestos and asbestos waste and dictates labeling of waste bags and transport vehicles. The primary responsibility under DOT regulations lies with the waste hauler. However, it is incumbent upon the building owner to determine that waste hauled from its facilities is properly bagged and labeled, that the waste arrives at an approved landfill, that a proper manifest is completed: documented and maintained with abatement records, and that the hauler is properly licensed to haul asbestos waste.

- The U.S. Environmental Protection Agency (EPA) has promulgated a series of regulations which focus on asbestos issues. Pertinent stipulations in these regulations are as follows:

Clean Air Act (CAA)

The EPA regulates asbestos under the National Emission Standards for Hazardous Air Pollutants (NESHAP), which is listed as Section 112 of the Clean Air Act (CAA). Under NESHAP, a hazardous pollutant has been defined as "an air pollutant to which no ambient air quality standard is applicable and which, in the judgment of the Administrator, causes or contributes to air pollution which may reasonably be anticipated to result in an increase in mortality or an increase in serious irreversible or incapacitating reversible illness." The NESHAP program currently regulates arsenic, benzene, beryllium, mercury, radionuclides, and vinyl chloride along with asbestos. The purpose of the asbestos NESHAP is to protect the public from exposure to asbestos in the ambient air. The asbestos NESHAP program

pertains primarily to demolition and renovation of buildings containing asbestos building materials. (The asbestos NESHAP also regulates manufacturing and fabricating operations, spray application of asbestos, waste disposal for asbestos mills, inactive waste disposal sites, and established standards for asbestos mills and roadways.) The specific provisions of NESHAP for demolition or renovation of buildings with asbestos containing are broken down into categories of notification, work practices, waste handling, and waste disposal.

The building owner would be responsible for compliance with NESHAP regulations primarily during abatement activities. Issues such as work practices, waste handling, and waste disposal are normally specified in the project's plans and specifications. Verifying adherence to these plans and specifications during the abatement process would be the building owner's responsibility.

Resource Conservation Recovery Act (RCRA)

The disposal of asbestos was originally regulated under RCRA in 1976. However, in that same year, asbestos, because it does not migrate in soil or pose any threat to ground water, was not listed by RCRA, and the authority for asbestos control was transferred to NESHAP. Therefore, the current RCRA regulations pertain only to facility siting and general landfill operations. The facility siting/licensing issue that would involve the building owner is the determination by the building owner staff that the facility where asbestos waste is disposed of is an EPA licensed facility.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

This act is most commonly referred to as "Superfund." The authority of CERCLA, as clarified in the Superfund Amendments Reauthorization Act (SARA), regulates asbestos as a hazardous substance. Reportable quantities (RQs) have been established to deal with releases or threats of releases of hazardous substances from vessels and from facilities including trucks and landfills. The trigger RQ for a release, or threat of release, of asbestos is one pound.

Superfund issues relative to the removal of ACM relate primarily to improper disposal of asbestos waste. The building owner is responsible for ensuring that a manifest for the waste is completed and signed by the licensed landfill facility and returned to the building owner for inclusion in their permanent records.

Asbestos Hazard Emergency Response Act (AHERA)

The 1988 Asbestos in Schools Rule (more commonly referred to as AHERA) required Local Education Agencies (LEAs) to develop and implement Management Plans for their ACBM. Response actions (i.e., removal encapsulation, enclosure, or O&M) were developed for ACBM identified in public and private schools (K-12). AHERA requires LEAs to conduct reinspection every three years and periodic surveillance every six months as part of their

O&M Program. Only Accredited and Certified professionals may conduct response actions. In particular, aggressive final clearance sampling is required to be performed by independent industrial hygienists.

Maine Regulations

The Maine Department of Environmental Protection (DEP) Chapter 425 Asbestos Management Regulations (effective date of January 1, 1994) define the minimum work practice requirements for asbestos abatement contractors for any project in excess of 3 square feet or 3 linear feet. The removal of non-friable ACM during demolition is also discussed. For removal of these materials under demolition conditions, friable ACM work practices would apply. Abatement work also requires conformance to OSHA Regulation 29 CFR, Part 1926.1101. In addition to the mandatory requirements of this regulation, federal OSHA officials regulating Maine asbestos abatement contractors interpret Appendix F, Work Practices and Engineering Controls for Major Asbestos Removal, Renovation and Demolition Operations, as mandatory to abatement work including traditionally non-friable materials such as roof systems. While stated as "non-mandatory," OSHA has determined that the standard will apply under their interpretation of "whenever feasible." DEP Chapter 425 Asbestos Management Regulations are currently being revised by DEP personnel with industry input.

APPENDIX B

SURVEY, SAMPLING AND ANALYTICAL PROTOCOL
SURVEY PROTOCOL

The first step in developing a comprehensive facility asbestos management plan is to conduct a building survey to identify the locations and quantities of suspect ACM and to determine the conditions of those materials.

The scope of work for this survey included details of how the survey was to be conducted, the information to be gathered, and the form and content of the survey report.

The facility survey was conducted by one or more DEP-certified URS asbestos surveyors. The specifics of the survey included the following:

- Reviewing any existing asbestos survey reports.
- Visually inspecting accessible building areas to determine the location of suspect ACM.
- Sampling and evaluating suspect ACM to determine its accessibility and limit the occupancy of the surrounding building area to employees.
- Compiling and reporting survey data by functional area.
- Quantifying homogeneous materials, including both friable and non-friable suspect ACM.
- Gathering information during the survey concerning locations, quantities, and types of materials.

BULK SAMPLING PROTOCOL

During the survey of this facility, bulk samples of suspect ACM were collected for laboratory analysis. The bulk samples were collected and categorized according to the homogeneous building materials being evaluated. The designation of homogeneous building materials was made by the URS surveyor. Once suspect homogeneous materials were identified, bulk samples were collected in accordance with the EPA protocol as outlined in the Asbestos Hazard Emergency Response Act (AHERA) regulations. If a single sample of a homogeneous material was found to contain asbestos, then that homogeneous material was identified as containing asbestos throughout the building. Homogeneous flooring materials were determined by similarity of floor tile size, color, and age, if determinable.

Sampling techniques generally involved one of two different sampling procedures.

1. Core samples were collected from certain materials, such as pipe covering and fittings, to sample these potentially multi-layered materials. Disposable core boring devices were used for this purpose to minimize potential cross contamination of samples.

2. Ceiling tile, floor tile, and similar materials were sampled by breaking off a portion of the desired material from an inconspicuous location.

Samples were given a unique sample number, which included the project number, and were placed in sample containers for transportation to URS's laboratory for analysis. The location of each sample was noted on the building drawing. Information regarding the sample location was also entered onto URS's Chain-of-Custody forms. The quantity, location and physical condition of each material were recorded on URS's field data sheets.

Sample locations (from insulation materials) were covered with duct tape or encapsulant after sampling. Locations in unoccupied portions of buildings were labeled. Sample points on fireproofing, plaster, ceiling tile and transite in the buildings were not necessarily labeled or repaired.

ANALYTICAL PROTOCOL

Samples collected during this facility asbestos survey were transported to URS's accredited laboratory for microscopic analysis. URS's analytical laboratory is accredited by the National Institute for Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP) for bulk asbestos analysis as required under EPA AHERA regulations. URS's laboratory is also accredited by the American Industrial Hygiene Association (AIHA) for asbestos air sample analysis. Chain-of-Custody was maintained by the laboratory through the use of URS's Chain-of-Custody forms. After being logged in by the laboratory and prepared for analysis, samples were analyzed following the EPA-recommended method of bulk sample analysis by polarized light microscopy with dispersion staining. A description of this analytical method is contained in Appendix D of this document.

In preparing the bulk materials for analysis, a small representative portion of each sample was selected from the bulk material collected in the field and mounted on a glass slide. If the bulk material appeared to have a uniform consistency, a minimum of two slides were prepared for viewing. If, however, the bulk material appeared to contain layers, a separate set of slides was prepared for each layer and results for each layer determined independently. Analytical results for layered samples were reported as an average of the asbestos composition of the material as a whole. In some situations multiple slides were prepared from particularly complex samples, such as floor tile, which were suspected to contain low percentages of asbestos. In cases where replicate samples of a homogeneous material were collected, they were analyzed until one was found to be positive (which meant the entire homogeneous area was deemed positive) or until each sample was analyzed to prove a negative result.

Sample results were reported either as "none detected" (ND) if no asbestos was found, or by type and percent composition if any form of asbestos was observed. EPA, OSHA, and DEP all recognize a level of greater than one percent asbestos by weight content or visual estimation as the minimum level for requiring a material to be treated as asbestos-containing. The identification of the presence or absence of asbestos in a material involves several specific analytical procedures. The percentage composition, on the other hand, is simply a visual approximation on the part of the analyst and may vary based on the way the sample slide is prepared and the specific analyst performing the identification. Estimating an accurate percentage composition of low-level asbestos-containing materials is very difficult. Therefore, samples identified positively as having an asbestos content of less than 10 percent by visual estimation are required to be re-analyzed by the point counting procedure described in the EPA "Interim Method for the Determination of Asbestos in Bulk Insulation Samples," method number EPA-600/M4-82-020, December 1982. A more definitive analysis can be obtained by transmission electron microscopy (TEM) analysis and is often used for confirming or denying the presence of asbestos in floor tile samples (in particular 12-inch by 12-inch tile) when previously analyzed via PLM and initially determined to be non-detected for asbestos.

It should be noted here that the analysis of a debris sample is a qualitative analysis for the presence or absence of asbestos in that particular sample. The EPA interim PLM method for analyzing bulk samples was intended to be used for analyzing asbestos-containing manufactured products or materials with near uniform concentrations of asbestos and not for the analysis of debris or other possibly contaminated materials which are not uniform in nature. Therefore percentage composition for soils, debris or dust samples is not indicated in this report. Further, a negative finding in these samples indicates only that the debris actually sampled was not found to contain asbestos. No inference should be made from any negative result concerning other debris, which was not specifically sampled.

Approximately ten percent of the samples collected during the field survey were reanalyzed as part of URS' quality control (QC) program. These QC samples were analyzed in URS' laboratory by an analyst different from the one who performed the initial analyses.

After the completion of both the initial and quality control analytical procedures, samples are stored in URS' sample storage area files and are maintained there for at least one year. At the end of one year URS will offer the client the opportunity to either have the samples properly disposed of by URS or have them returned for retention by the client.

APPENDIX C

POLARIZED LIGHT MICROSCOPIC ANALYTICAL METHOD

Polarized Light Microscopy (PLM) is the only analytical method for asbestos identification, which depends upon the unique optical crystallographic properties of the various crystals, phases in the sample. These properties—refractive indices, dispersion of refractive indices, birefringence, sign of elongation and extinction angle are unique to the crystalline state and, therefore, unequivocally identify chrysotile, lizardite, antigorite, anthophyllite, tremolite, actinolite, grunerite, cummingtonite, and riebeckite whether fibrous or non-fibrous.

PLM includes the classical optical crystallographic methods and the more recent dispersion staining procedures. Dispersion staining is, in effect, just a way of using optical crystallography for the study of transparent particles. It supplements the classical methods and, in some cases, makes the use of PLM for the study of crystals easier. For example, with one polar isotropic, substances show a single characteristic dispersion staining color, but anisotropic substances show different colors corresponding to the different refractive indices in different orientations. Chrysotile, for example, shows blue and blue-magenta colors, crosswise and lengthwise, respectively, for each fibrous crystal when mounted in Cargille high dispersion liquid n25=1.550 and observed by central stop dispersion staining (DS). The actual analysis begins by adding a Cargille refractive index liquid (nD-1.550, high dispersion) to a 0.5-1 mg slide sample. The particles should be dispersed in this liquid by teasing aggregates apart using two fine needles before covering with a cover slip.

A. Chrysotile

In liquid nD-1.550, chrysotile has distinctive fine flexible fibrils (often curly) plus straight bundles of such fibrils and distinctive dispersion staining colors usually blue-magenta parallel to the fiber axis and blue perpendicular (central stop colors). Different samples of chrysotile, however, may vary somewhat in the wavelength at which particle and liquid have the same refractive index. Parallel to the length ranges from about 440 to 560 nm and perpendicular to the length from about 560 to 660 nm.

The presence of chrysotile and other fibrous particles is sometimes secured by tiny particles of mortar. This is especially troublesome because most of these particles are so different in refractive index from the mounting liquid; they appear bright white and central stop dispersion staining. Trying to see the asbestos is like trying to see while driving at night with an oncoming stream of cars with high beam headlights. Often one can be confident the particles are covering obscured fibers because of their pattern-the Milky Way effect.

Sometimes a stray fibril may poke its way out into the liquid to show dispersion staining colors. It is always helpful in situations like this to examine the "milky way" with crossed polars since the underlying fibers often then become visible and recognizable as fibers. Crossed polars also help to locate smaller fibers and small percentages of fibers. Each sample should be quickly

scanned with crossed polars as well as dispersion staining before reporting the absence of asbestos fibers.

A mortar coating can sometimes be removed from the fibers by holding one end on the slide with one needle (lying flat) and scraping with a second needle along a fiber bundle, either before or after adding the mounting fluid. It may also be possible to remove enough mortar to see some dispersion staining colors by pressing the cover slip down hard on the particles (in the liquid) with a pencil eraser and sliding the cover slip in a circular pattern with the eraser. Another technique is to tease and scrape a fiber bundle out straight, cover with a cover slip and add the liquid so that it runs down the length of the fiber washing away much of the loosened mortar.

B. Amosite and Crocidolite

Amosite and crocidolite both have very pale yellow to white borders by central stop DS in liquid nD=1.550HD because their refractive indices are so much higher. Crocidolite usually shows a blue absorption color. If no anisotropic fibers with refractive indices much higher than 1.550 are present, no asbestos other than chrysotile can be present.

If higher index particles are observed in liquid nD=1.550HD a second sample is mounted in nD=1.605HD. Likely compounds visible in this liquid include tremolite, anthophyllite, actinolite, and wollastonite.

If higher index particles are observed in liquid nD=1.605, a third sample is mounted in Cargille liquid nD-1.680 and examined with DS. Most amosites used in buildings will show a wavelength of about 460 nm (golden yellow) parallel to the length and about 600 nm (blue-magenta) to >660 nm (pale blue) perpendicular to the length depending on fiber orientation. A perpendicular lambda 0 of >660 nm corresponds to the alpha vibration direction, which usually shows parallel extinction; a lambda 0=600 nm perpendicular to the length corresponds to beta (also no a parallel extinction view). As with most silicate minerals substitutional solid solution, in this case Fe2+ with Mg2+, can cause alpha, beta, and gamma to vary. Higher or lower values of refractive index for any one of the three vibration directions will mean correspondingly higher or lower values for all three.

Although the refractive indices of amosite and other amphiboles may vary over a wide range, most are not from commercial sources. Nearly all Amosite used commercially in insulation has the optical properties given above.

If, in liquid nD=1.680, low birefringent fibers show lambda 0 colors close together in the yellow to golden magenta, crocidolite is strongly indicated. If they show a negative sign of elongation (higher lambda 0 parallel to the length), and blue absorption colors with pleochroism (blue parallel and gray-blue perpendicular to the fiber length) crocidolite is present. Further confirmation can be obtained by mounting a third sample in Cargille refractive index liquid nD=1.70. Crocidolite will show central stop colors close to 600 nm (blue magenta) parallel to the length and about 520 (red magenta) perpendicular. Again, some parallel movement of the alpha, beta, and gamma colors should be expected for crocidolites from different sources.

We should emphasize that DS is a method for rapid refractive index determination. To be certain the observed colors mean a particular asbestos is present, one must be certain the DS data are consistent with particle orientation, i.e., the relationship between the optical properties and the crystallographic axes.

C. Other Asbestiform Minerals

When analyzing insulation, one usually skips the nD=1.605 liquid but if during examination anomalous results are observed with the 1.550 nD 1.680 liquids, that is, highly fibrous fibers with lambda colors in other than the prescribed ranges for chrysotile, amosite, and crocidolite, then fibrous tremolite, actinolite, or anthophyllite may be present. These are rarely found, however, in insulation. When these anomalous results are obtained, you should characterize the fibers in those liquids as to refractive indices relative to those liquids and extinction angles. If all of the fibers show parallel extinction and pale blue colors in 1.680, they are anthophyllite (if the possibility of organic fibers is first eliminated). Amosite shows parallel extinction as well, but good lambda colors in the visible in 1.680 identify this asbestos mineral. Tremolite will show strong colors in al orientations in nD=1.605 high dispersion liquid.

Actinolite has morphology and optics similar to tremolite except that the indices are all higher. Actinolite may also show pleochroism (green to colorless). It is best studied in high dispersion liquid nD=1.630HS in which alpha and gamma on the oblique extinction view show magenta and golden yellow, respectively. On the parallel extinction view, gamma (lengthwise) shows 0 ca. 470 nm or golden magenta and B (perpendicular) shows 0 ca. 495 nm also golden magenta although with more red. Ferroactinolites have been higher iron content and correspondingly higher refractive indices.

Tremolite, actinolite, and ferroactinolite are portions of a continuous solid solution series in the same manner as the amosite minerals, cummingtonite and grunerite. The name to use for a given amphibole, therefore, depends directly on the optical properties. An unusually asbestiform mineral is picrolite described as a fibrous form of antigorite. Its refractive indices are higher than chrysotile, which it closely resembles.

D. Interfering Substances

A few common substances show dispersion staining colors similar to those of chrysotile and some are elongated as well. These include two polymorphs of chrysotile: Antigorite and lizardite, quartz, talc, paper fibers and hairs. All of these show dispersion staining colors in 1.550 and all except talc and paper fibers show colors somewhat similar to chrysotile.

Quartz, although usually glassy flakes, shows blue and magenta central stop colors very similar to chrysotile in the 1.550 liquid. The shape is very different, however, and only a few views are oriented to show the magenta color.

Animal hairs, including human, also have refractive indices in the same range as chrysotile and, if finely fibrillated by electric razor for example, can be confusingly similar. Such fibrillated fibers are, however, rare; they also usually show melanin pigmented particles and indices

sufficiently different from chrysotile to avoid confusion. Paper fibers also show a crosswise index close to 1.550 (but lower) and the lengthwise index is much higher, hence shows a yellow central stop color. The morphology of paper fibers is also distinctive unless they are very tiny slivers broken away from larger fibers.

ATTACHMENT C

PHOTOGRAPHIC LOG

Photo No. 1

Photo Date:
October 16, 2019

Site Location:
211 State Street
Augusta, Maine

Description:
View of pipe insulation located above ceiling tiles (typical).

Photo By: DAK

Photo No. 2

Photo Date:
October 16, 2019

Site Location:
211 State Street
Augusta, Maine

Description:
View of glue daubs located above the existing ceiling tile system throughout the DHHS portion of the building (typical).

Photo By: DAK

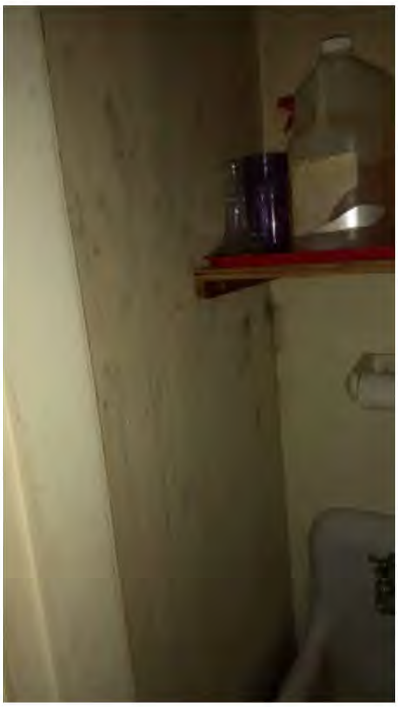

Photo No. 3

Photo Date:
October 16, 2019

Site Location:
211 State Street
Augusta, Maine

Description:
Second Floor Utility Closet – visible mold growth on walls.

Photo By: DAK

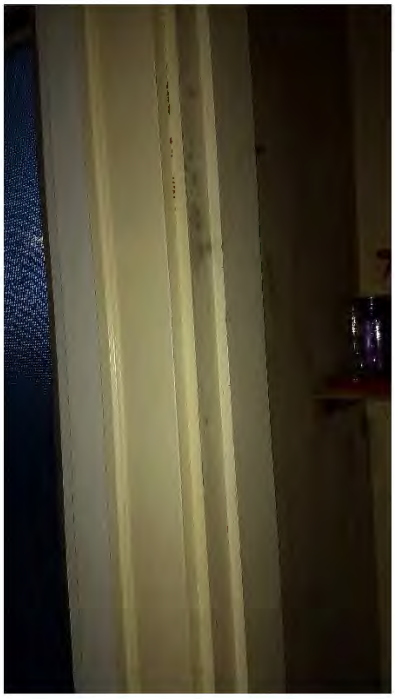

Photo No. 4

Photo Date:
October 16, 2019

Site Location:
211 State Street
Augusta, Maine

Description:
Second Floor Utility Closet – visible mold growth on door frame

Photo By: DAK

Photo No. 5

Photo Date:
October 16, 2019

Site Location:
211 State Street
Augusta, Maine

Description:
Second Floor Utility Closet – leaking sink.

Photo By: DAK

Photo No. 6

Photo Date:
October 16, 2019

Site Location:
211 State Street
Augusta, Maine

Description:
Second Floor Utility Closet – door system with visible mold growth.

Photo By: DAK

Photo No. 7

Photo Date:
October 16, 2019

Site Location:
211 State Street
Augusta, Maine

Description:
Second Floor Utility Room – visible mold growth on door louver vent.

Photo By: DAK

Photo No. 8

Photo Date:
October 16, 2019

Site Location:
211 State Street
Augusta, Maine

Description:
Ceiling tile – previously unidentified suspect asbestos.

Photo By: DAK

Photo No. 9

Photo Date:
October 16, 2019

Site Location:
211 State Street
Augusta, Maine

Description:
Asphalt vapor barrier located on exterior brick located behind the plaster wall. Previously unidentified suspect ACM.

Photo By: DAK

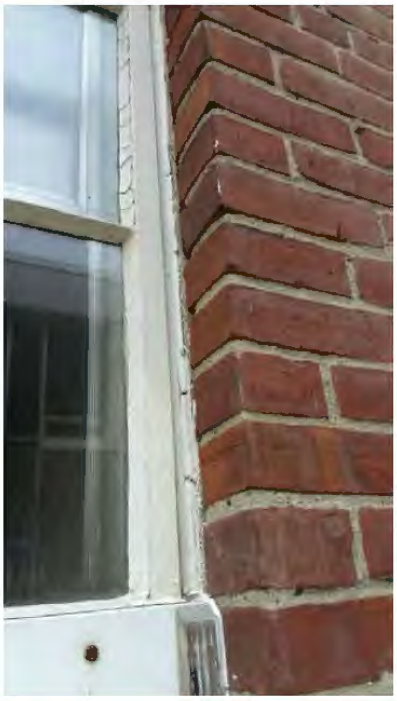

Photo No. 10

Photo Date:
October 16, 2019

Site Location:
211 State Street
Augusta, Maine

Description:
Exterior – White caulk adjacent to brick. Suspect ACM/PCB.

Photo By: DAK

Photo No. 11

Photo Date:
October 16, 2019

Site Location:
211 State Street
Augusta, Maine

Description:
Cream caulk adjacent to brick. Suspect PCB/ACM

Photo By: DAK

Photo No. 12

Photo Date:
October 16, 2019

Site Location:
211 State Street
Augusta, Maine

Description:
Gray caulk between metal door frame and brick. Suspect PCB/ACM.

Photo By: DAK

December 16, 2019

Ms. Jill M. Instasi
Senior Project Manager
State of Maine Bureau of Real Estate Management
77 State House Station
Augusta, Maine 04333-0077

Re: Limited Asbestos Identification Survey | Former DHHS Offices | 221 State Street | Augusta, Maine

Dear Ms. Instasi:

At the request of the State of Maine Bureau of Real Estate Management (BREM), CES, Inc. (CES) completed a 'limited' asbestos identification survey at the former Department of Health and Human Services (DHHS) offices located at 221 State Street in Augusta, Maine. The limited asbestos identification survey, conducted on December 5, 2019, was completed to determine if suspended ceiling tiles present throughout the DHHS offices, identified during the October 16, 2019 visual asbestos assessment of the DHHS portion of the building, are asbestos containing. Similar-type ceiling tiles are present and had been previously sampled and identified as asbestos-containing in the Health and Environmental Testing Laboratory (HETL) portion of the building. At the time of the initial sampling, it was assumed that the ceiling tile present within the DHHS offices was the same and considered asbestos containing. Because the DHHS portion of the building is considered to be a separate functional space (due to construction age and renovation activity), it was determined that the ceiling tiles in the DHHS portion are not homogeneous to the ceiling tiles in the HETL portion, and should be sampled separately to determine if they are asbestos-containing.

The former DHHS portion of the building consists of a three-story, masonry structure constructed in 1951 and is currently used as storage. The structure was unoccupied at the time of this limited asbestos identification survey.

LIMITED ASBESTOS IDENTIFICATION SURVEY

This limited asbestos identification survey was completed in accordance with the Maine Department of Environmental Protection (MDEP) Chapter 425 Asbestos Management Regulations (April 3, 2011 revision) and was completed to provide BREM with information regarding the presence of asbestos in one type of suspended ceiling tile (pin dot/swirl design ceiling tiles) which are present throughout the three floors of the DHHS portion of the building.

Sensible Solutions | www.cesincusa.com
465 South Main Street
PO Box 639
Brewer, Maine 04412
T 207.989.4824
F 207.989.4881

Ms. Deborah Kasik (CES), an asbestos inspector licensed by MDEP (AI#-0177), performed the limited asbestos identification survey on December 5, 2019. A copy of Ms. Kasik's Asbestos Inspector certification is included in **Attachment A**.

Completion of the limited asbestos identification survey included:

- Collection of nine representative bulk samples of suspect ceiling tiles from throughout the interior of the former DHHS building in accordance with MDEP regulations;
- Indication of sample locations on **Figures H101-H103**; and
- Quantification of ACM identified by laboratory analysis.

As with any scientific study, an asbestos identification survey is subject to a variety of limitations. Limitations to be considered in interpreting the results of the survey performed on this building includes the following:

- Condition of the structure at the time of the survey; and
- This survey was limited to the collection and laboratory analysis of one type of suspect asbestos-containing material (ACM). Additional suspect ACM are present within the subject areas but were not sampled as part of this limited investigation.

Bulk samples of suspect ACM collected during the survey were submitted to EMSL Analytical, Inc. (EMSL) of South Portland, Maine for analysis. Bulk samples collected during this survey were analyzed using the MDEP required analytical methods: "PLM-EPA 600/R-93/116" (for surfacing, thermal system insulation, and cementitious materials). Samples were analyzed at the South Portland, Maine EMSL laboratory, which is certified to perform asbestos analysis by both the National Voluntary Laboratory Accreditation Program (NVLAP) and the American Industrial Hygiene Association (AIHA). EMSL is a MDEP licensed Asbestos Analytical Laboratory. A copy of EMSL's laboratory certifications is included in **Attachment B**. Laboratory analytical results and chain of custodies are included as **Attachment C**.

According to the MDEP Chapter 425 Asbestos Management Regulations, bulk samples shall be analyzed until a positive result is obtained or all samples have been analyzed. The MDEP defines ACM as "any material containing asbestos in quantities greater than or equal to one percent (%) by volume as determined by weight, visual evaluation, and/or point count analysis."

Laboratory analytical results did not identify the sampled ceiling tiles (pin dot/swirl design) as asbestos-containing.

This report was prepared by CES for the sole use of BREM and should not be reproduced without their full, written authorization. Please contact either of the undersigned at (207) 989-4824 if you have any questions related to this project or if additional services are required.

Sincerely,
CES, Inc.

Deborah A. Kasik
Project Scientist
MDEP Asbestos Inspector AI-0177

Dennis B. Kingman, Jr., CHMM
Vice President/Senior Project Manager II

DAK/DBK/cmc
Attachments

Sensible Solutions | www.cesincusa.com

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Brewer, Maine 04412
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F 207.989.4881

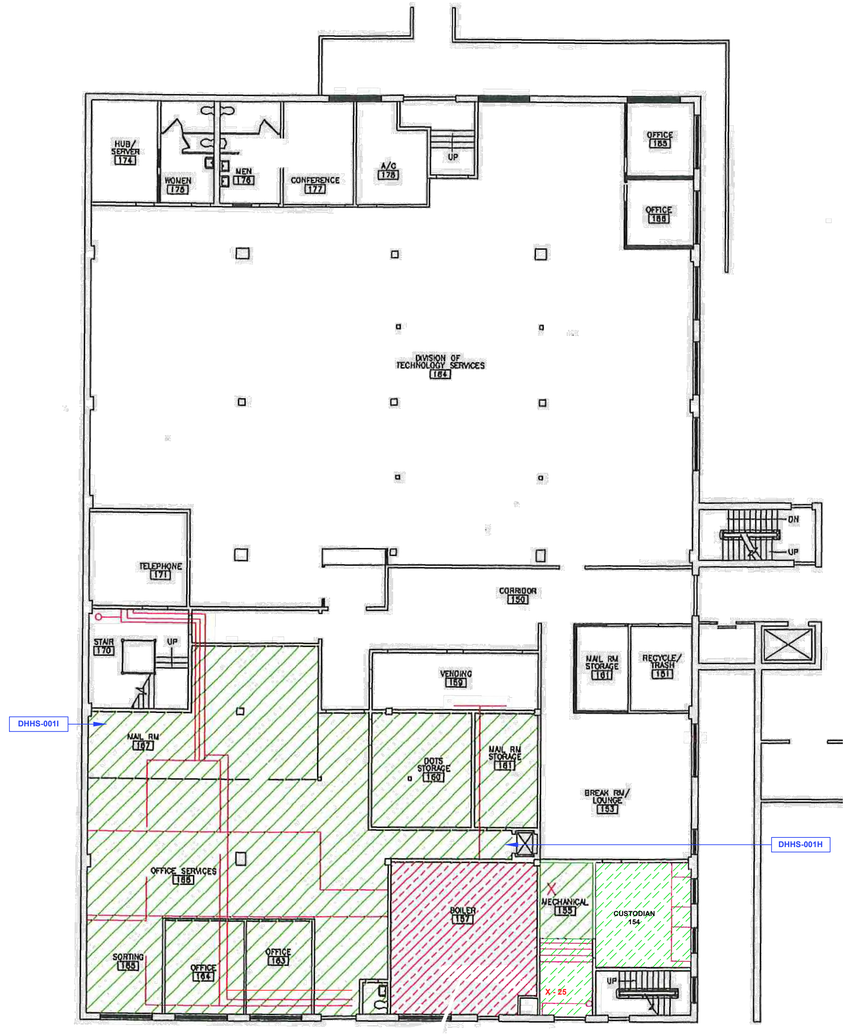
FIGURES

PLAN REFERENCE:

FLOOR PLAN DERIVED FROM DRAWINGS BY OTHERS PROVIDED TO CES, INC AND ARE NOT WARRANTED AS TO ACCURACY AND ARE INTENDED TO BE SCHEMATIC.

ASBESTOS LEGEND

- PIPE INSULATION ABOVE CEILING
- ACM FLOOR TILE WITH ACM MASTIC
- ACM ADHESIVE ONLY
- ACM INSULATED HORIZONTAL PIPES
- ACM INSULATED VERTICAL PIPE RISER
- X - 3 — ACM INSULATED PIPE FITTING VISIBLE IN A FUNCTIONAL AREA
- DHHS-002A — SAMPLE NUMBER AND LOCATION TESTING NEGATIVE FOR ASBESTOS



www.cesincusa.com
Brewer
465 South Main Street
PO Box 639
Brewer, ME
T.207-989-4824
F.207-989-4881

CES INC
Engineers • Environmental Scientists • Surveyors

PROJECT TITLE
STATE OF MAINE, BUREAU OF REAL ESTATE MANAGEMENT
FORMER DHHS BUILDING, 211 STATE ST., AUGUSTA, ME

SHEET TITLE
LIMITED ASBESTOS IDENTIFICATION SURVEY
FIRST FLOOR

REV	DESCRIPTION	DATE	DRAWN BY	CHECKED BY

ISSUE STATUS
NOT FOR CONSTRUCTION

SCALE	NTS
DATE	2019.12.13
DRAWN BY	JNB
CHECKED BY	DAK
DESIGNED BY	
APPROVED BY	
JOB NUMBER	10289.014

SHEET NUMBER
H101

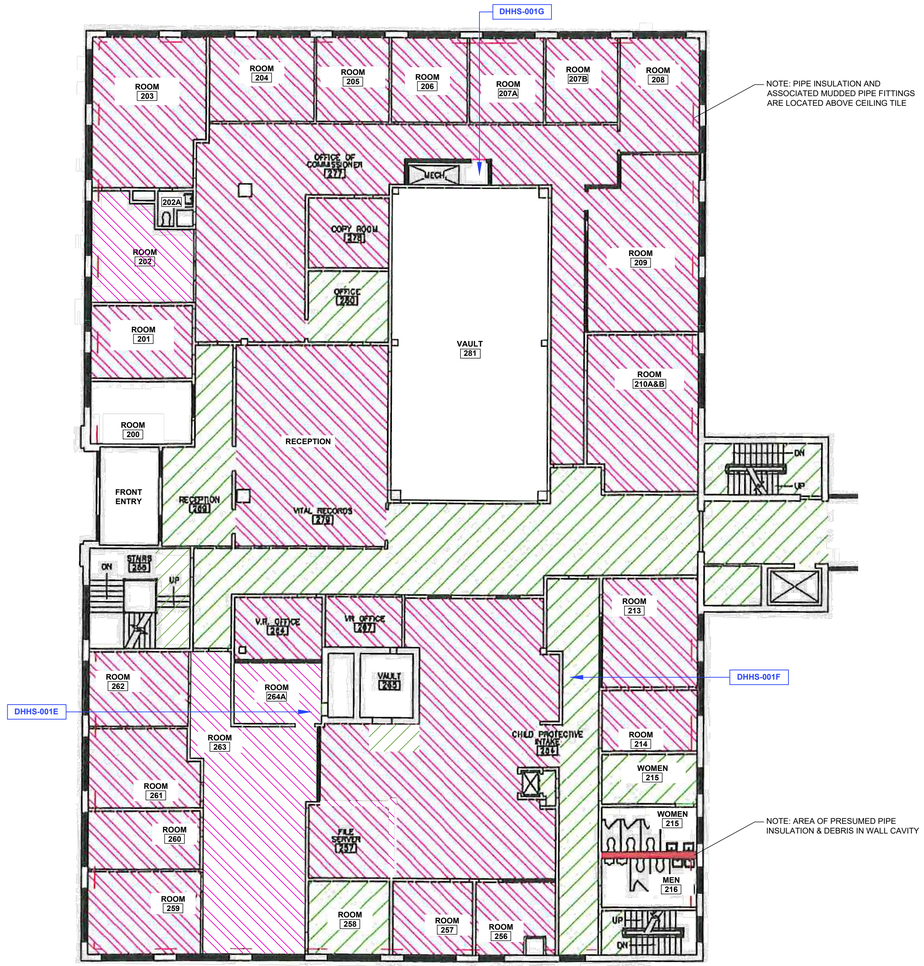
P:\10289-STATE_OF_MAINE\014-STATEST AUGUSTA PCB SCREENING DHHS BLDG-BEK\02-CAD_DRAWINGS\CIVIL\DISK_DWGS\10289.014-H-AA.DWG

PLAN REFERENCE:

FLOOR PLAN DERIVED FROM DRAWINGS BY OTHERS PROVIDED TO CES, INC AND ARE NOT WARRANTED AS TO ACCURACY AND ARE INTENDED TO BE SCHEMATIC.

ASBESTOS LEGEND

- ACM FLOOR TILE WITH ACM MASTIC
- ACM FLOOR TILE AND MASTIC BELOW CARPET
- ACM INSULATED HORIZONTAL PIPES
- DHHS-002A — SAMPLE NUMBER AND LOCATION TESTING NEGATIVE FOR ASBESTOS



www.cesincusa.com
Brewer
465 South Main Street
PO Box 639
Brewer, ME
T.207-989-4824
F.207-989-4881

CES INC
Engineers • Environmental Scientists • Surveyors

PROJECT TITLE
STATE OF MAINE, BUREAU OF REAL ESTATE MANAGEMENT
FORMER DHHS BUILDING, 211 STATE ST., AUGUSTA, ME

SHEET TITLE
LIMITED ASBESTOS IDENTIFICATION SURVEY
SECOND FLOOR

REV	DESCRIPTION	DATE	DRAWN BY	CHECKED BY

ISSUE STATUS
NOT FOR CONSTRUCTION

SCALE	NTS
DATE	2019.12.13
DRAWN BY	JNB
CHECKED BY	DAK
DESIGNED BY	
APPROVED BY	
JOB NUMBER	10289.014

SHEET NUMBER
H102

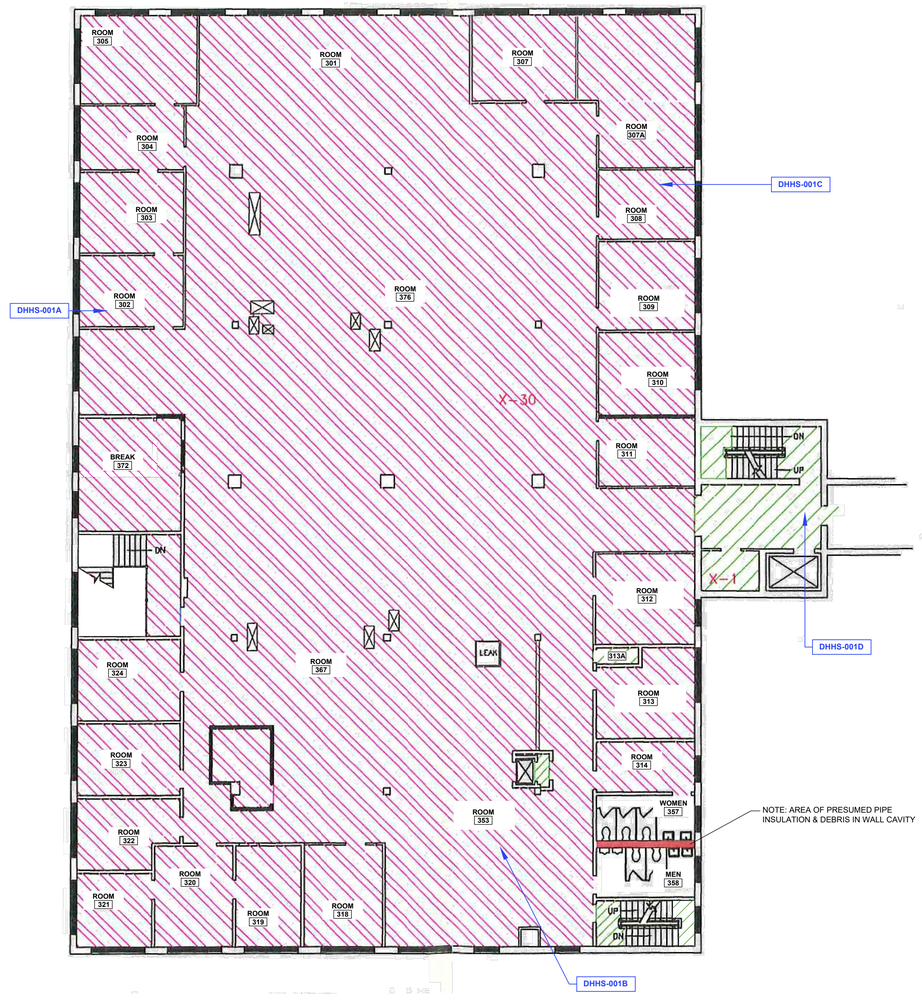
P:\10289-STATE_OF_MAINE\914-STATEST AUGUSTA PCB SCREENING DHHS BLDG\DBK\02-CAD_DRAWINGS\CIVIL\DISK_DWGS\10289-914-H-AA.DWG

PLAN REFERENCE:

FLOOR PLAN DERIVED FROM DRAWINGS BY OTHERS PROVIDED TO CES, INC AND ARE NOT WARRANTED AS TO ACCURACY AND ARE INTENDED TO BE SCHEMATIC.

ASBESTOS LEGEND

- ACM FLOOR TILE WITH ACM MASTIC
- ACM FLOOR TILE AND MASTIC BELOW CARPET
- X - 3 — ACM INSULATED PIPE FITTING VISIBLE IN A FUNCTIONAL AREA
- DHHS-002A — SAMPLE NUMBER AND LOCATION TESTING NEGATIVE FOR ASBESTOS



www.cesincusa.com
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465 South Main Street
PO Box 639
Brewer, ME
T.207-989-4824
F.207-989-4881

CES INC
Engineers • Environmental Scientists • Surveyors

PROJECT TITLE
STATE OF MAINE, BUREAU OF REAL ESTATE MANAGEMENT
FORMER DHHS BUILDING, 211 STATE ST., AUGUSTA, ME

SHEET TITLE
LIMITED ASBESTOS IDENTIFICATION SURVEY
THIRD FLOOR

REV	DESCRIPTION	DATE	DRAWN BY	CHECKED BY

ISSUE STATUS
NOT FOR CONSTRUCTION

SCALE	NTS
DATE	2019.12.13
DRAWN BY	JNB
CHECKED BY	DAK
DESIGNED BY	
APPROVED BY	
JOB NUMBER	10289.014
SHEET NUMBER	H103

P:\10289-STATE_OF_MAINE\01-STATEST AUGUSTA PCB SCREENING DHHS BLDG-SMA\02-CAD_DRAWINGS\CIVIL\DGN_DWGS\10289.014-H-AA.DWG

ATTACHMENTS

ATTACHMENT A

ASBESTOS INSPECTOR CERTIFICATION

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JANET T. MILLS
GOVERNOR

GERALD D. REID
COMMISSIONER

December 4, 2019

CES, Inc.
465 South Main Street
Brewer, Maine 04412

Dear Licensee:

Asbestos application(s) for individual certification of the **two** employee(s) listed below have been received and **approved**. Individual certification numbers are listed below and wallet card(s) are enclosed. Card(s) are property of the individual to whom each is issued. Your responsibility as a licensee is to ensure delivery of the cards to persons in your employment. This letter should be retained for your company files as record of certification. Please attach 1 updated passport size photo with every application.

Remember, in Maine all **certified employees** working on an asbestos abatement project, whether conducting removal/repair, air monitoring, design, inspection, or analysis functions, **must work for a State of Maine licensed asbestos firm** and carry his/her wallet card(s) on the job site.

As a reminder, prior to renewing your asbestos certification, the State of Maine **requires** an annual refresher course to be taken before submitting a renewal application. A certificate shall expire one year from the last day of the month from the date of issuance, **or on the last day of the month that the training certificate expires**, whichever is sooner.

All our asbestos forms can be found at https://www.maine.gov/dep/waste/asbestos/forms.html
Thank you for your cooperation and your completed application(s).

Name	Category	Certification #	Exp. Date
Dennis B. Kingman, Jr.	Inspector	AI-0034	11/30/2020
Deborah A. Kasik	Inspector	AI-0177	11/30/2020

Sincerely,

Sandra J. Moody, Environmental Specialist
Division of Remediation
Bureau of Remediation and Waste Management

State of Maine
Asbestos Abatement Program

Deborah A. Kasik

Inspector
Cert No. AI-0177
Trn.Exp.Date 11/21/2020
Expiration Date 11/30/2020
This is not a legal form of official identification

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826

BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO
PORTLAND,
(207) 822-630

website: www.maine.gov/dep

Environmental Safety
Professionals

21 Sylvan Drive
Brewer, Maine
(207)-989-6848

This is to Certify that

Deborah Kasik

has successfully completed the 4-hour Training, passed
the final exam and hand-on proficiencies for

Asbestos Inspector; Annual Review

Conducted under TSCA Title II and CMR 425.5(E) by

Environmental Safety Professionals

Course Date: November 21, 2019
Expiration: November 21, 2020

Exam Date: November 21, 2019
Exam Score: 96

AI19-13
Certificate No.

Instructor:

Chris Atwood, CSP, OHST

ATTACHMENT B

ASBESTOS ANALYTICAL LABORATORY CERTIFICATIONS

AIHA Laboratory Accreditation Programs, LLC

acknowledges that

EMSL Analytical, Inc.

200 Route 130 North, Cinnaminson, NJ 08077

Laboratory ID: 100194

along with all premises from which key activities are performed, as listed above, has fulfilled the requirements of the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC accreditation to the ISO/IEC 17025:2005 international standard, *General Requirements for the Competence of Testing and Calibration Laboratories* in the following:

LABORATORY ACCREDITATION PROGRAMS

✓	**INDUSTRIAL HYGIENE**	Accreditation Expires: November 01, 2020
✓	**ENVIRONMENTAL LEAD**	Accreditation Expires: November 01, 2020
✓	**ENVIRONMENTAL MICROBIOLOGY**	Accreditation Expires: November 01, 2020
☐	**FOOD**	Accreditation Expires:
☐	**UNIQUE SCOPES**	Accreditation Expires:

Specific Field(s) of Testing (FoT)/Method(s) within each Accreditation Program for which the above named laboratory maintains accreditation is outlined on the attached **Scope of Accreditation**. Continued accreditation is contingent upon successful on-going compliance with ISO/IEC 17025:2005 and AIHA-LAP, LLC requirements. This certificate is not valid without the attached **Scope of Accreditation**. Please review the AIHA-LAP, LLC website (www.aihaaccreditedlabs.org) for the most current Scope.

Beth Bair

Elizabeth Bair
Chairperson, Analytical Accreditation Board

Cheryl O. Morton

Cheryl O. Morton
Managing Director, AIHA Laboratory Accreditation Programs, LLC

Revision 17 – 09/11/2018

Date Issued: 11/30/2018

AIHA Laboratory Accreditation Programs, LLC
SCOPE OF ACCREDITATION

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077

Laboratory ID: **100194**
Issue Date: 02/19/2019

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

Industrial Hygiene Laboratory Accreditation Program (IHLAP)

Initial Accreditation Date: 02/01/1989

IHLAP Scope Category	Field of Testing (FoT) (FoTs cover all relevant IH matrices)	Technology sub-type/ Detector	Published Reference Method/Title of In-house Method	Method Description or Analyte *(for internal methods only)*
Chromatography Core	Gas Chromatography	GC/FID	NIOSH 1003 Modified	
			NIOSH 1005 Modified	
			NIOSH 1400 Modified	
			NIOSH 1500 Modified	
			NIOSH 1501 Modified	
			NIOSH 1550 Modified	
			NIOSH 1603 Modified	
			NIOSH 2000 Modified	
		GC/ECD	NIOSH 5502 Modified	
			NIOSH 5503 Modified	
			NIOSH 5510 Modified	
			OSHA 1010 Modified	
	GC/MS		EPA TO-15	
	Gas Chromatography (Diffusive Samplers)		NIOSH 1501 Modified	
	Ion Chromatography (IC)		NIOSH 6004 Modified	
			NIOSH 6011	
			NIOSH 7903	
			OSHA ID-214	
			OSHA ID-215 Modified Version 2	
	Liquid Chromatography	HPLC/FL	NIOSH 2016 Modified	
		HPLC/UV	NIOSH 5506 Modified	
		LC/MS	NIOSH 9111 Modified	

IHLAP Scope Category	Field of Testing (FoT) (FoTs cover all relevant IH matrices)	Technology sub-type/ Detector	Published Reference Method/Title of In-house Method	Method Description or Analyte *(for internal methods only)*
Spectrometry Core	Atomic Absorption	CVAA	NIOSH 6009 Modified	
			OSHA ID-140 Modified	
			OSHA ID-145	
		FAA	NIOSH 7082	
		GFAA	NIOSH 7105	
	Inductively-Coupled Plasma	ICP/MS	NIOSH 7300 Modified	
		ICP/AES	NIOSH 7300 Modified	
	X-ray Diffraction (XRD)		NIOSH 7500 Modified	
			OSHA ID-142 Modified	
	UV/VIS (Colorimetric)		NIOSH 6010 Modified	
Asbestos/Fiber Microscopy Core	Polarized Light Microscopy (PLM)		EPA 600/R-93/116	
	Phase Contrast Microscopy (PCM)		NIOSH 7400	
	Transmission Electron Microscopy (TEM)		EPA AHERA - 40 CFR Part 763	EPA AHERA Method (40 CFR 763, Subpart E, Appendix A, Mandatory Method
			NIOSH 7402	
Miscellaneous Core	Gravimetric		NIOSH 0500	
			NIOSH 0600	
			NIOSH 5524	
	Thermo-optical Analysis (TOA)		NIOSH 5040	
Beryllium Testing	Inductively-Coupled Plasma	ICP/MS	NIOSH 7300	
			NIOSH 7303	

A complete listing of currently accredited Industrial Hygiene laboratories is available on the AIHA-LAP, LLC website at: http://www.aihaaccreditedlabs.org

United States Department of Commerce
National Institute of Standards and Technology

Certificate of Accreditation to ISO/IEC 17025:2017

NVLAP LAB CODE: 500094-0

EMSL Analytical, Inc.

South Portland, ME

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

Asbestos Fiber Analysis

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2019-10-01 through 2020-09-30

Effective Dates

For the National Voluntary Laboratory Accreditation Program

NVLAP® National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

EMSL Analytical, Inc.
161 John Roberts Road
South Portland, ME 04106
Mr. Zackary Carbee
Phone: 207-517-6921
Email: zcarbee@emsl.com
http://www.emsl.com

ASBESTOS FIBER ANALYSIS — NVLAP LAB CODE 500094-0

Bulk Asbestos Analysis

Code	*Description*
18/A01	EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

Airborne Asbestos Analysis

Code	*Description*
18/A02	U.S. EPA's "Interim Transmission Electron Microscopy Analytical Methods-Mandatory and Nonmandatory-and Mandatory Section to Determine Completion of Response Actions" as found in 40 CFR, Part 763, Subpart E, Appendix A.

For the National Voluntary Laboratory Accreditation Program

State of Maine
Department of Environmental Protection

LICENSE

EMSL Analytical, Inc.

Asbestos Analytical Laboratory
(Bulk)

License Number: LB-0039

Expiration Date: 10/31/2020

State of Maine
Department of Environmental Protection

LICENSE

EMSL Analytical, Inc.

Asbestos Analytical Laboratory
(Air)

License Number: LA-0038 **Expiration Date:** 10/31/2020

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JANET T. MILLS
Governor

GERALD D. REID
Commissioner

September 10, 2019

Attn: Anastasia Krakhaleva, Quality Assurance Specialist
EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

Dear Ms. Krakhaleva,

This is to confirm that the Maine Department of Environmental Protection is in receipt of your request to add the following labs to your licensing of Analytical Laboratories: Boston, MA., E. Weymouth, MA and South Portland, Maine.

LA-0038 for Asbestos Analytical Laboratory (Air), expires on 10/31/2020
LB-0039 for Asbestos Analytical Laboratory (Bulk), expires on 10/31/2020

Remember each laboratory must have certified individual(s) within the lab to perform analyses.

If you need any further assistance please feel free to contact me at (207) 287-7751 or e-mail at sandy.j.moody@maine.gov.

Sincerely,

Sandra J. Moody, Environmental Specialist
Division of Remediation
Bureau of Remediation and Waste Management

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826
RAY BLDG., HOSPITAL ST.

BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04679-2094
(207) 764-0477 FAX: (207) 760-3143

web site: www.maine.gov/dep

PORTLAND - INDIVIDUAL ANALYST CERTIFICATIONS

State of Maine

November 11, 2019

Employee Name	*Lab Location*	*State Certified*	*Certification No.*	*Type of Cert.*	*Exp. Date*
Zachary Carbee	S. Portland	Maine	BA-0174	Asbestos PLM Analyst	8/31/2020
Stephen Severn	S. Portland	Maine	AA-0497	Asbestos PCM Analyst	10/28/2020
Stephen Severn	S. Portland	Maine	BA-0178	Asbestos PLM Analyst	10/28/2020
Thomas Stegerman	S. Portland	Maine	BA-0197	Asbestos PLM Analyst	10/28/2020
Samantha Voigt	S. Portland	Maine	BA-0188	Asbestos PLM Analyst	8/31/2020

ATTACHMENT C

ASBESTOS LABORATORY ANALYTICAL RESULTS

EMSL Analytical, Inc.

161 John Roberts Road South Portland, ME 04106

Tel/Fax: (207) 517-6921 / (207) 517-6922

http://www.EMSL.com / portlandlab@emsl.com

EMSL Order:	621901907
Customer ID:	CESI62
Customer PO:	
Project ID:	

Attention:	Deb Kasik	**Phone:**	(207) 989-4824
	CES/Summit Environmental Consultants	**Fax:**	(207) 989-4881
	465 S. Main Street	**Received Date:**	12/06/2019 10:00 AM
	PO Box 639	**Analysis Date:**	12/06/2019
	Brewer, ME 04412	**Collected Date:**	12/05/2019
Project:	10289.014		

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

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
DHHS-001A *621901907-0001*	3rd Floor Rm 302 - CT 4 x 2 Pindot Swirl	Gray Fibrous Homogeneous	50% Cellulose 45% Min. Wool	5% Non-fibrous (Other)	None Detected
DHHS-001B *621901907-0002*	3rd Floor Rm 353 Near Stairs - CT 4 x 2 Pindot Swirl	Gray Fibrous Homogeneous	50% Cellulose 45% Min. Wool	5% Non-fibrous (Other)	None Detected
DHHS-001C *621901907-0003*	3rd Floor Rm 308 - CT 4 x 2 Pindot Swirl	Gray Fibrous Homogeneous	50% Cellulose 45% Min. Wool	5% Non-fibrous (Other)	None Detected
DHHS-001D *621901907-0004*	3rd Floor Hall Near Elevator - CT 4 x 2 Pindot Swirl	Gray Fibrous Homogeneous	50% Cellulose	50% Non-fibrous (Other)	None Detected
DHHS-001E *621901907-0005*	2nd Floor Rm 264A - CT 4 x 2 Pindot Swirl	Gray Fibrous Homogeneous	50% Cellulose 45% Min. Wool	5% Non-fibrous (Other)	None Detected
DHHS-001F *621901907-0006*	2nd Floor Hall Outside Rm 213 - CT 4 x 2 Pindot Swirl	Gray Fibrous Homogeneous	50% Cellulose 45% Min. Wool	5% Non-fibrous (Other)	None Detected
DHHS-001G *621901907-0007*	2nd Floor Rm 277 Near Elec. Panel - CT 4 x 2 Pindot Swirl	Gray Fibrous Homogeneous	50% Cellulose 45% Min. Wool	5% Non-fibrous (Other)	None Detected
DHHS-001H *621901907-0008*	1st Floor Hall Near Freight Elev. - CT 4 x 2 Pindot Swirl	Gray Fibrous Homogeneous	50% Cellulose 45% Min. Wool	5% Non-fibrous (Other)	None Detected
DHHS-001I *621901907-0009*	1st Floor Rm 167 - CT 4 x 2 Pindot Swirl	Gray Fibrous Homogeneous	50% Cellulose 45% Min. Wool	5% Non-fibrous (Other)	None Detected

Report Comment: **ME CERT # BA-0178, BA-0188**

Analyst(s)

Stephen Severn (5)

Samantha Voigt (4)

Zackary Carbee, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method"), but augmented with procedures outlined in the 1993 ("final") version of the method. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. All samples received in acceptable condition unless otherwise noted. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. EMSL recommends gravimetric reduction for all non-friable organically bound materials prior to analysis. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. South Portland, ME NVLAP Lab Code 500094-0, MA AA000236, VT AL197271, ME LM-0039, CT PH-0346

Initial report from: 12/09/2019 08:43:36

OrderID: 621901907

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (*Lab Use Only*): 621901907

EMSL Analytical, Inc.
161 John Roberts Road
South Portland, ME 04106
PHONE: (207) 517-6921
FAX: (207) 517-6922

Company: CES, INC	**EMSL-Bill to:** ☐ Same ☑ Different If Bill to is Different note instructions in Comments** *Third Party Billing requires written authorization from third party*
Street: 465 S MAIN STREET	
City: BREWER **State/Province:** ME	**Zip/Postal Code:** 04412 **Country:** US
Report To (Name): DEB KASIK	**Telephone #:** 207989-4824
Email Address: dkasik@cesincusa.com	**Fax #:** 207 989-4881 **Purchase Order:**
Project Name/Number: 10289.014	**Please Provide Results:** ☐ Fax ☑ Email ☐ Mail
U.S. State Samples Taken: ME	**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour ☐ 6 Hour ☑ 24 Hour ☐ 48 Hour ☐ 72 Hour ☑ 96 Hour ☐ 1 Week ☐ 2 Week

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

PLM - Bulk (reporting limit)	TEM – Bulk
■ PLM EPA 600/R-93/116 (<1%)	☐ TEM EPA NOB – EPA 600/R-93/116 Section 2.5.5.1
■ PLM EPA NOB (<1%)	☐ NY ELAP Method 198.4 (TEM)
Point Count ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ Chatfield Protocol (semi-quantitative)
Point Count w/Gravimetric ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ TEM % by Mass – EPA 600/R-93/116 Section 2.5.5.2
☐ NIOSH 9002 (<1%)	☐ TEM Qualitative via Filtration Prep Technique
☐ NY ELAP Method 198.1 (friable in NY)	☐ TEM Qualitative via Drop Mount Prep Technique
☐ NY ELAP Method 198.6 NOB (non-friable-NY)	**Other**
☐ OSHA ID-191 Modified	☐
☐ Standard Addition Method	

■ **Check For Positive Stop – Clearly Identify Homogenous Group** **Date Sampled:** 12/5/19

Samplers Name: Deb Kasik **Samplers Signature:** Deborah A Kasik

Sample #	HA #	Sample Location	Material Description
621901907-001A		3rd floor Rm 302	CT 4x2 pindot swirl
B		" " Rm 353 near stairs	"
C		" " Rm 308	"
D		3rd floor Hall near Elevator	"
E		2nd floor Rm 264A	"
F		" " Wall outside Rm 213	"
G		" " Rm 277 near elec. panel	"
H		1st floor Hall near freight elev.	"
I		1st floor Rm 167	"

DIFFS

Client Sample # (s): - **Total # of Samples:** 9

Relinquished (Client): Deborah A Kasik **Date:** 12/5/19 **Time:** 5:00pm

Received (Lab): Steph S. **Date:** 12/6/19 **Time:** 10AM

Comments/Special Instructions:
NOB PER MAINE DEP
BillTo: CES, INC,
Prefix 'DHHS'

Page 1 of 1 pages E Fedex (1 of 1)

RECEIVED
DEC 06 2019
By SRS

URS

URS Corporation
115 Water Street, Suite 3
Hallowell, Maine 04347

ASBESTOS IDENTIFICATION SURVEY DHS BUILDING AUGUSTA, MAINE

Prepared for:

Mr. Joe Silva
Bureau of General Services
77 State House Station
Augusta, ME 04333-0077

JOB NO.: 28407
May 16, 2002

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Appendix B Survey, Sampling and Analytical Protocol
Appendix C Polarized Light Microscopy Analytical Methods
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1.0 INTRODUCTION

URS Corporation (URS) was retained by the State of Maine; Bureau of General Services (BGS) to conduct an asbestos identification survey at the Department of Human Services (DHS) Building, located in Augusta, Maine. The objective of the field survey was to locate and identify asbestos-containing materials (ACM) in the interior of the building.

1.1 ASBESTOS-CONTAINING MATERIALS

Mr. Michael Haughton, (URS), an asbestos inspector licensed in the State of Maine performed the field survey during the period of April 9, 2002 through April 12, 2002. During the survey, the inspector reviewed the 1987 Hall-Kimbrell asbestos identification survey and the 1999 ICON Environmental asbestos identification survey, information regarding the facility that was provided to them by BGS, visually identified interior suspect ACM and collected bulk samples of suspect ACM in accordance with the Maine Department of Environmental Protection (DEP) regulations. Forty- two bulk samples of suspect ACM building materials were collected during the field survey. Quantity estimates and locations of identified ACM were based upon information provided by BGS and from field observations

Following the completion of the survey work, the bulk samples of suspect ACM were submitted to the URS's Salem, NH laboratory for analysis. The URS laboratory is certified to perform asbestos analysis by both the National Voluntary Laboratory Accreditation Program (NVLAP) and the American Industrial Hygiene (AIHA). The method used to analyze the bulk samples collected during this survey was the recommended EPA procedure of Polarized Light Microscopy (PLM) with dispersion staining. Analytical results are presented in Appendix A. The protocol for analysis of bulk samples is presented in Appendix D.

2.0 SURVEY LIMITATIONS

The information presented in this report represents the conditions observed at the time of the site investigation. Survey data, observations and recommendations presented in this report are based upon industry-accepted methodologies used to conduct this investigation and the professional judgment of the investigator. URS Corporation is not responsible for changes in condition observed after the field investigation was completed.

As with any scientific study, facility asbestos identification surveys are subject to a variety of limitations. Limitations to be considered in interpreting the results of this survey include the following:

- Asbestos survey may not be able to identify all ACM throughout a facility. A thorough study should be capable of identifying approximately 95 percent of accessible (by non-destructive methods) ACM present. The survey and analytical protocol used for this project is presented in Appendix B and C.
- Areas not accessible at the time of the scheduled survey were not surveyed.
- This survey was conducted using non-destructive sampling methods.
- Thermal system insulation identified during the 1987 Hall-Kimbrell asbestos identification survey was not re-sampled during this survey. Samples of thermal system insulation were only collected if the material could not be referenced to the original survey or if the suspect material appeared to have been installed after the 1987 survey.
- Cost figures used in developing abatement costs were estimated, based on historical information. These costs should be considered estimates and used for budgetary purposes only. For cost projections in future years, an adjustment that considers inflation and the state of the abatement industry must be applied.

3.0 OBSERVATIONS AND FINDINGS

The DHS Building is a three-story brick, masonry structure consisting of a basement and three upper floors. During the walk-through survey of the building, the URS surveyors reviewed existing drawing plans, identified interior suspect ACM and determined quantities of suspect ACM. The asbestos inspector collected bulk samples of suspect ACM in accordance with Maine DEP regulations. Suspect ACM sampled during the survey included ceiling tile, flooring material and flooring material adhesives, pipe insulation, sheetrock and associated joint compound and laboratory fume hoods.

The following sections of this report contain brief descriptions of the building areas by floor and a summary of the types of ACM identified in those areas. An inventory of ACM materials and their locations is included in Table 1. The location of the identified ACM within the building is shown in Figures 1 through 4

BASEMENT

The Basement consists of a boiler room, mechanical space, lounge area, laboratories, restrooms and stairwells. Suspect ACM identified in the basement included twelve-inch by twelve-inch floor tile and associated floor tile mastic (four types), nine-inch by nine-inch floor tile and associated floor tile mastic, pipe insulation, mud-insulated pipe fittings, ceiling tile (two types) and sheet rock and associated joint compound. Materials identified as ACM included nine-inch by nine-inch off-white floor tile and associated mastic, twelve-inch by twelve-inch dark off-white floor tile with gray design and associated mastic, pipe insulation, mud-insulated pipefittings and two-foot by four-foot white ceiling tile with pin dot design.

FIRST FLOOR

The first floor consists of laboratories located in the east wing and office areas located in the west wing, entryway, reception area, restrooms and stairwells. Suspect ACM identified on the first floor includes twelve-inch by twelve-inch green floor tile and associated floor tile mastic, nine-inch by nine-inch floor tile and associated floor tile mastic (two types) ceiling tile (three types), pipe insulation, mud-insulated pipe fittings, laboratory fume hoods, sheet rock and associated joint compound. Material identified as ACM included nine-inch by nine-inch brown and off-white floor tile and associated mastic, pipe insulation, mud-insulated pipe fittings and laboratory fume hoods.

SECOND FLOOR

The second floor consists of east and west office wings, common areas, restrooms and stairwells. Suspect ACM identified on the second floor includes twelve-inch by twelve-inch white floor tile and associated floor tile mastic, nine-inch by nine-inch floor tile and associated floor tile mastic, ceiling tile, pipe insulation, mud-insulated pipe fittings and sheet rock and associated joint compound. Material identified as ACM included nine-inch by nine-inch off-white floor tile and associated floor tile mastic located under carpets, nine-inch by nine-inch floor tile brown and associated floor tile mastic, pipe insulation and mud-insulated pipe fittings.

THIRD FLOOR

The third floor consists of a west office wing, common areas, restrooms and stairwells. Suspect ACM identified on the third floor includes nine-inch by nine-inch floor tile and associated floor tile mastic, pipe insulation, mud-insulated pipe fittings and sheet rock and associated joint compound. Material identified as ACM included nine-inch by nine-inch unknown color floor tile and associated floor tile mastic located under carpets, nine-inch by nine-inch brown floor tile and associated floor tile mastic, pipe insulation and mud-insulated pipe fittings.

PENTHOUSE

The Penthouse consists of an area used to house a mechanical HVAC system. Suspect ACM identified in the Penthouse includes exterior transite siding, pipe insulation and mud-insulated pipe fittings. Materials identified as ACM include exterior transite siding, pipe insulation and mud-insulated pipe fittings.

4.0 RECOMMENDATIONS

The ACM identified throughout the facility was found to range from fair to good condition, with the exception of the nine-inch by nine-inch floor tile located in the Custodian's Closet located on the second floor and the pipe insulation located in the Penthouse. These materials were observed to be in poor condition and should be removed.

Asbestos fibers are potential health hazards when they become airborne. As long as this material remains intact, undamaged, and in good condition, the material may be managed in place. However, current regulations require that asbestos-containing building materials be either removed if the materials will be disturbed by renovation, demolition, or other building maintenance activities. An Operation and Maintenance (O&M) plan should be implemented to manage the materials in place until such a time when they have been removed. ACM identified during this survey that will be impacted by the planned renovation project should be removed prior to the initiation of the actual renovation work. Upon finalization of the renovation plans the actual extent of impact to the existing ACM can be determined. ACM abatement should be performed using approved methods in accordance with applicable regulations established by the U.S. Environmental Protection Agency (EPA), OSHA and Maine DEP. The ACM impacted by planned renovation activities must be removed by a State of Maine licensed asbestos abatement contractor.

5.0 BUDGETARY COST ESTIMATES

URS has developed preliminary cost estimates for abatement of ACM identified during the survey. These estimates do not include material replacement costs or associated design and project monitoring fees or regulatory agency notification fees. Actual abatement costs will vary depending upon the quantity of material removed at any one time. These cost estimates assume that the ACM will be removed in a friable state.

ACM ABATEMENT COSTS
DHS BUILDING
AUGUSTA, MAINE

ACM	Approximate Quantity	Unit Cost	Cost
Pipe Insulation	3,525 Linear Feet (LF)	$15.00/LF	$ 52,875
Ceiling Tile	900 Square Feet (SF)	$ 10.00/SF	$ 9,000
Floor Tile	23,405 SF	$ 2.50/SF	$ 58,512
Floor Tile Mastic	8,025 SF	$5/SF	$40,125
Exterior Transite Siding	2,000 SF	$3/SF	$6,000
Fume Hoods	7 Each (EA)	$500/EA	$3,500
Mud Insulated Pipe Fittings	470 EA	$25/EA	$11,750
Total Estimated Cost Range			**$175,000 - $200,000**

URS has estimated asbestos abatement project duration of between 75 working days of eight – hour contractor shifts, using an 8-person crew.

6.0 REPORT CERTIFICATION

This report was prepared and reviewed by URS Corporation for the sole use of the State of Maine Bureau of General Services and it's constituents and should not be reproduced without full, written authorization from the Bureau of General Services.

Inspector:

Michael Haughton

AI-0167
Maine DEP License No.

May 16, 2002
Date

Quality Control:

Dennis B. Kingman, Jr.

Senior Project Manager
Title

Date

TABLES

TABLE 1

ASBESTOS-CONTAINING MATERIALS
DHS BUILDING
AUGUSTA, MAINE

BASEMENT

Location	Material Type	Sample Number	Asbestos Percent and Type	Estimated Quantity of ACM	Condition	Recommended Response Action
Mechanical Room	Pipe Insulation Mud Insulated Pipe Fittings	HK114702 HK114703	35% Chrysotile 15% Chrysotile	550 LF 60 EA	Good Good	O & M O & M
Ernie's Room	Pipe Insulation Mud Insulated Pipe Fittings	HK114702 HK114703	35% Chrysotile 15% Chrysotile	225 LF 12 EA	Good Good	O & M O & M
Laboratories	Pipe Insulation Mud Insulated Pipe Fittings Ceiling Tile Floor Tile and Associated Mastic	HK114702 HK114703 08 01 02	35% Chrysotile 15% Chrysotile 5% Amosite 2% Chrysotile 1% Chrysotile	300 LF 130 EA 900 SF 600 SF	Good Good Good Good	O & M O & M O & M O & M
Evidence Room	Pipe Insulation Mud Insulated Pipe Fittings	HK114702 HK114703	35% Chrysotile 15% Chrysotile	100 LF 20 EA	Good Good	O & M O & M
Corridor	Pipe Insulation Mud Insulated Pipe Fittings Floor Tile and Associated Mastic	HK114702 HK114703 01 02	35% Chrysotile 15% Chrysotile 2% Chrysotile 1% Chrysotile	200 LF 50 EA 750 SF	Good Good Good	O & M O & M O & M

Location	Material Type	Sample Number	Asbestos Percent and Type	Estimated Quantity of ACM	Condition	Recommended Response Action
Supply Room	Pipe Insulation Mud Insulated Pipe Fittings	HK114702 HK114703	35% Chrysotile 15% Chrysotile	200 LF 30 EA	Good Good	O & M O & M
Boiler Room	Pipe Insulation Mud Insulated Pipe Fittings	HK114696 HK114690	35% Chrysotile 15% Chrysotile	200 LF 16 EA	Good Good	O & M O & M
Storage Room	Pipe Insulation Mud Insulated Pipe Fittings	HK114696 HK114690	35% Chrysotile 15% Chrysotile	325 LF 30 EA	Good Good	O & M O & M
Break Room	Pipe Insulation Mud Insulated Pipe Fittings	HK114702 HK114703	35% Chrysotile 15% Chrysotile	75 SF 30 EA	Good Good	O & M O & M

FIRST FLOOR

Location	Material Type	Sample Number	Asbestos Percent and Type	Estimated Quantity of ACM	Condition	Recommended Response Action
Laboratories	Pipe Insulation	HK114702	35% Chrysotile	350 LF	Good	O & M
	Mud Insulated Pipe Fittings	HK114703	15% Chrysotile	50 EA	Good	O & M
	Floor Tile and Associated Mastic	11 12	3% Chrysotile 1% Chrysotile	1600 SF	Good	O & M
	Fume Hoods			7 EA	Good	O & M
Corridor	Floor Tile and Associated Mastic	11 12	3% Chrysotile 1% Chrysotile	600 SF	Good	O & M
Administration Room	Floor Tile and Associated Mastic	11 12	3% Chrysotile 1% Chrysotile	100 SF	Good	O & M
Boiler Room	Pipe Insulation	HK114702	35% Chrysotile	300 LF	Good	O & M
Mechanical Room	Pipe Insulation	HK114702	35% Chrysotile	125 LF	Good	O & M
	Floor Tile and Associated Floor Tile Mastic	11 12	3% Chrysotile 1% Chrysotile	75 SF	Good	O & M
Mail Room	Pipe Insulation	HK114702	35% Chrysotile	200 LF	Good	O & M
	Floor Tile and Associated Floor Tile Mastic	IATL96216 IATL96217	10% Chrysotile 3% Chrysotile	2,000SF	Good	O & M

SECOND FLOOR

Location	Material Type	Sample Number	Asbestos Percent and Type	Estimated Quantity of ACM	Condition	Recommended Response Action
East Office Wing	Floor Tile located under carpet	11	3% Chrysotile	1,800 SF	Good	O & M
	Mud Insulated Pipe Fittings	HK114703	15% Chrysotile	30 EA	Good	O & M
Custodian's Closet	Floor Tile and Associated Mastic	IATL96216	10% Chrysotile	80 SF	Poor	Remove
West Office Wing	Floor Tile located under carpet	IATL96216	10% Chrysotile	3,500 SF	Good	O & M
	Floor Tile and Associated Mastic	11	3% Chrysotile	2,000 SF	Good	O & M
	Pipe Insulation	12	1% Chrysotile			
		HK114702	35% Chrysotile	300 LF	Good	O & M
Corridor	Floor Tile and Associated Floor Tile Mastic	11	3% Chrysotile	300 SF	Good	O & M
		12	1% Chrysotile			

THIRD FLOOR

Location	Material Type	Sample Number	Asbestos Percent and Type	Estimated Quantity of ACM	Condition	Recommended Response Action
West Office Wing	Floor Tile located under carpet Mud Fitting	IATL96216	10% Chrysotile	10,000 SF	Good	O & M
		HK114703	15% Chrysotile	30 EA	Good	O & M

PENTHOUSE

Location	Material Type	Sample Number	Asbestos Percent and Type	Estimated Quantity of ACM	Condition	Recommended Response Action
Attic	Transite Siding			2,000 SF	Good	O & M
Penthouse	Pipe Insulation	HK114702	35% Chrysotile	75 LF	Poor	Remove

FIGURES

APPENDIX A

POLAR LIGHT MICROSCOPY ANALYTICAL DATA

URS

URS Corporation
5 Industrial Way
Salem, NH 03079
Tel: 603.893.0616
Fax: 603.893.6240

Dennis Kingman
URS Corporation
115 Water Street, Suite 3
Hallowell, ME 04347

URS Project #	: 03956
Laboratory Batch #	: 15032
Date Samples Received	: 4/10/02
Date Samples Analyzed	: 4/10/02
Date of Final Report	: 4/10/02

SAMPLE IDENTIFICATION:

Forty-Two bulk samples from the Bureau of General Services; HETL 1st Floor/Basement project; submitted by Michael Haughton.

These bulk samples were delivered to URS Corporation, Salem, New Hampshire for asbestos content determination.

ANALYTICAL METHOD:

Analytical procedures were performed in accordance with the U.S. Environmental Protection Agency (EPA) Recommended Method for the Determination of Asbestos in Bulk Samples by Polarized Light Microscopy and Dispersion Staining (PLM/DS)(EPA-600/M4-82-020, EPA-600/ R-93-116) and the New York Department of Health Environmental Laboratory Approval Program (NYDOH-ELAP 198.1) with the exception of resinously bound materials (please refer to the comments at the end of this report). This report relates only to those samples actually analyzed, and may not be indicative of other similar appearing materials existing at this, or other sites.

Quantification of asbestos content was determined by Calibrated Visual Estimation.

The EPA requires that friable samples with analytical results of 10% or less asbestos, by visual estimation, be treated as asbestos-containing material unless these quantities are verified using the point counting method. The point counting method is a systematic technique for estimating concentration, also using PLM. The point counting method, however, does not increase the analyst's ability to detect fibers. If you would like any of your friable samples with an asbestos content of less 10% to be point counted, please contact our office. Point counting is not required for those samples in which no asbestos is detected during analysis by PLM.

New York State regulations require that a matrix reduction be performed on all NOB (Non-Organically Bound) samples (i.e.: floor tile, adhesives, roofing materials, etc.). The URS Asbestos Laboratory complies with this directive by applying solvent and low level heat to all resinously bound materials (regardless of state or country origin) to release bound asbestos fibers from the resinous matrix without altering their optical properties. However, this procedure is not covered by the EPA methodologies (EPA-600/ M4-82-020 & EPA-600/ R-93-116) and is therefore a departure from documented protocols.

In any given material, fibers with a small diameter (<0.25µm) may not be detected by the PLM method. Floor tile and other resinously bound material may yield a false negative if the asbestos fibers are too small to be resolved using PLM. Additional analytical methods may be required. URS recommends using Transmission Electron Microscopy (TEM) for a more definitive analysis.

New York state regulations require that all friable samples in which asbestos is detected be point counted (using the NYDOH-ELAP stratified point counting method). New York state regulations also require TEM confirmation of NOB (Non Organically Bound) samples found to have No Asbestos Detected by PLM. These regulations apply only to samples taken within the State of New York.

URS will retain all samples for a minimum of three months. Further analysis or return of samples must be requested within this three month period to guarantee their availability.

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If you have any questions regarding this report, please do not hesitate to contact ns.

Douglas R. Lawson, Ph.D, CIH
Laboratory Director

Jeffrey D. Waite
Laboratory Supervisor

NVLAP Lab ID#: 101433-0
NYDOH-ELAP #: 11020

2068

URS

Laboratory Bulk Asbestos Analysis Results

Client/ Project Title : Bureau of General Services; HETL 1st Floor/Basement
Project Number : 03956
Laboratory Batch : 15032

Date Received : 4/10/2002
Date Reported : 4/10/2002
Analyst : JDW

			Asbestos Type(s) Detected				Non-Asbestos Materials				
Lab ID #	Client ID #/ Description	Color	% Chrysotile	% Amosite	% Crocidolite	% Other	% Cellulose	% Fiber Glass/ Mineral Wool	% Other Fibrous Material (OFM)	% Non-Fibrous Material	**Comments** Analysis Methods Per EPA-600/M4-82-020, EPA-600/R-93-116, & NYDOH-ELAP 198.1 NAD - No Asbestos Detected
001	01A, Floor Tile	White	2				1			97	
002	01B, Floor Tile										Sample Not Analyzed / Positive Stop
003	01C, Floor Tile										Sample Not Analyzed / Positive Stop
004	02A, Mastic	Black	<1				2			>97	
005	02B, Mastic	Black	<1				3			>96	
006	02C, Mastic	Black	<1				3			>96	
007	03A, Ceiling Tile	Gry/Wht					35	35		30	No Asbestos Detected
008	03B, Ceiling Tile	Gry/Wht					35	35		30	No Asbestos Detected
009	03C, Ceiling Tile	Gry/Wht					35	35		30	No Asbestos Detected
010	04A, Floor Tile	Gray					1			99	NAD; Mastic (Black) Positive 2%
011	04B, Floor Tile	Gray					2			98	No Asbestos Detected
012	04C, Floor Tile	Gray					1			99	No Asbestos Detected
013	05A, Floor Tile	Tan	2				1			97	Black Mastic Positive 2%
014	05B, Floor Tile										Sample Not Analyzed / Positive Stop
015	05C, Floor Tile										Sample Not Analyzed / Positive Stop
016	06A, Floor Tile	Green					2			98	No Asbestos Detected
017	06B, Floor Tile	Green					3			97	No Asbestos Detected
018	06C, Floor Tile	Green					2			98	No Asbestos Detected
019	07A, Linoleum	Brown					2	10	8	80	NAD; Gypsum 8%
020	07B, Linoleum	Brown					2	8	10	80	NAD; Gypsum 10%

URS

Laboratory Bulk Asbestos Analysis Results

Client/ Project Title : Bureau of General Services; HETL 1st Floor/Basement
Project Number : 03956
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Date Received : 4/10/2002
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			Asbestos Type(s) Detected				Non-Asbestos Materials				
Lab ID #	Client ID #/ Description	Color	% Chrysotile	% Amosite	% Crocidolite	% Other	% Cellulose	% Fiber Glass/ Mineral Wool	% Other Fibrous Material (OFM)	% Non-Fibrous Material	**Comments** Analysis Methods Per EPA-600/M4-82-020, EPA-600/R-93-116, & NYDOH-ELAP 198.1 NAD - No Asbestos Detected
021	07C, Linoleum	Brown					2	10	8	80	NAD; Gypsum 8%
022	08A, Ceiling Tile	Gry/Pink	2	5			28	35		30	
023	08B, Ceiling Tile										Sample Not Analyzed / Positive Stop
024	08C, Ceiling Tile										Sample Not Analyzed / Positive Stop
025	09A, Sheetrock/Joint Compound	Gry/Wht					23	1		76	No Asbestos Detected
026	09B, Sheetrock/Joint Compound	Gry/Wht					24	1		75	No Asbestos Detected
027	09C, Sheetrock/Joint Compound	Gry/Wht					23	1		76	No Asbestos Detected
028	010A, Floor Tile	Gray					1			99	No Asbestos Detected
029	010B, Floor Tile	Gray					1			99	No Asbestos Detected
030	010C, Floor Tile	Gray					1			99	No Asbestos Detected
031	011A, Floor Tile	Gray	3							97	
032	011B, Floor Tile										Sample Not Analyzed / Positive Stop
033	011C, Floor Tile										Sample Not Analyzed / Positive Stop
034	012A, Mastic	Black	<1				2			>97	
035	012B, Mastic	Black	<1				3			>96	
036	012C, Mastic	Black	<1				2			>97	
037	013A, Floor Tile	White	2				1			97	
038	013B, Floor Tile										Sample Not Analyzed / Positive Stop
039	013C, Floor Tile										Sample Not Analyzed / Positive Stop
040	PC-01A, Pipe Covering	Blue		23			10			67	

URS

Laboratory Bulk Asbestos Analysis Results

Client/ Project Title : Bureau of General Services; HETL 1st Floor/Basement
Project Number : 03956
Laboratory Batch : 15032

Date Received : 4/10/2002
Date Reported : 4/10/2002
Analyst : JDW

			Asbestos Type(s) Detected				Non-Asbestos Materials				
Lab ID #	Client ID #/ Description	Color	% Chrysotile	% Amosite	% Crocidolite	% Other	% Cellulose	% Fiber Glass/ Mineral Wool	% Other Fibrous Material (OFM)	% Non-Fibrous Material	**Comments** Analysis Methods Per EPA-600/M4-82-020, EPA-600/R-93-116, & NYDOH-ELAP 198.1 NAD - No Asbestos Detected
041	PC-01B, Pipe Covering										Sample Not Analyzed / Positive Stop
042	PC-01C, Pipe Covering										Sample Not Analyzed / Positive Stop

~~Attn:~~ Positive Stop.

URS Corporation
Bulk Sample Chain Of Custody

Call w/ Results

Laboratory Batch# B15032

URS Corporation 7 University Drive Augusta, Maine 04330 Tel # 207-623-9188 Fax# 207-622-6085	Project Number: await for # Client: Bureau of General Services (See Back Of Page) Location: HCTC (Basement) Project Manager: Kingman Date Results Due: 4/10/02

Samples Taken By: HOUGHTON | Date Samples Taken: 4/9/02

Lab #	Sample #	Sample Location/ Description	Asbestos Type	%
	01A	9X9 off-white FT w/		
	01B	↓		
	01C	↓		
	02A	Associated Black MASTIC		
	02B	↓		
	02C	↓		
	03A	2X4 white CT w/ fisure Design		
	03B	↓		
	03C	↓		
	04A	12X12 off-white FT w/ gray Design		
	04B	↓		
	04C	↓		
	05A	12X12 Cream FT w/ ~~gray & purple~~ LIGHT brown Design		
	05B	↓		
	05C	↓		
	06A	12X12 Green FT w/ gray & purple Design		
	06B	↓		
	06C	↓		
	07A	Brown Linoleum w/ white & Black Design		
	07B	↓		
	07C	↓		
	08A	2X4 White CT w/ pin-dot design		
	08B	↓		
	08C	↓		
	09A	Sheetrock/joint compound		
	09B	↓		
	09C	↓		
	10A	12X12 Light Gray FT w/ orange & green Design		
	10B	↓		
	10C	↓		

Asbestos Types: CH=Chrysotile AM=Amosite CR=Crocidolite TR=Tremolite AN=Anthophyllite AC=Actinolite ND=No Asbestos Detected NA=Not Analyzed NEMTA=Not Enough Material To Analyze

Relinquished By: M. Paul Hoyt	Date:	Received By: John G. Hazard	Date: 4/10/02
Company: URS, Corp	Time:	Company: URS Salem, NH	Time: 10 AM

URS Corporation
IH Sample Chain Of Custody

Laboratory Batch# B15032

URS Corporation 115 Water Street, Suite 3 Hallowell, Maine 04347 Tel # 207-623-9188 Fax# 207-622-6085	Project Number: Client: Bureau of General Services Location: 1ST FLOOR HETC Project Manager: Kinneman Date Results Due: 4/10/02

See Back Of Page

Samples Taken By: MCH

Date Samples Taken: 4/9/02

Lab #	Sample #	Sample Location/ Description	Analysis	Results
	11A	9x9 Brown FT w/ white & DRK brn design		
	11B			
	11C			
	12A	Associated Black Mastic		
	12B			
	12C			
	13A	9x9 off-white FT w/ Burn design		
	13B			
	13C			
	PC-01A	Blue colored Pipe covering located in Basement area		
	PC-01B			
	PC-01C			

ND=None Detected NA=Not Analyzed NEMTA=Not Enough Material To Analyze

Relinquished By:	Date: 4/9/02	Received By:	Date: 4/10/02
Company: URS, Corp	Time:	Company: URS Salem NH	Time: 10 am

APPENDIX B

SURVEY, SAMPLING AND ANALYTICAL PROTOCOL

APPENDIX B

SURVEY, SAMPLING AND ANALYTICAL PROTOCOL
SURVEY PROTOCOL

The first step in developing a comprehensive facility asbestos management plan is to conduct a building survey to identify the locations and quantities of suspect ACM and to determine the conditions of those materials.

The scope of work for this survey included details of how the survey was to be conducted, the information to be gathered, and the form and content of the survey report.

The facility survey was conducted by one or more DEP-certified URS asbestos surveyors. The specifics of the survey included the following:

- Reviewing any existing asbestos survey reports.
- Visually inspecting accessible building areas to determine the location of suspect ACM.
- Sampling and evaluating suspect ACM to determine its accessibility and limit the occupancy of the surrounding building area to employees.
- Compiling and reporting survey data by functional area.
- Quantifying homogeneous materials, including both friable and non-friable suspect ACM.
- Gathering information during the survey concerning locations, quantities, and types of materials.

BULK SAMPLING PROTOCOL

During the survey of this facility, bulk samples of suspect ACM were collected for laboratory analysis. The bulk samples were collected and categorized according to the homogeneous building materials being evaluated. The designation of homogeneous building materials was made by the URS surveyor. Once suspect homogeneous materials were identified, bulk samples were collected in accordance with the EPA protocol as outlined in the Asbestos Hazard Emergency Response Act (AHERA) regulations. If a single sample of a homogeneous material was found to contain asbestos, then that homogeneous material was identified as containing asbestos throughout the building. Homogeneous flooring materials were determined by similarity of floor tile size, color, and age, if determinable.

Sampling techniques generally involved one of two different sampling procedures.

1. Core samples were collected from certain materials, such as pipe covering and fittings, to sample these potentially multi-layered materials. Disposable core boring devices were used for this purpose to minimize potential cross contamination of samples.

2. Ceiling tile, floor tile, and similar materials were sampled by breaking off a portion of the desired material from an inconspicuous location.

Samples were given a unique sample number, which included the project number, and were placed in sample containers for transportation to URS's laboratory for analysis. The location of each sample was noted on the building drawing. Information regarding the sample location was also entered onto URS's Chain-of-Custody forms. The quantity, location and physical condition of each material were recorded on URS's field data sheets.

Sample locations (from insulation materials) were covered with duct tape or encapsulant after sampling. Locations in unoccupied portions of buildings were labeled. Sample points on fireproofing, plaster, ceiling tile and transite in the buildings were not necessarily labeled or repaired.

ANALYTICAL PROTOCOL

Samples collected during this facility asbestos survey were transported to URS's accredited laboratory for microscopic analysis. URS's analytical laboratory is accredited by the National Institute for Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP) for bulk asbestos analysis as required under EPA AHERA regulations. URS's laboratory is also accredited by the American Industrial Hygiene Association (AIHA) for asbestos air sample analysis. Chain-of-Custody was maintained by the laboratory through the use of URS's Chain-of-Custody forms. After being logged in by the laboratory and prepared for analysis, samples were analyzed following the EPA-recommended method of bulk sample analysis by polarized light microscopy with dispersion staining. A description of this analytical method is contained in Appendix D of this document.

In preparing the bulk materials for analysis, a small representative portion of each sample was selected from the bulk material collected in the field and mounted on a glass slide. If the bulk material appeared to have a uniform consistency, a minimum of two slides were prepared for viewing. If, however, the bulk material appeared to contain layers, a separate set of slides was prepared for each layer and results for each layer determined independently. Analytical results for layered samples were reported as an average of the asbestos composition of the material as a whole. In some situations multiple slides were prepared from particularly complex samples, such as floor tile, which were suspected to contain low percentages of asbestos. In cases where replicate samples of a homogeneous material were collected, they were analyzed until one was found to be positive (which meant the entire homogeneous area was deemed positive) or until each sample was analyzed to prove a negative result.

Sample results were reported either as "none detected" (ND) if no asbestos was found, or by type and percent composition if any form of asbestos was observed. EPA, OSHA, and DEP all recognize a level of greater than one percent asbestos by weight content or visual estimation as the minimum level for requiring a material to be treated as asbestos-containing. The identification of the presence or absence of asbestos in a material involves several specific analytical procedures. The percentage composition, on the other hand, is simply a visual approximation on the part of the analyst and may vary based on the way the sample slide is prepared and the specific analyst performing the identification. Estimating an accurate percentage composition of low-level asbestos-containing materials is very difficult. Therefore, samples identified positively as having an asbestos content of less than 10 percent by visual estimation are required to be re-analyzed by the point counting procedure described in the EPA "Interim Method for the Determination of Asbestos in Bulk Insulation Samples," method number EPA-600/M4-82-020, December 1982. A more definitive analysis can be obtained by transmission electron microscopy (TEM) analysis and is often used for confirming or denying the presence of asbestos in floor tile samples (in particular 12-inch by 12-inch tile) when previously analyzed via PLM and initially determined to be non-detected for asbestos.

It should be noted here that the analysis of a debris sample is a qualitative analysis for the presence or absence of asbestos in that particular sample. The EPA interim PLM method for analyzing bulk samples was intended to be used for analyzing asbestos-containing manufactured products or materials with near uniform concentrations of asbestos and not for the analysis of debris or other possibly contaminated materials which are not uniform in nature. Therefore percentage composition for soils, debris or dust samples is not indicated in this report. Further, a negative finding in these samples indicates only that the debris actually sampled was not found to contain asbestos. No inference should be made from any negative result concerning other debris, which was not specifically sampled.

Approximately ten percent of the samples collected during the field survey were reanalyzed as part of URS's quality control (QC) program. These QC samples were analyzed in URS's laboratory by an analyst different from the one who performed the initial analyses.

After the completion of both the initial and quality control analytical procedures, samples are stored in URS's sample storage area files and are maintained there for at least one year. At the end of one year URS will offer the client the opportunity to either have the samples properly disposed of by URS or have them returned for retention by the client.

APPENDIX C

POLARIZED LIGHT MICROSCOPY ANALYTICAL METHODS

APPENDIX C

POLARIZED LIGHT MICROSCOPIC ANALYTICAL METHOD

Polarized Light Microscopy (PLM) is the only analytical method for asbestos identification, which depends upon the unique optical crystallographic properties of the various crystals, phases in the sample. These properties—refractive indices, dispersion of refractive indices, birefringence, sign of elongation and extinction angle are unique to the crystalline state and, therefore, unequivocally identify chrysotile, lizardite, antigorite, anthophyllite, tremolite, actinolite, grunerite, cummingtonite, and riebeckite whether fibrous or non-fibrous.

PLM includes the classical optical crystallographic methods and the more recent dispersion staining procedures. Dispersion staining is, in effect, just a way of using optical crystallography for the study of transparent particles. It supplements the classical methods and, in some cases, makes the use of PLM for the study of crystals easier. For example, with one polar isotropic, substances show a single characteristic dispersion staining color, but anisotropic substances show different colors corresponding to the different refractive indices in different orientations. Chrysotile, for example, shows blue and blue-magenta colors, crosswise and lengthwise, respectively, for each fibrous crystal when mounted in Cargille high dispersion liquid n25=1.550 and observed by central stop dispersion staining (DS). The actual analysis begins by adding a Cargille refractive index liquid (nD-1.550, high dispersion) to a 0.5-1 mg slide sample. The particles should be dispersed in this liquid by teasing aggregates apart using two fine needles before covering with a cover slip.

A. Chrysotile

In liquid nD-1.550, chrysotile has distinctive fine flexible fibrils (often curly) plus straight bundles of such fibrils and distinctive dispersion staining colors usually blue-magenta parallel to the fiber axis and blue perpendicular (central stop colors). Different samples of chrysotile, however, may vary somewhat in the wavelength at which particle and liquid have the same refractive index. Parallel to the length ranges from about 440 to 560 nm and perpendicular to the length from about 560 to 660 nm.

The presence of chrysotile and other fibrous particles is sometimes secured by tiny particles of mortar. This is especially troublesome because most of these particles are so different in refractive index from the mounting liquid; they appear bright white and central stop dispersion staining. Trying to see the asbestos is like trying to see while driving at night with an oncoming stream of cars with high beam headlights. Often one can be confident the particles are covering obscured fibers because of their pattern-the Milky Way effect.

Sometimes a stray fibril may poke its way out into the liquid to show dispersion staining colors. It is always helpful in situations like this to examine the "milky way" with crossed polars since the underlying fibers often then become visible and recognizable as fibers. Crossed polars also help to locate smaller fibers and small percentages of fibers. Each sample should be quickly

scanned with crossed polars as well as dispersion staining before reporting the absence of asbestos fibers.

A mortar coating can sometimes be removed from the fibers by holding one end on the slide with one needle (lying flat) and scraping with a second needle along a fiber bundle, either before or after adding the mounting fluid. It may also be possible to remove enough mortar to see some dispersion staining colors by pressing the cover slip down hard on the particles (in the liquid) with a pencil eraser and sliding the cover slip in a circular pattern with the eraser. Another technique is to tease and scrape a fiber bundle out straight, cover with a cover slip and add the liquid so that it runs down the length of the fiber washing away much of the loosened mortar.

B. Amosite and Crocidolite

Amosite and crocidolite both have very pale yellow to white borders by central stop DS in liquid nD=1.550HD because their refractive indices are so much higher. Crocidolite usually shows a blue absorption color. If no anisotropic fibers with refractive indices much higher than 1.550 are present, no asbestos other than chrysotile can be present.

If higher index particles are observed in liquid nD=1.550HD a second sample is mounted in nD=1.605HD. Likely compounds visible in this liquid include tremolite, anthophyllite, actinolite, and wollastonite.

If higher index particles are observed in liquid nD=1.605, a third sample is mounted in Cargille liquid nD-1.680 and examined with DS. Most amosites used in buildings will show a wavelength of about 460 nm (golden yellow) parallel to the length and about 600 nm (blue-magenta) to >660 nm (pale blue) perpendicular to the length depending on fiber orientation. A perpendicular lambda 0 of >660 nm corresponds to the alpha vibration direction, which usually shows parallel extinction; a lambda 0=600 nm perpendicular to the length corresponds to beta (also no a parallel extinction view). As with most silicate minerals substitutional solid solution, in this case Fe2+ with Mg2+, can cause alpha, beta, and gamma to vary. Higher or lower values of refractive index for any one of the three vibration directions will mean correspondingly higher or lower values for all three.

Although the refractive indices of amosite and other amphiboles may vary over a wide range, most are not from commercial sources. Nearly all Amosite used commercially in insulation has the optical properties given above.

If, in liquid nD=1.680, low birefringent fibers show lambda 0 colors close together in the yellow to golden magenta, crocidolite is strongly indicated. If they show a negative sign of elongation (higher lambda 0 parallel to the length), and blue absorption colors with pleochroism (blue parallel and gray-blue perpendicular to the fiber length) crocidolite is present. Further confirmation can be obtained by mounting a third sample in Cargille refractive index liquid nD=1.70. Crocidolite will show central stop colors close to 600 nm (blue magenta) parallel to the length and about 520 (red magenta) perpendicular. Again, some parallel movement of the alpha, beta, and gamma colors should be expected for crocidolites from different sources.

We should emphasize that DS is a method for rapid refractive index determination. To be certain the observed colors mean a particular asbestos is present, one must be certain the DS data are consistent with particle orientation, i.e., the relationship between the optical properties and the crystallographic axes.

C. Other Asbestiform Minerals

When analyzing insulation, one usually skips the nD=1.605 liquid but if during examination anomalous results are observed with the 1.550 nD 1.680 liquids, that is, highly fibrous fibers with lambda colors in other than the prescribed ranges for chrysotile, amosite, and crocidolite, then fibrous tremolite, actinolite, or anthophyllite may be present. These are rarely found, however, in insulation. When these anomalous results are obtained, you should characterize the fibers in those liquids as to refractive indices relative to those liquids and extinction angles. If all of the fibers show parallel extinction and pale blue colors in 1.680, they are anthophyllite (if the possibility of organic fibers is first eliminated). Amosite shows parallel extinction as well, but good lambda colors in the visible in 1.680 identify this asbestos mineral. Tremolite will show strong colors in al orientations in nD=1.605 high dispersion liquid.

Actinolite has morphology and optics similar to tremolite except that the indices are all higher. Actinolite may also show pleochroism (green to colorless). It is best studied in high dispersion liquid nD=1.630HS in which alpha and gamma on the oblique extinction view show magenta and golden yellow, respectively. On the parallel extinction view, gamma (lengthwise) shows 0 ca. 470 nm or golden magenta and B (perpendicular) shows 0 ca. 495 nm also golden magenta although with more red. Ferroactinolites have been higher iron content and correspondingly higher refractive indices.

Tremolite, actinolite, and ferroactinolite are portions of a continuous solid solution series in the same manner as the amosite minerals, cummingtonite and grunerite. The name to use for a given amphibole, therefore, depends directly on the optical properties. An unusually asbestiform mineral is picrolite described as a fibrous form of antigorite. Its refractive indices are higher than chrysotile, which it closely resembles.

D. Interfering Substances

A few common substances show dispersion staining colors similar to those of chrysotile and some are elongated as well. These include two polymorphs of chrysotile: Antigorite and lizardite, quartz, talc, paper fibers and hairs. All of these show dispersion staining colors in 1.550 and all except talc and paper fibers show colors somewhat similar to chrysotile.

Quartz, although usually glassy flakes, shows blue and magenta central stop colors very similar to chrysotile in the 1.550 liquid. The shape is very different, however, and only a few views are oriented to show the magenta color.

Animal hairs, including human, also have refractive indices in the same range as chrysotile and, if finely fibrillated by electric razor for example, can be confusingly similar. Such fibrillated fibers are, however, rare; they also usually show melanin pigmented particles and indices

sufficiently different from chrysotile to avoid confusion. Paper fibers also show a crosswise index close to 1.550 (but lower) and the lengthwise index is much higher, hence shows a yellow central stop color. The morphology of paper fibers is also distinctive unless they are very tiny slivers broken away from larger fibers.

APPENDIX D

DEFINITIONS AND REGULATIONS

APPENDIX D

DEFINITIONS AND REGULATIONS

Abatement: A range of procedures to control fiber release from ACM. Abatement options include removal, repair and encapsulation, enclosure, or operations and maintenance activities.

Accessible: With regard to ACM it means that the material is subject to disturbance by building occupants including custodial or maintenance personnel in the course of their normal activities.

Accredited: When referring to a person or laboratory, this means that such person or laboratory is accredited in accordance with Section 206 of Title II of the Toxic Substances Control Act. Accreditation is given to laboratories which analyze bulk material samples for asbestos and satisfy the proficiency requirements established by the National Institute for Science and Testing (NIST).

Asbestos: The term asbestos includes chrysotile, amosite, crocidolite, tremolite, anthophyllite, and/or actinolite including any of these minerals, which have been chemically treated and/or altered.

Asbestos-Containing Material (ACM): Material composed of asbestos of any type and in an amount greater than one percent by weight or visual estimation, either alone or mixed with other fibrous or non-fibrous materials (e.g., surfacing, thermal system insulation, miscellaneous material).

Asbestos-Containing Building Material (ACBM): ACM that is a building material (e.g. flooring, wall boards, ceilings, insulation, etc.)

Friable Asbestos Material: Material that contains more than one percent asbestos by weight or visual estimation that can be crumbled, pulverized, or reduced to powder by hand pressure when dry.

Non-friable Asbestos Material: Material that contains asbestos such that the fibers have been locked-in by a bonding agent, coating, binder, or other material such that the asbestos will not release fibers during any reasonably appropriate use, handling, storage, transportation, or processing.

Operations and Maintenance (O&M) Program: A program of work practices designed to maintain undamaged ACM in good condition and to repair ACM and clean-up asbestos fibers which may be inadvertently released during fiber release episodes.

Removal: The complete removal of ACM from a damaged area, a functional space, or a homogeneous area in a building.

Repair: Returning damaged ACM to an undamaged condition so as to prevent fiber release.

Response Action: A method, including removal, encapsulation, enclosure, or operations and maintenance (including repair), that protects against the release of fibers from friable ACM.

Routine Maintenance Area: An area, such as a boiler room or mechanical room, that is not normally occupied by non-maintenance individuals and in which maintenance employees or contracted workers regularly conduct maintenance activities. Routine maintenance areas with ACRSM present require AAsbestos-Caution≅ stickers be appropriately posted.

Small-Scale Short Duration (SSSD) Projects: Asbestos abatement activities impacting less than 3 linear feet or 3 square feet of ACM.

Surfacing ACM: Surfacing asbestos-containing materials such as sprayed-on or trowel-applied fireproofing.

Surfacing Material: Material that is sprayed-on, troweled-on, or otherwise applied to surfaces. Examples include acoustical plaster on ceilings and fireproofing materials on structural members.

Thermal System Insulation (TSI): Material in a building applied to pipes, fittings, boilers, breeching, tanks, ducts, or other components to improve the thermal characteristics of the component by preventing heat loss or gain, or preventing water condensation.

Visible Asbestos-Containing Material: Any quantity of ACM, which is visible to the unaided eye, including dust and other types of debris.

REGULATIONS

REGULATORY OVERVIEW

Over the past two decades, the regulatory community has become increasingly aware of the potential hazards of inhaled asbestos fibers. Regulations have been developed by federal, state, and local agencies to protect workers and the general public from the release of asbestos fibers. Departments of the federal government responsible for the regulation of asbestos include:

- The U.S. Department of Labor (DOL) through the Occupational Safety and Health Administration (OSHA) has developed two standards designed to protect employees at their work sites. These two standards are the Asbestos Regulations for General Industry (29 CFR 1910.1001) and Asbestos Regulations for the Construction Industry (29 CFR 1926.1101). These OSHA regulations apply only to employers and employees. Employees involved in performing Operations and Maintenance (O&M) activities who might potentially come into contact with asbestos-containing materials would clearly be addressed by the regulations. Second, employees who might inadvertently be exposed to asbestos-containing materials during the normal course of their work activities would also be covered by these regulations. Third, construction-related activities (e.g. asbestos abatement) are also covered.

- The U.S. Department of Transportation (DOT) regulates the transport of commercial asbestos and asbestos waste and dictates labeling of waste bags and transport vehicles. The primary responsibility under DOT regulations lies with the waste hauler. However, it is incumbent upon the building owner to determine that waste hauled from its facilities is properly bagged and labeled, that the waste arrives at an approved landfill, that a proper manifest is completed: documented and maintained with abatement records, and that the hauler is properly licensed to haul asbestos waste.

- The U.S. Environmental Protection Agency (EPA) has promulgated a series of regulations which focus on asbestos issues. Pertinent stipulations in these regulations are as follows:

Clean Air Act (CAA)

The EPA regulates asbestos under the National Emission Standards for Hazardous Air Pollutants (NESHAP), which is listed as Section 112 of the Clean Air Act (CAA). Under NESHAP, a hazardous pollutant has been defined as "an air pollutant to which no ambient air quality standard is applicable and which, in the judgment of the Administrator, causes or contributes to air pollution which may reasonably be anticipated to result in an increase in mortality or an increase in serious irreversible or incapacitating reversible illness." The NESHAP program currently regulates arsenic, benzene, beryllium, mercury, radionuclides, and vinyl chloride along with asbestos. The purpose of the asbestos NESHAP is to protect the public from exposure to asbestos in the ambient air. The asbestos NESHAP program

pertains primarily to demolition and renovation of buildings containing asbestos building materials. (The asbestos NESHAP also regulates manufacturing and fabricating operations, spray application of asbestos, waste disposal for asbestos mills, inactive waste disposal sites, and established standards for asbestos mills and roadways.) The specific provisions of NESHAP for demolition or renovation of buildings with asbestos containing are broken down into categories of notification, work practices, waste handling, and waste disposal.

The building owner would be responsible for compliance with NESHAP regulations primarily during abatement activities. Issues such as work practices, waste handling, and waste disposal are normally specified in the project's plans and specifications. Verifying adherence to these plans and specifications during the abatement process would be the building owner's responsibility.

Resource Conservation Recovery Act (RCRA)

The disposal of asbestos was originally regulated under RCRA in 1976. However, in that same year, asbestos, because it does not migrate in soil or pose any threat to ground water, was not listed by RCRA, and the authority for asbestos control was transferred to NESHAP. Therefore, the current RCRA regulations pertain only to facility siting and general landfill operations. The facility siting/licensing issue that would involve the building owner is the determination by the building owner staff that the facility where asbestos waste is disposed of is an EPA licensed facility.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

This act is most commonly referred to as "Superfund." The authority of CERCLA, as clarified in the Superfund Amendments Reauthorization Act (SARA), regulates asbestos as a hazardous substance. Reportable quantities (RQs) have been established to deal with releases or threats of releases of hazardous substances from vessels and from facilities including trucks and landfills. The trigger RQ for a release, or threat of release, of asbestos is one pound.

Superfund issues relative to the removal of ACM relate primarily to improper disposal of asbestos waste. The building owner is responsible for ensuring that a manifest for the waste is completed and signed by the licensed landfill facility and returned to the building owner for inclusion in their permanent records.

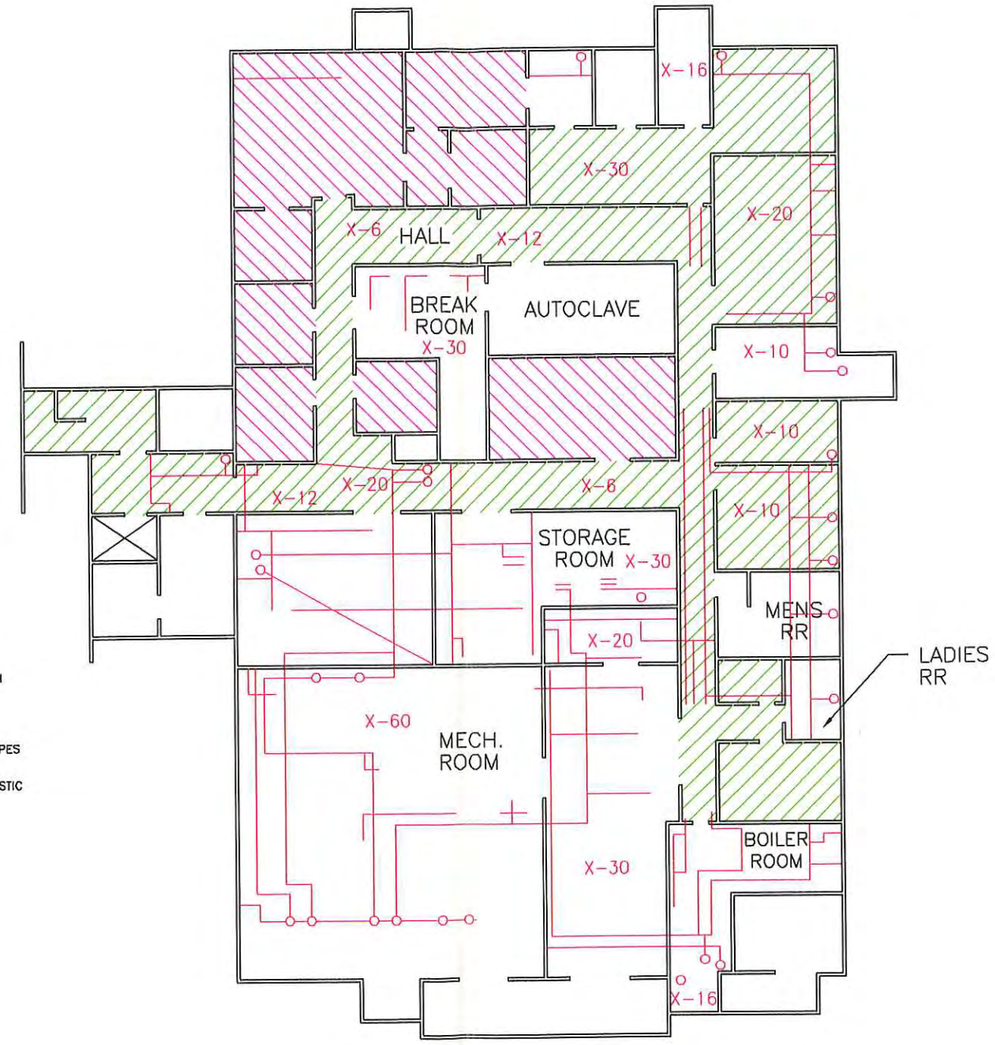
Asbestos Hazard Emergency Response Act (AHERA)

The 1988 Asbestos in Schools Rule (more commonly referred to as AHERA) required Local Education Agencies (LEAs) to develop and implement Management Plans for their ACBM. Response actions (i.e., removal encapsulation, enclosure, or O&M) were developed for ACBM identified in public and private schools (K-12). AHERA requires LEAs to conduct reinspection every three years and periodic surveillance every six months as part of their

O&M Program. Only Accredited and Certified professionals may conduct response actions. In particular, aggressive final clearance sampling is required to be performed by independent industrial hygienists.

Maine Regulations

The Maine Department of Environmental Protection (DEP) Chapter 425 Asbestos Management Regulations (effective date of January 1, 1994) define the minimum work practice requirements for asbestos abatement contractors for any project in excess of 3 square feet or 3 linear feet. The removal of non-friable ACM during demolition is also discussed. For removal of these materials under demolition conditions, friable ACM work practices would apply. Abatement work also requires conformance to OSHA Regulation 29 CFR, Part 1926.1101. In addition to the mandatory requirements of this regulation, federal OSHA officials regulating Maine asbestos abatement contractors interpret Appendix F, Work Practices and Engineering Controls for Major Asbestos Removal, Renovation and Demolition Operations, as mandatory to abatement work including traditionally non-friable materials such as roof systems. While stated as "non-mandatory," OSHA has determined that the standard will apply under their interpretation of "whenever feasible." DEP Chapter 425 Asbestos Management Regulations are currently being revised by DEP personnel with industry input.



LEGEND

X-10	INDICATES ELBOWS OR JOINT ACBM WHICH IS VISIBLE IN A FUNCTIONAL AREA
o	ASBESTOS INSULATION IN PIPE RISER
——	ASBESTOS INSULATION ON HORIZONTAL PIPES
	INDICATES ACM FLOOR TILE WITH ACM MASTIC
	ACM CEILING TILE

BASEMENT

CLIENT:	BUREAU OF GENERAL SERVICES		
PROJECT:	DHS ASBESTOS SURVEY		
	URS Corporation		
TITLE:	BASEMENT		PROJECT NO: 28786-009
DESIGN: MCH	SCALE: NONE		FIGURE NO: 1
APPROVED: DBK	DATE: 05/09/02		
DRAWN: LRH	FILE NO: A393		

FIRST FLOOR

LEGEND

- X — INDICATES ELBOWS OR JOINT ACBM WHICH IS VISIBLE IN A FUNCTIONAL AREA
- ○ — ASBESTOS INSULATION IN PIPE RISER
- ——— ASBESTOS INSULATION ON HORIZONTAL PIPES
- □ — FUME HOOD
- PIPE INSULATION ABOVE CEILING
- INDICATES ACM FLOOR TILE WITH ACM MASTIC
- ACM FLOOR TILE AND MASTIC BELOW CARPET

CLIENT:	BUREAU OF GENERAL SERVICES
PROJECT:	DHS ASBESTOS SURVEY
	URS Corporation
TITLE:	FIRST FLOOR
PROJECT NO:	28786-009
DESIGN: MCH	SCALE: NONE
APPROVED: DBK	DATE: 05/03/02
DRAWN: LRH	FILE NO: A390
FIGURE NO:	2

SECOND FLOOR

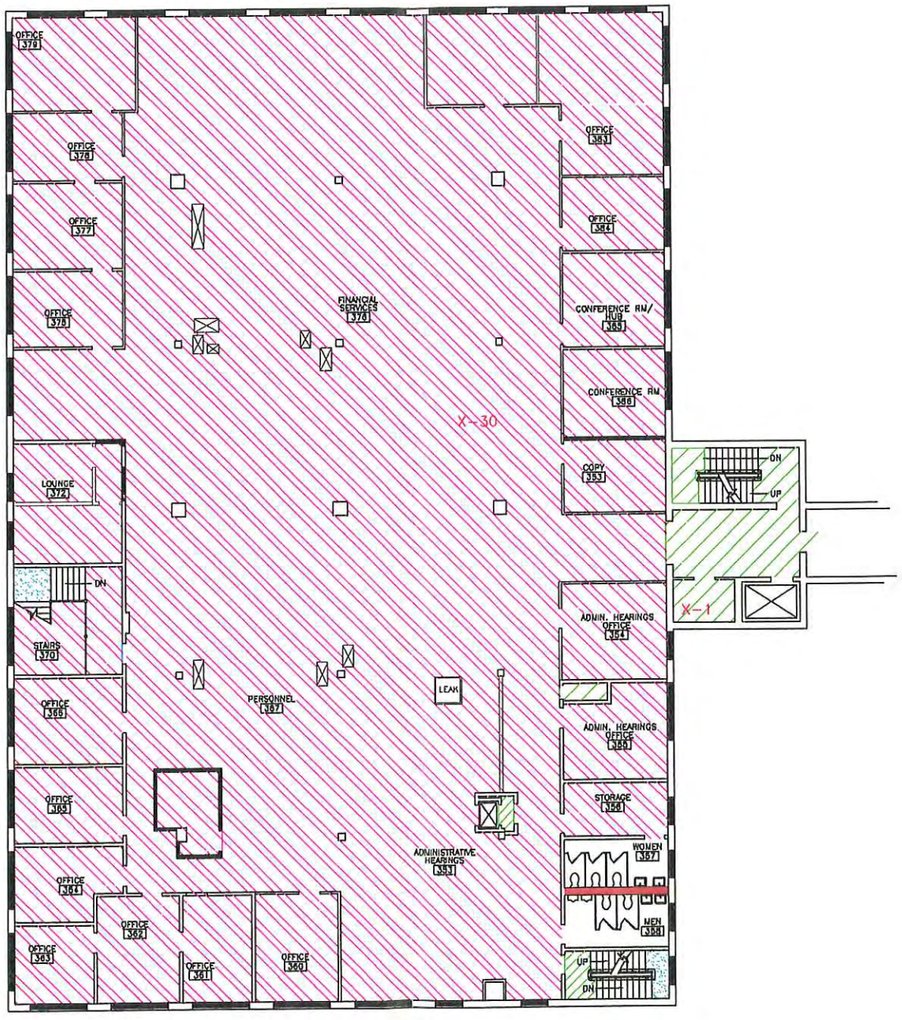
LEGEND

X	INDICATES ELBOWS OR JOINT ACBM WHICH IS VISIBLE IN A FUNCTIONAL AREA
O	ASBESTOS INSULATION IN PIPE RISER
	ASBESTOS INSULATION ON HORIZONTAL PIPES
	ACM FLOOR TILE AND MASTIC
	ACM FLOOR TILE AND MASTIC BELOW CARPET

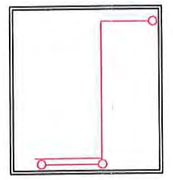
CLIENT:	BUREAU OF GENERAL SERVICES		
PROJECT:	DHS ASBESTOS SURVEY		
	URS Corporation		
TITLE:	SECOND FLOOR		PROJECT NO: 28786-009
DESIGN: MCH		SCALE: NONE	FIGURE NO: 3
APPROVED: DBK		DATE: 05/03/02	
DRAWN: LRH		FILE NO: A391	

LEGEND

- ACM FLOOR TILE AND MASTIC
- ACM FLOOR TILE AND MASTIC BELOW CARPET
- ACM PIPE INSULATION BELOW CEILING
- ASBESTOS MASTIC BELOW PAINT
- X-30 ACM MUD FITTING ON FIBERGLASS PIPE
- O ASBESTOS INSULATION IN PIPE RISER
- ASBESTOS INSULATION ON HORIZONTAL PIPES



THIRD FLOOR



PENTHOUSE

CLIENT:	BUREAU OF GENERAL SERVICES
PROJECT:	DHS ASBESTOS SURVEY
	URS Corporation
TITLE:	THIRD FLOOR AND PENTHOUSE
PROJECT NO:	28786-009
DESIGN: MCH	SCALE: NONE
APPROVED: DBK	DATE: 05/09/02
DRAWN: LRH	FILE NO: A392
FIGURE NO:	4

URS Corporation
115 Water Street, Suite 3
Hallowell, Maine 04347

ASBESTOS IDENTIFICATION SURVEY
DHS BUILDING
AUGUSTA, MAINE

Prepared for:

Mr. Joe Silva
Bureau of General Services
77 State House Station
Augusta, ME 04333-0077

JOB NO.: 28407
August 7, 2007

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Appendix B Survey, Sampling and Analytical Protocol
Appendix C Polarized Light Microscopy Analytical Methods
Appendix D Definitions and Regulations

1.0 INTRODUCTION

URS Corporation (URS) was retained by the State of Maine; Bureau of General Services (BGS) to conduct an asbestos identification survey at the Department of Human Services (DHS) Building, located in Augusta, Maine. The objective of the field survey was to locate and identify asbestos-containing materials (ACM) in the interior of the building.

1.1 ASBESTOS-CONTAINING MATERIALS

Mr. Michael Haughton, (URS), an asbestos inspector licensed in the State of Maine performed the field survey during the period of April 9, 2002 through April 12, 2002. During the survey, the inspector reviewed the 1987 Hall-Kimbrell asbestos identification survey and the 1999 ICON Environmental asbestos identification survey, information regarding the facility that was provided to them by BGS, visually identified interior suspect ACM and collected bulk samples of suspect ACM in accordance with the Maine Department of Environmental Protection (DEP) regulations. Forty- two bulk samples of suspect ACM building materials were collected during the field survey. Quantity estimates and locations of identified ACM were based upon information provided by BGS and from field observations

Following the completion of the survey work, the bulk samples of suspect ACM were submitted to the URS's Salem, NH laboratory for analysis. The URS laboratory is certified to perform asbestos analysis by both the National Voluntary Laboratory Accreditation Program (NVLAP) and the American Industrial Hygiene (AIHA). The method used to analyze the bulk samples collected during this survey was the recommended EPA procedure of Polarized Light Microscopy (PLM) with dispersion staining. Analytical results are presented in Appendix A. The protocol for analysis of bulk samples is presented in Appendix D.

2.0 SURVEY LIMITATIONS

The information presented in this report represents the conditions observed at the time of the site investigation. Survey data, observations and recommendations presented in this report are based upon industry-accepted methodologies used to conduct this investigation and the professional judgment of the investigator. URS Corporation is not responsible for changes in condition observed after the field investigation was completed.

As with any scientific study, facility asbestos identification surveys are subject to a variety of limitations. Limitations to be considered in interpreting the results of this survey include the following:

- Asbestos survey may not be able to identify all ACM throughout a facility. A thorough study should be capable of identifying approximately 95 percent of accessible (by non-destructive methods) ACM present. The survey and analytical protocol used for this project is presented in Appendix B and C.
- Areas not accessible at the time of the scheduled survey were not surveyed.
- This survey was conducted using non-destructive sampling methods.
- Thermal system insulation identified during the 1987 Hall-Kimbrell asbestos identification survey was not re-sampled during this survey. Samples of thermal system insulation were only collected if the material could not be referenced to the original survey or if the suspect material appeared to have been installed after the 1987 survey.
- Cost figures used in developing abatement costs were estimated, based on historical information. These costs should be considered estimates and used for budgetary purposes only. For cost projections in future years, an adjustment that considers inflation and the state of the abatement industry must be applied.

3.0 OBSERVATIONS AND FINDINGS

The DHS Building is a three-story brick, masonry structure consisting of a basement and three upper floors. During the walk-through survey of the building, the URS surveyors reviewed existing drawing plans, identified interior suspect ACM and determined quantities of suspect ACM. The asbestos inspector collected bulk samples of suspect ACM in accordance with Maine DEP regulations. Suspect ACM sampled during the survey included ceiling tile, flooring material and flooring material adhesives, pipe insulation, sheetrock and associated joint compound and laboratory fume hoods.

The following sections of this report contain brief descriptions of the building areas by floor and a summary of the types of ACM identified in those areas. An inventory of ACM materials and their locations is included in Table 1. The location of the identified ACM within the building is shown in Figures 1 through 4

BASEMENT

The Basement consists of a boiler room, mechanical space, lounge area, laboratories, restrooms and stairwells. Suspect ACM identified in the basement included twelve-inch by twelve-inch floor tile and associated floor tile mastic (four types), nine-inch by nine-inch floor tile and associated floor tile mastic, pipe insulation, mud-insulated pipe fittings, ceiling tile (two types) and sheet rock and associated joint compound. Materials identified as ACM included nine-inch by nine-inch off-white floor tile and associated mastic, twelve-inch by twelve-inch dark off-white floor tile with gray design and associated mastic, pipe insulation, mud-insulated pipefittings and two-foot by four-foot white ceiling tile with pin dot design.

FIRST FLOOR

The first floor consists of laboratories located in the east wing and office areas located in the west wing, entryway, reception area, restrooms and stairwells. Suspect ACM identified on the first floor includes twelve-inch by twelve-inch green floor tile and associated floor tile mastic, nine-inch by nine-inch floor tile and associated floor tile mastic (two types) ceiling tile (three types), pipe insulation, mud-insulated pipe fittings, laboratory fume hoods, sheet rock and associated joint compound. Material identified as ACM included nine-inch by nine-inch brown and off-white floor tile and associated mastic, pipe insulation, mud-insulated pipe fittings and laboratory fume hoods.

SECOND FLOOR

The second floor consists of east and west office wings, common areas, restrooms and stairwells. Suspect ACM identified on the second floor includes twelve-inch by twelve-inch white floor tile and associated floor tile mastic, nine-inch by nine-inch floor tile and associated floor tile mastic, ceiling tile, pipe insulation, mud-insulated pipe fittings and sheet rock and associated joint compound. Material identified as ACM included nine-inch by nine-inch off-white floor tile and associated floor tile mastic located under carpets, nine-inch by nine-inch floor tile brown and associated floor tile mastic, pipe insulation and mud-insulated pipe fittings.

THIRD FLOOR

The third floor consists of a west office wing, common areas, restrooms and stairwells. Suspect ACM identified on the third floor includes nine-inch by nine-inch floor tile and associated floor tile mastic, pipe insulation, mud-insulated pipe fittings and sheet rock and associated joint compound. Material identified as ACM included nine-inch by nine-inch unknown color floor tile and associated floor tile mastic located under carpets, nine-inch by nine-inch brown floor tile and associated floor tile mastic, pipe insulation and mud-insulated pipe fittings.

PENTHOUSE

The Penthouse consists of an area used to house a mechanical HVAC system. Suspect ACM identified in the Penthouse includes exterior transite siding, pipe insulation and mud-insulated pipe fittings. Materials identified as ACM include exterior transite siding, pipe insulation and mud-insulated pipe fittings.

4.0 RECOMMENDATIONS

The ACM identified throughout the facility was found to range from fair to good condition, with the exception of the nine-inch by nine-inch floor tile located in the Custodian's Closet located on the second floor and the pipe insulation located in the Penthouse. These materials were observed to be in poor condition and should be removed.

Asbestos fibers are potential health hazards when they become airborne. As long as this material remains intact, undamaged, and in good condition, the material may be managed in place. However, current regulations require that asbestos-containing building materials be either removed if the materials will be disturbed by renovation, demolition, or other building maintenance activities. An Operation and Maintenance (O&M) plan should be implemented to manage the materials in place until such a time when they have been removed. ACM identified during this survey that will be impacted by the planned renovation project should be removed prior to the initiation of the actual renovation work. Upon finalization of the renovation plans the actual extent of impact to the existing ACM can be determined. ACM abatement should be performed using approved methods in accordance with applicable regulations established by the U.S. Environmental Protection Agency (EPA), OSHA and Maine DEP. The ACM impacted by planned renovation activities must be removed by a State of Maine licensed asbestos abatement contractor.

5.0 BUDGETARY COST ESTIMATES

URS has developed preliminary cost estimates for abatement of ACM identified during the survey. These estimates do not include material replacement costs or associated design and project monitoring fees or regulatory agency notification fees. Actual abatement costs will vary depending upon the quantity of material removed at any one time. These cost estimates assume that the ACM will be removed in a friable state.

ACM ABATEMENT COSTS
DHS BUILDING
AUGUSTA, MAINE

ACM	Approximate Quantity	Unit Cost	Cost
Pipe Insulation	3,525 Linear Feet (LF)	$15.00/LF	$ 52,875
Ceiling Tile	900 Square Feet (SF)	$ 10.00/SF	$ 9,000
Floor Tile	23,405 SF	$ 2.50/SF	$ 58,512
Floor Tile Mastic	8,025 SF	$5/SF	$40,125
Exterior Transite Siding	2,000 SF	$3/SF	$6,000
Fume Hoods	7 Each (EA)	$500/EA	$3,500
Mud Insulated Pipe Fittings	470 EA	$25/EA	$11,750
Total Estimated Cost Range			**$175,000 - $200,000**

URS has estimated asbestos abatement project duration of between 75 working days of eight – hour contractor shifts, using an 8-person crew.

6.0 REPORT CERTIFICATION

This report was prepared and reviewed by URS Corporation for the sole use of the State of Maine Bureau of General Services and it's constituents and should not be reproduced without full, written authorization from the Bureau of General Services.

Inspector:

Michael Haughton

AI-0167
Maine DEP License No.

Date

Quality Control:

Dennis B. Kingman, Jr.

Senior Project Manager
Title

Date

TABLE 1

ASBESTOS-CONTAINING MATERIALS
DHS BUILDING
AUGUSTA, MAINE

BASEMENT

Location	Material Type	Sample Number	Asbestos Percent and Type	Estimated Quantity of ACM	Condition	Recommended Response Action
Mechanical Room	Pipe Insulation Mud Insulated Pipe Fittings	HK114702 HK114703	35% Chrysotile 15% Chrysotile	550 LF 60 EA	Good Good	O & M O & M
Ernie's Room	Pipe Insulation Mud Insulated Pipe Fittings	HK114702 HK114703	35% Chrysotile 15% Chrysotile	225 LF 12 EA	Good Good	O & M O & M
Laboratories	Pipe Insulation Mud Insulated Pipe Fittings Ceiling Tile Floor Tile and Associated Mastic	HK114702 HK114703 08 01 02	35% Chrysotile 15% Chrysotile 5% Amosite 2% Chrysotile 1% Chrysotile	300 LF 130 EA 900 SF 600 SF	Good Good Good Good	O & M O & M O & M O & M
Evidence Room	Pipe Insulation Mud Insulated Pipe Fittings	HK114702 HK114703	35% Chrysotile 15% Chrysotile	100 LF 20 EA	Good Good	O & M O & M
Corridor	Pipe Insulation Mud Insulated Pipe Fittings Floor Tile and Associated Mastic	HK114702 HK114703 01 02	35% Chrysotile 15% Chrysotile 2% Chrysotile 1% Chrysotile	200 LF 50 EA 750 SF	Good Good Good	O & M O & M O & M

Location	Material Type	Sample Number	Asbestos Percent and Type	Estimated Quantity of ACM	Condition	Recommended Response Action
Supply Room	Pipe Insulation Mud Insulated Pipe Fittings	HK114702 HK114703	35% Chrysotile 15% Chrysotile	200 LF 30 EA	Good Good	O & M O & M
Boiler Room	Pipe Insulation Mud Insulated Pipe Fittings	HK114696 HK114690	35% Chrysotile 15% Chrysotile	200 LF 16 EA	Good Good	O & M O & M
Storage Room	Pipe Insulation Mud Insulated Pipe Fittings	HK114696 HK114690	35% Chrysotile 15% Chrysotile	325 LF 30 EA	Good Good	O & M O & M
Break Room	Pipe Insulation Mud Insulated Pipe Fittings	HK114702 HK114703	35% Chrysotile 15% Chrysotile	75 SF 30 EA	Good Good	O & M O & M

FIRST FLOOR

Location	Material Type	Sample Number	Asbestos Percent and Type	Estimated Quantity of ACM	Condition	Recommended Response Action
Laboratories	Pipe Insulation Mud Insulated Pipe Fittings Floor Tile and Associated Mastic Fume Hoods	HK114702 HK114703 11 12	35% Chrysotile 15% Chrysotile 3% Chrysotile 1% Chrysotile	350 LF 50 EA 1600 SF 7 EA	Good Good Good Good	O & M O & M O & M O & M
Corridor	Floor Tile and Associated Mastic	11 12	3% Chrysotile 1% Chrysotile	600 SF	Good	O & M
Administration Room	Floor Tile and Associated Mastic	11 12	3% Chrysotile 1% Chrysotile	100 SF	Good	O & M
Boiler Room	Pipe Insulation	HK114702	35% Chrysotile	300 LF	Good	O & M
Mechanical Room	Pipe Insulation Floor Tile and Associated Floor Tile Mastic	HK114702 11 12	35% Chrysotile 3% Chrysotile 1% Chrysotile	125 LF 75 SF	Good Good	O & M O & M
Mail Room	Pipe Insulation Floor Tile and Associated Floor Tile Mastic	HK114702 IATL96216 IATL96217	35% Chrysotile 10% Chrysotile 3% Chrysotile	200 LF 2,000SF	Good Good	O & M O & M

SECOND FLOOR

Location	Material Type	Sample Number	Asbestos Percent and Type	Estimated Quantity of ACM	Condition	Recommended Response Action
East Office Wing	Floor Tile located under carpet	11	3% Chrysotile	1,800 SF	Good	O & M
	Mud Insulated Pipe Fittings	HK114703	15% Chrysotile	30 EA	Good	O & M
Custodian's Closet	Floor Tile and Associated Mastic	IATL96216	10% Chrysotile	80 SF	Poor	Remove
West Office Wing	Floor Tile located under carpet	IATL96216	10% Chrysotile	3,500 SF	Good	O & M
	Floor Tile and Associated Mastic	11	3% Chrysotile	2,000 SF	Good	O & M
	Pipe Insulation	12	1% Chrysotile			
		HK114702	35% Chrysotile	300 LF	Good	O & M
Corridor	Floor Tile and Associated Floor Tile Mastic	11	3% Chrysotile	300 SF	Good	O & M
		12	1% Chrysotile			

THIRD FLOOR

Location	Material Type	Sample Number	Asbestos Percent and Type	Estimated Quantity of ACM	Condition	Recommended Response Action
West Office Wing	Floor Tile located under carpet Mud Fitting	IATL96216 HK114703	10% Chrysotile 15% Chrysotile	10,000 SF 30 EA	Good Good	O & M O & M

PENTHOUSE

Location	Material Type	Sample Number	Asbestos Percent and Type	Estimated Quantity of ACM	Condition	Recommended Response Action
Attic	Transite Siding			2,000 SF	Good	O & M
Penthouse	Pipe Insulation	HK114702	35% Chrysotile	75 LF	Poor	Remove

APPENDIX C

POLARIZED LIGHT MICROSCOPY ANALYTICAL METHODS

APPENDIX D

DEFINITIONS AND REGULATIONS

Abatement: A range of procedures to control fiber release from ACM. Abatement options include removal, repair and encapsulation, enclosure, or operations and maintenance activities.

Accessible: With regard to ACM it means that the material is subject to disturbance by building occupants including custodial or maintenance personnel in the course of their normal activities.

Accredited: When referring to a person or laboratory, this means that such person or laboratory is accredited in accordance with Section 206 of Title II of the Toxic Substances Control Act. Accreditation is given to laboratories which analyze bulk material samples for asbestos and satisfy the proficiency requirements established by the National Institute for Science and Testing (NIST).

Asbestos: The term asbestos includes chrysotile, amosite, crocidolite, tremolite, anthophyllite, and/or actinolite including any of these minerals, which have been chemically treated and/or altered.

Asbestos-Containing Material (ACM): Material composed of asbestos of any type and in an amount greater than one percent by weight or visual estimation, either alone or mixed with other fibrous or non-fibrous materials (e.g., surfacing, thermal system insulation, miscellaneous material).

Asbestos-Containing Building Material (ACBM): ACM that is a building material (e.g. flooring, wall boards, ceilings, insulation, etc.)

Friable Asbestos Material: Material that contains more than one percent asbestos by weight or visual estimation that can be crumbled, pulverized, or reduced to powder by hand pressure when dry.

Non-friable Asbestos Material: Material that contains asbestos such that the fibers have been locked-in by a bonding agent, coating, binder, or other material such that the asbestos will not release fibers during any reasonably appropriate use, handling, storage, transportation, or processing.

Operations and Maintenance (O&M) Program: A program of work practices designed to maintain undamaged ACM in good condition and to repair ACM and clean-up asbestos fibers which may be inadvertently released during fiber release episodes.

Removal: The complete removal of ACM from a damaged area, a functional space, or a homogeneous area in a building.

Repair: Returning damaged ACM to an undamaged condition so as to prevent fiber release.

Response Action: A method, including removal, encapsulation, enclosure, or operations and maintenance (including repair), that protects against the release of fibers from friable ACM.

Routine Maintenance Area: An area, such as a boiler room or mechanical room, that is not normally occupied by non-maintenance individuals and in which maintenance employees or contracted workers regularly conduct maintenance activities. Routine maintenance areas with ACRSM present require □Asbestos-Caution□ stickers be appropriately posted.

Small-Scale Short Duration (SSSD) Projects: Asbestos abatement activities impacting less than 3 linear feet or 3 square feet of ACM.

Surfacing ACM: Surfacing asbestos-containing materials such as sprayed-on or trowel-applied fireproofing.

Surfacing Material: Material that is sprayed-on, troweled-on, or otherwise applied to surfaces. Examples include acoustical plaster on ceilings and fireproofing materials on structural members.

Thermal System Insulation (TSI): Material in a building applied to pipes, fittings, boilers, breeching, tanks, ducts, or other components to improve the thermal characteristics of the component by preventing heat loss or gain, or preventing water condensation.

Visible Asbestos-Containing Material: Any quantity of ACM, which is visible to the unaided eye, including dust and other types of debris.

REGULATIONS

REGULATORY OVERVIEW

Over the past two decades, the regulatory community has become increasingly aware of the potential hazards of inhaled asbestos fibers. Regulations have been developed by federal, state, and local agencies to protect workers and the general public from the release of asbestos fibers. Departments of the federal government responsible for the regulation of asbestos include:

- The U.S. Department of Labor (DOL) through the Occupational Safety and Health Administration (OSHA) has developed two standards designed to protect employees at their work sites. These two standards are the Asbestos Regulations for General Industry (29 CFR 1910.1001) and Asbestos Regulations for the Construction Industry (29 CFR 1926.1101). These OSHA regulations apply only to employers and employees. Employees involved in performing Operations and Maintenance (O&M) activities who might potentially come into contact with asbestos-containing materials would clearly be addressed by the regulations. Second, employees who might inadvertently be exposed to asbestos-containing materials during the normal course of their work activities would also be covered by these regulations. Third, construction-related activities (e.g. asbestos abatement) are also covered.

- The U.S. Department of Transportation (DOT) regulates the transport of commercial asbestos and asbestos waste and dictates labeling of waste bags and transport vehicles. The primary responsibility under DOT regulations lies with the waste hauler. However, it is incumbent upon the building owner to determine that waste hauled from its facilities is properly bagged and labeled, that the waste arrives at an approved landfill, that a proper manifest is completed: documented and maintained with abatement records, and that the hauler is properly licensed to haul asbestos waste.

- The U.S. Environmental Protection Agency (EPA) has promulgated a series of regulations which focus on asbestos issues. Pertinent stipulations in these regulations are as follows:

Clean Air Act (CAA)

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The disposal of asbestos was originally regulated under RCRA in 1976. However, in that same year, asbestos, because it does not migrate in soil or pose any threat to ground water, was not listed by RCRA, and the authority for asbestos control was transferred to NESHAP. Therefore, the current RCRA regulations pertain only to facility siting and general landfill operations. The facility siting/licensing issue that would involve the building owner is the determination by the building owner staff that the facility where asbestos waste is disposed of is an EPA licensed facility.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

This act is most commonly referred to as "Superfund." The authority of CERCLA, as clarified in the Superfund Amendments Reauthorization Act (SARA), regulates asbestos as a hazardous substance. Reportable quantities (RQs) have been established to deal with releases or threats of releases of hazardous substances from vessels and from facilities including trucks and landfills. The trigger RQ for a release, or threat of release, of asbestos is one pound.

Superfund issues relative to the removal of ACM relate primarily to improper disposal of asbestos waste. The building owner is responsible for ensuring that a manifest for the waste is completed and signed by the licensed landfill facility and returned to the building owner for inclusion in their permanent records.

Asbestos Hazard Emergency Response Act (AHERA)

The 1988 Asbestos in Schools Rule (more commonly referred to as AHERA) required Local Education Agencies (LEAs) to develop and implement Management Plans for their ACBM. Response actions (i.e., removal encapsulation, enclosure, or O&M) were developed for ACBM identified in public and private schools (K-12). AHERA requires LEAs to conduct reinspection every three years and periodic surveillance every six months as part of their

O&M Program. Only Accredited and Certified professionals may conduct response actions. In particular, aggressive final clearance sampling is required to be performed by independent industrial hygienists.

Maine Regulations

The Maine Department of Environmental Protection (DEP) Chapter 425 Asbestos Management Regulations (effective date of January 1, 1994) define the minimum work practice requirements for asbestos abatement contractors for any project in excess of 3 square feet or 3 linear feet. The removal of non-friable ACM during demolition is also discussed. For removal of these materials under demolition conditions, friable ACM work practices would apply. Abatement work also requires conformance to OSHA Regulation 29 CFR, Part 1926.1101. In addition to the mandatory requirements of this regulation, federal OSHA officials regulating Maine asbestos abatement contractors interpret Appendix F, Work Practices and Engineering Controls for Major Asbestos Removal, Renovation and Demolition Operations, as mandatory to abatement work including traditionally non-friable materials such as roof systems. While stated as "non-mandatory," OSHA has determined that the standard will apply under their interpretation of "whenever feasible." DEP Chapter 425 Asbestos Management Regulations are currently being revised by DEP personnel with industry input.

APPENDIX B

SURVEY, SAMPLING AND ANALYTICAL PROTOCOL
SURVEY PROTOCOL

The first step in developing a comprehensive facility asbestos management plan is to conduct a building survey to identify the locations and quantities of suspect ACM and to determine the conditions of those materials.

The scope of work for this survey included details of how the survey was to be conducted, the information to be gathered, and the form and content of the survey report.

The facility survey was conducted by one or more DEP-certified URS asbestos surveyors. The specifics of the survey included the following:

- Reviewing any existing asbestos survey reports.
- Visually inspecting accessible building areas to determine the location of suspect ACM.
- Sampling and evaluating suspect ACM to determine its accessibility and limit the occupancy of the surrounding building area to employees.
- Compiling and reporting survey data by functional area.
- Quantifying homogeneous materials, including both friable and non-friable suspect ACM.
- Gathering information during the survey concerning locations, quantities, and types of materials.

BULK SAMPLING PROTOCOL

During the survey of this facility, bulk samples of suspect ACM were collected for laboratory analysis. The bulk samples were collected and categorized according to the homogeneous building materials being evaluated. The designation of homogeneous building materials was made by the URS surveyor. Once suspect homogeneous materials were identified, bulk samples were collected in accordance with the EPA protocol as outlined in the Asbestos Hazard Emergency Response Act (AHERA) regulations. If a single sample of a homogeneous material was found to contain asbestos, then that homogeneous material was identified as containing asbestos throughout the building. Homogeneous flooring materials were determined by similarity of floor tile size, color, and age, if determinable.

Sampling techniques generally involved one of two different sampling procedures.

1. Core samples were collected from certain materials, such as pipe covering and fittings, to sample these potentially multi-layered materials. Disposable core boring devices were used for this purpose to minimize potential cross contamination of samples.

2. Ceiling tile, floor tile, and similar materials were sampled by breaking off a portion of the desired material from an inconspicuous location.

Samples were given a unique sample number, which included the project number, and were placed in sample containers for transportation to URS's laboratory for analysis. The location of each sample was noted on the building drawing. Information regarding the sample location was also entered onto URS's Chain-of-Custody forms. The quantity, location and physical condition of each material were recorded on URS's field data sheets.

Sample locations (from insulation materials) were covered with duct tape or encapsulant after sampling. Locations in unoccupied portions of buildings were labeled. Sample points on fireproofing, plaster, ceiling tile and transite in the buildings were not necessarily labeled or repaired.

ANALYTICAL PROTOCOL

Samples collected during this facility asbestos survey were transported to URS's accredited laboratory for microscopic analysis. URS's analytical laboratory is accredited by the National Institute for Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP) for bulk asbestos analysis as required under EPA AHERA regulations. URS's laboratory is also accredited by the American Industrial Hygiene Association (AIHA) for asbestos air sample analysis. Chain-of-Custody was maintained by the laboratory through the use of URS's Chain-of-Custody forms. After being logged in by the laboratory and prepared for analysis, samples were analyzed following the EPA-recommended method of bulk sample analysis by polarized light microscopy with dispersion staining. A description of this analytical method is contained in Appendix D of this document.

In preparing the bulk materials for analysis, a small representative portion of each sample was selected from the bulk material collected in the field and mounted on a glass slide. If the bulk material appeared to have a uniform consistency, a minimum of two slides were prepared for viewing. If, however, the bulk material appeared to contain layers, a separate set of slides was prepared for each layer and results for each layer determined independently. Analytical results for layered samples were reported as an average of the asbestos composition of the material as a whole. In some situations multiple slides were prepared from particularly complex samples, such as floor tile, which were suspected to contain low percentages of asbestos. In cases where replicate samples of a homogeneous material were collected, they were analyzed until one was found to be positive (which meant the entire homogeneous area was deemed positive) or until each sample was analyzed to prove a negative result.

Sample results were reported either as "none detected" (ND) if no asbestos was found, or by type and percent composition if any form of asbestos was observed. EPA, OSHA, and DEP all recognize a level of greater than one percent asbestos by weight content or visual estimation as the minimum level for requiring a material to be treated as asbestos-containing. The identification of the presence or absence of asbestos in a material involves several specific analytical procedures. The percentage composition, on the other hand, is simply a visual approximation on the part of the analyst and may vary based on the way the sample slide is prepared and the specific analyst performing the identification. Estimating an accurate percentage composition of low-level asbestos-containing materials is very difficult. Therefore, samples identified positively as having an asbestos content of less than 10 percent by visual estimation are required to be re-analyzed by the point counting procedure described in the EPA "Interim Method for the Determination of Asbestos in Bulk Insulation Samples," method number EPA-600/M4-82-020, December 1982. A more definitive analysis can be obtained by transmission electron microscopy (TEM) analysis and is often used for confirming or denying the presence of asbestos in floor tile samples (in particular 12-inch by 12-inch tile) when previously analyzed via PLM and initially determined to be non-detected for asbestos.

It should be noted here that the analysis of a debris sample is a qualitative analysis for the presence or absence of asbestos in that particular sample. The EPA interim PLM method for analyzing bulk samples was intended to be used for analyzing asbestos-containing manufactured products or materials with near uniform concentrations of asbestos and not for the analysis of debris or other possibly contaminated materials which are not uniform in nature. Therefore percentage composition for soils, debris or dust samples is not indicated in this report. Further, a negative finding in these samples indicates only that the debris actually sampled was not found to contain asbestos. No inference should be made from any negative result concerning other debris, which was not specifically sampled.

Approximately ten percent of the samples collected during the field survey were reanalyzed as part of URS' quality control (QC) program. These QC samples were analyzed in URS' laboratory by an analyst different from the one who performed the initial analyses.

After the completion of both the initial and quality control analytical procedures, samples are stored in URS' sample storage area files and are maintained there for at least one year. At the end of one year URS will offer the client the opportunity to either have the samples properly disposed of by URS or have them returned for retention by the client.

APPENDIX C

POLARIZED LIGHT MICROSCOPIC ANALYTICAL METHOD

Polarized Light Microscopy (PLM) is the only analytical method for asbestos identification, which depends upon the unique optical crystallographic properties of the various crystals, phases in the sample. These properties—refractive indices, dispersion of refractive indices, birefringence, sign of elongation and extinction angle are unique to the crystalline state and, therefore, unequivocally identify chrysotile, lizardite, antigorite, anthophyllite, tremolite, actinolite, grunerite, cummingtonite, and riebeckite whether fibrous or non-fibrous.

PLM includes the classical optical crystallographic methods and the more recent dispersion staining procedures. Dispersion staining is, in effect, just a way of using optical crystallography for the study of transparent particles. It supplements the classical methods and, in some cases, makes the use of PLM for the study of crystals easier. For example, with one polar isotropic, substances show a single characteristic dispersion staining color, but anisotropic substances show different colors corresponding to the different refractive indices in different orientations. Chrysotile, for example, shows blue and blue-magenta colors, crosswise and lengthwise, respectively, for each fibrous crystal when mounted in Cargille high dispersion liquid n25=1.550 and observed by central stop dispersion staining (DS). The actual analysis begins by adding a Cargille refractive index liquid (nD-1.550, high dispersion) to a 0.5-1 mg slide sample. The particles should be dispersed in this liquid by teasing aggregates apart using two fine needles before covering with a cover slip.

A. Chrysotile

In liquid nD-1.550, chrysotile has distinctive fine flexible fibrils (often curly) plus straight bundles of such fibrils and distinctive dispersion staining colors usually blue-magenta parallel to the fiber axis and blue perpendicular (central stop colors). Different samples of chrysotile, however, may vary somewhat in the wavelength at which particle and liquid have the same refractive index. Parallel to the length ranges from about 440 to 560 nm and perpendicular to the length from about 560 to 660 nm.

The presence of chrysotile and other fibrous particles is sometimes secured by tiny particles of mortar. This is especially troublesome because most of these particles are so different in refractive index from the mounting liquid; they appear bright white and central stop dispersion staining. Trying to see the asbestos is like trying to see while driving at night with an oncoming stream of cars with high beam headlights. Often one can be confident the particles are covering obscured fibers because of their pattern-the Milky Way effect.

Sometimes a stray fibril may poke its way out into the liquid to show dispersion staining colors. It is always helpful in situations like this to examine the "milky way" with crossed polars since the underlying fibers often then become visible and recognizable as fibers. Crossed polars also help to locate smaller fibers and small percentages of fibers. Each sample should be quickly

scanned with crossed polars as well as dispersion staining before reporting the absence of asbestos fibers.

A mortar coating can sometimes be removed from the fibers by holding one end on the slide with one needle (lying flat) and scraping with a second needle along a fiber bundle, either before or after adding the mounting fluid. It may also be possible to remove enough mortar to see some dispersion staining colors by pressing the cover slip down hard on the particles (in the liquid) with a pencil eraser and sliding the cover slip in a circular pattern with the eraser. Another technique is to tease and scrape a fiber bundle out straight, cover with a cover slip and add the liquid so that it runs down the length of the fiber washing away much of the loosened mortar.

B. Amosite and Crocidolite

Amosite and crocidolite both have very pale yellow to white borders by central stop DS in liquid nD=1.550HD because their refractive indices are so much higher. Crocidolite usually shows a blue absorption color. If no anisotropic fibers with refractive indices much higher than 1.550 are present, no asbestos other than chrysotile can be present.

If higher index particles are observed in liquid nD=1.550HD a second sample is mounted in nD=1.605HD. Likely compounds visible in this liquid include tremolite, anthophyllite, actinolite, and wollastonite.

If higher index particles are observed in liquid nD=1.605, a third sample is mounted in Cargille liquid nD-1.680 and examined with DS. Most amosites used in buildings will show a wavelength of about 460 nm (golden yellow) parallel to the length and about 600 nm (blue-magenta) to >660 nm (pale blue) perpendicular to the length depending on fiber orientation. A perpendicular lambda 0 of >660 nm corresponds to the alpha vibration direction, which usually shows parallel extinction; a lambda 0=600 nm perpendicular to the length corresponds to beta (also no a parallel extinction view). As with most silicate minerals substitutional solid solution, in this case Fe2+ with Mg2+, can cause alpha, beta, and gamma to vary. Higher or lower values of refractive index for any one of the three vibration directions will mean correspondingly higher or lower values for all three.

Although the refractive indices of amosite and other amphiboles may vary over a wide range, most are not from commercial sources. Nearly all Amosite used commercially in insulation has the optical properties given above.

If, in liquid nD=1.680, low birefringent fibers show lambda 0 colors close together in the yellow to golden magenta, crocidolite is strongly indicated. If they show a negative sign of elongation (higher lambda 0 parallel to the length), and blue absorption colors with pleochroism (blue parallel and gray-blue perpendicular to the fiber length) crocidolite is present. Further confirmation can be obtained by mounting a third sample in Cargille refractive index liquid nD=1.70. Crocidolite will show central stop colors close to 600 nm (blue magenta) parallel to the length and about 520 (red magenta) perpendicular. Again, some parallel movement of the alpha, beta, and gamma colors should be expected for crocidolites from different sources.

We should emphasize that DS is a method for rapid refractive index determination. To be certain the observed colors mean a particular asbestos is present, one must be certain the DS data are consistent with particle orientation, i.e., the relationship between the optical properties and the crystallographic axes.

C. Other Asbestiform Minerals

When analyzing insulation, one usually skips the nD=1.605 liquid but if during examination anomalous results are observed with the 1.550 nD 1.680 liquids, that is, highly fibrous fibers with lambda colors in other than the prescribed ranges for chrysotile, amosite, and crocidolite, then fibrous tremolite, actinolite, or anthophyllite may be present. These are rarely found, however, in insulation. When these anomalous results are obtained, you should characterize the fibers in those liquids as to refractive indices relative to those liquids and extinction angles. If all of the fibers show parallel extinction and pale blue colors in 1.680, they are anthophyllite (if the possibility of organic fibers is first eliminated). Amosite shows parallel extinction as well, but good lambda colors in the visible in 1.680 identify this asbestos mineral. Tremolite will show strong colors in al orientations in nD=1.605 high dispersion liquid.

Actinolite has morphology and optics similar to tremolite except that the indices are all higher. Actinolite may also show pleochroism (green to colorless). It is best studied in high dispersion liquid nD=1.630HS in which alpha and gamma on the oblique extinction view show magenta and golden yellow, respectively. On the parallel extinction view, gamma (lengthwise) shows 0 ca. 470 nm or golden magenta and B (perpendicular) shows 0 ca. 495 nm also golden magenta although with more red. Ferroactinolites have been higher iron content and correspondingly higher refractive indices.

Tremolite, actinolite, and ferroactinolite are portions of a continuous solid solution series in the same manner as the amosite minerals, cummingtonite and grunerite. The name to use for a given amphibole, therefore, depends directly on the optical properties. An unusually asbestiform mineral is picrolite described as a fibrous form of antigorite. Its refractive indices are higher than chrysotile, which it closely resembles.

D. Interfering Substances

A few common substances show dispersion staining colors similar to those of chrysotile and some are elongated as well. These include two polymorphs of chrysotile: Antigorite and lizardite, quartz, talc, paper fibers and hairs. All of these show dispersion staining colors in 1.550 and all except talc and paper fibers show colors somewhat similar to chrysotile.

Quartz, although usually glassy flakes, shows blue and magenta central stop colors very similar to chrysotile in the 1.550 liquid. The shape is very different, however, and only a few views are oriented to show the magenta color.

Animal hairs, including human, also have refractive indices in the same range as chrysotile and, if finely fibrillated by electric razor for example, can be confusingly similar. Such fibrillated fibers are, however, rare; they also usually show melanin pigmented particles and indices

sufficiently different from chrysotile to avoid confusion. Paper fibers also show a crosswise index close to 1.550 (but lower) and the lengthwise index is much higher, hence shows a yellow central stop color. The morphology of paper fibers is also distinctive unless they are very tiny slivers broken away from larger fibers.

Air Quality Management Services, Inc.
"Discovering Solutions for Healthier Living"

October 19th, 2022

Bureau of General Services
Nick Ferrala
77 SHS, 4th Floor
Augusta, Maine 04333-0077

Re: Limited Lead Based Paint Determination, Lead in Dust, and Asbestos in Air Survey in the 2nd floor at 221 State Street property in Augusta, Maine.

AQM Project # 22-688

Air Quality Management Services, Inc. (AQM) conducted a limited survey to test for the presence of lead as well as asbestos fibers in the air prior to occupancy. This test was conducted on October 4th, 2022 followed up with another testing event on October 7th, 2022.

Findings – Lead Paint Chip Samples

These are the results of the paint chip materials that were sampled and analyzed by Flame Atomic Absorption Spectrometry (SW 846 3050B/7000B):

Sample #	Location	Material	% Lead by Weight
L1	Paint Chips from Windows (collected from loose and flaking paint from various windows)	Plaster	0.18%

Reporting Limit – 0.008%

According to State of Maine Department of Environmental Protection (DEP); Lead Based Paint means paint or other surface coatings that contain lead equal to or in excess of 1.0 milligram per square centimeter (XRF Reading) or equal to or in excess of 0.5% by weight (Paint Chip Analysis).

However, Occupational Safety & Health Administration's (OSHA) lead-in-construction standard was intended to apply to any detectable concentration of lead in paint, as even small concentrations of lead can result in unacceptable employee exposures depending upon on the method of removal and other workplace conditions. Actions to repair loose and flaking paint without proper PPE or controls in-place (negative pressure enclosure) can release lead into the environment. Employees occupying these spaces in the future can be exposed to lead in the dust. Based on this result (0.18% as being above the method reporting limit) and that OSHA considers any detectable concentration of lead in paint a potential hazard, paint chips around windows (where loose and flaking) shall be considered lead containing.

Findings – Lead in Dust

These are the results of the paint chip materials that were sampled and analyzed by Flame Atomic Absorption Spectrometry (SW 846 3050B/7000B):

Sample #	Location	Area Sampled	Lead Concentration
W1	Carpet in Room 285	1ft^2	<10µg/ft^2
W2	Carpet in Commissioner's Conference Room	1ft^2	<10µg/ft^2
W3	Window sill in Room 287	136in^2	<11µg/ft^2
W4	Floor in Reception Hallway	1ft^2	<10µg/ft^2
W5	Floor in Women's Room	1ft^2	<10µg/ft^2
W6	Window Sill in Men's Room	1ft^2	<10µg/ft^2
W7	Window Sill in Room 265	1ft^2	31µg/ft^2
W8	Carpet in East Side Lobby	1ft^2	<10µg/ft^2
W9	Window Sill in Room 254	1ft^2	16µg/ft^2
W10	Carpet in Room 254	1ft^2	10µg/ft^2

Reporting Limit – 10µg/ft^2 per area sampled (ft^2)

According to State of Maine Department of Environmental Protection (DEP); the threshold for Lead in Dust is considered equal to or in excess of as follows:

- Carpeted floors - 10µg/ft^2
- Interior Window Sills - 100µg/ft^2
    - These standards are implied for Child Occupied Facilities.

According to OSHA, any measured amount of lead in dust could present a hazard to workers in the environment, if dust is suspended in the air through; foot traffic, office activities, or desk fans. With this being said samples W7, W9, and W10 should be considered as potential lead hazards.

Findings – Asbestos Air Samples

AQM was asked to collect air samples for asbestos fibers as the building is known to contain asbestos building materials (i.e. floor tiles). AQM collected air samples in representative locations in the 2nd floor that will be occupied by future tenants. Samples were collected using the following method; Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) performed by EPA Level II. This TEM method was chosen as analysis is specific for asbestos fibers.

These air samples were submitted to Batta Laboratories, LLC. located in Newark, Delaware. Samples were collected by Mr. Randy Geoffroy of AQM; a State of Maine DEP certified and licensed Air Monitor.

Findings – Asbestos Air Samples (Continued)

Analysis of air samples T1 – T4 were reported as being None Detected. Sampling and Analysis was conducted in accordance with MEDEP's Asbestos Management Regulations Chapter 425 – Section 8.

Sample #	Sample Description	Run Time (Minutes)	Calibration (L/Min)	Sample Volume (L)	Result	Concentration (S/cc)
TEM1	HETL Finance (E)	120	10	1200	ND	N/A
TEM2	Lobby West	120	10	1200	ND	N/A
TEM3	Bathroom Hallway (West)	120	10	1200	ND	N/A
TEM4	North facing Hallway on Westside of Building	120	10	1200	ND	N/A
TEM5	Method Blank	----	----	----	ND	----

ND = None Detected N/A = Not Analyzed L = Liters Min = Minutes S/cc = Structures per centimeter

Asbestos Fibers were not identified in the samples (as outlined in the chart above). No risks based on this sample data.

Findings – Asbestos in Dust

During this testing event, AQM noticed that sections of the 2nd floor (Westside) were being used for storage. AQM observed shelving units stored in the 2nd floor. These shelving units appear to have been moved in this building from the Cultural Building. AQM observed what appeared to be fireproof fragments on the storage shelves. AQM's knowledge of fireproofing at the Cultural Building is that it's asbestos containing. This is a concern as the fireproof fragments on the shelving resembled that of fireproofing that contains asbestos. AQM recommended sampling fragments for asbestos content. Client agreed; AQM collected the sample using Microvac method as to ensure capture of this material. The result is as follows;

This is the result of the dust that were sampled and analyzed by Batta TEM SOP #77 Transmission Electron Microscopy (TEM) using Qualitative Analysis:

Sample #	Location	Material	Result
D1	2nd floor Westside	Dust / Fragments from Storage Shelves	Positive – Chrysotile

Asbestos was confirmed to be present in this sample and should be considered contaminated.

Recommendations

Lead:

AQM recommends all water damaged plaster as well as all loose and flaking paints at windows be scrapped and repaired. A Lead Abatement Contractor should perform this work as there is risk of exposing employees to lead dust. Carpet and window sills where lead was found to be in excess of method detection limits shall be cleaned (window sill) or removed and replaced (carpets), carpets may prove difficult to clean. AQM suspects asbestos containing floor tiles under all if not most carpets in the 2nd floor. If removal of carpet is desired, ensure to not damage asbestos flooring under the carpets during removal actions.

Asbestos:

Clean all surfaces of storage shelves that are being stored in the 2nd floor of the Building. This cleaning should be performed by a contractor knowledgeable with and trained in Asbestos Abatement.

Survey Limitations

As with any scientific study, there are certain assumptions which are made, and certain limitations to the scope of information that can be derived. Some restrictions on the conduct of the survey are imposed by outside sources while others are established through the designed scope and methodology of the study. As with any building / facility survey, it is subject to a variety of limitations and restrictions. Limitations that should be considered in the interpretation of the results of this survey include the following:

A. Survey(s) may not be able to identify all Asbestos Containing Building Materials (ACBM), and Lead-Based Paint, present throughout the Building and maybe limited to the areas of concern. A thorough study should be capable of identifying approximately 95 percent of accessible (by non-destructive methods) of Asbestos and Lead-Based Paints.

B. The inspection protocols used for this project were in accordance with U.S. Environmental Protection Agency (USEPA) - National Emission Standard for Hazardous Air Pollutants (NESHAP) and with the Maine Department of Environmental Protection (MEDEP) protocols specific to asbestos, and lead based paint sampling.

C. Limitations to the scope of the survey can result from limited access to hidden materials and areas. For example, multiple layers of materials or structural components may restrict access to suspect materials thus affecting the thoroughness of the survey. In most cases a survey is limited to accessible suspect materials with some minor demolition or destructive sampling.

D. In some cases, hidden materials may be identified during demolition / renovation activities. Due to the limited nature of this survey, AQM recommends any suspect material not identified in this report be sampled and analyzed for asbestos, lead content, and treated as such until otherwise determined.

AQM appreciates this opportunity to have assisted you with your testing needs. In the event we can be of further service or you have questions regarding this report, please give us a call.

Sincerely,

Randy Geoffroy, CMI
MEDEP Certification #'s AI-0395 & LI-0394

SUPPORTING DOCUMENTATION

AQM

EMSL Analytical, Inc
200 Route 130 North

Cinnaminson, NJ 08077
1-800-220-3675
(856) 786-5974

EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS TRAINING

Lead (Pb) Chain of Custody

EMSL Order ID *(Lab Use Only)*: 20 8208705

Company: Air Quality Management Services, Inc

EMSL-Bill to: ☑ Different ☐ Same
If Bill to is Different note instructions in Comments**

Third Party Billing requires written authorization from third party

Street: PO Box 2491

City: Lewiston | State/Province: ME | Zip/Postal Code: 04241 | Country: United States

Report To (Name): Randy Geoffroy | Telephone #: 207-657-7360

Email Address: randy@aqmservices.com | Fax #: 207-657-7361 | Purchase Order: 22-688

Project Name/Number: 22-688 - Augusta | Please Provide Results: ☐ FAX ☑ E-mail ☐ Mail

U.S. State Samples Taken: ME | CT Samples: ☐ Commercial/Taxable ☐ Residential/Tax Exempt

Turnaround Time (TAT) Options* - Please Check

☐ 3 Hour | ☐ 6 Hour | ☒ 24 Hour | ☐ 48 Hour | ☐ 72 Hour | ☐ 96 Hour | ☐ 1 Week | ☐ 2 Week

*Analysis completed in accordance with EMSL's Terms and Conditions located in the Price Guide

Matrix	Method	Instrument	Reporting Limit	Check
Chips ☒ % by wt. ☐ mg/cm² ☐ ppm	SW846-7000B	Flame Atomic Absorption	0.01%	☒
Air	NIOSH 7082	Flame Atomic Absorption	4 µg/filter	☐
	NIOSH 7105	Graphite Furnace AA	0.03 µg/filter	☐
	NIOSH 7300 modified	ICP-AES/ICP-MS	0.5 µg/filter	☐
Wipe* ASTM ☐ non ASTM ☐ *If no box is checked, non-ASTM Wipe is assumed	SW846-7000B	Flame Atomic Absorption	10 µg/wipe	☐
	SW846-6010B or C	ICP-AES	1.0 µg/wipe	☐
	SW846-7000B/7010	Graphite Furnace AA	0.075 µg/wipe	☐
TCLP	SW846-1311/7000B/SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)	☐
	SW846-1131/SW846 6010B or C	ICP-AES	0.1 mg/L (ppm)	☐
Soil	SW846-7000B	Flame Atomic Absorption	40 mg/kg (ppm)	☐
	SW846-7010	Graphite Furnace AA	0.3 mg/kg (ppm)	☐
	SW846-6010B or C	ICP-AES	2 mg/kg (ppm)	☐
Wastewater Unpreserved ☐ Preserved with HNO_3 pH < 2 ☐	SM3111B/SW846-7000B	Flame Atomic Absorption	0.4 mg/L (ppm)	☐
	EPA 200.9	Graphite Furnace AA	0.003 mg/L (ppm)	☐
	EPA 200.7	ICP-AES	0.020 mg/L (ppm)	☐
Drinking Water Unpreserved ☐ Preserved with HNO_3 pH < 2 ☐	EPA 200.9	Graphite Furnace AA	0.003 mg/L (ppm)	☐
	EPA 200.8	ICP-MS	0.001 mg/L (ppm)	☐
TSP/SPM Filter	40 CFR Part 50	ICP-AES	12 µg/filter	☐
	40 CFR Part 50	Graphite Furnace AA	3.6 µg/filter	☐
Other:				☐

Name of Sampler: Randy Geoffroy - LI-0394 | Signature of Sampler:

Sample #	Location	Volume/Area	Date/Time Sampled
L1	Paint Chips from Windows		10/4/22

Client Sample #'s -L1 | Total # of Samples: 1

Relinquished (Client): EO EIX | Date: 10/4/22 | Time: 1630

Received (Lab): | Date: 10 05 22 | Time: 11 AM

Comments:

All To: Air Quality Management Services, Inc. PO Box 2491, Lewiston, ME 04241 United States
Attention: Randy Geoffroy Phone: 207-657-7360 Email: randy@aqmservices.com Fax: 207-657-7361

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856) 303-2500 / (856) 786-5974
http://www.EMSL.com cinnaminsonleadlab@emsl.com

EMSL Order:	202208765
CustomerID:	AIRQ51A
CustomerPO:	22-688
ProjectID:	

Attn: **Randy Geoffroy**
Air Quality Management Services, Inc.
PO Box 2491
Lewiston, ME 04241

Phone:	(207) 657-7360
Fax:	
Received:	10/5/2022 11:00 AM
Collected:	10/4/2022

Project: **22-688 - Augusta**

Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)*

Client Sample Description	*Lab ID*	*Collected*	*Analyzed*	*Weight*	*Lead Concentration*
L1	*202208765-0001*	10/4/2022	10/5/2022	0.2712 g	0.18 % wt
	Site: Paint Chips From Windows				

The QC sample duplicate RPD result for Lead was outside of the method control limits.

Owen Mckenna, Lead Laboratory Director
or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted.
* Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.008% wt based on the minimum sample weight per our SOP. "<" (less than) result signifies the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. Definitions of modifications are available upon request.
Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NELAP Certifications: NJ 03036, NY 10872, PA 68-00367, AIHA-LAP, LLC ELLAP 100194, A2LA 2845.01

Initial report from 10/06/2022 11:41:08

EMSL Analytical, Inc
200 Route 130 North

Cinnaminson, NJ 08077
PHONE 1-800-220-3675
FAX (856) 786-5974

EMSL ANALYTICAL, INC.
LABORATORY · PRODUCTS · TRAINING

Lead (Pb) Chain of Custody

EMSL Order ID *(Lab Use Only)*: 022208864

Company: Air Quality Management Services, Inc		EMSL-Bill to: ☑ Different ☐ Same If Bill to is Different note instructions in Comments** *Third Party Billing requires written authorization from third party*	
Street: PO Box 2491			
City: Lewiston	State/Province: ME	Zip/Postal Code: 04241	Country: United States
Report To (Name): Randy Geoffroy		Telephone #: 207-657-7360	
Email Address: randy@aqmservices.com		Fax #: 207-657-7361	Purchase Order: 22-688
Project Name/Number: 22-688B - Augusta		Please Provide Results: ☐ FAX	☑ E-mail ☐ Mail
U.S. State Samples Taken: ME		CT Samples: ☐ Commercial/Taxable	☐ Residential/Tax Exempt

Turnaround Time (TAT) Options* - Please Check

☐ 3 Hour | ☐ 6 Hour | ■ 24 Hour | ☐ 48 Hour | ☐ 72 Hour | ☐ 96 Hour | ☐ 1 Week | ☐ 2 Week

**Analysis completed in accordance with EMSL's Terms and Conditions located in the Price Guide*

Matrix	Method	Instrument	Reporting Limit	Check
Chips ☐ % by wt. ☐ mg/cm² ☐ ppm	SW846-7000B	Flame Atomic Absorption	0.01%	☐
Air	NIOSH 7082	Flame Atomic Absorption	4 µg/filter	☐
	NIOSH 7105	Graphite Furnace AA	0.03 µg/filter	☐
	NIOSH 7300 modified	ICP-AES/ICP-MS	0.5 µg/filter	☐
Wipe* ASTM ☐ non ASTM ☒ *If no box is checked, non-ASTM Wipe is assumed	SW846-7000B	Flame Atomic Absorption	10 µg/wipe	☒
	SW846-6010B or C	ICP-AES	1.0 µg/wipe	☐
	SW846-7000B/7010	Graphite Furnace AA	0.075 µg/wipe	☐
TCLP	SW846-1311/7000B/SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)	☐
	SW846-1131/SW846-6010B or C	ICP-AES	0.1 mg/L (ppm)	☐
Soil	SW846-7000B	Flame Atomic Absorption	40 mg/kg (ppm)	☐
	SW846-7010	Graphite Furnace AA	0.3 mg/kg (ppm)	☐
	SW846-6010B or C	ICP-AES	2 mg/kg (ppm)	☐
Wastewater Unpreserved ☐ Preserved with HNO_3 pH < 2 ☐	SM3111B/SW846-7000B	Flame Atomic Absorption	0.4 mg/L (ppm)	☐
	EPA 200.9	Graphite Furnace AA	0.003 mg/L (ppm)	☐
	EPA 200.7	ICP-AES	0.020 mg/L (ppm)	☐
Drinking Water Unpreserved ☐ Preserved with HNO_3 pH < 2 ☐	EPA 200.9	Graphite Furnace AA	0.003 mg/L (ppm)	☐
	EPA 200.8	ICP-MS	0.001 mg/L (ppm)	☐
TSP/SPM Filter	40 CFR Part 50	ICP-AES	12 µg/filter	☐
	40 CFR Part 50	Graphite Furnace AA	3.6 µg/filter	☐
Other:				☐

Name of Sampler: Randy Geoffroy - LI-0394 | Signature of Sampler: [signature]

Sample #	Location	Volume/Area	Date/Time Sampled
W1	Carpet in Room 285	1ft2	10/7/22
W2	Carpet in Commissioner's Conference Room	1ft2	
W3	Window sill in Room 287	136in2	
W4	Floor in Reception Hallway	1ft2	
W5	Floor in Women's Room	1ft2	

Client Sample #'s: -W1 - W10 | Total # of Samples: 10

Relinquished (Client):	[signature]	Date:	10/7/22	Time:	16:30
Received (Lab):	ED EFA	Date:	10/10/22	Time:	9am

Comments:
Bill To: Air Quality Management Services, Inc. PO Box 2063 Bradenton FL 34204 United States
Attention: Randy Geoffroy Phone: 207-657-7360 Email: randy@aqmservices.com Purchase Order: 14 655

EMSL ANALYTICAL, INC.

LEAD (Pb) CHAIN OF CUSTODY

EMSL ORDER ID *(Lab Use Only)*: 202208864

EMSL Analytical, Inc.
200 Route 130 North

Cinnaminson, NJ 08077
PHONE: 1-800-220-3675
FAX: (856) 786-5974

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

Sample #	Location	Volume/Area	Date/Time Sampled
W6	Window Sill in Men's Room	1ft2	10/7/22
W7	Window Sill in Room 265	1ft2	
W8	Carpet in East Side Lobby	1ft2	
W9	Window Sill in Room 254	1ft2	
W10	Carpet in Room 254	$1ft^2$	

Comments/Special Instructions:
BillTo: Air Quality Management Services, Inc., PO Box 20635, Bradenton, FL 34204, United States
Attention: Randy Geoffroy Phone: 207-857-7360 Email: randy@aqmservices.com Purchase Order: 14-555

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856) 303-2500 / (856) 786-5974
http://www.EMSL.com cinnaminsonleadlab@emsl.com

EMSL Order:	202208864
CustomerID:	AIRQ51A
CustomerPO:	
ProjectID:	

Attn: **Randy Geoffroy**
Air Quality Management Services, Inc.
PO Box 2491
Lewiston, ME 04241

Phone:	(207) 657-7360
Fax:	
Received:	10/10/2022 09:00 AM
Collected:	10/7/2022

Project: **22-688B - Augusta**

Test Report: Lead in Dust by Flame AAS (SW 846 3050B/7000B)*

Client Sample Description	Lab ID	Collected	Analyzed	Area Sampled	Lead Concentration
W1	202208864-0001	10/7/2022	10/10/2022	1 ft²	<10 µg/ft²
	Site: Carpet in Room 285				
W2	202208864-0002	10/7/2022	10/10/2022	1 ft²	<10 µg/ft²
	Site: Carpet in Commissioner's Conference Room				
W3	202208864-0003	10/7/2022	10/10/2022	136 in²	<11 µg/ft²
	Site: Window Sill in Room 287				
W4	202208864-0004	10/7/2022	10/10/2022	1 ft²	<10 µg/ft²
	Site: Floor in Reception Hallway				
W5	202208864-0005	10/7/2022	10/10/2022	1 ft²	<10 µg/ft²
	Site: Floor in Women's Room				
W6	202208864-0006	10/7/2022	10/10/2022	1 ft²	<10 µg/ft²
	Site: Window Sill in Men's Room				
W7	202208864-0007	10/7/2022	10/10/2022	1 ft²	31 µg/ft²
	Site: Window Sill in Room 265				
W8	202208864-0008	10/7/2022	10/10/2022	1 ft²	<10 µg/ft²
	Site: Carpet in East Side Lobby				
W9	202208864-0009	10/7/2022	10/10/2022	1 ft²	16 µg/ft²
	Site: Window Sill in Room 254				
W10	202208864-0010	10/7/2022	10/10/2022	1 ft²	10 µg/ft²
	Site: Carpet in Room 254				

Owen Mckenna, Lead Laboratory Director
or other approved signatory

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* Analysis following Lead in Dust by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 10 ug/wipe. Ug/wipe = ug/ft2 x area sampled in ft2. Unless noted, results in this report are not blank corrected. The lab is not responsible for data reported in ug/ft2 which is dependent upon the area provided by non-lab personnel. "<" (less than) result signifies that the analyte was not detected at

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NELAP Certifications: NJ 03036, NY 10872, PA 68-00367, AIHA-LAP, LLC ELLAP 100194, A2LA 2845.01

Initial report from 10/10/2022 18:57:29

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NY ELAP Lab# 11093

batta LABORATORIES

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(302) 737-3376 - Fax (302) 737-5764
Web: www.battaenv.com E-mail: battaenv@battaenv.com

EPA Lab ID #DE004

NVLAP Lab Code 101032-0

Batch ID# R114520 - 10/04/22 - 5

CERTIFICATE OF TEM ANALYSIS

Level II (Yamate) Method for Measurment of Airborne Asbestos

Report Date: 10/7/2022

Sampling Data

BLI Project #: R114520
Project Name: Air Quality Management Services - 22-688
Date Sampled: 10/4/2022

Instrument: Hitachi S00AS
EDX Software System: Pathfinder
EDX Hardware System: Thermo UltraDry
Sampling Location: Augusta, Maine
Sampled By: Client
Date Received: 10/6/2022

Analytical Data

Effective Filter Area (mm^2): 385
Filter Media: MCE
Filter Pore Size (µm): 0.45
Grid Opening Area (mm^2): 0.0137
Date Samples Prepped: 10/7/2022
Prepped By: M. Collins
Date Analyzed: 10/7/2022
Analyzed By: M. Collins

Client-Supplied Data					Analytical Data					Results		Comments
Lab Sample #	Client Sample #	Sample Type	Sample Location	Volume (L)	Area Analyzed (mm^2)	# of Structures: Structures 0.5-≤5µm / Structures ≥5µm	Asbestos Types Detected	Analytical Sensitivity (s/cc)	Limit of Detection (s/mm^2)	Reported Concentration (s/cc)	Reported Density (s/mm^2)	Confidence Limits, s/mm^2 (see notes below)
1324919	TEM 1	Air	2nd Floor HETL Finance (East)	1200.00	0.1370	0 / 0 / 0	None Detected	0.00234	7.3	< 0.0023	< 7.3	0 - 7.3
1324920	TEM 2	Air	2nd Floor Lobby (West)	1200.00	0.1370	0 / 0 / 0	None Detected	0.00234	7.3	< 0.0023	< 7.3	0 - 7.3
1324921	TEM 3	Air	2nd Floor Bath Hallway (West)	1200.00	0.1370	0 / 0 / 0	None Detected	0.00234	7.3	< 0.0023	< 7.3	0 - 7.3
1324922	TEM 4	Air	2nd Floor Hallway (North)	1200.00	0.1370	0 / 0 / 0	None Detected	0.00234	7.3	< 0.0023	< 7.3	0 - 7.3
1324923	TEM 5	Air	Blank	0.00	0.1370	0 / 0 / 0	None Detected	n/a	7.3	n/a	< 7.3	0 - 7.3

ANALYST: M. Collins

REVIEWED BY:

batta LABORATORIES

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Delaware Industrial Park
6 Garfield Way, Newark, DE 19713-5817
Tel: (302) 737-3376 Fax: (302) 737-5764
Email: battaenv@battaenv.com
Web: www.battaenv.com

NVLAP
AIHA LAP, LLC ACCREDITED LABORATORY INDUSTRIAL HYGIENE & ENVIRONMENTAL LEAD ISO/IEC 17025:2005 www.aihaaccreditedlabs.org

NVLAP #101032
AIHA LAP, LLC #100448
NY ELAP #11993
EPA Lab #DE004

Customer Billing Information
Tel 1: (207) 657-7360
Tel 2:
Customer Name: Air Quality Management Services
Billing Address 1: PO Box 2491 - Lewiston, ME 04241
Billing Address 2:

Shipping Information
- [ ] Picked up by BATTA
- [ ] Delivered by Customer
- [x] Shipped by Customer

Turnaround Times (check one, refer to notes*)
- [ ] 3 Hours/ immediate (Note 1)
- [ ] 6 Hours/Same Day (Note 2)
- [x] 24 Hours (Note 3)
- [ ] 48 Hours (Note 4)
- [ ] 72 Hours (Note 5)
- [ ] 5 Days (Note 6)
- [ ] 5 - 10 days
- [ ] Other

BEA Project #:
Client Project #: 22-688
BL Project #:

*Notes Regarding Turnaround Times
1 Specific turnaround depends on the test requested. Turnaround not available for all types of analysis. Client must make prior arrangements with lab to guarantee turnaround time. Premium rate will apply.
2 Same day (by 5 p.m.) offered if samples are received by 12 noon. After that time, a 6-hour designation may be offered. A 6-hour/Same Day turnaround time may not be available with all analyses
3 Unless a specific time is requested, results are guaranteed by 5 p.m. on the following business day. The turnaround time of 24 hours may not be available with all analyses.
4 Unless a specific time is requested, results are guaranteed by 5 p.m. on the 2nd business day
5 Unless a specific time is requested, results are guaranteed by 5 p.m. on the 3rd business day
6 Unless a specific time is requested, results are guaranteed by 5 p.m. on the 5th business day

Results To: Randy Geoffroy Tel 1:
Results To: Tel 2:
Project Name: 22-688
Project Location: Augusta, Maine
Email: randy@aqmservices.com

BL Use Only	Field Sample ID#	Sample Location / Description	Sampling Date / Time	Sampling Info (Air & Surface Samples) Start Time	Stop Time	Flow Rate	Volume/Area	Sample Type	Test Method	Lab Use Only Results	Date of Analysis	Analyst
1324919	TEM 1	2nd floor HETL Finance (East)	10/4/22	10:05 am	12:05 pm	10LPM	1200L	Air	EPA Level II TEM			
920	TEM 2	2nd floor Lobby (West)	↓	10:10 am	12:10 pm	↓	↓	↓	↓			
921	TEM 3	2nd floor Bath Hallway (West)	↓	10:13 am	12:13 pm	↓	↓	↓	↓			
922	TEM 4	2nd floor Hallway (North)	↓	10:15 am	12:15 pm	↓	↓	↓	↓			
923	TEM 5	Blank	↓	—	—	↓	↓	↓	↓			
			↓									
	D1	Dust / Debris from Contents / Items from Archievs	↓	—	—	—	—	Bulk / Dust	See Note			
			↓									

Sample Relinquished By: [signature] Date: 10/4/2022 Time: 4:30 pm
Sample Received By: [signature] Date: 10/6/22 Time: 10:20
Sample Relinquished By: Date: Time:
Sample Received By: Date: Time:

Special Instructions / Requests From Client (if applicable):
Please try TEM Bulk Analysis for D1 if possible, if not analyze by TEM Dust. Thank you
Note to Client: Batta Laboratories recommends that blanks be supplied by the client when mandated by published methods.

BL Use Only
Logged-in By: Log-in Date: Date:
Lab Note: When building material layers are not specified by the client on the Chain of Custody, Batta will follow EPA 600 R-93/116, and make those determinations in the lab at the time of analysis. **Friability:** State/Federal Regulations mandate friability shall not be determined in labs.

BL Use Only
Are some samples not accepted? If so, check "No" and explain conditions in the box below.
- [ ] Yes
- [ ] No
- [ ] Received on Ice

Field Samples Not Accepted :
Conditions :

Method of Payment
- [ ] Cash Cashier
- [ ] Visa / Mastercard / Discover
- [ ] Money Order
- [ ] Purchase Order #
- [ ] Check #
- [ ] Other
- [ ] Unit Price / Quote
- [ ] Total Payment
- [ ] Reference #

For drinking water samples: for results to be valid, lab must receive samples on ice and within 48 hours of collection. **For air samples collected by NIOSH 7400 and 7402:** in accordance with these NIOSH methods, two field blanks (or 10% of the number of field samples submitted, whichever is greater) must be submitted and be analyzed with field samples.

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Environment Since 1982

NY ELAP Lab 11993
PCM, PLM, TEM and Lead

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A Certified MBE Company

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Web: www.battaenv.com E-mail: battaenv@battaenv.com

E.P.A. LAB ID# DE00004

NVLAP
Lab Code: 101032-0

CERTIFICATE OF TEM ANALYSIS

Test Method: BATTA TEM SOP #77 TEM Qualitative Analysis

Report Date: 10/7/2022

Sampling Data

BLI Project #: R114520
Project Name: Air Quality Management Services - 22-688
Project Location: Augusta, Maine

Date Sampled: 10/4/2022
Sampled By: Client
Date Analyzed: 10/7/2022

Method Description

The method used for the qualitative evaluation for asbestiform minerals in bulk materials involves scanning the prepared sample until four (4) asbestiform mineral structures are encountered or a total of ten (10) grid openings have been examined, whichever comes first. If less than four (4) asbestiform mineral structures are encountered in ten (10) grid openings, the sample is reported as negative. If four (4) or more asbestiform mineral structures are identified in the scanning process, the scan of the grid is halted, the remainder of the analysis for that sample is terminated, and the sample is reported as positive. This method is qualitative (+/-) only and does not provide a quantification (%) of asbestiform mineral content of the sample examined.

	Client-Supplied Data					Analytical Data		Results	
Lab Sample #	Client Sample #	Sample Location	Material Type	Sample Color	Friable ? (y or n)	Number of Structures	Number of Grid Openings	Asbestos Type(s) Detected	Reported Result (Positive or Negative)
1324924	D1	Items from Archievs	Dust / Debris	NA	n/a	10	1	Chrysotile	**POSITIVE**

ANALYST: Madell Collins

REVIEWED BY:

This report does not constitute endorsement by NVLAP and/or any specific U.S. government agencies. The test data relate only to the items tested. No assumptions or conclusions should be made to materials or samples not analyzed. Furthermore, Batta Laboratories assumes no responsibility for the accuracy of results influenced by the use of improper collection techniques or equipment. Due to the general heterogeneity of materials containing materials (ACM), EPA and OSHA have recommended submission of at least three samples of each type of materials for TEM asbestos analysis. Submission of fewer samples may compromise the accuracy of ACM determinations.

CHAIN OF CUSTODY

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Delaware Industrial Park
6 Garfield Way, Newark, DE 19713-5817
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Email: battaenv@battaenv.com
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ISO/IEC 17025:2005

NVLAP #101032
AIHA LAP, LLC #100448
NY ELAP #11993
EPA Lab #DE004

Customer Billing Information
Tel 1: (207) 657-7360
Tel 2:
Customer Name: Air Quality Management Services
Billing Address 1: PO Box 2491 - Lewiston, ME 04241
Billing Address 2:
Results To: Randy Geoffroy Tel 1:
Results To: Tel 2:
Email: randy@aqmservices.com

Shipping Information
- ☐ Picked up by BATTA
- ☐ Delivered by Customer
- ☑ Shipped by Customer

Turnaround Times (check one, refer to notes*)
- ☐ 3 hours/Immediate (Note 1)
- ☐ 6 hours/Same Day (Note 2)
- ☑ 24 Hours (Note 3)
- ☐ 48 hours (Note 4)
- ☐ 72 Hours (Note 5)
- ☐ 5 Days (Note 6)
- ☐ 5 - 10 days
- ☐ Other

Project Name: 22-688
Project Location: Augusta, Maine

BEA Project #:
Client Project #: 22-688
BL Project #:

*Notes Regarding Turnaround Times
1 Specific turnaround depends on the test requested. Turnaround not available for all types of analysis Client must make prior arrangements with lab to guarantee turnaround time. Premium rate will apply
2 Same day (by 5 p.m.) offered if samples are received by 12 noon. After that time, a 6 hour designation may be offered. A 6 hour/Same Day turnaround time may not be available with all analyses
3 Unless a specific time is requested, results are guaranteed by 5 p.m. on the following business day The turnaround time of 24 hours may not be available with all analyses
4 Unless a specific time is requested, results are guaranteed by 5 p.m. on the 2nd business day
5 Unless a specific time is requested, results are guaranteed by 5 p.m. on the 3rd business day
6 Unless a specific time is requested, results are guaranteed by 5 p.m. on the 5th business day

BL Use Only	Field Sample ID#	Sample Location / Description	Sampling Date / Time	Sampling Info (Air & Surface Samples) Start Time	Stop Time	Flow Rate	Volume/Area	Sample Type	Test Method	Lab Use Only: Results	Date of Analysis	Analyst
	TEM 1	2nd floor HETL Finance (East)	10/4/22	10:05 am	12:05 pm	10LPM	1200L	Air	EPA Level II TEM			
	TEM 2	2nd floor Lobby (West)		10:10 am	12:10 pm							
	TEM 3	2nd floor Bath Hallway (West)		10:13 am	12:13 pm							
	TEM 4	2nd floor Hallway (North)		10:15 am	12:15 pm							
	TEM 5	Blank		—	—							
1324924	D1	Dust / Debris from Contents / Items from Archievs		—	—	—	—	Bulk / Dust	See Note			

Sample Relinquished By: Date: 10/4/2022 Time: 4:30 pm
Sample Received By: Date: 10/6/22 Time: 10:20
Sample Relinquished By: Date: Time:
Sample Received By: Date: Time:

Special Instructions / Requests From Client (if applicable):
Please try TEM Bulk Analysis for D1 if possible, if not analyze by TEM Dust. Thank you *
Note to Client: Batta Laboratories recommends that blanks be supplied by the client when mandated by published methods

BL Use Only Logged-in By: Log-in Date: Date:
Lab Note: When building material layers are not specified by the client on the Chain of Custody, Batta will follow EPA 600 R-93/116, and make those determinations in the lab at the time of analysis. Friability: State/Federal Regulations mandate friability shall not be determined in labs.

BL Use Only
Are some samples not accepted? If so, check "No" and explain conditions in the box below.
☐ Yes ☐ No ☐ Received on Ice
Field Samples Not Accepted:
Conditions:
* insufficient material for bulk will process ASTM5755

Method of Payment
- ☐ Cash Cashier
- ☐ Visa / Mastercard / Discover
- ☐ Money Order
- ☐ Purchase Order #
- ☐ Check #
- ☐ Other
- ☐ Unit Price / Quote
- ☐ Total Payment
- ☐ Reference #

For drinking water samples: for results to be valid, lab must receive samples on ice and within 48 hours of collection. For air samples collected by NIOSH 7400 and 7402: in accordance with these NIOSH methods, two field blanks (or 10% of the number of field samples submitted, whichever is greater) must be submitted and be analyzed with field samples.

Angela Lewis

From: Randy Geoffroy <Randy@aqmservices.com>
Sent: Thursday, October 6, 2022 2:22 PM
To: Angela Lewis
Cc: Madell Collins; Brittany Sammons; Irene Adebiyi; Jason Shatney; Kathryn Reeves; Ray Sankey
Subject: Re: Microvac question for 22-688

A yes or no is fine with me. Thank you

Sent from my U.S.Cellular© Smartphone
Get Outlook for Android

From: Angela Lewis <AngelaLewis@battaenv.com>
Sent: Thursday, October 6, 2022 2:06:35 PM
To: randy@aqmservices.com <randy@aqmservices.com>
Cc: Madell Collins <MadellC@battaenv.com>; Brittany Sammons <brittanys@battaenv.com>; Irene Adebiyi <Irene.Adebiyi@battaenv.com>; Jason Shatney <jasons@battaenv.com>; Kathryn Reeves <Kathryn.Reeves@battaenv.com>; Ray Sankey <Rays@battaenv.com>
Subject: Microvac question for 22-688

Good afternoon, Randy.
Due to the small amount of material received, the sample will be treated as ASTM 5755 microvac. However we need to know the dimensions of the area sampled, please.
Your other option (which is cheaper and quicker) would be a simple yes/no drop mount. There will be no quantitative result with a Y/N drop mount, just a reporting of whether asbestos was or was not detected.
Please let us know at your earliest convenience how you wish us to proceed.
Thanks.

MCD_NAME	CONTRACTOR_COMPANY_OR_NAME	START_DATE_	END_DATE_	ASB_OR_LEAD	MATERIALS_DESCRIPTION	AMOUNT_OF_MATERIAL	UNITS_DESCRIPTION	OPERATION_DESCRIPTI	DIRECTIONS	WORK	WORK	LANS_I	COMMENTS
AUGUSTA	ABATEMENT PROFESSIONALS CORP	4/16/2007	4/17/2007	Asbestos	Floor Tile	200	Sq. Feet	Renovation	DHHS, STATE ST THROUGHOUT, OFFICES,	730	1600	19352	
AUGUSTA	ABATEMENT PROFESSIONALS CORP	8/21/2002	9/4/2002	Asbestos	Pipe	550	Ln. Feet	Renovation	DHS BLDG,HETL SIDE,16 STATE ST,BASEMENT,MECHANICAL RM,4 FLS	700	1530	11876	
AUGUSTA	ABATEMENT PROFESSIONALS CORP	8/21/2002	9/4/2002	Asbestos	Other	140	Ln. Feet	Renovation	DHS BLDG,HETL SIDE,16 STATE ST,BASEMENT,MECHANICAL RM,4 FLS	700	1530	11876	
AUGUSTA	ABATEMENT PROFESSIONALS CORP	3/2/2002	3/3/2002	Asbestos	Mastic	400	Sq. Feet	Emergency Renovation	DHS GROUND/CAFATERIA, STATE ST, LAB	1700	700	10919	
AUGUSTA	ABATEMENT PROFESSIONALS CORP	12/12/2000	12/13/2000	Asbestos	Pipe	50	Ln. Feet	Emergency Renovation	DEPT OF HUMAN SVCS,STATE ST,BASEMENT,2 FLS	730	1700	8378	
AUGUSTA	ABATEMENT PROFESSIONALS CORP	9/21/2000	9/21/2000	Asbestos	Pipe	15	Ln. Feet	Renovation	DEPT OF HUMAN SERVICES,STATE ST,RM #B-8-D,OFFICE/ADMIN	1600	2400	7884	
AUGUSTA	ABATEMENT PROFESSIONALS CORP	9/21/2000	9/21/2000	Asbestos	Transite/Paneling	60	Sq. Feet	Renovation	DEPT OF HUMAN SERVICES,STATE ST,RM #B-8-D,OFFICE/ADMIN	1600	2400	7884	
AUGUSTA	ABATEMENT PROFESSIONALS CORP	9/5/1997	9/5/1997	Asbestos	Boiler covering	20	Sq. Feet	Renovation	STATE OFFICE BUILDING, STATE & CAPITOL ST, BOILER ROOM	0	0	1548	
AUGUSTA	ABATEMENT SOLUTIONS, INC	5/17/2003	5/18/2003	Asbestos	Floor Tile	400	Sq. Feet	Renovation	DHS BLDG-HETL SIDE,16 STATE ST,4 FLS,1ST FL,LABORATORY	700	1700	13164	ORIGINAL START DATE 04/26/2003
AUGUSTA	ABATEMENT SOLUTIONS, INC	5/17/2003	5/18/2003	Asbestos	Transite/Paneling	80	Sq. Feet	Renovation	DHS BLDG-HETL SIDE,16 STATE ST,4 FLS,1ST FL,LABORATORY	700	1700	13164	ORIGINAL START DATE 04/26/2003
AUGUSTA	ABATEMENT SOLUTIONS, INC	5/10/2003	5/11/2003	Asbestos	Transite/Paneling	150	Sq. Feet	Renovation	DHS BLDG, HETL SIDE 1ST FL, 16 STATE ST	700	1700	13201	
AUGUSTA	ABATEMENT SOLUTIONS, INC	5/10/2003	5/11/2003	Asbestos	Floor Tile	250	Sq. Feet	Renovation	DHS BLDG, HETL SIDE 1ST FL, 16 STATE ST	700	1700	13201	
AUGUSTA	ABATEMENT SOLUTIONS, INC	5/10/2003	5/11/2003	Asbestos	Pipe	15	Ln. Feet	Renovation	DHS BLDG, HETL SIDE 1ST FL, 16 STATE ST	700	1700	13201	
AUGUSTA	ABATEMENT SOLUTIONS, INC	4/12/2003	4/13/2003	Asbestos	Floor Tile	250	Sq. Feet	Renovation	DHS BLDG-HETL SIDE 1ST FL 16 STATE ST	700	1700	13109	
AUGUSTA	ABATEMENT SOLUTIONS, INC	4/12/2003	4/13/2003	Asbestos	Pipe	30	Ln. Feet	Renovation	DHS BLDG-HETL SIDE 1ST FL 16 STATE ST	700	1700	13109	
AUGUSTA	ABATEMENT SOLUTIONS, INC	4/12/2003	4/13/2003	Asbestos	Transite/Paneling	40	Sq. Feet	Renovation	DHS BLDG-HETL SIDE 1ST FL 16 STATE ST	700	1700	13109	
AUGUSTA	ABATEMENT SOLUTIONS, INC	3/22/2003	3/23/2003	Asbestos	Pipe	20	Ln. Feet	Renovation	DHS BLDG-HETL SIDE,16 STATE ST,1ST FL,LABORATORY	700	1700	13014	
AUGUSTA	ABATEMENT SOLUTIONS, INC	3/22/2003	3/23/2003	Asbestos	Transite/Paneling	80	Sq. Feet	Renovation	DHS BLDG-HETL SIDE,16 STATE ST,1ST FL,LABORATORY	700	1700	13014	
AUGUSTA	ABATEMENT SOLUTIONS, INC	3/22/2003	3/23/2003	Asbestos	Floor Tile	300	Sq. Feet	Renovation	DHS BLDG-HETL SIDE,16 STATE ST,1ST FL,LABORATORY	700	1700	13014	
AUGUSTA	ABATEMENT SOLUTIONS, INC	12/18/2002	12/22/2002	Asbestos	Pipe	375	Ln. Feet	Renovation	DEPT OF HUMAN SVCS,STATE ST,1ST FL,HETL SIDE,3 FLS,LAB	700	1700	12499	K=MUD FITTINGS
AUGUSTA	ABATEMENT SOLUTIONS, INC	12/18/2002	12/22/2002	Asbestos	Other	25	Ln. Feet	Renovation	DEPT OF HUMAN SVCS,STATE ST,1ST FL,HETL SIDE,3 FLS,LAB	700	1700	12499	K=MUD FITTINGS
AUGUSTA	ABATEMENT SOLUTIONS, INC	5/11/2002	5/22/2002	Asbestos	Floor Tile	300	Ln. Feet	Renovation	DHS TESTING LAB, GROUND FL, STATE ST, LAB	0	0	11262	
AUGUSTA	ABATEMENT SOLUTIONS, INC	5/11/2002	5/22/2002	Asbestos	Pipe	20	Ln. Feet	Renovation	DHS TESTING LAB, GROUND FL, STATE ST, LAB	0	0	11262	
AUGUSTA	ABATEMENT SOLUTIONS, INC	3/28/2002	3/30/2002	Asbestos	Other	150	Sq. Feet	Renovation	DHS, STATE ST, 1ST FL CUSTODIAN RM, TESTING LAB	700	1700	11051	
AUGUSTA	ABATEMENT SOLUTIONS, INC	3/28/2002	3/30/2002	Asbestos	Pipe	100	Ln. Feet	Renovation	DHS, STATE ST, 1ST FL CUSTODIAN RM, TESTING LAB	700	1700	11051	
AUGUSTA	ABATEMENT SOLUTIONS, INC	2/11/2002	3/8/2002	Asbestos	Floor Tile	1830	Sq. Feet	Renovation	HETL/DHS BLDG,STATE ST,3 FLS,GROUND FLOOR,BGS,LABORATORY	700	2300	10776	NEW HOURS FOR 19,22,22 1730 TO 0330
AUGUSTA	ABATEMENT SOLUTIONS, INC	2/11/2002	3/8/2002	Asbestos	Pipe	560	Ln. Feet	Renovation	HETL/DHS BLDG,STATE ST,3 FLS,GROUND FLOOR,BGS,LABORATORY	700	2300	10776	NEW HOURS FOR 19,22,22 1730 TO 0330
AUGUSTA	ABATEMENT SOLUTIONS, INC	2/11/2002	3/8/2002	Asbestos	Other	1530	Sq. Feet	Renovation	HETL/DHS BLDG,STATE ST,3 FLS,GROUND FLOOR,BGS,LABORATORY	700	2300	10776	NEW HOURS FOR 19,22,22 1730 TO 0330
AUGUSTA	ATLANTIC ENVIRONMENTAL CONTRACTORS INC.	5/16/2019	5/24/2019	Asbestos	Floor Tile	190	Sq. Feet	Renovation	221 State Street (DHHS Bldg)	700	330	36028	JR
AUGUSTA	ATLANTIC ENVIRONMENTAL CONTRACTORS INC.	5/16/2019	5/24/2019	Asbestos	Pipe	220	Ln. Feet	Renovation	221 State Street (DHHS Bldg)	700	330	36028	JR
AUGUSTA	ATLANTIC ENVIRONMENTAL CONTRACTORS INC.	5/16/2019	5/24/2019	Asbestos	Mudded Fittings	4	Ln. Feet	Renovation	221 State Street (DHHS Bldg)	700	330	36028	JR
AUGUSTA	MORRISSEY ENVIRONMENTAL	12/26/2006	12/26/2006	Asbestos	Pipe	7	Ln. Feet	Renovation	HETL BLDG, 221 STATE ST, RM 121, STATE OFFICE BLDG	1700	2400	18974	
AUGUSTA	MORRISSEY ENVIRONMENTAL	5/2/2006	5/2/2006	Asbestos	Transite/Paneling	50	Sq. Feet	Renovation	DHS-HETL BLDG, STATE ST, RM B3A	1700	2400	17978	
AUGUSTA	MORRISSEY ENVIRONMENTAL	2/24/2005	2/24/2005	Asbestos	Pipe	20	Ln. Feet	Renovation	BGS, DEPT HUMANS SERV BLDG, RM 151, 108, 118, STATE ST	1700	2400	16155	
AUGUSTA	MORRISSEY ENVIRONMENTAL	2/24/2005	2/24/2005	Asbestos	Other	90	Sq. Feet	Renovation	BGS, DEPT HUMANS SERV BLDG, RM 151, 108, 118, STATE ST	1700	2400	16155	
AUGUSTA	MORRISSEY ENVIRONMENTAL	4/2/2004	4/2/2004	Asbestos	Floor Tile	120	Sq. Feet	Renovation	DHS/HETL BLDG, BASEMENT ROOM, RESTRICTED RM. 16 STATE ST	1600	2400	14704	
AUGUSTA	MORRISSEY ENVIRONMENTAL	2/6/2004	2/26/2004	Asbestos	Ceiling tiles	1276	Sq. Feet	Renovation	DHS/HETL BLDG,16 STATE ST,4 FLS,BASEMENT LAB #B-7	700	1800	14546	FRIDAY START TIME IS 1000AM
AUGUSTA	MORRISSEY ENVIRONMENTAL	12/6/2003	12/6/2003	Asbestos	Ceiling tiles	80	Sq. Feet	Renovation	DHS/HETL BLDG,16 STATE ST,4 FLS,BASEMENT LAB B-3	700	1600	14345	
AUGUSTA	MORRISSEY ENVIRONMENTAL	6/15/2000	6/30/2000	Asbestos	Other	6	Ln. Feet	Renovation	DEPT OF HUMAN SVCS,221 STATE ST,OFFICE,4 FLS	700	1130	7379	NO ENDING DATE FOR RENOVATION(PD CK#7129)
AUGUSTA	MORRISSEY ENVIRONMENTAL	6/15/2000	6/30/2000	Asbestos	Floor Tile	5460	Sq. Feet	Renovation	DEPT OF HUMAN SVCS,221 STATE ST,OFFICE,4 FLS	700	1130	7379	NO ENDING DATE FOR RENOVATION(PD CK#7129)
AUGUSTA	MORRISSEY ENVIRONMENTAL	6/15/2000	6/30/2000	Asbestos	Pipe	720	Ln. Feet	Renovation	DEPT OF HUMAN SVCS,221 STATE ST,OFFICE,4 FLS	700	1130	7379	NO ENDING DATE FOR RENOVATION(PD CK#7129)
AUGUSTA	MORRISSEY ENVIRONMENTAL	4/22/2000	4/22/2000	Asbestos	Pipe	40	Ln. Feet	Emergency Renovation	DEPT OF HUMAN SERVICES,STATE ST,BASEMENT LEVEL,STATION #77	700	1600	6954	
AUGUSTA	MORRISSEY ENVIRONMENTAL	4/16/1998	4/16/1998	Asbestos	Pipe	40	Ln. Feet	Renovation	DHS SOB COMPLEX MECHANICAL ROOM B-17	830	1800	2728	
AUGUSTA	NEW MEADOWS ABATEMENT INC	1/16/2014	1/16/2014	Asbestos	Pipe	12	Ln. Feet	Renovation	DHHS BLDG,STATE OF ME,221 STATE ST,BOILER RM	345	1700	28111	
AUGUSTA	NEW MEADOWS ABATEMENT INC	11/26/2013	11/26/2013	Asbestos	Other	80	Sq. Feet	Renovation	DHHS BLDG,2221 STATE ST,BOILER ROOM,BASEMENT LEVEL	700	1500	27956	K=ASBESTOS BREECHING
AUGUSTA	NEW MEADOWS ABATEMENT INC	12/1/2010	12/1/2010	Asbestos	Pipe	2	Ln. Feet	Courtesy	DHHS OFFICE BLDG,221 STATE ST,3 FLS,BASEMENT	800	1000	24193	
AUGUSTA	NEW MEADOWS ABATEMENT INC	10/23/2010	10/24/2010	Asbestos	Floor Tile	2700	Sq. Feet	Renovation	221 STATE ST, 3RD FLR, DHHS OFFICE BLDG, LARRY MARE (BGS)	900	1530	24037	
AUGUSTA	PORTLAND DIVERSIFIED SERVICES	1/23/2002	1/28/2002	Asbestos	Floor Tile	260	Sq. Feet	Renovation	DHS BLDG, BASEMENT 200, 213 & 256	0	0	10695	
AUGUSTA	PORTLAND DIVERSIFIED SERVICES	1/23/2002	1/28/2002	Asbestos	Pipe	285	Ln. Feet	Renovation	DHS BLDG, BASEMENT 200, 213 & 256	0	0	10695	
AUGUSTA	RJ ENTERPRISES	4/2/2013	4/2/2013	Asbestos	Boiler covering	12	Sq. Feet	Renovation	DHHS,221 STATE ST,BOILER ROOM,OWNER/ C/O ME BOILER INC	800	1600	27082	
AUGUSTA	RJ ENTERPRISES	3/20/2013	3/20/2013	Asbestos	Pipe	8	Ln. Feet	Renovation	DHHS,21 STATE ST,BOILER ROOM	800	1600	27053	
AUGUSTA	ROOF SYSTEMS OF MAINE	10/21/1996	10/25/1996	Asbestos	Roofing/Flashing	400	Sq. Feet	Renovation	221 STATE ST, DEPT OF HUMAN SERVICES	600	1600	790	
AUGUSTA	UNKNOWN ASBESTOS	3/1/2003	4/14/2003	Asbestos	Pipe	0	Ln. Feet	Renovation	DHS BLDG,HETL SIDE,1ST FL,16 STATE ST,LABORATORY	730	1700	12870	ORIGINAL START DATE 02/28/2003
AUGUSTA	UNKNOWN ASBESTOS	3/1/2003	4/14/2003	Asbestos	Floor Tile	1000	Sq. Feet	Renovation	DHS BLDG,HETL SIDE,1ST FL,16 STATE ST,LABORATORY	730	1700	12870	ORIGINAL START DATE 02/28/2003
AUGUSTA	UNKNOWN ASBESTOS	3/1/2003	4/14/2003	Asbestos	Other	5	Ln. Feet	Renovation	DHS BLDG,HETL SIDE,1ST FL,16 STATE ST,LABORATORY	730	1700	12870	ORIGINAL START DATE 02/28/2003
AUGUSTA	UNKNOWN ASBESTOS	9/3/2002	9/5/2002	Asbestos	Ceiling tiles	100	Sq. Feet	Emergency Renovation	DHS BLDG,STATE ST,3 FLS,BASEMENT(HETL)SIDE,LABORATORY	700	1530	12039	K=MUD FITTINGS ON FIBERGLASS
AUGUSTA	UNKNOWN ASBESTOS	9/3/2002	9/5/2002	Asbestos	Pipe	20	Ln. Feet	Emergency Renovation	DHS BLDG,STATE ST,3 FLS,BASEMENT(HETL)SIDE,LABORATORY	700	1530	12039	K=MUD FITTINGS ON FIBERGLASS
AUGUSTA	UNKNOWN ASBESTOS	9/3/2002	9/5/2002	Asbestos	Other	8	Cu. Feet	Emergency Renovation	DHS BLDG,STATE ST,3 FLS,BASEMENT(HETL)SIDE,LABORATORY	700	1530	12039	K=MUD FITTINGS ON FIBERGLASS
AUGUSTA	UNKNOWN ASBESTOS	3/18/2002	3/18/2002	Asbestos	Pipe	50	Ln. Feet	Emergency Renovation	DHS,STATE ST, BASEMENT/ELEVATOR, MECH. RM	700	1900	11049	
AUGUSTA	UNKNOWN ASBESTOS	3/14/2002	3/16/2002	Asbestos	Mastic	150	Sq. Feet	Renovation	DHS, STATE ST, 1ST FL, CUSTODIAN BREAK RM.	700	1900	11004	
AUGUSTA	UNKNOWN ASBESTOS	3/14/2002	3/16/2002	Asbestos	Pipe	30	Ln. Feet	Renovation	DHS, STATE ST, 1ST FL, CUSTODIAN BREAK RM.	700	1900	11004	

ATTACHMENT C

ASBESTOS ANALYTICAL LABORATORY CERTIFICATIONS

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JANET T. MILLS
GOVERNOR

MELANIE LOYZIM
COMMISSIONER

October 1, 2025

Attn: Lorie Dennis,| QA Certification Coordinator
EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

Dear Ms. Dennis,

This is to confirm that the Maine Department of Environmental Protection is in receipt of your request to add the following labs to your licensing of Analytical Laboratories: Boston, MA., South Portland, Maine, Wallingford, CT, Carle Place, NY and Rochester, NY.

LA-0038 for Asbestos Analytical Laboratory (Air), expires on 10/31/2026
LB-0039 for Asbestos Analytical Laboratory (Bulk), expires on 10/31/2026

Remember each laboratory must have certified individual(s) within the lab to perform analyses.

If you need any further assistance please feel free to contact me at (207) 242-0877 or e-mail at sandy.j.moody@maine.gov.

Sincerely,

Sandra J. Moody, Environmental Specialist
Division of Remediation
Bureau of Remediation and Waste Management

State of Maine
Department of Environmental Protection

LICENSE

EMSL Analytical, Inc.

Asbestos Analytical Laboratory
(Bulk)

License Number: LB-0039 **Expiration Date: 10/31/2026**

State of Maine
Department of Environmental Protection

LICENSE

EMSL Analytical, Inc.

Asbestos Analytical Laboratory
(Air)

License Number: LA-0038

Expiration Date: 10/31/2026

S. PORTLAND - INDIVIDUAL ANALYST CERTIFICATIONS

State of Maine

September 12, 2025

Employee Name	*Lab Location*	*State Certified*	*Certification No.*	*Type of Cert.*	*Exp. Date*
Erin Bouttenot	S. Portland	Maine	BA-0262	Bulk Asbestos Analyst	2/28/2026
Anastasia Metzger	S. Portland	Maine	BA-0263	Bulk Asbestos Analyst	2/28/2026
Stephen Severn	S. Portland	Maine	AA-0497	Air Asbestos Analyst	9/30/2026
Stephen Severn	S. Portland	Maine	BA-0178	Bulk Asbestos Analyst	9/30/2026

United States Department of Commerce
National Institute of Standards and Technology

Certificate of Accreditation to ISO/IEC 17025:2017

NVLAP LAB CODE: 500094-0

EMSL Analytical, Inc.

South Portland, ME

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

Asbestos Fiber Analysis

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique on ISO/IEC 17025).

2025-10-01 through 2026-09-30

Effective Dates

For the National Voluntary Laboratory Accreditation Program

National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

EMSL Analytical, Inc.
161 John Roberts Road
South Portland, ME 04106
Stephen Severn
Phone: 207-517-6921
Email: ssevern@emsl.com
http://www.emsl.com

ASBESTOS FIBER ANALYSIS **NVLAP LAB CODE 500094-0**

Bulk Asbestos Analysis

Code	***Description***
18/A01	EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

For the National Voluntary Laboratory Accreditation Program

AIHA Laboratory Accreditation Programs, LLC

acknowledges that

EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077

Laboratory ID: LAP-100194

along with all premises from which key activities are performed, as listed above, has fulfilled the requirements of the AIHA Laboratory Accreditation Programs, LLC (AIHA LAP) accreditation to the ISO/IEC 17025:2017 international standard, General Requirements for the Competence of Testing and Calibration Laboratories in the following:

LABORATORY ACCREDITATION PROGRAMS

☑	**INDUSTRIAL HYGIENE**	Accreditation Expires: April 01, 2027
☑	**ENVIRONMENTAL LEAD**	Accreditation Expires: April 01, 2027
☑	**ENVIRONMENTAL MICROBIOLOGY**	Accreditation Expires: April 01, 2027
☐	**FOOD**	Accreditation Expires:
☐	**UNIQUE SCOPES**	Accreditation Expires:
☐	**BE FIELD/MOBILE**	Accreditation Expires:

Specific Field(s) of Testing/Method(s) within each Accreditation Program for which the above named laboratory maintains accreditation is outlined on the attached Scope of Accreditation. Continued accreditation is contingent upon successful on-going compliance with ISO/IEC 17025:2017 and AIHA LAP requirements. This certificate is not valid without the attached Scope of Accreditation. Please review the AIHA LAP website (www.aihaaccreditedlabs.org) for the most current Scope.

Cheryl O Morton
Managing Director, AIHA Laboratory Accreditation Programs, LLC

Revision21: 10/24/2023

Date Issued: 05/01/2025

AIHA Laboratory Accreditation Programs, LLC

SCOPE OF ACCREDITATION

EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077

Laboratory ID: LAP-100194

Issue Date: 08/05/2024
Expire Date: 04/01/2027

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

Industrial Hygiene Laboratory Accreditation Program (IHLAP)

Initial Accreditation Date: 02/01/1989

IHLAP Scope Category	Field of Testing (FOT)	Technology sub-type/Detector	Published Reference Method/Title of In-house Method	Component, parameter, characteristic, material, or product tested
Asbestos/Fiber Microscopy Core	Phase Contrast Microscopy (PCM)	-	NIOSH 7400	Asbestos/Fibers
Asbestos/Fiber Microscopy Core	Polarized Light Microscopy (PLM)	-	EPA 600/R-93/116	Asbestos & Other Fibers in Bulk
Asbestos/Fiber Microscopy Core	Transmission Electron Microscopy (TEM)	-	EPA AHERA - 40 CFR Part 763	Asbestos
Asbestos/Fiber Microscopy Core	Transmission Electron Microscopy (TEM)	-	NIOSH 7402	Asbestos/Fibers
Chromatography Core	Gas Chromatography	Diffusive Sampler	NIOSH 1501	Aromatic Hydrocarbons
Chromatography Core	Gas Chromatography	GC/ECD	NIOSH 5503 Modified	Polychlorinated biphenyls
Chromatography Core	Gas Chromatography	GC/FID	NIOSH 1003 Modified	Halogenated Hydrocarbons
Chromatography Core	Gas Chromatography	GC/FID	NIOSH 1005 Modified	Methylene Chloride
Chromatography Core	Gas Chromatography	GC/FID	NIOSH 1400 Modified	Alcohols
Chromatography Core	Gas Chromatography	GC/FID	NIOSH 1500 Modified	Hydrocarbons
Chromatography Core	Gas Chromatography	GC/FID	NIOSH 1501 Modified	Aromatic Hydrocarbons
Chromatography Core	Gas Chromatography	GC/FID	NIOSH 1550 Modified	Total Petroleum Hydrocarbons
Chromatography Core	Gas Chromatography	GC/FID	NIOSH 1603 Modified	Acetic Acid
Chromatography Core	Gas Chromatography	GC/FID	NIOSH 2000 Modified	Methyl Alcohol
Chromatography Core	Gas Chromatography	GC/MS	EPA TO-15	Volatile Organic Compounds
Chromatography Core	Ion Chromatography (IC)	-	NIOSH 6004 Modified	Sulfur Dioxide/Sulfate

AIHA LAP™

IHLAP Scope Category	Field of Testing (FOT)	Technology sub-type/Detector	Published Reference Method/Title of In-house Method	Component, parameter, characteristic, material, or product tested
Chromatography Core	Ion Chromatography (IC)	-	NIOSH 6011	Chlorine & Bromine
Chromatography Core	Ion Chromatography (IC)	-	NIOSH 7903	Inorganic Acids
Chromatography Core	Ion Chromatography (IC)	-	OSHA ID-214	Ozone
Chromatography Core	Liquid Chromatography	HPLC/FL	NIOSH 2016	Formaldehyde
Chromatography Core	Liquid Chromatography	HPLC/UV	NIOSH 5506 Modified	Polynuclear Aromatic Hydrocarbons (PAHs)
Chromatography Core	Liquid Chromatography	LC/MS	NIOSH 9111 Modified	Methamphetamines
Miscellaneous Core	Gravimetric	-	NIOSH 0500	Total Dust
Miscellaneous Core	Gravimetric	-	NIOSH 0600	Respirable Dust
Miscellaneous Core	Gravimetric	-	NIOSH 5524	Metal Working Fluids
Miscellaneous Core	Thermo-optical Analysis (TOA)	-	NIOSH 5040	Elemental Carbon
Spectrometry Core	Atomic Absorption	CVAA	NIOSH 6009 Modified	Mercury
Spectrometry Core	Atomic Absorption	CVAA	OSHA ID-140 Modified	Mercury vapor
Spectrometry Core	Atomic Absorption	CVAA	OSHA ID-145	Mercury particulate
Spectrometry Core	Atomic Absorption	FAA	NIOSH 7082	Lead
Spectrometry Core	Inductively-Coupled Plasma	ICP/AES	NIOSH 7300 Modified	Lead
Spectrometry Core	Inductively-Coupled Plasma	ICP/MS	NIOSH 7300 Modified	Lead
Spectrometry Core	X-ray Diffraction (XRD)	-	NIOSH 7500	Silica
Spectrometry Core	X-ray Diffraction (XRD)	-	OSHA ID-142	Silica

A complete listing of currently accredited IHLAP laboratories is available on the AIHA LAP, LLC website at: *http://www.aihaaccreditedlabs.org*

ATTACHMENT D

ASBESTOS LABORATORY ANALYTICAL RESULTS

EMSL Analytical, Inc.

161 John Roberts Road South Portland, ME 04106
Phone/Fax: (207) 517-6921 / (207) 517-6922
http://www.EMSL.com / portlandlab@emsl.com

EMSL Order ID: 622501486
Customer ID: CESI62
Customer PO:
Project ID:

Attn: Deb Kasik
Haley Ward
1 Merchant's Plaza
7th Floor
Bangor, ME 04401

Proj: 10377.050

Phone: (207) 989-4824
Fax: (207) 989-4881
Collected: 9/25/2025
Received: 9/29/2025
Analyzed: 10/06/2025

Summary Test Report for Asbestos Analysis of Bulk Material

Client Sample ID: SS-001A **Lab Sample ID:** **622501486-0001**
Sample Description: 3rd Floor Rm 318/Interior Window Glazing

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025	Gray	0.0%	99.4%	**0.55% Chrysotile**	

Client Sample ID: SS-001B **Lab Sample ID:** **622501486-0002**
Sample Description: 3rd Floor W Rm 302/Interior Window Glazing

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025	Gray	0.0%	99.5%	**0.47% Chrysotile**	

Client Sample ID: SS-001C **Lab Sample ID:** **622501486-0003**
Sample Description: 3rd Floor E Rm 312/Interior Window Glazing

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025	Gray	0.0%	99.3%	**0.74% Chrysotile**	

Client Sample ID: SS-002A **Lab Sample ID:** **622501486-0004**
Sample Description: 3rd Floor S Rm 321/White/Gray Caulk

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025	Gray/White	0.0%	98.7%	**1.3% Chrysotile**	

Client Sample ID: SS-002B **Lab Sample ID:** **622501486-0005**
Sample Description: 3rd Floor N Rm 301/White/Gray Caulk

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025			Positive Stop (Not Analyzed)		

Client Sample ID: SS-002C **Lab Sample ID:** **622501486-0006**
Sample Description: 1st Floor N Rm 177/White/Gray Caulk

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025			Positive Stop (Not Analyzed)		

Client Sample ID: SS-003A **Lab Sample ID:** **622501486-0007**
Sample Description: 1st Floor S (D9) (Metal Door)/White Caulk

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025	White	0.0%	98.6%	**1.4% Chrysotile**	

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Customer ID: CESI62
Customer PO:
Project ID:

Summary Test Report for Asbestos Analysis of Bulk Material

Client Sample ID: SS-003B ***Lab Sample ID:*** **622501486-0008**

Sample Description: 1st Floor S (D12) (Metal Door)/White Caulk

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025				Positive Stop (Not Analyzed)	

Client Sample ID: SS-003C ***Lab Sample ID:*** **622501486-0009**

Sample Description: 1st Floor S (D10) (Metal Door)/White Caulk

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025				Positive Stop (Not Analyzed)	

Client Sample ID: SS-004A ***Lab Sample ID:*** **622501486-0010**

Sample Description: 3rd Floor W/Exterior Window Glazing

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025	White	0.0%	100%	**<0.25% Chrysotile**	

Client Sample ID: SS-004B ***Lab Sample ID:*** **622501486-0011**

Sample Description: 3rd Floor E Rm 312/Exterior Window Glazing

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025	White	0.0%	100%	**<0.25% Chrysotile**	

Client Sample ID: SS-004C ***Lab Sample ID:*** **622501486-0012**

Sample Description: 1st Floor N Rm 176/Exterior Window Glazing

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025	White	0.0%	99.6%	**0.36% Chrysotile**	

Client Sample ID: SS-005A ***Lab Sample ID:*** **622501486-0013**

Sample Description: 1st Floor S D11/Gray Caulk (Exterior)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025	Gray	0.0%	100%	None Detected	

Client Sample ID: SS-005B ***Lab Sample ID:*** **622501486-0014**

Sample Description: 1st Floor N D2/Gray Caulk (Exterior)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025	Gray	0.0%	98.7%	**1.3% Chrysotile**	

Client Sample ID: SS-005C ***Lab Sample ID:*** **622501486-0015**

Sample Description: 1st Floor E D8/Gray Caulk (Exterior)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025				Positive Stop (Not Analyzed)	

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Project ID:

Summary Test Report for Asbestos Analysis of Bulk Material

Client Sample ID: SS-006A ***Lab Sample ID:*** **622501486-0016**

Sample Description: 1st Floor E Rm 154/Cream Caulk (Exterior)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025	Beige	0.0%	100%	**<0.25% Chrysotile**	

Client Sample ID: SS-006B ***Lab Sample ID:*** **622501486-0017**

Sample Description: 2nd Floor E Rm 213/Cream Caulk (Exterior)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025	Beige	0.0%	100%	**<0.25% Chrysotile**	

Client Sample ID: SS-007A ***Lab Sample ID:*** **622501486-0018**

Sample Description: 3rd Floor S Rm 353 Perimeter Wall/Plaster Skim Coat

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	10/01/2025	White	0.0%	100.0%	None Detected	

Client Sample ID: SS-007B ***Lab Sample ID:*** **622501486-0019**

Sample Description: 3rd Floor SW Rm 353 Column/Plaster Skim Coat

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	10/01/2025	White	0.0%	100.0%	None Detected	

Client Sample ID: SS-007C ***Lab Sample ID:*** **622501486-0020**

Sample Description: 3rd Floor N Rm 305 Perimeter Wall/Plaster Skim Coat

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	10/01/2025	White	0.0%	100.0%	None Detected	

Client Sample ID: SS-007D ***Lab Sample ID:*** **622501486-0021**

Sample Description: 2nd Floor NW Rm 203 Perimeter Wall/Plaster Skim Coat

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	10/01/2025	White	0.0%	100.0%	None Detected	

Client Sample ID: SS-007E ***Lab Sample ID:*** **622501486-0022**

Sample Description: 2nd Floor W Stair 260/Plaster Skim Coat

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	10/01/2025	White	0.0%	100.0%	None Detected	

Client Sample ID: SS-007F ***Lab Sample ID:*** **622501486-0023**

Sample Description: 2nd Floor E Corridor/Plaster Skim Coat

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	10/01/2025	White	0.0%	100.0%	None Detected	

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Project ID:

Summary Test Report for Asbestos Analysis of Bulk Material

Client Sample ID: SS-007G ***Lab Sample ID:*** **622501486-0024**
Sample Description: 1st Floor W Rm 174/Plaster Skim Coat

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	10/01/2025	White	0.0%	100.0%	None Detected	

Client Sample ID: SS-007H ***Lab Sample ID:*** **622501486-0025**
Sample Description: 1st Floor E Rm 164/Plaster Skim Coat

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	10/01/2025	White	0.0%	100.0%	None Detected	

Client Sample ID: SS-007I ***Lab Sample ID:*** **622501486-0026**
Sample Description: 1st Floor Rm 159/Plaster Skim Coat

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	10/01/2025	White	0.0%	100.0%	None Detected	

Client Sample ID: SS-008A ***Lab Sample ID:*** **622501486-0027**
Sample Description: 3rd Floor Rm 353 (S)/Plaster Brown Coat

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	10/01/2025	Gray	2.0%	98.0%	None Detected	

Client Sample ID: SS-008B ***Lab Sample ID:*** **622501486-0028**
Sample Description: 3rd Floor Rm 353 Column (SW)/Plaster Brown Coat

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	10/01/2025	Gray	2.0%	98.0%	None Detected	

Client Sample ID: SS-008C ***Lab Sample ID:*** **622501486-0029**
Sample Description: 3rd Floor N Rm 305/Plaster Brown Coat

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	10/01/2025	Gray	2.0%	98.0%	None Detected	

Client Sample ID: SS-008D ***Lab Sample ID:*** **622501486-0030**
Sample Description: 2nd Floor NW Rm 203/Plaster Brown Coat

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	10/01/2025	Gray	2.0%	98.0%	None Detected	

Client Sample ID: SS-008E ***Lab Sample ID:*** **622501486-0031**
Sample Description: 2nd Floor W Stairs/Plaster Brown Coat

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	10/01/2025	Gray	2.0%	98.0%	None Detected	

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Summary Test Report for Asbestos Analysis of Bulk Material

Client Sample ID: SS-008F ***Lab Sample ID:*** **622501486-0032**
Sample Description: 2nd Floor E Corridor/Plaster Brown Coat

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	10/01/2025	Gray	2.0%	98.0%	None Detected	

Client Sample ID: SS-008G ***Lab Sample ID:*** **622501486-0033**
Sample Description: 1st Floor W Rm 174/Plaster Brown Coat

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	10/01/2025	Gray	2.0%	98.0%	None Detected	

Client Sample ID: SS-008H ***Lab Sample ID:*** **622501486-0034**
Sample Description: 1st Floor E Rm 164/Plaster Brown Coat

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	10/01/2025	Gray	2.0%	98.0%	None Detected	

Client Sample ID: SS-008I ***Lab Sample ID:*** **622501486-0035**
Sample Description: 1st Floor Rm 159/Plaster Brown Coat

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	10/01/2025	Gray	2.0%	98.0%	None Detected	

Client Sample ID: SS-009A ***Lab Sample ID:*** **622501486-0036**
Sample Description: 3rd Floor Rm 310/Covebase Adhesive

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025	Brown	0.0%	100%	**<0.35% Chrysotile**	

Client Sample ID: SS-009B ***Lab Sample ID:*** **622501486-0037**
Sample Description: 2nd Floor W Stairs/Covebase Adhesive

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025	Brown	0.0%	100%	**<0.45% Chrysotile**	

Client Sample ID: SS-009C ***Lab Sample ID:*** **622501486-0038**
Sample Description: 1st Floor Rm 159/Covebase Adhesive

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025	Brown	0.0%	97.5%	**2.5% Chrysotile**	

Client Sample ID: SS-010A ***Lab Sample ID:*** **622501486-0039**
Sample Description: 3rd Floor W Stairs/Glue Daubs

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025	Black	0.0%	100%	**<0.45% Chrysotile**	

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Summary Test Report for Asbestos Analysis of Bulk Material

Client Sample ID: SS-010B ***Lab Sample ID:*** **622501486-0040**
Sample Description: 3rd Floor E Stairs/Glue Daubs

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025	Black	0.0%	100%	**<0.45% Chrysotile**	

Client Sample ID: SS-010C ***Lab Sample ID:*** **622501486-0041**
Sample Description: 2nd Floor E Stairs/Glue Daubs

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025	Black	0.0%	100%	**<0.44% Chrysotile**	

Client Sample ID: SS-011A ***Lab Sample ID:*** **622501486-0042**
Sample Description: 3rd Floor Men's Rm/Black Adhesive Beneath Ceramic

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025	Black	0.0%	95.9%	**4.1% Chrysotile**	

Client Sample ID: SS-011B ***Lab Sample ID:*** **622501486-0043**
Sample Description: 3rd Floor Men's Rm/Black Adhesive Beneath Ceramic

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025				Positive Stop (Not Analyzed)	

Client Sample ID: SS-011C ***Lab Sample ID:*** **622501486-0044**
Sample Description: 3rd Floor Men's Rm/Black Adhesive Beneath Ceramic

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025				Positive Stop (Not Analyzed)	

Client Sample ID: SS-012A ***Lab Sample ID:*** **622501486-0045**
Sample Description: 1st Floor Rm 174/Black Vapor Barrier

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	10/01/2025	Black	0.0%	100.0%	None Detected	

Client Sample ID: SS-012B ***Lab Sample ID:*** **622501486-0046**
Sample Description: 1st Floor Rm 174/Black Vapor Barrier

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	10/01/2025	Black	0.0%	100.0%	None Detected	

Client Sample ID: SS-012C ***Lab Sample ID:*** **622501486-0047**
Sample Description: 1st Floor Rm 174/Black Vapor Barrier

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	10/01/2025	Black	0.0%	100.0%	None Detected	

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Summary Test Report for Asbestos Analysis of Bulk Material

Client Sample ID: SS-013A ***Lab Sample ID:*** **622501486-0048**
Sample Description: 3rd Floor Corridor/CT 4x2 F W/P

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	10/01/2025	Gray	80.0%	20.0%	None Detected	

Client Sample ID: SS-013B ***Lab Sample ID:*** **622501486-0049**
Sample Description: 3rd Floor Corridor/CT 4x2 F W/P

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	10/01/2025	Gray	80.0%	20.0%	None Detected	

Client Sample ID: SS-013C ***Lab Sample ID:*** **622501486-0050**
Sample Description: 3rd Floor Corridor/CT 4x2 F W/P

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	10/01/2025	Gray	80.0%	20.0%	None Detected	

Client Sample ID: SS-014A ***Lab Sample ID:*** **622501486-0051**
Sample Description: Exterior Roof AH4/Built-Up Roofing

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025	Black	0.0%	100%	None Detected	

Client Sample ID: SS-014B ***Lab Sample ID:*** **622501486-0052**
Sample Description: Exterior Roof AH4/Built-Up Roofing

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025	Black	0.0%	100%	None Detected	

Client Sample ID: SS-014C ***Lab Sample ID:*** **622501486-0053**
Sample Description: Exterior Roof AH3/Built-Up Roofing

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025	Black	0.0%	100%	None Detected	

Client Sample ID: SS-015A ***Lab Sample ID:*** **622501486-0054**
Sample Description: Exterior Roof AH4/Ceiling/Deck

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	10/01/2025	Gray	0.0%	100.0%	None Detected	

Client Sample ID: SS-015B ***Lab Sample ID:*** **622501486-0055**
Sample Description: Exterior Roof AH4/Ceiling/Deck

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	10/01/2025	Gray	0.0%	100.0%	None Detected	

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Summary Test Report for Asbestos Analysis of Bulk Material

Client Sample ID: SS-015C ***Lab Sample ID:*** **622501486-0056**

Sample Description: Exterior Roof AH3/Ceiling/Deck

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	10/01/2025	Gray	0.0%	100.0%	None Detected	

Client Sample ID: SS-016A ***Lab Sample ID:*** **622501486-0057**

Sample Description: Exterior Roof AH4/Caulk On Duct Work

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025	White/Black	0.0%	97.1%	**2.9% Chrysotile**	

Client Sample ID: SS-016B ***Lab Sample ID:*** **622501486-0058**

Sample Description: Exterior Roof AH4/Caulk On Duct Work

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025				Positive Stop (Not Analyzed)	

Client Sample ID: SS-016C ***Lab Sample ID:*** **622501486-0059**

Sample Description: Exterior Roof AH3/Caulk On Duct Work

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025				Positive Stop (Not Analyzed)	

Client Sample ID: SS-017A ***Lab Sample ID:*** **622501486-0060**

Sample Description: 3rd Floor Rm 312/Skimcoat In Wells

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	10/01/2025	White	0.0%	100.0%	None Detected	

Client Sample ID: SS-017B ***Lab Sample ID:*** **622501486-0061**

Sample Description: 3rd Floor Rm 312/Skimcoat In Wells

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	10/01/2025	White	0.0%	100.0%	None Detected	

Client Sample ID: SS-017C ***Lab Sample ID:*** **622501486-0062**

Sample Description: 3rd Floor Rm 312/Skimcoat In Wells

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	10/01/2025	White	0.0%	100.0%	None Detected	

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Customer ID:	CESI62
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Project ID:	

Summary Test Report for Asbestos Analysis of Bulk Material

Analyst(s):

Anastasia Metzger	PLM (30)
Stephen Severn	PLM Grav. Reduction (23)

Reviewed and approved by:

Erin Wright, Laboratory Director
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This is a summary report; official reports are available on LabConnect or upon request and relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. South Portland, ME NVLAP Lab Code 500094-0, VT AL197271, ME LM-0039, MA AA000236

Initial report from: 10/06/202515:51:30

OrderID: 622501486

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Asbestos Bulk Building Materials - Chain of Custody

EMSL Order Number / Lab Use Only RK 9.29.25

#622501483 6

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South Portland, ME 04106
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Customer Information		Billing Information	
Customer ID:	CESI62	Billing ID:	
Company Name:	Haley Ward	Company Name:	Haley Ward
Contact Name:	Deb Kasik	Billing Contact:	Julie Oreskovich
Street Address:	1 Merchant's Plaza 7th Floor	Street Address:	1 Merchant's Plaza, 7th Floor
City, State, Zip:	Bangor ME 04401	City, State, Zip:	Bangor ME
Country:	US	Country:	US
Phone:	207-989-4824	Phone:	207-989-4824
Email(s) for Report:	dkasik@haleyward.com	Email(s) for Invoice:	

Project Information

Project Name/No: 10377.050
Purchase Order:
EMSL LIMS Project ID: (If applicable, EMSL will provide)
US State where samples collected: ME
State of Connecticut (CT) must select project location: ☐ Commercial (Taxable) ☐ Residential (Non-Taxable)
Sampled By Name: Deb Kasik
Sampled By Signature: Deborah A Kasik
Date Sampled: 9/24-25/25
No. of Samples In Shipment: 62

Turn-Around-Time (TAT)

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 32 Hour ☐ 48 Hour ☐ 72 Hour ☑ 96 Hour ☐ 1 Week ☐ 2 Week

Please call ahead for large projects and/or turnaround times 6 Hours or Less. *32 Hour TAT available for select tests only; samples must be submitted by 11:30am.

Test Selection

PLM - Bulk (reporting limit)

- ☑ PLM EPA 600/R-93/116 (<1%)
- ☑ PLM EPA NOB (<1%)
- ☐ POINT COUNT
  - ☐ 400 (<0.25%) ☐ 1,000 (<0.1%)
- ☐ POINT COUNT w/ GRAVIMETRIC
  - ☐ 400 (<0.25%) ☐ 1,000 (<0.1%)
- ☐ NIOSH 9002 (<1%)
- ☐ NYS 198.1 (Friable - NY)
- ☐ NYS 198.6 NOB (Non-Friable - NY)
- ☐ NYS 198.8 (Vermiculite SM-V)

TEM - Bulk

- ☐ TEM EPA NOB
- ☐ NYS NOB 198.4 (Non-Friable - NY)
- ☐ TEM EPA 600/R-93/116 w Milling Prep (0.1%)

Other Tests (please specify)

☑ Positive Stop - Clearly Identified Homogeneous Areas (HA)

Sample Number	HA Number	Sample Location	Material Description
SS-001A		3rd Floor Rm 318	Interior window glazing
B		3rd Floor W Rm 302	↓
C		3rd Floor E Rm 312	↓
SS-002A		3rd Floor S Rm ~~353~~ 321	White/gray caulk
B		3rd Floor N Rm 301	↓
C		1st Floor N Rm 177	↓
SS-003A		1st floor S (D9) (metal door)	White caulk
B		1st Floor S (D12) (metal door)	↓
C		1st Floor S (D10) (metal door)	↓
SS-004A		3rd Floor W	Exterior window glazing

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

NOB per MDEP

Method of Shipment: EMSL Fed Ex - S. Portland		Sample Condition Upon Receipt:	
Relinquished by: Deborah A Kasik	Date/Time: 9/26/25 2pm	Received by: RK	Date/Time: 9.29.25 1020
Relinquished by:	Date/Time:	Received by:	Date/Time

Controlled Document - Asbestos Bulk R7 9/14/2021

RECEIVED
SEP 29 2025
BY: RK

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Page 1 of 34

OrderID: 622501486

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Bulk Building Materials - Chain of Custody

EMSL Order Number / Lab Use Only NK 9.29.25

#622501487G

200 Route 130 North
Cinnaminson, NJ 08077
PHONE: 1-800-220-3675
EMAIL: c@emsl.com

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

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Sample Number	HA Number	Sample Location	Material Description
SS-004B		2nd floor E Rm 312	Exterior window glazing
C		1st floor N Rm 176	↓
SS-005A		1st floor S D11	Gray caulk (ext)
B		1st floor N D2	↓
C		1st floor E D8	↓
SS-006A		1st floor E Rm 154	Cream caulk (ext)
B		2nd floor E Rm 213	↓
C			
SS-007A		3rd floor S Rm 353 (perimeter wall	Plaster Skimcoat
B		3rd floor SW Rm 353 Column	↓
C		3rd floor N Rm 305 perimeter wall	↓
D		2nd floor NW Rm 203 perimeter wall	↓
E		2nd floor W Stair 260	↓
F		2nd floor E Corridor	↓
G		1st floor W Rm 174	↓
H		1st floor E Rm 164	↓
I		1st floor Rm 159	↓
SS-008A		3rd floor Rm 353 (S)	Plaster Browncoat
B		3rd floor Rm 353 column (SW)	↓
C		3rd floor N Rm 305	↓
D		2nd floor NW Rm 203	↓
E		2nd floor W Stairs	↓
F		2nd floor E Corridor	↓
G		1st floor W Rm 174	↓
H		1st floor E Rm 164	↓

Method of Shipment: EMSL Fed Ex - S. Portland		Sample Condition Upon Receipt:	
Relinquished by: Deborah Kasik	Date/Time: 9/22/25 2pm	Received by: NK	Date/Time 9.29.25 1020
Relinquished by:	Date/Time:	Received by:	Date/Time

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OrderID: 622501486

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Asbestos Bulk Building Materials - Chain of Custody

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Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Sample Number	HA Number	Sample Location	Material Description
SS-008I		1st floor Rm 159	Plaster brown coat
SS-009A		3rd floor Rm 310	Cove base Adhesive
B		2nd floor W Stairs	↓
C		1st floor Rm 159	↓
SS-010A		3rd floor W Stairs	Glue daubs
B		3rd floor E Stairs	↓
C		2nd floor E Stairs	↓
SS-011A		3rd floor Men's Rm	Black adhesive beneath ceramic
B		↓	↓
C		↓	↓
SS-012A		1st floor Rm 174	Black vapor barrier
B		↓	↓
C		↓	↓
SS-013A		3rd floor Corridor	CT 4x2 P/P
B		↓	↓
C		↓	↓
SS-014A		Exterior - Roof AH4	Built up roofing
B		↓ AH4	↓
C		↓ AH3	↓
SS-015A		Exterior - Roof AH4	Ceiling/deck
B		↓ AH4	↓
C		↓ AH3	↓
SS-016A		Exterior - Roof AH4	Caulk on duct work
B		↓ AH4	↓
C		↓ AH3	↓

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Method of Shipment: Fed Ex - S. Portland		Sample Condition Upon Receipt:	
Relinquished by: Deborah A Kauk	Date/Time: 9/26/25 2pm	Received by: RK	Date/Time: 9.29.25 1020
Relinquished by:	Date/Time:	Received by:	Date/Time

Controlled Document - Asbestos Bulk R7 09/14/2021

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Asbestos Bulk Building Materials - Chain of Custody

EMSL Order Number / Lab Use Only: 9.29.25

#622501486

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Cinnaminson, NJ 08077
PHONE: 1-800-220-3675
EMAIL: c@emsl.com

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

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Sample Number	HA Number	Sample Location	Material Description
SS-017A		3rd floor Rm 312	Skim coat in walls
B		↓ ↓	↓
C		↓ ↓	↓

Method of Shipment: EMSL Fed Ex - Portland

Relinquished by: Deborah J Kusk	Date/Time: 9/26/25 2pm	Received by: RK	Date/Time: 9.29.25 1020
Relinquished by:	Date/Time:	Received by:	Date/Time

Sample Condition Upon Receipt:

Controlled Document - Asbestos Bulk R7 09/14/2021

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OrderID: 622501486

RK 9.29.25

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2. Valid for shipment of the following samples only: Asbestos testing of bulk material samples, wipe/dust samples, or air sample cassettes; Lead analysis of paint chips, air samples, or wipe samples; Microbiology air samples or bulk samples, tape lift samples, and/or swab samples; Metals (Air, Chips & Wipes), IH Organics (Formaldehyde, Methamphetamine, Isocyanates, BTEX, etc.), Combustion By-Products (Soot)/Material Identification, and Silica, Respirable Dust/Total Dust.
3. This label is not valid for shipment of any sample that requires a cooler or any other sample type not specifically described herein.
4. US: The package shipment must exceed a minimum of $100 in analytical fees. If this minimum is not met, a minimum shipping fee of $25 will be added to the analysis invoice. Canada: The package shipment must exceed a minimum of $150 in analytical fees. If this minimum is not met, a minimum shipping fee of $30 will be added to the analysis invoice.
5. Not valid for the shipping of any hazardous materials or items prohibited to be shipped by these means.
6. Any additional fees added by FedEx will be charged back to the customer who initiated the shipment, including, but not limited to: Custom pickup fees from FedEx, excessive weight fees, any surcharge items, etc.
7. This label is not valid for weekend or holiday deliveries.
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10. Valid for only those accounts pre-approved to use this service. This courtesy shipping service may be terminated at any time by EMSL for any customer accounts that are not in good standing due to late payment /COD Status, or any other reason in the sole determination of EMSL.

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161 John Roberts Road South Portland, ME 04106
Phone/Fax: (207) 517-6921 / (207) 517-6922
http://www.EMSL.com / portlandlab@emsl.com

EMSL Order ID: 622501504
Customer ID: CESI62
Customer PO:
Project ID:

Attn: Deb Kasik
Haley Ward
1 Merchant's Plaza
7th Floor
Bangor, ME 04401

Proj: 10377.050 (B)

Phone: (207) 989-4824
Fax: (207) 989-4881
Collected: 9/25/2025
Received: 10/01/2025
Analyzed: 10/07/2025

Summary Test Report for Asbestos Analysis of Bulk Material

Client Sample ID: SS-018A **Lab Sample ID:** **622501504-0001**
Sample Description: 1st Floor Corridor (150)/12" FT White W/ Gray

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025	Gray/White	0.0%	100%	None Detected	

Client Sample ID: SS-018B **Lab Sample ID:** **622501504-0002**
Sample Description: 1st Floor Corridor (150)/12" FT White W/ Gray

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025	Gray/White	0.0%	100%	None Detected	

Client Sample ID: SS-018C **Lab Sample ID:** **622501504-0003**
Sample Description: 1st Floor Corridor (150)/12" FT White W/ Gray

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025	Gray/White	0.0%	100%	None Detected	

Client Sample ID: SS-019A **Lab Sample ID:** **622501504-0004**
Sample Description: 1st Floor Vending (159) Top/SF - Brown Pebble

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025	Brown	1.6%	98.4%	None Detected	

Client Sample ID: SS-019B **Lab Sample ID:** **622501504-0005**
Sample Description: 1st Floor Vending (159) Top/SF - Brown Pebble

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025	Brown	0.74%	99.3%	None Detected	

Client Sample ID: SS-019C **Lab Sample ID:** **622501504-0006**
Sample Description: 1st Floor Vending (159) Top/SF - Brown Pebble

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025	Brown	1.4%	98.6%	None Detected	

Client Sample ID: SS-020A **Lab Sample ID:** **622501504-0007**
Sample Description: 1st Floor Vending (159) 2nd Layer/9" FT Black (Green)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025	Black/Green	0.0%	96.6%	**3.4% Chrysotile**	

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EMSL Order ID: 622501504
Customer ID: CESI62
Customer PO:
Project ID:

Summary Test Report for Asbestos Analysis of Bulk Material

Client Sample ID: SS-020B ***Lab Sample ID:*** **622501504-0008**

Sample Description: 1st Floor Vending (159) 2nd Layer/9" FT Black (Green)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025				Positive Stop (Not Analyzed)	

Client Sample ID: SS-020C ***Lab Sample ID:*** **622501504-0009**

Sample Description: 1st Floor Vending (159) 2nd Layer/9" FT Black (Green)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025				Positive Stop (Not Analyzed)	

Client Sample ID: SS-021A ***Lab Sample ID:*** **622501504-0010**

Sample Description: 1st Floor 154/Carpet Adhesive

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025	Tan	0.0%	100%	None Detected	

Client Sample ID: SS-021B ***Lab Sample ID:*** **622501504-0011**

Sample Description: 1st Floor 154/Carpet Adhesive

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025	Tan	0.0%	100%	None Detected	

Client Sample ID: SS-021C ***Lab Sample ID:*** **622501504-0012**

Sample Description: 1st Floor 154/Carpet Adhesive

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/06/2025	Tan	0.0%	100%	None Detected	

Client Sample ID: SS-022A ***Lab Sample ID:*** **622501504-0013**

Sample Description: 1st Floor Stair 170/Sheetrock

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	10/07/2025	Gray	7.0%	93.0%	None Detected	

Client Sample ID: SS-022B ***Lab Sample ID:*** **622501504-0014**

Sample Description: 1st Floor Stair 170/Sheetrock

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	10/07/2025	Gray	7.0%	93.0%	None Detected	

Client Sample ID: SS-022C ***Lab Sample ID:*** **622501504-0015**

Sample Description: 1st Floor Stair 170/Sheetrock

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	10/07/2025	Gray	7.0%	93.0%	None Detected	

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Phone/Fax: (207) 517-6921 / (207) 517-6922
http://www.EMSL.com / portlandlab@emsl.com

EMSL Order ID:	622501504
Customer ID:	CESI62
Customer PO:	
Project ID:	

Summary Test Report for Asbestos Analysis of Bulk Material

Analyst(s):

Anastasia Metzger	PLM (3)
Stephen Severn	PLM Grav. Reduction (10)

Reviewed and approved by:

Erin Wright, Laboratory Director
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This is a summary report; official reports are available on LabConnect or upon request and relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. South Portland, ME NVLAP Lab Code 500094-0, VT AL197271, ME LM-0039, MA AA000236

Initial report from: 10/07/202509:40:01

OrderID: 622501504

Asbestos Bulk Building Materials - Chain of Custody

EMSL ANALYTICAL, INC.
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161 John Roberts Road
South Portland, ME 04106
PHONE: (207) 517-6921
EMAIL: portlandlab@emsl.com

EMSL Order Number / Lab Use Only

#622501504

Customer Information

Customer ID:	CESI62
Company Name:	Haley Ward
Contact Name:	Deb Kasik
Street Address:	1 Merchant's Plaza 7th Floor
City, State, Zip:	Bangor ME 04401
Country:	US
Phone:	207-989-4824
Email(s) for Report:	dkasik@haleyward.com

Billing Information

Billing ID:	
Company Name:	Haley Ward
Billing Contact:	Julie Oreskovich
Street Address:	1 Merchant's Plaza, 7th Floor
City, State, Zip:	Bangor ME
Country:	US
Phone:	207-989-4824
Email(s) for Invoice:	

Project Information

Project Name/No:	10377.050 (B)
Purchase Order:	
EMSL LIMS Project ID: (If applicable, EMSL will provide)	
US State where samples collected:	ME
State of Connecticut (CT) must select project location:	☐ Commercial (Taxable) ☐ Residential (Non-Taxable)
Sampled By Name:	Deb Kasik
Sampled By Signature:	Deborah A Kasik
Date Sampled:	9/25/25
No. of Samples In Shipment	15

Turn-Around-Time (TAT) *TAT added per client via attached email

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 32 Hour ☐ 48 Hour ☐ 72 Hour * ☐ 96 Hour ☐ 1 Week ☐ 2 Week

Please call ahead for large projects and/or turnaround times 6 Hours or Less. *32 Hour TAT available for select tests only; samples must be submitted by 11:30am.

Test Selection

PLM - Bulk (reporting limit)

- ☑ PLM EPA 600/R-93/116 (<1%)
- ☑ PLM EPA NOB (<1%)
- ☐ POINT COUNT
  - ☐ 400 (<0.25%) ☐ 1,000 (<0.1%)
- ☐ POINT COUNT w/ GRAVIMETRIC
  - ☐ 400 (<0.25%) ☐ 1,000 (<0.1%)
- ☐ NIOSH 9002 (<1%)
- ☐ NYS 198.1 (Friable - NY)
- ☐ NYS 198.6 NOB (Non-Friable - NY)
- ☐ NYS 198.8 (Vermiculite SM-V)

TEM - Bulk

- ☐ TEM EPA NOB
- ☐ NYS NOB 198.4 (Non-Friable - NY)
- ☐ TEM EPA 600/R-93/116 w Milling Prep (0.1%)

Other Tests (please specify)

☑ Positive Stop - Clearly Identified Homogeneous Areas (HA)

Sample Number	HA Number	Sample Location	Material Description
SS-018A		1st floor Corridor (150)	12" FT white w/ gray
B		↓	↓
C		↓	↓
SS-019A		1st floor Vending (159) top	SF - brown pebble
B		↓	↓
C		↓	↓
SS-020A		1st floor Vending (159) 2nd layer	9" FT black (green)
B		↓	↓
C		↓	↓
SS-021A		1st floor 154	Carpet adhesive

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

NOB per MDEP (Expanded work area -- additional samples)

Method of Shipment:	Fed Ex Emsl FedEx - S. Portland	Sample Condition Upon Receipt:	
Relinquished by:	Deborah A Kasik	Date/Time: 9/25/25 4pm	Received by: ED
Relinquished by:		Date/Time:	Received by:
			Date/Time: 10/1/25 10:10

Controlled Document - Asbestos Bulk R7 9/14/2021

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OrderID: 622501504

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Asbestos Bulk Building Materials - Chain of Custody

EMSL Order Number / Lab Use Only

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PHONE: 1-800-220-3675
EMAIL: c@emsl.com

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

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Sample Number	HA Number	Sample Location	Material Description
SS-021B		1st floor 154	Carpet adhesive
SS-021C		1st floor 154	↓
SS-022A		1st Floor Stair 170	Shutrock
B		↓	↓
C			

Method of Shipment: Fed Ex Emsl FedEx-S.Portland

Relinquished by: Deborah Kasik — Date/Time: 9/25/25 4pm — Received by: ETJ — Date/Time: 10/1/25 10:10

Relinquished by: — Date/Time: — Received by: — Date/Time

Sample Condition Upon Receipt:

Controlled Document - Asbestos Bulk R7 09/14/2021

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OrderID: 622501504

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2. Valid for shipment of the following samples only: Asbestos testing of bulk material samples, wipe/dust samples, or air sample cassettes; Lead analysis of paint chips, air samples, or wipe samples; Microbiology air samples or bulk samples, tape lift samples, and/or swab samples; Metals (Air, Chips & Wipes), IH Organics (Formaldehyde, Methamphetamine, Isocyanates, BTEX, etc.), Combustion By-Products (Soot)/Material Identification, and Silica, Respirable Dust/Total Dust.
3. This label is not valid for shipment of any sample that requires a cooler or any other sample type not specifically described herein.
4. US: The package shipment must exceed a minimum of $100 in analytical fees. If this minimum is not met, a minimum shipping fee of $25 will be added to the analysis invoice. Canada: The package shipment must exceed a minimum of $150 in analytical fees. If this minimum is not met, a minimum shipping fee of $30 will be added to the analysis invoice.
5. Not valid for the shipping of any hazardous materials or items prohibited to be shipped by these means.
6. Any additional fees added by FedEx will be charged back to the customer who initiated the shipment, including, but not limited to: Custom pickup fees from FedEx, excessive weight fees, any surcharge items, etc.
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#622501504

Jones, Emma

From: Deb Kasik <dkasik@haleyward.com>
Sent: Wednesday, October 1, 2025 10:21 AM
To: Jones, Emma
Subject: RE: Project 10377.050 (B)

[EXTERNAL E-MAIL]

96-hour TAT

Thanks

Deb Kasik
Project Scientist
t: 207.989.4824 d: 207.404.5916 m: 207.459.6528

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From: Jones, Emma <ejones@EMSL.com>
Sent: Wednesday, October 1, 2025 10:18 AM
To: Deb Kasik <dkasik@haleyward.com>
Cc: EMSL Lab - Portland <portlandlab@EMSL.com>
Subject: Project 10377.050 (B)

You don't often get email from ejones@emsl.com. Learn why this is important

Good Morning,

We have received your asbestos bulk samples for 10377.050 (B).

On the attached chain of custody, there is no turnaround time listed. In order to begin processing these samples, we will need to have this included on the COC. Please hit reply-all with what TAT you'd like us to add.

Thank you!

Emma Jones
Laboratory Assistant
EMSL Analytical, Inc. 161 John Roberts Road South Portland, ME 04106
Phone: 207-517-6921 Toll Free: 800-220-3675

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EMSL Order: 622501527
Customer ID: CESI62
Customer PO:
Project ID:

Attention: Deb Kasik
Haley Ward
1 Merchant's Plaza
7th Floor
Bangor, ME 04401
Project: 10377.050

Phone: (207) 989-4824
Fax: (207) 989-4881
Received Date: 10/03/2025 10:00 AM
Analysis Date: 10/08/2025
Collected Date: 10/02/2025

Test Report: Asbestos Analysis of Non-Friable Organic Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types
SS-023A *622501527-0001*	Exterior Roof - Vapor Barrier On Insulation At Various Levels	Beige Fibrous Heterogeneous	88.7 Other	11.3 Glass	No Asbestos Detected
SS-023B *622501527-0002*	Exterior Roof - Vapor Barrier On Insulation At Various Levels	Beige Fibrous Heterogeneous	91.9 Other	8.1 Glass	No Asbestos Detected
SS-023C *622501527-0003*	Exterior Roof - Vapor Barrier On Insulation At Various Levels	Beige Fibrous Heterogeneous	100 Other	None	No Asbestos Detected
SS-024A *622501527-0004*	Exterior Roof (See 014/015) - Asphalt Built-Up Roof Beneath 6" Of Insulation	Black Fibrous Heterogeneous	100 Other	None	No Asbestos Detected

Analyst(s)

Anastasia Metzger (4)

Erin Wright, Laboratory Director
or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Some samples may contain asbestos fibers present in dimensions below PLM resolution limits. EMSL suggests that samples reported as < 1% or none detected undergo additional analysis via TEM. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. South Portland, ME NVLAP Lab Code 500094-0, VT AL197271, ME LM-0039, MA AA000236

Initial report from: 10/08/2025 11:52:16

OrderID: 622501527

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Bulk Building Materials - Chain of Custody

EMSL Order Number / Lab Use Only

#622501527

161 John Roberts Road
South Portland, ME 04106
PHONE: (207) 517-6921
EMAIL: portlandlab@emsl.com

Customer Information		Billing Information	
Customer ID:	CESI62	Billing ID:	
Company Name:	Haley Ward	Company Name:	Haley Ward
Contact Name:	Deb Kasik	Billing Contact:	Julie Oreskovich
Street Address:	1 Merchant's Plaza 7th Floor	Street Address:	1 Merchant's Plaza, 7th Floor
City, State, Zip:	Bangor ME 0440[illegible] Country: US	City, State, Zip:	Bangor ME Country: US
Phone:	207-989-4824	Phone:	207-989-4824
Email(s) for Report:	dkasik@haleyward.com	Email(s) for Invoice:	

Project Information

Project Name/No:	10377.050	Purchase Order:	
EMSL LIMS Project ID: (If applicable, EMSL will provide)		US State where samples collected:	ME
State of Connecticut (CT) must select project location:	☐ Commercial (Taxable) ☐ Residential (Non-Taxable)		
Sampled By Name:	Deb Kasik	Sampled By Signature:	Deborah A Kasik
Date Sampled:	10/2/25 2pm	No. of Samples In Shipment	4

Turn-Around-Time (TAT)

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 32 Hour ☐ 48 Hour ☐ 72 Hour ☑ 96 Hour ☐ 1 Week ☐ 2 Week

Please call ahead for large projects and/or turnaround times 6 Hours or Less. *32 Hour TAT available for select tests only; samples must be submitted by 11:30am.

Test Selection

PLM - Bulk (reporting limit)

- ☑ PLM EPA 600/R-93/116 (<1%)
- ☑ PLM EPA NOB (<1%)
- ☐ POINT COUNT
  - ☐ 400 (<0.25%) ☐ 1,000 (<0.1%)
- ☐ POINT COUNT w/ GRAVIMETRIC
  - ☐ 400 (<0.25%) ☐ 1,000 (<0.1%)
- ☐ NIOSH 9002 (<1%)
- ☐ NYS 198.1 (Friable - NY)
- ☐ NYS 198.6 NOB (Non-Friable - NY)
- ☐ NYS 198.8 (Vermiculite SM-V)

TEM - Bulk

- ☐ TEM EPA NOB
- ☐ NYS NOB 198.4 (Non-Friable - NY)
- ☐ TEM EPA 600/R-93/116 w Milling Prep (0.1%)

Other Tests (please specify)

☑ Positive Stop - Clearly Identified Homogeneous Areas (HA)

Sample Number	HA Number	Sample Location	Material Description
SS-023A		Exterior Roof	Vapor barrier on insulation*
B		↓	↓
C		↓	↓
SS-024A		Exterior Roof (see 014/015)	Asphalt built-up roof beneath ~6" foam ins.

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

NOB per MDEP

(*@ various levels)

Method of Shipment:	Fed Ex EMSLFedEx - S. Portland	Sample Condition Upon Receipt:	
Relinquished by:	Deborah A Kasik	Date/Time: 10/2/25 2pm	Received by: EAW
Relinquished by:		Date/Time:	Received by:
Date/Time: 10.03.25 1000			
Date/Time			

Controlled Document - Asbestos Bulk R7 9/14/2021

RECEIVED
OCT 03 2025
BY: EAW

☐ AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

OrderID: 622501527

Disclaimer

Use of this FedEx shipping label is subject to the following restrictions and conditions:

IMPORTANT! Do not duplicate this label. Each package must contain a unique tracking number in order to maintain tracking and billing integrity.

1. This label may only be used on FedEx packaging: FedEx Envelope Pack or FedEx Box. This free shipping label is not valid for use on non-standard FedEx packages, nor coolers or other large boxes.
2. Valid for shipment of the following samples only: Asbestos testing of bulk material samples, wipe/dust samples, or air sample cassettes; Lead analysis of paint chips, air samples, or wipe samples; Microbiology air samples or bulk samples, tape lift samples, and/or swab samples; Metals (Air, Chips & Wipes), IH Organics (Formaldehyde, Methamphetamine, Isocyanates, BTEX, etc.), Combustion By-Products (Soot)/Material Identification, and Silica, Respirable Dust/Total Dust.
3. This label is not valid for shipment of any sample that requires a cooler or any other sample type not specifically described herein.
4. US: The package shipment must exceed a minimum of $100 in analytical fees. If this minimum is not met, a minimum shipping fee of $25 will be added to the analysis invoice. Canada: The package shipment must exceed a minimum of $150 in analytical fees. If this minimum is not met, a minimum shipping fee of $30 will be added to the analysis invoice.
5. Not valid for the shipping of any hazardous materials or items prohibited to be shipped by these means.
6. Any additional fees added by FedEx will be charged back to the customer who initiated the shipment, including, but not limited to: Custom pickup fees from FedEx, excessive weight fees, any surcharge items, etc.
7. This label is not valid for weekend or holiday deliveries.
8. Excludes Summa Canisters, Equipment Rental and Loaner Returns.
9. Valid within the Continental United States or Canada. Label may not be utilized from US to Canada, or Canada to US.
10. Valid for only those accounts pre-approved to use this service. This courtesy shipping service may be terminated at any time by EMSL for any customer accounts that are not in good standing due to late payment /COD Status, or any other reason in the sole determination of EMSL.

ATTACHMENT E

PCB LABORATORY ANALYTICAL RESULTS

ANALYTICAL REPORT

Lab Number:	L2560851
Client:	Haley Ward, Inc 1 Merchants Plaza, #701 Bangor, ME 04401
ATTN:	Dennis Kingman
Phone:	(207) 989-4824
Project Name:	221 STATE ST.
Project Number:	10377.050
Report Date:	10/08/25

The original project report/data package is held by Pace Analytical Services. This report/data package is paginated and should be reproduced only in its entirety. Pace Analytical Services holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930A1).

Project Name: 221 STATE ST.
Project Number: 10377.050

Lab Number: L2560851
Report Date: 10/08/25

Lab Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2560851-01	PCB-001A (INTERIOR GLAZING)	CAULK	INTERIOR GLAZING 3RD S RM 318	09/25/25 09:00	09/26/25
L2560851-02	PCB-001B	CAULK	3RD W RM 302	09/25/25 09:20	09/26/25
L2560851-03	PCB-001C	CAULK	3RD E RM 312	09/25/25 09:40	09/26/25
L2560851-04	PCB-002A WHITE/GRAY CAULK	CAULK	3RD S RM 321	09/25/25 09:50	09/26/25
L2560851-05	PCB-002B	CAULK	3RD N	09/25/25 10:07	09/26/25
L2560851-06	PCB-002C	CAULK	1ST N RM 176	09/25/25 10:30	09/26/25
L2560851-07	PCB-003A WHITE CAULK	CAULK	1ST S D9	09/25/25 10:40	09/26/25
L2560851-08	PCB-003B	CAULK	1ST S D12	09/25/25 10:50	09/26/25
L2560851-09	PCB-003C	CAULK	1ST S D10	09/25/25 12:10	09/26/25
L2560851-10	PCB-004A (EXTERIOR GLAZING)	CAULK	3RD W RM 312	09/25/25 11:00	09/26/25
L2560851-11	PCB-004B	CAULK	2ND E RM 213	09/25/25 11:10	09/26/25
L2560851-12	PCB-004C	CAULK	1ST N RM 176	09/25/25 11:30	09/26/25
L2560851-13	PCB-005A GRAY CAULK	CAULK	1ST S D11	09/25/25 09:10	09/26/25
L2560851-14	PCB-005B	CAULK	1ST N D2 GRAY	09/25/25 11:35	09/26/25
L2560851-15	PCB-005C	CAULK	1ST E D8	09/25/25 12:05	09/26/25
L2560851-16	PCB-006A CREAM CAULK	CAULK	1ST FL E CREAM	09/25/25 08:45	09/26/25
L2560851-17	PCB-006B	CAULK	2ND FL E	09/25/25 12:30	09/26/25

Project Name:	221 STATE ST.	**Lab Number:**	L2560851
Project Number:	10377.050	**Report Date:**	10/08/25

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 Pace Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. 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. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. 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. 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 Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments and solids are reported on a dry weight basis unless otherwise noted. Tissues are reported "as received" or on a wet 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.

HOLD POLICY - For samples submitted on hold, Pace'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 Pace Project Manager and made arrangements for Pace to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	221 STATE ST.	**Lab Number:**	L2560851
Project Number:	10377.050	**Report Date:**	10/08/25

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

PCBs

L2560851-10 and -13: The sample has elevated detection limits due to limited sample volume available for analysis.

L2560851-12: The sample contains peaks which match the retention times for Aroclor 1254, but do not match the area ratios typical for this aroclor. The result for Aroclor 1254 is reported as "weathered".

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: Tiffani Morrissey - Tiffani Morrissey

Title: Technical Director/Representative Date: 10/08/25

QC OUTLIER SUMMARY REPORT

Project Name: 221 STATE ST.
Project Number: 10377.050

Lab Number: L2560851
Report Date: 10/08/25

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment

There are no QC Outliers associated with this report.

ORGANICS

PCBS

Project Name: 221 STATE ST.
Project Number: 10377.050
Lab Number: L2560851
Report Date: 10/08/25

SAMPLE RESULTS

Lab ID: L2560851-01
Client ID: PCB-001A (INTERIOR GLAZING)
Sample Location: INTERIOR GLAZING 3RD S RM 318

Date Collected: 09/25/25 09:00
Date Received: 09/26/25
Field Prep: Not Specified

Sample Depth:
Matrix: Caulk
Analytical Method: 1,8082A
Analytical Date: 10/03/25 10:21
Analyst: EMR
Percent Solids: Results Reported on an "AS RECEIVED" basis

Extraction Method: EPA 3540C
Extraction Date: 10/01/25 10:35
Cleanup Method: EPA 3630
Cleanup Date: 10/03/25
Cleanup Method: EPA 3665A
Cleanup Date: 10/03/25
Cleanup Method: EPA 3660B
Cleanup Date: 10/03/25

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	631	179.	1	A
Aroclor 1221	ND		ug/kg	631	184.	1	A
Aroclor 1232	ND		ug/kg	631	140.	1	A
Aroclor 1242	ND		ug/kg	315	113.	1	A
Aroclor 1248	ND		ug/kg	631	177.	1	A
Aroclor 1254	ND		ug/kg	631	129.	1	A
Aroclor 1260	ND		ug/kg	631	142.	1	A
Aroclor 1262	ND		ug/kg	631	130.	1	A
Aroclor 1268	ND		ug/kg	315	111.	1	A
PCBs, Total	ND		ug/kg	315	111.	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	98		30-150	A
Decachlorobiphenyl	84		30-150	A
2,4,5,6-Tetrachloro-m-xylene	97		30-150	B
Decachlorobiphenyl	81		30-150	B

Project Name: 221 STATE ST.
Project Number: 10377.050
Lab Number: L2560851
Report Date: 10/08/25

SAMPLE RESULTS

Lab ID: L2560851-02
Client ID: PCB-001B
Sample Location: 3RD W RM 302

Date Collected: 09/25/25 09:20
Date Received: 09/26/25
Field Prep: Not Specified

Sample Depth:
Matrix: Caulk
Analytical Method: 1,8082A
Analytical Date: 10/03/25 10:29
Analyst: EMR
Percent Solids: Results Reported on an "AS RECEIVED" basis

Extraction Method: EPA 3540C
Extraction Date: 10/01/25 10:35
Cleanup Method: EPA 3630
Cleanup Date: 10/03/25
Cleanup Method: EPA 3665A
Cleanup Date: 10/03/25
Cleanup Method: EPA 3660B
Cleanup Date: 10/03/25

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	641	182.	1	A
Aroclor 1221	ND		ug/kg	641	188.	1	A
Aroclor 1232	ND		ug/kg	641	143.	1	A
Aroclor 1242	ND		ug/kg	320	115.	1	A
Aroclor 1248	1560		ug/kg	641	180.	1	A
Aroclor 1254	3360		ug/kg	641	131.	1	B
Aroclor 1260	ND		ug/kg	641	144.	1	A
Aroclor 1262	ND		ug/kg	641	132.	1	A
Aroclor 1268	ND		ug/kg	320	113.	1	A
PCBs, Total	4920		ug/kg	320	113.	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	92		30-150	A
Decachlorobiphenyl	77		30-150	A
2,4,5,6-Tetrachloro-m-xylene	90		30-150	B
Decachlorobiphenyl	73		30-150	B

Project Name: 221 STATE ST.
Project Number: 10377.050
Lab Number: L2560851
Report Date: 10/08/25

SAMPLE RESULTS

Lab ID: L2560851-03
Client ID: PCB-001C
Sample Location: 3RD E RM 312

Date Collected: 09/25/25 09:40
Date Received: 09/26/25
Field Prep: Not Specified

Sample Depth:
Matrix: Caulk
Analytical Method: 1,8082A
Analytical Date: 10/03/25 10:38
Analyst: EMR
Percent Solids: Results Reported on an "AS RECEIVED" basis

Extraction Method: EPA 3540C
Extraction Date: 10/01/25 10:35
Cleanup Method: EPA 3630
Cleanup Date: 10/03/25
Cleanup Method: EPA 3665A
Cleanup Date: 10/03/25
Cleanup Method: EPA 3660B
Cleanup Date: 10/03/25

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	656	186.	1	A
Aroclor 1221	ND		ug/kg	656	192.	1	A
Aroclor 1232	ND		ug/kg	656	146.	1	A
Aroclor 1242	ND		ug/kg	328	117.	1	A
Aroclor 1248	2090		ug/kg	656	184.	1	B
Aroclor 1254	4710		ug/kg	656	134.	1	B
Aroclor 1260	ND		ug/kg	656	147.	1	A
Aroclor 1262	ND		ug/kg	656	135.	1	A
Aroclor 1268	ND		ug/kg	328	116.	1	A
PCBs, Total	6800		ug/kg	328	116.	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	92		30-150	A
Decachlorobiphenyl	79		30-150	A
2,4,5,6-Tetrachloro-m-xylene	90		30-150	B
Decachlorobiphenyl	74		30-150	B

Project Name: 221 STATE ST.
Project Number: 10377.050
Lab Number: L2560851
Report Date: 10/08/25

SAMPLE RESULTS

Lab ID: L2560851-04
Client ID: PCB-002A WHITE/GRAY CAULK
Sample Location: 3RD S RM 321
Date Collected: 09/25/25 09:50
Date Received: 09/26/25
Field Prep: Not Specified

Sample Depth:
Matrix: Caulk
Analytical Method: 1,8082A
Analytical Date: 10/03/25 10:46
Analyst: EMR
Percent Solids: Results Reported on an "AS RECEIVED" basis

Extraction Method: EPA 3540C
Extraction Date: 10/01/25 10:35
Cleanup Method: EPA 3630
Cleanup Date: 10/03/25
Cleanup Method: EPA 3665A
Cleanup Date: 10/03/25
Cleanup Method: EPA 3660B
Cleanup Date: 10/03/25

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	573	163.	1	A
Aroclor 1221	ND		ug/kg	573	168.	1	A
Aroclor 1232	ND		ug/kg	573	128.	1	A
Aroclor 1242	ND		ug/kg	286	102.	1	A
Aroclor 1248	274	J	ug/kg	573	161.	1	A
Aroclor 1254	317	J	ug/kg	573	117.	1	B
Aroclor 1260	ND		ug/kg	573	129.	1	A
Aroclor 1262	ND		ug/kg	573	118.	1	A
Aroclor 1268	ND		ug/kg	286	101.	1	A
PCBs, Total	591	J	ug/kg	286	101.	1	B

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

Project Name: 221 STATE ST.
Project Number: 10377.050
Lab Number: L2560851
Report Date: 10/08/25

SAMPLE RESULTS

Lab ID: L2560851-05
Client ID: PCB-002B
Sample Location: 3RD N

Date Collected: 09/25/25 10:07
Date Received: 09/26/25
Field Prep: Not Specified

Sample Depth:
Matrix: Caulk
Analytical Method: 1,8082A
Analytical Date: 10/03/25 10:54
Analyst: EMR
Percent Solids: Results Reported on an "AS RECEIVED" basis

Extraction Method: EPA 3540C
Extraction Date: 10/01/25 10:35
Cleanup Method: EPA 3630
Cleanup Date: 10/03/25
Cleanup Method: EPA 3665A
Cleanup Date: 10/03/25
Cleanup Method: EPA 3660B
Cleanup Date: 10/03/25

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	971	276.	1	A
Aroclor 1221	ND		ug/kg	971	284.	1	A
Aroclor 1232	ND		ug/kg	971	216.	1	A
Aroclor 1242	ND		ug/kg	485	174.	1	A
Aroclor 1248	1190		ug/kg	971	272.	1	B
Aroclor 1254	1620		ug/kg	971	198.	1	A
Aroclor 1260	ND		ug/kg	971	218.	1	A
Aroclor 1262	ND		ug/kg	971	200.	1	A
Aroclor 1268	ND		ug/kg	485	171.	1	A
PCBs, Total	2810		ug/kg	485	171.	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	77		30-150	A
Decachlorobiphenyl	64		30-150	A
2,4,5,6-Tetrachloro-m-xylene	76		30-150	B
Decachlorobiphenyl	62		30-150	B

Project Name: 221 STATE ST.
Project Number: 10377.050
Lab Number: L2560851
Report Date: 10/08/25

SAMPLE RESULTS

Lab ID: L2560851-06
Client ID: PCB-002C
Sample Location: 1ST N RM 176

Date Collected: 09/25/25 10:30
Date Received: 09/26/25
Field Prep: Not Specified

Sample Depth:
Matrix: Caulk
Analytical Method: 1,8082A
Analytical Date: 10/03/25 11:02
Analyst: EMR
Percent Solids: Results Reported on an "AS RECEIVED" basis

Extraction Method: EPA 3540C
Extraction Date: 10/01/25 10:35
Cleanup Method: EPA 3630
Cleanup Date: 10/03/25
Cleanup Method: EPA 3665A
Cleanup Date: 10/03/25
Cleanup Method: EPA 3660B
Cleanup Date: 10/03/25

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	654	186.	1	A
Aroclor 1221	ND		ug/kg	654	191.	1	A
Aroclor 1232	ND		ug/kg	654	145.	1	A
Aroclor 1242	ND		ug/kg	327	117.	1	A
Aroclor 1248	952		ug/kg	654	183.	1	B
Aroclor 1254	791		ug/kg	654	133.	1	B
Aroclor 1260	218	J	ug/kg	654	147.	1	B
Aroclor 1262	ND		ug/kg	654	135.	1	A
Aroclor 1268	ND		ug/kg	327	115.	1	A
PCBs, Total	1960	J	ug/kg	327	115.	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	98		30-150	A
Decachlorobiphenyl	85		30-150	A
2,4,5,6-Tetrachloro-m-xylene	96		30-150	B
Decachlorobiphenyl	81		30-150	B

Project Name: 221 STATE ST. **Lab Number:** L2560851

Project Number: 10377.050 **Report Date:** 10/08/25

SAMPLE RESULTS

Lab ID: L2560851-07
Client ID: PCB-003A WHITE CAULK
Sample Location: 1ST S D9

Date Collected: 09/25/25 10:40
Date Received: 09/26/25
Field Prep: Not Specified

Sample Depth:
Matrix: Caulk
Analytical Method: 1,8082A
Analytical Date: 10/03/25 11:10
Analyst: EMR
Percent Solids: Results Reported on an "AS RECEIVED" basis

Extraction Method: EPA 3540C
Extraction Date: 10/01/25 10:35
Cleanup Method: EPA 3630
Cleanup Date: 10/03/25
Cleanup Method: EPA 3665A
Cleanup Date: 10/03/25
Cleanup Method: EPA 3660B
Cleanup Date: 10/03/25

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	627	178.	1	A
Aroclor 1221	ND		ug/kg	627	183.	1	A
Aroclor 1232	ND		ug/kg	627	139.	1	A
Aroclor 1242	ND		ug/kg	313	112.	1	A
Aroclor 1248	ND		ug/kg	627	176.	1	A
Aroclor 1254	241	J	ug/kg	627	128.	1	A
Aroclor 1260	ND		ug/kg	627	141.	1	A
Aroclor 1262	ND		ug/kg	627	129.	1	A
Aroclor 1268	ND		ug/kg	313	111.	1	A
PCBs, Total	241	J	ug/kg	313	111.	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	101		30-150	A
Decachlorobiphenyl	86		30-150	A
2,4,5,6-Tetrachloro-m-xylene	99		30-150	B
Decachlorobiphenyl	82		30-150	B

Project Name: 221 STATE ST.
Project Number: 10377.050
Lab Number: L2560851
Report Date: 10/08/25

SAMPLE RESULTS

Lab ID: L2560851-08
Client ID: PCB-003B
Sample Location: 1ST S D12

Date Collected: 09/25/25 10:50
Date Received: 09/26/25
Field Prep: Not Specified

Sample Depth:
Matrix: Caulk
Analytical Method: 1,8082A
Analytical Date: 10/03/25 11:19
Analyst: EMR
Percent Solids: Results Reported on an "AS RECEIVED" basis

Extraction Method: EPA 3540C
Extraction Date: 10/01/25 10:35
Cleanup Method: EPA 3630
Cleanup Date: 10/03/25
Cleanup Method: EPA 3665A
Cleanup Date: 10/03/25
Cleanup Method: EPA 3660B
Cleanup Date: 10/03/25

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	823	234.	1	A
Aroclor 1221	ND		ug/kg	823	241.	1	A
Aroclor 1232	ND		ug/kg	823	183.	1	A
Aroclor 1242	ND		ug/kg	412	147.	1	A
Aroclor 1248	ND		ug/kg	823	231.	1	A
Aroclor 1254	235	J	ug/kg	823	168.	1	B
Aroclor 1260	ND		ug/kg	823	185.	1	A
Aroclor 1262	ND		ug/kg	823	170.	1	A
Aroclor 1268	ND		ug/kg	412	145.	1	A
PCBs, Total	235	J	ug/kg	412	145.	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	104		30-150	A
Decachlorobiphenyl	91		30-150	A
2,4,5,6-Tetrachloro-m-xylene	102		30-150	B
Decachlorobiphenyl	86		30-150	B

Project Name: 221 STATE ST.
Project Number: 10377.050
Lab Number: L2560851
Report Date: 10/08/25

SAMPLE RESULTS

Lab ID: L2560851-09
Client ID: PCB-003C
Sample Location: 1ST S D10
Sample Depth:
Matrix: Caulk
Analytical Method: 1,8082A
Analytical Date: 10/03/25 11:27
Analyst: EMR
Percent Solids: Results Reported on an "AS RECEIVED" basis

Date Collected: 09/25/25 12:10
Date Received: 09/26/25
Field Prep: Not Specified

Extraction Method: EPA 3540C
Extraction Date: 10/01/25 10:35
Cleanup Method: EPA 3630
Cleanup Date: 10/03/25
Cleanup Method: EPA 3665A
Cleanup Date: 10/03/25
Cleanup Method: EPA 3660B
Cleanup Date: 10/03/25

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	617	175.	1	A
Aroclor 1221	ND		ug/kg	617	180.	1	A
Aroclor 1232	ND		ug/kg	617	137.	1	A
Aroclor 1242	ND		ug/kg	309	110.	1	A
Aroclor 1248	202	J	ug/kg	617	173.	1	B
Aroclor 1254	332	J	ug/kg	617	126.	1	B
Aroclor 1260	ND		ug/kg	617	138.	1	B
Aroclor 1262	ND		ug/kg	617	127.	1	A
Aroclor 1268	ND		ug/kg	309	109.	1	A
PCBs, Total	534	J	ug/kg	309	109.	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	101		30-150	A
Decachlorobiphenyl	88		30-150	A
2,4,5,6-Tetrachloro-m-xylene	99		30-150	B
Decachlorobiphenyl	84		30-150	B

Project Name: 221 STATE ST.
Project Number: 10377.050
Lab Number: L2560851
Report Date: 10/08/25

SAMPLE RESULTS

Lab ID: L2560851-10
Client ID: PCB-004A (EXTERIOR GLAZING)
Sample Location: 3RD W RM 312

Date Collected: 09/25/25 11:00
Date Received: 09/26/25
Field Prep: Not Specified

Sample Depth:
Matrix: Caulk
Analytical Method: 1,8082A
Analytical Date: 10/03/25 11:35
Analyst: EMR
Percent Solids: Results Reported on an "AS RECEIVED" basis

Extraction Method: EPA 3540C
Extraction Date: 10/01/25 10:35
Cleanup Method: EPA 3630
Cleanup Date: 10/03/25
Cleanup Method: EPA 3665A
Cleanup Date: 10/03/25
Cleanup Method: EPA 3660B
Cleanup Date: 10/03/25

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	2700	768.	1	A
Aroclor 1221	ND		ug/kg	2700	790.	1	A
Aroclor 1232	ND		ug/kg	2700	601.	1	A
Aroclor 1242	ND		ug/kg	1350	484.	1	A
Aroclor 1248	ND		ug/kg	2700	758.	1	A
Aroclor 1254	8550		ug/kg	2700	551.	1	A
Aroclor 1260	ND		ug/kg	2700	607.	1	A
Aroclor 1262	ND		ug/kg	2700	557.	1	A
Aroclor 1268	ND		ug/kg	1350	477.	1	A
PCBs, Total	8550		ug/kg	1350	477.	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	117		30-150	A
Decachlorobiphenyl	100		30-150	A
2,4,5,6-Tetrachloro-m-xylene	115		30-150	B
Decachlorobiphenyl	98		30-150	B

Project Name: 221 STATE ST.
Project Number: 10377.050
Lab Number: L2560851
Report Date: 10/08/25

SAMPLE RESULTS

Lab ID: L2560851-11
Client ID: PCB-004B
Sample Location: 2ND E RM 213

Date Collected: 09/25/25 11:10
Date Received: 09/26/25
Field Prep: Not Specified

Sample Depth:
Matrix: Caulk
Analytical Method: 1,8082A
Analytical Date: 10/03/25 11:43
Analyst: EMR
Percent Solids: Results Reported on an "AS RECEIVED" basis

Extraction Method: EPA 3540C
Extraction Date: 10/01/25 10:35
Cleanup Method: EPA 3630
Cleanup Date: 10/03/25
Cleanup Method: EPA 3665A
Cleanup Date: 10/03/25
Cleanup Method: EPA 3660B
Cleanup Date: 10/03/25

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	535	152.	1	A
Aroclor 1221	ND		ug/kg	535	156.	1	A
Aroclor 1232	ND		ug/kg	535	119.	1	A
Aroclor 1242	ND		ug/kg	267	95.7	1	A
Aroclor 1248	ND		ug/kg	535	150.	1	A
Aroclor 1254	3500		ug/kg	535	109.	1	B
Aroclor 1260	ND		ug/kg	535	120.	1	A
Aroclor 1262	ND		ug/kg	535	110.	1	A
Aroclor 1268	ND		ug/kg	267	94.4	1	A
PCBs, Total	3500		ug/kg	267	94.4	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	106		30-150	A
Decachlorobiphenyl	93		30-150	A
2,4,5,6-Tetrachloro-m-xylene	104		30-150	B
Decachlorobiphenyl	89		30-150	B

Project Name: 221 STATE ST.
Project Number: 10377.050
Lab Number: L2560851
Report Date: 10/08/25

SAMPLE RESULTS

Lab ID: L2560851-12
Client ID: PCB-004C
Sample Location: 1ST N RM 176

Date Collected: 09/25/25 11:30
Date Received: 09/26/25
Field Prep: Not Specified

Sample Depth:
Matrix: Caulk
Analytical Method: 1,8082A
Analytical Date: 10/03/25 11:52
Analyst: EMR
Percent Solids: Results Reported on an "AS RECEIVED" basis

Extraction Method: EPA 3540C
Extraction Date: 10/01/25 10:35
Cleanup Method: EPA 3630
Cleanup Date: 10/03/25
Cleanup Method: EPA 3665A
Cleanup Date: 10/03/25
Cleanup Method: EPA 3660B
Cleanup Date: 10/03/25

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	593	168.	1	A
Aroclor 1221	ND		ug/kg	593	174.	1	A
Aroclor 1232	ND		ug/kg	593	132.	1	A
Aroclor 1242	ND		ug/kg	297	106.	1	A
Aroclor 1248	ND		ug/kg	593	166.	1	A
Aroclor 1254	8250		ug/kg	593	121.	1	B
Aroclor 1260	ND		ug/kg	593	133.	1	A
Aroclor 1262	ND		ug/kg	593	122.	1	A
Aroclor 1268	ND		ug/kg	297	105.	1	A
PCBs, Total	8250		ug/kg	297	105.	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	110		30-150	A
Decachlorobiphenyl	95		30-150	A
2,4,5,6-Tetrachloro-m-xylene	108		30-150	B
Decachlorobiphenyl	93		30-150	B

Project Name: 221 STATE ST. **Lab Number:** L2560851

Project Number: 10377.050 **Report Date:** 10/08/25

SAMPLE RESULTS

Lab ID: L2560851-13
Client ID: PCB-005A GRAY CAULK
Sample Location: 1ST S D11

Date Collected: 09/25/25 09:10
Date Received: 09/26/25
Field Prep: Not Specified

Sample Depth:
Matrix: Caulk
Analytical Method: 1,8082A
Analytical Date: 10/03/25 12:00
Analyst: EMR
Percent Solids: Results Reported on an "AS RECEIVED" basis

Extraction Method: EPA 3540C
Extraction Date: 10/01/25 10:35
Cleanup Method: EPA 3630
Cleanup Date: 10/03/25
Cleanup Method: EPA 3665A
Cleanup Date: 10/03/25
Cleanup Method: EPA 3660B
Cleanup Date: 10/03/25

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	2380	676.	1	A
Aroclor 1221	ND		ug/kg	2380	696.	1	A
Aroclor 1232	ND		ug/kg	2380	530.	1	A
Aroclor 1242	ND		ug/kg	1190	426.	1	A
Aroclor 1248	ND		ug/kg	2380	668.	1	A
Aroclor 1254	ND		ug/kg	2380	486.	1	A
Aroclor 1260	ND		ug/kg	2380	534.	1	A
Aroclor 1262	ND		ug/kg	2380	490.	1	A
Aroclor 1268	ND		ug/kg	1190	420.	1	A
PCBs, Total	ND		ug/kg	1190	420.	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	109		30-150	A
Decachlorobiphenyl	97		30-150	A
2,4,5,6-Tetrachloro-m-xylene	106		30-150	B
Decachlorobiphenyl	96		30-150	B

Project Name: 221 STATE ST.
Project Number: 10377.050
Lab Number: L2560851
Report Date: 10/08/25

SAMPLE RESULTS

Lab ID: L2560851-14
Client ID: PCB-005B
Sample Location: 1ST N D2 GRAY

Date Collected: 09/25/25 11:35
Date Received: 09/26/25
Field Prep: Not Specified

Sample Depth:
Matrix: Caulk
Analytical Method: 1,8082A
Analytical Date: 10/03/25 12:08
Analyst: EMR
Percent Solids: Results Reported on an "AS RECEIVED" basis

Extraction Method: EPA 3540C
Extraction Date: 10/01/25 10:35
Cleanup Method: EPA 3630
Cleanup Date: 10/03/25
Cleanup Method: EPA 3665A
Cleanup Date: 10/03/25
Cleanup Method: EPA 3660B
Cleanup Date: 10/03/25

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	505	143.	1	A
Aroclor 1221	ND		ug/kg	505	148.	1	A
Aroclor 1232	ND		ug/kg	505	112.	1	A
Aroclor 1242	ND		ug/kg	252	90.4	1	A
Aroclor 1248	184	J	ug/kg	505	142.	1	B
Aroclor 1254	342	J	ug/kg	505	103.	1	A
Aroclor 1260	202	J	ug/kg	505	113.	1	B
Aroclor 1262	ND		ug/kg	505	104.	1	A
Aroclor 1268	ND		ug/kg	252	89.1	1	A
PCBs, Total	728	J	ug/kg	252	89.1	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	102		30-150	A
Decachlorobiphenyl	89		30-150	A
2,4,5,6-Tetrachloro-m-xylene	100		30-150	B
Decachlorobiphenyl	87		30-150	B

Project Name: 221 STATE ST.
Project Number: 10377.050
Lab Number: L2560851
Report Date: 10/08/25

SAMPLE RESULTS

Lab ID: L2560851-15
Client ID: PCB-005C
Sample Location: 1ST E D8

Date Collected: 09/25/25 12:05
Date Received: 09/26/25
Field Prep: Not Specified

Sample Depth:
Matrix: Caulk
Analytical Method: 1,8082A
Analytical Date: 10/03/25 12:16
Analyst: EMR
Percent Solids: Results Reported on an "AS RECEIVED" basis

Extraction Method: EPA 3540C
Extraction Date: 10/01/25 10:35
Cleanup Method: EPA 3630
Cleanup Date: 10/03/25
Cleanup Method: EPA 3665A
Cleanup Date: 10/03/25
Cleanup Method: EPA 3660B
Cleanup Date: 10/03/25

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	625	178.	1	A
Aroclor 1221	ND		ug/kg	625	183.	1	A
Aroclor 1232	ND		ug/kg	625	139.	1	A
Aroclor 1242	ND		ug/kg	312	112.	1	A
Aroclor 1248	ND		ug/kg	625	175.	1	A
Aroclor 1254	ND		ug/kg	625	128.	1	A
Aroclor 1260	ND		ug/kg	625	140.	1	A
Aroclor 1262	ND		ug/kg	625	129.	1	A
Aroclor 1268	ND		ug/kg	312	110.	1	A
PCBs, Total	ND		ug/kg	312	110.	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	112		30-150	A
Decachlorobiphenyl	96		30-150	A
2,4,5,6-Tetrachloro-m-xylene	111		30-150	B
Decachlorobiphenyl	90		30-150	B

Project Name: 221 STATE ST. **Lab Number:** L2560851

Project Number: 10377.050 **Report Date:** 10/08/25

SAMPLE RESULTS

Lab ID: L2560851-16
Client ID: PCB-006A CREAM CAULK
Sample Location: 1ST FL E CREAM

Date Collected: 09/25/25 08:45
Date Received: 09/26/25
Field Prep: Not Specified

Sample Depth:
Matrix: Caulk
Analytical Method: 1,8082A
Analytical Date: 10/03/25 12:25
Analyst: EMR
Percent Solids: Results Reported on an "AS RECEIVED" basis

Extraction Method: EPA 3540C
Extraction Date: 10/01/25 10:35
Cleanup Method: EPA 3630
Cleanup Date: 10/03/25
Cleanup Method: EPA 3665A
Cleanup Date: 10/03/25
Cleanup Method: EPA 3660B
Cleanup Date: 10/03/25

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	592	168.	1	A
Aroclor 1221	ND		ug/kg	592	173.	1	A
Aroclor 1232	ND		ug/kg	592	132.	1	A
Aroclor 1242	ND		ug/kg	296	106.	1	A
Aroclor 1248	ND		ug/kg	592	166.	1	A
Aroclor 1254	ND		ug/kg	592	121.	1	A
Aroclor 1260	ND		ug/kg	592	133.	1	A
Aroclor 1262	ND		ug/kg	592	122.	1	A
Aroclor 1268	ND		ug/kg	296	104.	1	A
PCBs, Total	ND		ug/kg	296	104.	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	96		30-150	A
Decachlorobiphenyl	82		30-150	A
2,4,5,6-Tetrachloro-m-xylene	94		30-150	B
Decachlorobiphenyl	83		30-150	B

Project Name: 221 STATE ST. **Lab Number:** L2560851

Project Number: 10377.050 **Report Date:** 10/08/25

SAMPLE RESULTS

Lab ID: L2560851-17
Client ID: PCB-006B
Sample Location: 2ND FL E

Date Collected: 09/25/25 12:30
Date Received: 09/26/25
Field Prep: Not Specified

Sample Depth:
Matrix: Caulk
Analytical Method: 1,8082A
Analytical Date: 10/03/25 12:33
Analyst: EMR
Percent Solids: Results Reported on an "AS RECEIVED" basis

Extraction Method: EPA 3540C
Extraction Date: 10/01/25 10:35
Cleanup Method: EPA 3630
Cleanup Date: 10/03/25
Cleanup Method: EPA 3665A
Cleanup Date: 10/03/25
Cleanup Method: EPA 3660B
Cleanup Date: 10/03/25

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	797	226.	1	A
Aroclor 1221	ND		ug/kg	797	233.	1	A
Aroclor 1232	ND		ug/kg	797	177.	1	A
Aroclor 1242	ND		ug/kg	398	143.	1	A
Aroclor 1248	1380		ug/kg	797	224.	1	B
Aroclor 1254	2610		ug/kg	797	162.	1	A
Aroclor 1260	ND		ug/kg	797	179.	1	A
Aroclor 1262	ND		ug/kg	797	164.	1	A
Aroclor 1268	ND		ug/kg	398	141.	1	A
PCBs, Total	3990		ug/kg	398	141.	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	105		30-150	A
Decachlorobiphenyl	90		30-150	A
2,4,5,6-Tetrachloro-m-xylene	101		30-150	B
Decachlorobiphenyl	86		30-150	B

Project Name: 221 STATE ST.
Project Number: 10377.050
Lab Number: L2560851
Report Date: 10/08/25

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 10/03/25 09:32
Analyst: EMR

Extraction Method: EPA 3540C
Extraction Date: 10/01/25 10:35
Cleanup Method: EPA 3630
Cleanup Date: 10/03/25
Cleanup Method: EPA 3665A
Cleanup Date: 10/03/25
Cleanup Method: EPA 3660B
Cleanup Date: 10/03/25

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-17 Batch: WG2121953-1						
Aroclor 1016	ND		ug/kg	602	171.	A
Aroclor 1221	ND		ug/kg	602	176.	A
Aroclor 1232	ND		ug/kg	602	134.	A
Aroclor 1242	ND		ug/kg	301	108.	A
Aroclor 1248	ND		ug/kg	602	169.	A
Aroclor 1254	ND		ug/kg	602	123.	A
Aroclor 1260	ND		ug/kg	602	135.	A
Aroclor 1262	ND		ug/kg	602	124.	A
Aroclor 1268	ND		ug/kg	301	106.	A
PCBs, Total	ND		ug/kg	301	106.	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	98		30-150	A
Decachlorobiphenyl	84		30-150	A
2,4,5,6-Tetrachloro-m-xylene	95		30-150	B
Decachlorobiphenyl	80		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: 221 STATE ST.
Project Number: 10377.050

Lab Number: L2560851
Report Date: 10/08/25

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-17 Batch: WG2121953-2 WG2121953-3									
Aroclor 1016	97		105		40-140	8		50	A
Aroclor 1260	95		101		40-140	6		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	102		107		30-150	A
Decachlorobiphenyl	85		90		30-150	A
2,4,5,6-Tetrachloro-m-xylene	98		103		30-150	B
Decachlorobiphenyl	82		89		30-150	B

Project Name: 221 STATE ST.
Project Number: 10377.050

Lab Number: L2560851
Report Date: 10/08/25

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2560851-01A	Glass 60mL/2oz unpreserved	NA	NA			Y	Absent		PCB-8082-CAULK(365)
L2560851-02A	Glass 60mL/2oz unpreserved	NA	NA			Y	Absent		PCB-8082-CAULK(365)
L2560851-03A	Glass 60mL/2oz unpreserved	NA	NA			Y	Absent		PCB-8082-CAULK(365)
L2560851-04A	Glass 60mL/2oz unpreserved	NA	NA			Y	Absent		PCB-8082-CAULK(365)
L2560851-05A	Glass 60mL/2oz unpreserved	NA	NA			Y	Absent		PCB-8082-CAULK(365)
L2560851-06A	Glass 60mL/2oz unpreserved	NA	NA			Y	Absent		PCB-8082-CAULK(365)
L2560851-07A	Glass 60mL/2oz unpreserved	NA	NA			Y	Absent		PCB-8082-CAULK(365)
L2560851-08A	Glass 60mL/2oz unpreserved	NA	NA			Y	Absent		PCB-8082-CAULK(365)
L2560851-09A	Glass 60mL/2oz unpreserved	NA	NA			Y	Absent		PCB-8082-CAULK(365)
L2560851-10A	Glass 60mL/2oz unpreserved	NA	NA			Y	Absent		PCB-8082-CAULK(365)
L2560851-11A	Glass 60mL/2oz unpreserved	NA	NA			Y	Absent		PCB-8082-CAULK(365)
L2560851-12A	Glass 60mL/2oz unpreserved	NA	NA			Y	Absent		PCB-8082-CAULK(365)
L2560851-13A	Glass 60mL/2oz unpreserved	NA	NA			Y	Absent		PCB-8082-CAULK(365)
L2560851-14A	Glass 60mL/2oz unpreserved	NA	NA			Y	Absent		PCB-8082-CAULK(365)
L2560851-15A	Glass 60mL/2oz unpreserved	NA	NA			Y	Absent		PCB-8082-CAULK(365)
L2560851-16A	Glass 60mL/2oz unpreserved	NA	NA			Y	Absent		PCB-8082-CAULK(365)
L2560851-17A	Glass 60mL/2oz unpreserved	NA	NA			Y	Absent		PCB-8082-CAULK(365)

*Values in parentheses indicate holding time in days

Project Name:	221 STATE ST.	**Lab Number:**	L2560851
Project Number:	10377.050	**Report Date:**	10/08/25

GLOSSARY

Acronyms

DL	- 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 limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
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).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
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.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
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. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
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.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
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.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	221 STATE ST.	**Lab Number:**	L2560851
Project Number:	10377.050	**Report Date:**	10/08/25

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

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.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

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.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

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. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

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.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

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.

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.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs). For calculated parameters, this represents that one or more values used in the calculation were

Report Format: DU Report with 'J' Qualifiers

Project Name:	221 STATE ST.	**Lab Number:**	L2560851
Project Number:	10377.050	**Report Date:**	10/08/25

Data Qualifiers

estimated.

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

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

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.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: 221 STATE ST.
Project Number: 10377.050
Lab Number: L2560851
Report Date: 10/08/25

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

LIMITATION OF LIABILITIES

Pace Analytical Services 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 Pace Analytical Services shall be to re-perform the work at it's own expense. In no event shall Pace Analytical Services 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 Pace Analytical Services.

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.

Certification Information

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

Westborough Facility – 8 Walkup Dr. Westborough, MA 01581
EPA 624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625.1: alpha-Terpineol
EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol, Azobenzene; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility – 320 Forbes Blvd. Mansfield, MA 02048
SM 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.
MADEP-APH.
Nonpotable Water: EPA RSK-175 Dissolved Gases
Biological Tissue Matrix: EPA 3050B

Mansfield Facility – 120 Forbes Blvd. Mansfield, MA 02048
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.
Nonpotable Water: EPA RSK-175 Dissolved Gases

The following test method is not included in our New Jersey Secondary NELAP Scope of Accreditation:

Mansfield Facility – 320 Forbes Blvd. Mansfield, MA 02048
Determination of Selected Perfluorinated Alkyl Substances by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry Isotope Dilution (via Alpha SOP 23528)

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility – 8 Walkup Dr. Westborough, MA 01581

Drinking Water
EPA 300.0: Chloride, 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, SM4500NO2-B**
EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, SM4500CL-G, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: 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 625.1: SVOC (Acid/Base/Neutral Extractables).
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT.**

Mansfield Facility – 320 Forbes Blvd. Mansfield, MA 02048

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Ca, Cr, Cu, Fe, Pb, Mg, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1: Hg. **EPA 245.7:** Hg.
SM2340B

Certification IDs:

Westborough Facility – 8 Walkup Dr. Westborough, MA 01581
CT PH-0826, IL 200077, IN C-MA-03, KY kY98045, ME MA00086, MD 348, MA M-MA086, NH 2064, NJ MA935, NY 11148, NC (DW) 25700, NC (NPW/SCM) 666, OR MA-1316, PA 68-03671, RI LAO00065, TX T104704476, VT VT-0935, VA 460195

Mansfield Facility – 320 Forbes Blvd. Mansfield, MA 02048
MA M-MA00030, CT PH-0825, ANAB/DoD L2474, IL 200081, IN C-MA-04, KY KY98046, LA 85084, ME MA00030, MI 9110, MN 025-999-495, NH 2062, NJ MA015, NY 11627, NC (NPW/SCM) 685, OR MA-0262, PA 68-02089, RI LAO00299, TX T-104704419, VT VT-0015, VA 460194, WA C954

Mansfield Facility – 120 Forbes Blvd. Mansfield, MA 02048
ANAB/DoD L2474, LA 245052, ME MA01156, MN 025-999-498, NH 2249, NJ MA025, NY 12191, OR 4203, TX T104704583, VA 460311, WA C1104.

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

CHAIN OF CUSTODY

PAGE 1 OF 2

Date Rec'd in Lab: 09/26/25

ALPHA Job #: L2560851

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: Haley Ward, Inc.
Address: One Merchants Plaza, Bangor, ME (Suite 701)
Phone: (207)989-4824
Email: dkingman@haleyward.com

Additional Project Information:

Soxhlet 8082

Caulk/glazing

Project Information

Project Name: 221 State St.
Project Location: Augusta
Project #: 10377.050
Project Manager: D. Kingman
ALPHA Quote #:

Turn-Around Time

☑ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due:

Report Information - Data Deliverables

☑ ADEx ☑ EMAIL

Billing Information

☑ Same as Client info PO #:

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 _____

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

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	Sample Comments	TOTAL # BOTTLES
L2560851-01	PCB-001A (Interior Glazing)	9/25/25	9:00	X1	DAK	Interior glazing 3rd S Rm 318	1
-02	PCB-001B		9:20			3rd W Rm 302	1
-03	PCB-001C		9:40			3rd E Rm 312	1
-04	PCB-002A white/gray caulk		9:50			3rd S Rm 324	1
-05	PCB-002B		10:07			3rd N	1
-06	PCB-002C		10:30			1st N Rm 176	1
-07	PCB-003A White caulk		10:40			1st S D9	1
-08	PCB-003B		10:50			1st S D12	1
-09	PCB-003C		12:10			1st S D10	1
-10	PCB-004A (Ext glazing)		11:00			3rd W Rm 312	1

Container Type										A											
Preservative										Ice											

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
Deborah M Kasik	9/26/25 10:50	Aaron Rogerace	9/26/25 10:50
Aaron Rogerace	9/26/25 17:00	Carl Tolliver PACE	9/26/25 17:00
Carl Tolliver	9/26/25 19:55	D Allado	9/26/25 1955

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

9/26/25 2230

9/26/25 1230

CHAIN OF CUSTODY

PAGE 2 OF 2

Date Rec'd In Lab: 09/26/25

ALPHA Job #: L2560851

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: Haley Ward, Inc.
Address: One Merchant's Plaza Suite 701, Bangor, ME
Phone: (207) 989-4824
Email: dkingman@haleyward.com

Project Information

Project Name: 221 State St. Augusta
Project Location:
Project #: 10377.050
Project Manager: D. Kingman
ALPHA Quote #:

Report Information - Data Deliverables

☑ ADEx ☑ EMAIL

Billing Information

☑ Same as Client info PO #:

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 _____

Turn-Around Time

☑ Standard ☐ RUSH (only confirmed if pre-approved)
Date Due:

Additional Project Information:

Soxhlet 8082

caulk/glazing

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	SAMPLE INFO / Sample Comments	TOTAL # BOTTLES
L0851-11	PCB-004B	9/25/25	11:10	X1	PAK	2nd E Rm213	1
-12	PCB-004C		11:30			1st N Rm176	1
-13	PCB-005A gray caulk		~~11:35~~ 9:10			1st S D11	1
-14	PCB-005B		11:35			1st N D2 gray	1
-15	PCB-005C		12:05			1st E D8	1
-16	PCB-006A cream caulk		8:45			1st FL E cream	1
-17	PCB-006B		12:30			2nd FL E	1

Filtration ☐ Field ☐ Lab to do
Preservation ☐ Lab to do

Container Type	A
Preservative	Ice

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
Rebecca A Kasik	9/26 10:50	Cindy Rogers Pace	9/26/25 10:50
Cindy Rogers	9/26/25 17:00	Cally Tidwell PACE	9/26/25 17:00
Cally Tidwell	9/26/25 19:55	D Woods	9/26/25 19:55

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

(FORM NO: 01-01 (rev. 12-Mar-2012))

9/26/25 2230

Sample Delivery Group Summary

Pace Job Number : L2560851

Account Name : Haley Ward, Inc
Project Number : 10377.050
Project Name : 221 STATE ST.

Received : 26-SEP-2025
Reviewer : Brendan Grady

Delivery Information

Samples Delivered By : Pace Courier

Chain of Custody : Present

Cooler Information

Cooler	Seal/Seal#	Preservation	Temperature(°C)	Additional Information
A	Absent/	Ice	5.7	

Condition Information

1) All samples on COC received?	**YES**
2) Extra samples received?	**NO**
3) Are there any sample container discrepancies?	**NO**
4) Are there any discrepancies between COC & sample labels?	**NO**
5) Are samples in appropriate containers for requested analysis?	**YES**
6) Are samples properly preserved for requested analysis?	**YES**
7) Are samples within holding time for requested analysis?	**YES**
8) All sampling equipment returned?	**NA**

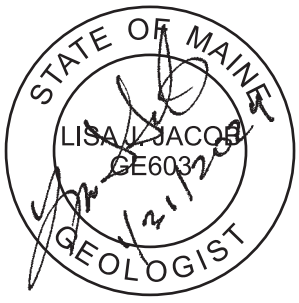
Volatile Organics/VPH

1) Reagent Water Vials Frozen by Client?	**NA**

PCB ASSESSMENT IN EXTERIOR BUILDING MATERIALS AND SOIL
HEALTH AND ENVIRONMENTAL TESTING LABORATORY
221 STATE STREET, AUGUSTA, MAINE

Prepared for

OAK POINT ASSOCIATES
231 MAIN STREET
BIDDEFORD, MAINE



January 2024

4 Blanchard Road
P.O. Box 85A
Cumberland, Maine 04021
Phone: 207.829.5016 smemaine.com

ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE

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ENGINEERS

Total PCBs detected in samples from the four sampling locations noted above are summarized in Table 1. Sample locations are shown on Figures 1 and 2.

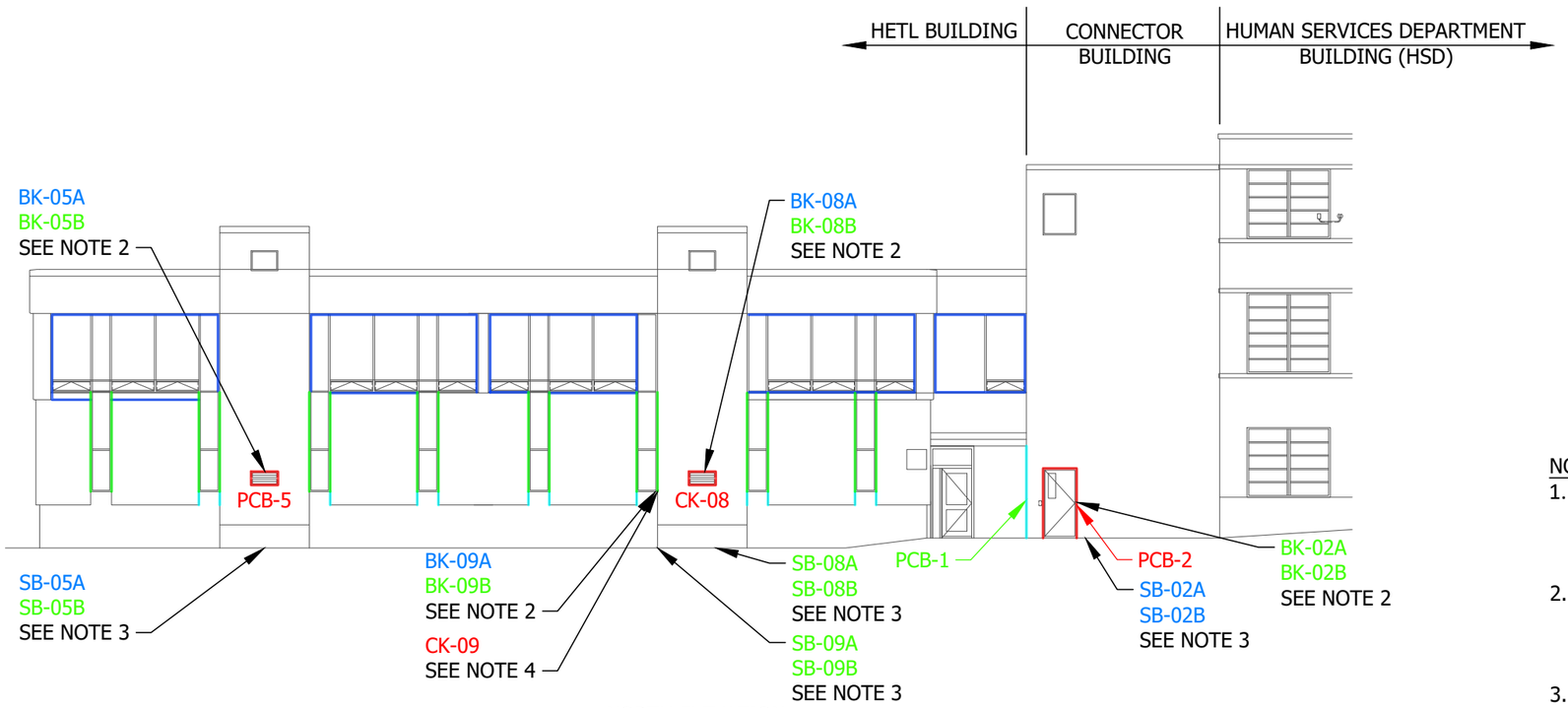
TABLE 1

CAULK, BRICK, AND SOIL PCB SAMPLE RESULTS SUMMARY

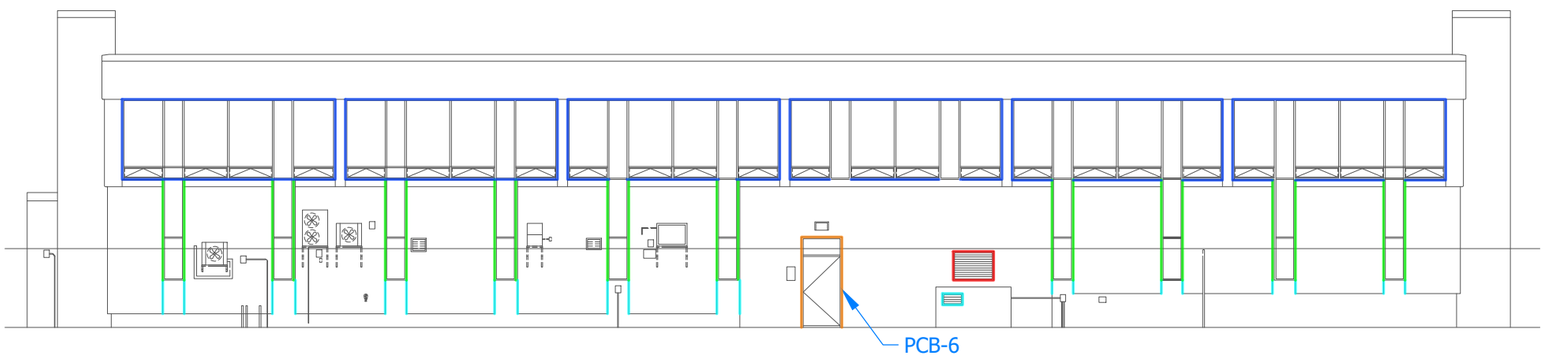
Sample ID:	Caulk Description	Sample Location	Caulk	Adjacent Building Material (Brick)		Soil	
				1 inch from caulk (A)	6 inches from caulk (B)	0 to 3 inches BGS (A)	6 inches BGS (B)
			Total PCBs (mg/kg)	Total PCBs (mg/kg)	Total PCBs (mg/kg)	Total PCBs (mg/kg)	Total PCBs (mg/kg)
PCB -5	Gray, smooth, soft	North side, metal vent to brick	**93,200**	**2.09**	ND	**2.35 / 2.24**	0.72
CK-08		North side, metal vent to brick	**42,200 J / 11,900 J**	**4.27**	ND	0.913	0.098
CK-09		North side (vent facing east), metal vent to brick	**25,600**	**1.62**	ND	0.406	0.603
PCB-2	White, rough, hard	North side, door metal frame to brick (unique application)	**1,190**	**ND**	**ND**	**7.68**	**1.32**

Notes:

1. "Parent" caulk sample location identifer is provided in left-most column. Associated brick ("BK") and soil ("SB") samples have the same numerical identifier; "A" and "B" suffixes denote distance from caulking or depth below ground.
2. Data from caulk samples PCB-2 and PCB-5 from May 2023 are included here in addition to data from samples obtained in November 2023.
3. Concentrations detected greater than 1 milligram per kilogram (mg/kg) are emboldened. Concentrations detected greater than 50 mg/kg are shown in red. Refer to laboratory analytical reports for additional information.
4. Abbreviations: ND - not detected above laboratory detection limits; N/A - not applicable, no sample obtained; BGS - below ground surface; J - estimated concentration.



NORTH ELEVATION
NTS



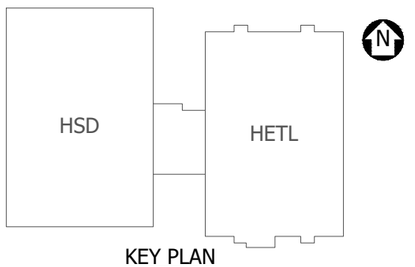
EAST ELEVATION
NTS

LEGEND

PCB-1	BULK SAMPLE <1 ppm FOR PCBs
PCB-1	BULK SAMPLE >1 ppm - <50 ppm FOR PCBs
PCB-1	BULK SAMPLE ≥50 ppm FOR PCBs
	PCB CAULKING ≥50 ppm (TYPE 1 AND 2)
	OBSERVED TYPE 3 CAULKING
	OBSERVED TYPE 4 AND 5 CAULKING
	OBSERVED TYPE 6 CAULKING
	ASSUMED TYPE 4 (FRAME TO MASONRY) AND TYPE 5 (GLASS TO FRAME) CAULKING

NOTE

1. SAMPLES OF CAULK ARE IDENTIFIED BY THE PREFIXES “CK” AND “PCB,” SAMPLES OF BRICK ARE DENOTED BY THE PREFIX “BK,” AND SAMPLES OF SOIL ARE DENOTED BY THE PREFIX “SB.”
2. BRICK SAMPLES BK-05, BK-08 AND BK-09 EACH HAD ONE SAMPLE COLLECTED 1-INCH FROM CAULK WITH IDENTIFIER "A". SECOND SAMPLE COLLECTED 6-INCHES FROM CAULK WITH IDENTIFIER "B".
3. SOIL SAMPLES SB-02, SB-05, SB-08, AND SB-09 EACH HAD ONE SAMPLE COLLECTED FROM GROUND SURFACE AT A DEPTH OF 0 TO 3-INCHES WITH IDENTIFIER "A". A SECOND SAMPLE WAS COLLECTED AT 6-INCHES BELOW GROUND SURFACE WITH IDENTIFIER "B"
4. VENT WITH PCB CAULK ≥50PPM. VENT FACES TO EAST, NOT SHOWN ON FIGURE.



KEY PLAN

FIGURE 1
EXTERIOR CAULKING ASSESSMENT FOR PCBs
STATE OF MAINE HEATH & ENVIRONMENTAL TESTING LABRATORY (HETL)
221 STATE STREET
AUGUSTA, MAINE

SME
SEVEE & MAHER ENGINEERS

DWG: ELEVATIONS LMN: NONE CTB: SME-STD-HALF.CTB REV: 1/31/2024

\\Server\cds\Oak Point\HETL\Acad\Figures\ELEVATIONS.dwg, B_FIG 1, 1/31/2024 12:56:07 PM, sjm

3.0 INVENTORY OF CAULK OCCURRENCE

SME compiled detailed observations of caulking on the building exterior to provide supporting information for development of a remediation and disposal plan for building materials in accordance with TSCA regulations. Based on observations and date from SME's May and November site visits, SME identified six types of caulking on the building exterior:

- **Type 1** – Gray, smooth, soft caulking found at vents on the north side (three) and east side (one), and one expansion joint on the south side of the HETL building. This caulk is known to be PCB-BPW, based on four samples.
- **Type 2** – White, hard caulk with a rough surface, observed only at Doorway 3 on the north elevation. This caulk is known to be PCB-BPW based on one sample from the single observed occurrence.
- **Type 3** – Gray/brown, soft caulk with a weathered exterior in expansion joints on all four sides of the HETL building, and vents on the north, east, and south sides. Two samples of Type 3 caulk were obtained in May 2023, and both had PCBs < 1 mg/kg.
- **Type 4** – White, smooth, hard caulk observed at windows on the first floor of all sides of the building. Type 4 caulk is assumed to be present at second floor windows based on observations from the ground surface. One sample of Type 4 caulk obtained in May 2023 (PCB-3) had total PCBs at a concentration of 11 mg/kg.
- **Type 5** – Factory-applied gray, thin caulk observed at metal-to-glass seams inside window frames on all sides of the building. Type 5 caulk is assumed to be present inside second floor window frames based on observations from the ground surface. One sample of Type 5 caulk obtained in May 2023 (PCB-4) had total PCBs at a concentration of 2.7 mg/kg.
- **Type 6** – Brown, soft caulk in a thin application observed around Doorway 5 on the east side of the building. Type 6 caulk was not observed in other applications. One sample of Type 6 caulk from May 2023 (PCB-6) did not have PCBs detected above laboratory reporting limits.

Laboratory analytical results from all caulk samples obtained to date are provided in Table 2.

TABLE 2

EXTERIOR CAULK SAMPLING RESULTS

Caulk Type	Caulking Description	Testing Location with Other Typical Caulking Application Areas	Sample ID	Total PCBs (mg/kg)
TYPE 1	Gray, smooth, soft	North side, metal vent to brick	PCB -5	**93,200**
		North side, metal vent to brick	CK-08	**42,200 J / 11,900 J**
		North side (vent facing east), metal vent to brick	CK-09	**25,600**
TYPE 2	White, rough application, hard	North side, door metal frame to brick (unique application)	PCB-2	**1,190**
TYPE 3	Gray/brown weathered exterior, wide application, soft	North side, expansion joint, brick to brick	PCB-1	ND
		South side, expansion joint, brick to brick	PCB-7	0.394
TYPE 4	White, smooth, hard	Northwest side, window to brick	PCB-3	**11.0**
TYPE 5	Gray, thin, factory application	Northwest side, window to glass	PCB -4	**2.7**
TYPE 6	Brown, thin, soft	Exterior, East side, door metal frame to brick	PCB-6	ND

Notes:

1. Data from May and November 2023 caulk sampling are provided in summary. Refer to Laboratory analytical data reports for additional information.
2. Concentrations detected greater than 1 milligram per kilogram (mg/kg) are emboldened. Concentrations detected greater than 50 mg/kg are shown in red.
3. Abbreviations: ND - not detected above laboratory detection limits; N/A - not applicable, no sample obtained; BGS - below ground surface; J - estimated concentration

SME combined observations made during site visits and approximate measurements from building elevations provided by Oak Point Associates to create an inventory of the occurrences of each type of caulk. Table 3 provides a listing of features observed or assumed to contain each type of caulk, including the total estimated quantity of each type of caulk in linear feet. Observed or assumed occurrences of each type of caulk are represented in color outline on Figures 1 and 2, showing the north and east building elevations and the west and south building elevations, respectively.

TABLE 3

EXTERIOR CAULK OCCURRENCES AND QUANTITY ESTIMATE

Caulk Type	Caulking Description	Application Occurrence/Areas	Sample ID	Caulking Type Occurrences	Occurrence Estimate (linear ft)	Total Quantity Estimate by Type (linear ft)
TYPE 1	Gray, smooth, soft	North side, metal vent to brick	PCB -5	vent	8.5	**51.5**
		North side, metal vent to brick	CK-08	vent	8.5	
		North side (vent facing east), metal vent to brick	CK-09	vent	8.5	
		East side vent, 4' x 3'	N/A	vent	14	
		South expansion joint	N/A	exp. joint	12	
TYPE 2	White, rough application, hard	North side, door metal frame to brick (unique application)	PCB-2	ext. door	17	**17**
TYPE 3	Gray/brown weathered exterior, wide application, soft	North side, expansion joint, brick to brick	PCB-1	exp. joint	9	**164.5**
		South side, expansion joint, brick to brick	PCB-7	exp. joint	10	
		South side vent	N/A	vent	8.5	
		South side vent	N/A	vent	8.5	
		South side vent (vent facing west)	N/A	vent	9	
		West side expansion joint below 1st floor windows	N/A	exp. joint	25.5	
		North side expansion joint below 1st floor windows	N/A	exp. joint	24	
		East side expansion joint below 1st floor windows	N/A	exp. joint	48	
		South side expansion joint below 1st floor windows	N/A	exp.joint	12	
		South side small vents (two) near laboratory entrance	N/A	2 vents	10	
TYPE 4	White, smooth, hard	West side of building on north side, window to brick	PCB-3	window	18	**950**
		West side 1st floor windows, excluding PCB-3	N/A	8 windows	144	
		West side 1st floor panel above window (est. 11' per panel)	N/A	9 panels	99	
		North side 1st floor windows	N/A	8 windows	144	
		North side 1st floor panel above window	N/A	8 panels	88	
		East side 1st floor windows	N/A	10 windows	180	
		East side 1st floor panel above window	N/A	10 panels	110	
		South side 1st floor windows	N/A	4 windows	72	
		South side 1st floor panel above windows	N/A	5 panels	55	
		West side north end expansion joint (unique application)	N/A	exp. joint	15	
		South side expansion joint (unique application)	N/A	exp. joint	4	
		South side expansion joint below window	N/A	exp. joint	6	
		East side vents (two); small, approx. 4' total per vent	N/A	vent	8	
		East side vent	N/A	vent	7	
		2nd floor windows, 45' per large unit (window frame to brick or concrete). *Assumption of type 4 caulk based on observation from ground surface.*	N/A	19 window units	855	**1152**
		2nd floor windows, 33' per large unit (window frame to brick or concrete). *Assumption of type 4 caulk based on observation from ground surface.*	N/A	3 window units	297	

4.0 CONCLUSIONS FOR MATERIAL HANDLING

4.1 Type 1 and 2 Caulk

Results of sampling to date indicate that Type 1 and Type 2 caulk have PCB concentrations greater than 50 mg/kg. These occurrences of caulk must be managed as PCB Bulk Product Waste in accordance with 40 CFR 761.62. Materials with PCB concentrations ≥ 50 mg/kg are considered hazardous by Maine Solid Waste Regulations and must be sent for disposal out of state.

Adjacent porous substrate (i.e., brick and mortar) may also be managed as PCB Bulk Product Waste if they are removed concurrent with the caulking. Based on substrate sampling, PCB concentrations are > 1 mg/kg at one inch from caulking and below laboratory reporting limits at a distance of of six inches from Types 1 and 2 caulk seams. Types 1 and 2 caulk seams and adjacent six inches of masonry can be removed and contained for off-site, out of state disposal at a facility permitted to receive PCB Bulk Product Waste in accordance with 40 CFR 761.62.

Soils in the vicinity (i.e., directly below) Type 1 and Type 2 caulk seams have been observed to contain PCBs at concentrations > 1 mg/kg in surficial (i.e., zero to three inches below ground surface), and < 1 mg/kg in soils at six inches below ground surface. Soils adjacent to Type 1 and Type 2 caulk seams with PCBs > 1 mg/kg are defined as PCB Remediation Waste in accordance with 40 CFR 761.30, and must be handled in accordance with 40 CFR 761.61. They must be removed for off-site disposal, and verification testing conducted to confirm that a cleanup goal of 1 mg/kg has been met. PCB Remediation Waste soil must be contained for disposal at a facility permitted to accept this type of waste with total PCBs < 50 mg/kg.

4.2 Type 4 and 5 Caulk

Type 4 and Type 5 caulk have concentrations > 1 mg/kg and < 50 mg/kg, based on a single sample of each type from the initial assessment. Further sampling will be valuable to provide additional characterization for each type, to assist in defining the material within TSCA regulations and determining appropriate handling. If additional sampling confirms that Types 4 and 5 caulk have PCB concentrations < 50 mg/kg, these materials can be defined and managed as Excluded PCB Products in accordance with 40 CFR 761.30.

4.3 Type 3 and 6 Caulk

Two samples of Type 3 caulk and one sample of Type 6 caulk collected to date had PCBs less than 1 mg/kg, suggesting that Type 3 and Type 6 caulk and adjacent building materials can be managed without restriction. Further characterization sampling of Type 3 caulk will confirm this observation or suggest alternative handling in accordance with TSCA regulations. Based on the limited occurrence of Type 6 caulk

- Indoor Environmental Testing and Consulting
- Industrial Hygiene Consulting
- OSHA Compliance
- Expert Witness
- Training

ASSESSMENT OF EXTERIOR CAULKING FOR ASBESTOS AND PCBS STATE OF MAINE HETL BUILDING 221 STATE STREET, AUGUSTA, MAINE

Prepared for

MR. JEFF LUY
OAK POINT ASSOCIATES
231 MAIN STREET
BIDDEFORD, ME 04005

June 30, 2023

John M. Boilard, RIHT, CMC
Senior Industrial Hygiene &
Safety Specialist

4 Blanchard Road
P.O. Box 85A
Cumberland, Maine 04021
Phone: 207.854.2711 sme-esha.com

SME SEVEE & MAHER ENGINEERS

ESHA ENVIRONMENTAL SAFETY & HYGIENE ASSOCIATES
A Sevee & Maher Engineers company

ASBESTOS BULK SAMPLING ANALYTICAL SUMMARY

CLIENT:
Oak Point Associates
231 Main Street
Biddeford, ME 04005

TESTING LOCATION:
Active HETL Lab Building
221 State Street
Augusta, ME 04330

SAMPLING DATE:
May 23, 2023

PROJECT NUMBER:
230771.00

LAB ID:
622300615

SAMPLE ID:	TESTING AREA/LOCATION	SAMPLE DESCRIPTION	ANALYTICAL METHOD	SAMPLE RESULTS
1A – 1C	North Elevation Brick Joints	Caulking – Gray	EPA PLM NOB	None Detected
2A – 2C	North Elevation Doorway Lintel	Caulking – Gray	EPA PLM NOB	None Detected
3A – 3C	Metal Window – Frame to Brick	Caulking – Gray	EPA PLM NOB	None Detected
4A – 4C	Window Metal – Frame to Glass	Caulking – Gray	EPA PLM NOB	None Detected
5A – 5C	North Elevation Door 03 – Door Frame to Brick	Caulking – Gray	EPA PLM NOB	None Detected
6A – 6C	Concrete Foundation to Brick	Caulking – Gray	EPA PLM NOB	None Detected
7A – 7C	Door 05 – Door Frame to Brick	Caulking – Dark Brown	EPA PLM NOB	None Detected

EPA SW-846 8082A/3540C
ANALYSIS OF PCBS IN CAULKING

CLIENT:
Oak Point Associates
231 Main Street
Biddeford, ME 04005

TESTING LOCATION:
Active HETL Lab Building
221 State Street
Augusta, ME 04330

TESTING DATE:
May 23, 2023

PROJECT NUMBER:
230771.00

LAB ID:
L2329036

SAMPLE ID:	LOCATION/DESCRIPTION	PARAMETER	RESULT (mg/kg)
PCB-1	Building Joint Brick to Brick – Gray Caulking (D4)	Aroclor-1016	Not Detected
		Aroclor-1221	Not Detected
		Aroclor-1232	Not Detected
		Aroclor-1242	Not Detected
		Aroclor-1248	Not Detected
		Aroclor-1254	Not Detected
		Aroclor-1260	Not Detected
		Aroclor-1262	Not Detected
		Aroclor-1268	Not Detected

SAMPLE ID:	LOCATION/DESCRIPTION	PARAMETER	RESULT (mg/kg)
PCB-2	Door Frame to Brick – Gray Caulking (D3)	Aroclor-1016	Not Detected
		Aroclor-1221	Not Detected
		Aroclor-1232	Not Detected
		Aroclor-1242	Not Detected
		Aroclor-1248	Not Detected
		Aroclor-1254	**1,190**
		Aroclo-1260	Not Detected
		Aroclor-1262	Not Detected
		Aroclor-1268	Not Detected

Project Name: HETL LAB BLDG
Project Number: 230771
Lab Number: L2329036
Report Date: 06/08/23

SAMPLE RESULTS

Lab ID: L2329036-01
Client ID: PCB-1 CAULKING
Sample Location: AUGUSTA, ME

Date Collected: 05/23/23 11:15
Date Received: 05/24/23
Field Prep: Not Specified

Sample Depth:
Matrix: Solid
Analytical Method: 1,8082A
Analytical Date: 06/01/23 19:34
Analyst: JM
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Extraction Method: EPA 3540C
Extraction Date: 05/30/23 09:10
Cleanup Method: EPA 3630
Cleanup Date: 06/01/23
Cleanup Method: EPA 3665A
Cleanup Date: 06/01/23
Cleanup Method: EPA 3660B
Cleanup Date: 06/01/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	595	--	1	A
Aroclor 1221	ND		ug/kg	595	--	1	A
Aroclor 1232	ND		ug/kg	595	--	1	A
Aroclor 1242	ND		ug/kg	298	--	1	A
Aroclor 1248	ND		ug/kg	595	--	1	A
Aroclor 1254	ND		ug/kg	595	--	1	B
Aroclor 1260	ND		ug/kg	595	--	1	A
Aroclor 1262	ND		ug/kg	595	--	1	A
Aroclor 1268	ND		ug/kg	298	--	1	A
PCBs, Total	ND		ug/kg	298	--	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	88		30-150	A
Decachlorobiphenyl	72		30-150	A
2,4,5,6-Tetrachloro-m-xylene	94		30-150	B
Decachlorobiphenyl	81		30-150	B

Project Name: HETL LAB BLDG
Project Number: 230771
Lab Number: L2329036
Report Date: 06/08/23

SAMPLE RESULTS

Lab ID: L2329036-02 D
Client ID: PCB-2 CAULKING
Sample Location: AUGUSTA, ME

Date Collected: 05/23/23 11:30
Date Received: 05/24/23
Field Prep: Not Specified

Sample Depth:
Matrix: Solid
Analytical Method: 1,8082A
Analytical Date: 06/01/23 19:42
Analyst: JM
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Extraction Method: EPA 3540C
Extraction Date: 05/30/23 09:10
Cleanup Method: EPA 3630
Cleanup Date: 06/01/23
Cleanup Method: EPA 3665A
Cleanup Date: 06/01/23
Cleanup Method: EPA 3660B
Cleanup Date: 06/01/23

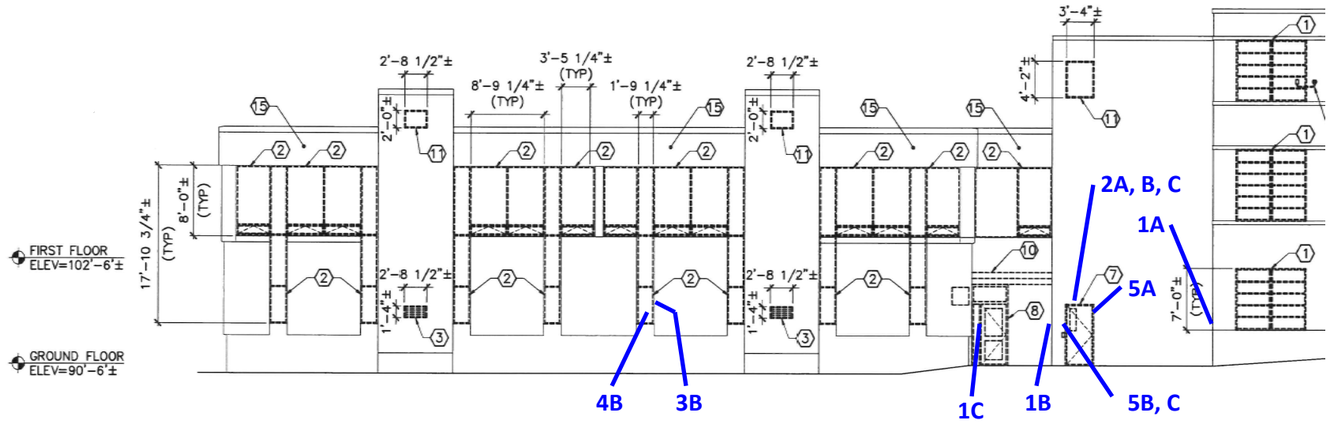
Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	58000	--	100	A
Aroclor 1221	ND		ug/kg	58000	--	100	A
Aroclor 1232	ND		ug/kg	58000	--	100	A
Aroclor 1242	ND		ug/kg	29000	--	100	A
Aroclor 1248	ND		ug/kg	58000	--	100	A
Aroclor 1254	1190000		ug/kg	58000	--	100	B
Aroclor 1260	ND		ug/kg	58000	--	100	A
Aroclor 1262	ND		ug/kg	58000	--	100	A
Aroclor 1268	ND		ug/kg	29000	--	100	A
PCBs, Total	1190000		ug/kg	29000	--	100	B

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

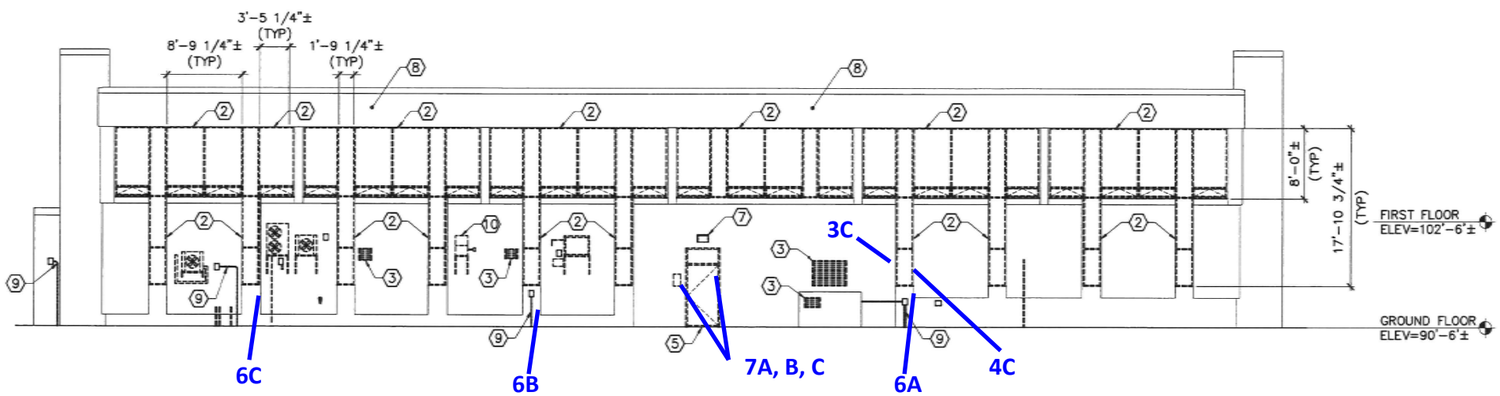
EXTERIOR CAULKING ASSESSMENT for ASBESTOS

STATE OF MAINE HEALTH & ENVIRONMENTAL TESTING LABORATORY (HETL)

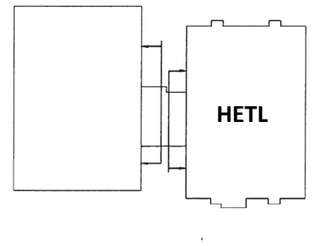
221 State Street, Augusta, Maine



NORTH ELEVATION



EAST ELEVATION



KEY PLAN

PLAN NORTH

KEY:

A1	BULK SAMPLE POSITIVE for ASBESTOS ≥ 1%
1A	BULK SAMPLE with ASBESTOS detected <1%
1A	BULK SAMPLE NEGATIVE for ASBESTOS (NONE DETECTED)

SME SEVEE & MAHER ENGINEERS

ESHA ENVIRONMENTAL SAFETY & HYGIENE ASSOCIATES A Sevee & Maher Engineers company

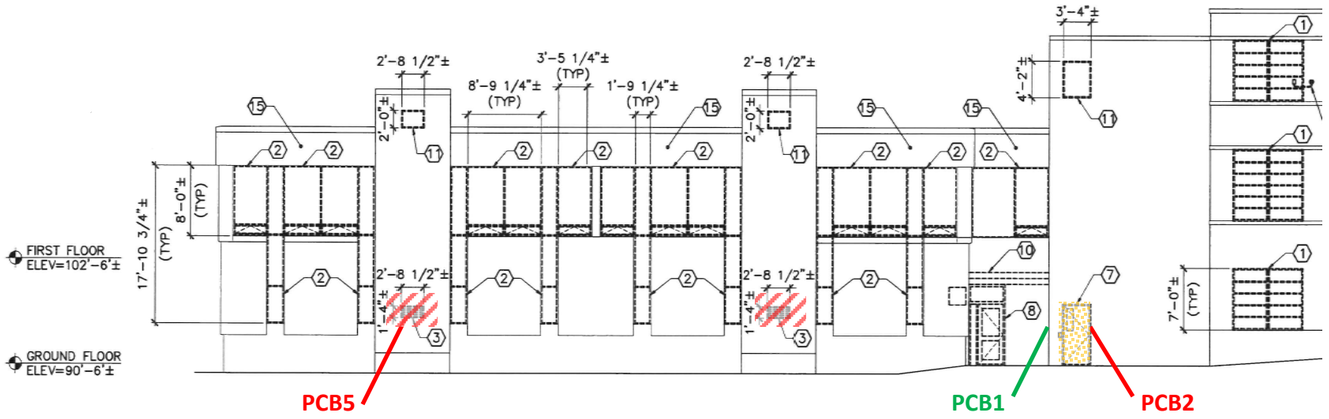
SME/ESHA JOB # **230771**

SAMPLING DATE: **5-23-2023**

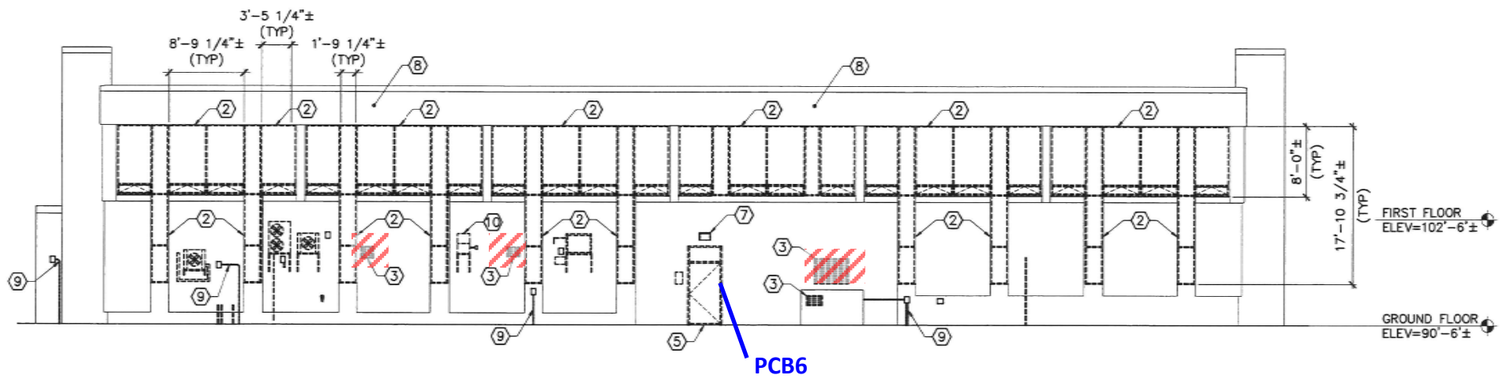
EXTERIOR CAULKING ASSESSMENT for PCBs

STATE OF MAINE HEALTH & ENVIRONMENTAL TESTING LABORATORY (HETL)

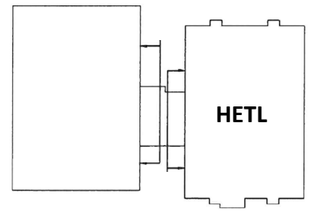
221 State Street, Augusta, Maine



NORTH ELEVATION



EAST ELEVATION



KEY PLAN

PLAN NORTH

KEY:

PCB1	BULK SAMPLE <1 ppm for PCBs
PCB1	BULK SAMPLE >1% - <50 ppm for PCBs
PCB1	BULK SAMPLE ≥50 ppm for PCBs
	LOUVER VENTS with GRAY CAULKING - PCBS >50 ppm
	DOORWAYS with GRAY CAULKING - PCBS >50 ppm

SME SEVEE & MAHER ENGINEERS

ESHA ENVIRONMENTAL SAFETY & HYGIENE ASSOCIATES A Sevee & Maher Engineers company

SME/ESHA JOB # **230771**

SAMPLING DATE: **5-23-2023**

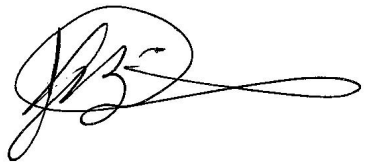
- Indoor Environmental Testing and Consulting
- Industrial Hygiene Consulting
- OSHA Compliance
- Expert Witness
- Training

LIMITED ASBESTOS MATERIALS INSPECTION
FORMER DHS AND CURRENT HETL BUILDINGS
AUGUSTA, MAINE

Prepared for

MR. JEFF LUY
OAK POINT ASSOCIATES
231 MAIN STREET
BIDDEFORD, ME 04005

November 11, 2022



John M. Boilard, RIHT, CMC
Senior Industrial Hygiene &
Safety Specialist

4 Blanchard Road
P.O. Box 85A
Cumberland, Maine 04021
Phone: 207.854.2711 sme-esha.com

SME SEVEE & MAHER ENGINEERS

ESHA ENVIRONMENTAL SAFETY & HYGIENE ASSOCIATES
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APPENDIX B	ANALYTICAL SUMMARY TABLES AND LABORATORY DATA
APPENDIX C	ASBESTOS MATERIALS LISTING
APPENDIX D	DRAWINGS

LIMITED ASBESTOS MATERIALS INSPECTION
FORMER DHS AND CURRENT HETL BUILDINGS
221 STATE STREET, AUGUSTA, MAINE

1.0 EXECUTIVE SUMMARY

Sevee & Maher Engineers, Inc./Environmental Safety & Hygiene Associates, LLC (SME/ESHA) was retained by Oak Point Associates to conduct a Limited Asbestos Materials Inspection for renovation considerations of the buildings formerly housing the State of Maine Department of Health & Human Services (DHS) Offices and currently housing the State of Maine Health and Environmental Testing Laboratory (HETL) situated at 221 State Street in Augusta, Maine.

This inspection was conducted to determine whether any asbestos-containing building materials (ACBMs) existed for the structure for any Environmental Protection Agency (U.S.EPA), National Emission Standards for Hazardous Air Pollutants (NESHAP), Maine Department of Environmental Protection (MEDEP), or Occupational Safety and Health Administration (OSHA) compliance issues requiring remedial actions before renovation/demolition activities for the areas assessed as part of this inspection.

The inspection, assessment, and sample collection actions were conducted by Mr. John M. Boilard, an MEDEP licensed Asbestos Inspector, MEDEP #AI-0154, on October 19, 2022. Site actions were aided by subcontracted G&E Roofing to provide roof patching as needed for this inspection action.

The scope of this inspection was to evaluate the roof areas for ACBMs, as well as sample for indoor waterproofing mastic located in the wall cavities of the former DHS Offices. While on-site, Oak Point Associates also requested the sampling and analysis of the plaster walls in the DHS Offices, as well as 1-foot x 1-foot ceiling tile glue daubs for a second floor stairwell landing area.

Based on the asbestos inspection, Regulated Asbestos-Containing Materials (RACMs) were identified in building materials that would require some formal remediation actions for any impact as part of renovation/demolition actions at the site.

These identified asbestos containing materials are comprised of the following:

- Black/Brown Roof Curbing Felt Papers on DHS Building Roof (approx. 48 sq. ft.)
- Black Ductwork Sealant for Hood H-5 on HETL Building Roof (approx. < 3 sq. ft.)
- Gray Transite Wall Panels for Roof Area Mechanical Room on HETL Building Roof (approx. 1,360 sq. ft.)

2.0 INSPECTION METHODOLOGY AND GENERAL FINDINGS

The following summary outlines the methods and standards associated with collecting asbestos and mold samples.

2.1 Asbestos Sample Collection and Results

Sampling was done according to Asbestos Hazardous Emergency Response Act (AHERA) Asbestos Inspection Guidelines, NESHAP, and MEDEP Requirements (CMR 425 Section 6).

Suspect ACBM samples were collected as follows:

Surfacing Materials

- At least three bulk samples from each homogenous area and/or material that is 1,000 square feet or less;
- At least five bulk samples from each homogenous area that is greater than 1,000 square feet, but less than or equal to 5,000 square feet; and
- At least seven bulk samples from each homogenous area that is greater than 5,000 square feet.

Thermal System Insulation (TSI)

- Three bulk samples from each homogenous area;
- One bulk sample from each homogenous area of patched thermal system insulation, if the patched section is less than 6 linear or square feet; and
- Samples sufficient to determine whether the material is ACBM from each insulated mechanical system where cement is utilized on tees, elbows, or valves.

Miscellaneous Materials

- Three samples from each miscellaneous material; and
- One sample if the amount of miscellaneous material is less than 6 square or linear feet.

A total of twenty-four (24) samples were collected as part of this action, with seven (7) samples analyzed by PLM Visual Estimation Method and fourteen (14) samples analyzed by PLM Non-Friable Organically Bound Method (NOB). Of note is that two (2) friable samples were not analyzed due to positive stops and four (4) NOB samples were prepped for analysis, but were not fully analyzed due to positive stop for homogeneous sample groups.

An Asbestos Bulk Sampling Analytical Summary table, associated laboratory chain-of-custody, and analysis data can be found in Appendix B to this document.

2.2 Methodology

Obtained suspect asbestos samples were submitted to EMSL Analytical Laboratory for analysis. EMSL is accredited for bulk-asbestos sample analysis by the State of Maine.

Bulk samples of any surfacing materials, thermal system insulation, and cementitious materials were analyzed by Polarized Light Microscopy (PLM) Visual Estimation Method (PLM–EPA 600/R-93/116).

Additionally, bulk samples of Non-Friable Organically Bound Materials (NOBs), such as vinyl floor tiles, asphalt shingles, caulking, glazing, mastics, coatings, sealants, adhesives, and glues were analyzed using PLM NOB–EPA 600/R-93/116 with gravimetric preparation method.

Bulk sample groups were analyzed until a positive result was obtained or all samples in the group had been analyzed with results less than 1 percent (< 1%). If samples are found to be less than or equal to 10 percent asbestos or "trace," then these samples are re-analyzed by the 400 Point Count Method, as needed.

If at least one sample in a homogeneous sample group is identified to have an asbestos content greater than 1 percent, then the material is considered to be an ACBM, and the other collected samples do not need to be formally analyzed.

3.0 SUMMARY/RECOMMENDATIONS

The ACBMs identified at the site that would require formal asbestos remedial actions prior to impact as part of any renovation/demolition activity are as follows.

The ACBMs found at the site consist of a Potentially Friable (transite wall panels) and Non-Friable (roof curbing felts and ductwork sealant) U.S.EPA RACMs.

Friable materials can be crumbled by hand pressure and readily release asbestos fibers when impacted. Comparatively, non-friable materials do not crumble under hand pressure and do not readily release asbestos fibers to the surrounding atmosphere.

Materials containing equal to or greater than 1 percent ($\geq$ 1%) of asbestos are regulated under the requirements of OSHA 29 CFR 1910.1001 and 29 CFR 1926.1101, U.S.EPA, and MEDEP.

All work operations which would impact ACBMs would need to be in compliance with the asbestos regulations as set forth in OSHA 29 CFR Part 1926.1101; U.S.EPA Title 40 - CFR, Part 61; NESHAP,

Subparts A and M (General Provisions and Asbestos Standards, respectively); and MEDEP Regulations, Chapter 425, effective 4-3-2011.

Any removal and/or cleanup of the identified ACBMs would need to be performed by properly trained and/or licensed companies and workers prior to any building renovation/demolition actions that would cause disturbance.

A MEDEP Asbestos Abatement Design Plan, Asbestos Abatement Project Notification permitting and fees to the MEDEP, as well as, MEDEP licensed supervisor/workers would be required for impact of the transite wall panels for the roof area mechanical room on the HETL Building.

The identified roof curbing felts and ductwork sealants can be removed by properly trained and supervised workers as an OSHA Class II Asbestos Activity as outlined on 29 CFR 1926.1001.

Refer to the Asbestos Materials Listing in Appendix C for the materials as described above.

4.0 LIMITING CONDITIONS

The observations, conclusions, and recommendations described in this inspection report were made under the conditions stated herein and were arrived at and in accordance with generally accepted standards related to indoor air quality inspections and good industrial hygiene practice. The conclusions presented in the report were based solely upon the services described herein, and not on scientific tasks or procedures beyond the scope of described services.

Hidden or changed conditions, activities that may have occurred after the time of the inspection, and possible inaccuracies of information supplied to SME/ESHA by others might have a material bearing on the findings, conclusions, and recommendations. SME/ESHA reserves the right to amend its opinion(s) if additional information becomes available, but SME/ESHA assumes no obligation to do so.

No warranty or guarantee, expressed or implied, is made regarding the findings, conclusions, or recommendations contained in this report. The limitations presented above supersede the requirements or provisions of all other contracts or scopes of work, implied or otherwise, except as expressly stated or acknowledged herein. SME/ESHA is not responsible for the actions other parties involved in this project.

It is expressly agreed that SME/ESHA will have no liability to any party for reliance upon any of the findings or recommendations contained in this report. To the extent that this provision is found unenforceable by any court, any liability SME/ESHA may have arising out of its agreement with the contracting party is expressly agreed to be limited to the amount paid to SME/ESHA.

APPENDIX A

CERTIFICATIONS AND LICENSES

SME
SEVEE & MAHER
ENGINEERS

ESHA
ENVIRONMENTAL SAFETY
& HYGIENE ASSOCIATES
A Sevee & Maher Engineers company

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JANET T. MILLS
GOVERNOR

MELANIE LOYZIM
COMMISSIONER

State of Maine
Asbestos Abatement Program
John M. Boilard
Inspector
Cert 1: AI-0154
Trn.Exp.Date 09/21/2023
Air Monitor
Cert 2: AM-0037
Trn.2.Exp.Date09/22/2023
Expiration Date 09/30/2023
This is not a legal form of official identification

September 27, 2022

Environmental Safety & Hygiene Associates
4 Blanchard Road
Cumberland, Maine 04021

Dear Licensee:

Asbestos application(s) for individual certification of the **two** employee(s) listed below have been received and **approved**. Individual certification numbers are listed below and wallet card(s) are enclosed. Card(s) are property of the individual to whom each is issued. Your responsibility as a licensee is to ensure delivery of the cards to persons in your employment. This letter should be retained for your company files as record of certification. Please attach 1 updated passport size photo with every application.

Remember, in Maine all **certified employees** working on an asbestos abatement project, whether conducting removal/repair, air monitoring, design, inspection, or analysis functions, **must work for a State of Maine licensed asbestos firm** and carry his/her wallet card(s) on the job site.

As a reminder, prior to renewing your asbestos certification, the State of Maine **requires** an annual refresher course to be taken before submitting a renewal application. A certificate shall expire one year from the last day of the month from the date of issuance, **or on the last day of the month that the training certificate expires**, whichever is sooner.

All our asbestos forms can be found at https://www.maine.gov/dep/waste/asbestos/forms.html
Thank you for your cooperation and your completed application(s).

Name	Category	Certification #	Exp. Date
John M. Boilard	Air Monitor	AM-0037	09/30/2023
John M. Boilard	Inspector	AI-0154	09/30/2023

Sincerely,

Sandra J. Moody

Sandra J. Moody, Environmental Specialist
Division of Remediation
Bureau of Remediation and Waste Management

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826

BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769
(207) 764-0477 FAX: (207) 760-3143

website: www.maine.gov/dep

APPENDIX B

ANALYTICAL SUMMARY TABLES AND LABORATORY DATA

SME
SEVEE & MAHER
ENGINEERS

ESHA
ENVIRONMENTAL SAFETY
& HYGIENE ASSOCIATES
A Sevee & Maher Engineers company

ASBESTOS BULK SAMPLING ANALYTICAL SUMMARY

CLIENT:
Oak Point Associates
231 Main Street
Biddeford, ME 04005

TESTING LOCATION:
221 State Street
Augusta, ME 04330

SAMPLING DATE:
October 19, 2022

PROJECT NUMBER:
220774.00

LAB ID:
622201645

SAMPLE ID:	TESTING AREA/LOCATION	SAMPLE DESCRIPTION	ANALYTICAL METHOD	SAMPLE RESULTS
1A – 1C	DHS Building – Main Roof	3 Layer Felts – Base on Concrete	PLM Gravimetric Reduction	None Detected
2A	DHS Building – Covered Roof Hatches	Felt Paper on Curbing	400 PLM Point Count Gravimetric Reduction	**PC 6.5% Chrysotile**
2B – 2C			PLM Gravimetric Reduction	Positive Stop (Not Analyzed)
3A	HETL Building Hood H-5 Exhaust Ductwork	Ductwork Sealant – Black	400 PLM Point Count Gravimetric Reduction	**PC 8.2% Chrysotile**
3B – 3C			PLM Gravimetric Reduction	Positive Stop (Not Analyzed)
4A – 4C	HETL Building Hood H-5 Exhaust Ductwork	Ductwork Sealant – Gray	PLM Gravimetric Reduction	None Detected
5A	HETL Building Penthouse Mechanical Room	Transite Wall Panels	PLM EPA Visual Estimation	**15% Chrysotile**
5B – 5C				Positive Stop (Not Analyzed)
6A – 6C	HETL Building	Mastic on Masonry/Cement – Black	PLM Gravimetric Reduction	None Detected
7A – 7C	DHS Building	Wall Plaster – White Topcoat & Gray Base Coat	PLM EPA Visual Estimation	None Detected
8A – 8C	DHS Building – Second Floor Stairwell Ceiling	Ceiling Tile Glue Daubs under 1' x 1' Ceiling Tile - Brown	PLM Gravimetric Reduction	None Detected

SME SEVEE & MAHER ENGINEERS

ESHA ENVIRONMENTAL SAFETY & HYGIENE ASSOCIATES
A Sevee & Maher Engineers company

EMSL Analytical, Inc.

161 John Roberts Road South Portland, ME 04106
Phone/Fax: (207) 517-6921 / (207) 517-6922
http://www.EMSL.com / portlandlab@emsl.com

EMSL Order ID:	622201645
Customer ID:	ESHA42
Customer PO:	220774.00
Project ID:	

Attn: Mark Coleman & Doreen Mattson
ESHA
PO Box 85A
Cumberland, ME 04021

Proj: 220774

Phone:	(207) 829-5016
Fax:	(207) 829-5692
Collected:	10/19/2022
Received:	10/20/2022
Analyzed:	10/26/2022

Summary Test Report for Asbestos Analysis of Bulk Material via EPA 600/R-93/116

Client Sample ID: 1A **Lab Sample ID:** 622201645-0001
Sample Description: Roofing Base Sheets

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/26/2022	Black	0.85%	99.1%	None Detected	

Client Sample ID: 1B **Lab Sample ID:** 622201645-0002
Sample Description: Roofing Base Sheets

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/26/2022	Black	0.47%	99.5%	None Detected	

Client Sample ID: 1C **Lab Sample ID:** 622201645-0003
Sample Description: Roofing Base Sheets

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/26/2022	Black	0.51%	99.5%	None Detected	

Client Sample ID: 2A **Lab Sample ID:** 622201645-0004
Sample Description: Roofing Curbing Felt

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
400 PLM PtCt Grav. Red.	10/26/2022	Black	0.0%	93.5%	**6.5% Chrysotile**	

Client Sample ID: 2B **Lab Sample ID:** 622201645-0005
Sample Description: Roofing Curbing Felt

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/26/2022				Positive Stop (Not Analyzed)	

Client Sample ID: 2C **Lab Sample ID:** 622201645-0006
Sample Description: Roofing Curbing Felt

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/26/2022				Positive Stop (Not Analyzed)	

Client Sample ID: 3A **Lab Sample ID:** 622201645-0007
Sample Description: Ductwork Sealant - Black

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
400 PLM PtCt Grav. Red.	10/26/2022	Black	0.0%	91.8%	**8.2% Chrysotile**	

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Phone/Fax: (207) 517-6921 / (207) 517-6922
http://www.EMSL.com / portlandlab@emsl.com

EMSL Order ID:	622201645
Customer ID:	ESHA42
Customer PO:	220774.00
Project ID:	

Summary Test Report for Asbestos Analysis of Bulk Material via EPA 600/R-93/116

Client Sample ID: 3B **Lab Sample ID:** **622201645-0008**
Sample Description: Ductwork Sealant - Black

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/26/2022			Positive Stop (Not Analyzed)		

Client Sample ID: 3C **Lab Sample ID:** **622201645-0009**
Sample Description: Ductwork Sealant - Black

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/26/2022			Positive Stop (Not Analyzed)		

Client Sample ID: 4A **Lab Sample ID:** **622201645-0010**
Sample Description: Ductwork Sealant - Gray

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/26/2022	Gray	0.0%	100%	None Detected	

Client Sample ID: 4B **Lab Sample ID:** **622201645-0011**
Sample Description: Ductwork Sealant - Gray

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/26/2022	Gray	0.0%	100%	None Detected	

Client Sample ID: 4C **Lab Sample ID:** **622201645-0012**
Sample Description: Ductwork Sealant - Gray

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/26/2022	Gray	0.0%	100%	None Detected	

Client Sample ID: 5A **Lab Sample ID:** **622201645-0013**
Sample Description: Transite Wall Panels

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	10/26/2022	Gray	0.0%	85.0%	**15% Chrysotile**	

Client Sample ID: 5B **Lab Sample ID:** **622201645-0014**
Sample Description: Transite Wall Panels

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	10/26/2022			Positive Stop (Not Analyzed)		

Client Sample ID: 5C **Lab Sample ID:** **622201645-0015**
Sample Description: Transite Wall Panels

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	10/26/2022			Positive Stop (Not Analyzed)		

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http://www.EMSL.com / portlandlab@emsl.com

EMSL Order ID:	622201645
Customer ID:	ESHA42
Customer PO:	220774.00
Project ID:	

Summary Test Report for Asbestos Analysis of Bulk Material via EPA 600/R-93/116

Client Sample ID: 6A **Lab Sample ID:** **622201645-0016**

Sample Description: Black Mastic on Masonry/Cement

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/26/2022	Black	0.0%	100%	None Detected	

Client Sample ID: 6B **Lab Sample ID:** **622201645-0017**

Sample Description: Black Mastic on Masonry/Cement

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/26/2022	Black	0.0%	100%	None Detected	

Client Sample ID: 6C **Lab Sample ID:** **622201645-0018**

Sample Description: Black Mastic on Masonry/Cement

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/26/2022	Black	0.0%	100%	None Detected	

Client Sample ID: 7A-White Top Coat **Lab Sample ID:** **622201645-0019**

Sample Description: Wall Plaster: White Top Coat & Gray Base Coat

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	10/26/2022	White	0.0%	100.0%	None Detected	

Client Sample ID: 7A-Gray Base Coat **Lab Sample ID:** **622201645-0019A**

Sample Description: Wall Plaster: White Top Coat & Gray Base Coat

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	10/26/2022	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 7B-White Top Coat **Lab Sample ID:** **622201645-0020**

Sample Description: Wall Plaster: White Top Coat & Gray Base Coat

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	10/26/2022	White	0.0%	100.0%	None Detected	

Client Sample ID: 7B-Gray Base Coat **Lab Sample ID:** **622201645-0020A**

Sample Description: Wall Plaster: White Top Coat & Gray Base Coat

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	10/26/2022	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 7C-White Top Coat **Lab Sample ID:** **622201645-0021**

Sample Description: Wall Plaster: White Top Coat & Gray Base Coat

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	10/26/2022	White	0.0%	100.0%	None Detected	

EMSL Analytical, Inc.

161 John Roberts Road South Portland, ME 04106
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http://www.EMSL.com / portlandlab@emsl.com

EMSL Order ID:	622201645
Customer ID:	ESHA42
Customer PO:	220774.00
Project ID:	

Summary Test Report for Asbestos Analysis of Bulk Material via EPA 600/R-93/116

Client Sample ID: 7C-Gray Base Coat ***Lab Sample ID:*** **622201645-0021A**

Sample Description: Wall Plaster: White Top Coat & Gray Base Coat

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	10/26/2022	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 8A ***Lab Sample ID:*** **622201645-0022**

Sample Description: Ceiling Tile Glue Daubs - Brown

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/26/2022	Brown	0.0%	100%	None Detected	

Client Sample ID: 8B ***Lab Sample ID:*** **622201645-0023**

Sample Description: Ceiling Tile Glue Daubs - Brown

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/26/2022	Brown	0.0%	100%	None Detected	

Client Sample ID: 8C ***Lab Sample ID:*** **622201645-0024**

Sample Description: Ceiling Tile Glue Daubs - Brown

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	10/26/2022	Brown	0.0%	100%	None Detected	

PLM: ME BA-0197

PLM 400 PC - Gravimetric: ME BA-0197

PLM EPA NOB: ME BA-0197

Analyst(s):

Thomas Stegeman — PLM (7); 400 PLM PtCt Grav. Red (2); PLM Grav. Reduction (12)

Reviewed and approved by:

Stephen Severn, Technical Manager
or Other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. South Portland, ME NVLAP Lab Code 500094-0, VT AL197271, ME LM-0039, CT PH-0346

Initial report from: 10/26/202216:36:18

OrderID: 622201645

EMSL ANALYTICAL, INC.

Asbestos Chain of Custody

EMSL Order Number *(lab use only)*: 622201645

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077
PHONE: 1-800-220-3675
FAX: (856) 786-5974

Company Name : ESHA (Sevee & Maher Engineers)		**EMSL Customer ID:** ESHA 42	
Street: PO Box 85A		**City:** Cumberland	**State or Province:** ME
Zip/Postal Code: 04021	**Country:** US	**Telephone #:** 207-829-5016	**Fax #:** 207-829-5692
Report To (Name): John Boilard		**Please Provide Results via:** ☐ Fax ☒ Email	
email Address: analytical.eshdata@sme-engineers.com		**Purchase Order Number:** 220774.00	
Client Project ID: 220774		**EMSL Project ID** *(internal use only)*:	
State or Province Collected: ME		**CT only** ☐ **Commercial/Taxable** ☐ **Residential/Tax Exempt**	

EMSL-Bill to: ☐ Same ☐ Different - *If bill to is different note instructions in comment. Third party billing requires written authorization from third party*

Turnaround Time (TAT) Options Please Check

☐ 3 Hr[1]	☐ 4-4.5Hr[1] AHERA Only	☐ 6 Hr[1]	☐ 24 Hr	☐ 32 Hr[2]	☐ 48 Hr	☐ 72 Hr	☒ 96 Hr	☐ 1 Week	☐ 2 Week

[1]*Premium Service Charge applies for 3 Hour TEM AHERA or EPA Level II TAT – you will be asked to sign an authorization form. TEM Air 3-6 Hour, please call ahead to schedule*
[2] *32 Hour TAT available for select tests only; samples must be submitted by 11:30 am.*

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

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

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

Point Count w/Gravimetric
- ☒ 400 (<0.25%) ☐ 1000 (<0.1%)
- ☐ NYS 198.1 (friable - NY)
- ☐ NYS 198.6 NOB (non-friable-NY)
- ☐ NYS 198.8 SOF-V
- ☐ NIOSH 9002 (<1%)

TEM – Air[1]
- ☐ AHERA 40 CFR, Part 763
- ☐ NIOSH 7402
- ☐ EPA Level II
- ☐ ISO 10312

TEM - Bulk
- ☐ TEM EPA NOB
- ☐ NYS NOB 198.4 (non-friable-NY)
- ☐ TEM EPA 600/R-93/116 with milling prep (<0.1%)*

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

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

Soil – Rock – Vermiculite (reporting limit)
- ☐ PLM EPA 600/R-93/116 with milling prep (<0.25%)
- ☐ TEM EPA 600/R-93/116 with milling prep (<0.1%)*
- ☐ TEM Qualitative via Filtration Prep
- ☐ TEM Qualitative via Drop Mount Prep
- ☐ Cincinnati Method EPA 600/R-04/004 – PLM/TEM

**Lower reporting limits avaialble on request*

Other test (please specify):

☒ **Stop At First Positive** *(clearly identify homogenous areas below)*

Filter Pore Size (Air Samples): ☐ 0.8µm ☐ 0.45µm

Sampler's Name: JOHN M. BOILARD **Sampler's Signature:**

Sample #	Sample Description/Location	Volume, Area or Homogenous Area	Date/Time Sampled
1A, B, C	ROOFING BASE SHEETS		10-19-22
2A, B, C	ROOFING CURBING FELT		
3A, B, C	DUCTWORK SEALANT - BLACK		
4A, B, C	DUCTWORK SEALANT - GRAY		
5A, B, C	TRANSITE WALL PANELS		10-19-22

Client Sample # (s): 1A, B, C - 8A, B, C **Total # of Samples:** 24

Relinquished by (Client): **Date:** 10-20-2022 **Time:** 1955

Received by (Lab): **Date:** 10/20/22 **Time:** 5:30 PM

Comments/Special Instructions:

Send Invoices To: accountspayable@smemaine.com

RECEIVED OCT 20 2022 BY:

Controlled Document – COC-05 Asbestos – R12.1 – 11/01/2019

EMSL Analytical, Inc.'s (DBA: LA Testing) Laboratory Terms and Conditions are incorporated into this chain of custody by reference in their entirety. Submission of samples to EMSL Analytical Inc. constitutes acceptance and acknowledgment of all terms and conditions.

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

Project Number 220774

EMSL Order Number (*Lab Use Only*):

622201645

PHONE:
FAX:

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

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
6 A, B, C	BLACK MASTIC ON MASONRY/CEMENT		10-19-22
7 A, B, C	WALL PLASTER: WHITE TOP COAT & GRAY BASE COAT		↓
8 A, B, C	CEILING TILE GLUE DAUBS - BROWN		10-19-22

*Comments/Special Instructions:

RECEIVED
BY: SJ

Page 2 of 2 pages

Controlled Document – Asbestos COC – R10 – 05/09/2016

APPENDIX C

ASBESTOS MATERIALS LISTING

SME
SEVEE & MAHER
ENGINEERS

ESHA
ENVIRONMENTAL SAFETY
& HYGIENE ASSOCIATES
A Sevee & Maher Engineers company

SME SEVEE & MAHER ENGINEERS
ESHA ENVIRONMENTAL SAFETY & HYGIENE ASSOCIATES A Sevee & Maher Engineers company

ASBESTOS MATERIALS LISTING

CLIENT: Oak Point Associates
ESHA JCN#: 220774
PROJECT: Former DHS and Current HETL Buildings
221 State Street
Augusta, Maine

SQUARE FOOTAGE OF ASBESTOS CONTAINING MATERIALS

Homogeneous Material Type	Functional Space	Associated Field Sample	Square Feet	Remarks
Roof Curbing Felts	DHS Building, Roof	**2A, B, C**	**Approx. 48**	Brown/Black curbing felts under EPDM roofing. See drawing.
Ductwork Sealant	HETL Roof, Hood H-5 Ductwork	**3A, B, C**	**Approx. < 3**	Black ductwork sealant. See drawing.
Transite Wall Panels	HETL Roof, Mechanical Room	**5A, B, C**	**Approx. 1,360**	Cementitious wall panels. See drawing.

4 Blanchard Road, P.O. Box 85A
Cumberland, ME 04021
Tel: 207.854.2711
info@sme-esha.com
sme-esha.com

APPENDIX D

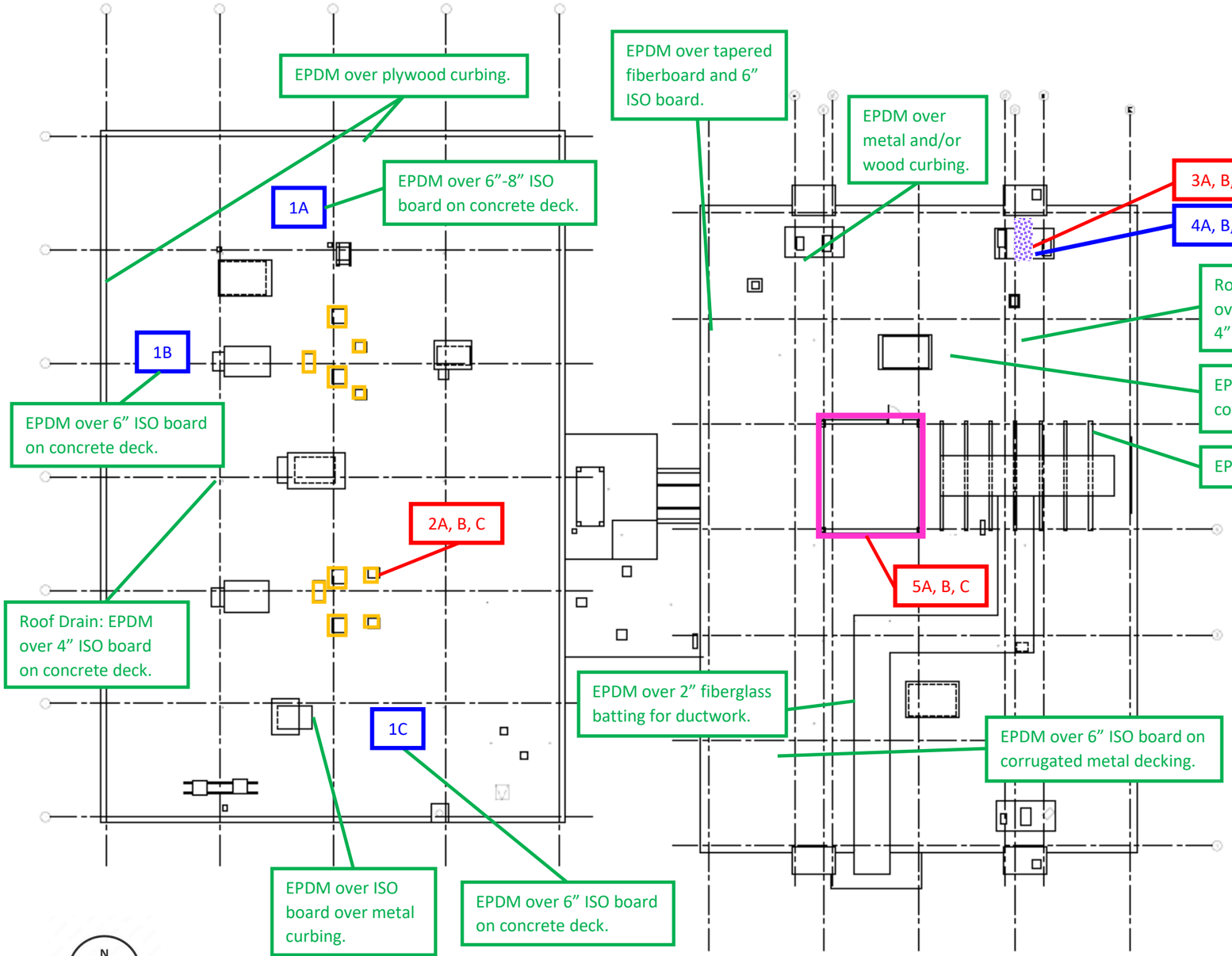
DRAWINGS

SME
SEVEE & MAHER
ENGINEERS

ESHA
ENVIRONMENTAL SAFETY
& HYGIENE ASSOCIATES
A Sevee & Maher Engineers company

SUPPLEMENTAL ASBESTOS MATERIALS SURVEY

221 STATE STREET, AUGUSTA, MAINE



ROOFS

KEY:

- **ASBESTOS CURBING FELT UNDER EPDM, PRESUMED TO BE SAME AS SAMPLES 2A, B, & C** (Approximately 48 sq. ft.)
- **ASBESTOS BLACK DUCTWORK SEALANT** (Approximately <3 sq. ft.)
- **ASBESTOS TRANSITE WALL PANELS** (Approximately 1,360 sq. ft.)
- 1A — **BULK SAMPLES POSITIVE for ASBESTOS**
- 1A — **BULK SAMPLES NEGATIVE for ASBESTOS**

SME SEVEE & MAHER ENGINEERS

ESHA ENVIRONMENTAL SAFETY & HYGIENE ASSOCIATES A Sevee & Maher Engineers company

ESHA JOB # **220774**

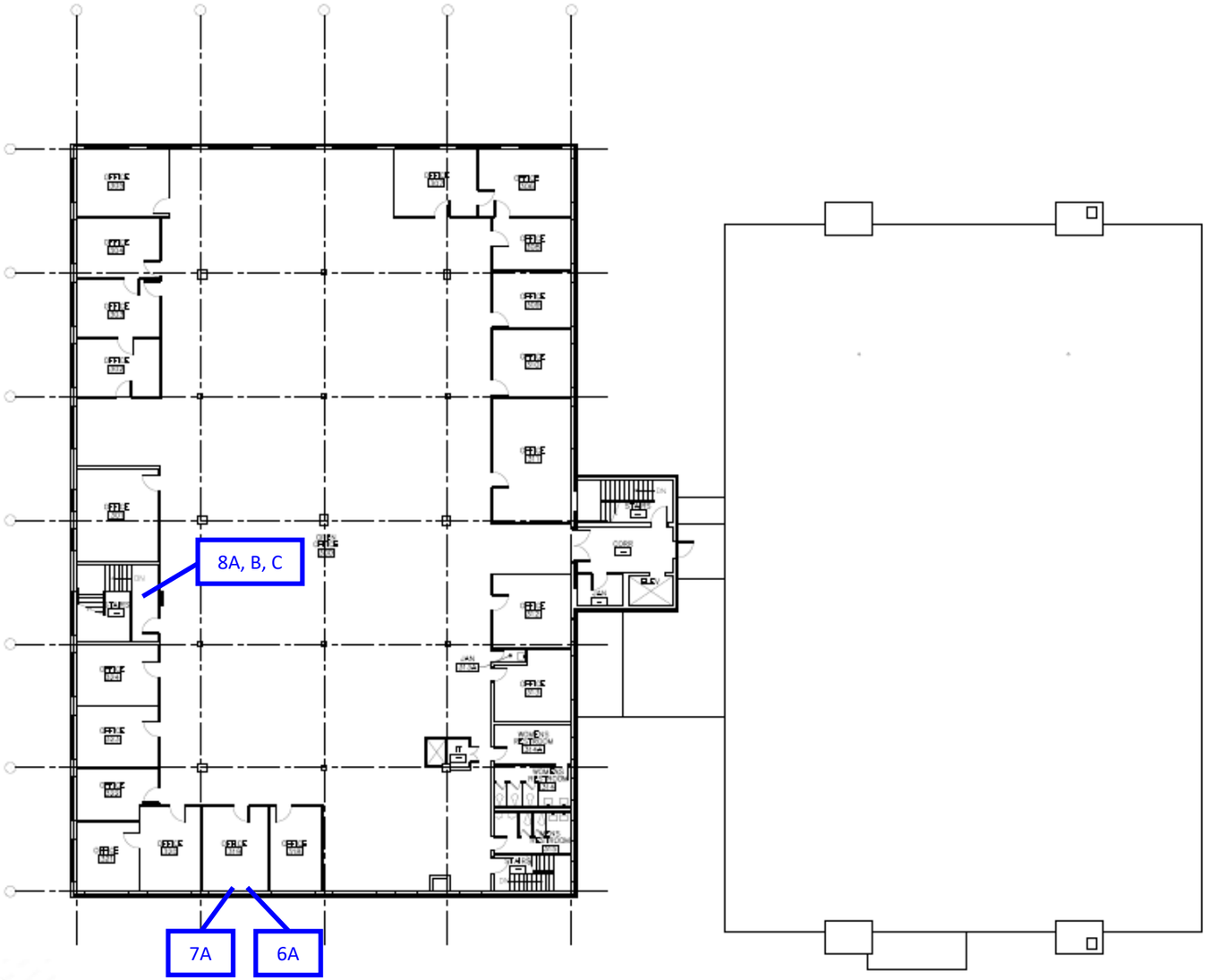
INSPECTION DATE: **10-19-2022**

JMB

DRAWING NOT TO SCALE

ASBESTOS MATERIALS SURVEY

221 STATE STREET, AUGUSTA, MAINE



SECOND FLOOR

KEY:

1A — **BULK SAMPLES POSITIVE for ASBESTOS**

1A — **BULK SAMPLES NEGATIVE for ASBESTOS**

SME SEVEE & MAHER ENGINEERS

ESHA ENVIRONMENTAL SAFETY & HYGIENE ASSOCIATES
A Sevee & Maher Engineers company

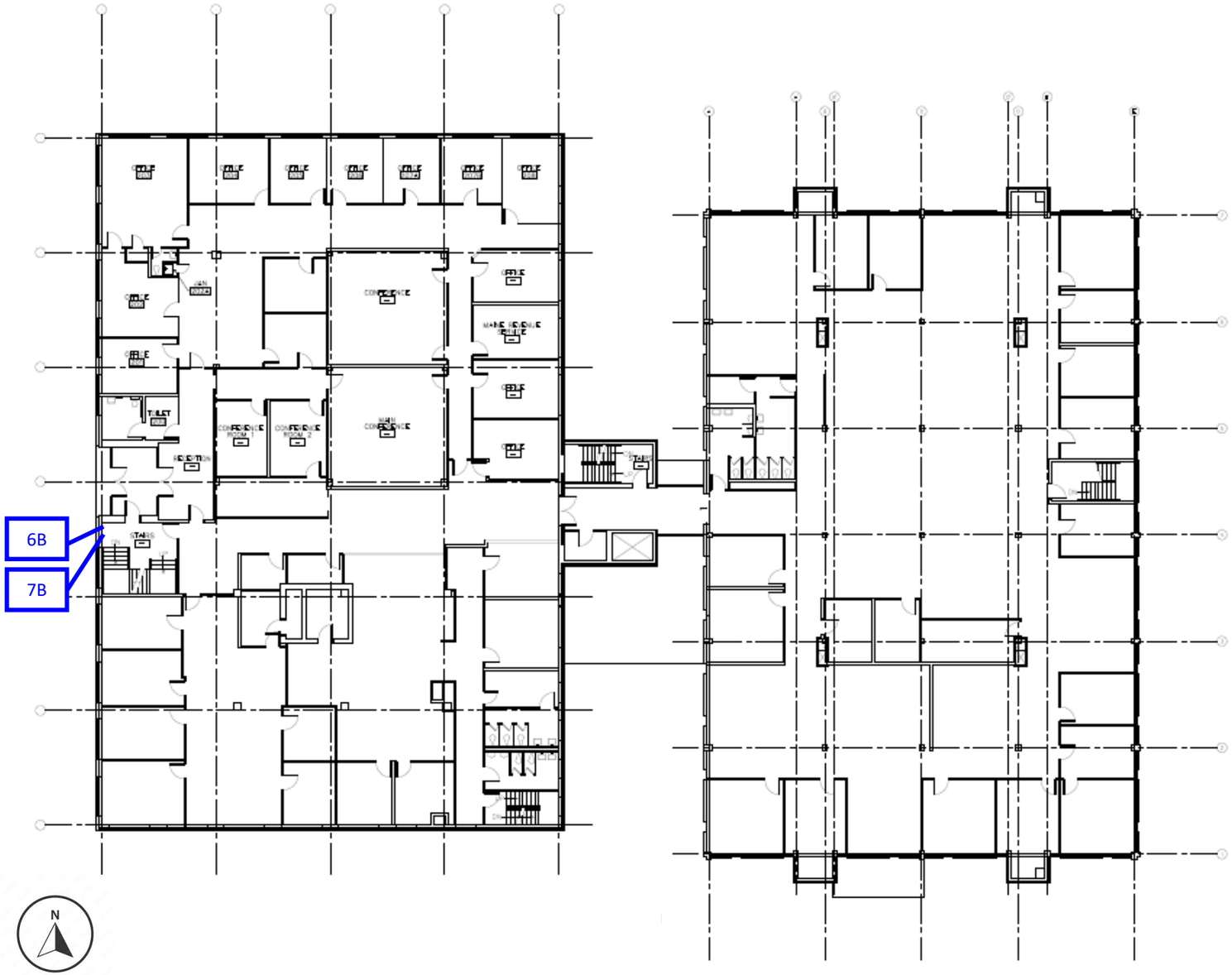
ESHA JOB # 220774

INSPECTION DATE: 10-19-2022
JMB

DRAWING NOT TO SCALE

ASBESTOS MATERIALS SURVEY

221 STATE STREET, AUGUSTA, MAINE



FIRST FLOOR

KEY:

1A	BULK SAMPLES POSITIVE for ASBESTOS
1A	BULK SAMPLES NEGATIVE for ASBESTOS

SME SEVEE & MAHER ENGINEERS

ESHA ENVIRONMENTAL SAFETY & HYGIENE ASSOCIATES
A Sevee & Maher Engineers company

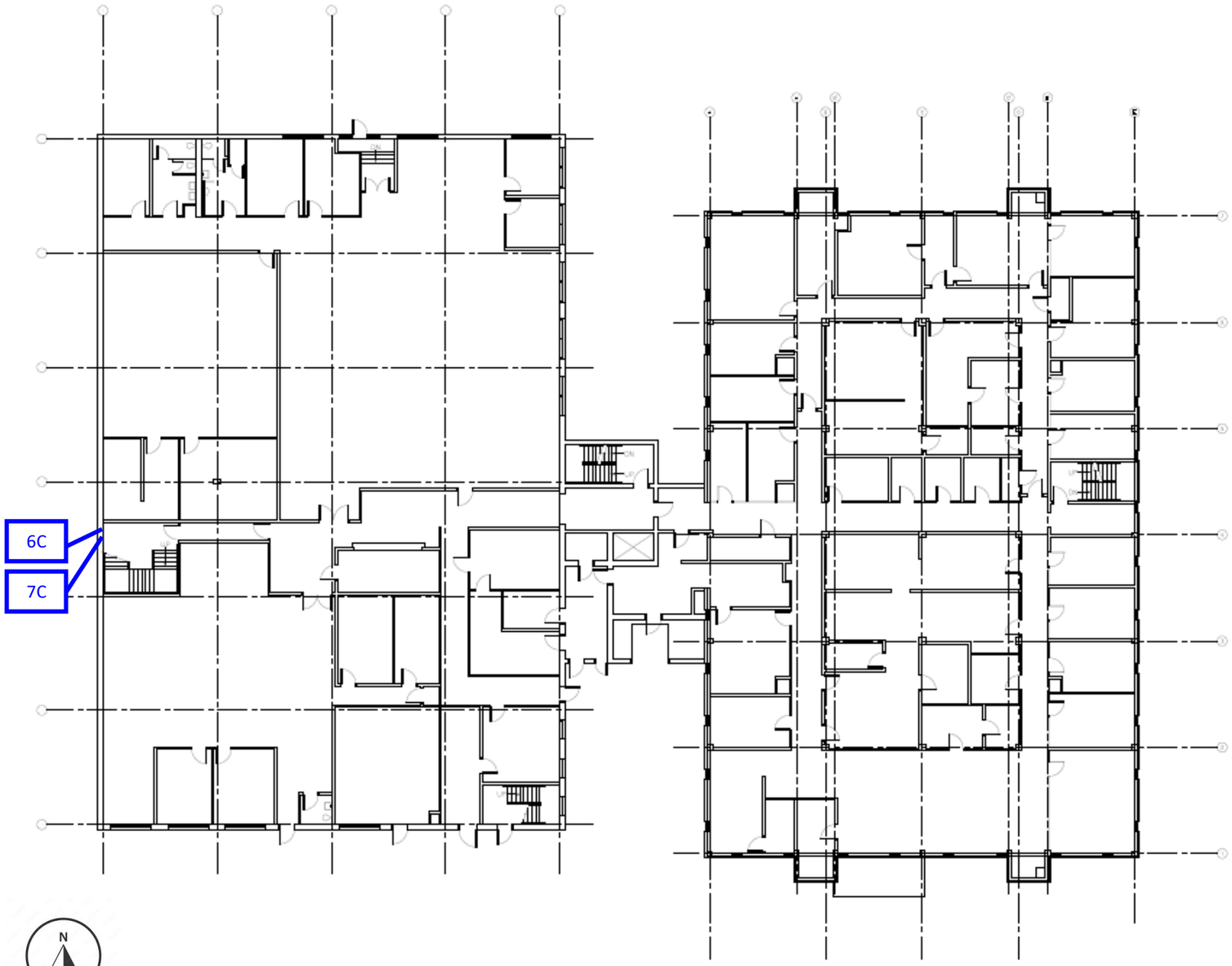
ESHA JOB # 220774

INSPECTION DATE: 10-19-2022
JMB

DRAWING NOT TO SCALE

ASBESTOS MATERIALS SURVEY

221 STATE STREET, AUGUSTA, MAINE



GROUND FLOOR

KEY:

1A	BULK SAMPLES POSITIVE for ASBESTOS
1A	BULK SAMPLES NEGATIVE for ASBESTOS

SME SEVEE & MAHER ENGINEERS

ESHA ENVIRONMENTAL SAFETY & HYGIENE ASSOCIATES A Sevee & Maher Engineers company

ESHA JOB # **220774**

INSPECTION DATE: **10-19-2022**

JMB

DRAWING NOT TO SCALE

January 02, 2020

Ms. Jill M. Instasi
Senior Project Manager
State of Maine Bureau of Real Estate Management
77 State House Station
Augusta, Maine 04333-0077

Re: Polychlorinated Biphenyl Caulk/Glazing Screening | Former Department of Health and Human Services Offices | 221 State Street | Augusta, Maine

Dear Ms. Instasi:

At the request of the State of Maine Bureau of Real Estate Management (BREM), CES, Inc. (CES) completed a Polychlorinated Biphenyl (PCB) caulk/glazing screening at the former Department of Health and Human Services (DHHS) offices located at 221 State Street in Augusta, Maine. The PCB screening, conducted on November 25, 2019, was completed to determine if the interior and exterior caulking/glazing associated with the window units throughout the DHHS offices and exterior door systems contained PCBs at concentrations greater than or equal to (≥) 1.0 parts per million (ppm).

The former DHHS portion of the building consists of a three-story, masonry structure constructed in 1951 and is currently used as storage. Steel frame windows are present throughout the building, most of which are double paneled. The door systems providing access to the DHHS portion of the building are also metal. It should be noted that this PCB caulk/glazing screening was limited to the DHHS portion of the building and did not include the Health and Environmental Testing Laboratory (HETL) portion of the building. The DHHS portion of the building was unoccupied at the time the PCB screening was completed.

PCB CAULK/GLAZING SCREENING

PCBs were used as a plasticizer in caulk and in elastic sealant materials, primarily from 1950 through 1978. These caulk/sealants were commonly used in windows and associated window systems, door frames, stairways, masonry columns, and other masonry building materials. PCBs were not used in these materials after 1978. Consistent with U.S. Environmental Protection Agency (USEPA) guidelines, PCB containing materials have a PCB content of ≥ 50.0 ppm. At this level, the materials containing PCBs are not an authorized use under the PCB regulations

465 South Main Street
PO Box 639
Brewer, Maine 04412
T 207.989.4824
F 207.989.4881

and must be removed. When removed, these materials are considered a controlled hazardous waste material under the Toxic Substance Control Act (TSCA).

On November 25, 2019, Ms. Deborah Kasik and Mr. Nathan Norris (both of CES) conducted the field assessment. During the assessment, CES collected a total of 42 representative samples of suspect PCB-contaminated caulk/glazing associated with the building window and door systems from each floor and elevation. The types of caulk/glazing samples collected included the following:

- Type 1 (001): White caulk associated with the exterior metal window system perimeter (metal window frame to brick junction);
- Type 2 (002): White glazing associated with exterior metal window glass panes;
- Type 3 (003): White caulk associated with the interior metal window system perimeter (metal window frame to brick junction);
- Type 4 (004): Gray caulk associated with interior metal window muntin bars (mullions);
- Type 5 (005): Gray caulk associated with metal door systems (metal door frames to brick/concrete junction) and;
- Type 6 (006): Cream caulk associated with a single metal window system (metal window frame to brick junction).

Samples of each type of identified caulk/glaze were collected from each floor and identified building elevation. The suspect PCB samples were collected and handled in accordance with applicable USEPA methods.

A total of six screening samples, one random sample from each represented type of caulk/glaze, was submitted to Alpha Analytical (Alpha) for analysis. The remaining samples were 'held' at the laboratory if additional sample analysis was warranted.

The suspect PCB samples were analyzed by Alpha Analytical (Alpha) utilizing USEPA analytical test method SW-846, Method 8082. All samples were prepared by the laboratory using extraction method SW-846, Method 3540C ("Soxhlet" extraction).

Table 1 presents the window and door system descriptions and assigned "type" caulk description and whether caulk with ≥ 1.0 ppm PCB content was identified.

TABLE 1 - CAULK/GLAZE - WINDOW/DOOR SYSTEM SUMMARY BY TYPE

TYPE	TYPE DESCRIPTION	SAMPLE NUMBER	CAULK DESCRIPTION	≥ 1.0 PPM PCB
1	Exterior – Window Caulk (metal frame to brick)	001A	White Caulk	No
2	Exterior – Window Glazing	002H	White Glaze	No
3	Interior – Window Caulk (metal frame to brick)	003B	White Caulk	No
4	Interior – Window Caulk (metal muntin bar)	004G	Gray Caulk	No
5	Exterior – Door Frame (metal frame to brick/concrete)	005B	Gray Caulk	No
6	Exterior – Window Caulk (metal frame to brick; one unit)	006A	Cream Caulk	No

SUPPLEMENTAL LABORATORY ANALYTICAL RESULTS

Upon review of the initial PCB screening results, Type 3 and Type 4 caulking sample results indicated elevated PCB concentrations, both of which were below the ≥ 1.0 ppm concentration. To ensure reliability of the data for these two caulk types, CES, upon discussion with BREM, requested PCB analysis be performed on four additional samples, two each of Type 3 and Type 4. The additional samples were randomly selected from those collected at the building. CES requested the additional analysis on December 10, 2019. Alpha Analytical (Alpha) utilizing USEPA analytical test method SW-846, Method 8082. All samples were prepared by the laboratory using extraction method SW-846, Method 3540C ("Soxhlet" extraction). The analytical results for the four additional samples are included as Table 2.

TABLE 2 - CAULK/GLAZE – WINDOW CAULKING

TYPE	TYPE DESCRIPTION	SAMPLE NUMBER	CAULK DESCRIPTION	≥ 1.0 PPM PCB
3	Interior – Window Caulk (metal frame to brick)	003E	White Caulk	No
3	Interior – Window Caulk (metal frame to brick)	003G	White Caulk	No
4	Interior – Window Caulk (metal muntin bar)	004D	Gray Caulk	No
4	Interior – Window Caulk (metal muntin bar)	004I	Gray Caulk	No

Sample locations for the caulk/glazing are shown on **Figures H201 and H202**, laboratory analytical results are located in **Attachment A**. A photographic log of the identified 'types' of caulk/glazing is included as **Attachment B**.

Caulk/glazing were not identified as having PCBs at concentrations ≥ 1.0 ppm. Therefore, the various caulk/glazing types identified and sampled at the Former DHHS Building are not considered to be a controlled hazardous waste. Based upon the laboratory analytical results of the PCB samples collected at the building, additional verification sampling is not required.

This report was prepared by CES for the sole use of BREM and should not be reproduced without their full, written authorization. Please contact either of the undersigned at (207) 989-4824 if you have any questions related to this project or if additional services are required.

Sincerely,
CES, Inc.

Deborah A. Kasik
Project Scientist

Dennis B. Kingman, Jr., CHMM
Vice President/Senior Project Manager II

DAK/DBK/cmc
Attachments

FIGURES

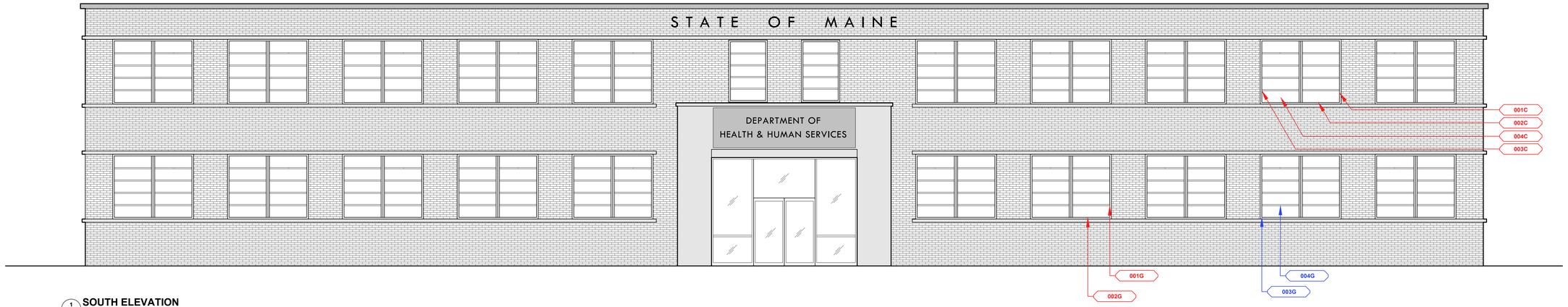
PLAN REFERENCE:

FLOOR PLAN DERIVED FROM DRAWINGS BY OTHERS PROVIDED TO CES, INC AND ARE NOT WARRANTED AS TO ACCURACY AND ARE INTENDED TO BE SCHEMATIC.

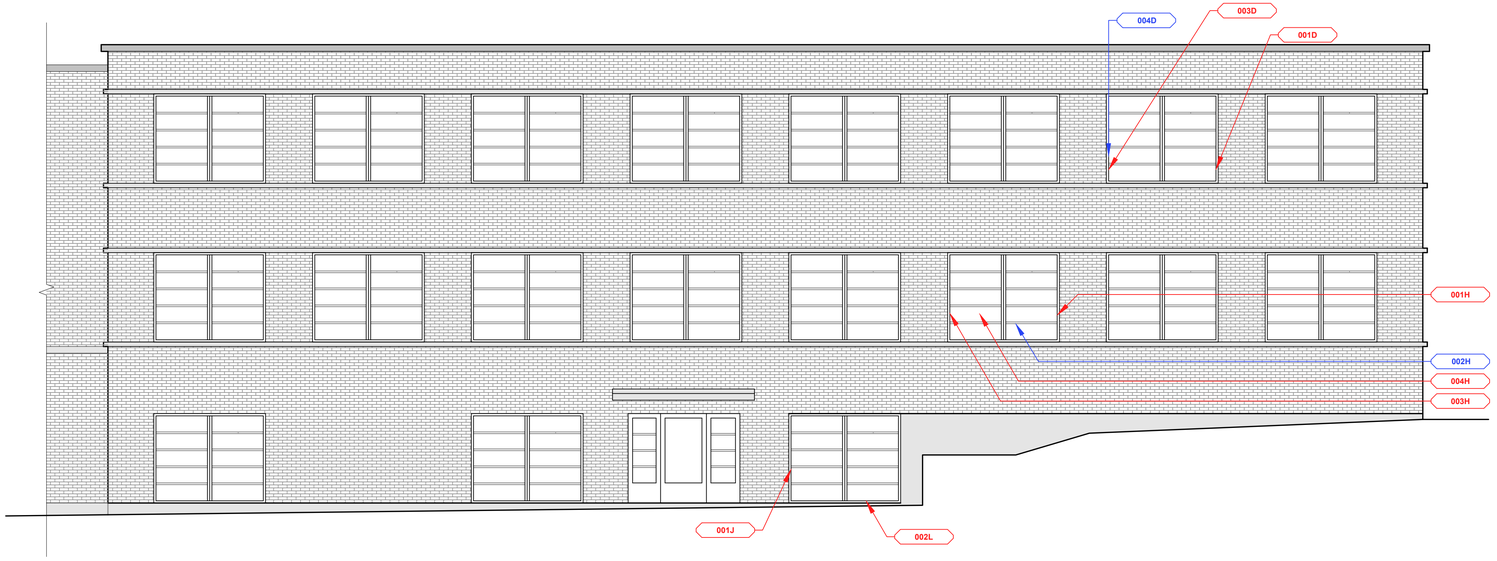
LEGEND

001A — PCB CAULK / GLAZING SAMPLE NUMBER AND LOCATION WITH PCB CONCENTRATIONS OF LESS THAN (<) 1.0 (ppm).

001A — PCB CAULK / GLAZING SAMPLE NUMBER AND LOCATION NOT ANALYZED.



1 H201 **SOUTH ELEVATION** N.T.S.



2 H201 **WEST ELEVATION** N.T.S.

www.cesincusa.com
Brewer
465 South Main Street
PO Box 639
Brewer, ME
T.207-989-4824
F.207-989-4881

CES INC
Engineers • Environmental Scientists • Surveyors

PROJECT TITLE
STATE OF MAINE, BUREAU OF REAL ESTATE MANAGEMENT
FORMER DHHS BUILDING, 211 STATE STREET, AUGUSTA, ME

SHEET TITLE
PCB CAULK/GLAZING SCREENING

NO	DESCRIPTION	DATE	DRAWN BY	CHECKED BY

ISSUE STATUS
NOT FOR CONSTRUCTION

SCALE	NTS
DATE	2019.11.25
DRAWN BY	JNB/BTH
CHECKED BY	DBK
DESIGNED BY	
APPROVED BY	
JOB NUMBER	10289.014
SHEET NUMBER	H201

P:\10289-STATE_OF_MAINE\01-STATEST AUGUSTA PCB SCREENING DHHS BLDG-08X02\CAD_DRAWINGS\STRUCTURAL\10289.014-H-AA.DWG

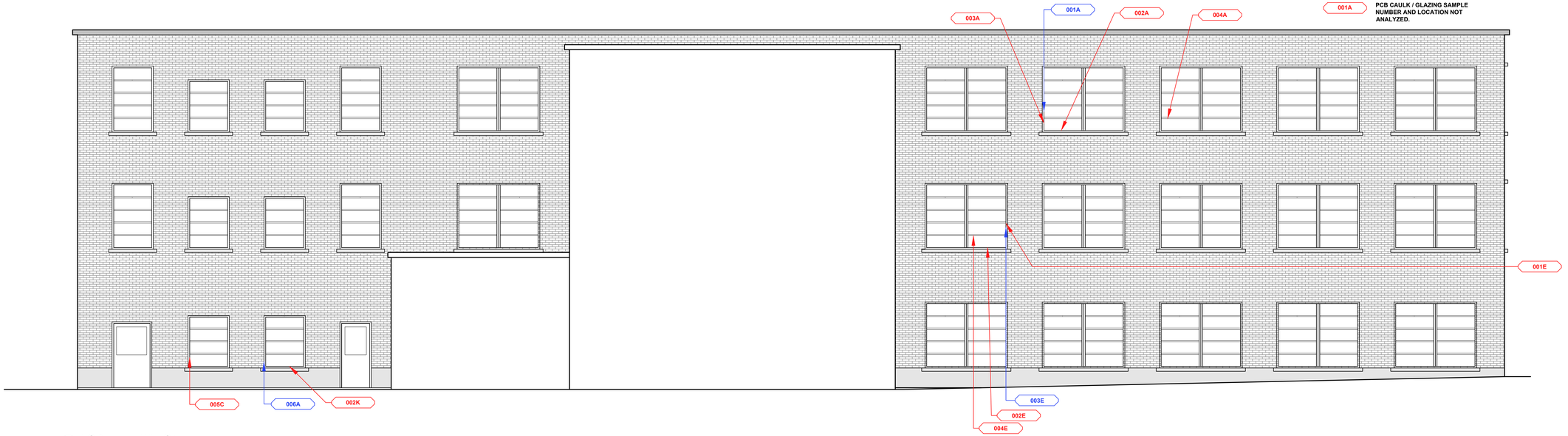
PLAN REFERENCE:

FLOOR PLAN DERIVED FROM DRAWINGS BY OTHERS PROVIDED TO CES, INC AND ARE NOT WARRANTED AS TO ACCURACY AND ARE INTENDED TO BE SCHEMATIC.

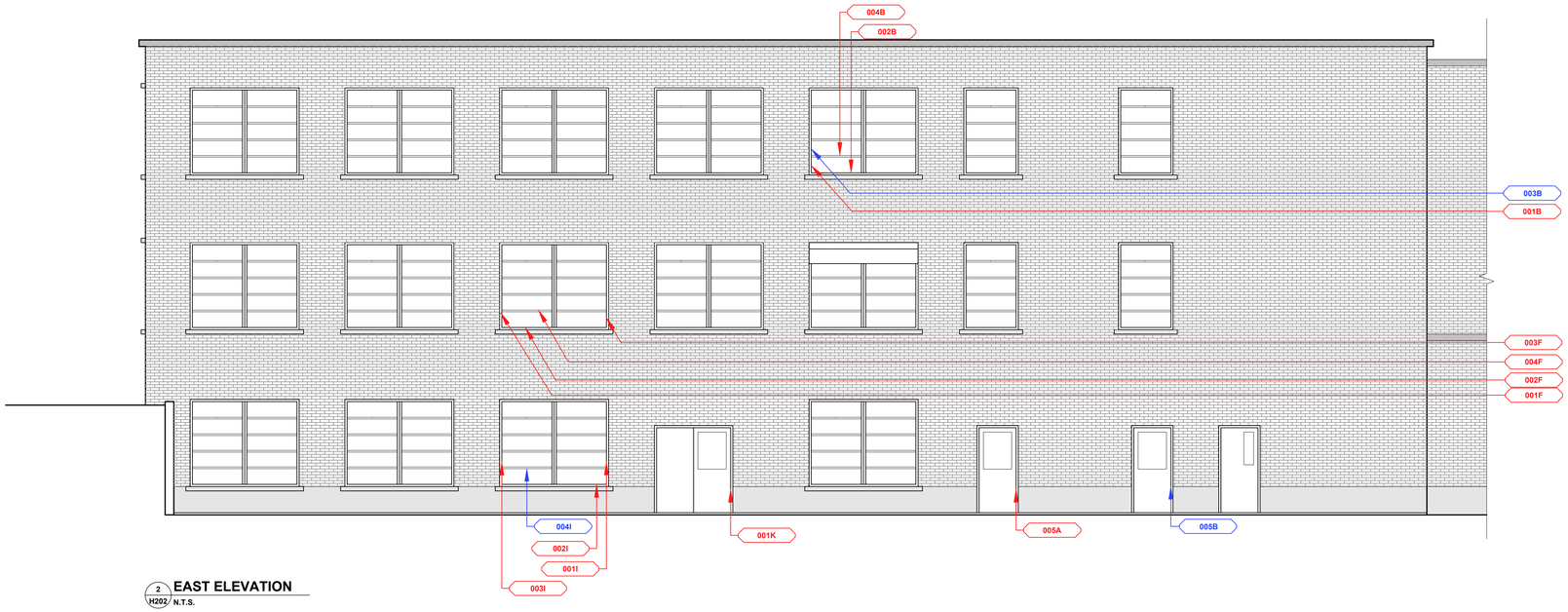
LEGEND

001A — PCB CAULK / GLAZING SAMPLE NUMBER AND LOCATION WITH PCB CONCENTRATIONS OF LESS THAN (<) 1.0 (ppm).

001A — PCB CAULK / GLAZING SAMPLE NUMBER AND LOCATION NOT ANALYZED.



1 / H202 **NORTH ELEVATION** N.T.S.



2 / H202 **EAST ELEVATION** N.T.S.

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Brewer
465 South Main Street
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Brewer, ME
T.207-989-4824
F.207-989-4881

CES INC
Engineers • Environmental Scientists • Surveyors

PROJECT TITLE
STATE OF MAINE, BUREAU OF REAL ESTATE MANAGEMENT
FORMER DHHS BUILDING, 211 STATE STREET, AUGUSTA, ME

SHEET TITLE
PCB CAULK/GLAZING SCREENING (CONT.)

NO	DESCRIPTION	DATE	DRAWN BY	CHECKED BY

ISSUE STATUS
NOT FOR CONSTRUCTION

SCALE	NTS
DATE	2019.11.25
DRAWN BY	JNB/BTH
CHECKED BY	DBK
DESIGNED BY	
APPROVED BY	
JOB NUMBER	10289.014
SHEET NUMBER	H202

P:\10289-STATE_OF_MAINE\01-STATEST AUGUSTA PCB SCREENING DHHS BLDG-DBK\02-CAD_DRAWINGS\STRUCTURAL\10289.014-H-AA.DWG

ATTACHMENTS

ATTACHMENT A

LABORATORY ANALYTICAL RESULTS

Initial Screening Results
Supplemental Analysis

ANALYTICAL REPORT

Lab Number:	L1956918
Client:	CES, Inc. 465 South Main Street Brewer, ME 04412
ATTN:	Dennis Kingman
Phone:	(207) 989-4824
Project Name:	DHHS-AUGUSTA
Project Number:	10289
Report Date:	12/06/19

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

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

Project Name: DHHS-AUGUSTA
Project Number: 10289

Lab Number: L1956918
Report Date: 12/06/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1956918-01	001A (WINDOW)	SOLID	AUGUSTA	11/25/19 10:12	11/26/19
L1956918-02	001B (WINDOW)	SOLID	AUGUSTA	11/25/19 10:46	11/26/19
L1956918-03	001C (WINDOW)	SOLID	AUGUSTA	11/25/19 11:26	11/26/19
L1956918-04	001D (WINDOW)	SOLID	AUGUSTA	11/25/19 12:53	11/26/19
L1956918-05	001E (WINDOW)	SOLID	AUGUSTA	11/25/19 13:34	11/26/19
L1956918-06	001F (WINDOW)	SOLID	AUGUSTA	11/25/19 13:59	11/26/19
L1956918-07	001G (WINDOW)	SOLID	AUGUSTA	11/25/19 14:30	11/26/19
L1956918-08	001H (WINDOW)	SOLID	AUGUSTA	11/25/19 14:46	11/26/19
L1956918-09	001I (WINDOW)	SOLID	AUGUSTA	11/25/19 15:41	11/26/19
L1956918-10	001J (WINDOW)	SOLID	AUGUSTA	11/25/19 16:15	11/26/19
L1956918-11	001K (DOOR)	SOLID	AUGUSTA	11/25/19 15:50	11/26/19
L1956918-12	002A (WINDOW)	SOLID	AUGUSTA	11/25/19 10:07	11/26/19
L1956918-13	002B (WINDOW)	SOLID	AUGUSTA	11/25/19 10:46	11/26/19
L1956918-14	002C (WINDOW)	SOLID	AUGUSTA	11/25/19 11:26	11/26/19
L1956918-15	002E (WINDOW)	SOLID	AUGUSTA	11/25/19 13:34	11/26/19
L1956918-16	002F (WINDOW)	SOLID	AUGUSTA	11/25/19 13:59	11/26/19
L1956918-17	002G (WINDOW)	SOLID	AUGUSTA	11/25/19 14:30	11/26/19
L1956918-18	002H (WINDOW)	SOLID	AUGUSTA	11/25/19 14:46	11/26/19
L1956918-19	002I (WINDOW)	SOLID	AUGUSTA	11/25/19 15:41	11/26/19
L1956918-20	002K (WINDOW)	SOLID	AUGUSTA	11/25/19 16:04	11/26/19
L1956918-21	002L (WINDOW)	SOLID	AUGUSTA	11/25/19 16:07	11/26/19
L1956918-22	003A (INT. WINDOW)	SOLID	AUGUSTA	11/25/19 10:17	11/26/19
L1956918-23	003B (INT. WINDOW)	SOLID	AUGUSTA	11/25/19 10:46	11/26/19
L1956918-24	003C (INT. WINDOW)	SOLID	AUGUSTA	11/25/19 11:26	11/26/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1956918-25	003D (INT. WINDOW)	SOLID	AUGUSTA	11/25/19 12:53	11/26/19
L1956918-26	003E (INT. WINDOW)	SOLID	AUGUSTA	11/25/19 13:34	11/26/19
L1956918-27	003H (INT. WINDOW)	SOLID	AUGUSTA	11/25/19 14:46	11/26/19
L1956918-28	003G (INT. WINDOW)	SOLID	AUGUSTA	11/25/19 14:30	11/26/19
L1956918-29	003I (INT. WINDOW)	SOLID	AUGUSTA	11/25/19 15:32	11/26/19
L1956918-30	004A (INT. WINDOW)	SOLID	AUGUSTA	11/25/19 10:46	11/26/19
L1956918-31	004B (INT. WINDOW)	SOLID	AUGUSTA	11/25/19 10:46	11/26/19
L1956918-32	004C (INT. WINDOW)	SOLID	AUGUSTA	11/25/19 11:26	11/26/19
L1956918-33	004D (INT. WINDOW)	SOLID	AUGUSTA	11/25/19 12:53	11/26/19
L1956918-34	004E (INT. WINDOW)	SOLID	AUGUSTA	11/25/19 13:34	11/26/19
L1956918-35	004F (INT. WINDOW)	SOLID	AUGUSTA	11/25/19 13:59	11/26/19
L1956918-36	004G (INT. WINDOW)	SOLID	AUGUSTA	11/25/19 14:30	11/26/19
L1956918-37	004H (INT. WINDOW)	SOLID	AUGUSTA	11/25/19 14:46	11/26/19
L1956918-38	004I (INT. WINDOW)	SOLID	AUGUSTA	11/25/19 15:30	11/26/19
L1956918-39	005A (D12 EXT. DOORS)	SOLID	AUGUSTA	11/25/19 15:50	11/26/19
L1956918-40	005B (HANDICAP EXT DOOR)	SOLID	AUGUSTA	11/25/19 15:55	11/26/19
L1956918-41	005C (CAULK WINDOW)	SOLID	AUGUSTA	11/25/19 15:55	11/26/19
L1956918-42	006A (CAULK WINDOW)	SOLID	AUGUSTA	11/25/19 15:55	11/26/19

Project Name:	DHHS-AUGUSTA	**Lab Number:**	L1956918
Project Number:	10289	**Report Date:**	12/06/19

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 NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. 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. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. 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. 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 Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data 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.

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 Alpha Project Manager 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 Project Management at 800-624-9220 with any questions.

Project Name:	DHHS-AUGUSTA	**Lab Number:**	L1956918
Project Number:	10289	**Report Date:**	12/06/19

Case Narrative (continued)

PCBs

L1956918-01, -23, and -42: The samples have elevated detection limits due to limited sample volume available for analysis.

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: Caitlin Walukevich

Caitlin Walukevich

Title: Technical Director/Representative Date: 12/06/19

QC OUTLIER SUMMARY REPORT

Project Name: DHHS-AUGUSTA
Project Number: 10289

Lab Number: L1956918
Report Date: 12/06/19

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment

There are no QC Outliers associated with this report.

ORGANICS

PCBS

Project Name: DHHS-AUGUSTA
Project Number: 10289
Lab Number: L1956918
Report Date: 12/06/19

SAMPLE RESULTS

Lab ID: L1956918-01
Client ID: 001A (WINDOW)
Sample Location: AUGUSTA

Date Collected: 11/25/19 10:12
Date Received: 11/26/19
Field Prep: Not Specified

Sample Depth:
Matrix: Solid
Analytical Method: 1,8082A
Analytical Date: 12/06/19 01:33
Analyst: AWS
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Extraction Method: EPA 3540C
Extraction Date: 12/04/19 09:10
Cleanup Method: EPA 3630
Cleanup Date: 12/05/19
Cleanup Method: EPA 3665A
Cleanup Date: 12/05/19
Cleanup Method: EPA 3660B
Cleanup Date: 12/05/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	823	--	1	A
Aroclor 1221	ND		ug/kg	823	--	1	A
Aroclor 1232	ND		ug/kg	823	--	1	A
Aroclor 1242	ND		ug/kg	412	--	1	A
Aroclor 1248	ND		ug/kg	823	--	1	A
Aroclor 1254	ND		ug/kg	823	--	1	A
Aroclor 1260	ND		ug/kg	823	--	1	A
Aroclor 1262	ND		ug/kg	823	--	1	A
Aroclor 1268	ND		ug/kg	412	--	1	A
PCBs, Total	ND		ug/kg	412	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	61		30-150	A
Decachlorobiphenyl	59		30-150	A
2,4,5,6-Tetrachloro-m-xylene	60		30-150	B
Decachlorobiphenyl	74		30-150	B

Project Name: DHHS-AUGUSTA
Lab Number: L1956918
Project Number: 10289
Report Date: 12/06/19

SAMPLE RESULTS

Lab ID: L1956918-18
Client ID: 002H (WINDOW)
Sample Location: AUGUSTA

Date Collected: 11/25/19 14:46
Date Received: 11/26/19
Field Prep: Not Specified

Sample Depth:
Matrix: Solid
Analytical Method: 1,8082A
Analytical Date: 12/06/19 01:44
Analyst: AWS
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Extraction Method: EPA 3540C
Extraction Date: 12/04/19 09:10
Cleanup Method: EPA 3630
Cleanup Date: 12/05/19
Cleanup Method: EPA 3665A
Cleanup Date: 12/05/19
Cleanup Method: EPA 3660B
Cleanup Date: 12/05/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	538	--	1	A
Aroclor 1221	ND		ug/kg	538	--	1	A
Aroclor 1232	ND		ug/kg	538	--	1	A
Aroclor 1242	ND		ug/kg	269	--	1	A
Aroclor 1248	ND		ug/kg	538	--	1	A
Aroclor 1254	ND		ug/kg	538	--	1	A
Aroclor 1260	ND		ug/kg	538	--	1	A
Aroclor 1262	ND		ug/kg	538	--	1	A
Aroclor 1268	ND		ug/kg	269	--	1	A
PCBs, Total	ND		ug/kg	269	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	61		30-150	A
Decachlorobiphenyl	56		30-150	A
2,4,5,6-Tetrachloro-m-xylene	63		30-150	B
Decachlorobiphenyl	67		30-150	B

Project Name: DHHS-AUGUSTA
Project Number: 10289
Lab Number: L1956918
Report Date: 12/06/19

SAMPLE RESULTS

Lab ID: L1956918-23
Client ID: 003B (INT. WINDOW)
Sample Location: AUGUSTA

Date Collected: 11/25/19 10:46
Date Received: 11/26/19
Field Prep: Not Specified

Sample Depth:
Matrix: Solid
Analytical Method: 1,8082A
Analytical Date: 12/06/19 04:01
Analyst: AWS
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Extraction Method: EPA 3540C
Extraction Date: 12/04/19 09:10
Cleanup Method: EPA 3630
Cleanup Date: 12/05/19
Cleanup Method: EPA 3665A
Cleanup Date: 12/05/19
Cleanup Method: EPA 3660B
Cleanup Date: 12/05/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	2630	--	1	A
Aroclor 1221	ND		ug/kg	2630	--	1	A
Aroclor 1232	ND		ug/kg	2630	--	1	A
Aroclor 1242	ND		ug/kg	1320	--	1	A
Aroclor 1248	ND		ug/kg	2630	--	1	A
Aroclor 1254	2680		ug/kg	2630	--	1	B
Aroclor 1260	ND		ug/kg	2630	--	1	A
Aroclor 1262	ND		ug/kg	2630	--	1	A
Aroclor 1268	ND		ug/kg	1320	--	1	A
PCBs, Total	2680		ug/kg	1320	--	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	61		30-150	A
Decachlorobiphenyl	59		30-150	A
2,4,5,6-Tetrachloro-m-xylene	63		30-150	B
Decachlorobiphenyl	65		30-150	B

Project Name: DHHS-AUGUSTA
Project Number: 10289
Lab Number: L1956918
Report Date: 12/06/19

SAMPLE RESULTS

Lab ID: L1956918-36
Client ID: 004G (INT. WINDOW)
Sample Location: AUGUSTA

Date Collected: 11/25/19 14:30
Date Received: 11/26/19
Field Prep: Not Specified

Sample Depth:
Matrix: Solid
Analytical Method: 1,8082A
Analytical Date: 12/06/19 04:13
Analyst: AWS
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Extraction Method: EPA 3540C
Extraction Date: 12/04/19 09:10
Cleanup Method: EPA 3630
Cleanup Date: 12/05/19
Cleanup Method: EPA 3665A
Cleanup Date: 12/05/19
Cleanup Method: EPA 3660B
Cleanup Date: 12/05/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	662	--	1	A
Aroclor 1221	ND		ug/kg	662	--	1	A
Aroclor 1232	ND		ug/kg	662	--	1	A
Aroclor 1242	781		ug/kg	331	--	1	B
Aroclor 1248	ND		ug/kg	662	--	1	A
Aroclor 1254	2040		ug/kg	662	--	1	A
Aroclor 1260	ND		ug/kg	662	--	1	A
Aroclor 1262	ND		ug/kg	662	--	1	A
Aroclor 1268	ND		ug/kg	331	--	1	A
PCBs, Total	2820		ug/kg	331	--	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	65		30-150	A
Decachlorobiphenyl	60		30-150	A
2,4,5,6-Tetrachloro-m-xylene	66		30-150	B
Decachlorobiphenyl	68		30-150	B

Project Name: DHHS-AUGUSTA
Lab Number: L1956918
Project Number: 10289
Report Date: 12/06/19

SAMPLE RESULTS

Lab ID: L1956918-40
Client ID: 005B (HANDICAP EXT DOOR)
Sample Location: AUGUSTA

Date Collected: 11/25/19 15:55
Date Received: 11/26/19
Field Prep: Not Specified

Sample Depth:
Matrix: Solid
Analytical Method: 1,8082A
Analytical Date: 12/06/19 04:25
Analyst: AWS
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Extraction Method: EPA 3540C
Extraction Date: 12/04/19 09:10
Cleanup Method: EPA 3630
Cleanup Date: 12/05/19
Cleanup Method: EPA 3665A
Cleanup Date: 12/05/19
Cleanup Method: EPA 3660B
Cleanup Date: 12/05/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	633	--	1	A
Aroclor 1221	ND		ug/kg	633	--	1	A
Aroclor 1232	ND		ug/kg	633	--	1	A
Aroclor 1242	ND		ug/kg	316	--	1	A
Aroclor 1248	ND		ug/kg	633	--	1	A
Aroclor 1254	ND		ug/kg	633	--	1	B
Aroclor 1260	ND		ug/kg	633	--	1	A
Aroclor 1262	ND		ug/kg	633	--	1	A
Aroclor 1268	ND		ug/kg	316	--	1	A
PCBs, Total	ND		ug/kg	316	--	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	66		30-150	A
Decachlorobiphenyl	61		30-150	A
2,4,5,6-Tetrachloro-m-xylene	66		30-150	B
Decachlorobiphenyl	66		30-150	B

Project Name: DHHS-AUGUSTA
Project Number: 10289
Lab Number: L1956918
Report Date: 12/06/19

SAMPLE RESULTS

Lab ID: L1956918-42
Client ID: 006A (CAULK WINDOW)
Sample Location: AUGUSTA

Date Collected: 11/25/19 15:55
Date Received: 11/26/19
Field Prep: Not Specified

Sample Depth:
Matrix: Solid
Analytical Method: 1,8082A
Analytical Date: 12/06/19 04:36
Analyst: AWS
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Extraction Method: EPA 3540C
Extraction Date: 12/04/19 09:10
Cleanup Method: EPA 3630
Cleanup Date: 12/05/19
Cleanup Method: EPA 3665A
Cleanup Date: 12/05/19
Cleanup Method: EPA 3660B
Cleanup Date: 12/05/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	702	--	1	A
Aroclor 1221	ND		ug/kg	702	--	1	A
Aroclor 1232	ND		ug/kg	702	--	1	A
Aroclor 1242	ND		ug/kg	351	--	1	A
Aroclor 1248	ND		ug/kg	702	--	1	A
Aroclor 1254	ND		ug/kg	702	--	1	B
Aroclor 1260	ND		ug/kg	702	--	1	A
Aroclor 1262	ND		ug/kg	702	--	1	A
Aroclor 1268	ND		ug/kg	351	--	1	A
PCBs, Total	ND		ug/kg	351	--	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	62		30-150	A
Decachlorobiphenyl	55		30-150	A
2,4,5,6-Tetrachloro-m-xylene	61		30-150	B
Decachlorobiphenyl	62		30-150	B

Project Name: DHHS-AUGUSTA
Project Number: 10289
Lab Number: L1956918
Report Date: 12/06/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 12/06/19 04:48
Analyst: AWS

Extraction Method: EPA 3540C
Extraction Date: 12/04/19 09:10
Cleanup Method: EPA 3630
Cleanup Date: 12/05/19
Cleanup Method: EPA 3665A
Cleanup Date: 12/05/19
Cleanup Method: EPA 3660B
Cleanup Date: 12/05/19

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01,18,23,36,40,42 Batch: WG1316405-1						
Aroclor 1016	ND		ug/kg	557	--	A
Aroclor 1221	ND		ug/kg	557	--	A
Aroclor 1232	ND		ug/kg	557	--	A
Aroclor 1242	ND		ug/kg	278	--	A
Aroclor 1248	ND		ug/kg	557	--	A
Aroclor 1254	ND		ug/kg	557	--	A
Aroclor 1260	ND		ug/kg	557	--	A
Aroclor 1262	ND		ug/kg	557	--	A
Aroclor 1268	ND		ug/kg	278	--	A
PCBs, Total	ND		ug/kg	278	--	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	72		30-150	A
Decachlorobiphenyl	65		30-150	A
2,4,5,6-Tetrachloro-m-xylene	72		30-150	B
Decachlorobiphenyl	74		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: DHHS-AUGUSTA

Project Number: 10289

Lab Number: L1956918

Report Date: 12/06/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01,18,23,36,40,42 Batch: WG1316405-2 WG1316405-3									
Aroclor 1016	72		91		40-140	23		50	A
Aroclor 1260	62		80		40-140	25		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	59		72		30-150	A
Decachlorobiphenyl	55		76		30-150	A
2,4,5,6-Tetrachloro-m-xylene	58		71		30-150	B
Decachlorobiphenyl	61		72		30-150	B

Project Name: DHHS-AUGUSTA
Project Number: 10289

Lab Number: L1956918
Report Date: 12/06/19

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1956918-01A	Glass 60mL/2oz unpreserved	A	NA		5.4	Y	Absent		PCB-8082-CAULK(14)
L1956918-02A	Glass 60mL/2oz unpreserved	A	NA		5.4	Y	Absent		HOLD(14)
L1956918-03A	Glass 60mL/2oz unpreserved	A	NA		5.4	Y	Absent		HOLD(14)
L1956918-04A	Glass 60mL/2oz unpreserved	A	NA		5.4	Y	Absent		HOLD(14)
L1956918-05A	Glass 60mL/2oz unpreserved	A	NA		5.4	Y	Absent		HOLD(14)
L1956918-06A	Glass 60mL/2oz unpreserved	A	NA		5.4	Y	Absent		HOLD(14)
L1956918-07A	Glass 60mL/2oz unpreserved	A	NA		5.4	Y	Absent		HOLD(14)
L1956918-08A	Glass 60mL/2oz unpreserved	A	NA		5.4	Y	Absent		HOLD(14)
L1956918-09A	Glass 120ml/4oz unpreserved	A	NA		5.4	Y	Absent		HOLD(14)
L1956918-10A	Glass 120ml/4oz unpreserved	A	NA		5.4	Y	Absent		HOLD(14)
L1956918-11A	Glass 120ml/4oz unpreserved	A	NA		5.4	Y	Absent		HOLD(14)
L1956918-12A	Glass 60mL/2oz unpreserved	A	NA		5.4	Y	Absent		HOLD(14)
L1956918-13A	Glass 60mL/2oz unpreserved	A	NA		5.4	Y	Absent		HOLD(14)
L1956918-14A	Glass 60mL/2oz unpreserved	A	NA		5.4	Y	Absent		HOLD(14)
L1956918-15A	Glass 60mL/2oz unpreserved	A	NA		5.4	Y	Absent		HOLD(14)
L1956918-16A	Glass 60mL/2oz unpreserved	A	NA		5.4	Y	Absent		HOLD(14)
L1956918-17A	Glass 60mL/2oz unpreserved	A	NA		5.4	Y	Absent		HOLD(14)
L1956918-18A	Glass 120ml/4oz unpreserved	A	NA		5.4	Y	Absent		PCB-8082-CAULK(14)
L1956918-19A	Glass 120ml/4oz unpreserved	A	NA		5.4	Y	Absent		HOLD(14)
L1956918-20A	Glass 120ml/4oz unpreserved	A	NA		5.4	Y	Absent		HOLD(14)
L1956918-21A	Glass 120ml/4oz unpreserved	A	NA		5.4	Y	Absent		HOLD(14)
L1956918-22A	Glass 60mL/2oz unpreserved	A	NA		5.4	Y	Absent		HOLD(14)
L1956918-23A	Glass 60mL/2oz unpreserved	A	NA		5.4	Y	Absent		PCB-8082-CAULK(14)

*Values in parentheses indicate holding time in days

Project Name: DHHS-AUGUSTA
Project Number: 10289

Lab Number: L1956918
Report Date: 12/06/19

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1956918-24A	Glass 60mL/2oz unpreserved	A	NA		5.4	Y	Absent		HOLD(14)
L1956918-25A	Glass 60mL/2oz unpreserved	A	NA		5.4	Y	Absent		HOLD(14)
L1956918-26A	Glass 60mL/2oz unpreserved	A	NA		5.4	Y	Absent		HOLD(14)
L1956918-27A	Glass 60mL/2oz unpreserved	A	NA		5.4	Y	Absent		HOLD(14)
L1956918-28A	Glass 60mL/2oz unpreserved	A	NA		5.4	Y	Absent		HOLD(14)
L1956918-29A	Glass 120ml/4oz unpreserved	A	NA		5.4	Y	Absent		HOLD(14)
L1956918-30A	Glass 60mL/2oz unpreserved	A	NA		5.4	Y	Absent		HOLD(14)
L1956918-31A	Glass 60mL/2oz unpreserved	A	NA		5.4	Y	Absent		HOLD(14)
L1956918-32A	Glass 60mL/2oz unpreserved	A	NA		5.4	Y	Absent		HOLD(14)
L1956918-33A	Glass 60mL/2oz unpreserved	A	NA		5.4	Y	Absent		HOLD(14)
L1956918-34A	Glass 60mL/2oz unpreserved	A	NA		5.4	Y	Absent		HOLD(14)
L1956918-35A	Glass 60mL/2oz unpreserved	A	NA		5.4	Y	Absent		HOLD(14)
L1956918-36A	Glass 60mL/2oz unpreserved	A	NA		5.4	Y	Absent		PCB-8082-CAULK(14)
L1956918-37A	Glass 120ml/4oz unpreserved	A	NA		5.4	Y	Absent		HOLD(14)
L1956918-38A	Glass 120ml/4oz unpreserved	A	NA		5.4	Y	Absent		HOLD(14)
L1956918-39A	Glass 120ml/4oz unpreserved	A	NA		5.4	Y	Absent		HOLD(14)
L1956918-40A	Glass 120ml/4oz unpreserved	A	NA		5.4	Y	Absent		PCB-8082-CAULK(14)
L1956918-41A	Glass 120ml/4oz unpreserved	A	NA		5.4	Y	Absent		HOLD(14)
L1956918-42A	Glass 120ml/4oz unpreserved	A	NA		5.4	Y	Absent		PCB-8082-CAULK(14)

*Values in parentheses indicate holding time in days

Project Name:	DHHS-AUGUSTA	**Lab Number:**	L1956918
Project Number:	10289	**Report Date:**	12/06/19

GLOSSARY

Acronyms

DL - 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 limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

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).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

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.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

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. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

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.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

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.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

Report Format: Data Usability Report

Project Name:	DHHS-AUGUSTA	**Lab Number:**	L1956918
Project Number:	10289	**Report Date:**	12/06/19

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

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.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

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.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

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. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

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.

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.

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

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

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

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.

Report Format: Data Usability Report

Project Name:	DHHS-AUGUSTA	**Lab Number:**	L1956918
Project Number:	10289	**Report Date:**	12/06/19

Data Qualifiers

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: Data Usability Report

Project Name:	DHHS-AUGUSTA	**Lab Number:**	L1956918
Project Number:	10289	**Report Date:**	12/06/19

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

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.

Certification Information

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

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
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.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, 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, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: 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 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

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

CHAIN OF CUSTODY

PAGE 1 OF 5

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:

ALPHA Job #:

Project Information

Project Name: DHHS-Augusta

Project Location: Augusta

Project #: 10289

Project Manager: D. Kingman

ALPHA Quote #:

Report Information - Data Deliverables

☑ ADEx ☑ EMAIL

Billing Information

☐ Same as Client info PO #:

Client Information

Client: CES, Inc.

Address: 465 S Main St.
Brewer ME 04412

Phone: (207) 989-4824

Email: dkingman@cesinc.usa.com

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 _____

Turn-Around Time

☑ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due:

Additional Project Information:

Soxhlet Extraction (9082)

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

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	Sample Comments	TOTAL # BOTTLES
	001A (window)	11/25/19	10:12	X1	DK/MN	Caulk N 3rd	A
	001B		10:46			" E	H
	001C		11:26			" S	H
	001D		12:53			" W	H
	001E		1:34			" N 2nd	H
	001F		1:59			" E	H
	001G		2:30			" S	H
	001H		2:46			" W	H
	001I		3:41			" E 1st	H
	001J		4:15			" W 1st	H

Container Type											A									4	
Preservative											O									Ice	

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= NaHSO4
H = $Na_2S_2O_3$
I= Ascorbic Acid
J = NH_4Cl
K= Zn Acetate
O= Other

X1 = caulk
"1" white

Relinquished By:	Date/Time	Received By:	Date/Time
[illegible]	11/26/19 1:55	[illegible]	[illegible]

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 5

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:

ALPHA Job #:

Project Information
Project Name: DHHS
Project Location: Augusta
Project #: 10784
Project Manager: Dkingman
ALPHA Quote #:

Report Information - Data Deliverables
☐ ADEx ☑ EMAIL

Billing Information
☐ Same as Client info PO #:

Client Information
Client: CES Inc.
Address: 1165 S Main St. Brewer ME 04412
Phone: (207) 989-4824
Email: Dkingman@cesincusa.com

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 _____

Turn-Around Time
☑ Standard ☐ RUSH (only confirmed if pre-approved)
Date Due:

Additional Project Information:
Soxhlet Extraction (8082)

ANALYSIS: ☐ VOC: 8260 ☐ 624 ☐ 524.2 ☐ SVOC: ☐ ABN ☐ PAH ☐ METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15 ☐ RCRA5 ☐ RCRA8 ☐ PP13 ☐ EPH: ☐ Ranges & Targets ☐ Ranges Only ☐ VPH: ☐ Ranges & Targets ☐ Ranges Only ☑ PCB ☐ PEST ☐ TPH: ☐ Quant Only ☐ Fingerprint

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	Sample Comments	TOTAL # BOTTLES
	001K (door)	11/25/19	3:50	X1	DK/NW	Caulk E	H
	002A (window)		10:07			Glaze N 3rd	H
	002B		10:46			" E	H
	002C		11:26			" S	H
	002E		1:34			" N 2nd	H
	002F		1:59			" C	H
	002G		2:30			" S	H
	002H		2:46			" W	A
	002I		3:41			" E 1st	H
	002K		4:04			" N	H

X1 - glazing
No 002D Sample for 25

Container Type	A
Preservative	D

Ice

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
Dkingman	11/26/19 1:55		

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 3 OF 5

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:

ALPHA Job #:

Client Information

Client: CES, Inc.
Address: 465 S Main St.
Dover ME 04424
Phone: (207) 989-4824
Email: dlongman@cosinc usa.com

Project Information

Project Name: DHHS
Project Location: Augusta
Project #: 10289
Project Manager: D Kingman
ALPHA Quote #:

Turn-Around Time

☐ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due:

Report Information - Data Deliverables

☐ ADEx ☑ EMAIL

Billing Information

☐ Same as Client info PO #:

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:

Soxhlet Extraction (8082)

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

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	Sample Comments	TOTAL # BOTTLES
	002L (window)	11/25/19	9:07	X1	DL/NN	Glaze W 1ST	H
	063A (Int. Window)		10:17			Caulk N 3RD	H
	003B "		10:46			" E	A
	003C "		11:26			" S	H
	003D "		12:53			" W	H
	003E "		1:34			" N 2ND	H
	003H "		2:46			" W	H
	003G "		2:30			" S	H
	003I "		3:32			" E 1ST	H
	004A (Int Window)		10:46			Caulk N 3RD	

Container Type: A
Preservative: O

ICE

Approved each frame / Paper

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
DL/NN	11/26/19 7:55		

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 4 OF 5

ALPHA ANALYTICAL
Work Class Chemistry
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:

ALPHA Job #:

Client Information

Client: CES Inc
Address: 465 S Main St. Brewer ME 04412
Phone: (207) 989-4824
Email: Kirchman@cesinc.com

Project Information

Project Name: DHHS
Project Location: Augusta
Project #: 10299
Project Manager: D Kirchman
ALPHA Quote #:

Report Information - Data Deliverables

☐ ADEx ☐ EMAIL

Billing Information

☐ Same as Client info PO #:

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 _____

Turn-Around Time

☑ Standard ☐ RUSH (only confirmed if pre-approved)
Date Due:

Additional Project Information:

Soxhlet Extraction (8082)

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

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	Sample Comments	TOTAL # BOTTLES
	004B (1st Window*)	11/25/14	10:46	X1	DL/NN	Caulk E 3rd	H
	004C "		11:26			" S 1	H
	004D "		12:53			" W ↓	H
	004E "		1:34			" N 2nd	H
	004F "		1:59			" E 1	H
	004G "		2:30			" S 1	A
	004H "		2:46			" W ↓	H
	004I "		3:22			" E 1st	H
	005A (Ext. Door Frame)	↓	3:50	↓	↓	Caulk (wood) 1st	H
	005B (1st door HANDRAIL)	↓	3:55	↓	↓	" " "	A

Container Type										A													
Preservative										B													Ice

Container Type
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

Preservative * frame/panes
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
Edmund Vasile	11/26/14 7:55		

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FORM NO: 01-01 (rev. 12-Mar-2012)

CHAIN OF CUSTODY

PAGE 5 OF 5

ALPHA ANALYTICAL — Mobile Data Champions

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:

ALPHA Job #:

Client Information

Client: CES, Inc.
Address: 165 S Main St. Brewer ME 04412
Phone: 207 989 4824
Email: dkingman@cesincusa.com

Project Information

Project Name: DHHS
Project Location: Augusta
Project #: 10589
Project Manager: DKingman
ALPHA Quote #:

Report Information - Data Deliverables

☑ ADEx ☐ EMAIL

Billing Information

☐ Same as Client info PO #:

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 _____

Turn-Around Time

☑ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due:

Additional Project Information:

Soxhlet Extraction (8082)

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

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	Sample Comments	TOTAL # BOTTLES
	0056 Crank Window	11/26/19	3:55	X1	DK/NW	Crank N 1st	H
	0060 Crank Window	11/26/19	3:55	X1	DK/NW	Crank N 1st	A

Container Type	A
Preservative	C

ice

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
Deborah Crank	11/26/19 7:55		

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FORM NO: 01-01 (rev. 12-Mar-2012)

CHAIN OF CUSTODY

PAGE 1 OF 5

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: 11/26/19

ALPHA Job #: L1956918

Client Information

Client: CES Inc.
Address: 465 S Main St. Brewer ME 04412
Phone: (207) 989-4824
Email: dkingman@cesinc usa.com

Project Information

Project Name: DH115-Augusta
Project Location: Augusta
Project #: 10389
Project Manager: D. Kingman
ALPHA Quote #:

Turn-Around Time

☑ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due:

Report Information - Data Deliverables

☑ ADEx ☑ EMAIL

Billing Information

☐ Same as Client info PO #:

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:

Soxhlet Extraction (9082)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	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	SAMPLE INFO: Filtration ☐ Field ☐ Lab to do; Preservation ☐ Lab to do	TOTAL # BOTTLES	Sample Comments
6918-01	001A (window)	11/25/19	10:12	X1	JK/NN	✓			caulk N 3rd
-02	001B		10:46			✓			" E
-03	001C		11:26			✓			" S
-04	001D		12:53			✓			" W
-05	001E		1:34			✓			" N 2nd
-06	001F		1:59			✓			" E
-07	001G		2:30			✓			" S
-08	001H		2:46			✓			" W
-09	001I		3:41			✓			" E 1st
-10	001J		4:15			✓			" W 1st
	Container Type					A			
	Preservative					O			ice

X1 = caulk "i" white

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
Deborah Kane	11/26/19 7:55		
	11-26-19 14:35	AAL	11/26/19 14:35
AAL	11/26/19		11/26 1750

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CHAIN OF CUSTODY

PAGE 2 OF 5

Date Rec'd in Lab: 11/26/19

ALPHA Job #: L1953918

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: CES, Inc
Address: 465 Main St. Bremer ME 04412
Phone: (207) 98'9-4824
Email: dkingman@cesincusa.com

Project Information

Project Name: DHHS
Project Location: Augusta
Project #: 10389
Project Manager: DKingman
ALPHA Quote #:

Report Information - Data Deliverables

☐ ADEx ☑ EMAIL

Billing Information

☐ Same as Client info PO #:

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 _____

Turn-Around Time

☑ Standard ☐ RUSH (only confirmed if pre-approved)
Date Due:

Additional Project Information:

Soxhlet Extraction (5082)

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

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	Sample Comments	TOTAL # BOTTLES
6918-11	001K (door)	11/25/19	3:50	X1	DK/NN	caulk E	
-12	002A (window)		10:07			glaze N 3rd	
-13	002B		10:46			" E	
-14	002C		11:26			" S	
-15	002E		1:34			" N 2nd	
-16	002F		1:59			" E	
-17	002G		2:30			" S	
-18	002H		2:46			" W	
-19	002I		3:41			" E 1st	
-20	002K		4:04			" N	

X1 - glazing
No 002D Sample for 25

Container Type	
Container Type	A
Preservative	D

ice

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
Deborah J. Kinch	11/26/19 7:55		
	11/26/19 14:35		11/26/19 14:35
	11/26/19		11/26 1730
	AAL 11/26 1945		

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FORM NO: 01-01 (rev. 12-Mar-2012)

CHAIN OF CUSTODY

PAGE 3 OF 5

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: 11/26/19

ALPHA Job #: L1956918

Client Information
Client: CES, Inc.
Address: 465 S Main St. Brewer, ME 04412
Phone: (207) 989-4824
Email: dlkingman@cesincusa.com

Project Information
Project Name: DHHS
Project Location: Augusta
Project #: 10289
Project Manager: D Kingman
ALPHA Quote #:

Turn-Around Time
☐ Standard ☐ RUSH (only confirmed if pre-approved)
Date Due:

Report Information - Data Deliverables
☐ ADEx ☑ EMAIL

Billing Information
☐ Same as Client info PO #:

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:
Soxhlet Extraction (8082)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	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	SAMPLE INFO: Filtration ☐Field ☐Lab to do; Preservation ☐Lab to do	Sample Comments	TOTAL # BOTTLES
6918-21	002L (window)	11/25/19	4:07	X1	DK/NW	✓		glaze W 1st	
-22	003A (int. window)		10:17			✓		caulk N 3rd	
-23	003B "		10:46			✓		" E	
-24	003C "		11:26			✓		" S	
-25	003D "		12:53			✓		" W	
-26	003E "		1:34			✓		" N 2nd	
-27	003H "		3:46			✓		" W	
-28	003G "		2:30			✓		" S	
-29	003I "		3:32			✓		" E 1st	
-30	004A (int window)		10:46			✓		caulk N 3rd	
						Container Type: A			
						Preservative: O		ice	

*around each framed pane

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
DKingman	11/26/19 7:55		
	11/26/19 14:35		11/26/19 14:35
	11/26/19		11/26 1730
			11/27/19 1945

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FORM NO: 01-01 (rev. 12-Mar-2012)

CHAIN OF CUSTODY

PAGE 4 OF 5

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: 11/26/19

ALPHA Job #: L1956918

Client Information

Client: CES, Inc
Address: 465 S Main St.
Brewer, ME 04412
Phone: (207) 989-4824
Email: dkingman@cesinclesa.com

Project Information

Project Name: DHHS
Project Location: Augusta
Project #: 10299
Project Manager: DKingman
ALPHA Quote #:

Turn-Around Time

☐ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due:

Report Information - Data Deliverables

☐ ADEx ☐ EMAIL

Billing Information

☐ Same as Client info PO #:

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:

Soxhlet Extraction (8082)

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

SAMPLE INFO
Filtration
☐ Field
☐ Lab to do
Preservation
☐ Lab to do

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	Sample Comments
6918-31	004B (int windows)	11/25/19	10:46	XI	JL/NM	Can/IC E 3rd
-32	004C "		11:26			" S
-33	004D "		12:53			" W
-34	004E "		1:34			" N 2nd
-35	004F "		1:54			" E
-36	004G "		2:30			" S
-37	004H "		2:46			" W
-38	004I "		3:32			" E 1st
-39	005A (ext. DR doors)		3:50			Can/IC (gray) 1st E
-40	005B (ext HANDICAP door)		3:55			" " " E

Container Type: A
Preservative: O

ice

Container Type
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

Preservative * frame/panels
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
Deborah M Rank	11/26/19 7:55	[illegible]	11/26/19 7:55
[illegible]	11/26/19 14:35	[illegible] AAL	11/26/19 14:35
[illegible] AAL	11/26/19	[illegible] AAL	11/26/19 1730
[illegible]	11/26 1945	[illegible]	11/27/19 [illegible]

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 5 OF 5

Date Rec'd in Lab: 11/26/19

ALPHA Job #: L1956918

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: CES, Inc
Address: 465 S Main St. Brewer, ME 04412
Phone: (207) 989-4824
Email: dkingman@cesincusa.com

Project Information

Project Name: DHHS
Project Location: Augusta
Project #: 10289
Project Manager: DKingman
ALPHA Quote #:

Turn-Around Time

☑ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due:

Report Information - Data Deliverables

☐ ADEx ☑ EMAIL

Billing Information

☐ Same as Client info PO #:

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:

Soxhlet Extraction (8082)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	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	SAMPLE INFO: Filtration ☐ Field ☐ Lab to do; Preservation ☐ Lab to do	Sample Comments	TOTAL # BOTTLES
6918-41	005C (caulk window	11/25/19	3:55	X1	DK/NW	✓		caulk N 1st	
-42	006A Caulk window	11/26/19	3:55	X1	DK/NW	✓		Caulk N 1st	

Container Type	A	
Preservative	C	ice

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
Deborah Caulk	11/26/19 7:55		11/26/19 7:55
	11/26/19 14:35		11/26/19 14:35
AAL	11/26/19	AAL	11/26/19 1730
AAL	11/26 1943		11/26/19 1945

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

ANALYTICAL REPORT

Lab Number:	L1959282
Client:	CES, Inc. 465 South Main Street Brewer, ME 04412
ATTN:	Dennis Kingman
Phone:	(207) 989-4824
Project Name:	DHHS-AUGUSTA
Project Number:	10289
Report Date:	12/17/19

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

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

Project Name: DHHS-AUGUSTA
Project Number: 10289

Lab Number: L1959282
Report Date: 12/17/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1959282-01	003E (INT. WINDOW)	SOLID	AUGUSTA	11/25/19 13:34	11/26/19
L1959282-02	003G (INT. WINDOW)	SOLID	AUGUSTA	11/25/19 14:30	11/26/19
L1959282-03	004D (INT. WINDOW)	SOLID	AUGUSTA	11/25/19 12:53	11/26/19
L1959282-04	004I (INT. WINDOW)	SOLID	AUGUSTA	11/25/19 15:30	11/26/19

Project Name:	DHHS-AUGUSTA	**Lab Number:**	L1959282
Project Number:	10289	**Report Date:**	12/17/19

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 NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. 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. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. 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. 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 Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data 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.

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 Alpha Project Manager 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 Project Management at 800-624-9220 with any questions.

Project Name:	DHHS-AUGUSTA	**Lab Number:**	L1959282
Project Number:	10289	**Report Date:**	12/17/19

Case Narrative (continued)

PCBs

L1959282-01 through -04 were extracted with the method required holding time exceeded.

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: Caitlin Walukevich

Title: Technical Director/Representative Date: 12/17/19

QC OUTLIER SUMMARY REPORT

Project Name: DHHS-AUGUSTA
Project Number: 10289

Lab Number: L1959282
Report Date: 12/17/19

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment

There are no QC Outliers associated with this report.

ORGANICS

PCBS

Project Name: DHHS-AUGUSTA
Project Number: 10289
Lab Number: L1959282
Report Date: 12/17/19

SAMPLE RESULTS

Lab ID: L1959282-01
Client ID: 003E (INT. WINDOW)
Sample Location: AUGUSTA

Date Collected: 11/25/19 13:34
Date Received: 11/26/19
Field Prep: Not Specified

Sample Depth:
Matrix: Solid
Analytical Method: 1,8082A
Analytical Date: 12/16/19 16:51
Analyst: AWS
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Extraction Method: EPA 3540C
Extraction Date: 12/14/19 09:45
Cleanup Method: EPA 3630
Cleanup Date: 12/15/19
Cleanup Method: EPA 3665A
Cleanup Date: 12/15/19
Cleanup Method: EPA 3660B
Cleanup Date: 12/15/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	1740	--	1	A
Aroclor 1221	ND		ug/kg	1740	--	1	A
Aroclor 1232	ND		ug/kg	1740	--	1	A
Aroclor 1242	ND		ug/kg	870	--	1	A
Aroclor 1248	ND		ug/kg	1740	--	1	A
Aroclor 1254	2960		ug/kg	1740	--	1	B
Aroclor 1260	ND		ug/kg	1740	--	1	A
Aroclor 1262	ND		ug/kg	1740	--	1	A
Aroclor 1268	ND		ug/kg	870	--	1	A
PCBs, Total	2960		ug/kg	870	--	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	76		30-150	A
Decachlorobiphenyl	73		30-150	A
2,4,5,6-Tetrachloro-m-xylene	75		30-150	B
Decachlorobiphenyl	62		30-150	B

Project Name: DHHS-AUGUSTA
Project Number: 10289
Lab Number: L1959282
Report Date: 12/17/19

SAMPLE RESULTS

Lab ID: L1959282-02
Client ID: 003G (INT. WINDOW)
Sample Location: AUGUSTA

Date Collected: 11/25/19 14:30
Date Received: 11/26/19
Field Prep: Not Specified

Sample Depth:
Matrix: Solid
Analytical Method: 1,8082A
Analytical Date: 12/16/19 04:13
Analyst: AWS
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Extraction Method: EPA 3540C
Extraction Date: 12/14/19 09:45
Cleanup Method: EPA 3630
Cleanup Date: 12/15/19
Cleanup Method: EPA 3665A
Cleanup Date: 12/15/19
Cleanup Method: EPA 3660B
Cleanup Date: 12/15/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	1460	--	1	A
Aroclor 1221	ND		ug/kg	1460	--	1	A
Aroclor 1232	ND		ug/kg	1460	--	1	A
Aroclor 1242	ND		ug/kg	730	--	1	A
Aroclor 1248	1990		ug/kg	1460	--	1	B
Aroclor 1254	1530		ug/kg	1460	--	1	B
Aroclor 1260	ND		ug/kg	1460	--	1	A
Aroclor 1262	ND		ug/kg	1460	--	1	A
Aroclor 1268	ND		ug/kg	730	--	1	A
PCBs, Total	3520		ug/kg	730	--	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	40		30-150	A
Decachlorobiphenyl	49		30-150	A
2,4,5,6-Tetrachloro-m-xylene	41		30-150	B
Decachlorobiphenyl	52		30-150	B

Project Name: DHHS-AUGUSTA
Project Number: 10289
Lab Number: L1959282
Report Date: 12/17/19

SAMPLE RESULTS

Lab ID: L1959282-03
Client ID: 004D (INT. WINDOW)
Sample Location: AUGUSTA

Date Collected: 11/25/19 12:53
Date Received: 11/26/19
Field Prep: Not Specified

Sample Depth:
Matrix: Solid
Analytical Method: 1,8082A
Analytical Date: 12/16/19 04:25
Analyst: AWS
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Extraction Method: EPA 3540C
Extraction Date: 12/14/19 09:45
Cleanup Method: EPA 3630
Cleanup Date: 12/15/19
Cleanup Method: EPA 3665A
Cleanup Date: 12/15/19
Cleanup Method: EPA 3660B
Cleanup Date: 12/15/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	1900	--	1	A
Aroclor 1221	ND		ug/kg	1900	--	1	A
Aroclor 1232	ND		ug/kg	1900	--	1	A
Aroclor 1242	ND		ug/kg	952	--	1	A
Aroclor 1248	ND		ug/kg	1900	--	1	A
Aroclor 1254	3880		ug/kg	1900	--	1	B
Aroclor 1260	ND		ug/kg	1900	--	1	A
Aroclor 1262	ND		ug/kg	1900	--	1	A
Aroclor 1268	ND		ug/kg	952	--	1	A
PCBs, Total	3880		ug/kg	952	--	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	48		30-150	A
Decachlorobiphenyl	57		30-150	A
2,4,5,6-Tetrachloro-m-xylene	50		30-150	B
Decachlorobiphenyl	60		30-150	B

Project Name: DHHS-AUGUSTA
Project Number: 10289
Lab Number: L1959282
Report Date: 12/17/19

SAMPLE RESULTS

Lab ID: L1959282-04
Client ID: 004I (INT. WINDOW)
Sample Location: AUGUSTA

Date Collected: 11/25/19 15:30
Date Received: 11/26/19
Field Prep: Not Specified

Sample Depth:
Matrix: Solid
Analytical Method: 1,8082A
Analytical Date: 12/16/19 04:38
Analyst: AWS
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Extraction Method: EPA 3540C
Extraction Date: 12/14/19 09:45
Cleanup Method: EPA 3630
Cleanup Date: 12/15/19
Cleanup Method: EPA 3665A
Cleanup Date: 12/15/19
Cleanup Method: EPA 3660B
Cleanup Date: 12/15/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	1900	--	1	A
Aroclor 1221	ND		ug/kg	1900	--	1	A
Aroclor 1232	ND		ug/kg	1900	--	1	A
Aroclor 1242	ND		ug/kg	952	--	1	A
Aroclor 1248	ND		ug/kg	1900	--	1	A
Aroclor 1254	ND		ug/kg	1900	--	1	B
Aroclor 1260	ND		ug/kg	1900	--	1	A
Aroclor 1262	ND		ug/kg	1900	--	1	A
Aroclor 1268	ND		ug/kg	952	--	1	A
PCBs, Total	ND		ug/kg	952	--	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	58		30-150	A
Decachlorobiphenyl	74		30-150	A
2,4,5,6-Tetrachloro-m-xylene	61		30-150	B
Decachlorobiphenyl	75		30-150	B

Project Name: DHHS-AUGUSTA
Project Number: 10289

Lab Number: L1959282
Report Date: 12/17/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 12/16/19 04:50
Analyst: AWS

Extraction Method: EPA 3540C
Extraction Date: 12/14/19 09:45
Cleanup Method: EPA 3630
Cleanup Date: 12/15/19
Cleanup Method: EPA 3665A
Cleanup Date: 12/15/19
Cleanup Method: EPA 3660B
Cleanup Date: 12/15/19

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-04 Batch: WG1320829-1						
Aroclor 1016	ND		ug/kg	1720	--	A
Aroclor 1221	ND		ug/kg	1720	--	A
Aroclor 1232	ND		ug/kg	1720	--	A
Aroclor 1242	ND		ug/kg	862	--	A
Aroclor 1248	ND		ug/kg	1720	--	A
Aroclor 1254	ND		ug/kg	1720	--	A
Aroclor 1260	ND		ug/kg	1720	--	A
Aroclor 1262	ND		ug/kg	1720	--	A
Aroclor 1268	ND		ug/kg	862	--	A
PCBs, Total	ND		ug/kg	862	--	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	73		30-150	A
Decachlorobiphenyl	94		30-150	A
2,4,5,6-Tetrachloro-m-xylene	76		30-150	B
Decachlorobiphenyl	97		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: DHHS-AUGUSTA

Project Number: 10289

Lab Number: L1959282

Report Date: 12/17/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-04 Batch: WG1320829-2 WG1320829-3									
Aroclor 1016	90		85		40-140	6		50	A
Aroclor 1260	107		102		40-140	5		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	81		79		30-150	A
Decachlorobiphenyl	108		102		30-150	A
2,4,5,6-Tetrachloro-m-xylene	87		81		30-150	B
Decachlorobiphenyl	112		104		30-150	B

Project Name: DHHS-AUGUSTA
Project Number: 10289

Lab Number: L1959282
Report Date: 12/17/19

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1959282-01A	Glass 60mL/2oz unpreserved	A	NA		5.4	Y	Absent		PCB-8082-CAULK(14)
L1959282-02A	Glass 60mL/2oz unpreserved	A	NA		5.4	Y	Absent		PCB-8082-CAULK(14)
L1959282-03A	Glass 60mL/2oz unpreserved	A	NA		5.4	Y	Absent		PCB-8082-CAULK(14)
L1959282-04A	Glass 60mL/2oz unpreserved	A	NA		5.4	Y	Absent		PCB-8082-CAULK(14)

*Values in parentheses indicate holding time in days

Project Name:	DHHS-AUGUSTA	**Lab Number:**	L1959282
Project Number:	10289	**Report Date:**	12/17/19

GLOSSARY

Acronyms

DL - 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 limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

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).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

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.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

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. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

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.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

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.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

Report Format: Data Usability Report

Project Name:	DHHS-AUGUSTA	**Lab Number:**	L1959282
Project Number:	10289	**Report Date:**	12/17/19

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

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.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

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.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

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. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

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.

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.

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

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

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

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.

Report Format: Data Usability Report

Project Name:	DHHS-AUGUSTA	**Lab Number:**	L1959282
Project Number:	10289	**Report Date:**	12/17/19

Data Qualifiers

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: Data Usability Report

Project Name:	DHHS-AUGUSTA	**Lab Number:**	L1959282
Project Number:	10289	**Report Date:**	12/17/19

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

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.

Certification Information

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

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
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.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, 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, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: 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 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

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

CHAIN OF CUSTODY

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Date Rec'd In Lab: 11/26/19

ALPHA Job #: ~~L1958918~~

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: CES, Inc.
Address: 465 S Main St. Ste 1 Brewer, ME 04412
Phone: (207) 989-4824
Email: dkingman@cesincusa.com

Project Information

Project Name: DHHS
Project Location: Augusta
Project #: 10289
Project Manager: D Kingman
ALPHA Quote #:

Turn-Around Time

☐ Standard ☐ RUSH (only confirmed if pre-approved)
Date Due:

Report Information - Data Deliverables

☐ ADEx ☐ EMAIL

Billing Information

☐ Same as Client info PO #:

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:

Soxhlet Extraction (8082)

PCB-8082-CAULK

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	Sample Comments
~~L1958~~ -21	002L (window)	11/25/19	4:07	X1	DK/NW	Glaze W 1st
-22	003A (int. window)		10:17			Caulk N 3rd
-23	003B "		10:46			" E
-24	003C "		11:26			" S
-25	003D "		12:53			" W
59282-01 -26	003E "		1:34			" N 2nd
-27	003H "		2:46			" W
02 -28	003G "		2:30			" S
-29	003I "		3:32			" E 1st
-30	004A (int window)		10:46			Caulk N 3rd

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 | TPH: ☐ Quant Only ☐ Fingerprint

SAMPLE INFO
Filtration: ☐ Field ☐ Lab to do
Preservation: ☐ Lab to do

TOTAL # BOTTLES

Container Type																					
Preservative																					
	A																				
	C																				

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

A around each frame pane

ice

Relinquished By:	Date/Time	Received By:	Date/Time
D Kingman	11/26/19 7:55		
	11/26/19 14:35		11/26/19 14:35
	11/26/19		11/26 1730

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 4 OF 5

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: 11/26/19

ALPHA Job #: L1956918

Client Information
Client: CES, Inc
Address: 465 S Main St. Brewer, ME 04412
Phone: (207) 989-4824
Email: dkingman@cesinc.com

Project Information
Project Name: DHHS
Project Location: Augusta
Project #: 10299
Project Manager: DKingman
ALPHA Quote #:

Turn-Around Time
☐ Standard ☐ RUSH (only confirmed if pre-approved)
Date Due:

Report Information - Data Deliverables
☐ ADEx ☐ EMAIL

Billing Information
☐ Same as Client info PO #:

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:
Soxhlet Extraction (8082)

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-CAULK

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	TOTAL # BOTTLES	Sample Comments
6918-31	004B (int window)	11/25/19	10:46	XL	JL/NH		Caulk E 3rd
-32	004C "		11:26				" S
59282-03 -33	004D "		12:53			X	" W
-34	004E "		1:34				" N 2nd
-35	004F "		1:59				" E
-36	004G "		2:30				" S
-37	004H "		2:46				" W
04 -38	004I "		3:20			X	" E 1st
-39	005A (ext. door DH accons)		3:50				Caulk (gray) 1st E
-40	005B (ext door HANDICAP)		3:55				" " " E

Container Type	A
Preservative	C

ice

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

* frame/panels

Relinquished By:	Date/Time	Received By:	Date/Time
	11/26/19 7:55		11/26/19 7:55
	11/26/19 14:35		11/26/19 14:35
	11/26/19		11/26/19 1730
	11/26 1945		11/27/19 0400

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

ATTACHMENT B

PHOTOGRAPHIC LOG

Photo No. 1

Photo Date:
November 25, 2019

Site Location:
Former DHHS Building
221 State Street
Augusta, ME

Description:
Exterior – White caulking around perimeter of window units (brick to metal; Sample 001A)

Photo By: DAK

Photo No. 2

Photo Date:
November 25, 2019

Site Location:
Former DHHS Building
221 State Street
Augusta, ME

Description:
Exterior – white glazing around window glass panes (Sample 002H)

Photo By: DAK

Photo No. 3

Photo Date:
November 25, 2019

Site Location:
Former DHHS Building
221 State Street
Augusta, ME

Description:
Interior – white caulking around perimeter of window units (Sample 003B)

Photo By: DAK

Photo No. 4

Photo Date:
November 25, 2019

Site Location:
Former DHHS Building
221 State Street
Augusta, ME

Description:
Interior – white caulking around perimeter of window units (Sample 003E)

Photo By: DAK

Photo No. 5

Photo Date:
November 25, 2019

Site Location:
Former DHHS Building
221 State Street
Augusta, ME

Description:
Interior – white caulking around perimeter of window units (Sample 003G)

Photo By: DAK

Photo No. 6

Photo Date:
November 25, 2019

Site Location:
Former DHHS Building
221 State Street
Augusta, ME

Description:
Interior – gray caulking on muntin bar of the individual glass panes (Sample 004G)

Photo By: DAK

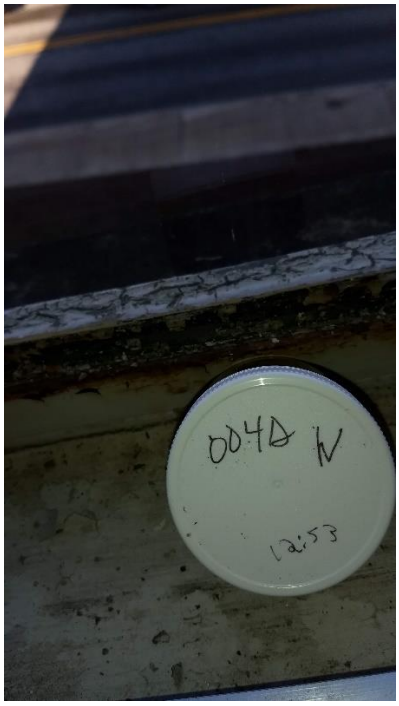


Photo No. 7

Photo Date:
November 25, 2019

Site Location:
Former DHHS Building
221 State Street
Augusta, ME

Description:
Interior – gray caulking on window lip of individual panes (Sample 004D)

Photo By: DAK

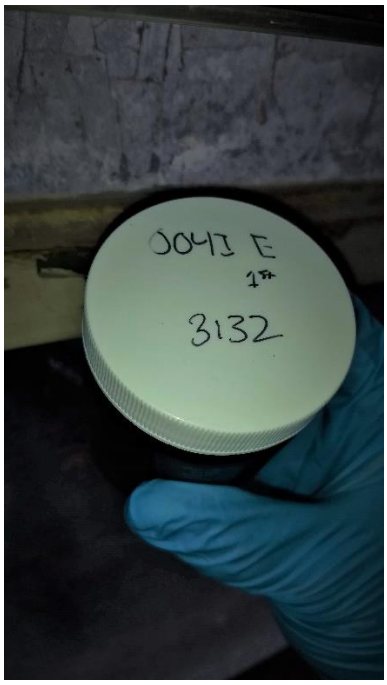


Photo No. 8

Photo Date:
November 25, 2019

Site Location:
Former DHHS Building
221 State Street
Augusta, ME

Description:
Interior – gray caulking on muntin bar of individual glass panes (Sample 004I)

Photo By: DAK

Photo No. 9

Photo Date:
November 25, 2019

Site Location:
Former DHHS Building
221 State Street
Augusta, ME

Description:
Interior – Typical (gray caulking) on muntin bar (mullion).

Photo By: DAK

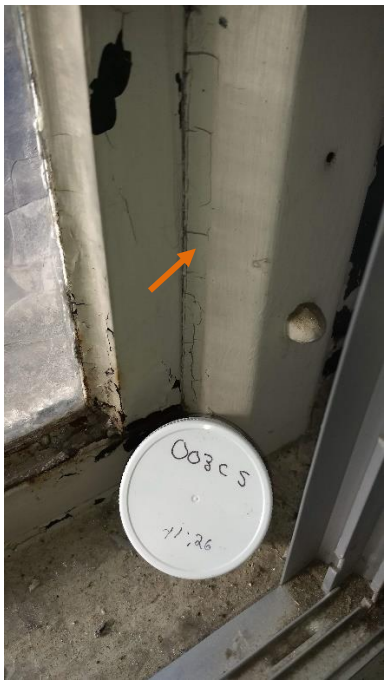


Photo No. 10

Photo Date:
November 25, 2019

Site Location:
Former DHHS Building
221 State Street
Augusta, ME

Description:
Interior – Typical (white caulking) around perimeter of window unit.

Photo By: DAK

Photo No. 11

Photo Date:
November 25, 2019

Site Location:
Former DHHS Building
221 State Street
Augusta, ME

Description:
Exterior – gray caulking around perimeter of door system (Sample 005B).

Photo By: DAK

Photo No. 12

Photo Date:
November 25, 2019

Site Location:
Former DHHS Building
221 State Street
Augusta, ME

Description:
Exterior – cream caulking around perimeter of window (Sample 006A)

Photo By: DAK

December 16, 2019

Ms. Jill M. Instasi
Senior Project Manager
State of Maine Bureau of Real Estate Management
77 State House Station
Augusta, Maine 04333-0077

Re: Limited Asbestos Identification Survey | Former DHHS Offices | 221 State Street | Augusta, Maine

Dear Ms. Instasi:

At the request of the State of Maine Bureau of Real Estate Management (BREM), CES, Inc. (CES) completed a 'limited' asbestos identification survey at the former Department of Health and Human Services (DHHS) offices located at 221 State Street in Augusta, Maine. The limited asbestos identification survey, conducted on December 5, 2019, was completed to determine if suspended ceiling tiles present throughout the DHHS offices, identified during the October 16, 2019 visual asbestos assessment of the DHHS portion of the building, are asbestos containing. Similar-type ceiling tiles are present and had been previously sampled and identified as asbestos-containing in the Health and Environmental Testing Laboratory (HETL) portion of the building. At the time of the initial sampling, it was assumed that the ceiling tile present within the DHHS offices was the same and considered asbestos containing. Because the DHHS portion of the building is considered to be a separate functional space (due to construction age and renovation activity), it was determined that the ceiling tiles in the DHHS portion are not homogeneous to the ceiling tiles in the HETL portion, and should be sampled separately to determine if they are asbestos-containing.

The former DHHS portion of the building consists of a three-story, masonry structure constructed in 1951 and is currently used as storage. The structure was unoccupied at the time of this limited asbestos identification survey.

LIMITED ASBESTOS IDENTIFICATION SURVEY

This limited asbestos identification survey was completed in accordance with the Maine Department of Environmental Protection (MDEP) Chapter 425 Asbestos Management Regulations (April 3, 2011 revision) and was completed to provide BREM with information regarding the presence of asbestos in one type of suspended ceiling tile (pin dot/swirl design ceiling tiles) which are present throughout the three floors of the DHHS portion of the building.

465 South Main Street
PO Box 639
Brewer, Maine 04412
T 207.989.4824
F 207.989.4881

Ms. Deborah Kasik (CES), an asbestos inspector licensed by MDEP (AI#-0177), performed the limited asbestos identification survey on December 5, 2019. A copy of Ms. Kasik's Asbestos Inspector certification is included in **Attachment A**.

Completion of the limited asbestos identification survey included:

- Collection of nine representative bulk samples of suspect ceiling tiles from throughout the interior of the former DHHS building in accordance with MDEP regulations;
- Indication of sample locations on **Figures H101-H103**; and
- Quantification of ACM identified by laboratory analysis.

As with any scientific study, an asbestos identification survey is subject to a variety of limitations. Limitations to be considered in interpreting the results of the survey performed on this building includes the following:

- Condition of the structure at the time of the survey; and
- This survey was limited to the collection and laboratory analysis of one type of suspect asbestos-containing material (ACM). Additional suspect ACM are present within the subject areas but were not sampled as part of this limited investigation.

Bulk samples of suspect ACM collected during the survey were submitted to EMSL Analytical, Inc. (EMSL) of South Portland, Maine for analysis. Bulk samples collected during this survey were analyzed using the MDEP required analytical methods: "PLM-EPA 600/R-93/116" (for surfacing, thermal system insulation, and cementitious materials). Samples were analyzed at the South Portland, Maine EMSL laboratory, which is certified to perform asbestos analysis by both the National Voluntary Laboratory Accreditation Program (NVLAP) and the American Industrial Hygiene Association (AIHA). EMSL is a MDEP licensed Asbestos Analytical Laboratory. A copy of EMSL's laboratory certifications is included in **Attachment B**. Laboratory analytical results and chain of custodies are included as **Attachment C**.

According to the MDEP Chapter 425 Asbestos Management Regulations, bulk samples shall be analyzed until a positive result is obtained or all samples have been analyzed. The MDEP defines ACM as "any material containing asbestos in quantities greater than or equal to one percent (%) by volume as determined by weight, visual evaluation, and/or point count analysis."

Laboratory analytical results did not identify the sampled ceiling tiles (pin dot/swirl design) as asbestos-containing.

This report was prepared by CES for the sole use of BREM and should not be reproduced without their full, written authorization. Please contact either of the undersigned at (207) 989-4824 if you have any questions related to this project or if additional services are required.

Sincerely,
CES, Inc.

Deborah A. Kasik
Project Scientist
MDEP Asbestos Inspector AI-0177

Dennis B. Kingman, Jr., CHMM
Vice President/Senior Project Manager II

DAK/DBK/cmc
Attachments

Sensible Solutions | www.cesincusa.com

465 South Main Street
PO Box 639
Brewer, Maine 04412
T 207.989.4824
F 207.989.4881

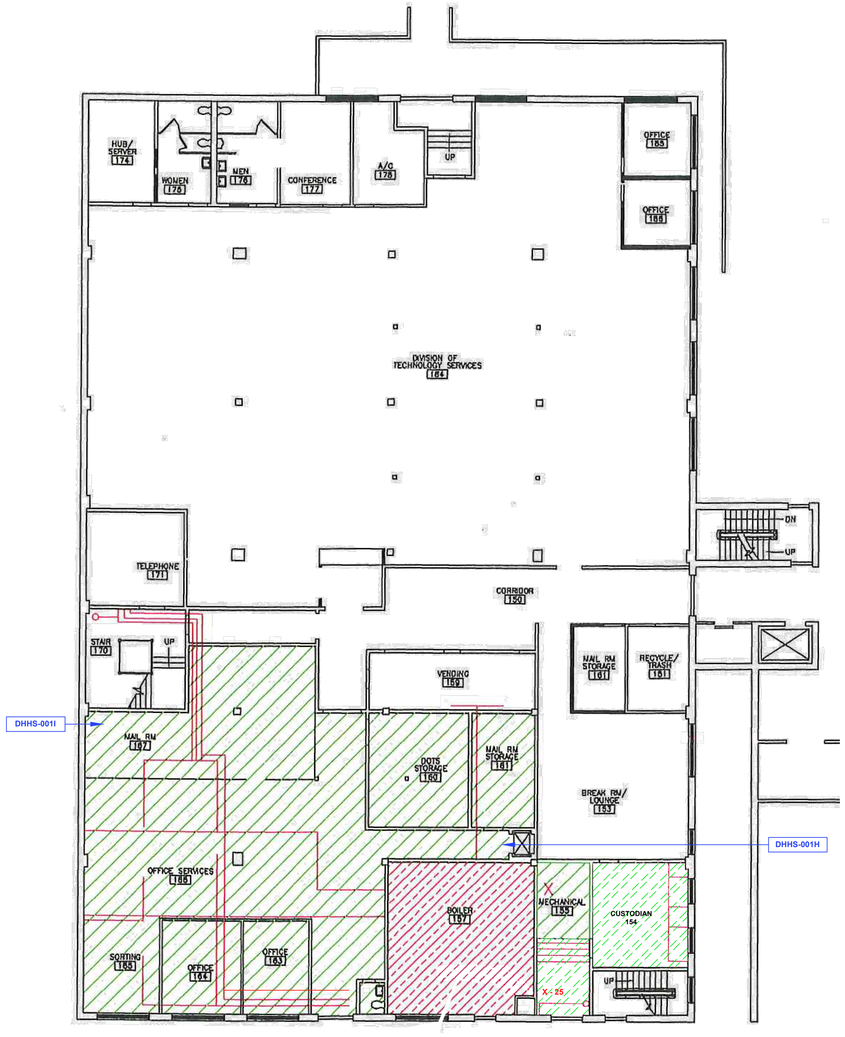
FIGURES

PLAN REFERENCE:

FLOOR PLAN DERIVED FROM DRAWINGS BY OTHERS PROVIDED TO CES, INC AND ARE NOT WARRANTED AS TO ACCURACY AND ARE INTENDED TO BE SCHEMATIC.

ASBESTOS LEGEND

- PIPE INSULATION ABOVE CEILING
- ACM FLOOR TILE WITH ACM MASTIC
- ACM ADHESIVE ONLY
- ACM INSULATED HORIZONTAL PIPES
- ACM INSULATED VERTICAL PIPE RISER
- X - 3 — ACM INSULATED PIPE FITTING VISIBLE IN A FUNCTIONAL AREA
- DHHS-002A — SAMPLE NUMBER AND LOCATION TESTING NEGATIVE FOR ASBESTOS



www.cesincusa.com
Brewer
465 South Main Street
PO Box 639
Brewer, ME
T.207-989-4824
F.207-989-4881

CES INC
Engineers • Environmental Scientists • Surveyors

PROJECT TITLE
STATE OF MAINE, BUREAU OF REAL ESTATE MANAGEMENT
FORMER DHHS BUILDING, 211 STATE ST., AUGUSTA, ME

SHEET TITLE
LIMITED ASBESTOS IDENTIFICATION SURVEY
FIRST FLOOR

REV	DESCRIPTION	DATE	DRAWN BY	CHECKED BY

ISSUE STATUS
NOT FOR CONSTRUCTION

SCALE	NTS
DATE	2019.12.13
DRAWN BY	JNB
CHECKED BY	DAK
DESIGNED BY	
APPROVED BY	
JOB NUMBER	10289.014
SHEET NUMBER	H101

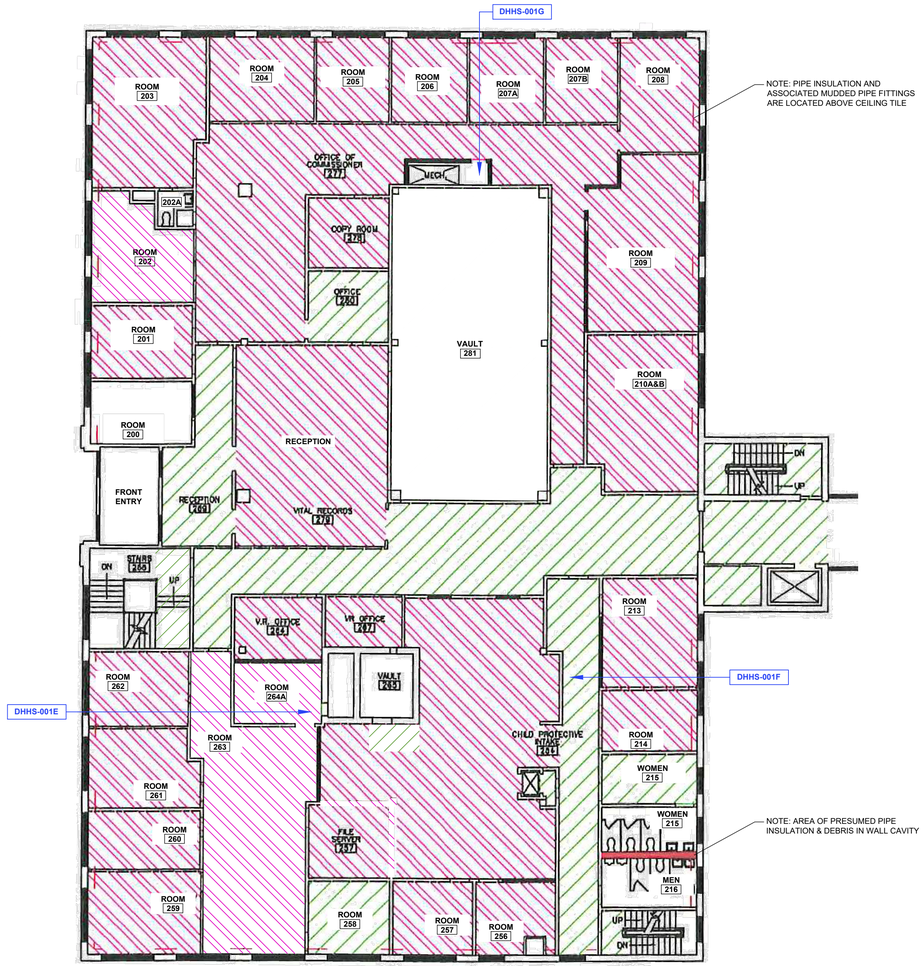
P:\10289-STATE_OF_MAINE\014-STATEST AUGUSTA PCB SCREENING DHHS BLDG-BEK\02-CAD_DRAWINGS\CIVIL\DISK_DWGS\10289.014-H-AA.DWG

PLAN REFERENCE:

FLOOR PLAN DERIVED FROM DRAWINGS BY OTHERS PROVIDED TO CES, INC AND ARE NOT WARRANTED AS TO ACCURACY AND ARE INTENDED TO BE SCHEMATIC.

ASBESTOS LEGEND

- ACM FLOOR TILE WITH ACM MASTIC
- ACM FLOOR TILE AND MASTIC BELOW CARPET
- ACM INSULATED HORIZONTAL PIPES
- DHHS-002A — SAMPLE NUMBER AND LOCATION TESTING NEGATIVE FOR ASBESTOS



www.cesincusa.com
Brewer
465 South Main Street
PO Box 639
Brewer, ME
T.207-989-4824
F.207-989-4881

CES INC
Engineers • Environmental Scientists • Surveyors

PROJECT TITLE
STATE OF MAINE, BUREAU OF REAL ESTATE MANAGEMENT
FORMER DHHS BUILDING, 211 STATE ST., AUGUSTA, ME

SHEET TITLE
LIMITED ASBESTOS IDENTIFICATION SURVEY
SECOND FLOOR

REV	DESCRIPTION	DATE	DRAWN BY	CHECKED BY

ISSUE STATUS
NOT FOR CONSTRUCTION

SCALE	NTS
DATE	2019.12.13
DRAWN BY	JNB
CHECKED BY	DAK
DESIGNED BY	
APPROVED BY	
JOB NUMBER	10289.014

SHEET NUMBER
H102

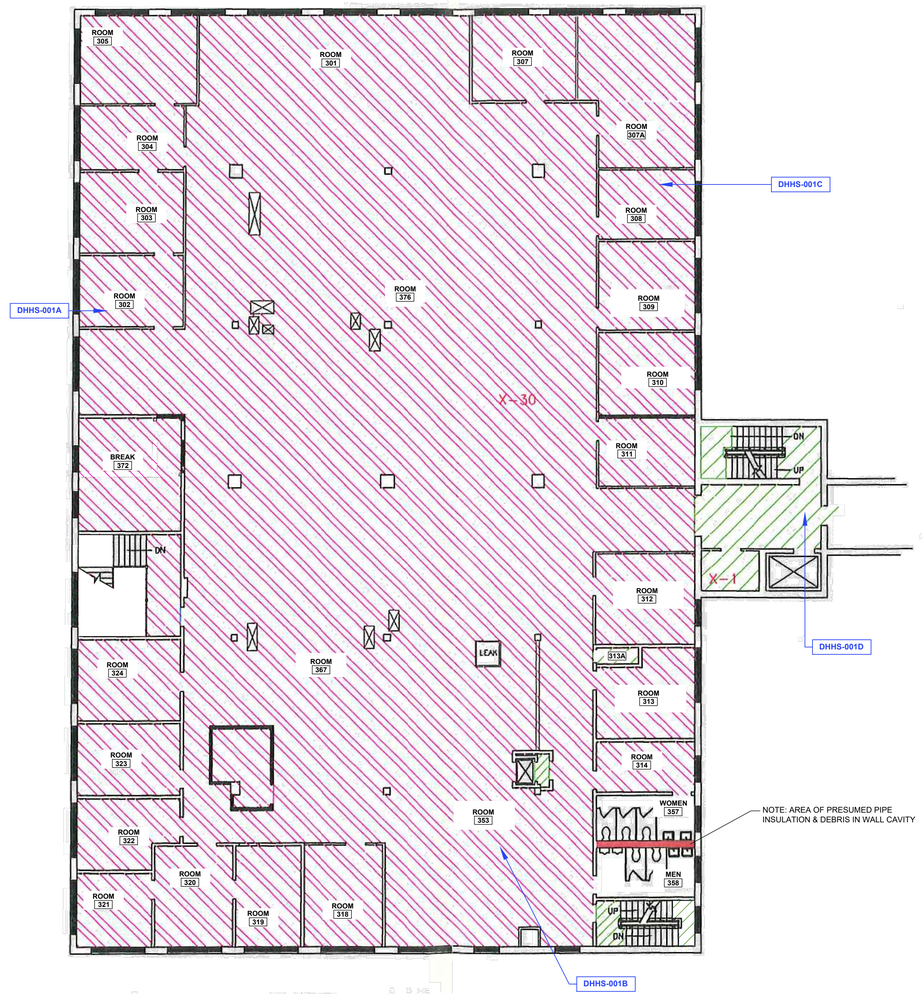
P:\10289-STATE_OF_MAINE\914-STATEST AUGUSTA PCB SCREENING DHHS BLDG\08\02-CAD_DRAWINGS\CIVIL\DISK_DWGS\10289-914-H-AA.DWG

PLAN REFERENCE:

FLOOR PLAN DERIVED FROM DRAWINGS BY OTHERS PROVIDED TO CES, INC AND ARE NOT WARRANTED AS TO ACCURACY AND ARE INTENDED TO BE SCHEMATIC.

ASBESTOS LEGEND

- ACM FLOOR TILE WITH ACM MASTIC
- ACM FLOOR TILE AND MASTIC BELOW CARPET
- X - 3 — ACM INSULATED PIPE FITTING VISIBLE IN A FUNCTIONAL AREA
- DHHS-002A — SAMPLE NUMBER AND LOCATION TESTING NEGATIVE FOR ASBESTOS



www.cesincusa.com
Brewer
465 South Main Street
PO Box 639
Brewer, ME
T.207-989-4824
F.207-989-4881

CES INC
Engineers • Environmental Scientists • Surveyors

PROJECT TITLE
STATE OF MAINE, BUREAU OF REAL ESTATE MANAGEMENT
FORMER DHHS BUILDING, 211 STATE ST., AUGUSTA, ME

SHEET TITLE
LIMITED ASBESTOS IDENTIFICATION SURVEY
THIRD FLOOR

REV	DESCRIPTION	DATE	DRAWN BY	CHECKED BY

ISSUE STATUS
NOT FOR CONSTRUCTION

SCALE	NTS
DATE	2019.12.13
DRAWN BY	JNB
CHECKED BY	DAK
DESIGNED BY	
APPROVED BY	
JOB NUMBER	10289.014
SHEET NUMBER	H103

P:\10289-STATE_OF_MAINE\01-6\TATEST AUGUSTA PCB SCREENING DHHS BLDG-DB\H02-CAD_DRAWINGS\CIVIL\DGN_DWG\10289.014-H-AA.DWG

ATTACHMENTS

ATTACHMENT A

ASBESTOS INSPECTOR CERTIFICATION

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JANET T. MILLS
GOVERNOR

GERALD D. REID
COMMISSIONER

December 4, 2019

CES, Inc.
465 South Main Street
Brewer, Maine 04412

Dear Licensee:

Asbestos application(s) for individual certification of the **two** employee(s) listed below have been received and **approved**. Individual certification numbers are listed below and wallet card(s) are enclosed. Card(s) are property of the individual to whom each is issued. Your responsibility as a licensee is to ensure delivery of the cards to persons in your employment. This letter should be retained for your company files as record of certification. Please attach 1 updated passport size photo with every application.

Remember, in Maine all **certified employees** working on an asbestos abatement project, whether conducting removal/repair, air monitoring, design, inspection, or analysis functions, **must work for a State of Maine licensed asbestos firm** and carry his/her wallet card(s) on the job site.

As a reminder, prior to renewing your asbestos certification, the State of Maine **requires** an annual refresher course to be taken before submitting a renewal application. A certificate shall expire one year from the last day of the month from the date of issuance, **or on the last day of the month that the training certificate expires**, whichever is sooner.

All our asbestos forms can be found at https://www.maine.gov/dep/waste/asbestos/forms.html
Thank you for your cooperation and your completed application(s).

Name	Category	Certification #	Exp. Date
Dennis B. Kingman, Jr.	Inspector	AI-0034	11/30/2020
Deborah A. Kasik	Inspector	AI-0177	11/30/2020

Sincerely,

Sandra J. Moody, Environmental Specialist
Division of Remediation
Bureau of Remediation and Waste Management

State of Maine
Asbestos Abatement Program

Deborah A. Kasik

Inspector
Cert No. AI-0177
Trn.Exp.Date 11/21/2020
Expiration Date 11/30/2020
This is not a legal form of official identification

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826

BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO
PORTLAND,
(207) 822-630

website: www.maine.gov/dep

Environmental Safety
Professionals

21 Sylvan Drive
Brewer, Maine
(207)-989-6848

This is to Certify that

Deborah Kasik

has successfully completed the 4-hour Training, passed
the final exam and hand-on proficiencies for

Asbestos Inspector; Annual Review

Conducted under TSCA Title II and CMR 425.5(E) by

Environmental Safety Professionals

Course Date: November 21, 2019
Expiration: November 21, 2020

Exam Date: November 21, 2019
Exam Score: 96

AI19-13
Certificate No.

Instructor:

Chris Atwood, CSP, OHST

ATTACHMENT B

ASBESTOS ANALYTICAL LABORATORY CERTIFICATIONS

AIHA Laboratory Accreditation Programs, LLC

acknowledges that

EMSL Analytical, Inc.

200 Route 130 North, Cinnaminson, NJ 08077

Laboratory ID: 100194

along with all premises from which key activities are performed, as listed above, has fulfilled the requirements of the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC accreditation to the ISO/IEC 17025:2005 international standard, *General Requirements for the Competence of Testing and Calibration Laboratories* in the following:

LABORATORY ACCREDITATION PROGRAMS

✓	**INDUSTRIAL HYGIENE**	Accreditation Expires: November 01, 2020
✓	**ENVIRONMENTAL LEAD**	Accreditation Expires: November 01, 2020
✓	**ENVIRONMENTAL MICROBIOLOGY**	Accreditation Expires: November 01, 2020
☐	**FOOD**	Accreditation Expires:
☐	**UNIQUE SCOPES**	Accreditation Expires:

Specific Field(s) of Testing (FoT)/Method(s) within each Accreditation Program for which the above named laboratory maintains accreditation is outlined on the attached **Scope of Accreditation**. Continued accreditation is contingent upon successful on-going compliance with ISO/IEC 17025:2005 and AIHA-LAP, LLC requirements. This certificate is not valid without the attached **Scope of Accreditation**. Please review the AIHA-LAP, LLC website (www.aihaaccreditedlabs.org) for the most current Scope.

Beth Bair

Elizabeth Bair
Chairperson, Analytical Accreditation Board

Cheryl O. Morton

Cheryl O. Morton
Managing Director, AIHA Laboratory Accreditation Programs, LLC

Revision 17 – 09/11/2018

Date Issued: 11/30/2018

AIHA Laboratory Accreditation Programs, LLC
SCOPE OF ACCREDITATION

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077

Laboratory ID: **100194**
Issue Date: 02/19/2019

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

Industrial Hygiene Laboratory Accreditation Program (IHLAP)

Initial Accreditation Date: 02/01/1989

IHLAP Scope Category	Field of Testing (FoT) (FoTs cover all relevant IH matrices)	Technology sub-type/ Detector	Published Reference Method/Title of In-house Method	Method Description or Analyte *(for internal methods only)*
Chromatography Core	Gas Chromatography	GC/FID	NIOSH 1003 Modified	
			NIOSH 1005 Modified	
			NIOSH 1400 Modified	
			NIOSH 1500 Modified	
			NIOSH 1501 Modified	
			NIOSH 1550 Modified	
			NIOSH 1603 Modified	
			NIOSH 2000 Modified	
		GC/ECD	NIOSH 5502 Modified	
			NIOSH 5503 Modified	
			NIOSH 5510 Modified	
			OSHA 1010 Modified	
	GC/MS		EPA TO-15	
	Gas Chromatography (Diffusive Samplers)		NIOSH 1501 Modified	
	Ion Chromatography (IC)		NIOSH 6004 Modified	
			NIOSH 6011	
			NIOSH 7903	
			OSHA ID-214	
			OSHA ID-215 Modified Version 2	
	Liquid Chromatography	HPLC/FL	NIOSH 2016 Modified	
		HPLC/UV	NIOSH 5506 Modified	
		LC/MS	NIOSH 9111 Modified	

IHLAP Scope Category	Field of Testing (FoT) (FoTs cover all relevant IH matrices)	Technology sub-type/ Detector	Published Reference Method/Title of In-house Method	Method Description or Analyte *(for internal methods only)*
Spectrometry Core	Atomic Absorption	CVAA	NIOSH 6009 Modified	
			OSHA ID-140 Modified	
			OSHA ID-145	
		FAA	NIOSH 7082	
		GFAA	NIOSH 7105	
	Inductively-Coupled Plasma	ICP/MS	NIOSH 7300 Modified	
		ICP/AES	NIOSH 7300 Modified	
	X-ray Diffraction (XRD)		NIOSH 7500 Modified	
			OSHA ID-142 Modified	
	UV/VIS (Colorimetric)		NIOSH 6010 Modified	
Asbestos/Fiber Microscopy Core	Polarized Light Microscopy (PLM)		EPA 600/R-93/116	
	Phase Contrast Microscopy (PCM)		NIOSH 7400	
	Transmission Electron Microscopy (TEM)		EPA AHERA - 40 CFR Part 763	EPA AHERA Method (40 CFR 763, Subpart E, Appendix A, Mandatory Method
			NIOSH 7402	
Miscellaneous Core	Gravimetric		NIOSH 0500	
			NIOSH 0600	
			NIOSH 5524	
	Thermo-optical Analysis (TOA)		NIOSH 5040	
Beryllium Testing	Inductively-Coupled Plasma	ICP/MS	NIOSH 7300	
			NIOSH 7303	

A complete listing of currently accredited Industrial Hygiene laboratories is available on the AIHA-LAP, LLC website at: http://www.aihaaccreditedlabs.org

United States Department of Commerce
National Institute of Standards and Technology

Certificate of Accreditation to ISO/IEC 17025:2017

NVLAP LAB CODE: 500094-0

EMSL Analytical, Inc.

South Portland, ME

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

Asbestos Fiber Analysis

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2019-10-01 through 2020-09-30

Effective Dates

For the National Voluntary Laboratory Accreditation Program

National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

EMSL Analytical, Inc.
161 John Roberts Road
South Portland, ME 04106
Mr. Zackary Carbee
Phone: 207-517-6921
Email: zcarbee@emsl.com
http://www.emsl.com

ASBESTOS FIBER ANALYSIS **NVLAP LAB CODE 500094-0**

Bulk Asbestos Analysis

Code	*Description*
18/A01	EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

Airborne Asbestos Analysis

Code	*Description*
18/A02	U.S. EPA's "Interim Transmission Electron Microscopy Analytical Methods-Mandatory and Nonmandatory-and Mandatory Section to Determine Completion of Response Actions" as found in 40 CFR, Part 763, Subpart E, Appendix A.

For the National Voluntary Laboratory Accreditation Program

State of Maine
Department of Environmental Protection

LICENSE

EMSL Analytical, Inc.

Asbestos Analytical Laboratory
(Bulk)

License Number: LB-0039

Expiration Date: 10/31/2020

State of Maine
Department of Environmental Protection

LICENSE

EMSL Analytical, Inc.

Asbestos Analytical Laboratory
(Air)

License Number: LA-0038 **Expiration Date:** 10/31/2020

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JANET T. MILLS
GOVERNOR

GERALD D. REID
COMMISSIONER

September 10, 2019

Attn: Anastasia Krakhaleva, *Quality Assurance Specialist*
EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

Dear Ms. Krakhaleva,

This is to confirm that the Maine Department of Environmental Protection is in receipt of your request to add the following labs to your licensing of Analytical Laboratories: Boston, MA., E. Weymouth, MA and South Portland, Maine.

LA-0038 for Asbestos Analytical Laboratory (Air), expires on 10/31/2020
LB-0039 for Asbestos Analytical Laboratory (Bulk), expires on 10/31/2020

Remember each laboratory must have certified individual(s) within the lab to perform analyses.

If you need any further assistance please feel free to contact me at (207) 287-7751 or e-mail at sandy.j.moody@maine.gov.

Sincerely,

Sandra J. Moody, Environmental Specialist
Division of Remediation
Bureau of Remediation and Waste Management

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826
RAY BLDG., HOSPITAL ST.

BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-4570 FAX (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04679-2094
(207) 764-0477 FAX: (207) 760-3143

web site: www.maine.gov/dep

PORTLAND - INDIVIDUAL ANALYST CERTIFICATIONS

State of Maine

November 11, 2019

Employee Name	*Lab Location*	*State Certified*	*Certification No.*	*Type of Cert.*	*Exp. Date*
Zachary Carbee	S. Portland	Maine	BA-0174	Asbestos PLM Analyst	8/31/2020
Stephen Severn	S. Portland	Maine	AA-0497	Asbestos PCM Analyst	10/28/2020
Stephen Severn	S. Portland	Maine	BA-0178	Asbestos PLM Analyst	10/28/2020
Thomas Stegerman	S. Portland	Maine	BA-0197	Asbestos PLM Analyst	10/28/2020
Samantha Voigt	S. Portland	Maine	BA-0188	Asbestos PLM Analyst	8/31/2020

ATTACHMENT C

ASBESTOS LABORATORY ANALYTICAL RESULTS

EMSL Analytical, Inc.

161 John Roberts Road South Portland, ME 04106

Tel/Fax: (207) 517-6921 / (207) 517-6922

http://www.EMSL.com / portlandlab@emsl.com

EMSL Order:	621901907
Customer ID:	CESI62
Customer PO:	
Project ID:	

Attention:	Deb Kasik	**Phone:**	(207) 989-4824
	CES/Summit Environmental Consultants	**Fax:**	(207) 989-4881
	465 S. Main Street	**Received Date:**	12/06/2019 10:00 AM
	PO Box 639	**Analysis Date:**	12/06/2019
	Brewer, ME 04412	**Collected Date:**	12/05/2019
Project:	10289.014		

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

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
DHHS-001A *621901907-0001*	3rd Floor Rm 302 - CT 4 x 2 Pindot Swirl	Gray Fibrous Homogeneous	50% Cellulose 45% Min. Wool	5% Non-fibrous (Other)	None Detected
DHHS-001B *621901907-0002*	3rd Floor Rm 353 Near Stairs - CT 4 x 2 Pindot Swirl	Gray Fibrous Homogeneous	50% Cellulose 45% Min. Wool	5% Non-fibrous (Other)	None Detected
DHHS-001C *621901907-0003*	3rd Floor Rm 308 - CT 4 x 2 Pindot Swirl	Gray Fibrous Homogeneous	50% Cellulose 45% Min. Wool	5% Non-fibrous (Other)	None Detected
DHHS-001D *621901907-0004*	3rd Floor Hall Near Elevator - CT 4 x 2 Pindot Swirl	Gray Fibrous Homogeneous	50% Cellulose	50% Non-fibrous (Other)	None Detected
DHHS-001E *621901907-0005*	2nd Floor Rm 264A - CT 4 x 2 Pindot Swirl	Gray Fibrous Homogeneous	50% Cellulose 45% Min. Wool	5% Non-fibrous (Other)	None Detected
DHHS-001F *621901907-0006*	2nd Floor Hall Outside Rm 213 - CT 4 x 2 Pindot Swirl	Gray Fibrous Homogeneous	50% Cellulose 45% Min. Wool	5% Non-fibrous (Other)	None Detected
DHHS-001G *621901907-0007*	2nd Floor Rm 277 Near Elec. Panel - CT 4 x 2 Pindot Swirl	Gray Fibrous Homogeneous	50% Cellulose 45% Min. Wool	5% Non-fibrous (Other)	None Detected
DHHS-001H *621901907-0008*	1st Floor Hall Near Freight Elev. - CT 4 x 2 Pindot Swirl	Gray Fibrous Homogeneous	50% Cellulose 45% Min. Wool	5% Non-fibrous (Other)	None Detected
DHHS-001I *621901907-0009*	1st Floor Rm 167 - CT 4 x 2 Pindot Swirl	Gray Fibrous Homogeneous	50% Cellulose 45% Min. Wool	5% Non-fibrous (Other)	None Detected

Report Comment: **ME CERT # BA-0178, BA-0188**

Analyst(s)

Stephen Severn (5)

Samantha Voigt (4)

Zackary Carbee, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method"), but augmented with procedures outlined in the 1993 ("final") version of the method. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. All samples received in acceptable condition unless otherwise noted. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. EMSL recommends gravimetric reduction for all non-friable organically bound materials prior to analysis. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. South Portland, ME NVLAP Lab Code 500094-0, MA AA000236, VT AL197271, ME LM-0039, CT PH-0346

Initial report from: 12/09/2019 08:43:36

OrderID: 621901907

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (*Lab Use Only*): 621901907

EMSL Analytical, Inc.
161 John Roberts Road
South Portland, ME 04106
PHONE: (207) 517-6921
FAX: (207) 517-6922

Company: CES, INC	**EMSL-Bill to:** ☐ Same ☑ Different If Bill to is Different note instructions in Comments** *Third Party Billing requires written authorization from third party*
Street: 465 S MAIN STREET	
City: BREWER **State/Province:** ME	**Zip/Postal Code:** 04412 **Country:** US
Report To (Name): DEB KASIK	**Telephone #:** 207989-4824
Email Address: dkasik@cesincusa.com	**Fax #:** 207 989-4881 **Purchase Order:**
Project Name/Number: 10289.014	**Please Provide Results:** ☐ Fax ☑ Email ☐ Mail
U.S. State Samples Taken: ME	**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour ☐ 6 Hour ☑ 24 Hour ☐ 48 Hour ☐ 72 Hour ☑ 96 Hour ☐ 1 Week ☐ 2 Week

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

PLM - Bulk (reporting limit)	TEM – Bulk
☑ PLM EPA 600/R-93/116 (<1%)	☐ TEM EPA NOB – EPA 600/R-93/116 Section 2.5.5.1
☑ PLM EPA NOB (<1%)	☐ NY ELAP Method 198.4 (TEM)
Point Count ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ Chatfield Protocol (semi-quantitative)
Point Count w/Gravimetric ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ TEM % by Mass – EPA 600/R-93/116 Section 2.5.5.2
☐ NIOSH 9002 (<1%)	☐ TEM Qualitative via Filtration Prep Technique
☐ NY ELAP Method 198.1 (friable in NY)	☐ TEM Qualitative via Drop Mount Prep Technique
☐ NY ELAP Method 198.6 NOB (non-friable-NY)	**Other**
☐ OSHA ID-191 Modified	☐
☐ Standard Addition Method	

☑ **Check For Positive Stop – Clearly Identify Homogenous Group** **Date Sampled:** 12/5/19

Samplers Name: Deb Kasik **Samplers Signature:** Deborah A Kasik

Sample #	HA #	Sample Location	Material Description
DHHS-001A		3rd Floor Rm 302	CT 4x2 fine dot swirl
B		" " Rm 353 near stairs	"
C		" " Rm 308	"
D		3rd Floor Hall near Elevator	"
E		2nd Floor Rm 264A	"
F		" " Wall outside Rm 213	"
G		" " Rm 277 near elec. panel	"
H		1st Floor Hall near freight elev.	"
I		1st Floor Rm 167	"

Client Sample # (s): - **Total # of Samples:** 9

Relinquished (Client): Deborah A Kasik **Date:** 12/5/19 **Time:** 5:00pm

Received (Lab): Steph S. **Date:** 12/6/19 **Time:** 10AM

Comments/Special Instructions:
NOB PER MAINE DEP
BillTo: CES, INC,
Prefix 'DHHS'

E Fedex (1 of 1)

RECEIVED
DEC 06 2019
By SRS

URS

URS Corporation
115 Water Street, Suite 3
Hallowell, Maine 04347

ASBESTOS IDENTIFICATION SURVEY
DHS BUILDING
AUGUSTA, MAINE

Prepared for:

Mr. Joe Silva
Bureau of General Services
77 State House Station
Augusta, ME 04333-0077

JOB NO.: 28407
May 16, 2002

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Appendix B Survey, Sampling and Analytical Protocol
Appendix C Polarized Light Microscopy Analytical Methods
Appendix D Definitions and Regulations

1.0 INTRODUCTION

URS Corporation (URS) was retained by the State of Maine; Bureau of General Services (BGS) to conduct an asbestos identification survey at the Department of Human Services (DHS) Building, located in Augusta, Maine. The objective of the field survey was to locate and identify asbestos-containing materials (ACM) in the interior of the building.

1.1 ASBESTOS-CONTAINING MATERIALS

Mr. Michael Haughton, (URS), an asbestos inspector licensed in the State of Maine performed the field survey during the period of April 9, 2002 through April 12, 2002. During the survey, the inspector reviewed the 1987 Hall-Kimbrell asbestos identification survey and the 1999 ICON Environmental asbestos identification survey, information regarding the facility that was provided to them by BGS, visually identified interior suspect ACM and collected bulk samples of suspect ACM in accordance with the Maine Department of Environmental Protection (DEP) regulations. Forty- two bulk samples of suspect ACM building materials were collected during the field survey. Quantity estimates and locations of identified ACM were based upon information provided by BGS and from field observations

Following the completion of the survey work, the bulk samples of suspect ACM were submitted to the URS's Salem, NH laboratory for analysis. The URS laboratory is certified to perform asbestos analysis by both the National Voluntary Laboratory Accreditation Program (NVLAP) and the American Industrial Hygiene (AIHA). The method used to analyze the bulk samples collected during this survey was the recommended EPA procedure of Polarized Light Microscopy (PLM) with dispersion staining. Analytical results are presented in Appendix A. The protocol for analysis of bulk samples is presented in Appendix D.

2.0 SURVEY LIMITATIONS

The information presented in this report represents the conditions observed at the time of the site investigation. Survey data, observations and recommendations presented in this report are based upon industry-accepted methodologies used to conduct this investigation and the professional judgment of the investigator. URS Corporation is not responsible for changes in condition observed after the field investigation was completed.

As with any scientific study, facility asbestos identification surveys are subject to a variety of limitations. Limitations to be considered in interpreting the results of this survey include the following:

- Asbestos survey may not be able to identify all ACM throughout a facility. A thorough study should be capable of identifying approximately 95 percent of accessible (by non-destructive methods) ACM present. The survey and analytical protocol used for this project is presented in Appendix B and C.
- Areas not accessible at the time of the scheduled survey were not surveyed.
- This survey was conducted using non-destructive sampling methods.
- Thermal system insulation identified during the 1987 Hall-Kimbrell asbestos identification survey was not re-sampled during this survey. Samples of thermal system insulation were only collected if the material could not be referenced to the original survey or if the suspect material appeared to have been installed after the 1987 survey.
- Cost figures used in developing abatement costs were estimated, based on historical information. These costs should be considered estimates and used for budgetary purposes only. For cost projections in future years, an adjustment that considers inflation and the state of the abatement industry must be applied.

3.0 OBSERVATIONS AND FINDINGS

The DHS Building is a three-story brick, masonry structure consisting of a basement and three upper floors. During the walk-through survey of the building, the URS surveyors reviewed existing drawing plans, identified interior suspect ACM and determined quantities of suspect ACM. The asbestos inspector collected bulk samples of suspect ACM in accordance with Maine DEP regulations. Suspect ACM sampled during the survey included ceiling tile, flooring material and flooring material adhesives, pipe insulation, sheetrock and associated joint compound and laboratory fume hoods.

The following sections of this report contain brief descriptions of the building areas by floor and a summary of the types of ACM identified in those areas. An inventory of ACM materials and their locations is included in Table 1. The location of the identified ACM within the building is shown in Figures 1 through 4

BASEMENT

The Basement consists of a boiler room, mechanical space, lounge area, laboratories, restrooms and stairwells. Suspect ACM identified in the basement included twelve-inch by twelve-inch floor tile and associated floor tile mastic (four types), nine-inch by nine-inch floor tile and associated floor tile mastic, pipe insulation, mud-insulated pipe fittings, ceiling tile (two types) and sheet rock and associated joint compound. Materials identified as ACM included nine-inch by nine-inch off-white floor tile and associated mastic, twelve-inch by twelve-inch dark off-white floor tile with gray design and associated mastic, pipe insulation, mud-insulated pipefittings and two-foot by four-foot white ceiling tile with pin dot design.

FIRST FLOOR

The first floor consists of laboratories located in the east wing and office areas located in the west wing, entryway, reception area, restrooms and stairwells. Suspect ACM identified on the first floor includes twelve-inch by twelve-inch green floor tile and associated floor tile mastic, nine-inch by nine-inch floor tile and associated floor tile mastic (two types) ceiling tile (three types), pipe insulation, mud-insulated pipe fittings, laboratory fume hoods, sheet rock and associated joint compound. Material identified as ACM included nine-inch by nine-inch brown and off-white floor tile and associated mastic, pipe insulation, mud-insulated pipe fittings and laboratory fume hoods.

SECOND FLOOR

The second floor consists of east and west office wings, common areas, restrooms and stairwells. Suspect ACM identified on the second floor includes twelve-inch by twelve-inch white floor tile and associated floor tile mastic, nine-inch by nine-inch floor tile and associated floor tile mastic, ceiling tile, pipe insulation, mud-insulated pipe fittings and sheet rock and associated joint compound. Material identified as ACM included nine-inch by nine-inch off-white floor tile and associated floor tile mastic located under carpets, nine-inch by nine-inch floor tile brown and associated floor tile mastic, pipe insulation and mud-insulated pipe fittings.

THIRD FLOOR

The third floor consists of a west office wing, common areas, restrooms and stairwells. Suspect ACM identified on the third floor includes nine-inch by nine-inch floor tile and associated floor tile mastic, pipe insulation, mud-insulated pipe fittings and sheet rock and associated joint compound. Material identified as ACM included nine-inch by nine-inch unknown color floor tile and associated floor tile mastic located under carpets, nine-inch by nine-inch brown floor tile and associated floor tile mastic, pipe insulation and mud-insulated pipe fittings.

PENTHOUSE

The Penthouse consists of an area used to house a mechanical HVAC system. Suspect ACM identified in the Penthouse includes exterior transite siding, pipe insulation and mud-insulated pipe fittings. Materials identified as ACM include exterior transite siding, pipe insulation and mud-insulated pipe fittings.

4.0 RECOMMENDATIONS

The ACM identified throughout the facility was found to range from fair to good condition, with the exception of the nine-inch by nine-inch floor tile located in the Custodian's Closet located on the second floor and the pipe insulation located in the Penthouse. These materials were observed to be in poor condition and should be removed.

Asbestos fibers are potential health hazards when they become airborne. As long as this material remains intact, undamaged, and in good condition, the material may be managed in place. However, current regulations require that asbestos-containing building materials be either removed if the materials will be disturbed by renovation, demolition, or other building maintenance activities. An Operation and Maintenance (O&M) plan should be implemented to manage the materials in place until such a time when they have been removed. ACM identified during this survey that will be impacted by the planned renovation project should be removed prior to the initiation of the actual renovation work. Upon finalization of the renovation plans the actual extent of impact to the existing ACM can be determined. ACM abatement should be performed using approved methods in accordance with applicable regulations established by the U.S. Environmental Protection Agency (EPA), OSHA and Maine DEP. The ACM impacted by planned renovation activities must be removed by a State of Maine licensed asbestos abatement contractor.

5.0 BUDGETARY COST ESTIMATES

URS has developed preliminary cost estimates for abatement of ACM identified during the survey. These estimates do not include material replacement costs or associated design and project monitoring fees or regulatory agency notification fees. Actual abatement costs will vary depending upon the quantity of material removed at any one time. These cost estimates assume that the ACM will be removed in a friable state.

ACM ABATEMENT COSTS
DHS BUILDING
AUGUSTA, MAINE

ACM	Approximate Quantity	Unit Cost	Cost
Pipe Insulation	3,525 Linear Feet (LF)	$15.00/LF	$ 52,875
Ceiling Tile	900 Square Feet (SF)	$ 10.00/SF	$ 9,000
Floor Tile	23,405 SF	$ 2.50/SF	$ 58,512
Floor Tile Mastic	8,025 SF	$5/SF	$40,125
Exterior Transite Siding	2,000 SF	$3/SF	$6,000
Fume Hoods	7 Each (EA)	$500/EA	$3,500
Mud Insulated Pipe Fittings	470 EA	$25/EA	$11,750
Total Estimated Cost Range			**$175,000 - $200,000**

URS has estimated asbestos abatement project duration of between 75 working days of eight – hour contractor shifts, using an 8-person crew.

6.0 REPORT CERTIFICATION

This report was prepared and reviewed by URS Corporation for the sole use of the State of Maine Bureau of General Services and it's constituents and should not be reproduced without full, written authorization from the Bureau of General Services.

Inspector:

Michael Haughton

AI-0167
Maine DEP License No.

May 16, 2002
Date

Quality Control:

Dennis B. Kingman, Jr.

Senior Project Manager
Title

Date

TABLES

TABLE 1

ASBESTOS-CONTAINING MATERIALS
DHS BUILDING
AUGUSTA, MAINE

BASEMENT

Location	Material Type	Sample Number	Asbestos Percent and Type	Estimated Quantity of ACM	Condition	Recommended Response Action
Mechanical Room	Pipe Insulation	HK114702	35% Chrysotile	550 LF	Good	O & M
	Mud Insulated Pipe Fittings	HK114703	15% Chrysotile	60 EA	Good	O & M
Ernie's Room	Pipe Insulation	HK114702	35% Chrysotile	225 LF	Good	O & M
	Mud Insulated Pipe Fittings	HK114703	15% Chrysotile	12 EA	Good	O & M
Laboratories	Pipe Insulation	HK114702	35% Chrysotile	300 LF	Good	O & M
	Mud Insulated Pipe Fittings	HK114703	15% Chrysotile	130 EA	Good	O & M
		08	5% Amosite	900 SF	Good	
	Ceiling Tile	01	2% Chrysotile	600 SF	Good	O & M
	Floor Tile and Associated Mastic	02	1% Chrysotile			O & M
Evidence Room	Pipe Insulation	HK114702	35% Chrysotile	100 LF	Good	O & M
	Mud Insulated Pipe Fittings	HK114703	15% Chrysotile	20 EA	Good	O & M
Corridor	Pipe Insulation	HK114702	35% Chrysotile	200 LF	Good	O & M
	Mud Insulated Pipe Fittings	HK114703	15% Chrysotile	50 EA	Good	O & M
	Floor Tile and Associated Mastic	01 02	2% Chrysotile 1% Chrysotile	750 SF	Good	O & M

Location	Material Type	Sample Number	Asbestos Percent and Type	Estimated Quantity of ACM	Condition	Recommended Response Action
Supply Room	Pipe Insulation Mud Insulated Pipe Fittings	HK114702 HK114703	35% Chrysotile 15% Chrysotile	200 LF 30 EA	Good Good	O & M O & M
Boiler Room	Pipe Insulation Mud Insulated Pipe Fittings	HK114696 HK114690	35% Chrysotile 15% Chrysotile	200 LF 16 EA	Good Good	O & M O & M
Storage Room	Pipe Insulation Mud Insulated Pipe Fittings	HK114696 HK114690	35% Chrysotile 15% Chrysotile	325 LF 30 EA	Good Good	O & M O & M
Break Room	Pipe Insulation Mud Insulated Pipe Fittings	HK114702 HK114703	35% Chrysotile 15% Chrysotile	75 SF 30 EA	Good Good	O & M O & M

FIRST FLOOR

Location	Material Type	Sample Number	Asbestos Percent and Type	Estimated Quantity of ACM	Condition	Recommended Response Action
Laboratories	Pipe Insulation	HK114702	35% Chrysotile	350 LF	Good	O & M
	Mud Insulated Pipe Fittings	HK114703	15% Chrysotile	50 EA	Good	O & M
	Floor Tile and Associated Mastic	11 12	3% Chrysotile 1% Chrysotile	1600 SF	Good	O & M
	Fume Hoods			7 EA	Good	O & M
Corridor	Floor Tile and Associated Mastic	11 12	3% Chrysotile 1% Chrysotile	600 SF	Good	O & M
Administration Room	Floor Tile and Associated Mastic	11 12	3% Chrysotile 1% Chrysotile	100 SF	Good	O & M
Boiler Room	Pipe Insulation	HK114702	35% Chrysotile	300 LF	Good	O & M
Mechanical Room	Pipe Insulation	HK114702	35% Chrysotile	125 LF	Good	O & M
	Floor Tile and Associated Floor Tile Mastic	11 12	3% Chrysotile 1% Chrysotile	75 SF	Good	O & M
Mail Room	Pipe Insulation	HK114702	35% Chrysotile	200 LF	Good	O & M
	Floor Tile and Associated Floor Tile Mastic	IATL96216 IATL96217	10% Chrysotile 3% Chrysotile	2,000SF	Good	O & M

SECOND FLOOR

Location	Material Type	Sample Number	Asbestos Percent and Type	Estimated Quantity of ACM	Condition	Recommended Response Action
East Office Wing	Floor Tile located under carpet	11	3% Chrysotile	1,800 SF	Good	O & M
	Mud Insulated Pipe Fittings	HK114703	15% Chrysotile	30 EA	Good	O & M
Custodian's Closet	Floor Tile and Associated Mastic	IATL96216	10% Chrysotile	80 SF	Poor	Remove
West Office Wing	Floor Tile located under carpet	IATL96216	10% Chrysotile	3,500 SF	Good	O & M
	Floor Tile and Associated Mastic	11	3% Chrysotile	2,000 SF	Good	O & M
	Pipe Insulation	12	1% Chrysotile			
		HK114702	35% Chrysotile	300 LF	Good	O & M
Corridor	Floor Tile and Associated Floor	11	3% Chrysotile	300 SF	Good	O & M
	Tile Mastic	12	1% Chrysotile			

THIRD FLOOR

Location	Material Type	Sample Number	Asbestos Percent and Type	Estimated Quantity of ACM	Condition	Recommended Response Action
West Office Wing	Floor Tile located under carpet Mud Fitting	IATL96216 HK114703	10% Chrysotile 15% Chrysotile	10,000 SF 30 EA	Good Good	O & M O & M

PENTHOUSE

Location	Material Type	Sample Number	Asbestos Percent and Type	Estimated Quantity of ACM	Condition	Recommended Response Action
Attic	Transite Siding			2,000 SF	Good	O & M
Penthouse	Pipe Insulation	HK114702	35% Chrysotile	75 LF	Poor	Remove

FIGURES

APPENDIX A

POLAR LIGHT MICROSCOPY ANALYTICAL DATA

URS Corporation
5 Industrial Way
Salem, NH 03079
Tel: 603.893.0616
Fax: 603.893.6240

Dennis Kingman
URS Corporation
115 Water Street, Suite 3
Hallowell, ME 04347

URS Project #	: 03956
Laboratory Batch #	: 15032
Date Samples Received	: 4/10/02
Date Samples Analyzed	: 4/10/02
Date of Final Report	: 4/10/02

SAMPLE IDENTIFICATION:

Forty-Two bulk samples from the Bureau of General Services; HETL 1st Floor/Basement project; submitted by Michael Haughton.

These bulk samples were delivered to URS Corporation, Salem, New Hampshire for asbestos content determination.

ANALYTICAL METHOD:

Analytical procedures were performed in accordance with the U.S. Environmental Protection Agency (EPA) Recommended Method for the Determination of Asbestos in Bulk Samples by Polarized Light Microscopy and Dispersion Staining (PLM/DS)(EPA-600/M4-82-020, EPA-600/ R-93-116) and the New York Department of Health Environmental Laboratory Approval Program (NYDOH-ELAP 198.1) with the exception of resinously bound materials (please refer to the comments at the end of this report). This report relates only to those samples actually analyzed, and may not be indicative of other similar appearing materials existing at this, or other sites.

Quantification of asbestos content was determined by Calibrated Visual Estimation.

The EPA requires that friable samples with analytical results of 10% or less asbestos, by visual estimation, be treated as asbestos-containing material unless these quantities are verified using the point counting method. The point counting method is a systematic technique for estimating concentration, also using PLM. The point counting method, however, does not increase the analyst's ability to detect fibers. If you would like any of your friable samples with an asbestos content of less 10% to be point counted, please contact our office. Point counting is not required for those samples in which no asbestos is detected during analysis by PLM.

New York State regulations require that a matrix reduction be performed on all NOB (Non-Organically Bound) samples (i.e.: floor tile, adhesives, roofing materials, etc.). The URS Asbestos Laboratory complies with this directive by applying solvent and low level heat to all resinously bound materials (regardless of state or country origin) to release bound asbestos fibers from the resinous matrix without altering their optical properties. However, this procedure is not covered by the EPA methodologies (EPA-600/ M4-82-020 & EPA-600/ R-93-116) and is therefore a departure from documented protocols.

In any given material, fibers with a small diameter (<0.25µm) may not be detected by the PLM method. Floor tile and other resinously bound material may yield a false negative if the asbestos fibers are too small to be resolved using PLM. Additional analytical methods may be required. URS recommends using Transmission Electron Microscopy (TEM) for a more definitive analysis.

New York state regulations require that all friable samples in which asbestos is detected be point counted (using the NYDOH-ELAP stratified point counting method). New York state regulations also require TEM confirmation of NOB (Non Organically Bound) samples found to have No Asbestos Detected by PLM. These regulations apply only to samples taken within the State of New York.

URS will retain all samples for a minimum of three months. Further analysis or return of samples must be requested within this three month period to guarantee their availability.

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If you have any questions regarding this report, please do not hesitate to contact ns.

Douglas R. Lawson, Ph.D, CIH
Laboratory Director

Jeffrey D. Waite
Laboratory Supervisor

NVLAP Lab ID#: 101433-0
NYDOH-ELAP #: 11020

2068

URS

Laboratory Bulk Asbestos Analysis Results

Client/ Project Title : Bureau of General Services; HETL 1st Floor/Basement
Project Number : 03956
Laboratory Batch : 15032

Date Received : 4/10/2002
Date Reported : 4/10/2002
Analyst : JDW

			Asbestos Type(s) Detected				Non-Asbestos Materials				
Lab ID #	Client ID #/ Description	Color	% Chrysotile	% Amosite	% Crocidolite	% Other	% Cellulose	% Fiber Glass/ Mineral Wool	% Other Fibrous Material (OFM)	% Non-Fibrous Material	**Comments** Analysis Methods Per EPA-600/M4-82-020, EPA-600/R-93-116, & NYDOH-ELAP 198.1 NAD - No Asbestos Detected
001	01A, Floor Tile	White	2				1			97	
002	01B, Floor Tile										Sample Not Analyzed / Positive Stop
003	01C, Floor Tile										Sample Not Analyzed / Positive Stop
004	02A, Mastic	Black	<1				2			>97	
005	02B, Mastic	Black	<1				3			>96	
006	02C, Mastic	Black	<1				3			>96	
007	03A, Ceiling Tile	Gry/Wht					35	35		30	No Asbestos Detected
008	03B, Ceiling Tile	Gry/Wht					35	35		30	No Asbestos Detected
009	03C, Ceiling Tile	Gry/Wht					35	35		30	No Asbestos Detected
010	04A, Floor Tile	Gray					1			99	NAD; Mastic (Black) Positive 2%
011	04B, Floor Tile	Gray					2			98	No Asbestos Detected
012	04C, Floor Tile	Gray					1			99	No Asbestos Detected
013	05A, Floor Tile	Tan	2				1			97	Black Mastic Positive 2%
014	05B, Floor Tile										Sample Not Analyzed / Positive Stop
015	05C, Floor Tile										Sample Not Analyzed / Positive Stop
016	06A, Floor Tile	Green					2			98	No Asbestos Detected
017	06B, Floor Tile	Green					3			97	No Asbestos Detected
018	06C, Floor Tile	Green					2			98	No Asbestos Detected
019	07A, Linoleum	Brown					2	10	8	80	NAD; Gypsum 8%
020	07B, Linoleum	Brown					2	8	10	80	NAD; Gypsum 10%

URS

Laboratory Bulk Asbestos Analysis Results

Client/ Project Title : Bureau of General Services; HETL 1st Floor/Basement
Project Number : 03956
Laboratory Batch : 15032

Date Received : 4/10/2002
Date Reported : 4/10/2002
Analyst : JDW

			Asbestos Type(s) Detected				Non-Asbestos Materials				
Lab ID #	Client ID #/ Description	Color	% Chrysotile	% Amosite	% Crocidolite	% Other	% Cellulose	% Fiber Glass/ Mineral Wool	% Other Fibrous Material (OFM)	% Non-Fibrous Material	**Comments** Analysis Methods Per EPA-600/M4-82-020, EPA-600/R-93-116, & NYDOH-ELAP 198.1 NAD - No Asbestos Detected
021	07C, Linoleum	Brown					2	10	8	80	NAD; Gypsum 8%
022	08A, Ceiling Tile	Gry/Pink	2	5			28	35		30	
023	08B, Ceiling Tile										Sample Not Analyzed / Positive Stop
024	08C, Ceiling Tile										Sample Not Analyzed / Positive Stop
025	09A, Sheetrock/Joint Compound	Gry/Wht					23	1		76	No Asbestos Detected
026	09B, Sheetrock/Joint Compound	Gry/Wht					24	1		75	No Asbestos Detected
027	09C, Sheetrock/Joint Compound	Gry/Wht					23	1		76	No Asbestos Detected
028	010A, Floor Tile	Gray					1			99	No Asbestos Detected
029	010B, Floor Tile	Gray					1			99	No Asbestos Detected
030	010C, Floor Tile	Gray					1			99	No Asbestos Detected
031	011A, Floor Tile	Gray	3							97	
032	011B, Floor Tile										Sample Not Analyzed / Positive Stop
033	011C, Floor Tile										Sample Not Analyzed / Positive Stop
034	012A, Mastic	Black	<1				2			>97	
035	012B, Mastic	Black	<1				3			>96	
036	012C, Mastic	Black	<1				2			>97	
037	013A, Floor Tile	White	2				1			97	
038	013B, Floor Tile										Sample Not Analyzed / Positive Stop
039	013C, Floor Tile										Sample Not Analyzed / Positive Stop
040	PC-01A, Pipe Covering	Blue		23			10			67	

URS

Laboratory Bulk Asbestos Analysis Results

Client/ Project Title : Bureau of General Services; HETL 1st Floor/Basement
Project Number : 03956
Laboratory Batch : 15032

Date Received : 4/10/2002
Date Reported : 4/10/2002
Analyst : JDW

			Asbestos Type(s) Detected				Non-Asbestos Materials				
Lab ID #	Client ID #/ Description	Color	% Chrysotile	% Amosite	% Crocidolite	% Other	% Cellulose	% Fiber Glass/ Mineral Wool	% Other Fibrous Material (OFM)	% Non-Fibrous Material	**Comments** Analysis Methods Per EPA-600/M4-82-020, EPA-600/R-93-116, & NYDOH-ELAP 198.1 NAD - No Asbestos Detected
041	PC-01B, Pipe Covering										Sample Not Analyzed / Positive Stop
042	PC-01C, Pipe Covering										Sample Not Analyzed / Positive Stop

8119

~~Attn~~ Positive Stop.

URS Corporation
Bulk Sample Chain Of Custody

Call w/ Results

Laboratory Batch# B15032

URS Corporation 7 University Drive Augusta, Maine 04330 Tel # 207-623-9188 Fax# 207-622-6085	Project Number: await for # Client: Bureau of General Services (See Back Of Page) Location: HCTC (Basement) Project Manager: Kirkman Date Results Due: 4/10/02

Samples Taken By: HOUGHTON | Date Samples Taken: 4/9/02

Lab #	Sample #	Sample Location/ Description	Asbestos Type	%
	01A	9X9 off-white FT w/		
	01B	↓		
	01C	↓		
	02A	Associated Black MASTIC		
	02B	↓		
	02C	↓		
	03A	2X4 white CT w/ fisure Design		
	03B	↓		
	03C	↓		
	04A	12X12 off-white FT w/ gray Design		
	04B	↓		
	04C	↓		
	05A	12X12 Cream FT w/ ~~gray & purple~~ LIGHT brown Design		
	05B	↓		
	05C	↓		
	06A	12X12 Green FT w/ gray & purple Design		
	06B	↓		
	06C	↓		
	07A	Brown Linoleum w/ white & Black Design		
	07B	↓		
	07C	↓		
	08A	2X4 White CT w/ pin-dot design		
	08B	↓		
	08C	↓		
	09A	Sheetrock/joint compound		
	09B	↓		
	09C	↓		
	10A	12X12 Light Gray FT w/ orange & green Design		
	10B	↓		
	10C	↓		

Asbestos Types: CH=Chrysotile AM=Amosite CR=Crocidolite TR=Tremolite
AN=Anthophyllite AC=Actinolite
ND=No Asbestos Detected NA=Not Analyzed NEMTA=Not Enough Material To Analyze

Relinquished By: M. Paul Hoyt	Date:	Received By: John G. Hazard	Date: 4/10/02
Company URS, Corp	Time:	Company: URS Salem, NH	Time: 10 AM

URS Corporation
IH Sample Chain Of Custody

Laboratory Batch# B15032

URS Corporation 115 Water Street, Suite 3 Hallowell, Maine 04347 Tel # 207-623-9188 Fax# 207-622-6085	Project Number: Client: Bureau of General Services (See Back Of Page) Location: 1ST Floor HETL Project Manager: Rumsey Date Results Due: 4/10/02

Samples Taken By: MLH	Date Samples Taken: 4/9/02

Lab #	Sample #	Sample Location/ Description	Analysis	Results
	11A	9x9 Brown FT w/ white dark brown design		
	11B			
	11C			
	12A	Associated Black Mastic		
	12B			
	12C			
	13A	9x9 off-white FT w/ Burn design		
	13B			
	13C			
	PC-01A	Blue colored pipe covering located in Basement area		
	PC-01B			
	PC-01C			

ND=None Detected NA=Not Analyzed NEMTA=Not Enough Material To Analyze

Relinquished By: [signature] Company: URS, Corp	Date: 4/9/02 Time:	Received By: [signature] Company: URS Salem NH	Date: 4/10/02 Time: 10 am

APPENDIX B

SURVEY, SAMPLING AND ANALYTICAL PROTOCOL

APPENDIX B

SURVEY, SAMPLING AND ANALYTICAL PROTOCOL
SURVEY PROTOCOL

The first step in developing a comprehensive facility asbestos management plan is to conduct a building survey to identify the locations and quantities of suspect ACM and to determine the conditions of those materials.

The scope of work for this survey included details of how the survey was to be conducted, the information to be gathered, and the form and content of the survey report.

The facility survey was conducted by one or more DEP-certified URS asbestos surveyors. The specifics of the survey included the following:

- Reviewing any existing asbestos survey reports.
- Visually inspecting accessible building areas to determine the location of suspect ACM.
- Sampling and evaluating suspect ACM to determine its accessibility and limit the occupancy of the surrounding building area to employees.
- Compiling and reporting survey data by functional area.
- Quantifying homogeneous materials, including both friable and non-friable suspect ACM.
- Gathering information during the survey concerning locations, quantities, and types of materials.

BULK SAMPLING PROTOCOL

During the survey of this facility, bulk samples of suspect ACM were collected for laboratory analysis. The bulk samples were collected and categorized according to the homogeneous building materials being evaluated. The designation of homogeneous building materials was made by the URS surveyor. Once suspect homogeneous materials were identified, bulk samples were collected in accordance with the EPA protocol as outlined in the Asbestos Hazard Emergency Response Act (AHERA) regulations. If a single sample of a homogeneous material was found to contain asbestos, then that homogeneous material was identified as containing asbestos throughout the building. Homogeneous flooring materials were determined by similarity of floor tile size, color, and age, if determinable.

Sampling techniques generally involved one of two different sampling procedures.

1. Core samples were collected from certain materials, such as pipe covering and fittings, to sample these potentially multi-layered materials. Disposable core boring devices were used for this purpose to minimize potential cross contamination of samples.

2. Ceiling tile, floor tile, and similar materials were sampled by breaking off a portion of the desired material from an inconspicuous location.

Samples were given a unique sample number, which included the project number, and were placed in sample containers for transportation to URS's laboratory for analysis. The location of each sample was noted on the building drawing. Information regarding the sample location was also entered onto URS's Chain-of-Custody forms. The quantity, location and physical condition of each material were recorded on URS's field data sheets.

Sample locations (from insulation materials) were covered with duct tape or encapsulant after sampling. Locations in unoccupied portions of buildings were labeled. Sample points on fireproofing, plaster, ceiling tile and transite in the buildings were not necessarily labeled or repaired.

ANALYTICAL PROTOCOL

Samples collected during this facility asbestos survey were transported to URS's accredited laboratory for microscopic analysis. URS's analytical laboratory is accredited by the National Institute for Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP) for bulk asbestos analysis as required under EPA AHERA regulations. URS's laboratory is also accredited by the American Industrial Hygiene Association (AIHA) for asbestos air sample analysis. Chain-of-Custody was maintained by the laboratory through the use of URS's Chain-of-Custody forms. After being logged in by the laboratory and prepared for analysis, samples were analyzed following the EPA-recommended method of bulk sample analysis by polarized light microscopy with dispersion staining. A description of this analytical method is contained in Appendix D of this document.

In preparing the bulk materials for analysis, a small representative portion of each sample was selected from the bulk material collected in the field and mounted on a glass slide. If the bulk material appeared to have a uniform consistency, a minimum of two slides were prepared for viewing. If, however, the bulk material appeared to contain layers, a separate set of slides was prepared for each layer and results for each layer determined independently. Analytical results for layered samples were reported as an average of the asbestos composition of the material as a whole. In some situations multiple slides were prepared from particularly complex samples, such as floor tile, which were suspected to contain low percentages of asbestos. In cases where replicate samples of a homogeneous material were collected, they were analyzed until one was found to be positive (which meant the entire homogeneous area was deemed positive) or until each sample was analyzed to prove a negative result.

Sample results were reported either as "none detected" (ND) if no asbestos was found, or by type and percent composition if any form of asbestos was observed. EPA, OSHA, and DEP all recognize a level of greater than one percent asbestos by weight content or visual estimation as the minimum level for requiring a material to be treated as asbestos-containing. The identification of the presence or absence of asbestos in a material involves several specific analytical procedures. The percentage composition, on the other hand, is simply a visual approximation on the part of the analyst and may vary based on the way the sample slide is prepared and the specific analyst performing the identification. Estimating an accurate percentage composition of low-level asbestos-containing materials is very difficult. Therefore, samples identified positively as having an asbestos content of less than 10 percent by visual estimation are required to be re-analyzed by the point counting procedure described in the EPA "Interim Method for the Determination of Asbestos in Bulk Insulation Samples," method number EPA-600/M4-82-020, December 1982. A more definitive analysis can be obtained by transmission electron microscopy (TEM) analysis and is often used for confirming or denying the presence of asbestos in floor tile samples (in particular 12-inch by 12-inch tile) when previously analyzed via PLM and initially determined to be non-detected for asbestos.

It should be noted here that the analysis of a debris sample is a qualitative analysis for the presence or absence of asbestos in that particular sample. The EPA interim PLM method for analyzing bulk samples was intended to be used for analyzing asbestos-containing manufactured products or materials with near uniform concentrations of asbestos and not for the analysis of debris or other possibly contaminated materials which are not uniform in nature. Therefore percentage composition for soils, debris or dust samples is not indicated in this report. Further, a negative finding in these samples indicates only that the debris actually sampled was not found to contain asbestos. No inference should be made from any negative result concerning other debris, which was not specifically sampled.

Approximately ten percent of the samples collected during the field survey were reanalyzed as part of URS's quality control (QC) program. These QC samples were analyzed in URS's laboratory by an analyst different from the one who performed the initial analyses.

After the completion of both the initial and quality control analytical procedures, samples are stored in URS's sample storage area files and are maintained there for at least one year. At the end of one year URS will offer the client the opportunity to either have the samples properly disposed of by URS or have them returned for retention by the client.

APPENDIX C

POLARIZED LIGHT MICROSCOPY ANALYTICAL METHODS

APPENDIX C

POLARIZED LIGHT MICROSCOPIC ANALYTICAL METHOD

Polarized Light Microscopy (PLM) is the only analytical method for asbestos identification, which depends upon the unique optical crystallographic properties of the various crystals, phases in the sample. These properties—refractive indices, dispersion of refractive indices, birefringence, sign of elongation and extinction angle are unique to the crystalline state and, therefore, unequivocally identify chrysotile, lizardite, antigorite, anthophyllite, tremolite, actinolite, grunerite, cummingtonite, and riebeckite whether fibrous or non-fibrous.

PLM includes the classical optical crystallographic methods and the more recent dispersion staining procedures. Dispersion staining is, in effect, just a way of using optical crystallography for the study of transparent particles. It supplements the classical methods and, in some cases, makes the use of PLM for the study of crystals easier. For example, with one polar isotropic, substances show a single characteristic dispersion staining color, but anisotropic substances show different colors corresponding to the different refractive indices in different orientations. Chrysotile, for example, shows blue and blue-magenta colors, crosswise and lengthwise, respectively, for each fibrous crystal when mounted in Cargille high dispersion liquid n25=1.550 and observed by central stop dispersion staining (DS). The actual analysis begins by adding a Cargille refractive index liquid (nD-1.550, high dispersion) to a 0.5-1 mg slide sample. The particles should be dispersed in this liquid by teasing aggregates apart using two fine needles before covering with a cover slip.

A. Chrysotile

In liquid nD-1.550, chrysotile has distinctive fine flexible fibrils (often curly) plus straight bundles of such fibrils and distinctive dispersion staining colors usually blue-magenta parallel to the fiber axis and blue perpendicular (central stop colors). Different samples of chrysotile, however, may vary somewhat in the wavelength at which particle and liquid have the same refractive index. Parallel to the length ranges from about 440 to 560 nm and perpendicular to the length from about 560 to 660 nm.

The presence of chrysotile and other fibrous particles is sometimes secured by tiny particles of mortar. This is especially troublesome because most of these particles are so different in refractive index from the mounting liquid; they appear bright white and central stop dispersion staining. Trying to see the asbestos is like trying to see while driving at night with an oncoming stream of cars with high beam headlights. Often one can be confident the particles are covering obscured fibers because of their pattern-the Milky Way effect.

Sometimes a stray fibril may poke its way out into the liquid to show dispersion staining colors. It is always helpful in situations like this to examine the "milky way" with crossed polars since the underlying fibers often then become visible and recognizable as fibers. Crossed polars also help to locate smaller fibers and small percentages of fibers. Each sample should be quickly

scanned with crossed polars as well as dispersion staining before reporting the absence of asbestos fibers.

A mortar coating can sometimes be removed from the fibers by holding one end on the slide with one needle (lying flat) and scraping with a second needle along a fiber bundle, either before or after adding the mounting fluid. It may also be possible to remove enough mortar to see some dispersion staining colors by pressing the cover slip down hard on the particles (in the liquid) with a pencil eraser and sliding the cover slip in a circular pattern with the eraser. Another technique is to tease and scrape a fiber bundle out straight, cover with a cover slip and add the liquid so that it runs down the length of the fiber washing away much of the loosened mortar.

B. Amosite and Crocidolite

Amosite and crocidolite both have very pale yellow to white borders by central stop DS in liquid nD=1.550HD because their refractive indices are so much higher. Crocidolite usually shows a blue absorption color. If no anisotropic fibers with refractive indices much higher than 1.550 are present, no asbestos other than chrysotile can be present.

If higher index particles are observed in liquid nD=1.550HD a second sample is mounted in nD=1.605HD. Likely compounds visible in this liquid include tremolite, anthophyllite, actinolite, and wollastonite.

If higher index particles are observed in liquid nD=1.605, a third sample is mounted in Cargille liquid nD-1.680 and examined with DS. Most amosites used in buildings will show a wavelength of about 460 nm (golden yellow) parallel to the length and about 600 nm (blue-magenta) to >660 nm (pale blue) perpendicular to the length depending on fiber orientation. A perpendicular lambda 0 of >660 nm corresponds to the alpha vibration direction, which usually shows parallel extinction; a lambda 0=600 nm perpendicular to the length corresponds to beta (also no a parallel extinction view). As with most silicate minerals substitutional solid solution, in this case Fe2+ with Mg2+, can cause alpha, beta, and gamma to vary. Higher or lower values of refractive index for any one of the three vibration directions will mean correspondingly higher or lower values for all three.

Although the refractive indices of amosite and other amphiboles may vary over a wide range, most are not from commercial sources. Nearly all Amosite used commercially in insulation has the optical properties given above.

If, in liquid nD=1.680, low birefringent fibers show lambda 0 colors close together in the yellow to golden magenta, crocidolite is strongly indicated. If they show a negative sign of elongation (higher lambda 0 parallel to the length), and blue absorption colors with pleochroism (blue parallel and gray-blue perpendicular to the fiber length) crocidolite is present. Further confirmation can be obtained by mounting a third sample in Cargille refractive index liquid nD=1.70. Crocidolite will show central stop colors close to 600 nm (blue magenta) parallel to the length and about 520 (red magenta) perpendicular. Again, some parallel movement of the alpha, beta, and gamma colors should be expected for crocidolites from different sources.

We should emphasize that DS is a method for rapid refractive index determination. To be certain the observed colors mean a particular asbestos is present, one must be certain the DS data are consistent with particle orientation, i.e., the relationship between the optical properties and the crystallographic axes.

C. Other Asbestiform Minerals

When analyzing insulation, one usually skips the nD=1.605 liquid but if during examination anomalous results are observed with the 1.550 nD 1.680 liquids, that is, highly fibrous fibers with lambda colors in other than the prescribed ranges for chrysotile, amosite, and crocidolite, then fibrous tremolite, actinolite, or anthophyllite may be present. These are rarely found, however, in insulation. When these anomalous results are obtained, you should characterize the fibers in those liquids as to refractive indices relative to those liquids and extinction angles. If all of the fibers show parallel extinction and pale blue colors in 1.680, they are anthophyllite (if the possibility of organic fibers is first eliminated). Amosite shows parallel extinction as well, but good lambda colors in the visible in 1.680 identify this asbestos mineral. Tremolite will show strong colors in al orientations in nD=1.605 high dispersion liquid.

Actinolite has morphology and optics similar to tremolite except that the indices are all higher. Actinolite may also show pleochroism (green to colorless). It is best studied in high dispersion liquid nD=1.630HS in which alpha and gamma on the oblique extinction view show magenta and golden yellow, respectively. On the parallel extinction view, gamma (lengthwise) shows 0 ca. 470 nm or golden magenta and B (perpendicular) shows 0 ca. 495 nm also golden magenta although with more red. Ferroactinolites have been higher iron content and correspondingly higher refractive indices.

Tremolite, actinolite, and ferroactinolite are portions of a continuous solid solution series in the same manner as the amosite minerals, cummingtonite and grunerite. The name to use for a given amphibole, therefore, depends directly on the optical properties. An unusually asbestiform mineral is picrolite described as a fibrous form of antigorite. Its refractive indices are higher than chrysotile, which it closely resembles.

D. Interfering Substances

A few common substances show dispersion staining colors similar to those of chrysotile and some are elongated as well. These include two polymorphs of chrysotile: Antigorite and lizardite, quartz, talc, paper fibers and hairs. All of these show dispersion staining colors in 1.550 and all except talc and paper fibers show colors somewhat similar to chrysotile.

Quartz, although usually glassy flakes, shows blue and magenta central stop colors very similar to chrysotile in the 1.550 liquid. The shape is very different, however, and only a few views are oriented to show the magenta color.

Animal hairs, including human, also have refractive indices in the same range as chrysotile and, if finely fibrillated by electric razor for example, can be confusingly similar. Such fibrillated fibers are, however, rare; they also usually show melanin pigmented particles and indices

sufficiently different from chrysotile to avoid confusion. Paper fibers also show a crosswise index close to 1.550 (but lower) and the lengthwise index is much higher, hence shows a yellow central stop color. The morphology of paper fibers is also distinctive unless they are very tiny slivers broken away from larger fibers.

APPENDIX D

DEFINITIONS AND REGULATIONS

APPENDIX D

DEFINITIONS AND REGULATIONS

Abatement: A range of procedures to control fiber release from ACM. Abatement options include removal, repair and encapsulation, enclosure, or operations and maintenance activities.

Accessible: With regard to ACM it means that the material is subject to disturbance by building occupants including custodial or maintenance personnel in the course of their normal activities.

Accredited: When referring to a person or laboratory, this means that such person or laboratory is accredited in accordance with Section 206 of Title II of the Toxic Substances Control Act. Accreditation is given to laboratories which analyze bulk material samples for asbestos and satisfy the proficiency requirements established by the National Institute for Science and Testing (NIST).

Asbestos: The term asbestos includes chrysotile, amosite, crocidolite, tremolite, anthophyllite, and/or actinolite including any of these minerals, which have been chemically treated and/or altered.

Asbestos-Containing Material (ACM): Material composed of asbestos of any type and in an amount greater than one percent by weight or visual estimation, either alone or mixed with other fibrous or non-fibrous materials (e.g., surfacing, thermal system insulation, miscellaneous material).

Asbestos-Containing Building Material (ACBM): ACM that is a building material (e.g. flooring, wall boards, ceilings, insulation, etc.)

Friable Asbestos Material: Material that contains more than one percent asbestos by weight or visual estimation that can be crumbled, pulverized, or reduced to powder by hand pressure when dry.

Non-friable Asbestos Material: Material that contains asbestos such that the fibers have been locked-in by a bonding agent, coating, binder, or other material such that the asbestos will not release fibers during any reasonably appropriate use, handling, storage, transportation, or processing.

Operations and Maintenance (O&M) Program: A program of work practices designed to maintain undamaged ACM in good condition and to repair ACM and clean-up asbestos fibers which may be inadvertently released during fiber release episodes.

Removal: The complete removal of ACM from a damaged area, a functional space, or a homogeneous area in a building.

Repair: Returning damaged ACM to an undamaged condition so as to prevent fiber release.

Response Action: A method, including removal, encapsulation, enclosure, or operations and maintenance (including repair), that protects against the release of fibers from friable ACM.

Routine Maintenance Area: An area, such as a boiler room or mechanical room, that is not normally occupied by non-maintenance individuals and in which maintenance employees or contracted workers regularly conduct maintenance activities. Routine maintenance areas with ACRSM present require AAsbestos-Caution≅ stickers be appropriately posted.

Small-Scale Short Duration (SSSD) Projects: Asbestos abatement activities impacting less than 3 linear feet or 3 square feet of ACM.

Surfacing ACM: Surfacing asbestos-containing materials such as sprayed-on or trowel-applied fireproofing.

Surfacing Material: Material that is sprayed-on, troweled-on, or otherwise applied to surfaces. Examples include acoustical plaster on ceilings and fireproofing materials on structural members.

Thermal System Insulation (TSI): Material in a building applied to pipes, fittings, boilers, breeching, tanks, ducts, or other components to improve the thermal characteristics of the component by preventing heat loss or gain, or preventing water condensation.

Visible Asbestos-Containing Material: Any quantity of ACM, which is visible to the unaided eye, including dust and other types of debris.

REGULATIONS

REGULATORY OVERVIEW

Over the past two decades, the regulatory community has become increasingly aware of the potential hazards of inhaled asbestos fibers. Regulations have been developed by federal, state, and local agencies to protect workers and the general public from the release of asbestos fibers. Departments of the federal government responsible for the regulation of asbestos include:

- The U.S. Department of Labor (DOL) through the Occupational Safety and Health Administration (OSHA) has developed two standards designed to protect employees at their work sites. These two standards are the Asbestos Regulations for General Industry (29 CFR 1910.1001) and Asbestos Regulations for the Construction Industry (29 CFR 1926.1101). These OSHA regulations apply only to employers and employees. Employees involved in performing Operations and Maintenance (O&M) activities who might potentially come into contact with asbestos-containing materials would clearly be addressed by the regulations. Second, employees who might inadvertently be exposed to asbestos-containing materials during the normal course of their work activities would also be covered by these regulations. Third, construction-related activities (e.g. asbestos abatement) are also covered.

- The U.S. Department of Transportation (DOT) regulates the transport of commercial asbestos and asbestos waste and dictates labeling of waste bags and transport vehicles. The primary responsibility under DOT regulations lies with the waste hauler. However, it is incumbent upon the building owner to determine that waste hauled from its facilities is properly bagged and labeled, that the waste arrives at an approved landfill, that a proper manifest is completed: documented and maintained with abatement records, and that the hauler is properly licensed to haul asbestos waste.

- The U.S. Environmental Protection Agency (EPA) has promulgated a series of regulations which focus on asbestos issues. Pertinent stipulations in these regulations are as follows:

Clean Air Act (CAA)

The EPA regulates asbestos under the National Emission Standards for Hazardous Air Pollutants (NESHAP), which is listed as Section 112 of the Clean Air Act (CAA). Under NESHAP, a hazardous pollutant has been defined as "an air pollutant to which no ambient air quality standard is applicable and which, in the judgment of the Administrator, causes or contributes to air pollution which may reasonably be anticipated to result in an increase in mortality or an increase in serious irreversible or incapacitating reversible illness." The NESHAP program currently regulates arsenic, benzene, beryllium, mercury, radionuclides, and vinyl chloride along with asbestos. The purpose of the asbestos NESHAP is to protect the public from exposure to asbestos in the ambient air. The asbestos NESHAP program

pertains primarily to demolition and renovation of buildings containing asbestos building materials. (The asbestos NESHAP also regulates manufacturing and fabricating operations, spray application of asbestos, waste disposal for asbestos mills, inactive waste disposal sites, and established standards for asbestos mills and roadways.) The specific provisions of NESHAP for demolition or renovation of buildings with asbestos containing are broken down into categories of notification, work practices, waste handling, and waste disposal.

The building owner would be responsible for compliance with NESHAP regulations primarily during abatement activities. Issues such as work practices, waste handling, and waste disposal are normally specified in the project's plans and specifications. Verifying adherence to these plans and specifications during the abatement process would be the building owner's responsibility.

Resource Conservation Recovery Act (RCRA)

The disposal of asbestos was originally regulated under RCRA in 1976. However, in that same year, asbestos, because it does not migrate in soil or pose any threat to ground water, was not listed by RCRA, and the authority for asbestos control was transferred to NESHAP. Therefore, the current RCRA regulations pertain only to facility siting and general landfill operations. The facility siting/licensing issue that would involve the building owner is the determination by the building owner staff that the facility where asbestos waste is disposed of is an EPA licensed facility.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

This act is most commonly referred to as "Superfund." The authority of CERCLA, as clarified in the Superfund Amendments Reauthorization Act (SARA), regulates asbestos as a hazardous substance. Reportable quantities (RQs) have been established to deal with releases or threats of releases of hazardous substances from vessels and from facilities including trucks and landfills. The trigger RQ for a release, or threat of release, of asbestos is one pound.

Superfund issues relative to the removal of ACM relate primarily to improper disposal of asbestos waste. The building owner is responsible for ensuring that a manifest for the waste is completed and signed by the licensed landfill facility and returned to the building owner for inclusion in their permanent records.

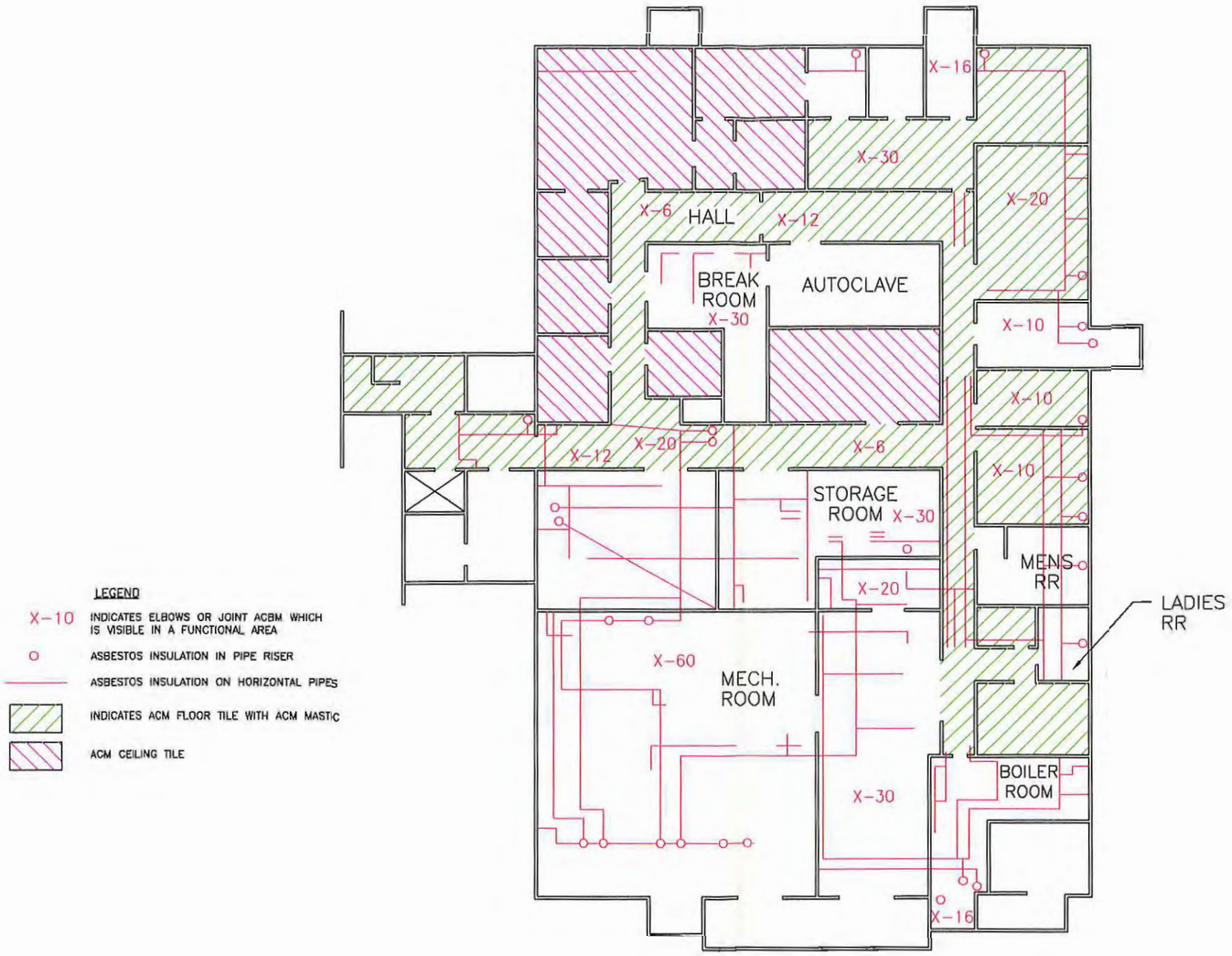
Asbestos Hazard Emergency Response Act (AHERA)

The 1988 Asbestos in Schools Rule (more commonly referred to as AHERA) required Local Education Agencies (LEAs) to develop and implement Management Plans for their ACBM. Response actions (i.e., removal encapsulation, enclosure, or O&M) were developed for ACBM identified in public and private schools (K-12). AHERA requires LEAs to conduct reinspection every three years and periodic surveillance every six months as part of their

O&M Program. Only Accredited and Certified professionals may conduct response actions. In particular, aggressive final clearance sampling is required to be performed by independent industrial hygienists.

Maine Regulations

The Maine Department of Environmental Protection (DEP) Chapter 425 Asbestos Management Regulations (effective date of January 1, 1994) define the minimum work practice requirements for asbestos abatement contractors for any project in excess of 3 square feet or 3 linear feet. The removal of non-friable ACM during demolition is also discussed. For removal of these materials under demolition conditions, friable ACM work practices would apply. Abatement work also requires conformance to OSHA Regulation 29 CFR, Part 1926.1101. In addition to the mandatory requirements of this regulation, federal OSHA officials regulating Maine asbestos abatement contractors interpret Appendix F, Work Practices and Engineering Controls for Major Asbestos Removal, Renovation and Demolition Operations, as mandatory to abatement work including traditionally non-friable materials such as roof systems. While stated as "non-mandatory," OSHA has determined that the standard will apply under their interpretation of "whenever feasible." DEP Chapter 425 Asbestos Management Regulations are currently being revised by DEP personnel with industry input.



LEGEND

X-10	INDICATES ELBOWS OR JOINT ACBM WHICH IS VISIBLE IN A FUNCTIONAL AREA
o	ASBESTOS INSULATION IN PIPE RISER
——	ASBESTOS INSULATION ON HORIZONTAL PIPES
	INDICATES ACM FLOOR TILE WITH ACM MASTIC
	ACM CEILING TILE

BASEMENT

CLIENT:	BUREAU OF GENERAL SERVICES
PROJECT:	DHS ASBESTOS SURVEY
	URS Corporation
TITLE:	BASEMENT
PROJECT NO:	28786-009
DESIGN: MCH	SCALE: NONE
APPROVED: DBK	DATE: 05/09/02
DRAWN: LRH	FILE NO: A393
FIGURE NO:	1

FIRST FLOOR

LEGEND

- X — INDICATES ELBOWS OR JOINT ACBM WHICH IS VISIBLE IN A FUNCTIONAL AREA
- ○ — ASBESTOS INSULATION IN PIPE RISER
- ——— ASBESTOS INSULATION ON HORIZONTAL PIPES
- □ — FUME HOOD
- PIPE INSULATION ABOVE CEILING
- INDICATES ACM FLOOR TILE WITH ACM MASTIC
- ACM FLOOR TILE AND MASTIC BELOW CARPET

CLIENT:	BUREAU OF GENERAL SERVICES		
PROJECT:	DHS ASBESTOS SURVEY		
	URS Corporation		
TITLE: FIRST FLOOR			PROJECT NO: 28786-009
DESIGN: MCH	SCALE: NONE		FIGURE NO: 2
APPROVED: DBK	DATE: 05/03/02		
DRAWN: LRH	FILE NO: A390		

SECOND FLOOR

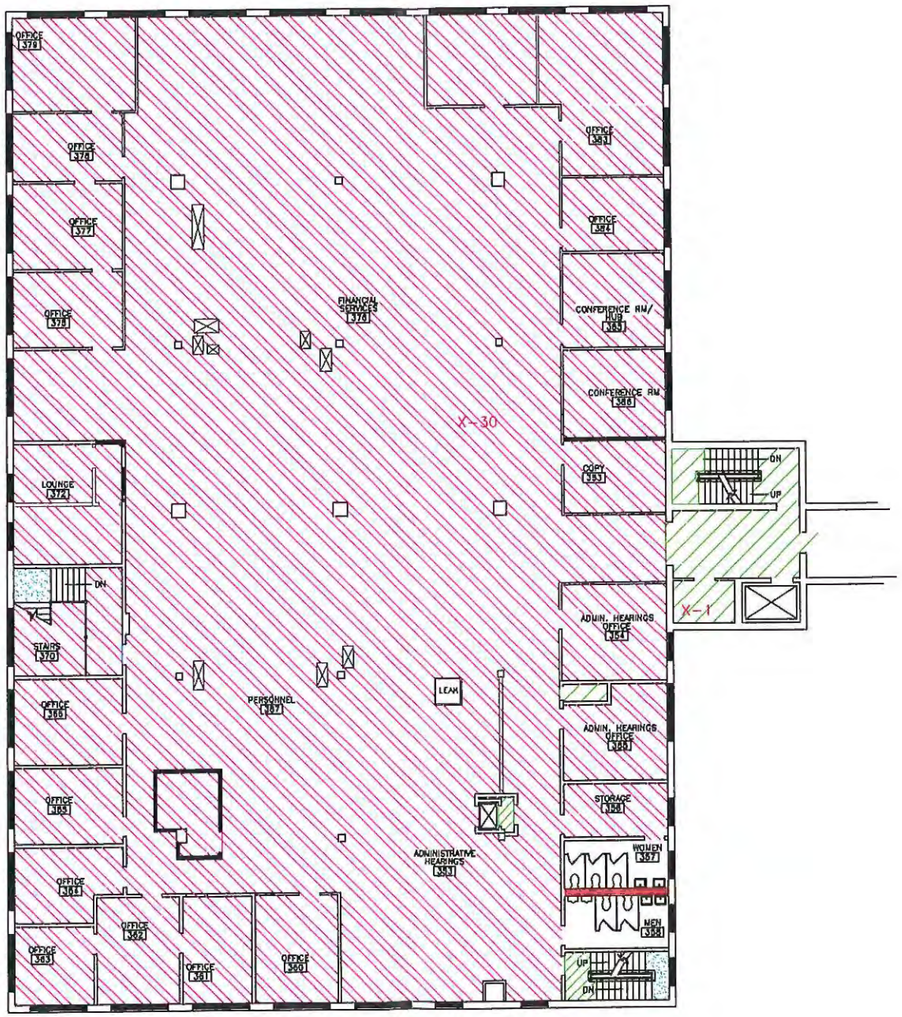
LEGEND

X	INDICATES ELBOWS OR JOINT ACBM WHICH IS VISIBLE IN A FUNCTIONAL AREA
O	ASBESTOS INSULATION IN PIPE RISER
	ASBESTOS INSULATION ON HORIZONTAL PIPES
	ACM FLOOR TILE AND MASTIC
	ACM FLOOR TILE AND MASTIC BELOW CARPET

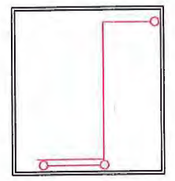
CLIENT:	BUREAU OF GENERAL SERVICES		
PROJECT:	DHS ASBESTOS SURVEY		
URS Corporation			
TITLE: SECOND FLOOR			PROJECT NO: 28786-009
DESIGN: MCH	SCALE: NONE		FIGURE NO: 3
APPROVED: DBK	DATE: 05/03/02		
DRAWN: LRH	FILE NO: A391		

LEGEND

- ACM FLOOR TILE AND MASTIC
- ACM FLOOR TILE AND MASTIC BELOW CARPET
- ACM PIPE INSULATION BELOW CEILING
- ASBESTOS MASTIC BELOW PAINT
- X-30 ACM MUD FITTING ON FIBERGLASS PIPE
- O ASBESTOS INSULATION IN PIPE RISER
- ASBESTOS INSULATION ON HORIZONTAL PIPES



THIRD FLOOR



PENTHOUSE

CLIENT:	BUREAU OF GENERAL SERVICES
PROJECT:	DHS ASBESTOS SURVEY
	URS Corporation
TITLE:	THIRD FLOOR AND PENTHOUSE
PROJECT NO:	28786-009
DESIGN: MCH	SCALE: NONE
APPROVED: DBK	DATE: 05/09/02
DRAWN: LRH	FILE NO: A392
FIGURE NO:	4

URS Corporation
115 Water Street, Suite 3
Hallowell, Maine 04347

ASBESTOS IDENTIFICATION SURVEY
DHS BUILDING
AUGUSTA, MAINE

Prepared for:

Mr. Joe Silva
Bureau of General Services
77 State House Station
Augusta, ME 04333-0077

JOB NO.: 28407
August 7, 2007

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Appendix B Survey, Sampling and Analytical Protocol
Appendix C Polarized Light Microscopy Analytical Methods
Appendix D Definitions and Regulations

1.0 INTRODUCTION

URS Corporation (URS) was retained by the State of Maine; Bureau of General Services (BGS) to conduct an asbestos identification survey at the Department of Human Services (DHS) Building, located in Augusta, Maine. The objective of the field survey was to locate and identify asbestos-containing materials (ACM) in the interior of the building.

1.1 ASBESTOS-CONTAINING MATERIALS

Mr. Michael Haughton, (URS), an asbestos inspector licensed in the State of Maine performed the field survey during the period of April 9, 2002 through April 12, 2002. During the survey, the inspector reviewed the 1987 Hall-Kimbrell asbestos identification survey and the 1999 ICON Environmental asbestos identification survey, information regarding the facility that was provided to them by BGS, visually identified interior suspect ACM and collected bulk samples of suspect ACM in accordance with the Maine Department of Environmental Protection (DEP) regulations. Forty- two bulk samples of suspect ACM building materials were collected during the field survey. Quantity estimates and locations of identified ACM were based upon information provided by BGS and from field observations

Following the completion of the survey work, the bulk samples of suspect ACM were submitted to the URS's Salem, NH laboratory for analysis. The URS laboratory is certified to perform asbestos analysis by both the National Voluntary Laboratory Accreditation Program (NVLAP) and the American Industrial Hygiene (AIHA). The method used to analyze the bulk samples collected during this survey was the recommended EPA procedure of Polarized Light Microscopy (PLM) with dispersion staining. Analytical results are presented in Appendix A. The protocol for analysis of bulk samples is presented in Appendix D.

2.0 SURVEY LIMITATIONS

The information presented in this report represents the conditions observed at the time of the site investigation. Survey data, observations and recommendations presented in this report are based upon industry-accepted methodologies used to conduct this investigation and the professional judgment of the investigator. URS Corporation is not responsible for changes in condition observed after the field investigation was completed.

As with any scientific study, facility asbestos identification surveys are subject to a variety of limitations. Limitations to be considered in interpreting the results of this survey include the following:

- Asbestos survey may not be able to identify all ACM throughout a facility. A thorough study should be capable of identifying approximately 95 percent of accessible (by non-destructive methods) ACM present. The survey and analytical protocol used for this project is presented in Appendix B and C.
- Areas not accessible at the time of the scheduled survey were not surveyed.
- This survey was conducted using non-destructive sampling methods.
- Thermal system insulation identified during the 1987 Hall-Kimbrell asbestos identification survey was not re-sampled during this survey. Samples of thermal system insulation were only collected if the material could not be referenced to the original survey or if the suspect material appeared to have been installed after the 1987 survey.
- Cost figures used in developing abatement costs were estimated, based on historical information. These costs should be considered estimates and used for budgetary purposes only. For cost projections in future years, an adjustment that considers inflation and the state of the abatement industry must be applied.

3.0 OBSERVATIONS AND FINDINGS

The DHS Building is a three-story brick, masonry structure consisting of a basement and three upper floors. During the walk-through survey of the building, the URS surveyors reviewed existing drawing plans, identified interior suspect ACM and determined quantities of suspect ACM. The asbestos inspector collected bulk samples of suspect ACM in accordance with Maine DEP regulations. Suspect ACM sampled during the survey included ceiling tile, flooring material and flooring material adhesives, pipe insulation, sheetrock and associated joint compound and laboratory fume hoods.

The following sections of this report contain brief descriptions of the building areas by floor and a summary of the types of ACM identified in those areas. An inventory of ACM materials and their locations is included in Table 1. The location of the identified ACM within the building is shown in Figures 1 through 4

BASEMENT

The Basement consists of a boiler room, mechanical space, lounge area, laboratories, restrooms and stairwells. Suspect ACM identified in the basement included twelve-inch by twelve-inch floor tile and associated floor tile mastic (four types), nine-inch by nine-inch floor tile and associated floor tile mastic, pipe insulation, mud-insulated pipe fittings, ceiling tile (two types) and sheet rock and associated joint compound. Materials identified as ACM included nine-inch by nine-inch off-white floor tile and associated mastic, twelve-inch by twelve-inch dark off-white floor tile with gray design and associated mastic, pipe insulation, mud-insulated pipefittings and two-foot by four-foot white ceiling tile with pin dot design.

FIRST FLOOR

The first floor consists of laboratories located in the east wing and office areas located in the west wing, entryway, reception area, restrooms and stairwells. Suspect ACM identified on the first floor includes twelve-inch by twelve-inch green floor tile and associated floor tile mastic, nine-inch by nine-inch floor tile and associated floor tile mastic (two types) ceiling tile (three types), pipe insulation, mud-insulated pipe fittings, laboratory fume hoods, sheet rock and associated joint compound. Material identified as ACM included nine-inch by nine-inch brown and off-white floor tile and associated mastic, pipe insulation, mud-insulated pipe fittings and laboratory fume hoods.

SECOND FLOOR

The second floor consists of east and west office wings, common areas, restrooms and stairwells. Suspect ACM identified on the second floor includes twelve-inch by twelve-inch white floor tile and associated floor tile mastic, nine-inch by nine-inch floor tile and associated floor tile mastic, ceiling tile, pipe insulation, mud-insulated pipe fittings and sheet rock and associated joint compound. Material identified as ACM included nine-inch by nine-inch off-white floor tile and associated floor tile mastic located under carpets, nine-inch by nine-inch floor tile brown and associated floor tile mastic, pipe insulation and mud-insulated pipe fittings.

THIRD FLOOR

The third floor consists of a west office wing, common areas, restrooms and stairwells. Suspect ACM identified on the third floor includes nine-inch by nine-inch floor tile and associated floor tile mastic, pipe insulation, mud-insulated pipe fittings and sheet rock and associated joint compound. Material identified as ACM included nine-inch by nine-inch unknown color floor tile and associated floor tile mastic located under carpets, nine-inch by nine-inch brown floor tile and associated floor tile mastic, pipe insulation and mud-insulated pipe fittings.

PENTHOUSE

The Penthouse consists of an area used to house a mechanical HVAC system. Suspect ACM identified in the Penthouse includes exterior transite siding, pipe insulation and mud-insulated pipe fittings. Materials identified as ACM include exterior transite siding, pipe insulation and mud-insulated pipe fittings.

4.0 RECOMMENDATIONS

The ACM identified throughout the facility was found to range from fair to good condition, with the exception of the nine-inch by nine-inch floor tile located in the Custodian's Closet located on the second floor and the pipe insulation located in the Penthouse. These materials were observed to be in poor condition and should be removed.

Asbestos fibers are potential health hazards when they become airborne. As long as this material remains intact, undamaged, and in good condition, the material may be managed in place. However, current regulations require that asbestos-containing building materials be either removed if the materials will be disturbed by renovation, demolition, or other building maintenance activities. An Operation and Maintenance (O&M) plan should be implemented to manage the materials in place until such a time when they have been removed. ACM identified during this survey that will be impacted by the planned renovation project should be removed prior to the initiation of the actual renovation work. Upon finalization of the renovation plans the actual extent of impact to the existing ACM can be determined. ACM abatement should be performed using approved methods in accordance with applicable regulations established by the U.S. Environmental Protection Agency (EPA), OSHA and Maine DEP. The ACM impacted by planned renovation activities must be removed by a State of Maine licensed asbestos abatement contractor.

5.0 BUDGETARY COST ESTIMATES

URS has developed preliminary cost estimates for abatement of ACM identified during the survey. These estimates do not include material replacement costs or associated design and project monitoring fees or regulatory agency notification fees. Actual abatement costs will vary depending upon the quantity of material removed at any one time. These cost estimates assume that the ACM will be removed in a friable state.

ACM ABATEMENT COSTS
DHS BUILDING
AUGUSTA, MAINE

ACM	Approximate Quantity	Unit Cost	Cost
Pipe Insulation	3,525 Linear Feet (LF)	$15.00/LF	$ 52,875
Ceiling Tile	900 Square Feet (SF)	$ 10.00/SF	$ 9,000
Floor Tile	23,405 SF	$ 2.50/SF	$ 58,512
Floor Tile Mastic	8,025 SF	$5/SF	$40,125
Exterior Transite Siding	2,000 SF	$3/SF	$6,000
Fume Hoods	7 Each (EA)	$500/EA	$3,500
Mud Insulated Pipe Fittings	470 EA	$25/EA	$11,750
Total Estimated Cost Range			**$175,000 - $200,000**

URS has estimated asbestos abatement project duration of between 75 working days of eight – hour contractor shifts, using an 8-person crew.

6.0 REPORT CERTIFICATION

This report was prepared and reviewed by URS Corporation for the sole use of the State of Maine Bureau of General Services and it's constituents and should not be reproduced without full, written authorization from the Bureau of General Services.

Inspector:

_____
Michael Haughton

AI-0167
Maine DEP License No.

_____
Date

Quality Control:

_____
Dennis B. Kingman, Jr.

Senior Project Manager
Title

_____
Date

TABLE 1

ASBESTOS-CONTAINING MATERIALS
DHS BUILDING
AUGUSTA, MAINE

BASEMENT

Location	Material Type	Sample Number	Asbestos Percent and Type	Estimated Quantity of ACM	Condition	Recommended Response Action
Mechanical Room	Pipe Insulation Mud Insulated Pipe Fittings	HK114702 HK114703	35% Chrysotile 15% Chrysotile	550 LF 60 EA	Good Good	O & M O & M
Ernie's Room	Pipe Insulation Mud Insulated Pipe Fittings	HK114702 HK114703	35% Chrysotile 15% Chrysotile	225 LF 12 EA	Good Good	O & M O & M
Laboratories	Pipe Insulation Mud Insulated Pipe Fittings Ceiling Tile Floor Tile and Associated Mastic	HK114702 HK114703 08 01 02	35% Chrysotile 15% Chrysotile 5% Amosite 2% Chrysotile 1% Chrysotile	300 LF 130 EA 900 SF 600 SF	Good Good Good Good	O & M O & M O & M O & M
Evidence Room	Pipe Insulation Mud Insulated Pipe Fittings	HK114702 HK114703	35% Chrysotile 15% Chrysotile	100 LF 20 EA	Good Good	O & M O & M
Corridor	Pipe Insulation Mud Insulated Pipe Fittings Floor Tile and Associated Mastic	HK114702 HK114703 01 02	35% Chrysotile 15% Chrysotile 2% Chrysotile 1% Chrysotile	200 LF 50 EA 750 SF	Good Good Good	O & M O & M O & M

Location	Material Type	Sample Number	Asbestos Percent and Type	Estimated Quantity of ACM	Condition	Recommended Response Action
Supply Room	Pipe Insulation Mud Insulated Pipe Fittings	HK114702 HK114703	35% Chrysotile 15% Chrysotile	200 LF 30 EA	Good Good	O & M O & M
Boiler Room	Pipe Insulation Mud Insulated Pipe Fittings	HK114696 HK114690	35% Chrysotile 15% Chrysotile	200 LF 16 EA	Good Good	O & M O & M
Storage Room	Pipe Insulation Mud Insulated Pipe Fittings	HK114696 HK114690	35% Chrysotile 15% Chrysotile	325 LF 30 EA	Good Good	O & M O & M
Break Room	Pipe Insulation Mud Insulated Pipe Fittings	HK114702 HK114703	35% Chrysotile 15% Chrysotile	75 SF 30 EA	Good Good	O & M O & M

FIRST FLOOR

Location	Material Type	Sample Number	Asbestos Percent and Type	Estimated Quantity of ACM	Condition	Recommended Response Action
Laboratories	Pipe Insulation Mud Insulated Pipe Fittings Floor Tile and Associated Mastic Fume Hoods	HK114702 HK114703 11 12	35% Chrysotile 15% Chrysotile 3% Chrysotile 1% Chrysotile	350 LF 50 EA 1600 SF 7 EA	Good Good Good Good	O & M O & M O & M O & M
Corridor	Floor Tile and Associated Mastic	11 12	3% Chrysotile 1% Chrysotile	600 SF	Good	O & M
Administration Room	Floor Tile and Associated Mastic	11 12	3% Chrysotile 1% Chrysotile	100 SF	Good	O & M
Boiler Room	Pipe Insulation	HK114702	35% Chrysotile	300 LF	Good	O & M
Mechanical Room	Pipe Insulation Floor Tile and Associated Floor Tile Mastic	HK114702 11 12	35% Chrysotile 3% Chrysotile 1% Chrysotile	125 LF 75 SF	Good Good	O & M O & M
Mail Room	Pipe Insulation Floor Tile and Associated Floor Tile Mastic	HK114702 IATL96216 IATL96217	35% Chrysotile 10% Chrysotile 3% Chrysotile	200 LF 2,000SF	Good Good	O & M O & M

SECOND FLOOR

Location	Material Type	Sample Number	Asbestos Percent and Type	Estimated Quantity of ACM	Condition	Recommended Response Action
East Office Wing	Floor Tile located under carpet	11	3% Chrysotile	1,800 SF	Good	O & M
	Mud Insulated Pipe Fittings	HK114703	15% Chrysotile	30 EA	Good	O & M
Custodian's Closet	Floor Tile and Associated Mastic	IATL96216	10% Chrysotile	80 SF	Poor	Remove
West Office Wing	Floor Tile located under carpet	IATL96216	10% Chrysotile	3,500 SF	Good	O & M
	Floor Tile and Associated Mastic	11	3% Chrysotile	2,000 SF	Good	O & M
	Pipe Insulation	12	1% Chrysotile			
		HK114702	35% Chrysotile	300 LF	Good	O & M
Corridor	Floor Tile and Associated Floor Tile Mastic	11	3% Chrysotile	300 SF	Good	O & M
		12	1% Chrysotile			

THIRD FLOOR

Location	Material Type	Sample Number	Asbestos Percent and Type	Estimated Quantity of ACM	Condition	Recommended Response Action
West Office Wing	Floor Tile located under carpet Mud Fitting	IATL96216 HK114703	10% Chrysotile 15% Chrysotile	10,000 SF 30 EA	Good Good	O & M O & M

PENTHOUSE

Location	Material Type	Sample Number	Asbestos Percent and Type	Estimated Quantity of ACM	Condition	Recommended Response Action
Attic	Transite Siding			2,000 SF	Good	O & M
Penthouse	Pipe Insulation	HK114702	35% Chrysotile	75 LF	Poor	Remove

APPENDIX C

POLARIZED LIGHT MICROSCOPY ANALYTICAL METHODS

APPENDIX D

DEFINITIONS AND REGULATIONS

Abatement: A range of procedures to control fiber release from ACM. Abatement options include removal, repair and encapsulation, enclosure, or operations and maintenance activities.

Accessible: With regard to ACM it means that the material is subject to disturbance by building occupants including custodial or maintenance personnel in the course of their normal activities.

Accredited: When referring to a person or laboratory, this means that such person or laboratory is accredited in accordance with Section 206 of Title II of the Toxic Substances Control Act. Accreditation is given to laboratories which analyze bulk material samples for asbestos and satisfy the proficiency requirements established by the National Institute for Science and Testing (NIST).

Asbestos: The term asbestos includes chrysotile, amosite, crocidolite, tremolite, anthophyllite, and/or actinolite including any of these minerals, which have been chemically treated and/or altered.

Asbestos-Containing Material (ACM): Material composed of asbestos of any type and in an amount greater than one percent by weight or visual estimation, either alone or mixed with other fibrous or non-fibrous materials (e.g., surfacing, thermal system insulation, miscellaneous material).

Asbestos-Containing Building Material (ACBM): ACM that is a building material (e.g. flooring, wall boards, ceilings, insulation, etc.)

Friable Asbestos Material: Material that contains more than one percent asbestos by weight or visual estimation that can be crumbled, pulverized, or reduced to powder by hand pressure when dry.

Non-friable Asbestos Material: Material that contains asbestos such that the fibers have been locked-in by a bonding agent, coating, binder, or other material such that the asbestos will not release fibers during any reasonably appropriate use, handling, storage, transportation, or processing.

Operations and Maintenance (O&M) Program: A program of work practices designed to maintain undamaged ACM in good condition and to repair ACM and clean-up asbestos fibers which may be inadvertently released during fiber release episodes.

Removal: The complete removal of ACM from a damaged area, a functional space, or a homogeneous area in a building.

Repair: Returning damaged ACM to an undamaged condition so as to prevent fiber release.

Response Action: A method, including removal, encapsulation, enclosure, or operations and maintenance (including repair), that protects against the release of fibers from friable ACM.

Routine Maintenance Area: An area, such as a boiler room or mechanical room, that is not normally occupied by non-maintenance individuals and in which maintenance employees or contracted workers regularly conduct maintenance activities. Routine maintenance areas with ACRSM present require □Asbestos-Caution□ stickers be appropriately posted.

Small-Scale Short Duration (SSSD) Projects: Asbestos abatement activities impacting less than 3 linear feet or 3 square feet of ACM.

Surfacing ACM: Surfacing asbestos-containing materials such as sprayed-on or trowel-applied fireproofing.

Surfacing Material: Material that is sprayed-on, troweled-on, or otherwise applied to surfaces. Examples include acoustical plaster on ceilings and fireproofing materials on structural members.

Thermal System Insulation (TSI): Material in a building applied to pipes, fittings, boilers, breeching, tanks, ducts, or other components to improve the thermal characteristics of the component by preventing heat loss or gain, or preventing water condensation.

Visible Asbestos-Containing Material: Any quantity of ACM, which is visible to the unaided eye, including dust and other types of debris.

REGULATIONS

REGULATORY OVERVIEW

Over the past two decades, the regulatory community has become increasingly aware of the potential hazards of inhaled asbestos fibers. Regulations have been developed by federal, state, and local agencies to protect workers and the general public from the release of asbestos fibers. Departments of the federal government responsible for the regulation of asbestos include:

- The U.S. Department of Labor (DOL) through the Occupational Safety and Health Administration (OSHA) has developed two standards designed to protect employees at their work sites. These two standards are the Asbestos Regulations for General Industry (29 CFR 1910.1001) and Asbestos Regulations for the Construction Industry (29 CFR 1926.1101). These OSHA regulations apply only to employers and employees. Employees involved in performing Operations and Maintenance (O&M) activities who might potentially come into contact with asbestos-containing materials would clearly be addressed by the regulations. Second, employees who might inadvertently be exposed to asbestos-containing materials during the normal course of their work activities would also be covered by these regulations. Third, construction-related activities (e.g. asbestos abatement) are also covered.

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- The U.S. Environmental Protection Agency (EPA) has promulgated a series of regulations which focus on asbestos issues. Pertinent stipulations in these regulations are as follows:

Clean Air Act (CAA)

The EPA regulates asbestos under the National Emission Standards for Hazardous Air Pollutants (NESHAP), which is listed as Section 112 of the Clean Air Act (CAA). Under NESHAP, a hazardous pollutant has been defined as "an air pollutant to which no ambient air quality standard is applicable and which, in the judgment of the Administrator, causes or contributes to air pollution which may reasonably be anticipated to result in an increase in mortality or an increase in serious irreversible or incapacitating reversible illness." The NESHAP program currently regulates arsenic, benzene, beryllium, mercury, radionuclides, and vinyl chloride along with asbestos. The purpose of the asbestos NESHAP is to protect the public from exposure to asbestos in the ambient air. The asbestos NESHAP program

pertains primarily to demolition and renovation of buildings containing asbestos building materials. (The asbestos NESHAP also regulates manufacturing and fabricating operations, spray application of asbestos, waste disposal for asbestos mills, inactive waste disposal sites, and established standards for asbestos mills and roadways.) The specific provisions of NESHAP for demolition or renovation of buildings with asbestos containing are broken down into categories of notification, work practices, waste handling, and waste disposal.

The building owner would be responsible for compliance with NESHAP regulations primarily during abatement activities. Issues such as work practices, waste handling, and waste disposal are normally specified in the project's plans and specifications. Verifying adherence to these plans and specifications during the abatement process would be the building owner's responsibility.

Resource Conservation Recovery Act (RCRA)

The disposal of asbestos was originally regulated under RCRA in 1976. However, in that same year, asbestos, because it does not migrate in soil or pose any threat to ground water, was not listed by RCRA, and the authority for asbestos control was transferred to NESHAP. Therefore, the current RCRA regulations pertain only to facility siting and general landfill operations. The facility siting/licensing issue that would involve the building owner is the determination by the building owner staff that the facility where asbestos waste is disposed of is an EPA licensed facility.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

This act is most commonly referred to as "Superfund." The authority of CERCLA, as clarified in the Superfund Amendments Reauthorization Act (SARA), regulates asbestos as a hazardous substance. Reportable quantities (RQs) have been established to deal with releases or threats of releases of hazardous substances from vessels and from facilities including trucks and landfills. The trigger RQ for a release, or threat of release, of asbestos is one pound.

Superfund issues relative to the removal of ACM relate primarily to improper disposal of asbestos waste. The building owner is responsible for ensuring that a manifest for the waste is completed and signed by the licensed landfill facility and returned to the building owner for inclusion in their permanent records.

Asbestos Hazard Emergency Response Act (AHERA)

The 1988 Asbestos in Schools Rule (more commonly referred to as AHERA) required Local Education Agencies (LEAs) to develop and implement Management Plans for their ACBM. Response actions (i.e., removal encapsulation, enclosure, or O&M) were developed for ACBM identified in public and private schools (K-12). AHERA requires LEAs to conduct reinspection every three years and periodic surveillance every six months as part of their

O&M Program. Only Accredited and Certified professionals may conduct response actions. In particular, aggressive final clearance sampling is required to be performed by independent industrial hygienists.

Maine Regulations

The Maine Department of Environmental Protection (DEP) Chapter 425 Asbestos Management Regulations (effective date of January 1, 1994) define the minimum work practice requirements for asbestos abatement contractors for any project in excess of 3 square feet or 3 linear feet. The removal of non-friable ACM during demolition is also discussed. For removal of these materials under demolition conditions, friable ACM work practices would apply. Abatement work also requires conformance to OSHA Regulation 29 CFR, Part 1926.1101. In addition to the mandatory requirements of this regulation, federal OSHA officials regulating Maine asbestos abatement contractors interpret Appendix F, Work Practices and Engineering Controls for Major Asbestos Removal, Renovation and Demolition Operations, as mandatory to abatement work including traditionally non-friable materials such as roof systems. While stated as "non-mandatory," OSHA has determined that the standard will apply under their interpretation of "whenever feasible." DEP Chapter 425 Asbestos Management Regulations are currently being revised by DEP personnel with industry input.

APPENDIX B

SURVEY, SAMPLING AND ANALYTICAL PROTOCOL
SURVEY PROTOCOL

The first step in developing a comprehensive facility asbestos management plan is to conduct a building survey to identify the locations and quantities of suspect ACM and to determine the conditions of those materials.

The scope of work for this survey included details of how the survey was to be conducted, the information to be gathered, and the form and content of the survey report.

The facility survey was conducted by one or more DEP-certified URS asbestos surveyors. The specifics of the survey included the following:

- Reviewing any existing asbestos survey reports.
- Visually inspecting accessible building areas to determine the location of suspect ACM.
- Sampling and evaluating suspect ACM to determine its accessibility and limit the occupancy of the surrounding building area to employees.
- Compiling and reporting survey data by functional area.
- Quantifying homogeneous materials, including both friable and non-friable suspect ACM.
- Gathering information during the survey concerning locations, quantities, and types of materials.

BULK SAMPLING PROTOCOL

During the survey of this facility, bulk samples of suspect ACM were collected for laboratory analysis. The bulk samples were collected and categorized according to the homogeneous building materials being evaluated. The designation of homogeneous building materials was made by the URS surveyor. Once suspect homogeneous materials were identified, bulk samples were collected in accordance with the EPA protocol as outlined in the Asbestos Hazard Emergency Response Act (AHERA) regulations. If a single sample of a homogeneous material was found to contain asbestos, then that homogeneous material was identified as containing asbestos throughout the building. Homogeneous flooring materials were determined by similarity of floor tile size, color, and age, if determinable.

Sampling techniques generally involved one of two different sampling procedures.

1. Core samples were collected from certain materials, such as pipe covering and fittings, to sample these potentially multi-layered materials. Disposable core boring devices were used for this purpose to minimize potential cross contamination of samples.

2. Ceiling tile, floor tile, and similar materials were sampled by breaking off a portion of the desired material from an inconspicuous location.

Samples were given a unique sample number, which included the project number, and were placed in sample containers for transportation to URS's laboratory for analysis. The location of each sample was noted on the building drawing. Information regarding the sample location was also entered onto URS's Chain-of-Custody forms. The quantity, location and physical condition of each material were recorded on URS's field data sheets.

Sample locations (from insulation materials) were covered with duct tape or encapsulant after sampling. Locations in unoccupied portions of buildings were labeled. Sample points on fireproofing, plaster, ceiling tile and transite in the buildings were not necessarily labeled or repaired.

ANALYTICAL PROTOCOL

Samples collected during this facility asbestos survey were transported to URS's accredited laboratory for microscopic analysis. URS's analytical laboratory is accredited by the National Institute for Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP) for bulk asbestos analysis as required under EPA AHERA regulations. URS's laboratory is also accredited by the American Industrial Hygiene Association (AIHA) for asbestos air sample analysis. Chain-of-Custody was maintained by the laboratory through the use of URS's Chain-of-Custody forms. After being logged in by the laboratory and prepared for analysis, samples were analyzed following the EPA-recommended method of bulk sample analysis by polarized light microscopy with dispersion staining. A description of this analytical method is contained in Appendix D of this document.

In preparing the bulk materials for analysis, a small representative portion of each sample was selected from the bulk material collected in the field and mounted on a glass slide. If the bulk material appeared to have a uniform consistency, a minimum of two slides were prepared for viewing. If, however, the bulk material appeared to contain layers, a separate set of slides was prepared for each layer and results for each layer determined independently. Analytical results for layered samples were reported as an average of the asbestos composition of the material as a whole. In some situations multiple slides were prepared from particularly complex samples, such as floor tile, which were suspected to contain low percentages of asbestos. In cases where replicate samples of a homogeneous material were collected, they were analyzed until one was found to be positive (which meant the entire homogeneous area was deemed positive) or until each sample was analyzed to prove a negative result.

Sample results were reported either as "none detected" (ND) if no asbestos was found, or by type and percent composition if any form of asbestos was observed. EPA, OSHA, and DEP all recognize a level of greater than one percent asbestos by weight content or visual estimation as the minimum level for requiring a material to be treated as asbestos-containing. The identification of the presence or absence of asbestos in a material involves several specific analytical procedures. The percentage composition, on the other hand, is simply a visual approximation on the part of the analyst and may vary based on the way the sample slide is prepared and the specific analyst performing the identification. Estimating an accurate percentage composition of low-level asbestos-containing materials is very difficult. Therefore, samples identified positively as having an asbestos content of less than 10 percent by visual estimation are required to be re-analyzed by the point counting procedure described in the EPA "Interim Method for the Determination of Asbestos in Bulk Insulation Samples," method number EPA-600/M4-82-020, December 1982. A more definitive analysis can be obtained by transmission electron microscopy (TEM) analysis and is often used for confirming or denying the presence of asbestos in floor tile samples (in particular 12-inch by 12-inch tile) when previously analyzed via PLM and initially determined to be non-detected for asbestos.

It should be noted here that the analysis of a debris sample is a qualitative analysis for the presence or absence of asbestos in that particular sample. The EPA interim PLM method for analyzing bulk samples was intended to be used for analyzing asbestos-containing manufactured products or materials with near uniform concentrations of asbestos and not for the analysis of debris or other possibly contaminated materials which are not uniform in nature. Therefore percentage composition for soils, debris or dust samples is not indicated in this report. Further, a negative finding in these samples indicates only that the debris actually sampled was not found to contain asbestos. No inference should be made from any negative result concerning other debris, which was not specifically sampled.

Approximately ten percent of the samples collected during the field survey were reanalyzed as part of URS' quality control (QC) program. These QC samples were analyzed in URS' laboratory by an analyst different from the one who performed the initial analyses.

After the completion of both the initial and quality control analytical procedures, samples are stored in URS' sample storage area files and are maintained there for at least one year. At the end of one year URS will offer the client the opportunity to either have the samples properly disposed of by URS or have them returned for retention by the client.

APPENDIX C

POLARIZED LIGHT MICROSCOPIC ANALYTICAL METHOD

Polarized Light Microscopy (PLM) is the only analytical method for asbestos identification, which depends upon the unique optical crystallographic properties of the various crystals, phases in the sample. These properties—refractive indices, dispersion of refractive indices, birefringence, sign of elongation and extinction angle are unique to the crystalline state and, therefore, unequivocally identify chrysotile, lizardite, antigorite, anthophyllite, tremolite, actinolite, grunerite, cummingtonite, and riebeckite whether fibrous or non-fibrous.

PLM includes the classical optical crystallographic methods and the more recent dispersion staining procedures. Dispersion staining is, in effect, just a way of using optical crystallography for the study of transparent particles. It supplements the classical methods and, in some cases, makes the use of PLM for the study of crystals easier. For example, with one polar isotropic, substances show a single characteristic dispersion staining color, but anisotropic substances show different colors corresponding to the different refractive indices in different orientations. Chrysotile, for example, shows blue and blue-magenta colors, crosswise and lengthwise, respectively, for each fibrous crystal when mounted in Cargille high dispersion liquid n25=1.550 and observed by central stop dispersion staining (DS). The actual analysis begins by adding a Cargille refractive index liquid (nD-1.550, high dispersion) to a 0.5-1 mg slide sample. The particles should be dispersed in this liquid by teasing aggregates apart using two fine needles before covering with a cover slip.

A. Chrysotile

In liquid nD-1.550, chrysotile has distinctive fine flexible fibrils (often curly) plus straight bundles of such fibrils and distinctive dispersion staining colors usually blue-magenta parallel to the fiber axis and blue perpendicular (central stop colors). Different samples of chrysotile, however, may vary somewhat in the wavelength at which particle and liquid have the same refractive index. Parallel to the length ranges from about 440 to 560 nm and perpendicular to the length from about 560 to 660 nm.

The presence of chrysotile and other fibrous particles is sometimes secured by tiny particles of mortar. This is especially troublesome because most of these particles are so different in refractive index from the mounting liquid; they appear bright white and central stop dispersion staining. Trying to see the asbestos is like trying to see while driving at night with an oncoming stream of cars with high beam headlights. Often one can be confident the particles are covering obscured fibers because of their pattern-the Milky Way effect.

Sometimes a stray fibril may poke its way out into the liquid to show dispersion staining colors. It is always helpful in situations like this to examine the "milky way" with crossed polars since the underlying fibers often then become visible and recognizable as fibers. Crossed polars also help to locate smaller fibers and small percentages of fibers. Each sample should be quickly

scanned with crossed polars as well as dispersion staining before reporting the absence of asbestos fibers.

A mortar coating can sometimes be removed from the fibers by holding one end on the slide with one needle (lying flat) and scraping with a second needle along a fiber bundle, either before or after adding the mounting fluid. It may also be possible to remove enough mortar to see some dispersion staining colors by pressing the cover slip down hard on the particles (in the liquid) with a pencil eraser and sliding the cover slip in a circular pattern with the eraser. Another technique is to tease and scrape a fiber bundle out straight, cover with a cover slip and add the liquid so that it runs down the length of the fiber washing away much of the loosened mortar.

B. Amosite and Crocidolite

Amosite and crocidolite both have very pale yellow to white borders by central stop DS in liquid nD=1.550HD because their refractive indices are so much higher. Crocidolite usually shows a blue absorption color. If no anisotropic fibers with refractive indices much higher than 1.550 are present, no asbestos other than chrysotile can be present.

If higher index particles are observed in liquid nD=1.550HD a second sample is mounted in nD=1.605HD. Likely compounds visible in this liquid include tremolite, anthophyllite, actinolite, and wollastonite.

If higher index particles are observed in liquid nD=1.605, a third sample is mounted in Cargille liquid nD-1.680 and examined with DS. Most amosites used in buildings will show a wavelength of about 460 nm (golden yellow) parallel to the length and about 600 nm (blue-magenta) to >660 nm (pale blue) perpendicular to the length depending on fiber orientation. A perpendicular lambda 0 of >660 nm corresponds to the alpha vibration direction, which usually shows parallel extinction; a lambda 0=600 nm perpendicular to the length corresponds to beta (also no a parallel extinction view). As with most silicate minerals substitutional solid solution, in this case Fe2+ with Mg2+, can cause alpha, beta, and gamma to vary. Higher or lower values of refractive index for any one of the three vibration directions will mean correspondingly higher or lower values for all three.

Although the refractive indices of amosite and other amphiboles may vary over a wide range, most are not from commercial sources. Nearly all Amosite used commercially in insulation has the optical properties given above.

If, in liquid nD=1.680, low birefringent fibers show lambda 0 colors close together in the yellow to golden magenta, crocidolite is strongly indicated. If they show a negative sign of elongation (higher lambda 0 parallel to the length), and blue absorption colors with pleochroism (blue parallel and gray-blue perpendicular to the fiber length) crocidolite is present. Further confirmation can be obtained by mounting a third sample in Cargille refractive index liquid nD=1.70. Crocidolite will show central stop colors close to 600 nm (blue magenta) parallel to the length and about 520 (red magenta) perpendicular. Again, some parallel movement of the alpha, beta, and gamma colors should be expected for crocidolites from different sources.

We should emphasize that DS is a method for rapid refractive index determination. To be certain the observed colors mean a particular asbestos is present, one must be certain the DS data are consistent with particle orientation, i.e., the relationship between the optical properties and the crystallographic axes.

C. Other Asbestiform Minerals

When analyzing insulation, one usually skips the nD=1.605 liquid but if during examination anomalous results are observed with the 1.550 nD 1.680 liquids, that is, highly fibrous fibers with lambda colors in other than the prescribed ranges for chrysotile, amosite, and crocidolite, then fibrous tremolite, actinolite, or anthophyllite may be present. These are rarely found, however, in insulation. When these anomalous results are obtained, you should characterize the fibers in those liquids as to refractive indices relative to those liquids and extinction angles. If all of the fibers show parallel extinction and pale blue colors in 1.680, they are anthophyllite (if the possibility of organic fibers is first eliminated). Amosite shows parallel extinction as well, but good lambda colors in the visible in 1.680 identify this asbestos mineral. Tremolite will show strong colors in al orientations in nD=1.605 high dispersion liquid.

Actinolite has morphology and optics similar to tremolite except that the indices are all higher. Actinolite may also show pleochroism (green to colorless). It is best studied in high dispersion liquid nD=1.630HS in which alpha and gamma on the oblique extinction view show magenta and golden yellow, respectively. On the parallel extinction view, gamma (lengthwise) shows 0 ca. 470 nm or golden magenta and B (perpendicular) shows 0 ca. 495 nm also golden magenta although with more red. Ferroactinolites have been higher iron content and correspondingly higher refractive indices.

Tremolite, actinolite, and ferroactinolite are portions of a continuous solid solution series in the same manner as the amosite minerals, cummingtonite and grunerite. The name to use for a given amphibole, therefore, depends directly on the optical properties. An unusually asbestiform mineral is picrolite described as a fibrous form of antigorite. Its refractive indices are higher than chrysotile, which it closely resembles.

D. Interfering Substances

A few common substances show dispersion staining colors similar to those of chrysotile and some are elongated as well. These include two polymorphs of chrysotile: Antigorite and lizardite, quartz, talc, paper fibers and hairs. All of these show dispersion staining colors in 1.550 and all except talc and paper fibers show colors somewhat similar to chrysotile.

Quartz, although usually glassy flakes, shows blue and magenta central stop colors very similar to chrysotile in the 1.550 liquid. The shape is very different, however, and only a few views are oriented to show the magenta color.

Animal hairs, including human, also have refractive indices in the same range as chrysotile and, if finely fibrillated by electric razor for example, can be confusingly similar. Such fibrillated fibers are, however, rare; they also usually show melanin pigmented particles and indices

sufficiently different from chrysotile to avoid confusion. Paper fibers also show a crosswise index close to 1.550 (but lower) and the lengthwise index is much higher, hence shows a yellow central stop color. The morphology of paper fibers is also distinctive unless they are very tiny slivers broken away from larger fibers.