

# MicroFab, Inc. Amesbury, MA

## Hazardous Material Survey Report

Prepared by:



**Amec Foster Wheeler Environment & Infrastructure, Inc.**  
271 Mill Road  
Chelmsford, MA 01824

Prepared for:



MassDEP SARSS  
BOSTON, MA

December 2016

## Table of Contents

1. Introduction.....	3
2. Asbestos .....	4
3. Lead Based Paint and Plating Baths .....	6
3.1 LBP Disposal .....	6
3.2 LBP Worker Protection .....	7
4. Hazardous Materials.....	7
5. Other Materials.....	8
6. Cost Estimate .....	9
7. Conclusions .....	10

## LIST OF TABLES

Table 1: Summary of overall area of Building
Table 2: Cost estimate for Demolition
Table 3: Actionable Hazardous Material
Table 4: Hazardous Materials Abatement Schedule
Table 5: Summary of Asbestos Results
Table 6: Summary of TCLP Analytical Results
Table 7: Summary of Oil Analytical Results
Table 8: Survey of Universal Waste
Table 9: Survey of Tanks and Equipment

## LIST OF FIGURES

FIGURE 1: Site location Map
FIGURE 2: MicroFab Building overall sketch
FIGURE 3: Overall internal drawing including wastewater treatment building
FIGURE 4: Plating room, Area # 1
FIGURE 5: Production floor, Area # 2
FIGURE 6: Production floor, Area # 3
FIGURE 7: Production floor, Area # 4
FIGURE 8: Production floor, Area # 5
FIGURE 9: Office floor, Area # 6
FIGURE 10: Ground floor, Area # 7
FIGURE 11: Basement, Area # 8
FIGURE 12: Wastewater treatment building
FIGURE 13: Exterior sample collection from roof and grade level
FIGURE 14: Dimensions of building

## Appendices

Appendix A: Photo Logs

Appendix B: EMSL Lab Results for Asbestos

Appendix C: TestAmerica Lab Results for TCLP and PCBs

## 1. Introduction

Amec Foster Wheeler Environmental and Infrastructure, Inc. (Amec Foster Wheeler) has performed a hazardous material survey of the MicroFab building structures located on 106 Haverhill Road in Amesbury, MA. This survey has been performed in advance of demolition to identify hazardous materials, which will be abated and removed prior to demolition.

To complete the survey, the building was divided into nine sections including the wastewater treatment building. Details about this segregation is shown on drawings in Appendix A. Table 1 below summarizes the area (ft<sup>2</sup>) occupied by the basement, first floor, second floor and roof.

*Table 1: Summary of overall area of Building*

Location	Area #	Approximate Floor Area (ft <sup>2</sup> )
Roof*	1, 2, 3, 4, 5, and 6	62,500
Basement	8	6,900
Production Floor	1, 2, 3, 4, and 5	59,600
2 <sup>nd</sup> Floor -Office	6	2,900
Ground Floor	7	31,000
Wastewater Treatment Building (Roof collapsed)	9	2,560
Total Area (Excluding roof)		102,960

*\*About 5% of roof collapsed*

Amec Foster Wheeler performed lead, polychlorinated biphenyls (PCB) and asbestos sampling during the months of September and October 2016. Inventory and pH tests of materials containing in storage/process tanks and plating baths were also completed, and are summarized in Table 9. Amec Foster Wheeler's scope of work included the following tasks:

- Assess and analyze building components for asbestos-containing materials (ACM);
- Collect and analyze representative painted surfaces for lead-based paint (LBP);
- Collect and analyze representative sealant samples for PCBs;
- Perform a visual inventory of containerized materials assumed to be hazardous;



- Identify and inventory other materials that may require segregation, i.e. light switches, light ballasts, etc.;
- Perform an inventory of universal waste material and HVAC duct work wrapped with insulation;
- Provide a report summarizing the findings and recommendations

Specific details on these hazardous materials and remedial recommendations are summarized in Table 3 and Table 4.

#### **Limitations:**

Amec Foster Wheeler's Hazardous Materials Survey Report is not considered a comprehensive investigation for demolition of the site building. The investigation was limited to accessible areas within the interior and exterior of the building in order to identify suspect hazardous materials or components and destructive testing to access areas behind solid walls, floors or ceilings was limited. In addition, AMEC did not access any electrical boxes, panels or equipment (including wiring) or subsurface vaults/manholes or below grade structures. Prior to demolition, Amec Foster Wheeler recommends further investigation and sampling take place using destructive techniques to access non-accessible areas, electrical equipment and/or subsurface areas in order to properly identify additional suspect materials that may require special handling and/or disposal.

## **2. Asbestos**

Amec Foster Wheeler performed a visual evaluation for ACM in accessible and partially concealed areas (where feasible) throughout the project area. ACM were categorized and bulk sampled in general accordance with the sampling procedures outlined within the Environmental Protection Agency (EPA) Asbestos Hazard Emergency Response Act (AHERA) regulations. Bulk samples were submitted to EMSL Analytical, Inc. in Woburn, MA for analysis by Polarized Light Microscopy (PLM) in accordance with EPA Method 600/R-93/116. The EPA defines ACM as those materials that contain greater than 1% asbestos.

Table 4 provides a summary of ACM bulk sampling data including location, estimated quantity, sample numbers, etc. Amec Foster Wheeler recommends the following to address the ACM found in the MicroFab building:

- Remove all identified installed ACM, as indicated in Table 3 and 4. Types of ACM include:
  - Floor tiles and mastic beneath it— approximately 5,070 sq. ft.
  - Window caulking – approximately 370 linear ft.

- Equipment Flashing Materials on roof - 730 sq. ft.
- Roofing materials – approximately 3,900 sq. ft.
- Floor debris- approximately 5,200 sq. ft.
- Thru-Wall Copper Flashing/Tar between Exterior Walls and Slab – 440 linear feet.
- Chemicals, TCLP solids, and waste oil contained in tanks and elevator, transformer and compactor reservoir.
- Installed ACM on HVAC duct work wrapped with insulation - 5 heating, ventilation and air conditioning (HVAC) ducts.
- A licensed asbestos abatement contractor must remove all ACM identified in Table 4 prior to demolition in accordance with all State and Federal regulations.

Materials not included in the survey that require further inspection/analysis prior to disposal, include:

- Non-accessible areas behind solid walls, floors and ceilings.
- Electrical components such as boxes, wiring, panels, etc.
- Subsurface vaults, manholes or below grade structures
- Roofing materials with ACM will have to be segregated from those that do not contain ACM.
- Remove and segregate the HVAC units from the rooftop – these should be examined and inspected by a licensed abatement contractor.

ACM is subject to a variety of specific Federal, State and local regulatory requirements. The following summarizes the major regulatory requirements for asbestos:

- All contractors and employees should be alerted to the presence and location of the identified and presumed ACM and hazards, in accordance with applicable Occupational and Safety Health Administration (OSHA) regulations.
- Various regulatory agencies must be notified of any asbestos removal, repair or encapsulation work prior to conducting said work. The licensed asbestos abatement contractor typically submits these notifications.
- Employees who work with asbestos should be provided with proper personal protective equipment, as well as the appropriate asbestos removal equipment, training and licensure if applicable.
- All asbestos material must be disposed of in accordance with the Federal, State or Local asbestos regulations.
- Asbestos removal should be monitored to ensure that no asbestos is released into ambient air. During enclosed asbestos removals, it is required that an independent consultant who is a licensed project monitor, perform clearance air testing prior to the removal of the containment/enclosure barriers. We recommend that air monitoring be performed in accordance with applicable regulations and that potentially affected employees are notified of any asbestos abatement work.

- A standardized specification for abatement should be established for the removal of asbestos containing materials identified at the referenced property. It is recommending that a licensed asbestos designer develop the specification to address important issues including an accurate scope of work, regulatory requirements, insurance requirements, notification procedures, air sampling requirements and other pertinent information.
- If demolition to any areas outside the scope of this report, it will be necessary to investigate and collect bulk samples in order to confirm the presence or absence of asbestos content.
- If concealed ACM is observed during demolition activities, it will be necessary to investigate and collect bulk samples in order to confirm the presence or absence of asbestos content.

Implementation of these recommendations will help ensure compliance with regulatory requirements.

### 3. Lead Based Paint and Plating Baths

#### 3.1 LBP Disposal

An investigation of LBP surfaces within the project area was performed to evaluate building disposal requirements. A composite sample was collected from approximately 6 representative interior painted surfaces. The cuttings were composited and submitted to TestAmerica Buffalo Inc. in Amherst, NY for analysis by Atomic Absorption Spectroscopy in accordance with EPA Method 1311/6010B Toxic Characteristic Leaching Procedure (TCLP).

The EPA defines LBP as those materials that contain greater than 5.0 milligram per liter (mg/l) lead. Painted building materials examined in this building survey are below the regulatory limits and may be disposed of at an approved construction and demolition waste facility. However, the composite sample collected from plating bath of line 2 located at plating room and chemical make-up tank from basement had high amount of lead content.

Recycling of painted metal components is typically exempt from special lead containing or lead contaminated disposal requirements as long as the paint remains intact to its substrate; however, several areas inside were observed to be in deteriorated condition with large amounts of flaking and scaling paint. Prior to demolition, painted metal surfaces in deteriorated condition (surface that exhibit scaling and flaking) should be collected, segregated, and disposed of as hazardous lead waste. All lead paint impact work should be performed in accordance with the Occupational Safety and Health Association (OSHA) lead paint rules and Federal, State and Local hazardous waste disposal regulations.

### 3.2 LBP Worker Protection

OSHA regulates activities that disturb any amount of lead paint. The demolition contractors work practices shall comply with the OSHA Lead in Construction Regulations. Lead paint shall be removed if demolition activities will create airborne lead levels that exceed the OSHA action limit of 30 micrograms per cubic meter (e.g. negative exposure assessment). The contractor shall wear personal protective equipment (e.g. respirators, suits) until the negative exposure assessment is completed.

Demolition activities that have the potential to create significant airborne dust/vapor levels (i.e. torch cutting, abrasive mechanical saw cutting, dry sanding, and abrading) should not be utilized for the removal of lead painted surfaces. If these types of methods are used on LBP surfaces, the contractor shall implement worker protection, work area containment, and exposure monitoring. If less obtrusive methods (i.e., machine demolition, chemical stripping or component removal) are implemented, then the contractor should be notified and informed of the presence of lead containing surfaces, and contractor compliance to applicable portions of the OSHA Lead in Construction Regulations will be necessary.

## 4. Hazardous Materials

Polychlorinated Biphenyls (PCBs) can be found in certain sealing materials installed prior to 1978 on doors, windows, concrete, masonry, etc. If PCBs are detected in building materials, EPA mandates the materials be managed in-place or removed in accordance with an EPA approved plan.

An investigation of PCBs in waste oil within the project area was performed to evaluate building disposal requirements. A grab and wipe samples were collected from elevator reservoir and transformer. These samples were submitted to TestAmerica Buffalo Inc. in Amherst, NY for analysis by Gas Chromatography in accordance with EPA Method 3540C/8082.

The EPA defines PCB-containing materials as those materials that contain greater than 50 milligrams per kilogram (mg/kg) PCBs. Analytical results of the sample in Table 5 indicate that presence of PCBs on sampled oil is below regulatory levels. Waste oil which are below the regulatory limits and may be disposed of at an approved construction and demolition waste facility.

As part of our survey for regulated materials, Amec Foster Wheeler also visually quantified and noted the hazardous materials observed during the site visit as shown in Tables 6. These materials must be disposed as hazardous waste and/or recycled prior to demolition. Sampling of these types of materials is not necessary, particularly if the items are adequately labeled.

Amec Foster Wheeler recommends identified hazardous materials be characterized and disposed of as hazardous waste and/or recycled in accordance with applicable regulations generally summarized as follows:

- All light ballasts that do not have a clear “NO PCBs” label on them are to be considered PCB containing and, disposed of as PCB-containing material.
- All bulbs are to be packaged and disposed as a mercury (Hg) containing waste. Bulbs that are clearly labeled “NO Hg” may be disposed of as general construction debris. Care must be taken to not break the bulbs, as that may cause mercury exposure to individuals handling the bulbs.
- All thermostats are to be packaged and disposed as a mercury (Hg) containing waste. Care must be taken to not break the devices, as that may cause mercury exposure to individuals handling the devices.
- Elevator reservoir
- Transformer

Hazardous Materials are subject to a variety of Federal, State and local regulatory requirements. In order to comply with regulatory requirements for hazardous materials, Amec Foster Wheeler recommends the following:

- Workers who handle hazardous materials should be licensed and trained in safe and proper hazardous materials handling procedures. At a minimum, this should include OSHA 40 Hour Hazardous Waste Site Health and Safety Training in accordance with 29 CFR 1910.120.
- All drums and containers leaving the property should be appropriately labeled as hazardous waste (when applicable), as well as the quantity and type of waste, USDOT description, emergency phone numbers, name, address, and telephone number of the generator and date on which the drum was filled. All waste should be transported to a licensed hazardous waste recycling/disposal facility.
- A Uniform Hazardous Waste Manifest or alternate which contains substantially similar information should be signed by the generator, Contractor, and disposal facility.

## 5. Other Materials

During survey and investigation of MicroFab building, Amec Foster Wheeler found two lines of plating baths. Each line contains 15 rectangular baths of volume about 36 cubic feet. Most of the tanks are filled with rain water (pH of about 8 s.u.) and a few tanks are filled with sludge. There are about ten storage or process tank. There are two bulk storage tanks containing about 1,350 pounds of ammonium hydroxide crystals in bulk storage area (Area #2). Lab results determined that the ammonium hydroxide crystals do not contain TCLP, and are not a regulated material. Amec Foster Wheeler will discuss with MassDEP whether it is safe to landfill this material. Details of other tanks

and their contents are provided in Table 9. All these solid and liquid wastes should be managed according to Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF) regulations.

## 6. Cost Estimate

AMEC FOSTER WHEELER consulted with ATC Group Services LLC (ATC) to estimate the cost of demolition of the MicroFab building. The following consideration was taken into account for estimation of the costs provided by ATC.

- Total area occupied by building – about 103,000 square feet;
- Total area of roof – 62,500 square feet;
- Floor debris containing ACM – 5,200 square foot;
- Drywall and joint compound;
- HVAC/Rooftop staging for ACM inspection;
- Safe handling and proper disposal of waste acid, plating tank waste, waste oil, universal waste according to TSDF regulations.

The following provides a budgetary cost estimate for additional assessment, abatement and demolition of the building. These budgetary cost estimates are based on the information collected to date. There are unknowns that may present themselves during additional recommended assessment as well as during demolition. The costs below could range from +50% to -30% of the total budgetary estimate.

*Table 2: Budgetary Cost Estimate*

<b>Actions</b>	<b>Approx. Amount</b>	<b>Note</b>
Additional ACM Survey for Demolition	\$20,000	ACM Survey during demolition
Asbestos Abatement	\$375,000 - \$475, 000	Includes identified ACM, clean-up of the debris and abatement of other miscellaneous asbestos materials that may be discovered by additional sampling.
Building Demolition	\$700,00 - \$800,000	Includes demolition and disposal of the structure.
Misc. Haz-mat Item	\$50,000	

## 7. Conclusions

The following summarizes Amec Foster Wheeler's limited hazardous material survey and remediation recommendations. As noted previously, an additional comprehensive survey is recommended, to more fully identify all possible waste streams prior to demolition activities.

- Amec Foster Wheeler assessed and analyzed building components for asbestos-containing materials (ACM). Chrysotile asbestos was identified which will have to be removed prior to demolition.
- Amec Foster Wheeler collected and analyzed painted surfaces for LBP building disposal requirements.
- Analytical results of the composite sample indicate lead which is below the threshold of 5.0 mg/l. Painted building materials and paint chips are below the regulatory limits and may be disposed of at an approved construction and demolition waste facility.
- The demolition contractors work practices should comply with the OSHA Lead in Construction Regulations.
- Amec Foster Wheeler collected and analyzed a composite PCB sample. Analytical results of the sample in Table 1 indicates PCBs are below the regulatory threshold of 50 mg/kg. Sealant materials are below the regulatory limits and may be disposed of at an approved construction and demolition waste facility.
- Amec Foster Wheeler visually quantified and noted the hazardous materials observed during the site visit as shown in Table 1 including PCB ballasts and mercury bulbs, which will have to be removed and disposed of prior to demolition.

All work should be performed in accordance with Federal, State and Local environmental, health and safety regulations.

## **LIST OF TABLES**

Table 1: Summery of overall area of Building

Table 2: Cost estimate for Demolition

Table 3: Actionable Hazardous Material

Table 4: Hazardous Materials Abatement Schedule

Table 5: Summary of Asbestos Results

Table 6: Summary of TCLP Analytical Results

Table 7: Summary of Oil Analytical Results

Table 8: Survey of Universal Waste

Table 9: Survey of Tanks and Equipment



Table 3: Actionable Hazardous Material

Name Hazardous Material	Types	Actionable Amount/Number of Hazardous Material in each Area									Total Amount
		Area # 1	Area # 2	Area # 3	Area # 4	Area # 5	Area # 6	Area # 7	Area # 8	Area # 9	
Area measurement		6,785 SF	10,645 SF	4,964 SF	6,215 SF	31,000 SF	2,868 SF	31,000 SF	6,900 SF	2,554 SF	102,931 SF
Floor tiles with Mastics	ACM	-	-	2361 SF	1090 SF	1616 SF	-	-	-	-	5067 SF
Window Caulking	ACM	-	16 LF	-	-	352 LF	-	-	-	-	368 LF
Bottoms remains of plating bath line 1 & 2 (15 rectangular tank with dimension 6 ft X 1 ft X 6 ft in each line)	TCLP - Lead	(2) 250 gals drum of solid ( Each drum can fill 300 lb of solid)	-	-	-	-	-	-	-	-	600 lb.
White ammonium hydroxide crystal in bulk tank	Basic crystal - pH ~ 9	-	1350 lbs.	-	-	-	-	-	-	-	1350 lb.
Blue ammonium hydroxide crystal in bulk tank	Basic crystal - pH ~ 9	-	1350 lbs.	-	-	-	-	-	-	-	1350 lb.
Floor Debris (2 Inches thick max.)	ACM	-	-	5220 SF			-	-	-	-	5220 SF

**LEGEND**

ACM = Asbestos Containing Material

No. = Number of quantity

LF = Linear Feet

SF = Square Feet

PCB = Polychlorinated Biphenyls

TCLP = Toxicity characteristic

UW= Universal Waste

gal. =Gallons

lb. = Pound

Table 3: Actionable Hazardous Material

Name Hazardous Material	Types	Actionable Amount/Number of Hazardous Material in each Area									Total Amount
		Area # 1	Area # 2	Area # 3	Area # 4	Area # 5	Area # 6	Area # 7	Area # 8	Area # 9	
1 inch hydrochloric acid of pH ~1.0 in 6000 gallons poly tank	Conc. Acid	-	-	-	-	-	-	54 gal.	-	-	54 gal.
1 inch unknown acid of pH ~1.0 in 7500 gallons poly tank	Conc. Acid	-	-	-	-	-	-	59 gal.	-	-	59 gal.
1 inch unknown acid of pH ~ 1.0 in 7500 gallons poly tank	Conc. Acid	-	-	-	-	-	-	59 gal.	-	-	59 gal.
Elevator reservoir & Refuse compactor waste Oil	PCB	-	-	-	-	-	-	65 gal.	-	-	65 gal.
Bottom remains of chemical process tank	TCLP - Lead	-	-	-	-	-	-	-	5 lbs.	-	5 lbs.
Equipment and Elevator Flashing Materials - rubber, black tar	ACM	120 SF	-	120 SF	160 SF	208 SF	120 SF	-	-	-	728 SF
Roof Edge Flashing - shingle and tar	ACM	350 SF	336 SF	-	336 SF	-	404 SF	-	-	-	1426 SF
Sill Materials - copper flashing with fiber and adhesive	ACM	-	-	376 SF	-	1365 SF	-	-	-	-	1741 SF

**LEGEND**

ACM = Asbestos Containing Material

No. = Number of quantity

LF = Linear Feet

SF = Square Feet

PCB = Polychlorinated Biphenyls

TCLP = Toxicity characteristic

UW= Universal Waste

gal. =Gallons

lb. = Pound

Table 3: Actionable Hazardous Material

Name Hazardous Material	Types	Actionable Amount/Number of Hazardous Material in each Area										Total Amount									
		Area # 1		Area # 2		Area # 3		Area # 4		Area # 5			Area # 6		Area # 7		Area # 8		Area # 9		
High-Intensity Discharge (HID) lamp	UW	42	No.	-		-		-		12		-		-				-		54	No.
Emergency Lighting and exit sign	UW	1	No.	-		-		-		-		-		-		1	No.	-		2	No.
Wall mounted Mercury Thermostat	UW	1	No.	-		-		1	No.	1	No.	-		-		1	No.	-		4	No.
Alarm box having hydraulic oil	UW	1	No.	-		-		-		-		-		-		-		-		1	No.
Ballasts	UW	12	No.	192	No.	136	No.	134	No.	348	No.	36	No.	230	No.	54	No.	-		FALSE	No.
Fluorescent Tubes	UW	24	No.	384	No.	118	No.	244	No.	676	No.	-		405	No.	108	No.	-		1959	No.
Air Dryer	Equipment	-		1	No.	-		-		-		-		-		1	No.	-		2	No.
Through-Wall AC Unit	Equipment	-		1	No.	-		-		-		-		-		-		-		1	No.
20 LB Fire Extinguishers	Equipment	-		-		-		-		-		-		-		1	No.	-		1	No.
50 LB filtration Vessel	Equipment	-		-		-		-		-		-		-		1	No.	-		1	No.

**LEGEND**

ACM = Asbestos Containing Material

No. = Number of quantity

LF = Linear Feet

SF = Square Feet

PCB = Polychlorinated Biphenyls

TCLP = Toxicity characteristic

UW= Universal Waste

gal. =Gallons

lb. = Pound

Table 4 - Hazardous Materials Abatement Schedule  
(MicroFab Building) 106 Haverhill Road Amesbury, Massachusetts

Area Number	Room	App. Room Size (ft. X ft.)	Material	Approximate Quantity	Sample ID	Lab Result	Limit	Remediation Requirement
1	Plating Room balcony	20 X15	Floor debris containing drywall, ceiling and floor tiles	Throughout	1A, 1B	Negative- None Asbestos detected	1%	No removal required
			Floor Tiles with Mastics	Throughout	2A,2B	Negative- None Asbestos detected	1%	No removal required
1	General Plating Room	115 X 59	Window caulking (5) 47" X 45" window	80 LF	3A	Negative- None Asbestos detected	1%	No removal required
			Concrete/Cement plates	Throughout	4A,4B	Negative- None Asbestos detected	1%	No removal required
1	Line 2 of Plating bath	30 X15	Bottom remains of plating bath	300 gals	1-1	Positive- 40.5 mg/l Lead	5 mg/l	Remove bottom remains of all 15 plating bath of line 2
1	Line 1 of Plating bath	30 X15	Bottom remains of plating bath	300 gals	1-2	Negative- None TCLP Metals detected		Remove bottom remains of all 15 plating bath of line 2
2	Maintenance Room	50 X30	Window caulking (1) 48" X 48" window	16 LF	5A	Positive- 4% Chrysotile Asbestos	1%	Remove all installed ACM on the window
2	Fabrication Room	45 X35	Window caulking (4) 48" X 48" window	64 LF	5B	Negative- None Asbestos detected	1%	No removal required
2	Lay-Up Room	45 X25	Debris from floor	Throughout	6A	Negative- None Asbestos detected	1%	No removal required
			Drywall (wall height: 13 ft.)	1820 SF	7A	Negative- None Asbestos detected	1%	No removal required

**LEGEND**

ACM = Asbestos Containing Material

NA = Not Applicable

LF = Linear Feet

SF = Square Feet

PCB = Polychlorinated Biphenyls

Shaded areas indicate either a positive result and/or material requiring removal

Table 4 - Hazardous Materials Abatement Schedule  
(MicroFab Building) 106 Haverhill Road Amesbury, Massachusetts

Area Number	Room	App. Room Size (ft. X ft.)	Material	Approximate Quantity	Sample ID	Lab Result	Limit	Remediation Requirement
2	Bulk Storage room	26 X16	White ammonium hydroxide crystal in bulk tank	1350 pounds	2-1	Negative- None TCLP Metals detected		Clean ammonium hydroxide crystal from tank (pH ~10)
2	Bulk Storage room	26 X16	Blue ammonium hydroxide crystal in bulk tank	1350 pounds	2-2	Negative- None TCLP Metals detected		Clean ammonium hydroxide crystal from tank (pH ~10)
2	Microplate Room	55 X28	Debris from floor	Throughout	6A	Negative- None Asbestos detected	1%	No removal required
2	Process Room	30 X25	Drywall (wall height: 13 ft.)	1430 SF	7B	Negative- None Asbestos detected	1%	No removal required
2	Programming room	18 X12	Drywall (wall height: 13 ft.)	780 SF	7C	Negative- None Asbestos detected	1%	No removal required
3	Walkway in-between Area 1 and 3	115 X 5	9" X 9" Floor Tiles with Mastics	575 SF	8A, 8B, 8C	Positive- 5% Chrysotile Asbestos	1%	Remove all installed ACM from floor tiles
3	Screening Room	48 X20	12" X 12" Floor Tiles with Mastics	960 SF	9A	Positive- 2% Chrysotile Asbestos	1%	Remove all installed ACM from floor tiles
3	Photo Room	23 X 36	12" X 12" Floor Tiles with Mastics	826 SF	9B, 9C	Positive- 6% Chrysotile Asbestos	1%	Remove all installed ACM from floor tiles
3	Photo Room	23 X 36	Drywall (wall height: 13 ft.)	1534 SF	10A	Negative- None Asbestos detected	1%	No removal required
			2' x 4' Ceiling tiles	828 SF	12A	Negative- None Asbestos detected	1%	No removal required
3	Dark Room	20 x18	Drywall (wall height: 13 ft.)	988 SF	10B	Negative- None Asbestos detected	1%	No removal required
3	Touch Up room	30 X25	Drywall (wall height: 13 ft.)	1430 SF	10C	Negative- None Asbestos detected	1%	No removal required
			2' x 4' Ceiling tiles	750 SF	12B	Negative- None Asbestos detected	1%	No removal required

**LEGEND**

ACM = Asbestos Containing Material

NA = Not Applicable

LF = Linear Feet

SF = Square Feet

PCB = Polychlorinated Biphenyls

Shaded areas indicate either a positive result and/or material requiring removal

Table 4 - Hazardous Materials Abatement Schedule  
(MicroFab Building) 106 Haverhill Road Amesbury, Massachusetts

Area Number	Room	App. Room Size (ft. X ft.)	Material	Approximate Quantity	Sample ID	Lab Result	Limit	Remediation Requirement
3	Lobby	10 X10	1' x 2' Ceiling tiles	100 SF	11A, 11B, 11C	Negative- None Asbestos detected	1%	No removal required
3	Screening Room	48 X20	Wall board end (board width : 0.5 ft.)	32 SF	13A	Negative- None Asbestos detected	1%	No removal required
3	Artwork Room	30 X 18	Wall board end (board width : 0.5 ft.)	24 SF	13B	Negative- None Asbestos detected	1%	No removal required
3	Screen Makeup Room	21 X10	Wall board end (board width : 0.5 ft.)	15	13C	Negative- None Asbestos detected	1%	No removal required
3	Area # 3 Floor	145 X36	Floor Debris	Throughout	14A	Positive- 4% Chrysotile Asbestos	1%	Remove all ACM from floor debris
4	Walkway in-between Area 2 and 4	113 X 5	9" x9" Floor tiles with Mastics	565 SF	15A	Positive- 8% Chrysotile Asbestos	1%	Remove all installed ACM from floor tiles
4	First Aid Room	15 X10	9" x9" Floor tiles with Mastics	150 SF	15B	Positive- 3% Chrysotile Asbestos	1%	Remove all installed ACM from floor tiles
4	First Aid Room	15 X10	Wall board end	25 SF	24A	Negative- None Asbestos detected	1%	No removal required
4	Workset Inspect Room	25 X 15	9" x9" Floor tiles with Mastics	375 SF	15C	Positive- 3% Chrysotile Asbestos	1%	Remove all installed ACM from floor tiles
4	Cafeteria	38 X 30	12" x12" Floor tiles with Mastics	1520 SF	16A, 16B, 16C	Negative- None Asbestos detected	1%	No removal required
			Drywall (wall height: 13 ft.)	1768 SF	23B	Negative- None Asbestos detected	1%	No removal required
			2' x 4' Ceiling tiles	1520 SF	22A, 22B, 22C	Negative- None Asbestos detected	1%	No removal required

**LEGEND**

ACM = Asbestos Containing Material

NA = Not Applicable

LF = Linear Feet

SF = Square Feet

PCB = Polychlorinated Biphenyls

Shaded areas indicate either a positive result and/or material requiring removal

Table 4 - Hazardous Materials Abatement Schedule  
(MicroFab Building) 106 Haverhill Road Amesbury, Massachusetts

Area Number	Room	App. Room Size (ft. X ft.)	Material	Approximate Quantity	Sample ID	Lab Result	Limit	Remediation Requirement
4	Men's toilet	15 X10	1" x1" Ceramic tiles with Mastics	150 SF	17A, 17B	Negative- None Asbestos detected	1%	No removal required
			2" x4" Wet wall board	17 SF	19A	Negative- None Asbestos detected	1%	No removal required
			12" x12" Ceiling tiles	150 SF	20A	Negative- None Asbestos detected	1%	No removal required
4	Women's toilet	15 X10	1" x1" Ceramic tiles with Mastics	150 SF	18A, 18B	Negative- None Asbestos detected	1%	No removal required
			2" x4" Wet wall board	17 SF	21B	Negative- None Asbestos detected	1%	No removal required
			12" x12" Ceiling tiles	150 SF	20B	Negative- None Asbestos detected	1%	No removal required
4	Walkway adjacent to Cafeteria	50 X 5	2' x 4' Ceiling tiles	250 SF	22C	Negative- None Asbestos detected	1%	No removal required
4	Drill Room	75 X35	Drywall (wall height: 13 ft.)	2860 SF	23A	Negative- None Asbestos detected	1%	No removal required
4	Fabrication Room	45 X35	Drywall (wall height: 13 ft.)	2080 SF	23C	Negative- None Asbestos detected	1%	No removal required
			Wall board end	80 SF	24B	Negative- None Asbestos detected	1%	No removal required
5	Middle Corridor	200 X 8	12" x12" floor tile tiles with mastics	1600 SF	25A, 25B, 25C	Positive- 6% Chrysotile Asbestos	1%	Remove all installed ACM from floor tiles
5	Middle Corridor	200 X 8	Window caulking (8) 48" X 48" window	128 LF	30B, 13 C	Positive- 2% Chrysotile Asbestos	1%	Remove all installed ACM on the window
5	Middle Corridor	200 X 8	Wall board end	208 SF	29B	Negative- None Asbestos detected	1%	No removal required
5	Middle Corridor	200 X 8	2' x 4' Ceiling tiles	1600 SF	26A	Negative- None Asbestos detected	1%	No removal required

**LEGEND**

ACM = Asbestos Containing Material

NA = Not Applicable

LF = Linear Feet

SF = Square Feet

PCB = Polychlorinated Biphenyls

Shaded areas indicate either a positive result and/or material requiring removal

Table 4 - Hazardous Materials Abatement Schedule  
(MicroFab Building) 106 Haverhill Road Amesbury, Massachusetts

Area Number	Room	App. Room Size (ft. X ft.)	Material	Approximate Quantity	Sample ID	Lab Result	Limit	Remediation Requirement
5	Women's bathroom	14 X16	2' x 4' Ceiling tiles	224 SF	26B	Negative- None Asbestos detected	1%	No removal required
5	Faculties manager room	15 X15	2' x 4' Ceiling tiles	225 SF	26C	Negative- None Asbestos detected	1%	No removal required
5	Fabrication room	60 X 32	Drywall (wall height: 15 ft.)	2760 SF	27A	Negative- None Asbestos detected	1%	No removal required
5	Fabrication room	60 X32	Window caulking (1) 48" X 48" window	16 LF	30A	Positive- 2% Chrysotile Asbestos	1%	Remove all installed ACM on the window
5	Programming room	22 X 16	Drywall (wall height: 15 ft.)	1140 SF	27B	Negative- None Asbestos detected	1%	No removal required
5	Men's bathroom	14 X16	Drywall (wall height: 15 ft.)	900 SF	27C	Negative- None Asbestos detected	1%	No removal required
5	Men's bathroom	14 X16	12" x12" Floor tiles with Mastics	224 SF	28A, 28B	Positive- 6% Chrysotile Asbestos	1%	Remove all installed ACM from floor tiles
5	Touchup room	44 X 25	Wall board end	69 SF	29A	Negative- None Asbestos detected	1%	No removal required
5	Equipment receiving area	44 X29	Wall board end	73 SF	29C	Negative- None Asbestos detected	1%	No removal required
5	Stairs for going to #7 from #5	8 X 4	Rubber matted stairs	32 SF	31A,31B	Negative- None Asbestos detected	1%	No removal required
6	Men's bathroom	12 x 9	1" X 1" & 1"X .5" Floor finish tiles and mastics	84 SF	32A,32B 32C	Negative- None Asbestos detected	1%	No removal required
6	Women's bathroom	12 x 9	1" X 1" & 1"X .5" Floor finish tiles and mastics	84 SF	32D,32E 32F	Negative- None Asbestos detected	1%	No removal required
			Drywall (wall height: 12 ft.)	504 SF	33C	Negative- None Asbestos detected	1%	No removal required

#### LEGEND

ACM = Asbestos Containing Material

NA = Not Applicable

LF = Linear Feet

SF = Square Feet

PCB = Polychlorinated Biphenyls

Shaded areas indicate either a positive result and/or material requiring removal



Table 4 - Hazardous Materials Abatement Schedule  
(MicroFab Building) 106 Haverhill Road Amesbury, Massachusetts

Area Number	Room	App. Room Size (ft. X ft.)	Material	Approximate Quantity	Sample ID	Lab Result	Limit	Remediation Requirement
6	Accounting room	18 X12	Drywall (wall height: 12 ft.)	720 SF	33A	Negative- None Asbestos detected	1%	No removal required
6	Office room	12 X9	Drywall (wall height: 12 ft.)	504 SF	33B	Negative- None Asbestos detected	1%	No removal required
			Wall board end	21 SF	37A, 37B	Negative- None Asbestos detected	1%	No removal required
6	Sales Room	12 X15	Window caulking (1) 48" X 48" window	16 LF	34A	Negative- None Asbestos detected	1%	No removal required
6	Stairs for going to #3 from #6	8 X4	Window caulking (1) 48" X 48" window	16 LF	34B	Negative- None Asbestos detected	1%	No removal required
6	Office Floor	78 X 37	Floor debris	Throughout	35A, 36A	Negative- None Asbestos detected	1%	No removal required
7	Middle Corridor	110 X 8	12" x12" floor tile tiles with mastics	880 SF	38A, 38B	Positive- 3% Chrysotile Asbestos	1%	Remove all installed ACM from floor tiles
7	Middle Corridor	110 X 8	Celling Tiles	880 SF	42A,42B	Negative- None Asbestos detected	1%	No removal required
7	Trash room Corridor	30 X 10	Insulation material on floor	220 SF	39A,39B, 40A,40B	Negative- None Asbestos detected	1%	No removal required
7	Trash room Corridor	30 X 10	Insulation material on floor	220 SF	39A,39B, 40A,40B	Negative- None Asbestos detected	1%	No removal required
7	Drilling room	110 X 45	Drywall (wall height: 15ft)	4650 SF	41A	Negative- None Asbestos detected	1%	No removal required
7	Elevator room	9 X 6	Wall board end	15 SF	43A	Negative- None Asbestos detected	1%	No removal required

**LEGEND**

ACM = Asbestos Containing Material

NA = Not Applicable

LF = Linear Feet

SF = Square Feet

PCB = Polychlorinated Biphenyls

Shaded areas indicate either a positive result and/or material requiring removal

Table 4 - Hazardous Materials Abatement Schedule  
(MicroFab Building) 106 Haverhill Road Amesbury, Massachusetts

Area Number	Room	App. Room Size (ft. X ft.)	Material	Approximate Quantity	Sample ID	Lab Result	Limit	Remediation Requirement
7	Confined space of Storage room	35 X12	1 inch hydrochloric acid of pH ~1.0 in 6000 gallons poly tank	54 gallons	NA	NA	NA	Remove tank with acid
7	Confined space of Storage room	35 X12	1 inch unknown acid of pH ~1.0 in 7500 gallons poly tank	59 gallons	NA	NA	NA	Remove tank with acid
7	Confined space of Storage room	35 X12	1 inch unknown acid of pH ~1.0 in 7500 gallons poly tank	59 gallons	NA	NA	NA	Remove tank with acid
7	Elevator reservoir	8 X6	Hydraulic oil	40 gallons	Elevator oil	Negative- No PCBs detected	NA	Remove oil form elevator reservoir
7	Office room	9 X 9	Wall board end	18 SF	43B	Negative- None Asbestos detected	1%	No removal required
8	Receiving and Storage room	101 X32	Basement floor debris	Throughout	44A	Negative- None Asbestos detected	1%	No removal required
8	Boiler Room	15 X10	Boiler room debris	Throughout	44B	Negative- None Asbestos detected	1%	No removal required
8	Chemical Makeup room	24 X24	Bottom remains of chemical process tank	Trace	8-4	Positive- 39.4 mg/l lead detected	5 mg/l	Remove all bottom remains of tank
1R	Roof 1	115 X60	Stone layer of roof	6900 SF	1R-A	Negative- None Asbestos detected	1%	No removal required
1R	Roof 1	115 X60	Tar layer of roof	6900 SF	1R-A	Negative- None Asbestos detected	1%	No removal required
1R	Roof 1	115 X60	Roof Edge Flashing Materials - Concrete	350 SF	1R-B	Negative- None Asbestos detected	1%	No removal required

#### LEGEND

ACM = Asbestos Containing Material

NA = Not Applicable

LF = Linear Feet

SF = Square Feet

PCB = Polychlorinated Biphenyls

Shaded areas indicate either a positive result and/or material requiring removal

Table 4 - Hazardous Materials Abatement Schedule  
(MicroFab Building) 106 Haverhill Road Amesbury, Massachusetts

Area Number	Room	App. Room Size (ft. X ft.)	Material	Approximate Quantity	Sample ID	Lab Result	Limit	Remediation Requirement
1R	Roof 1	115 X60	Roof Edge Flashing Materials - tar	350 SF	1R- B	Positive- 8% Chrysotile Asbestos	1%	Remove all installed ACM from flashing material on roof edge
1R	Roof 1	115 X60	Roof Edge Flashing Materials- tar paper on wood	350 SF	1R-B	Negative- None Asbestos detected	1%	No removal required
1R	Roof 1	115 X60	Equipment Flashing Materials - tar material with wood and fibers	120 SF	1R-C	Positive- 10% Chrysotile Asbestos	1%	Remove all installed ACM from flashing material on equipment
2R	Roof 2	113 X55	Roofing Materials- rubber, with tar and particle board material	6215 SF	2R-A	Negative- None Asbestos detected	1%	No removal required
2R	Roof 2	113 X55	Roof Edge Flashing Materials - tar material with shingles	336 SF	2R-B 2R-C	Positive- 5% Chrysotile Asbestos	1%	Remove all installed ACM from flashing material on roof edge
3R	Roof 3	50 X23 + 85 X30	Roofing Materials- roof shingle	3700 SF	3R-A	Negative- None Asbestos detected	1%	No removal required
3R	Roof 3	50 X23 + 85 X30	Roofing Materials- rubber, with tar and particle board	3700 SF	3R-B	Negative- None Asbestos detected	1%	No removal required
3R	Roof 3	50 X23 + 85 X30	Roof Edge Flashing Materials - tar with rubber, particle board	376 SF	3R-C	Negative- None Asbestos detected	1%	No removal required
3R	Roof 3	50 X23 + 85 X30	Equipment Flashing Materials - rubber, black tar and fibers	120 SF	3R -D	Negative- None Asbestos detected	1%	No removal required

**LEGEND**

ACM = Asbestos Containing Material

NA = Not Applicable

LF = Linear Feet

SF = Square Feet

PCB = Polychlorinated Biphenyls

Shaded areas indicate either a positive result and/or material requiring removal

Table 4 - Hazardous Materials Abatement Schedule  
(MicroFab Building) 106 Haverhill Road Amesbury, Massachusetts

Area Number	Room	App. Room Size (ft. X ft.)	Material	Approximate Quantity	Sample ID	Lab Result	Limit	Remediation Requirement
3R	Roof 3	50 X23 + 85 X30	Roofing "Cap" Materials- rubber, tar with stone , and particle board	3700 SF	3R-E	Negative- None Asbestos detected	1%	No removal required
3R	Roof 3	50 X23 + 85 X30	Roofing Materials- rubber, with tar and particle board	3700 SF	3R-F	Negative- None Asbestos detected	1%	No removal required
3R	Roof 3	50 X23 + 85 X30	Equipment Flashing Materials - rubber, black tar material	120 SF	3R -G	Positive- 7% Chrysotile Asbestos	1%	Remove all installed ACM from flashing material on roof edge
3R	Roof 3	50 X23 + 85 X30	Wall Materials - tar material with shingles and drywall	376 SF	3R-H	Positive- 10% Chrysotile Asbestos	1%	Remove all installed ACM from wall material
4R	Roof 4	113 X55	Wall Materials - tar and drywall	6215 SF	4R-A	Negative- None Asbestos detected	1%	No removal required
4R	Roof 4	113 X55	Roof Edge Flashing Materials- tar, and fibers	336 SF	4R-B	Positive- 3% Chrysotile Asbestos	1%	Remove all installed ACM from flashing material on roof edge
4R	Roof 4	113 X55	Roof Edge Flashing Materials- tar, and fibers	336 SF	4R-C	Negative- None Asbestos detected	1%	No removal required
4R	Roof 4	113 X55	Roof Edge Flashing Materials- tar, and fibers	336 SF	4R-D	Positive- 2% Chrysotile Asbestos	1%	Remove all installed ACM from flashing material on roof edge
4R	Roof 4	113 X55	Exterior Wall Fiber Board	336 SF	4R-E	Negative- None Asbestos detected	1%	No removal required

**LEGEND**

ACM = Asbestos Containing Material

NA = Not Applicable

LF = Linear Feet

SF = Square Feet

PCB = Polychlorinated Biphenyls

Shaded areas indicate either a positive result and/or material requiring removal

Table 4 - Hazardous Materials Abatement Schedule  
(MicroFab Building) 106 Haverhill Road Amesbury, Massachusetts

Area Number	Room	App. Room Size (ft. X ft.)	Material	Approximate Quantity	Sample ID	Lab Result	Limit	Remediation Requirement
4R	Roof 4	113 X55	Equipment Flashing Materials - rubber, black tar	120 SF	4R-F	Positive- 15% Chrysotile Asbestos	1%	Remove all installed ACM from equipment
5R	Roof 5	200 X85	Roofing Materials- rubber, with tar and particle board	17000 SF	5R-A	Negative- None Asbestos detected	1%	No removal required
5R	Roof 5	200 X85	Elevator Shaft Flashing - rubber, black tar material, and fibers	28 SF	5R-B	Positive- 12% Chrysotile Asbestos	1%	Remove all installed ACM from elevator shaft
5R	Roof 5	200 X85	Interior Roof Edge Flashing Materials - drywall	570 SF	5R-C	Negative- None Asbestos detected	1%	No removal required
5R	Roof 5	200 X85	Interior Roof Edge Flashing Materials - flashing	570 SF	5R-C	Positive- 5% Chrysotile Asbestos	1%	Remove all installed ACM from roof edge flashing material
5R	Roof 5	200 X85	Equipment Flashing Materials- rubber with tar and foam	120 SF	5R-D 5R-E	Negative- None Asbestos detected	1%	No removal required
5R	Roof 5	200 X85	Equipment Flashing Materials- dry wall, foam insulation, rubber	120 SF	5R-F	Negative- None Asbestos detected	1%	No removal required
5R	Roof 5	200 X85	Equipment Flashing Materials- Flashing	120 SF	5R-F	Positive- 15% Chrysotile Asbestos	1%	Remove all installed ACM from equipment
6R	Roof 6	80 X40	Roofing and Flashing Materials - insulations	3200 SF	6R-A	Positive- 3% Chrysotile Asbestos	1%	Remove all installed ACM from flashing material

**LEGEND**

ACM = Asbestos Containing Material

NA = Not Applicable

LF = Linear Feet

SF = Square Feet

PCB = Polychlorinated Biphenyls

Shaded areas indicate either a positive result and/or material requiring removal

Table 4 - Hazardous Materials Abatement Schedule  
(MicroFab Building) 106 Haverhill Road Amesbury, Massachusetts

Area Number	Room	App. Room Size (ft. X ft.)	Material	Approximate Quantity	Sample ID	Lab Result	Limit	Remediation Requirement
6R	Roof 6	80 X40	Equipment Flashing Materials- rubber with tar	120 SF	6R-B	Positive- 10% Chrysotile Asbestos	1%	Remove all installed ACM from equipment flashing materials
DA	Dome roof area	22 X20	Roof Edge Flashing - shingle and tar	84 SF	DA-01	Positive- 5% Chrysotile Asbestos	1%	Remove all installed ACM from roof edge flashing materials
CA	Collapsed roof Area	50 X30	Roofing Materials - tar with shingles and fibers	1500 SF	CA-01	Negative- None Asbestos detected	1%	No removal required
GL	Grade Level -1	115X60	Block Wall Materials - loose insulation from block wall bay	8700 SF	GL-A	Negative- None Asbestos detected	1%	No removal required
GL	Grade Level - 5	200 X85	Sill Materials - copper flashing with fiber and adhesive	440 LF	GL-B	Positive- 5% Chrysotile Asbestos	1%	Remove all installed ACM from still material
GL	Grade Level-5	200 X85	Roofing Materials - shingles	570 SF	GL-C	Negative- None Asbestos detected	1%	No removal required
GL	Grade Level - 2	113 x55	Transformer Materials - Fiber strip	24 SF	GL-D	Negative- None Asbestos detected	1%	No removal required
GL	Grade Level - 5	200 x85	Brickwork Seam Material - Caulking	1365 IF	GL-E	Negative- None Asbestos detected	1%	No removal required

**LEGEND**

ACM = Asbestos Containing Material

NA = Not Applicable

LF = Linear Feet

SF = Square Feet

PCB = Polychlorinated Biphenyls

Shaded areas indicate either a positive result and/or material requiring removal

**Table 5**  
**Summary of Asbestos Results**

Asbestos Bulk Building Material					Asbestos Result
Sample	Area No.	Sample Location	Material Description	Apperence	% Type
1A-Ceiling Tile	1	Interior - Plating room belcony, adjacent to elevator	Floor debris containing drywall, ceiling and floor tiles)	Brown Fibrous	Non Detected
1A-Sheetrock	1	Interior - Plating room belcony, adjacent to elevator	Floor debris containing drywall, ceiling and floor tiles)	White Non-Fibrous	Non Detected
1B-Ceiling Tile	1	Interior - Plating room balcony, adjacent to elevator	Floor debris containing drywall, ceiling and floor tiles)	Gray Fibrous	Non Detected
1B-Sheetrock	1	Interior - Plating room balcony, adjacent to elevator	Floor debris containing drywall, ceiling and floor tiles)	Brown/Gray Fibrous	Non Detected
1B-Fiberboard	1	Interior - Plating room balcony, adjacent to elevator	Floor debris containing drywall, ceiling and floor tiles)	Brown Fibrous	Non Detected
2A-Floor Tile	1	Interior - Plating room belcony, adjacent to elevator	12" x 12" floor tiles/mastics	Tan Non-Fibrous	Non Detected
2A-Mastic	1	Interior - Plating room belcony, adjacent to elevator	12" x 12" floor tiles/mastics	Black Non-Fibrous	Non Detected
2B-Floor Tile	1	Interior - Plating room belcony, adjacent to elevator	12" 12" floor tiles/mastics	Gray Non-Fibrous	Non Detected
2B-Mastic	1	Interior - Plating room belcony, adjacent to elevator	12" 12" floor tiles/mastics	Brown/Black Non-Fibrous	Non Detected
3A	1	Interior - Windows through corridor	47" X 45" Window caulking and glazing	White Non-Fibrous	Non Detected

**Table 5**  
**Summary of Asbestos Results**

Asbestos Bulk Building Material					Asbestos Result
Sample	Area No.	Sample Location	Material Description	Apperence	% Type
4A	1	Interior- Plating floor	Concrete/cement plates	Brown Non-Fibrous	Non Detected
4B	1	Interior- Plating floor	Concrete/cement plates	Brown/Gray Non-Fibrous	Non Detected
5A	2	Interior- window in maintainance room	48" x 48" Window caulking and glazing	Gray/Tan Non-Fibrous	4% Chrysotile
5B	2	Interior- Window in conference room	48" x 48" Window caulking and glazing	Gray/Tan Non-Fibrous	Non Detected
6A-Flooring	2	Interior-Layup and Microplate room	Debris from floor	Brown/White Fibrous	Non Detected
6A-Foam Insulation	2	Interior-Layup and Microplate room	Debris from floor	Tan/White Non-Fibrous	Non Detected
7A	2	Interior- Lay-up room wall	Drywall conaining gypsum, heavy paper and plaster	Brown/Gray Non-Fibrous	Non Detected
7B	2	Interior- Process room	Drywall conaining gypsum, heavy paper and plaster	Brown/Gray Non-Fibrous	Non Detected
7C	2	Interior- Programming room	Drywall conaining gypsum, heavy paper and plaster	Brown/Gray Fibrous	Non Detected
8A-Floor Tile	3	Interior- Walkway adjacent top screening room	9" x9" Floor tiles	Tan Non-Fibrous	Non Detected
8A-Mastic	3	Interior- Walkway adjacent top screening room	9" x9" Floor tiles	Gray Non-Fibrous	Non Detected
8B-Floor Tile	3	Interior- Walkway adjacent top oven room	9" x9" Floor tiles	Tan Non-Fibrous	Non Detected
8B-Mastic	3	Interior- Walkway adjacent top oven room	9" x9" Floor tiles	Brown/Black Non-Fibrous	Non Detected
8C-Floor Tile	3	Interior- Walkway adjaction to photo room	9" x9" Floor tiles	Tan Non-Fibrous	5% Chrysotile
8C-Mastic	3	Interior- Walkway adjaction to photo room	9" x9" Floor tiles	Black Non-Fibrous	Non Detected



**Table 5**  
**Summary of Asbestos Results**

Asbestos Bulk Building Material					Asbestos Result
Sample	Area No.	Sample Location	Material Description	Apperence	% Type
9A-Floor Tile	3	Interior- Screening room	12" x12" Floor tiles	Brown Non-Fibrous	Non Detected
9A-Mastic	3	Interior- Screening room	12" x12" Floor tiles	Black Non-Fibrous	2% Chrysotile
9B-Floor Tile	3	Interior- Photo room	12" x12" Floor tiles	Brown Non-Fibrous	Non Detected
9B-Mastic	3	Interior- Photo room	12" x12" Floor tiles	Black Non-Fibrous	6% Chrysotile
9C-Floor Tile	3	Interior- Photo room	12" x12" Floor tiles	Gray/Tan Non-Fibrous	Non Detected
9C-Mastic	3	Interior- Photo room	12" x12" Floor tiles	Black Non-Fibrous	3% Chrysotile
10A	3	Interior- Photo room	Drywall conaining gypsum, heavy paper and plaster	Brown/Gray Non-Fibrous	Non Detected
10B	3	Interior- Dark Room	Drywall conaining gypsum, heavy paper and plaster	Brown/Gray Non-Fibrous	Non Detected
10C-Sheetrock	3	Interior- Touchup room	Drywall conaining gypsum, heavy paper and plaster	Brown/Gray Fibrous	Non Detected
10C-Joint Compound	3	Interior- Touchup room	Drywall conaining gypsum, heavy paper and plaster	White/Blue Non-Fibrous	Non Detected
11A	3	Interior- Lobby	1' x 2' Ceiling tiles	Gray/Tan Fibrous	Non Detected
11B-Ceiling Tile	3	Interior- Lobby	1' x 2' Ceiling tiles	Gray/purple Fibrous	Non Detected
11B-Insulation	3	Interior- Lobby	1' x 2' Ceiling tiles	Gray/Purple Fibrous	Non Detected
11B-Sheetrock	3	Interior- Lobby	1' x 2' Ceiling tiles	Gray Non-Fibrous	Non Detected
11C	3	Interior- Lobby	1' x 2' Ceiling tiles	Brown/Gray/ White Fibrous	Non Detected

**Table 5**  
**Summary of Asbestos Results**

Asbestos Bulk Building Material					Asbestos Result
Sample	Area No.	Sample Location	Material Description	Apperence	% Type
12A	3	Interior- Photo room	2' x 4' Ceiling tiles	Gray Fibrous	Non Detected
12B	3	Interior- Touchup room	2' x 4' Ceiling tiles	Gray Fibrous	Non Detected
12C	3	Interior- Screening room	2' x 4' Ceiling tiles	Gray/White/ Silver Fibrous	Non Detected
13A-Cove Base	3	Interior- Screening room wall end	Wall board end	Brown Non-Fibrous	Non Detected
13A-Mastic	3	Interior- Screening room wall end	Wall board end	Brown Non-Fibrous	Non Detected
13B-Cove Base	3	Interior- Artwork room	Wall board end	Brown Non-Fibrous	Non Detected
13B-Mastic	3	Interior- Artwork room	Wall board end	Tan Non-Fibrous	Non Detected
13C-Cove Base	3	Interior- Screen makeup room	Wall board end	Brown Non-Fibrous	Non Detected
13C-Mastic	3	Interior- Screen makeup room	Wall board end	Tan Non-Fibrous	Non Detected
14A-Sheetrock	3	Interior-Floor of photo room, Walkway, Screening room, Artwork room	Floor debris from different location of same homogeneous area	Gray Non-Fibrous	Non Detected
14A-Ceiling Tile	3	Interior-Floor of photo room, Walkway, Screening room, Artwork room	Floor debris from different location of same homogeneous area	Brown/Gray Fibrous	Non Detected
14A-Flooring	3	Interior-Floor of photo room, Walkway, Screening room, Artwork room	Floor debris from different location of same homogeneous area	Gray Non-Fibrous	4% Chrysotile
14A-Mastic	3	Interior-Floor of photo room, Walkway, Screening room, Artwork room	Floor debris from different location of same homogeneous area	Tan/Black/ Yellow Non-Fibrous	<1% Chrysotile

**Table 5**  
**Summary of Asbestos Results**

Asbestos Bulk Building Material					Asbestos Result
Sample	Area No.	Sample Location	Material Description	Apperence	% Type
15A-Floor Tile	4	Interior- Walkway adjacent to fabrication room	9" x9" Floor tiles	Gray Non-Fibrous	8% Chrysotile
15A-Mastic	4	Interior- Walkway adjacent to fabrication room	9" x9" Floor tiles	Black Non-Fibrous	Non Detected
15B-Floor Tile	4	Interior- First aid room	9" x9" Floor tiles	Tan Non-Fibrous	2% Chrysotile
15B-Mastic	4	Interior- First aid room	9" x9" Floor tiles	Black Non-Fibrous	3% Chrysotile
15C-Floor Tile	4	Interior- Workset Inspact room	9" x9" Floor tiles	Tan Non-Fibrous	3% Chrysotile
15C-Mastic	4	Interior- Workset Inspact room	9" x9" Floor tiles	Black Non-Fibrous	Non Detected
16A-Floor Tile	4	Interior- Cafeteria	12" x12" Floor tiles	Tan Non-Fibrous	Non Detected
16A-Mastic	4	Interior- Cafeteria	12" x12" Floor tiles	Black Non-Fibrous	Non Detected
16B-Floor Tile	4	Interior- Cafeteria	12" x12" Floor tiles	Gray Non-Fibrous	Non Detected
16B-Mastic	4	Interior- Cafeteria	12" x12" Floor tiles	Black Non-Fibrous	Non Detected
16C-Floor Tile	4	Interior- Cafeteria	12" x12" Floor tiles	Gray Non-Fibrous	Non Detected
16C-Mastic	4	Interior- Cafeteria	12" x12" Floor tiles	Black Non-Fibrous	Non Detected
17A	4	Interior- Men's toilet	1" x1" Floor tiles	White/Green Non-Fibrous	Non Detected
17B	4	Interior- Men's toilet	1" x1" Floor tiles	White/Green Non-Fibrous	Non Detected
18A-Ceramic Tile	4	Interior- Women's toilet	1" x1" Floor tiles	Gray/White Non-Fibrous	Non Detected

**Table 5**  
**Summary of Asbestos Results**

Asbestos Bulk Building Material					Asbestos Result
Sample	Area No.	Sample Location	Material Description	Apperence	% Type
18A-Grout	4	Interior- Women's toilet	1" x1" Floor tiles	Gray Non-Fibrous	Non Detected
19A-Ceramic Tile	4	Interior- Men's toilet	2" x4" Wet wall board	White/Green Non-Fibrous	Non Detected
19A-Grout	4	Interior- Men's toilet	2" x4" Wet wall board	Tan Non-Fibrous	Non Detected
19A-Wallboard	4	Interior- Men's toilet	2" x4" Wet wall board	Brown Fibrous	Non Detected
19B-Ceramic Tile	4	Interior- Men's toilet	2" x4" Wet wall board	White/Green Non-Fibrous	Non Detected
19B-Grout	4	Interior- Men's toilet	2" x4" Wet wall board	Tan Non-Fibrous	Non Detected
19B-Wallboard	4	Interior- Men's toilet	2" x4" Wet wall board	Brown/Black Fibrous	Non Detected
20A	4	Interior- Men's toilet	12" x12" Ceiling tiles	Brown Fibrous	Non Detected
20B	4	Interior- Women's toilet	12" x12" Ceiling tiles	Brown Fibrous	Non Detected
21A	4	Interior- Women's toilet	2" x4" Wet wall board	Tan/Pink Non-Fibrous	Non Detected
21B	4	Interior- Women's toilet	2" x4" Wet wall board	Tan Non-Fibrous	Non Detected
22A	4	Interior- Cafeteria	2' x 4' Ceiling tiles	Tan      Fibrous	Non Detected
22B	4	Interior- Cafeteria	2' x 4' Ceiling tiles	Brown Fibrous	Non Detected
22C	4	Interior- Walkway adjacent to Cafeteria	2' x 4' Ceiling tiles	Gray/Tan Non-Fibrous	Non Detected
23A-Drywall	4	Interior- Drill room	Drywall conaining gypsum, heavy paper and plaster	Gray Non-Fibrous	Non Detected

**Table 5**  
**Summary of Asbestos Results**

Asbestos Bulk Building Material					Asbestos Result
Sample	Area No.	Sample Location	Material Description	Apperence	% Type
23A-Joint Compound	4	Interior- Drill room	Drywall conaining gypsum, heavy paper and plaster	White Non-Fibrous	Non Detected
23B	4	Interior- Cafeteria	Drywall conaining gypsum, heavy paper and plaster	Gray Non-Fibrous	Non Detected
23C	4	Interior- Fabrication room	Drywall conaining gypsum, heavy paper and plaster	Brown/Gray Fibrous	Non Detected
24A-Cove Base	4	Interior- First aid room	Wall board end	Black Non-Fibrous	Non Detected
24A-Adhesive	4	Interior- First aid room	Wall board end	Yellow Non-Fibrous	Non Detected
24A-Leveling compound	4	Interior- First aid room	Wall board end	White Non-Fibrous	Non Detected
24B-Cove Base	4	Interior- Fabrication room	Wall board end	Black Non-Fibrous	Non Detected
24B-Mastic	4	Interior- Fabrication room	Wall board end	Brown Non-Fibrous	Non Detected
24B-Leveling	4	Interior- Fabrication room	Wall board end	White Non-Fibrous	Non Detected
25A-Floor Tile	5	Interior- Corridor adjacent to fabrication room	12" x12" floor tile tiles	Tan Non-Fibrous	2% Chrysotile
25A-Mastic	5	Interior- Corridor adjacent to fabrication room	12" x12" floor tile tiles	Black Non-Fibrous	6% Chrysotile
25B-Floor Tile	5	Interior-Corridor adjacent to Test and Aduct romm	12" x12" floor tile tiles	Tan Non-Fibrous	2% Chrysotile
25B-Mastic	5	Interior-Corridor adjacent to Test and Aduct romm	12" x12" floor tile tiles	Black Non-Fibrous	5% Chrysotile
25C-Floor Tile	5	Interior- Equipment receiving area	12" x12" floor tile tiles	Tan Non-Fibrous	3% Chrysotile
25C-Mastic	5	Interior- Equipment receiving area	12" x12" floor tile tiles	Black Non-Fibrous	2% Chrysotile

**Table 5**  
**Summary of Asbestos Results**

Asbestos Bulk Building Material					Asbestos Result
Sample	Area No.	Sample Location	Material Description	Apperence	% Type
26A	5	Interior-corridor adjacent to shipping room	2' x 4' Ceiling tiles	Tan Fibrous	Non Detected
26B	5	Interior- Womens bathroom	2' x 4' Ceiling tiles	Tan Fibrous	Non Detected
26C	5	Interior- Faculties manager room	2' x 4' Ceiling tiles	Tan Fibrous	Non Detected
27A	5	Interior- Fabrication room	Drywall conaining gypsum, heavy paper and plaster	Gray Non-Fibrous	Non Detected
27B	5	Interior- Programming room	Drywall conaining gypsum, heavy paper and plaster	Gray Non-Fibrous	Non Detected
27C	5	Interior- Men's bathroom	Drywall conaining gypsum, heavy paper and plaster	Gray Non-Fibrous	Non Detected
28A-Floor Tile	5	Interior- Men's bathroom	12" x12" Floor tiles	Red Non-Fibrous	2% Chrysotile
28A-Mastic	5	Interior- Men's bathroom	12" x12" Floor tiles	Black Non-Fibrous	2% Chrysotile
28B-Floor Tile	5	Interior-Men's bathroom	12" x12" Floor tiles	Red Non-Fibrous	2% Chrysotile
28B-Mastic	5	Interior-Men's bathroom	12" x12" Floor tiles	Black Non-Fibrous	6% Chrysotile
29A-Cove Base	5	Interior- Touchup room	Wall board end	Brown Non-Fibrous	Non Detected
29A-Adhesive	5	Interior- Touchup room	Wall board end	Brown Non-Fibrous	Non Detected
29B-Cove Base	5	Interior- Corridor adjacent to Mathod room	Wall board end	Brown Non-Fibrous	Non Detected
29B-Adhesive	5	Interior- Corridor adjacent to Mathod room	Wall board end	Black Non-Fibrous	Non Detected
29C-Cove Base	5	Interior- Equipment receiving area	Wall board end	Gray/Black Non-Fibrous	Non Detected

**Table 5**  
**Summary of Asbestos Results**

Asbestos Bulk Building Material					Asbestos Result
Sample	Area No.	Sample Location	Material Description	Apperence	% Type
29C-Mastic	5	Interior- Equipment receiving area	Wall board end	Gray Non-Fibrous	Non Detected
30A	5	Interior- Fabrication room	Window Caulking/Glazing	Gray Non-Fibrous	2% Chrysotile
30B	5	Interior- Corridor adjacent to Touchup room	Window Caulking/Glazing	Clear Non-Fibrous	2% Chrysotile
30C	5	Interior- Corridor adjacent to Method room	Window Caulking/Glazing	Red Non-Fibrous	2% Chrysotile
31A-Rubber Matted stair	5	Interior- Stairs for going to #7 from #5	Rubber matted stairs	Red Non-Fibrous	Non Detected
31A-Mastic	5	Interior- Stairs for going to #7 from #5	Rubber matted stairs	Black Non-Fibrous	Non Detected
31A-Leveling Compound	5	Interior- Stairs for going to #7 from #5	Rubber matted stairs	Tan Non-Fibrous	Non Detected
31B-Rubber Matted stair	5	Interior- Stairs for going to #7 from #5	Rubber matted stairs	Red Non-Fibrous	Non Detected
31B-Mastic	5	Interior- Stairs for going to #7 from #5	Rubber matted stairs	Brown Non-Fibrous	Non Detected
31B-Leveling Compound	5	Interior- Stairs for going to #7 from #5	Rubber matted stairs	Tan Non-Fibrous	Non Detected
32A	6	Interior- Men's bathroom	1" X 1" & 1"X .5" Floor finish tiles	White/Blue Non-Fibrous	Non Detected
32B-Ceramic Floor Tile	6	Interior- Men's bathroom	1" X 1" & 1"X .5" Floor finish tiles	White/Blue Non-Fibrous	Non Detected
32B-Adhesive	6	Interior- Men's bathroom	1" X 1" & 1"X .5" Floor finish tiles	Yellow Non-Fibrous	Non Detected
32C-Ceramic Floor Tile	6	Interior- Men's bathroom	1" X 1" & 1"X .5" Floor finish tiles	White/Blue Non-Fibrous	Non Detected
32C-Grout	6	Interior- Men's bathroom	1" X 1" & 1"X .5" Floor finish tiles	Yellow Non-Fibrous	Non Detected

**Table 5**  
**Summary of Asbestos Results**

Asbestos Bulk Building Material					Asbestos Result
Sample	Area No.	Sample Location	Material Description	Apperence	% Type
32D	6	Interior-Women's Bathroom	1" X 1" & 1"X .5" Floor finish tiles	Tan/White Non-Fibrous	Non Detected
32E-Ceramic Tile	6	Interior-Women's Bathroom	1" X 1" & 1"X .5" Floor finish tiles	White/Yellow Non-Fibrous	Non Detected
32E-Grout	6	Interior-Women's Bathroom	1" X 1" & 1"X .5" Floor finish tiles	Gray Non-Fibrous	Non Detected
32E-Adhesive	6	Interior-Women's Bathroom	1" X 1" & 1"X .5" Floor finish tiles	Brown Non-Fibrous	Non Detected
32F-Ceramic Tile	6	Interior-Women's Bathroom	1" X 1" & 1"X .5" Floor finish tiles	Gray Non-Fibrous	Non Detected
32F-Grout	6	Interior-Women's Bathroom	1" X 1" & 1"X .5" Floor finish tiles	Gray Non-Fibrous	Non Detected
33A-Drywall	6	Interior- Accounting room	Drywall conaining gypsum, heavy paper and plaster	White Non-Fibrous	Non Detected
33A-Joint Compound	6	Interior- Accounting room	Drywall conaining gypsum, heavy paper and plaster	Gray Non-Fibrous	Non Detected
33B	6	Interior- Office adjecent to Sales room	Drywall conaining gypsum, heavy paper and plaster	Gray Non-Fibrous	Non Detected
33C	6	Interior- Women's bathroom	Drywall conaining gypsum, heavy paper and plaster	Gray Non-Fibrous	Non Detected
34A	6	Interior- Window at sales room	Window Caulking	White Non-Fibrous	Non Detected
34B	6	Interior- Window at upstairs	Window Caulking	White/Gray Non-Fibrous	Non Detected
35A	6	Interior- Floor of Sale, Office and accouting room	Floor representative sample	White/Gray/Tan Non-Fibrous	Non Detected
36A	6	Interior- Office corridor	Floor debris	Tan Fibrous	Non Detected
37A-Cove Base	6	Interior- Plant manager room	Wall board end	Brown Non-Fibrous	Non Detected



**Table 5**  
**Summary of Asbestos Results**

Asbestos Bulk Building Material					Asbestos Result
Sample	Area No.	Sample Location	Material Description	Apperence	% Type
37A-Adhesive	6	Interior- Plant manager room	Wall board end	Brown Non-Fibrous	Non Detected
37A-Leveling Compound	6	Interior- Plant manager room	Wall board end	Tan Non-Fibrous	Non Detected
37B-Cove Base	6	Interior- office adjecent to Women's bathroom	Wall board end	Brown Non-Fibrous	Non Detected
37B-Mastic	6	Interior- office adjecent to Women's bathroom	Wall board end	Brown Non-Fibrous	Non Detected
38A-Floor Tile	7	Interior- Corridor adjacent to purchasing room	12" x12" floor tile tiles	Tan Non-Fibrous	2% Chrysotile
38A-Mastic	7	Interior- Corridor adjacent to purchasing room	12" x12" floor tile tiles	Black Non-Fibrous	2% Chrysotile
38B-Floor Tile	7	Interior- Corridor adjacent to Trash room	12" x12" floor tile tiles	White Non-Fibrous	3% Chrysotile
38B-Mastic	7	Interior- Corridor adjacent to Trash room	12" x12" floor tile tiles	Brown/Black Non-Fibrous	2% Chrysotile
39A	7	Interior- Corridor adjacent to Trash room	Miscellaneous fiber glass type insulation	Silver/Yellow Fibrous	Non Detected
39B	7	Interior- Corridor adjacent to Trash room	Miscellaneous fiber glass type insulation	Silver/Yellow Fibrous	Non Detected
40A	7	Interior- Corridor adjacent to Trash room	Miscellaneous fiber glass type insulation	Gray Fibrous	Non Detected
40B	7	Interior- Corridor adjacent to Trash room	Miscellaneous fiber glass type insulation	Gray/Black Fibrous	Non Detected
41A	7	Interior- Drilling room	Drywall conaining gypsum, heavy paper and plaster	Gray/Brown Fibrous	Non Detected
41B	7	Interior- Women's bathroom	Drywall conaining gypsum, heavy paper and plaster	Gray Fibrous	Non Detected
42A	7	Interior- Waiting & reception room	1' x 2' Ceiling tiles	Gray Fibrous	Non Detected

**Table 5**  
**Summary of Asbestos Results**

Asbestos Bulk Building Material					Asbestos Result
Sample	Area No.	Sample Location	Material Description	Apperence	% Type
42B	7	Interior- Corridor adjacent to laminating room	2' x 4' Ceiling tiles	Gray/White Fibrous	Non Detected
43A-Cove Base	7	Interior- Elevator room	Wall board end	Brown Non-Fibrous	Non Detected
43A-Adhesive	7	Interior- Elevator room	Wall board end	Brown Non-Fibrous	Non Detected
43A-Leveling Compound	7	Interior- Elevator room	Wall board end	White Non-Fibrous	Non Detected
43B-Cove Base	7	Interior- Office room adjacent to drilling	Wall board end	Black Non-Fibrous	Non Detected
43B-Adhesive	7	Interior- Office room adjacent to drilling	Wall board end	Black Non-Fibrous	Non Detected
43B-Mastic	7	Interior- Office room adjacent to drilling	Wall board end	White Non-Fibrous	Non Detected
44A	8	Interior- Receiving and Storage room	Basement floor debris	Brown Non-Fibrous	Non Detected
44B	8	Interior- Boiler Room	Boiler room debris	Brown/Gray /Black Non-Fibrous	Non Detected
1R-A-stone layer	1	Roof 1	Roofing Materials- rubber, tar with stone , and particle board material	Brown Non-Fibrous	Non Detected
1R-A-Tar layer	1	Roof 1	Roofing Materials- rubber, tar with stone , and particle board material	Black Non-Fibrous	Non Detected
1R-B-Concrete	1	Roof 1	Roof Edge Flashing Materials - tar material with wood, concrete, metal, and shingles	Gray Non- Fibrous	Non Detected
1R-B-Tar	1	Roof 1	Roof Edge Flashing Materials - tar material with wood, concrete, metal, and shingles	Gray Fibrous	8% Chrysotile
1R-B-Tar -Tar Paper on wood	1	Roof 1	Roof Edge Flashing Materials - tar material with wood, concrete, metal, and shingles	Black Fibrous	4% Chrysotile

**Table 5**  
**Summary of Asbestos Results**

Asbestos Bulk Building Material					Asbestos Result
Sample	Area No.	Sample Location	Material Description	Apperence	% Type
1R-C-Tar	1	Roof 1	Equipment Flashing Materials - black tar material with wood and fibers	Black Fibrous	3% Chrysotile
1R-C-Tar Paper	1	Roof 1	Equipment Flashing Materials - black tar material with wood and fibers	Red/Black Fibrous	10% Chrysotile
2R-A-Tar board	2	Roof 2	Roofing Materials- rubber, with tar and particle board material	Brown/Black Fibrous	Non Detected
2R-A-Tar layers	2	Roof 2	Roofing Materials- rubber, with tar and particle board material	Black Non-Fibrous	Non Detected
2R-B	2	Roof 2	Roof Edge Flashing Materials - tar material with shingles	Black Fibrous	5% Chrysotile
2R-C	2	Roof 2	Equipment Flashing Materials - rubber, black tar material and fibers	Black Non-Fibrous	2% Chrysotile
3R-A	3	Roof 3	Roofing Materials- roof shingle	Gray/Black Fibrous	Non Detected
3R-B-board	3	Roof 3	Roofing Materials- rubber, with tar, shingle, and particle board material	Brown Fibrous	Non Detected
3R-B-Tar Paper	3	Roof 3	Roofing Materials- rubber, with tar, shingle, and particle board material	Black Fibrous	Non Detected
3R-B-Tar	3	Roof 3	Roofing Materials- rubber, with tar, shingle, and particle board material	Black Non-Fibrous	Non Detected
3R-C	3	Roof 3	Roof Edge Flashing Materials - tar material with rubber, particle board material, and shingles	Black Fibrous	Non Detected
3R-D	3	Roof 3	Equipment Flashing Materials - rubber, black tar material and fibers	Black Non-Fibrous	Non Detected
3R-E-Shingle	3	Roof 3	Roofing "Cap" Materials- rubber, tar with stone , and particle board material	Black Non-Fibrous	Non Detected
3R-E-Tar with board layer	3	Roof 3	Roofing "Cap" Materials- rubber, tar with stone , and particle board material	Black Fibrous	Non Detected

**Table 5**  
**Summary of Asbestos Results**

Asbestos Bulk Building Material					Asbestos Result
Sample	Area No.	Sample Location	Material Description	Apperence	% Type
3R-F-Tar	3	Roof 3	Roofing Materials- rubber, with tar, shingle, and particle board material	Black Non-Fibrous	Non Detected
3R-F-Tar Felt	3	Roof 3	Roofing Materials- rubber, with tar, shingle, and particle board material	Black Fibrous	Non Detected
3R-G	3	Roof 3	Equipment Flashing Materials - rubber, black tar material	Black Non-Fibrous	7% Chrysotile
3R-H-Tar	3	Roof 3	Wall Materials - tar material with shingles and drywall	Brown Non-Fibrous	10% Chrysotile
3R-H-Sheetrock	3	Roof 3	Wall Materials - tar material with shingles and drywall	Brown Non-Fibrous	Non Detected
4R-A-Board	4	Roof 4	Roofing Materials- rubber, tar with stone , and particle board material	Brown Fibrous	Non Detected
4R-A-Tar	4	Roof 4	Roofing Materials- rubber, tar with stone , and particle board material	Black Non-Fibrous	Non Detected
4R-B	4	Roof 4	Roof Edge Flashing Materials b/w Roof Areas 4 & 5- tar material shingles, and fibers	Black Fibrous	3% Chrysotile
4R-C	4	Roof 4	Roof Edge Flashing Materials - tar material with rubber	Black Non-Fibrous	Non Detected
4R-D-Flashing	4	Roof 4	Roof Edge Flashing Materials - tar material with wood and shingles	Black Non-Fibrous	Non Detected
4R-D-Tar Felt	4	Roof 4	Roof Edge Flashing Materials - tar material with wood and shingles	Black Non-Fibrous	2% Chrysotile
4R-E	4	Roof 4	Exterior Wall Fiber Board	Brown Fibrous	Non Detected
4R-F-Tar	4	Roof 4	Equipment Flashing Materials - rubber, black tar material, wood, and fibers	Black Non-Fibrous	6% Chrysotile
4R-F-Tar Felt	4	Roof 4	Equipment Flashing Materials - rubber, black tar material, wood, and fibers	Black Non-Fibrous	15% Chrysotile
5R-A-Insulation	5	Roof 5	Roofing Materials- rubber, with tar, foam, and particle board material	Brown Non-Fibrous	Non Detected

**Table 5**  
**Summary of Asbestos Results**

Asbestos Bulk Building Material					Asbestos Result
Sample	Area No.	Sample Location	Material Description	Apperence	% Type
5R-A-Foam	5	Roof 5	Roofing Materials- rubber, with tar, foam, and particle board material	Yellow Non-Fibrous	Non Detected
5R-A-Tar	5	Roof 5	Roofing Materials- rubber, with tar, foam, and particle board material	Black Fibrous	Non Detected
5R-B	5	Roof 5	Elevator Shaft Flashing - rubber, black tar material, and fibers	Black Non-Fibrous	12% Chrysotile
5R-C-Drywall	5	Roof 5	Interior Roof Edge Flashing Materials - tar material with shingles, drywall, and fibers	Brown Non-Fibrous	Non Detected
5R-C-Flashing	5	Roof 5	Interior Roof Edge Flashing Materials - tar material with shingles, drywall, and fibers	Black Non-Fibrous	5% Chrysotile
5R-D-Tar Felt	5	Roof 5	Equipment Flashing Materials- rubber with tar and foam	Black Fibrous	Non Detected
5R-D-Tar	5	Roof 5	Equipment Flashing Materials- rubber with tar and foam	Black Non-Fibrous	Non Detected
5R-D-Foam Insulation	5	Roof 5	Equipment Flashing Materials- rubber with tar and foam	Black Non-Fibrous	Non Detected
5R-E-Insulation	5	Roof 5	Roof Flashing Materials- rubber, with tar, shingle, and particle board material	Brown Non-Fibrous	Non Detected
5R-E-Foam Insulation	5	Roof 5	Roof Flashing Materials- rubber, with tar, shingle, and particle board material	Yellow Non-Fibrous	Non Detected
5R-E-Flashing	5	Roof 5	Roof Flashing Materials- rubber, with tar, shingle, and particle board material	Red/Black Non-Fibrous	Non Detected
5R-E-Tar	5	Roof 5	Roof Flashing Materials- rubber, with tar, shingle, and particle board material	Black Non-Fibrous	Non Detected
5R-F-Flashing	5	Roof 5	Inside Front Wall Flashing and Drywall- tar material with shingles, drywall, and fibers	Black Non-Fibrous	15% Chrysotile
5R-F-Drywall	5	Roof 5	Inside Front Wall Flashing and Drywall- tar material with shingles, drywall, and fibers	Brown Non-Fibrous	Non Detected
5R-F-Foam Insulation	5	Roof 5	Inside Front Wall Flashing and Drywall- tar material with shingles, drywall, and fibers	Gray Non-Fibrous	Non Detected

**Table 5**  
**Summary of Asbestos Results**

Asbestos Bulk Building Material					Asbestos Result
Sample	Area No.	Sample Location	Material Description	Apperence	% Type
5R-F-Rubber Membrane	5	Roof 5	Inside Front Wall Flashing and Drywall- tar material with shingles, drywall, and fibers	Black Non-Fibrous	Non Detected
6R-A-Insulation	6	Roof 6	Roofing and Flashing Materials - rubber with tar and particle board material	Black Non-Fibrous	3% Chrysotile
6R-A	6	Roof 6	Roofing and Flashing Materials - rubber with tar and particle board material	Brown Non-Fibrous	Non Detected
6R-B	6	Roof 6	Equipment Flashing Materials- rubber with tar	Gray/Black Non-Fibrous	10% Chrysotile
DA-01	6	Dome Area	Dome Area Roof Edge Flashing - shingle materials and tar	Black Non-Fibrous	5% Chrysotile
CA-01-Roof Insullation	5	Collapsed Roof Area	Roofing Materials - tar with shingles and fibers	Brown Fibrous	Non Detected
CA-01-Roofing	5	Collapsed Roof Area	Roofing Materials - tar with shingles and fibers	Black Non-Fibrous	Non Detected
GL-A-Block	1	Grade Level	Block Wall Materials - loose insulation from block wall bay	Gray Non-Fibrous	Non Detected
GL-A-Insulation	1	Grade Level	Block Wall Materials - loose insulation from block wall bay	White Non-Fibrous	Non Detected
GL-B	5	Grade Level	Sill Materials - copper flashing with fiber and adhesive	Black Non-Fibrous	5% Chrysotile
GL-C	5	Grade Level	Roofing Materials - shingles	Black Non-Fibrous	Non Detected
GL-D	2	Grade Level	Transformer Materials - Fiber strip	Tan Non-Fibrous	Non Detected
GL-E	5	Grade Level	Brickwork Seam Material - Caulking	Gray Non-Fibrous	Non Detected

**Table 6**  
**Summary of TCLP Analytical Results**

Sample ID:				1-1	1-2	1-3	1-4	1-5	2-1	2-2
Sample Description:				Composite sample from plating bath	Composite sample from plating bath	Wall blue paint	Composite H <sub>2</sub> O sample from plating bath	Composite H <sub>2</sub> O sample from plating bath	NH <sub>4</sub> OH from Bulk tank	NH <sub>4</sub> OH from Bulk tank
Area Number				1	1	1	1	1	2	2
Sample Location:				Line 2 of plating room	Line 1 of plating room	Interior wall of plating room	Interior wall of plating room	Line 2 of plating room	Bulk storage area	Bulk storage area
Sample Date:				9/19/2016	9/19/2016	9/19/2016	9/21/2016	9/21/2016	9/19/2016	9/19/2016
Analyte Group	Analyte	Units	Toxicity Characteristics Regulatory Level (mg/L)							
Metals	LEAD	mg/kg	NS			91.4				
Other	MOISTURE	percent	NS			1.9				
	% SOLIDS	percent	NS			98.1				
TCLP Metals	ANTIMONY	mg/l	NS				0.006 U	0.006 U		
	ARSENIC	mg/l	5	0.015 U	0.015 U		0.01 U	0.01 U	0.0064 J	0.068
	BARIUM	mg/l	100	0.21 J	0.18 J		0.0033 J	0.0056 J	1 U	1 U
	BERYLLIUM	mg/l	NS				0.001 U	0.001 U		
	CADMIUM	mg/l	1	0.002 U	0.0071		0.012	0.001 U	0.002 U	0.002 U
	CHROMIUM	mg/l	5	0.02 U	0.016 J		0.0023 J	0.005 U	0.02 U	0.02 U
	LEAD	mg/l	5	40.5 ^	1 U ^		0.072	0.11	0.1	0.1 U ^
	MERCURY	mg/l	0.2	0.00013 J	0.00028		0.0002 U	0.0002 U	0.069 F1	0.02 U F1
	NICKEL	mg/l	NS				0.0025 J	0.0042 J		
	SELENIUM	mg/l	1	0.025 U	0.025 U		0.01 U	0.01 U	0.025 U	0.75
	SILVER	mg/l	5	0.042	0.006 U		0.0017 J	0.005 U	0.007	0.49
	THALLIUM	mg/l	NS				0.02 U	0.02 U		
	VANADIUM	mg/l	NS				0.01 U	0.01 U		
	ZINC	mg/l	NS				0.06 B	0.15 B F1		

Notes:

mg/kg = milligrams per kilogram

mg/l = milligrams per liter

ug/l = micrograms per liter

TCLP = Toxicity Characteristics Leaching Procedure

^ = ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

B = Compound was found in the blank and sample.

F1 = MS and/or MSD Recovery is outside acceptance limits.

J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

U = Analyte was not detected at the reporting limit shown.

Yellow highlighted detected results exceed the Toxicity Characteristics Regulatory Level (November 2004)

**Table 6**  
**Summary of TCLP Analytical Results**

Sample ID:					3-1	3-2	3-3	6-1	7-1	7-2
Sample Description:					Wall Paste	wall blue paint	Gray paint on wooden door	Wall paste	Acid contaminated area	Rectangular plating bath
Area Number					3	3	3	6	7	7
Sample Location:					Production floor corridor wall	Screening interior wall	Dark room of production floor	Inner wall of office building	Storage of Ground floor	Storage of Ground floor
Sample Date:					9/19/2016	9/19/2016	9/19/2016	9/19/2016	9/19/2016	9/19/2016
Analyte Group	cas_rn	Analyte	Units	Toxicity Characteristics Regulatory						
Metals	7439-92-1	LEAD	mg/kg	NS	17.4	9.8	41.2	3.5		
Other	MOIST	MOISTURE	perce	NS	3.1	45.1	0	9.3		
	TSOLIDS	% SOLIDS	perce	NS	96.9	54.9	100	90.7		
TCLP Metals	7440-36-0	ANTIMONY	mg/l	NS						
	7440-38-2	ARSENIC	mg/l	5					0.015 U	0.015 U
	7440-39-3	BARIUM	mg/l	100					0.11 J	0.87 J
	7440-41-7	BERYLLIUM	mg/l	NS						
	7440-43-9	CADMIUM	mg/l	1					0.001 J	0.0024
	7440-47-3	CHROMIUM	mg/l	5					0.016 J	0.02 U
	7439-92-1	LEAD	mg/l	5					1 U ^	0.1 U ^
	7439-97-6	MERCURY	mg/l	0.2					2E-04 U	0.0002 U
	7440-02-0	NICKEL	mg/l	NS						
	7782-49-2	SELENIUM	mg/l	1					0.13 U	0.025 U
	7440-22-4	SILVER	mg/l	5					0.006 U	0.006 U
	7440-28-0	THALLIUM	mg/l	NS						
	7440-62-2	VANADIUM	mg/l	NS						
	7440-66-6	ZINC	mg/l	NS						

Notes:

mg/kg = milligrams per kilogram

mg/l = milligrams per liter

ug/l = micrograms per liter

TCLP = Toxicity Characteristics Leaching Procedure

^ = ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

B = Compound was found in the blank and sample.

F1 = MS and/or MSD Recovery is outside acceptance limits.

J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

U = Analyte was not detected at the reporting limit shown.

Yellow highlighted detected results exceed the Toxicity Characteristics Regulatory Level (November 2004)



**Table 6**  
**Summary of TCLP Analytical Results**

Sample ID:					8-3	8-4	9-1
Sample Description:					Remains of poly tank	Remains of yellow tank	Yellow paint on iron pole
Area Number					8	8	9
Sample Location:					Chemical make-up room of basement	Chemical make-up room of basement	Wastewater treatment building
Sample Date:					9/19/2016	9/19/2016	9/19/2016
Analyte Group	cas_rn	Analyte	Units	Toxicity Characteristic			
Metals	7439-92-1	LEAD	mg/kg	NS			111
Other	MOIST	MOISTURE	percent	NS			11
	TSOLIDS	% SOLIDS	percent	NS			89
TCLP Metals	7440-36-0	ANTIMONY	mg/l	NS			
	7440-38-2	ARSENIC	mg/l	5	0.02 U	0.0088 J	
	7440-39-3	BARIUM	mg/l	100	1 U	1 U	
	7440-41-7	BERYLLIUM	mg/l	NS			
	7440-43-9	CADMIUM	mg/l	1	0.01	0.13	
	7440-47-3	CHROMIUM	mg/l	5	0.02 U	0.02 U	
	7439-92-1	LEAD	mg/l	5	0.04	39.4	
	7439-97-6	MERCURY	mg/l	0.2	0 U	0.00052	
	7440-02-0	NICKEL	mg/l	NS			
	7782-49-2	SELENIUM	mg/l	1	0.03 U	0.025 U	
	7440-22-4	SILVER	mg/l	5	0.21	0.034	
	7440-28-0	THALLIUM	mg/l	NS			
	7440-62-2	VANADIUM	mg/l	NS			
	7440-66-6	ZINC	mg/l	NS			

Notes:

mg/kg = milligrams per kilogram

mg/l = milligrams per liter

ug/l = micrograms per liter

TCLP = Toxicity Characteristics Leaching Procedure

^ = ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

B = Compound was found in the blank and sample.

F1 = MS and/or MSD Recovery is outside acceptance limits.

J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

U = Analyte was not detected at the reporting limit shown.

Yellow highlighted detected results exceed the Toxicity Characteristics Regulatory Level (November 2004)

**Table 7**  
**Summary of Oil Analytical Results**

Sample ID:		ELEVATOR OIL	TRANSFORMER OIL
Sample Description		Oil from elevator reservoir	Wiped Oil from transformer
Sample Area:		7	2 (Exterior)
Sample Location:		Ground floor elevator	Transformer tank pipe outside Area #2
Sample Date:		9/20/2016	9/20/2016
Units:		ug/l	ug/wipe
Analyte Group	Analyte		
PCBs	AROCLOR 1260	17 U	1 U
	AROCLOR 1254	17 U	1 U
	AROCLOR 1268	17 U	1 U
	AROCLOR 1221	17 U	1 U
	AROCLOR-1232	17 U	1 U
	AROCLOR-1248	17 U	1 U
	AROCLOR-1016	17 U	1 U
	AROCLOR 1262	17 U	1 U
	AROCLOR-1242	17 U	1 U

Notes:

ug/l = micrograms per liter

ug/wipe = micrograms per wipe

U = Analyte was not detected at the reporting limit shown.

Table 8  
Summary of Universal Waste  
MassDEP SARSS Amesbury, MA

Inventory Items by Area	Quantity
Area #1, Plating Room	
<b>General</b>	
High-Intensity Discharge (HID) lamp	42
Emergency Lighting and exit sign	1
Wall mounted Mercury Thermostat	1
Alarm box having hydrollic oil	1
<b>Plating Room Balcony</b>	
Fluorescent 4 Foot Fixtures	6
Ballasts	12
Fluorescent Tubes	24
Area #2, Production floor 2	
<b>Bulk Storage Room</b>	
Fluorescent 8 Foot Fixtures	2
Ballasts	2
Fluorescent Tubes	4
<b>Maintenance Room</b>	
Roof Collapsed	NA
<b>Compressor Room</b>	
Air dryer	1
Fluorescent 4 Foot Fixtures	4
Ballasts	8
Fluorescent Tubes	16
<b>Process Room</b>	
Fluorescent 4 Foot Fixtures	8
Ballasts	16
Fluorescent Tubes	32
<b>Lay-up Room</b>	
Through- Wall AC Unit	1
Fluorescent 4 Foot Fixtures	12
Ballasts	24
Fluorescent Tubes	48
<b>Storage Room -1</b>	
Fluorescent 4 Foot Fixtures	12
Ballasts	24
Fluorescent Tubes	48
<b>Microplate Area</b>	
Fluorescent 4 Foot Fixtures	24
Ballasts	48
Fluorescent Tubes	96
<b>Etch room</b>	
Fluorescent 4 Foot Fixtures	8
Ballasts	16
Fluorescent Tubes	32

Table 8  
Summary of Universal Waste  
MassDEP SARSS Amesbury, MA

Inventory Items by Area	Quantity
<b>Area #2, Production floor 2</b>	
<b>Lab room</b>	
Fluorescent 4 Foot Fixtures	8
Ballasts	16
Fluorescent Tubes	32
<b>Storage Room -2</b>	
Fluorescent 4 Foot Fixtures	2
Ballasts	4
Fluorescent Tubes	8
<b>Production zone # 3</b>	
Fluorescent 4 Foot Fixtures	8
Ballasts	16
Fluorescent Tubes	32
<b>Programming Room</b>	
Fluorescent 4 Foot Fixtures	2
Ballasts	4
Fluorescent Tubes	8
<b>Conference Room</b>	
Fluorescent 4 Foot Fixtures	3
Ballasts	6
Fluorescent Tubes	12
<b>Corridor in between plating room and Production Area # 2</b>	
Fluorescent 4 Foot Fixtures	2
Ballasts	8
Fluorescent Tubes	16
<b>Area #3, Production floor 3</b>	
<b>Dark Room - 1</b>	
Fluorescent 4 Foot Fixtures	2
Ballasts	4
Fluorescent Tubes	8
<b>Dark Room - 2</b>	
Fluorescent 4 Foot Fixtures	2
Ballasts	4
Fluorescent Tubes	8
<b>Artwork Room</b>	
Fluorescent 4 Foot Fixtures	12
Ballasts	24
<b>Corridor in between plating room and Production Area # 3</b>	
Fluorescent 4 Foot Fixtures	9
Ballasts	18
Fluorescent Tubes (50% tubes are broken)	20
<b>Corridor in between Artwork Room and Screening Room</b>	
Fluorescent 4 Foot Fixtures	4
Ballasts	8
Fluorescent Tubes (50% tubes are broken)	8

Table 8  
Summary of Universal Waste  
MassDEP SARSS Amesbury, MA

Inventory Items by Area	Quantity
<b>Lobby</b>	
Fluorescent 4 Foot Fixtures	2
Ballasts	4
Fluorescent Tubes	8
<b>Office Room</b>	
Fluorescent 4 Foot Fixtures	2
Ballasts	4
Fluorescent Tubes	8
<b>Exp. Room</b>	
Fluorescent 4 Foot Fixtures	2
Ballasts	4
Fluorescent Tubes	8
<b>Screening Make-up Room</b>	
Fluorescent 4 Foot Fixtures	4
Ballasts	8
Fluorescent Tubes (50% tubes are broken)	8
<b>Wash Down Room</b>	
Fluorescent 8 Foot Fixtures	2
Ballasts	4
Fluorescent Tubes	8
<b>Ovens Room</b>	
Fluorescent 4 Foot Fixtures	3
Ballasts	6
Fluorescent Tubes	12
<b>Photo Room</b>	
Fluorescent 4 Foot Fixtures	20
Fluorescent Tubes	80
Ballasts	40
<b>Touch-Up Room</b>	
Fluorescent 4 Foot Fixtures	8
Ballasts	16
Fluorescent Tubes	32
<b>Corridor between Area # 2 and Production Area # 4</b>	
Fluorescent 4 Foot Fixtures	5
Fluorescent Tubes (50% tubes are broken)	10
Ballasts	10
<b>Area #4, Production floor 4</b>	
<b>Corridor in between Cafeteria and Touch-Up</b>	
Fluorescent 4 Foot Fixtures	4
Ballasts	8
Fluorescent Tubes (50% tubes are broken)	8
<b>Cafeteria</b>	
Fluorescent 4 Foot Fixtures	20
Ballasts	40
Fluorescent Tubes	80

Table 8  
Summary of Universal Waste  
MassDEP SARSS Amesbury, MA

Inventory Items by Area	Quantity
<b>Drill Room</b>	
Fluorescent 4 Foot Fixtures	22
Ballasts	44
Fluorescent Tubes	88
<b>Fabrication Room</b>	
Fluorescent 4 Foot Fixtures	8
Ballasts	16
Fluorescent Tubes (25% tubes are broken)	24
<b>First Aid Room</b>	
Fluorescent 4 Foot Fixtures	2
Ballasts	4
Fluorescent Tubes	8
<b>Women Toilet</b>	
Fluorescent 4 Foot Fixtures	2
Ballasts	4
Fluorescent Tubes	8
<b>Men Toilet</b>	
Fluorescent 4 Foot Fixtures	2
Ballasts	4
Fluorescent Tubes	8
<b>Workset Inspection Area</b>	
Fluorescent 4 Foot Fixtures	7
Ballasts	14
Fluorescent Tubes (25% tubes are broken)	20
<b>Area #5, Production floor 5 (New Building)</b>	
<b>Area #5 corridor</b>	
Fluorescent 4 Foot Fixtures	16
Ballasts	32
Fluorescent Tubes (25% tubes are broken)	50
<b>Mens Bathroom</b>	
Fluorescent 4 Foot Fixtures	2
Ballasts	4
Fluorescent Tubes	8
<b>Womens Bathroom</b>	
Fluorescent 4 Foot Fixtures	2
Ballasts	4
Fluorescent Tubes	8
<b>Corridor in between Bathroom and Engineering Room</b>	
Fluorescent 4 Foot Fixtures	4
Ballasts	8
Fluorescent Tubes	16
<b>Engineering Room</b>	
Fluorescent 4 Foot Fixtures	14
Ballasts	28
Fluorescent Tubes	54

Table 8  
Summary of Universal Waste  
MassDEP SARSS Amesbury, MA

Inventory Items by Area	Quantity
<b>Copier Room</b>	
Fluorescent 4 Foot Fixtures	1
Ballasts	2
Fluorescent Tubes	4
<b>Shipping Room</b>	
Fluorescent 4 Foot Fixtures	4
Ballasts	8
Fluorescent Tubes	16
<b>Test and Audit Room</b>	
Fluorescent 4 Foot Fixtures	15
Ballasts	30
Fluorescent Tubes	60
<b>Test Fixture Fab. Room</b>	
Fluorescent 4 Foot Fixtures	6
Ballasts	12
Fluorescent Tubes	24
<b>Office Room</b>	
Fluorescent 4 Foot Fixtures	1
Ballasts	2
Fluorescent Tubes	4
<b>Fabrication Room</b>	
Fluorescent 4 Foot Fixtures	18
Ballasts	36
Fluorescent Tubes	72
<b>Maintainance Supervisor Room</b>	
Fluorescent 4 Foot Fixtures	1
Ballasts	2
Fluorescent Tubes	4
<b>Cleaning Storage Room</b>	
Fluorescent 4 Foot Fixtures	1
Ballasts	2
Fluorescent Tubes	4
<b>Area #5, Production floor 5 (New Building)</b>	
<b>Facilities Manager Room</b>	
Fluorescent 4 Foot Fixtures	2
Ballasts	4
Fluorescent Tubes	8
<b>Material manager Room</b>	
Fluorescent 4 Foot Fixtures	2
Ballasts	4
Fluorescent Tubes	8
<b>Production Manager Room</b>	
Fluorescent 4 Foot Fixtures	1
Ballasts	2
Fluorescent Tubes	4

Table 8  
Summary of Universal Waste  
MassDEP SARSS Amesbury, MA

Inventory Items by Area	Quantity
<b>Conference Room -1</b>	
Fluorescent 4 Foot Fixtures	2
Ballasts	4
Fluorescent Tubes	8
<b>Conference Room -2</b>	
Fluorescent 4 Foot Fixtures	4
Ballasts	8
Fluorescent Tubes	16
<b>Conference Room -3</b>	
Fluorescent 4 Foot Fixtures	7
Ballasts	14
Fluorescent Tubes	28
<b>Touch-Up Room</b>	
High-Intensity Discharge (HID) lamp	12
Number of Bulbs	12
<b>Equipment Receiving Room</b>	
Fluorescent 4 Foot Fixtures	2
Ballasts	4
Fluorescent Tubes	8
<b>Photo-2 Room</b>	
Fluorescent 4 Foot Fixtures	8
Ballasts	16
Fluorescent Tubes	32
<b>Photo-1 Room</b>	
Fluorescent 4 Foot Fixtures	8
Ballasts	16
Fluorescent Tubes	32
<b>Artwork Room</b>	
Fluorescent 4 Foot Fixtures	10
Ballasts	20
Fluorescent Tubes	40
<b>Drill &amp; Tool Inspection Room</b>	
Fluorescent 4 Foot Fixtures	14
Ballasts	28
Fluorescent Tubes	54
<b>Methods Room</b>	
Fluorescent 4 Foot Fixtures	8
Ballasts	16
Fluorescent Tubes	32
<b>Dark Room</b>	
Fluorescent 4 Foot Fixtures	6
Ballasts	12
Fluorescent Tubes	24



Table 8  
Summary of Universal Waste  
MassDEP SARSS Amesbury, MA

Inventory Items by Area	Quantity
<b>Programming Room</b>	
Fluorescent 4 Foot Fixtures	3
Ballasts	6
Fluorescent Tubes	12
<b>Store Room</b>	
Fluorescent 4 Foot Fixtures	1
Ballasts	2
Fluorescent Tubes	4
<b>Corridor to downstairs</b>	
Fluorescent 4 Foot Fixtures	2
Ballasts	4
Fluorescent Tubes	8
<b>Downstair to ground floor (Area # 7)</b>	
Fluorescent 4 Foot Fixtures	1
Ballasts	2
Fluorescent Tubes	4
<b>Office-1 Room</b>	
Fluorescent 4 Foot Fixtures	2
Ballasts	4
Fluorescent Tubes (All broken)	NA
<b>Office-2 Room</b>	
Fluorescent 4 Foot Fixtures	2
Ballasts	4
Fluorescent Tubes	NA
<b>Quality Manager Room</b>	
Fluorescent 4 Foot Fixtures	2
Ballasts	4
Fluorescent Tubes (All broken)	NA
<b>Office-3 Room</b>	
Fluorescent 4 Foot Fixtures	2
Ballasts	4
Fluorescent Tubes (All broken)	NA
<b>Area # 6, Office Building</b>	
<b>Sales Room</b>	
Fluorescent 4 Foot Fixtures	2
Ballasts	4
Fluorescent Tubes (All broken)	NA
<b>President Room</b>	
Fluorescent 4 Foot Fixtures	2
Ballasts	4
Fluorescent Tubes (All broken)	NA
<b>Accounting Room</b>	
Fluorescent 4 Foot Fixtures	2
Ballasts	4
Fluorescent Tubes	NA

Table 8  
Summary of Universal Waste  
MassDEP SARSS Amesbury, MA

Inventory Items by Area	Quantity
<b>Data Processing Room</b>	
Fluorescent 4 Foot Fixtures	2
Ballasts	4
Fluorescent Tubes (All broken)	NA
<b>Mens Bathroom</b>	
Fluorescent 4 Foot Fixtures	2
Ballasts	4
Fluorescent Tubes (All broken)	NA
<b>Womens Bathroom</b>	
Fluorescent 4 Foot Fixtures	2
Ballasts	4
Fluorescent Tubes (All broken)	NA
<b>Office-4 Room</b>	
Fluorescent 4 Foot Fixtures	2
Ballasts	4
Fluorescent Tubes (All broken)	NA
<b>Office building Corridor</b>	
Fluorescent 4 Foot Fixtures	6
Ballasts	12
Fluorescent Tubes (All broken)	NA
Emergency Lighting and exit sign	2
<b>Area #7, Ground floor</b>	
<b>Trash Room</b>	
Fluorescent 4 Foot Fixtures	2
Ballasts	4
Fluorescent Tubes	NA
<b>Shipping and receiving Room</b>	
Fluorescent 8 Foot Fixtures	6
Ballasts	6
Fluorescent Tubes	12
<b>Storage Room</b>	
Fluorescent 8 Foot Fixtures	24
Ballasts	24
Fluorescent Tubes (All broken)	NA
<b>Drilling Room</b>	
Fluorescent 4 Foot Fixtures	45
Ballasts	90
Fluorescent Tubes	180
<b>Office-1 Room</b>	
Fluorescent 4 Foot Fixtures	1
Ballasts	2
Fluorescent Tubes	4
<b>Compressor Room</b>	
Fluorescent 4 Foot Fixtures	3
Ballasts	6
Fluorescent Tubes	12

Table 8  
Summary of Universal Waste  
MassDEP SARSS Amesbury, MA

Inventory Items by Area	Quantity
<b>Mens Bathroom</b>	
Fluorescent 4 Foot Fixtures	1
Ballasts	2
Fluorescent Tubes	4
<b>Womens Bathroom</b>	
Fluorescent 4 Foot Fixtures	1
Ballasts	2
Fluorescent Tubes	4
<b>Elevator machine Room</b>	
Fluorescent 4 Foot Fixtures	1
Ballasts	2
Fluorescent Tubes	3
<b>Security Room</b>	
Fluorescent 4 Foot Fixtures	2
Ballasts	4
Fluorescent Tubes	8
<b>Waiting and Reception Room</b>	
Recessed Lighting Baffle	4
Bulbs (all broken)	NA
<b>Personnel Room</b>	
Fluorescent 4 Foot Fixtures	4
Ballasts	8
Fluorescent Tubes	16
<b>Office-2 Room</b>	
Fluorescent 4 Foot Fixtures	1
Ballasts	2
Fluorescent Tubes	4
<b>Lay-Up Storage Room</b>	
Fluorescent 4 Foot Fixtures	4
Ballasts	8
Fluorescent Tubes	16
<b>Purchasing Room</b>	
Fluorescent 4 Foot Fixtures	4
Ballasts	8

Table 8  
Summary of Universal Waste  
MassDEP SARSS Amesbury, MA

Inventory Items by Area	Quantity
<b>Area #7, Ground floor</b>	
Fluorescent Tubes	16
<b>Lay-Up Room</b>	
Fluorescent 4 Foot Fixtures	6
Ballasts	12
Fluorescent Tubes	24
<b>Laminating Room</b>	
Fluorescent 8 Foot Fixtures	20
Ballasts	40
Fluorescent Tubes	80
<b>Ground floor corridor</b>	
Fluorescent 4 Foot Fixtures	7
Ballasts	14
Fluorescent Tubes	28
<b>Area # 8, Basement</b>	
<b>Chemical Makeup Room</b>	
20 LB Fire Extinguishers	1
Air drier	1
50 LB filtration Vessel	1
Fluorescent 8 Foot Fixtures	4
Ballasts	8
Fluorescent Tubes	16
<b>Receiving and Storage Room</b>	
Fluorescent 8 Foot Fixtures	21
Ballasts	42
Fluorescent Tubes	84
Emergency Lighting and exit sign	1
<b>Boiler Room</b>	
Fluorescent 8 Foot Fixtures	2
Ballasts	4
Fluorescent Tubes	8

Table 9  
Summary of Tanks and Equipments  
MassDEP SARSS Amesbury, MA

Name	Area	Approx. Diameter (ft.)	Approx. Height (ft.)	Approx. volume of tank (gallon)	Content	Approx.. Volume of liquid/solid in tank (gallons)	Approx. Volume of liquid/solid in tank (Lbs.)
White tank with stand	Receiving and storage area in basement	4.5	3.5	417	Bottom remain ( iron rust, mud)	NA	NA
Yellow tank	Receiving and storage area in basement	6.5	6	1490	Bottom remain ( iron rust, mud)	NA	NA
Yellow tank	Chemical Make-up room in basement	6.5	6	1490	Bottom remain ( iron rust, mud)	NA	NA
Filtration process tank	Chemical Make-up room in basement	7.5	6	1984	Residual in bottom of tank	NA	NA
Bulk storage tank (2-1)	Bulk Storage room, Area #2	10.5	8.5	5508	3 inch of Ammonia etch solid at bottom of tank	162	1353
Bulk storage tank (2-2)	Bulk Storage room, Area #2	10.5	8.5	5508	3 inch of Ammonia etch solid at bottom of tank	162	1353
HCl Storage tank	Ground floor, Area # 7	10.5	9.5	6156	1 inch hydrochloric acid of pH ~1.0	54	NA
Acid Storage tank	Ground floor, Area # 7	11	10.5	7467	1 inch acid of pH ~1.0	59	NA
Acid Storage tank	Ground floor, Area # 7	11	10.5	7467	1 inch acid of pH ~1.0	59	NA
Elevator reservoir	Ground floor, Area # 7	NA	NA	NA	Hydraulic oil for elevator	40	NA
Refuse compactor	Ground floor, Area # 7	NA	NA	NA	Waste oil contained in refuse compactor hydraulic oil reservoir	25	NA

## **LIST OF FIGURES**

FIGURE 1: Site location Map

FIGURE 2: MicroFab Building overall sketch

FIGURE 3: Overall internal drawing including wastewater treatment building

FIGURE 4: Plating room, Area # 1

FIGURE 5: Production floor, Area # 2

FIGURE 6: Production floor, Area # 3

FIGURE 7: Production floor, Area # 4

FIGURE 8: Production floor, Area # 5

FIGURE 9: Office floor, Area # 6

FIGURE 10: Ground floor, Area # 7

FIGURE 11: Basement, Area # 8

FIGURE 12: Wastewater treatment building

FIGURE 13: Exterior sample collection from roof and grade level

FIGURE 14: Dimension of building





**SITE LOCATION MAP**

**MassDEP**  
**MICROFAB BUILDING**

106 Haverhill Road  
Amesbury, Massachusetts

**Legend**

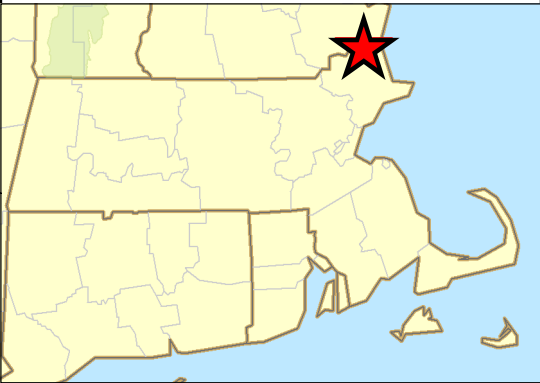


Site Center



Parcel Boundary

**Location of Site**



**Notes & Sources**

Datalayer Source: Parcel Boundary datalayer obtained from MassGIS Level 3 Assessor's Parcels for the City of Amesbury.

0 75 150  
Feet



Amec Foster Wheeler  
Environment & Infrastructure, Inc.  
271 Mill Road  
Chelmsford, MA 01824  
(978) 692-9090



**FIGURE**

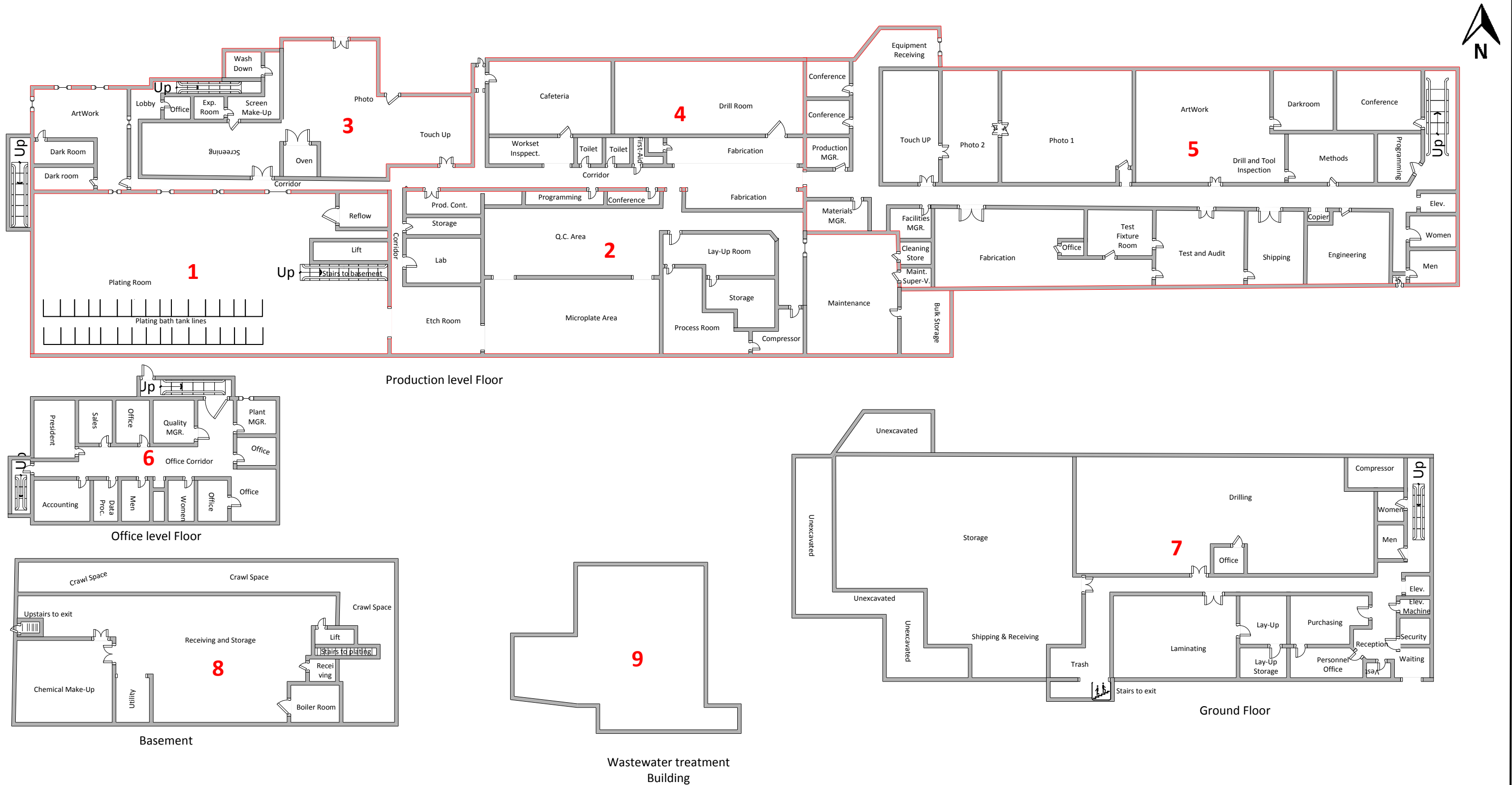
**1**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



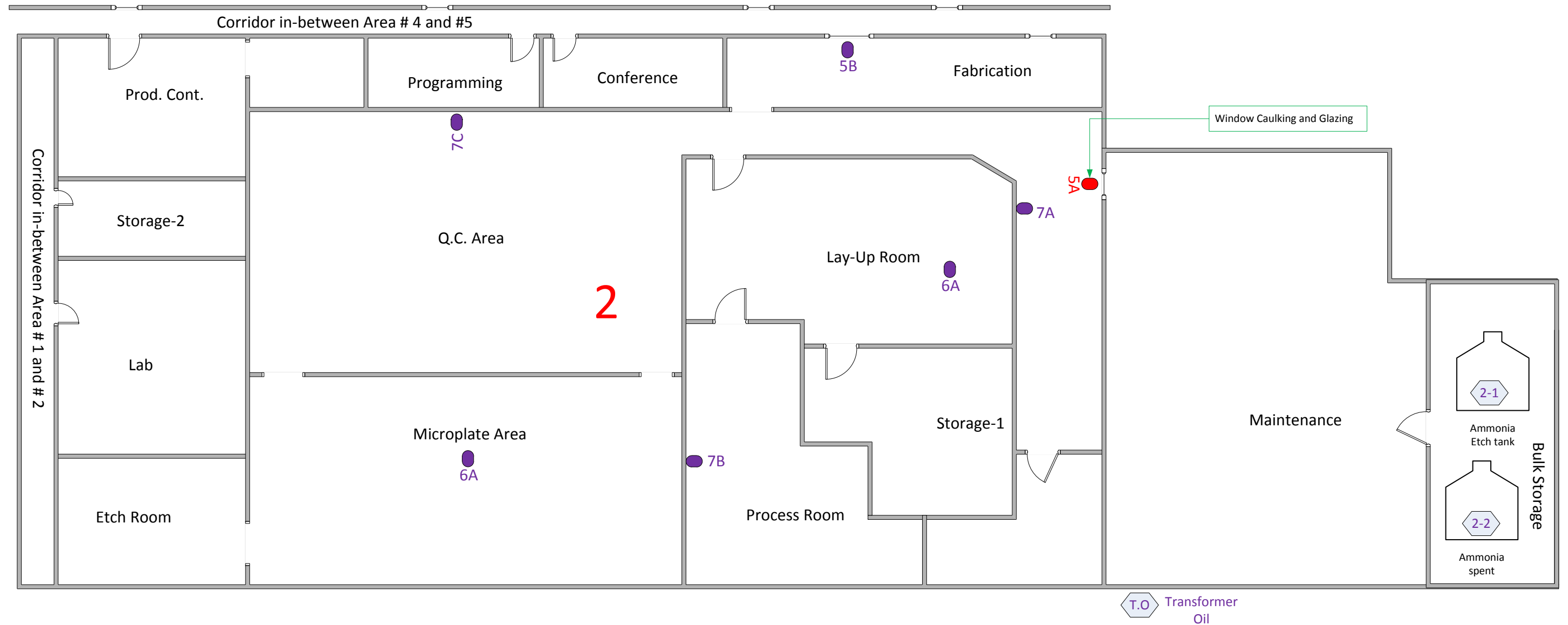












<div></div> <div>AMEC MASSACHUSETTS, INC. 271 MILL ROAD CHELMSFORD MASSACHUSETTS 01824 TELEPHONE: (978) 692-9090 FAX: (978) 692-6633 WEB: WWW.AMECEW.COM</div>						PROJECT:	<div><div>MassDEP</div><div>Commonwealth of Massachusetts Department of Environmental Protection</div></div>	<div>FIGURE 3</div>	DESIGNED BY:	PROJECT NUMBER
						MicroFab Building			DRAWN BY:	7775160013
						106 Haverhill Road			LR	DRAWING NUMBER
						Amesbury, MA 01913			CHECKED BY	REVISION NUMBER
						TITLE:			DATE:	REFERENCE:
						Interior Homogenous Areas			SCALE:	SHEET NUMBER
						Microfab Main( Area #1 -#8) and			NOT TO SCALE	
						Wastewater treatment Building				

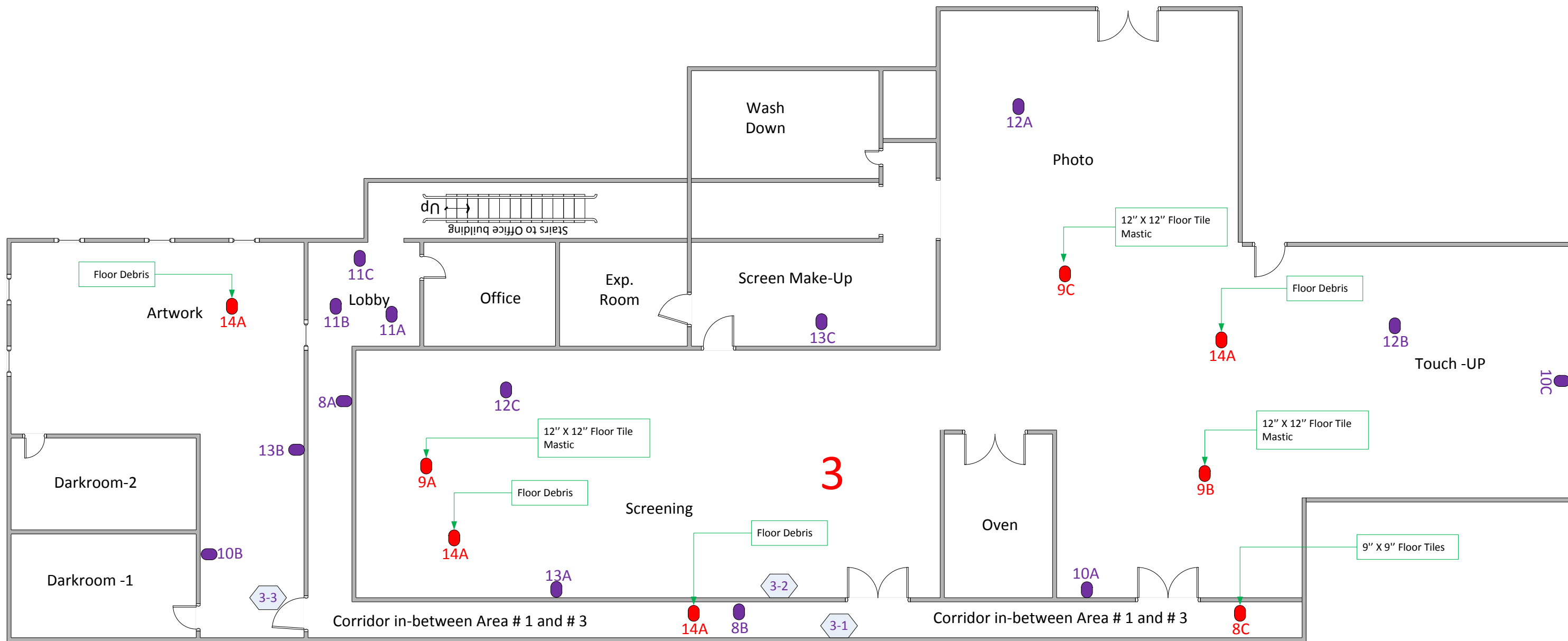




### Legends

-  Asbestos with positive detection
-  Asbestos with no detection
-  TCLP & Metal with positive detection
-  TCLP & Metal with no detection

 <p>AMEC MASSACHUSETTS, INC. 271 MILL ROAD CHELMSFORD MASSACHUSETTS 01824 TELEPHONE: (978) 692-9090 FAX: (978) 692-6633 WEB: WWW.AMECFW.COM</p>						PROJECT:	 <p>MassDEP Commonwealth of Massachusetts Department of Environmental Protection</p>	<p><b>Figure 5</b></p>	DESIGNED BY:	PROJECT NUMBER	
											7775160013
										DRAWN BY:	DRAWING NUMBER
										LR	
						TITLE:				CHECKED BY	REVISION NUMBER
						Interior Sample Location, Area # 2				DATE:	REFERENCE:
		12/9/2016								SCALE:	SHEET NUMBER
	Revision	DATE	DESCRIPTION	ISSUED BY	APPROVED					NOT TO SCALE	



Legends

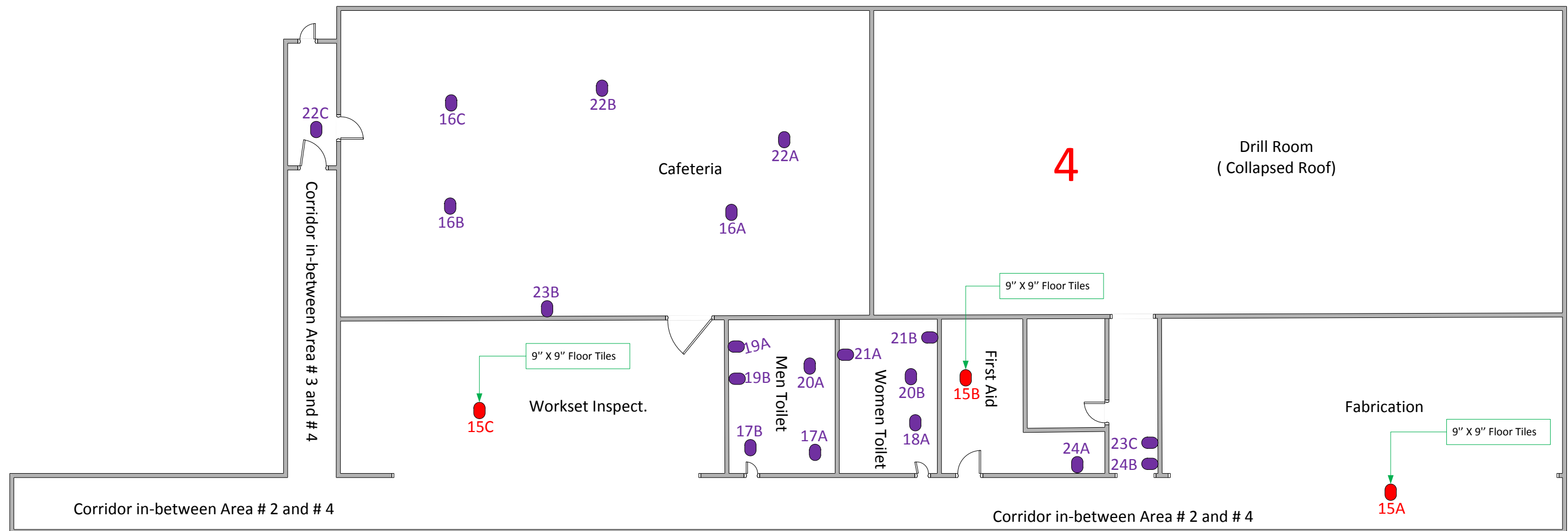
Asbestos with positive detection

Asbestos with no detection

TCLP & Metal with positive detection

TCLP & Metal with no detection

<div><div><div><div></div><div></div><div></div></div><div>amec foster wheeler</div></div><div>AMEC MASSACHUSETTS, INC. 271 MILL ROAD CHELMSFORD MASSACHUSETTS 01824 TELEPHONE: (978) 692-9090 FAX: (978) 692-6633 WEB: WWW.AMECEW.COM</div></div>						PROJECT:	MassDEP SARSS	<div>CLIENT:</div> <div><div><div></div><div></div><div></div></div><div>MassDEP</div><div>Commonwealth of Massachusetts Department of Environmental Protection</div></div>	<div>FIGURE 6</div>	DESIGNED BY:	PROJECT NUMBER
							MicroFab Building 106 Haverhill Road Amesbury, MA 01913			DRAWN BY:	DRAWING NUMBER
										LR	4
						TITLE:	Interior Sample Location, Area # 3			CHECKED BY	REVISION NUMBER
										DATE:	REFERENCE:
										SCALE:	SHEET NUMBER
										NOT TO SCALE	
	Revision	DATE	DESCRIPTION	ISSUED BY	APPROVED						



Legends

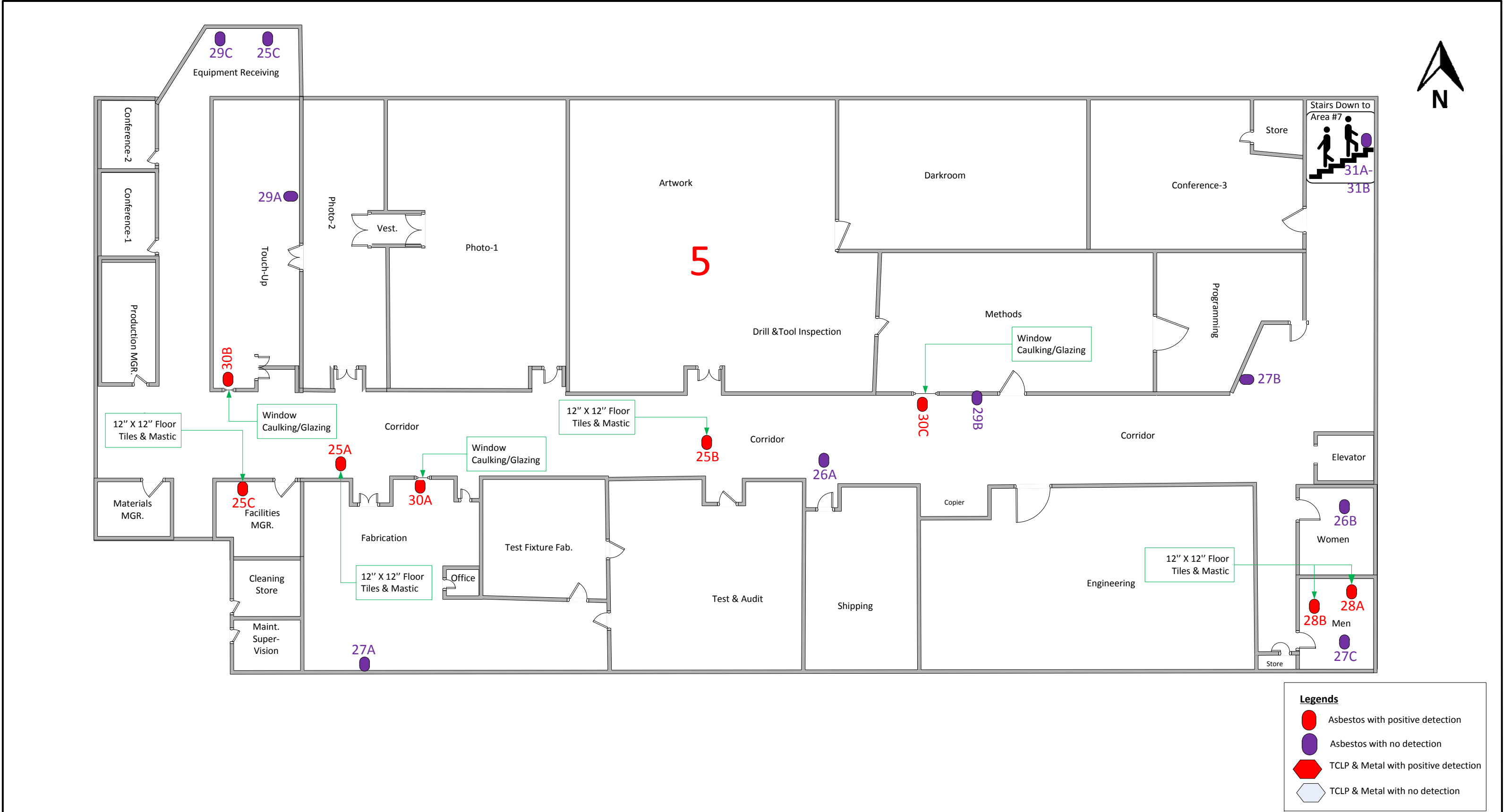
Asbestos with positive detection



Asbestos with no detection

TCLP & Metal with positive detection

TCLP & Metal with no detection

<div><div><div><div></div><div>amec foster wheeler</div></div><div>AMEC MASSACHUSETTS, INC. 271 MILL ROAD ELMSFORD MASSACHUSETTS 01824 TELEPHONE: (978) 692-9090 FAX: (978) 692-6633 WEB: WWW.AMECFW.COM</div></div></div>						<div>PROJECT: MassDEP SARSS MicroFab Building 106 Haverhill Road Amesbury, MA 01913</div> <div>TITLE: Interior Sample Location, Area #4</div>	<div>CLIENT:<div><div><div></div></div><div>MassDEP</div><div>Commonwealth of Massachusetts Department of Environmental Protection</div></div></div>	<div>FIGURE 7</div>	DESIGNED BY:	PROJECT NUMBER 7775160013
									DRAWN BY: LR	DRAWING NUMBER
									CHECKED BY	REVISION NUMBER
									DATE:	REFERENCE:
									SCALE: NOT TO SCALE	SHEET NUMBER
	Revision	DATE	DESCRIPTION	ISSUED BY	APPROVED					



<div></div> <div>AMEC MASSACHUSETTS, INC. 271 MILL ROAD CHELMSFORD MASSACHUSETTS 01824 TELEPHONE: (978) 692-9090 FAX: (978) 692-6633 WEB: WWW.AMECFW.COM</div>						PROJECT: MassDEP SARSS	<div></div> <div>Commonwealth of Massachusetts Department of Environmental Protection</div>	FIGURE 8	DESIGNED BY:	PROJECT NUMBER 7775160013
						MicroFab Building 106 Haverhill Road Amesbury, MA 01913			DRAWN BY: LR	DRAWING NUMBER
						TITLE: Interior Sample Location, Area #5			CHECKED BY	REVISION NUMBER
									DATE:	REFERENCE:
									SCALE:	SHEET NUMBER
	Revision	DATE	DESCRIPTION	ISSUED BY	APPROVED					
	12/9/2016									





Legends

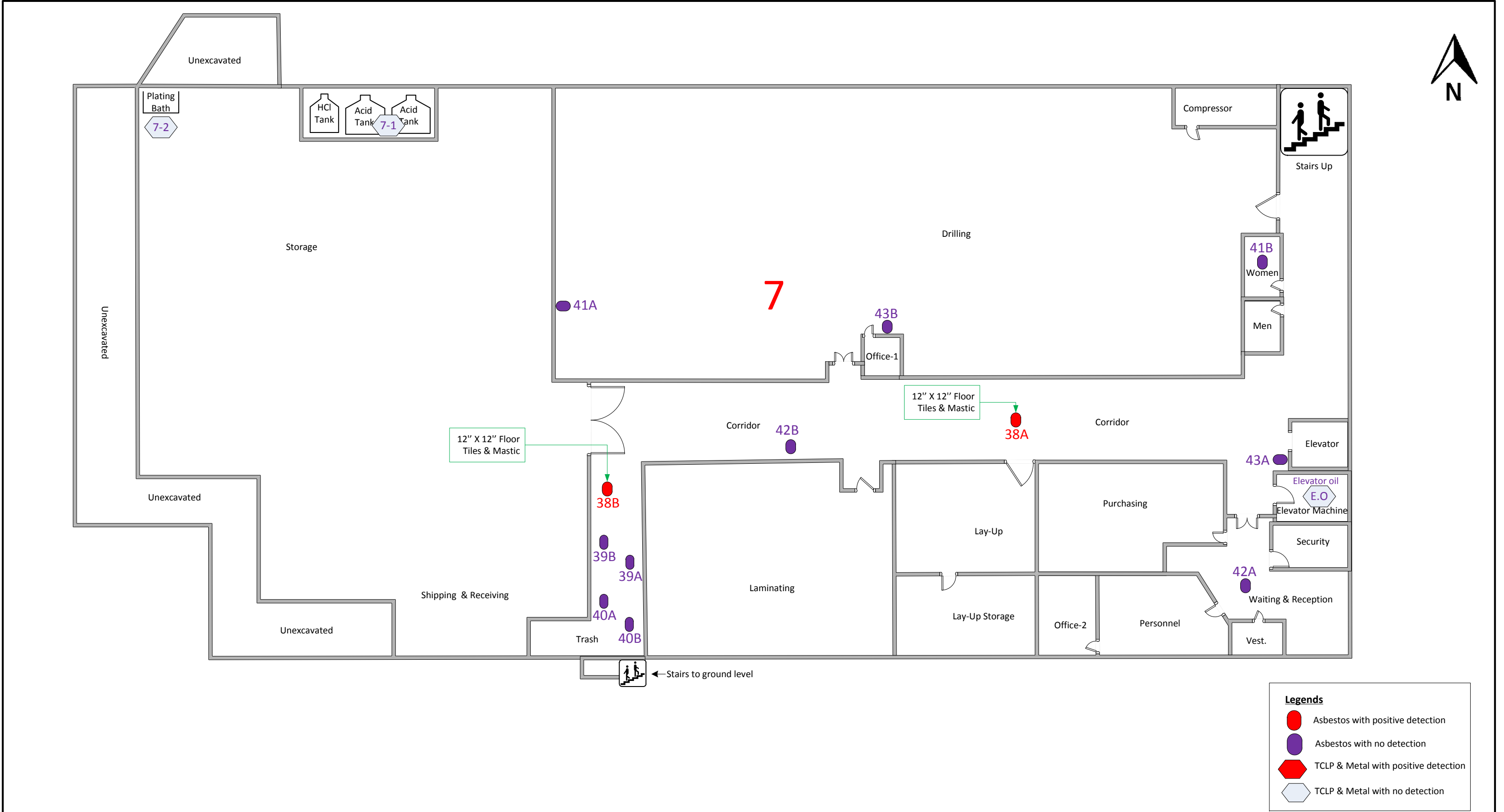
Asbestos with positive detection



Asbestos with no detection

TCLP & Metal with positive detection

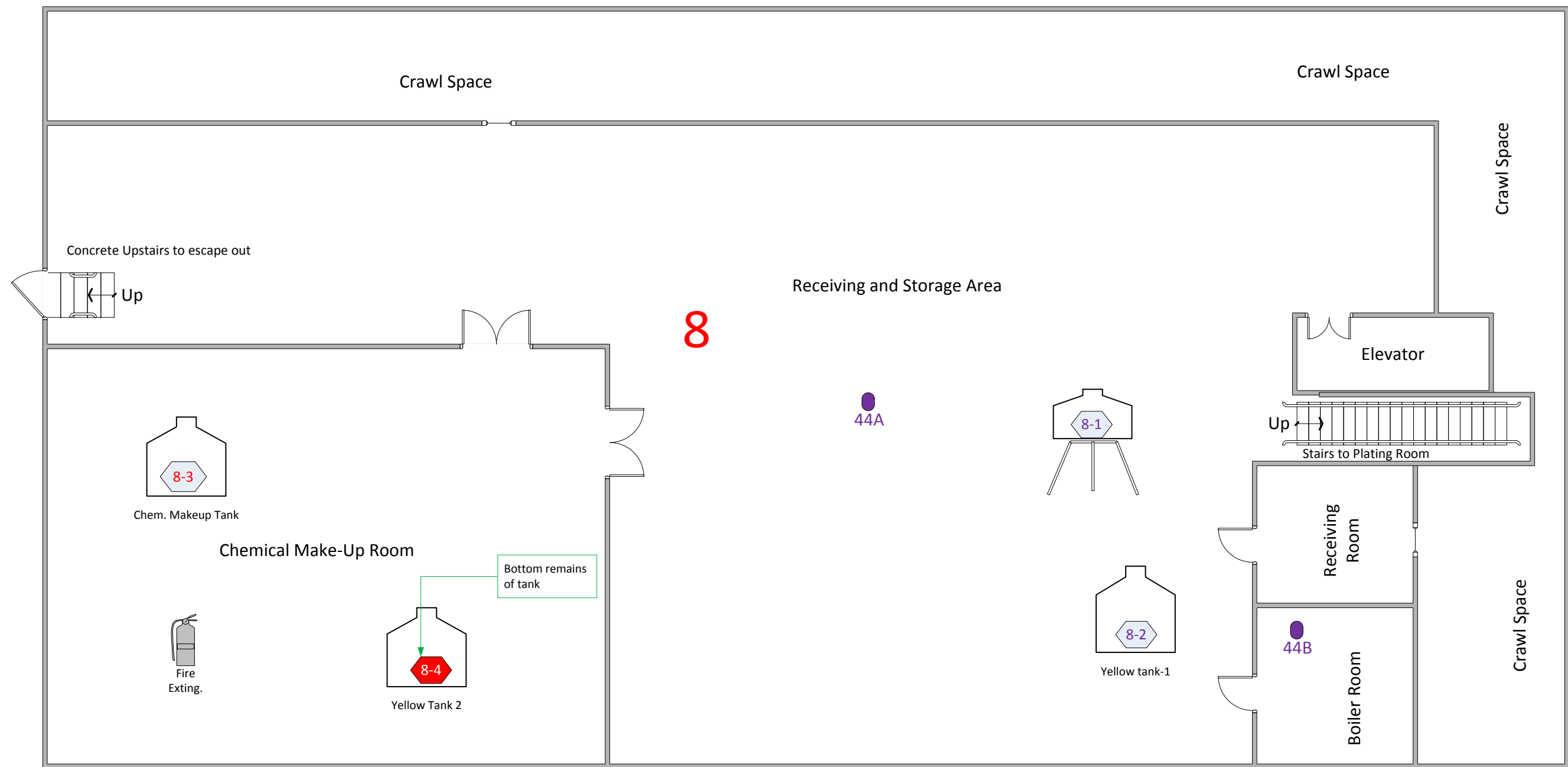
TCLP & Metal with no detection

<div>  AMEC MASSACHUSETTS, INC. 271 MILL ROAD CHELMSFORD MASSACHUSETTS 01824 TELEPHONE: (978) 692-9090 FAX: (978) 692-6633 WEB: WWW.AMECEW.COM</div>						PROJECT:	<div>CLIENT:</div> <div> <b>MassDEP</b> <small>Commonwealth of Massachusetts Department of Environmental Protection</small></div>	<div>FIGURE 9</div>	DESIGNED BY:	PROJECT NUMBER
						MassDEP SARSS			DRAWN BY:	7775160013
						MicroFab Building			LR	DRAWING NUMBER
						106 Haverhill Road			CHECKED BY	REVISION NUMBER
						Amesbury, MA 01913			DATE:	REFERENCE:
						TITLE:			SCALE:	SHEET NUMBER
						Interior Sample Location, Area #6			NOT TO SCALE	
	12/9/2016									
Revision	DATE	DESCRIPTION	ISSUED BY	APPROVED						





<div></div> <div>AMEC MASSACHUSETTS, INC. 271 MILL ROAD CHELMSFORD MASSACHUSETTS 01824 TELEPHONE: (978) 692-9090 FAX: (978) 692-6633 WEB: WWW.AMECEW.COM</div>						PROJECT:  MassDEP SARSS	<div>CLIENT:</div> <div> <b>MassDEP</b> <small>Commonwealth of Massachusetts Department of Environmental Protection</small></div>	<div>FIGURE 10</div>	DESIGNED BY:	PROJECT NUMBER 7775160013
						MicroFab Building 106 Haverhill Road Amesbury, MA 01913			DRAWN BY:	DRAWING NUMBER
						TITLE:  Interior Sample Location, Area # 7			CHECKED BY	REVISION NUMBER
									DATE:	REFERENCE:
									SCALE:	SHEET NUMBER
									NOT TO SCALE	
	Revision	DATE	DESCRIPTION	ISSUED BY	APPROVED					

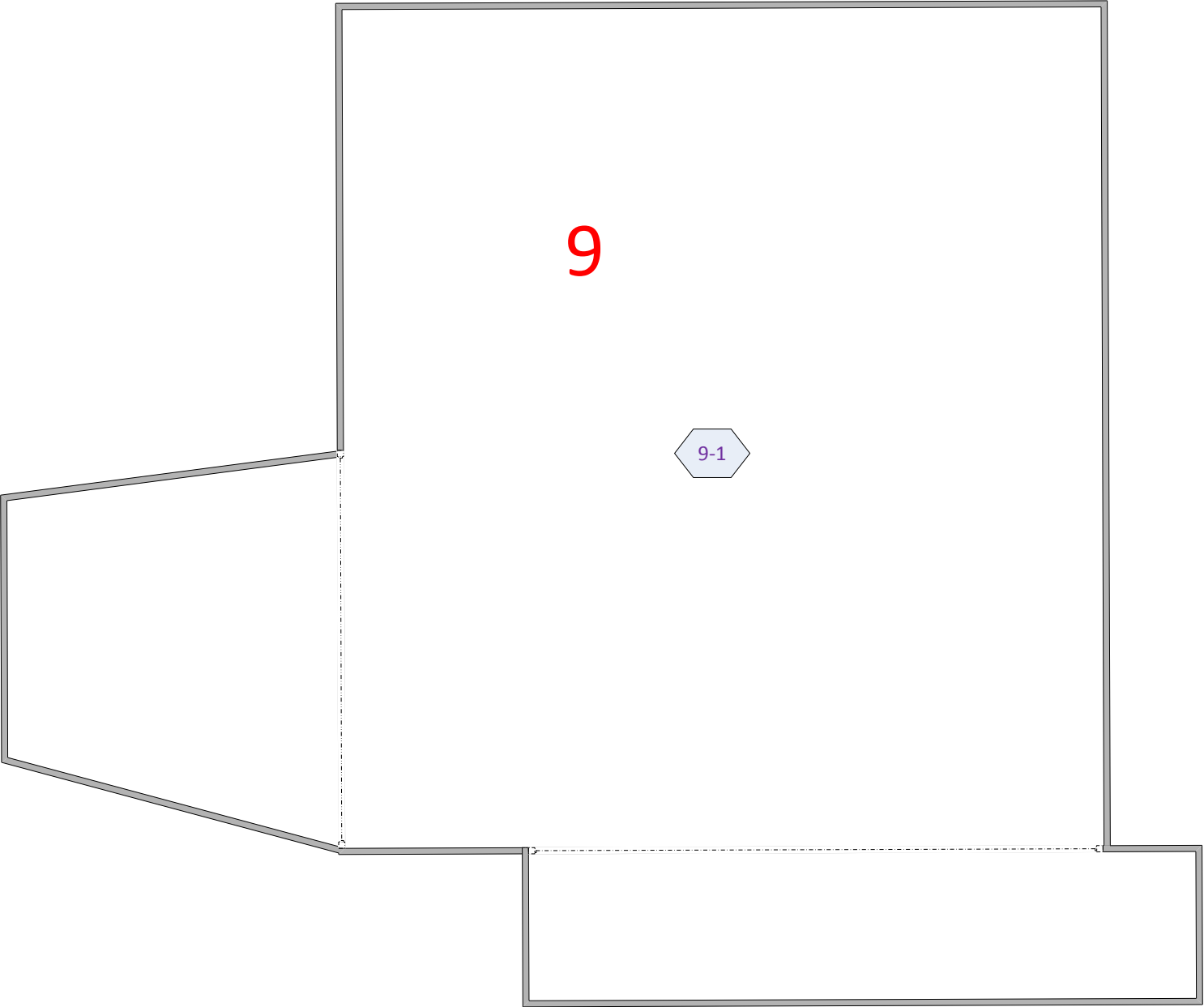








**Legends**



- Asbestos with positive detection
- Asbestos with no detection
- TCLP & Metal with positive detection
- TCLP & Metal with no detection

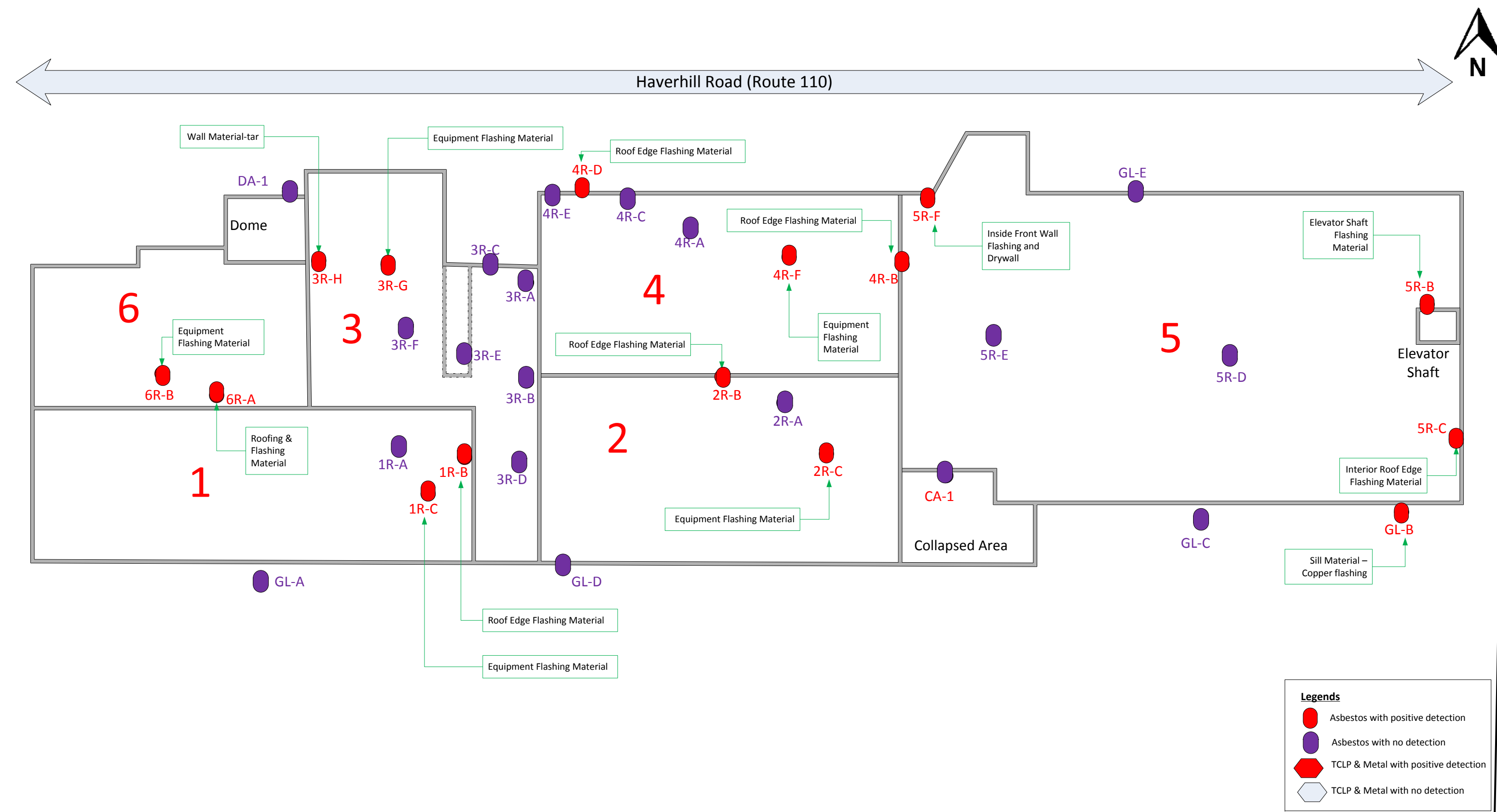
 AMEC MASSACHUSETTS, INC. 271 MILL ROAD CHELMSFORD MASSACHUSETTS 01824 TELEPHONE: (978) 692-9090 FAX: (978) 692-6633 WEB: WWW.AMCEW.COM						PROJECT:	MassDEP SARSS	 Commonwealth of Massachusetts Department of Environmental Protection	FIGURE 11	DESIGNED BY:	PROJECT NUMBER
							MicroFab Building			DRAWN BY:	DRAWING NUMBER
							106 Haverhill Road			CHECKED BY	REVISION NUMBER
							Amesbury, MA 01913			DATE:	REFERENCE:
						TITLE:	Interior Sample Location, Area # 8			SCALE:	SHEET NUMBER
										NOT TO SCALE	
	Revision	DATE	DESCRIPTION	ISSUED BY	APPROVED						



Legends

-  Asbestos with positive detection
-  Asbestos with no detection
-  TCLP & Metal with positive detection
-  TCLP & Metal with no detection

 AMEC MASSACHUSETTS, INC. 271 MILL ROAD CHELMSFORD MASSACHUSETTS 01824 TELEPHONE: (978) 692-9090 FAX: (978) 692-6633 WEB: WWW.AMECFW.COM						PROJECT:	MassDEP SARSS	 CLIENT:	FIGURE 12	DESIGNED BY:	PROJECT NUMBER
							MicroFab Building				7775160013
							106 Haverhill Road			DRAWN BY:	DRAWING NUMBER
							Amesbury, MA 01913			LR	
						TITLE:	Interior Sample Location			CHECKED BY	REVISION NUMBER
							Wastewater treatment Building			DATE:	REFERENCE:
										SCALE:	SHEET NUMBER
	Revision	DATE	DESCRIPTION	ISSUED BY	APPROVED					NOT TO SCALE	



Legends

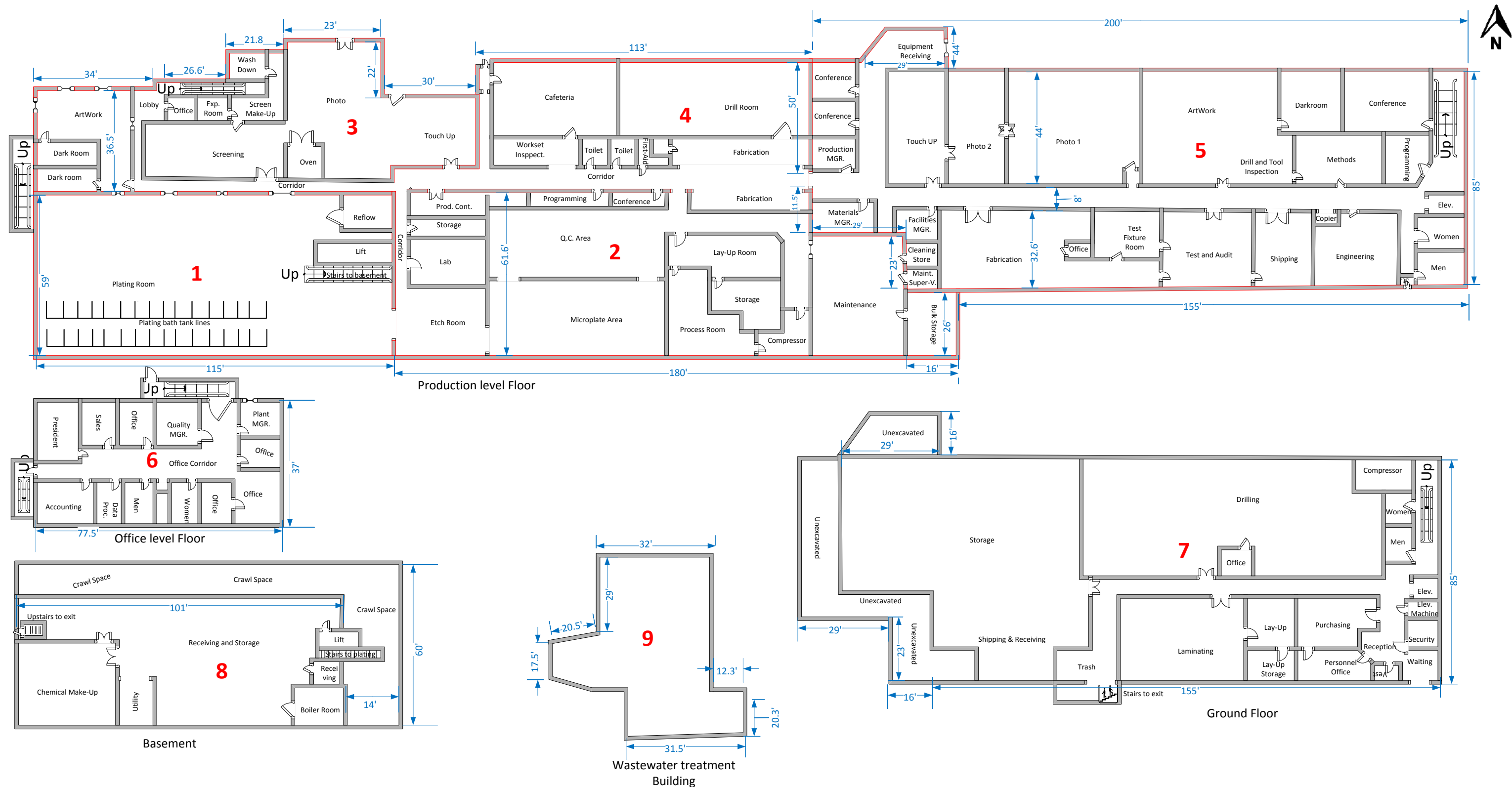
Asbestos with positive detection



Asbestos with no detection

TCLP & Metal with positive detection

TCLP & Metal with no detection

<div><div><div></div></div><div>amec foster wheeler</div></div> <div>AMEC MASSACHUSETTS, INC. 271 MILL ROAD CHELMSFORD MASSACHUSETTS 01824 TELEPHONE: (978) 692-9090 FAX: (978) 692-6633 WEB: WWW.AMECEW.COM</div>						PROJECT: MassDEP SARSS	<div>CLIENT:</div> <div><div><div></div></div><div>MassDEP</div><div>Commonwealth of Massachusetts Department of Environmental Protection</div></div>	<div>FIGURE 13</div>	DESIGNED BY:	PROJECT NUMBER
						MicroFab Building 106 Haverhill Road Amesbury, MA 01913			DRAWN BY:	DRAWING NUMBER
						TITLE: Exterior Roof and Ground Level Sample Location			CHECKED BY	REVISION NUMBER
									DATE:	REFERENCE:
									SCALE:	SHEET NUMBER
									NOT TO SCALE	
	Revision	DATE	DESCRIPTION	ISSUED BY	APPROVED					
		12/28/2016	Change dot to oval							
		12/9/2016								



<div> AMEC MASSACHUSETTS, INC. 271 MILL ROAD CHELMSFORD MASSACHUSETTS 01824 TELEPHONE: (978) 692-9090 FAX: (978) 692-6633 WEB: WWW.AMECFW.COM</div>						PROJECT:	MassDEP SARSS	<div> Commonwealth of Massachusetts Department of Environmental Protection</div>	FIGURE 14	DESIGNED BY:	PROJECT NUMBER
							MicroFab Building			DRAWN BY:	DRAWING NUMBER
							106 Haverhill Road			CHECKED BY	REVISION NUMBER
							Amesbury, MA 01913			DATE:	REFERENCE:
										SCALE:	SHEET NUMBER
										NOT TO SCALE	
	Revision	DATE	DESCRIPTION	ISSUED BY	APPROVED	TITLE:	Dimension of Interior Areas Microfab Main( Area #1 -#8) and Wastewater treatment Building				

## **Appendix A: Photo Logs**

---



Universal Waste – Plating room (Location#1)



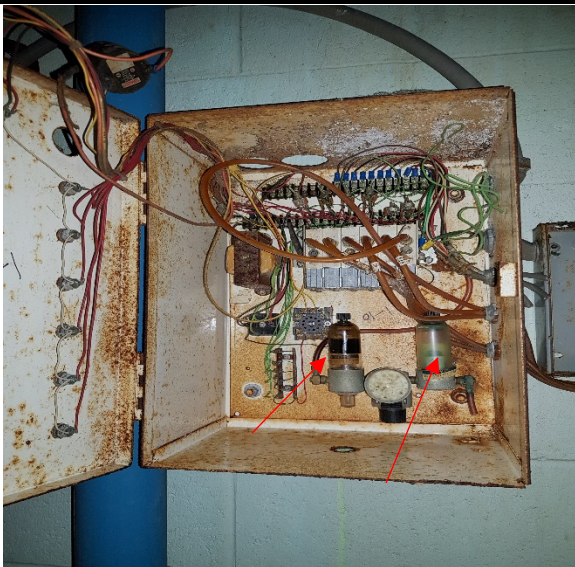
Emergency Lighting and exit sign



High-Intensity Discharge (HID) lamp

Total Number: 42

50% of bulbs are broken



Hydraulic Oil on alarm box system



Wall mounted Mercury Thermostat

Total Number: 1



**Bulk storage Tank – Location #2**



Bulk storage tank-1



Bulk storage tank-2



Solid ammonium hydroxide about 1 inch at bottom of tank-1  
Color: blue  
Sample ID: 2-1



Solid ammonium hydroxide about 1 inch at bottom of tank-1  
Color: White  
Sample ID: 2-2

Sampling for TCLP and Paint chips – Plating room (Location #1)



Two lines of plating bath.  
Each line contain 15 rectangular bath tank.



Solid remains inside rectangular bath tank of line 1  
Sample ID: 1-1, 1-2



Wall blue paint  
Sample ID: 1-3



Gaskets between Flanges  
Total number of gaskets: 5



Sampling for TCLP and Paint chips – Production Room (Location #3)



Wall paint on wall of corridor  
Sample ID: 3-1



wall board paint  
Sample ID: 3-2



Gray paint on wooden door of dark room  
Sample ID: 3-3



Corridor in-between plating room and production rom (#3)

Sampling for TCLP and Paint chips – Office Building (Location #6)



Wall paste on wall of quality manager room  
Sample ID: 6-1



Wall paste on wall of men bathroom  
Sample ID: 6-1



Wall paste on wall of sales room  
Sample ID: 6-1



Corridor of office building



Sampling for TCLP and Paint chips – Ground Floor (Location #7)



Acid contaminated area of storage room of ground floor  
Sample ID: 7-1



Rectangular plating bath in storage room of ground floor  
Sample ID: 7-2



Elevator reservoir having hydraulic Oil in trash room of ground floor  
Volume of oil: 40 gallons (worst case scenario)



Pump having hydraulic Oil in trash room of ground floor  
Volume of oil: 25 gallons (worst case scenario)

Sampling for TCLP and Paint chips – Basement (Location #8)



Drill hole to  
take sample  
out from  
bottom

White tank with iron stand in storage area of basement.



Drill hole to take  
sample out from  
bottom

Filtration process poly tank inside chemical make-up room of basement



Bottom sludge from bottom of white tank  
Sample ID: 8-1



Bottom sludge from filtration process poly tank inside chemical  
make-up room of basement  
Sample ID: 8-3



Sampling for TCLP and Paint chips – Basement (Location #8)



White tank with iron stand in storage area of basement.



Yellow tank at storage room of basement



Equipment – Basement (Location #8, #7)



Fire extinguisher inside chemical make-up room of basement



Filtration chamber inside chemical make-up room of basement



Air dryer inside chemical make-up room of basement



Three Poly tank with 1 inch of conc. acid pH of 1 at ground floor of new building (Location #7).  
Each Tank  
Volume ~ 7500 gallons  
Volume of acid~ 150 gallons (worse case)

**Window/door Caulking and Glazing from different location of building**



Window at corridor , new building (Location #5)



Window at plating room , Location #1



Door with caulking and glazing at touch up room of location 4.



Window at corridor (in-between plating room and production area, location #3)



**Lighting system:**



High-Intensity Discharge (HID) lamp  
Location: Touch-Up room, Location #5,  
Type: Universal waste.



Fluorescent tube with fixtures  
Location: throughout building  
Type: Universal waste.



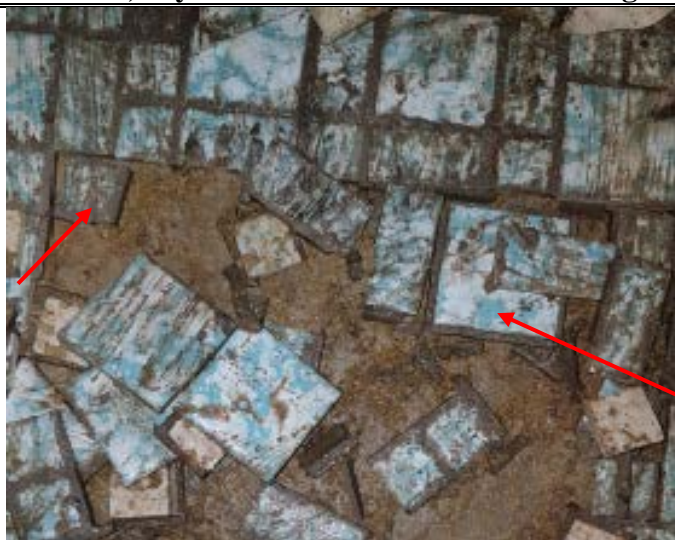
Ballasts attached with Fluorescent tube fixtures  
Location: throughout building  
Type: Universal waste.



Fluorescent tube with fixtures  
Location: throughout building, about 50% tubes are broken  
Type: Universal waste.



**Floor tiles, dry wall and debris: Office Building**



1/2 x 1/2 and 1x1 inches floor tiles with mastics in bathroom



Floor debris from corridor of building



Wall board end from interior office building wall.



Dry wall of inner office building.

Ceiling Tiles : New and existing building



2 Ft .X 4 Ft. ceiling tiles from new building ( Area #5)

1 Ft .X 4 Ft. ceiling tiles from new building (Area # 5)



2 Ft .X 2 Ft. ceiling tiles from existing building

1 Ft .X 1 Ft. ceiling tiles from new building basement (Area # 7)



Floor Tiles : New and existing building



9 Inch .X 12 Inch. Floor tiles from corridor ( Area #3)



9 Inch .X 9 Inch. Floor tiles from men bathroom new building (Area # 5)



12 Inch .X 12 Inch. Floor tiles from corridor ( Area #5)



Rubber matted stairs for going to Area #7 from #5



Exterior sampling: Roof and ground level



Equipment Flashing Materials - rubber, black tar material



Roofing Materials- rubber, with tar, shingle, and particle board material



Roof Edge Flashing Materials - tar material with wood, concrete, metal, and shingles



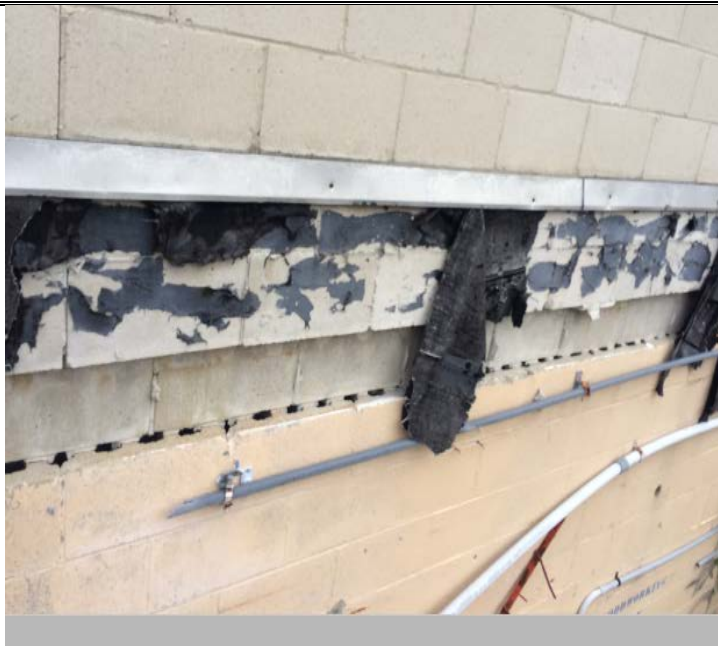
Roofing Materials- rubber, with tar, shingle, and particle board material



Exterior sampling: Roof and ground level



Interior Roof Edge Flashing Materials - tar material with wood, concrete, metal, and shingles



Exterior Wall Fiber Board



Exterior Wall Fiber Board



Roof Edge Flashing Materials



Exterior sampling: Roof and ground level



Roofing "Cap" Materials- rubber, tar with stone , and particle board material



Sill Materials - copper flashing with fiber and adhesive



Interior Roof Edge Flashing Materials - tar material with shingles, drywall, and fibers



Roofing Materials- rubber and tar



Exterior sampling: Roof and ground level



Roofing Materials- rubber, tar, and particle board material



Sill Materials - fiber and adhesive



Wall Materials - tar material with shingles and drywall



Roofing Materials- rubber, tar with stone , and particle board material



Exterior sampling: Roof and ground level



Block Wall Materials - loose insulation from block wall bay



Brickwork Seam Material



Block Wall Materials - loose insulation from block wall bay



Block Wall Materials - loose insulation from block wall bay



Exterior sampling: Roof and ground level



Dome adjacent to Area # 6



Overall roof picture



Miscellaneous equipment on the top of Area #6 roof



Transformer at exterior of Area # 2

---

## **Appendix B: EMSL Lab Result for Asbestos**



# EMSL Analytical, Inc.

7 Constitution Way, Suite 107 Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

<http://www.EMSL.com / bostonlab@emsl.com>

EMSL Order: 131604927

Customer ID: AMEC25

Customer PO: C012208776

Project ID:

Attention: Lok Rizal

AMEC Foster Wheeler E & I

271 Mill Road

Quorum Office Park

Chelmsford, MA 01824

Project: 7775160013

Phone: (978) 692-9090

Fax: (978) 692-6633

Received Date: 10/12/2016 4:10 PM

Analysis Date: 10/17/2016 - 10/19/2016

Collected Date:

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
1A-Ceiling Tile 131604927-0001	Interior - Plating Room Balcony, Adjacent to Elevator - Floor Debris; White, Yellow	Brown Fibrous Homogeneous	45% Cellulose 20% Glass	35% Non-fibrous (Other)	None Detected
HA: 1					
1A-Sheetrock 131604927-0001A	Interior - Plating Room Balcony, Adjacent to Elevator - Floor Debris; White, Yellow	White Non-Fibrous Homogeneous	5% Cellulose	65% Gypsum 30% Non-fibrous (Other)	None Detected
HA: 1					
1B-Sheetrock 131604927-0002	Interior - Plating Room Balcony, Adjacent to Elevator - Floor Debris: Green, Brown, White	Brown/Gray Fibrous Homogeneous	14% Cellulose 1% Glass	50% Gypsum 35% Non-fibrous (Other)	None Detected
HA: 1					
1B-Ceiling Tile 131604927-0002A	Interior - Plating Room Balcony, Adjacent to Elevator - Floor Debris: Green, Brown, White	Gray Fibrous Homogeneous	35% Cellulose 42% Min. Wool	23% Non-fibrous (Other)	None Detected
HA: 1					
1B-Fiberboard 131604927-0002B	Interior - Plating Room Balcony, Adjacent to Elevator - Floor Debris: Green, Brown, White	Brown Fibrous Homogeneous	93% Cellulose	7% Non-fibrous (Other)	None Detected
HA: 1					
2A-Floor Tile 131604927-0003	Interior - Plating Room Balcony, Adjacent to Elevator - 12"x12" Floor Tiles/Mastics; Brown, Black	Tan Non-Fibrous Homogeneous		32% Ca Carbonate 68% Non-fibrous (Other)	None Detected
HA: 1					
2A-Mastic 131604927-0003A	Interior - Plating Room Balcony, Adjacent to Elevator - 12"x12" Floor Tiles/Mastics; Brown, Black	Black Non-Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
HA: 1					
2B-Floor Tile 131604927-0004	Interior - Plating Room Balcony, Adjacent to Elevator - 12"x12" Floor Tiles/Mastics; Brown, Black	Gray Non-Fibrous Homogeneous	3% Cellulose	45% Ca Carbonate 52% Non-fibrous (Other)	None Detected
HA: 1					

Report amended: 10/20/2016 09:41:27 Replaces initial report from: 10/18/2016 13:28:55 Reason Code: Client-Additional Analysis





# EMSL Analytical, Inc.

7 Constitution Way, Suite 107 Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

<http://www.EMSL.com / bostonlab@emsl.com>

EMSL Order: 131604927

Customer ID: AMEC25

Customer PO: C012208776

Project ID:

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
2B-Mastic 131604927-0004A	Interior - Plating Room Balcony, Adjacent to Elevator - 12"x12" Floor Tiles/Mastics; Brown, Black	Brown/Black Non-Fibrous Homogeneous	6% Cellulose	42% Matrix 52% Non-fibrous (Other)	None Detected
HA: 1					
3A 131604927-0005	Interior - Windows Through Corridor - 47"x45" Window Caulking/Glazing; White	White Non-Fibrous Homogeneous		12% Ca Carbonate 88% Non-fibrous (Other)	None Detected
HA: 1					
4A 131604927-0006	Interior - Plating Floor - Concrete/Cement Plates; Brown, Black	Brown Non-Fibrous Homogeneous		43% Quartz 57% Non-fibrous (Other)	None Detected
HA: 1					
4B 131604927-0007	Interior - Plating Floor - Concrete/Cement Plates; Brown, Black	Brown/Gray Non-Fibrous Homogeneous		48% Quartz 4% Mica 48% Non-fibrous (Other)	None Detected
HA: 1					
5A 131604927-0008	Interior - Window in Maintenance Room - 48"x48" Window Caulking/Glazing; White, Yellow	Gray/Tan Non-Fibrous Homogeneous		40% Ca Carbonate 56% Non-fibrous (Other)	4% Chrysotile
HA: 2					
5B 131604927-0009	Interior - Window in Conference Room - 48"x48" Window Caulking/Glazing; Blue, White	Gray/Tan Non-Fibrous Homogeneous	3% Cellulose 1% Glass	20% Ca Carbonate 76% Non-fibrous (Other)	None Detected
Inseparable paint. HA: 2					
6A-Flooring 131604927-0010	Interior - Lay-up and Microplate Room - Debris from Floor; White, Yellow, Brown	Brown/White Fibrous Homogeneous	52% Cellulose	48% Non-fibrous (Other)	None Detected
HA: 2					
6A-Foam Insulation 131604927-0010A	Interior - Lay-up and Microplate Room - Debris from Floor; White, Yellow, Brown	Tan/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
HA: 2					
7A 131604927-0011	Interior - Lay-up Room Wall - Drywall; Brown, White, Pink	Brown/Gray Non-Fibrous Homogeneous	12% Cellulose	65% Gypsum 23% Non-fibrous (Other)	None Detected
HA: 2					
7B 131604927-0012	Interior - Process Room - Drywall; Brown, White	Brown/Gray Non-Fibrous Homogeneous	12% Cellulose	65% Gypsum 23% Non-fibrous (Other)	None Detected
HA: 2					
7C 131604927-0013	Interior - Programming Room - Drywall; Brown, White	Brown/Gray Fibrous Homogeneous	14% Cellulose	58% Gypsum 28% Non-fibrous (Other)	None Detected
HA: 2					

Report amended: 10/20/2016 09:41:27 Replaces initial report from: 10/18/2016 13:28:55 Reason Code: Client-Additional Analysis



# EMSL Analytical, Inc.

7 Constitution Way, Suite 107 Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

<http://www.EMSL.com> / [bostonlab@emsl.com](mailto:bostonlab@emsl.com)

EMSL Order: 131604927

Customer ID: AMEC25

Customer PO: C012208776

Project ID:

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
8A-Floor Tile  131604927-0014	Interior - Walkway Adjacent To Screening Room - 9"x9" Floor Tiles/Mastics; Yellow, Brown	Tan Non-Fibrous Homogeneous		32% Ca Carbonate 68% Non-fibrous (Other)	None Detected
HA: 3					
8A-Mastic  131604927-0014A	Interior - Walkway Adjacent To Screening Room - 9"x9" Floor Tiles/Mastics; Yellow, Brown	Gray Non-Fibrous Homogeneous		45% Matrix 55% Non-fibrous (Other)	None Detected
HA: 3					
8B-Floor Tile  131604927-0015	Interior - Walkway Adjacent To Oven Room - 9"x9" Floor Tiles/Mastics; Green, Yellow, Brown	Tan Non-Fibrous Homogeneous		32% Ca Carbonate 68% Non-fibrous (Other)	None Detected
HA: 3					
8B-Mastic  131604927-0015A	Interior - Walkway Adjacent To Oven Room - 9"x9" Floor Tiles/Mastics; Green, Yellow, Brown	Brown/Black Non-Fibrous Homogeneous	2% Cellulose	43% Matrix 55% Non-fibrous (Other)	None Detected
HA: 3					
8C-Floor Tile  131604927-0016	Interior - Walkway Adjacent To Photo Room - 9"x9" Floor Tiles/Mastics; Brown, Black	Tan Non-Fibrous Homogeneous		30% Ca Carbonate 65% Non-fibrous (Other)	5% Chrysotile
HA: 3					
8C-Mastic  131604927-0016A	Interior - Walkway Adjacent To Photo Room - 9"x9" Floor Tiles/Mastics; Brown, Black	Black Non-Fibrous Homogeneous	2% Glass	50% Matrix 48% Non-fibrous (Other)	None Detected
HA: 3					
9A-Floor Tile  131604927-0017	Interior - Screening Room - 12"x12" Floor Tiles/Mastics; Brown, Black	Brown Non-Fibrous Homogeneous		32% Ca Carbonate 68% Non-fibrous (Other)	None Detected
HA: 3					
9A-Mastic  131604927-0017A	Interior - Screening Room - 12"x12" Floor Tiles/Mastics; Brown, Black	Black Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
HA: 3					
9B-Floor Tile  131604927-0018	Interior - Photo Room - 12"x12" Floor Tiles/Mastics; Brown, Black	Brown Non-Fibrous Homogeneous		23% Ca Carbonate 77% Non-fibrous (Other)	None Detected
HA: 3					
9B-Mastic  131604927-0018A	Interior - Photo Room - 12"x12" Floor Tiles/Mastics; Brown, Black	Black Non-Fibrous Homogeneous		70% Matrix 24% Non-fibrous (Other)	6% Chrysotile
HA: 3					

Report amended: 10/20/2016 09:41:27 Replaces initial report from: 10/18/2016 13:28:55 Reason Code: Client-Additional Analysis



# EMSL Analytical, Inc.

7 Constitution Way, Suite 107 Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

<http://www.EMSL.com/bostonlab@emsl.com>

EMSL Order: 131604927

Customer ID: AMEC25

Customer PO: C012208776

Project ID:

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
9C-Floor Tile  131604927-0019	Interior - Photo Room - 12"x12" Floor Tiles/Mastics; Black, Gray	Gray/Tan Non-Fibrous Homogeneous	2% Cellulose	52% Ca Carbonate 46% Non-fibrous (Other)	None Detected
HA: 3					
9C-Mastic  131604927-0019A	Interior - Photo Room - 12"x12" Floor Tiles/Mastics; Black, Gray	Black Non-Fibrous Homogeneous		60% Matrix 37% Non-fibrous (Other)	3% Chrysotile
HA: 3					
10A  131604927-0020	Interior - Photo Room - Drywall; White, Brown, Yellow	Brown/Gray Non-Fibrous Homogeneous	15% Cellulose	65% Gypsum 20% Non-fibrous (Other)	None Detected
HA: 3					
10B  131604927-0021	Interior - Dark Room - Drywall; White, Brown, Yellow	Brown/Gray Non-Fibrous Homogeneous	15% Cellulose	65% Gypsum 20% Non-fibrous (Other)	None Detected
HA: 3					
10C-Sheetrock  131604927-0022	Interior - Touchup Room - Drywall; Blue, Yellow, Gray	Brown/Gray Fibrous Homogeneous	22% Cellulose 2% Glass	54% Gypsum 22% Non-fibrous (Other)	None Detected
HA: 3					
10C-Joint Compound  131604927-0022A <i>Inseparable paint / coating layer included in analysis</i>	Interior - Touchup Room - Drywall; Blue, Yellow, Gray	White/Blue Non-Fibrous Homogeneous		43% Ca Carbonate 4% Mica 53% Non-fibrous (Other)	None Detected
HA: 3					
11A  131604927-0023	Interior - Lobby - 1'x2' Ceiling Tiles; Brown, White	Gray/Tan Fibrous Homogeneous	45% Cellulose 25% Min. Wool	12% Perlite 18% Non-fibrous (Other)	None Detected
HA: 3					
11B-Ceiling Tile  131604927-0024	Interior - Lobby - 1'x2' Ceiling Tiles; Gray, Purple, White	Gray Fibrous Homogeneous	45% Cellulose 25% Min. Wool	15% Perlite 15% Non-fibrous (Other)	None Detected
HA: 3					
11B-Insulation  131604927-0024A	Interior - Lobby - 1'x2' Ceiling Tiles; Gray, Purple, White	Purple Fibrous Homogeneous	80% Glass	20% Non-fibrous (Other)	None Detected
HA: 3					
11B-Sheetrock  131604927-0024B	Interior - Lobby - 1'x2' Ceiling Tiles; Gray, Purple, White	Gray Non-Fibrous Homogeneous	5% Cellulose	65% Gypsum 30% Non-fibrous (Other)	None Detected
HA: 3					
11C  131604927-0025	Interior - Lobby - 1'x2' Ceiling Tiles; Brown, Yellow	Brown/Gray/White Fibrous Homogeneous	40% Cellulose 35% Min. Wool	25% Non-fibrous (Other)	None Detected
HA: 3					
12A  131604927-0026	Interior - Photo Room - 2'x4' Ceiling Tiles; White, Dark Gray	Gray Fibrous Homogeneous	45% Cellulose 25% Min. Wool	15% Perlite 15% Non-fibrous (Other)	None Detected
HA: 3					
12B  131604927-0027	Interior - Touchup Room - 2'x4' Ceiling Tiles; White, Dark Gray	Gray Fibrous Homogeneous	45% Cellulose 25% Min. Wool	15% Perlite 15% Non-fibrous (Other)	None Detected
HA: 3					

Report amended: 10/20/2016 09:41:27 Replaces initial report from: 10/18/2016 13:28:55 Reason Code: Client-Additional Analysis





# EMSL Analytical, Inc.

7 Constitution Way, Suite 107 Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

<http://www.EMSL.com/bostonlab@emsl.com>

EMSL Order: 131604927

Customer ID: AMEC25

Customer PO: C012208776

Project ID:

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
12C  131604927-0028  Inseparable paint / coating layer included in analysis	Interior - Screening Room - 2'x4' Ceiling Tiles; White, Dark Gray	Gray/White/Silver Fibrous Homogeneous	34% Cellulose 40% Min. Wool	26% Non-fibrous (Other)	None Detected
HA: 3					
13A-Cove Base  131604927-0029	Interior - Screening Room Wall End - Wall Board End; Yellow, Brown	Brown Non-Fibrous Homogeneous		32% Ca Carbonate 68% Non-fibrous (Other)	None Detected
HA: 3					
13A-Mastic  131604927-0029A	Interior - Screening Room Wall End - Wall Board End; Yellow, Brown	Brown Non-Fibrous Homogeneous	3% Cellulose	54% Matrix 43% Non-fibrous (Other)	None Detected
HA: 3					
13B-Cove Base  131604927-0030	Interior - Artwork Room - Wall Board End; Brown, Black	Brown Non-Fibrous Homogeneous		68% Matrix 32% Non-fibrous (Other)	None Detected
HA: 3					
13B-Mastic  131604927-0030A	Interior - Artwork Room - Wall Board End; Brown, Black	Tan Non-Fibrous Homogeneous	8% Cellulose	42% Matrix 50% Non-fibrous (Other)	None Detected
HA: 3					
13C-Cove Base  131604927-0031	Interior - Screen Makeup Room - Wall Board End; Black, Yellow	Brown Non-Fibrous Homogeneous		72% Matrix 28% Non-fibrous (Other)	None Detected
HA: 3					
13C-Mastic  131604927-0031A	Interior - Screen Makeup Room - Wall Board End; Black, Yellow	Tan Non-Fibrous Homogeneous		45% Matrix 55% Non-fibrous (Other)	None Detected
HA: 3					
14A-Sheetrock  131604927-0032	Interior - Floor of Photo Room, Walkway, Screening Room, Artwork Room - Floor Debris; Yellow, Brown, Dark Red	Gray Non-Fibrous Homogeneous		5% Quartz 70% Gypsum 25% Non-fibrous (Other)	None Detected
HA: 3					
14A-Ceiling Tile  131604927-0032A	Interior - Floor of Photo Room, Walkway, Screening Room, Artwork Room - Floor Debris; Yellow, Brown, Dark Red	Brown/Gray Fibrous Homogeneous	15% Cellulose 65% Min. Wool	20% Non-fibrous (Other)	None Detected
HA: 3					
14A-Flooring  131604927-0032B	Interior - Floor of Photo Room, Walkway, Screening Room, Artwork Room - Floor Debris; Yellow, Brown, Dark Red	Gray Non-Fibrous Homogeneous		38% Ca Carbonate 58% Non-fibrous (Other)	4% Chrysotile
HA: 3					

Report amended: 10/20/2016 09:41:27 Replaces initial report from: 10/18/2016 13:28:55 Reason Code: Client-Additional Analysis



# EMSL Analytical, Inc.

7 Constitution Way, Suite 107 Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

<http://www.EMSL.com/bostonlab@emsl.com>

EMSL Order: 131604927

Customer ID: AMEC25

Customer PO: C012208776

Project ID:

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
14A-Mastic  131604927-0032C	Interior - Floor of Photo Room, Walkway, Screening Room, Artwork Room - Floor Debris; Yellow, Brown, Dark Red	Tan/Black/Yellow Non-Fibrous Homogeneous	2% Cellulose	48% Matrix 50% Non-fibrous (Other)	<1% Chrysotile
inseparable mastic layers possible contamination from flooring material					
HA: 3					
15A-Floor Tile  131604927-0033	Interior - Walkway Adjacent to Fabrication Room - 9"x9" Floor Tiles/Mastics; Yellow, Brown, Black	Gray Non-Fibrous Homogeneous		40% Matrix 52% Non-fibrous (Other)	8% Chrysotile
HA: 4					
15A-Mastic  131604927-0033A	Interior - Walkway Adjacent to Fabrication Room - 9"x9" Floor Tiles/Mastics; Yellow, Brown, Black	Black Non-Fibrous Homogeneous	2% Cellulose	5% Quartz 38% Matrix 55% Non-fibrous (Other)	None Detected
HA: 4					
15B-Floor Tile  131604927-0034	Interior - First Aid Room - 9"x9" Floor Tiles/Mastics; Yellow, Brown, Black	Tan Non-Fibrous Homogeneous		50% Ca Carbonate 20% Matrix 28% Non-fibrous (Other)	2% Chrysotile
HA: 4					
15B-Mastic  131604927-0034A	Interior - First Aid Room - 9"x9" Floor Tiles/Mastics; Yellow, Brown, Black	Black Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile
possible contamination from inseparable floor tile					
HA: 4					
15C-Floor Tile  131604927-0035	Interior - Workset Inspect Room - 9"x9" Floor Tiles/Mastics; Yellow, Brown, Black	Tan Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile
HA: 4					
15C-Mastic  131604927-0035A	Interior - Workset Inspect Room - 9"x9" Floor Tiles/Mastics; Yellow, Brown, Black	Black Non-Fibrous Homogeneous		15% Ca Carbonate 60% Matrix 25% Non-fibrous (Other)	None Detected
HA: 4					
16A-Floor Tile  131604927-0036	Interior - Cafeteria - 12"x12" Floor Tiles/Mastics; Black, Brown	Tan Non-Fibrous Homogeneous	2% Cellulose	60% Ca Carbonate 38% Non-fibrous (Other)	None Detected
HA: 4					
16A-Mastic  131604927-0036A	Interior - Cafeteria - 12"x12" Floor Tiles/Mastics; Black, Brown	Black Non-Fibrous Homogeneous		40% Matrix 60% Non-fibrous (Other)	None Detected
HA: 4					
16B-Floor Tile  131604927-0037	Interior - Cafeteria - 12"x12" Floor Tiles/Mastics; Black, Brown	Gray Non-Fibrous Homogeneous	2% Cellulose	52% Ca Carbonate 46% Non-fibrous (Other)	None Detected
HA: 4					

Report amended: 10/20/2016 09:41:27 Replaces initial report from: 10/18/2016 13:28:55 Reason Code: Client-Additional Analysis



# EMSL Analytical, Inc.

7 Constitution Way, Suite 107 Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

<http://www.EMSL.com / bostonlab@emsl.com>

EMSL Order: 131604927

Customer ID: AMEC25

Customer PO: C012208776

Project ID:

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
16B-Mastic  131604927-0037A	Interior - Cafeteria - 12"x12" Floor Tiles/Mastics; Black, Brown	Black Non-Fibrous Homogeneous	5% Cellulose	35% Matrix 60% Non-fibrous (Other)	None Detected
HA: 4					
16C-Floor Tile  131604927-0038	Interior - Cafeteria - 12"x12" Floor Tiles/Mastics; Black, Brown	Gray Non-Fibrous Homogeneous		44% Ca Carbonate 56% Non-fibrous (Other)	None Detected
HA: 4					
16C-Mastic  131604927-0038A	Interior - Cafeteria - 12"x12" Floor Tiles/Mastics; Black, Brown	Black Non-Fibrous Homogeneous		50% Matrix 50% Non-fibrous (Other)	None Detected
HA: 4					
17A  131604927-0039  only ceramic tile, no mastic	Interior - Men's Toilet - 1"x1" Floor Tiles/Mastics; Green, White, Brown	White/Green Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
HA: 4					
17B  131604927-0040  only ceramic tile, no mastic	Interior - Men's Toilet - 1"x1" Floor Tiles/Mastics; Green, White, Brown	White/Green Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
HA: 4					
18A-Ceramic Tile  131604927-0041	Interior - Women's Toilet - 1"x1" Floor Tiles/Mastics; Green, White, Brown	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
HA: 4					
18A-Grout  131604927-0041A	Interior - Women's Toilet - 1"x1" Floor Tiles/Mastics; Green, White, Brown	Gray Non-Fibrous Homogeneous		35% Quartz 65% Non-fibrous (Other)	None Detected
HA: 4					
19A-Ceramic Tile  131604927-0042	Interior - Men's Toilet - 2"x4" Wet Wall Board; Green, Gray	White/Green Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
HA: 4					
19A-Grout  131604927-0042A	Interior - Men's Toilet - 2"x4" Wet Wall Board; Green, Gray	Tan Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
HA: 4					
19A-Wallboard  131604927-0042B	Interior - Men's Toilet - 2"x4" Wet Wall Board; Green, Gray	Brown Fibrous Homogeneous	96% Cellulose	4% Non-fibrous (Other)	None Detected
HA: 4					
19B-Ceramic Tile  131604927-0043	Interior - Men's Toilet - 2"x4" Wet Wall Board; Green, Gray	White/Green Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
HA: 4					
19B-Grout  131604927-0043A	Interior - Men's Toilet - 2"x4" Wet Wall Board; Green, Gray	Tan Non-Fibrous Homogeneous		32% Ca Carbonate 68% Non-fibrous (Other)	None Detected
HA: 4					

Report amended: 10/20/2016 09:41:27 Replaces initial report from: 10/18/2016 13:28:55 Reason Code: Client-Additional Analysis



# EMSL Analytical, Inc.

7 Constitution Way, Suite 107 Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

<http://www.EMSL.com / bostonlab@emsl.com>

EMSL Order: 131604927

Customer ID: AMEC25

Customer PO: C012208776

Project ID:

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
19B-Wallboard 131604927-0043B	Interior - Men's Toilet - 2"x4" Wet Wall Board; Green, Gray	Brown/Black Fibrous Homogeneous	90% Cellulose  HA: 4	10% Non-fibrous (Other)	None Detected
20A 131604927-0044	Interior - Men's Toilet - 12"x12" Ceiling Tiles; Brown, White	Brown Fibrous Homogeneous	98% Cellulose  HA: 4	2% Non-fibrous (Other)	None Detected
20B 131604927-0045	Interior - Women's Toilet - 12"x12" Ceiling Tiles; Brown, White	Brown Fibrous Homogeneous	80% Cellulose  HA: 4	20% Non-fibrous (Other)	None Detected
21A 131604927-0046	Interior - Women's Toilet - 2"x4" Wet Wall Board; Brown, Gray	Tan/Pink Non-Fibrous Homogeneous	HA: 4	10% Quartz 90% Non-fibrous (Other)	None Detected
21B 131604927-0047	Interior - Women's Toilet - 2"x4" Wet Wall Board; Brown, Gray	Tan Non-Fibrous Homogeneous	HA: 4	15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
22A 131604927-0048	Interior - Cafeteria - 2'x4' Ceiling Tiles; White, Brown	Tan Fibrous Homogeneous	50% Cellulose 10% Min. Wool HA: 4	20% Perlite 20% Non-fibrous (Other)	None Detected
22B 131604927-0049	Interior - Cafeteria - 2'x4' Ceiling Tiles; White, Brown	Brown Fibrous Homogeneous	60% Cellulose 10% Min. Wool HA: 4	20% Perlite 10% Non-fibrous (Other)	None Detected
22C 131604927-0050	Interior - Walkway Adjacent to Cafeteria - 2'x4' Ceiling Tiles; White, Brown	Gray/Tan Non-Fibrous Homogeneous	45% Cellulose 20% Min. Wool HA: 4	15% Perlite 20% Non-fibrous (Other)	None Detected
23A-Drywall 131604927-0051	Interior - Drill Room - Drywall; Yellow, White, Brown	Gray Non-Fibrous Homogeneous	2% Cellulose  HA: 4	60% Gypsum 38% Non-fibrous (Other)	None Detected
23A-Joint Compound 131604927-0051A	Interior - Drill Room - Drywall; Yellow, White, Brown	White Non-Fibrous Homogeneous	HA: 4	50% Ca Carbonate 2% Mica 48% Non-fibrous (Other)	None Detected
23B 131604927-0052	Interior - Cafeteria - Drywall; Yellow, White, Brown	Gray Non-Fibrous Homogeneous	HA: 4	15% Ca Carbonate 55% Gypsum 30% Non-fibrous (Other)	None Detected
23C 131604927-0053	Interior - Fabrication Room - Drywall; Yellow, White, Brown	Brown/Gray Fibrous Homogeneous	12% Cellulose  HA: 4	65% Gypsum 23% Non-fibrous (Other)	None Detected
24A-Cove Base 131604927-0054	Interior - First Aid Room - Wall Board End; Black, White	Black Non-Fibrous Homogeneous	HA: 4	15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
24A-Adhesive 131604927-0054A	Interior - First Aid Room - Wall Board End; Black, White	Yellow Non-Fibrous Homogeneous	HA: 4	25% Ca Carbonate 60% Matrix 15% Non-fibrous (Other)	None Detected

Report amended: 10/20/2016 09:41:27 Replaces initial report from: 10/18/2016 13:28:55 Reason Code: Client-Additional Analysis



# EMSL Analytical, Inc.

7 Constitution Way, Suite 107 Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

<http://www.EMSL.com/bostonlab@emsl.com>

EMSL Order: 131604927

Customer ID: AMEC25

Customer PO: C012208776

Project ID:

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
24A-Leveling Compound  131604927-0054B	Interior - First Aid Room - Wall Board End; Black, White	White Non-Fibrous Homogeneous		60% Ca Carbonate 2% Mica 38% Non-fibrous (Other)	None Detected
HA: 4					
24B-Cove Base  131604927-0055	Interior - Fabrication Room - Wall Board End; Black, White	Black Non-Fibrous Homogeneous		6% Ca Carbonate 94% Non-fibrous (Other)	None Detected
HA: 4					
24B-Mastic  131604927-0055A	Interior - Fabrication Room - Wall Board End; Black, White	Brown Non-Fibrous Homogeneous		60% Matrix 40% Non-fibrous (Other)	None Detected
HA: 4					
24B-Leveling Compound  131604927-0055B	Interior - Fabrication Room - Wall Board End; Black, White	White Non-Fibrous Homogeneous		40% Ca Carbonate 12% Gypsum 48% Non-fibrous (Other)	None Detected
HA: 4					
25A-Floor Tile  131604927-0056	Interior - Corridor Adjacent to Fabrication Room - 12"x12" Floor Tiles/Mastics; Yellow, Brown, Black	Tan Non-Fibrous Homogeneous		50% Ca Carbonate 30% Matrix 18% Non-fibrous (Other)	2% Chrysotile
HA: 5					
25A-Mastic  131604927-0056A	Interior - Corridor Adjacent to Fabrication Room - 12"x12" Floor Tiles/Mastics; Yellow, Brown, Black	Black Non-Fibrous Homogeneous		70% Matrix 24% Non-fibrous (Other)	6% Chrysotile
HA: 5					
25B-Floor Tile  131604927-0057	Interior - Corridor Adjacent to Test and Adduct Room - 12"x12" Floor Tiles/Mastics; Yellow, Brown, Black	Tan Non-Fibrous Homogeneous		40% Ca Carbonate 30% Matrix 28% Non-fibrous (Other)	2% Chrysotile
HA: 5					
25B-Mastic  131604927-0057A	Interior - Corridor Adjacent to Test and Adduct Room - 12"x12" Floor Tiles/Mastics; Yellow, Brown, Black	Black Non-Fibrous Homogeneous		60% Matrix 35% Non-fibrous (Other)	5% Chrysotile
HA: 5					
25C-Floor Tile  131604927-0058	Interior - Equipment Receiving Area - 12"x12" Floor Tiles/Mastics; Yellow, Brown, Black	Tan Non-Fibrous Homogeneous		50% Ca Carbonate 30% Matrix 17% Non-fibrous (Other)	3% Chrysotile
HA: 5					
25C-Mastic  131604927-0058A	Interior - Equipment Receiving Area - 12"x12" Floor Tiles/Mastics; Yellow, Brown, Black	Black Non-Fibrous Homogeneous		10% Ca Carbonate 70% Matrix 18% Non-fibrous (Other)	2% Chrysotile
HA: 5					

Report amended: 10/20/2016 09:41:27 Replaces initial report from: 10/18/2016 13:28:55 Reason Code: Client-Additional Analysis



# EMSL Analytical, Inc.

7 Constitution Way, Suite 107 Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

<http://www.EMSL.com> / [bostonlab@emsl.com](mailto:bostonlab@emsl.com)

EMSL Order: 131604927

Customer ID: AMEC25

Customer PO: C012208776

Project ID:

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
26A 131604927-0059	Interior - Corridor Adjacent to Shipping Room - 2'x4' Ceiling Tiles; White, Gray	Tan Fibrous Homogeneous	50% Cellulose 35% Min. Wool	10% Perlite 5% Non-fibrous (Other)	None Detected
HA: 5					
26B 131604927-0060	Interior - Women's Bathroom - 2'x4' Ceiling Tiles; White, Gray	Tan Fibrous Homogeneous	50% Cellulose 15% Min. Wool	12% Perlite 23% Non-fibrous (Other)	None Detected
HA: 5					
26C 131604927-0061	Interior - Faculties Manager Room - 2'x4' Ceiling Tiles; White, Gray	Tan Fibrous Homogeneous	25% Cellulose 36% Min. Wool	12% Perlite 27% Non-fibrous (Other)	None Detected
HA: 5					
27A 131604927-0062	Interior - Fabrication Room - Drywall; Gray, Brown	Gray Non-Fibrous Homogeneous	3% Cellulose	10% Ca Carbonate 60% Gypsum 27% Non-fibrous (Other)	None Detected
HA: 5					
27B 131604927-0063	Interior - Programming Room - Drywall; Gray, Brown	Gray Non-Fibrous Homogeneous	<1% Glass	15% Ca Carbonate 50% Gypsum 35% Non-fibrous (Other)	None Detected
HA: 5					
27C 131604927-0064	Interior - Men's Bathroom - Drywall; Gray, Brown	Gray Non-Fibrous Homogeneous	6% Cellulose	70% Gypsum 24% Non-fibrous (Other)	None Detected
HA: 5					
28A-Floor Tile 131604927-0065	Interior - Men's Bathroom - 12"x12" Floor Tiles/Mastics; Brown, Black	Red Non-Fibrous Homogeneous		45% Ca Carbonate 20% Matrix 33% Non-fibrous (Other)	2% Chrysotile
HA: 5					
28A-Mastic 131604927-0065A	Interior - Men's Bathroom - 12"x12" Floor Tiles/Mastics; Brown, Black	Black Non-Fibrous Homogeneous		80% Matrix 18% Non-fibrous (Other)	2% Chrysotile
HA: 5					
28B-Floor Tile 131604927-0066	Interior - Men's Bathroom - 12"x12" Floor Tiles/Mastics; Brown, Black	Red Non-Fibrous Homogeneous		70% Ca Carbonate 20% Matrix 8% Non-fibrous (Other)	2% Chrysotile
HA: 5					
28B-Mastic 131604927-0066A	Interior - Men's Bathroom - 12"x12" Floor Tiles/Mastics; Brown, Black	Black Non-Fibrous Homogeneous		70% Matrix 24% Non-fibrous (Other)	6% Chrysotile
HA: 5					
29A-Cove Base 131604927-0067	Interior - Touchup Room - Wall Board End; Dark Gray	Brown Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
HA: 5					
29A-Adhesive 131604927-0067A	Interior - Touchup Room - Wall Board End; Dark Gray	Brown Non-Fibrous Homogeneous		80% Matrix 20% Non-fibrous (Other)	None Detected
HA: 5					
29B-Cove Base 131604927-0068	Interior - Corridor Adjacent to Method Room - Wall Board End; Dark Gray	Brown Non-Fibrous Homogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected

Report amended: 10/20/2016 09:41:27 Replaces initial report from: 10/18/2016 13:28:55 Reason Code: Client-Additional Analysis





# EMSL Analytical, Inc.

7 Constitution Way, Suite 107 Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

<http://www.EMSL.com / bostonlab@emsl.com>

EMSL Order: 131604927

Customer ID: AMEC25

Customer PO: C012208776

Project ID:

## 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
HA: 5					
29B-Adhesive  131604927-0068A	Interior - Corridor Adjacent to Method Room - Wall Board End; Dark Gray	Black Non-Fibrous Homogeneous		50% Matrix 50% Non-fibrous (Other)	None Detected
HA: 5					
29C-Cove Base  131604927-0069	Interior - Equipment Receiving Area - Wall Board End; Dark Gray	Gray/Black Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
HA: 5					
29C-Mastic  131604927-0069A	Interior - Equipment Receiving Area - Wall Board End; Dark Gray	Gray Non-Fibrous Homogeneous		54% Matrix 46% Non-fibrous (Other)	None Detected
HA: 5					
30A  131604927-0070  Sample appears to be grout. Limited sample.	Interior - Fabrication Room - Window Caulking/Glazing; White, Yellow	Gray Non-Fibrous Homogeneous		20% Ca Carbonate 78% Non-fibrous (Other)	2% Chrysotile
HA: 5					
30B  131604927-0071	Interior - Corridor Adjacent to Touchup Room - Window Caulking/Glazing; White, Yellow	Clear Non-Fibrous Homogeneous		30% Ca Carbonate 68% Non-fibrous (Other)	2% Chrysotile
HA: 5					
30C  131604927-0072	Interior - Corridor Adjacent to Method Room - Window Caulking/Glazing; White, Yellow	Red Non-Fibrous Homogeneous		20% Ca Carbonate 78% Non-fibrous (Other)	2% Chrysotile
HA: 5					
31A-Rubber Matted Stair  131604927-0073	Interior - Stairs for Going to #7 from #5 - Rubber Matted Stairs; Brown, Yellow	Red Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
HA: 5					
31A-Mastic  131604927-0073A	Interior - Stairs for Going to #7 from #5 - Rubber Matted Stairs; Brown, Yellow	Black Non-Fibrous Homogeneous		70% Matrix 30% Non-fibrous (Other)	None Detected
HA: 5					
31A-Leveling Compound  131604927-0073B	Interior - Stairs for Going to #7 from #5 - Rubber Matted Stairs; Brown, Yellow	Tan Non-Fibrous Homogeneous		50% Ca Carbonate 1% Mica 49% Non-fibrous (Other)	None Detected
HA: 5					
31B-Rubber Matted Stair  131604927-0074	Interior - Stairs for Going to #7 from #5 - Rubber Matted Stairs; Brown, Yellow	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
HA: 5					
31B-Mastic  131604927-0074A	Interior - Stairs for Going to #7 from #5 - Rubber Matted Stairs; Brown, Yellow	Brown Non-Fibrous Homogeneous		40% Matrix 60% Non-fibrous (Other)	None Detected
HA: 5					

Report amended: 10/20/2016 09:41:27 Replaces initial report from: 10/18/2016 13:28:55 Reason Code: Client-Additional Analysis



# EMSL Analytical, Inc.

7 Constitution Way, Suite 107 Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

<http://www.EMSL.com / bostonlab@emsl.com>

EMSL Order: 131604927

Customer ID: AMEC25

Customer PO: C012208776

Project ID:

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
31B-Leveling Compound  131604927-0074B	Interior - Stairs for Going to #7 from #5 - Rubber Matted Stairs; Brown, Yellow	Tan Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
HA: 5					
32A  131604927-0075	Interior - Men's Bathroom - 1"x1" & 1"x.5" Floor Tiles/Mastics; Blue, White, Yellow	White/Blue Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
Contain only ceramic floor tile.  HA: 6					
32B-Ceramic Floor Tile  131604927-0076	Interior - Men's Bathroom - 1"x1" & 1"x.5" Floor Tiles/Mastics; Blue, White, Yellow	White/Blue Non-Fibrous Homogeneous		30% Quartz 70% Non-fibrous (Other)	None Detected
HA: 6					
32B-Adhesive  131604927-0076A	Interior - Men's Bathroom - 1"x1" & 1"x.5" Floor Tiles/Mastics; Blue, White, Yellow	Yellow Non-Fibrous Homogeneous		80% Matrix 20% Non-fibrous (Other)	None Detected
HA: 6					
32C-Ceramic Floor Tile  131604927-0077	Interior - Men's Bathroom - 1"x1" & 1"x.5" Floor Tiles/Mastics; Blue, White, Yellow	White/Blue Non-Fibrous Homogeneous		30% Quartz 70% Non-fibrous (Other)	None Detected
HA: 6					
32C-Grout  131604927-0077A	Interior - Men's Bathroom - 1"x1" & 1"x.5" Floor Tiles/Mastics; Blue, White, Yellow	Gray Non-Fibrous Homogeneous		60% Quartz 20% Ca Carbonate 20% Non-fibrous (Other)	None Detected
HA: 6					
32D  131604927-0078	Interior - Women's Bathroom - 1"x1" & 1"x.5" Floor Tiles/Mastics; Yellow, White	Tan/White Non-Fibrous Homogeneous		15% Quartz 85% Non-fibrous (Other)	None Detected
HA: 6					
32E-Ceramic Tile  131604927-0079	Interior - Women's Bathroom - 1"x1" & 1"x.5" Floor Tiles/Mastics; Yellow, White	White/Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
sample bag labeled '3E'  HA: 6					
32E-Grout  131604927-0079A	Interior - Women's Bathroom - 1"x1" & 1"x.5" Floor Tiles/Mastics; Yellow, White	Gray Non-Fibrous Homogeneous		38% Quartz 20% Gypsum 42% Non-fibrous (Other)	None Detected
HA: 6					
32E-Adhesive  131604927-0079B	Interior - Women's Bathroom - 1"x1" & 1"x.5" Floor Tiles/Mastics; Yellow, White	Brown Non-Fibrous Homogeneous		8% Quartz 54% Matrix 38% Non-fibrous (Other)	None Detected

Report amended: 10/20/2016 09:41:27 Replaces initial report from: 10/18/2016 13:28:55 Reason Code: Client-Additional Analysis



# EMSL Analytical, Inc.

7 Constitution Way, Suite 107 Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

<http://www.EMSL.com/bostonlab@emsl.com>

EMSL Order: 131604927

Customer ID: AMEC25

Customer PO: C012208776

Project ID:

## 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
HA: 6					
32F-Ceramic Tile  131604927-0080	Interior - Women's Bathroom - 1"x1" & 1"x.5" Floor Tiles/Mastics; Yellow, White	Gray Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
HA: 6					
32F-Grout  131604927-0080A	Interior - Women's Bathroom - 1"x1" & 1"x.5" Floor Tiles/Mastics; Yellow, White	Gray Non-Fibrous Homogeneous		60% Quartz 40% Non-fibrous (Other)	None Detected
HA: 6					
33A-Drywall  131604927-0081	Interior - Accounting Room - Drywall; White, Brown	Gray Non-Fibrous Homogeneous		10% Ca Carbonate 70% Gypsum 20% Non-fibrous (Other)	None Detected
HA: 6					
33A-Joint Compound  131604927-0081A Inseparable paint / coating layer included in analysis	Interior - Accounting Room - Drywall; White, Brown	White Non-Fibrous Homogeneous	8% Glass	60% Ca Carbonate 3% Mica 29% Non-fibrous (Other)	None Detected
HA: 6					
33B  131604927-0082	Interior - Office Adjacent to Sales Room - Drywall; White, Brown	Gray Non-Fibrous Homogeneous	10% Cellulose 1% Glass	70% Gypsum 19% Non-fibrous (Other)	None Detected
HA: 6					
33C  131604927-0083	Interior - Women's Bathroom - Drywall; White, Brown	Gray Non-Fibrous Homogeneous	2% Cellulose	63% Gypsum 35% Non-fibrous (Other)	None Detected
HA: 6					
34A  131604927-0084	Interior - Window at Sales Room - Window Caulking; White	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
HA: 6					
34B  131604927-0085	Interior - Window at Upstairs - Window Caulking; White	Gray/White Non-Fibrous Homogeneous	<1% Fibrous (Other)	35% Ca Carbonate 65% Non-fibrous (Other)	None Detected
HA: 6					
35A  131604927-0086  Inseparable paint / coating layer included in analysis	Interior - Floor of Sale, Office and Accounting Room - Floor Representative Sample; White, Brown, Black	Gray/Tan/White Non-Fibrous Homogeneous	10% Fibrous (Other)	60% Gypsum 30% Non-fibrous (Other)	None Detected
HA: 6					
36A  131604927-0087	Interior - Office Corridor - Floor Debris; White, Gray	Tan Fibrous Homogeneous	50% Cellulose 10% Min. Wool	15% Perlite 25% Non-fibrous (Other)	None Detected
HA: 6					
37A-Cove Base  131604927-0088	Interior - Plant Manager Room - Wall Board End; Brown	Brown Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
HA: 6					
37A-Adhesive  131604927-0088A	Interior - Plant Manager Room - Wall Board End; Brown	Brown Non-Fibrous Homogeneous		30% Ca Carbonate 60% Matrix 10% Non-fibrous (Other)	None Detected

Report amended: 10/20/2016 09:41:27 Replaces initial report from: 10/18/2016 13:28:55 Reason Code: Client-Additional Analysis



# EMSL Analytical, Inc.

7 Constitution Way, Suite 107 Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

<http://www.EMSL.com / bostonlab@emsl.com>

EMSL Order: 131604927

Customer ID: AMEC25

Customer PO: C012208776

Project ID:

## 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
HA: 6					
37A-Leveling Compound  131604927-0088B	Interior - Plant Manager Room - Wall Board End; Brown	Tan Non-Fibrous Homogeneous		65% Ca Carbonate 3% Mica 32% Non-fibrous (Other)	None Detected
HA: 6					
37B-Cove Base  131604927-0089	Interior - Office Adjacent to Women's Bathroom - Wall Board End; Brown	Brown Non-Fibrous Homogeneous		42% Ca Carbonate 58% Non-fibrous (Other)	None Detected
HA: 6					
37B-Mastic  131604927-0089A  Result includes a small amount of inseparable attached material	Interior - Office Adjacent to Women's Bathroom - Wall Board End; Brown	Brown Non-Fibrous Homogeneous	3% Cellulose	55% Matrix 42% Non-fibrous (Other)	None Detected
HA: 6					
38A-Floor Tile  131604927-0090	Interior - Corridor Adjacent to Purchasing Room - 12"x12" Floor Tiles/Mastics; Brown, Black	Tan Non-Fibrous Homogeneous		30% Ca Carbonate 40% Matrix 28% Non-fibrous (Other)	2% Chrysotile
HA: 7					
38A-Mastic  131604927-0090A	Interior - Corridor Adjacent to Purchasing Room - 12"x12" Floor Tiles/Mastics; Brown, Black	Black Non-Fibrous Homogeneous		80% Matrix 18% Non-fibrous (Other)	2% Chrysotile
HA: 7					
38B-Floor Tile  131604927-0091	Interior - Corridor Adjacent to Trash Room - 12"x12" Floor Tiles/Mastics; Brown, Black	White Non-Fibrous Homogeneous		40% Ca Carbonate 30% Matrix 27% Non-fibrous (Other)	3% Chrysotile
HA: 7					
38B-Mastic  131604927-0091A  Result includes a small amount of inseparable attached material	Interior - Corridor Adjacent to Trash Room - 12"x12" Floor Tiles/Mastics; Brown, Black	Brown/Black Non-Fibrous Homogeneous		40% Ca Carbonate 50% Matrix 8% Non-fibrous (Other)	2% Chrysotile
HA: 7					
39A  131604927-0092	Interior - Corridor Adjacent to Trash Room - Miscellaneous Fiberglass Type Insulation; Yellow	Silver/Yellow Fibrous Homogeneous	90% Min. Wool	10% Non-fibrous (Other)	None Detected
HA: 7					
39B  131604927-0093	Interior - Corridor Adjacent to Trash Room - Miscellaneous Fiberglass Type Insulation; Yellow	Silver/Yellow Fibrous Homogeneous	84% Min. Wool	16% Non-fibrous (Other)	None Detected
HA: 7					

Report amended: 10/20/2016 09:41:27 Replaces initial report from: 10/18/2016 13:28:55 Reason Code: Client-Additional Analysis



# EMSL Analytical, Inc.

7 Constitution Way, Suite 107 Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

<http://www.EMSL.com / bostonlab@emsl.com>

EMSL Order: 131604927

Customer ID: AMEC25

Customer PO: C012208776

Project ID:

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
40A  131604927-0094	Interior - Corridor Adjacent to Trash Room - Miscellaneous Fiberglass Type Insulation; Black	Gray Fibrous Homogeneous	95% Glass	5% Non-fibrous (Other)	None Detected
HA: 7					
40B  131604927-0095	Interior - Corridor Adjacent to Trash Room - Miscellaneous Fiberglass Type Insulation; Black	Gray/Black Fibrous Homogeneous	72% Glass	28% Non-fibrous (Other)	None Detected
HA: 7					
41A  131604927-0096	Interior - Drilling Room - Drywall; Brown, Gray	Brown Non-Fibrous Homogeneous		70% Ca Carbonate 15% Gypsum 15% Non-fibrous (Other)	None Detected
HA: 7					
41B  131604927-0097	Interior - Women's Bathroom - Drywall; Brown, Gray	Brown/Gray Fibrous Homogeneous	18% Cellulose	54% Gypsum 28% Non-fibrous (Other)	None Detected
HA: 7					
42A  131604927-0098	Interior - Waiting & Reception Room - 1'x2' Ceiling Tiles; Yellow, Gray	Gray Fibrous Homogeneous	25% Cellulose 60% Min. Wool	10% Perlite 5% Non-fibrous (Other)	None Detected
HA: 7					
42B  131604927-0099	Interior - Corridor Adjacent to Laminating Room - 2'x4' Ceiling Tiles; Yellow, Gray	Gray/White Fibrous Homogeneous	40% Cellulose 45% Min. Wool	15% Non-fibrous (Other)	None Detected
HA: 7					
43A-Cove Base  131604927-0100	Interior - Elevator Room - Wall Board End; Black, White	Brown Non-Fibrous Homogeneous		25% Ca Carbonate 75% Non-fibrous (Other)	None Detected
HA: 7					
43A-Adhesive  131604927-0100A	Interior - Elevator Room - Wall Board End; Black, White	Brown Non-Fibrous Homogeneous		20% Ca Carbonate 50% Matrix 30% Non-fibrous (Other)	None Detected
HA: 7					
43A-Leveling Compound  131604927-0100B	Interior - Elevator Room - Wall Board End; Black, White	White Non-Fibrous Homogeneous		75% Ca Carbonate 3% Mica 22% Non-fibrous (Other)	None Detected
HA: 7					
43B-Cove Base  131604927-0101	Interior - Office Room Adjacent to Drilling - Wall Board End; Black, White	Black Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
HA: 7					
43B-Mastic  131604927-0101A	Interior - Office Room Adjacent to Drilling - Wall Board End; Black, White	Black Non-Fibrous Homogeneous		30% Ca Carbonate 48% Matrix 22% Non-fibrous (Other)	None Detected
HA: 7					
43B-Joint Compound  131604927-0101B	Interior - Office Room Adjacent to Drilling - Wall Board End; Black, White	White Non-Fibrous Homogeneous		45% Ca Carbonate 7% Mica 48% Non-fibrous (Other)	None Detected

Report amended: 10/20/2016 09:41:27 Replaces initial report from: 10/18/2016 13:28:55 Reason Code: Client-Additional Analysis



# EMSL Analytical, Inc.

7 Constitution Way, Suite 107 Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

<http://www.EMSL.com/bostonlab@emsl.com>

EMSL Order: 131604927

Customer ID: AMEC25

Customer PO: C012208776

Project ID:

## 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
HA: 7					
44A  131604927-0102	Interior - Receiving and Storage Room - Basement Floor Debris; Yellow, Dark Brown	Brown Non-Fibrous Homogeneous	2% Cellulose <1% Glass	25% Quartz 73% Non-fibrous (Other)	None Detected
HA: 8					
44B  131604927-0103 foam	Interior - Boiler Room - Boiler Room Debris; Brown, Black	Brown/Gray/Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
HA: 8					
1R-A-stone layer  131604927-0104	Roof Area 1 - Roofing Materials - Rubber, Tar with Stone, and Particle Board Material	Brown Non-Fibrous Homogeneous	25% Cellulose	35% Quartz 25% Perlite 15% Non-fibrous (Other)	None Detected
HA: 1					
1R-A-Tar layer  131604927-0104A	Roof Area 1 - Roofing Materials - Rubber, Tar with Stone, and Particle Board Material	Black Non-Fibrous Homogeneous	15% Cellulose	80% Matrix 5% Non-fibrous (Other)	None Detected
HA: 1					
1R-B-Concrete  131604927-0105	Roof Area 1 - Roof Edge Flashing Materials - Tar Material with Wood, Concrete, Metal, and Shingles	Gray Non-Fibrous Homogeneous		45% Quartz 35% Gypsum 20% Non-fibrous (Other)	None Detected
HA: 1					
1R-B-Tar  131604927-0105A	Roof Area 1 - Roof Edge Flashing Materials - Tar Material with Wood, Concrete, Metal, and Shingles	Black Fibrous Homogeneous	20% Cellulose	45% Matrix 27% Non-fibrous (Other)	8% Chrysotile
HA: 1					
1R-B-Tar -Tar Paper on wood  131604927-0105B	Roof Area 1 - Roof Edge Flashing Materials - Tar Material with Wood, Concrete, Metal, and Shingles	Black Fibrous Homogeneous	65% Cellulose	30% Matrix 1% Non-fibrous (Other)	4% Chrysotile
HA: 1					
1R-C-Tar  131604927-0106	Roof Area 1 - Equipment Flashing Materials - Black Tar Material with Wood and Fibers	Black Fibrous Homogeneous	20% Cellulose	60% Matrix 17% Non-fibrous (Other)	3% Chrysotile
HA: 1					
1R-C-Tar Paper  131604927-0106A	Roof Area 1 - Equipment Flashing Materials - Black Tar Material with Wood and Fibers	Red/Black Fibrous Homogeneous	40% Cellulose	35% Matrix 15% Non-fibrous (Other)	10% Chrysotile
HA: 1					

Report amended: 10/20/2016 09:41:27 Replaces initial report from: 10/18/2016 13:28:55 Reason Code: Client-Additional Analysis





# EMSL Analytical, Inc.

7 Constitution Way, Suite 107 Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

<http://www.EMSL.com / bostonlab@emsl.com>

EMSL Order: 131604927

Customer ID: AMEC25

Customer PO: C012208776

Project ID:

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
2R-A-Tar board  131604927-0107	Roof Area 2 - Roofing Materials - Rubber with Tar and Particle Board Material	Brown/Black Fibrous Homogeneous	85% Cellulose	15% Matrix	None Detected
HA: 2					
2R-A-Tar layers  131604927-0107A	Roof Area 2 - Roofing Materials - Rubber with Tar and Particle Board Material	Black Non-Fibrous Homogeneous		10% Mica 75% Matrix 15% Non-fibrous (Other)	None Detected
HA: 2					
2R-B  131604927-0108  Inhomogeneous Set	Roof Area 2 - Roof Edge Flashing Materials - Tar Material with Shingles	Black Fibrous Homogeneous	20% Cellulose	35% Matrix 40% Non-fibrous (Other)	5% Chrysotile
HA: 2					
2R-C  131604927-0109	Roof Area 2 - Equipment Flashing Materials - Rubber, Black Tar Material and Fibers	Black Non-Fibrous Homogeneous		10% Ca Carbonate 60% Matrix 28% Non-fibrous (Other)	2% Chrysotile
HA: 2					
3R-A  131604927-0110	Roof Area 3 - Roofing Materials - Roof Shingle	Gray/Black Fibrous Homogeneous	15% Cellulose	25% Ca Carbonate 60% Matrix	None Detected
HA: 3					
3R-B-board  131604927-0111	Roof Area 3 - Roofing Materials - Rubber with Tar, Shingle, and Particle Board Material	Brown Fibrous Homogeneous	86% Cellulose	14% Non-fibrous (Other)	None Detected
HA: 3					
3R-B-Tar Paper  131604927-0111A	Roof Area 3 - Roofing Materials - Rubber with Tar, Shingle, and Particle Board Material	Black Fibrous Homogeneous	20% Cellulose 15% Synthetic	65% Matrix	None Detected
HA: 3					
3R-B-Tar  131604927-0111B	Roof Area 3 - Roofing Materials - Rubber with Tar, Shingle, and Particle Board Material	Black Non-Fibrous Homogeneous	10% Cellulose	80% Matrix 10% Non-fibrous (Other)	None Detected
HA: 3					
3R-C  131604927-0112	Roof Area 3 - Roof Edge Flashing Materials - Tar Material with Rubber, Particle Board Material, and Shingles	Black Fibrous Homogeneous	25% Cellulose	70% Matrix 5% Non-fibrous (Other)	None Detected
HA: 3					
3R-D  131604927-0113	Roof Area 3 - Equipment Flashing Materials - Rubber, Black Tar Material and Fibers	Black Non-Fibrous Homogeneous		80% Matrix 20% Non-fibrous (Other)	None Detected
HA: 3					

Report amended: 10/20/2016 09:41:27 Replaces initial report from: 10/18/2016 13:28:55 Reason Code: Client-Additional Analysis



# EMSL Analytical, Inc.

7 Constitution Way, Suite 107 Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

<http://www.EMSL.com / bostonlab@emsl.com>

EMSL Order: 131604927

Customer ID: AMEC25

Customer PO: C012208776

Project ID:

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
3R-E-Shingle  131604927-0114	Roof Area 3 - Roofing "Cap" Materials - Rubber, Tar with Stone, and Particle Board Material	Gray/Black Non-Fibrous Homogeneous	10% Cellulose	45% Ca Carbonate 40% Matrix 5% Non-fibrous (Other)	None Detected
HA: 3					
3R-E-Tar with board layer  131604927-0114A	Roof Area 3 - Roofing "Cap" Materials - Rubber, Tar with Stone, and Particle Board Material	Black Fibrous Homogeneous	65% Cellulose	25% Matrix 10% Non-fibrous (Other)	None Detected
HA: 3					
3R-F-Tar  131604927-0115	Roof Area 3 - Roofing Materials - Rubber with Tar, Shingle, and Particle Board Material	Black Non-Fibrous Homogeneous		5% Ca Carbonate 88% Matrix 7% Non-fibrous (Other)	None Detected
HA: 3					
3R-F-Tar Felt  131604927-0115A	Roof Area 3 - Roofing Materials - Rubber with Tar, Shingle, and Particle Board Material	Black Fibrous Homogeneous	35% Cellulose 15% Glass	40% Matrix 10% Non-fibrous (Other)	None Detected
HA: 3					
3R-G  131604927-0116	Roof Area 3 - Equipment Flashing Materials - Rubber, Black Tar Material	Black Non-Fibrous Homogeneous		80% Matrix 13% Non-fibrous (Other)	7% Chrysotile
HA: 3					
3R-H-Tar  131604927-0117	Roof Area 3 - Wall Materials - Tar Material with Shingles and Drywall	Black Non-Fibrous Homogeneous		70% Matrix 20% Non-fibrous (Other)	10% Chrysotile
HA: 3					
3R-H-Sheetrock  131604927-0117A	Roof Area 3 - Wall Materials - Tar Material with Shingles and Drywall	Brown Non-Fibrous Homogeneous		60% Gypsum 40% Non-fibrous (Other)	None Detected
HA: 3					
4R-A-Board  131604927-0118	Roof Area 4 - Roofing Materials - Rubber, Tar with Stone, and Particle Board Material	Brown Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
HA: 4					
4R-A-Tar  131604927-0118A	Roof Area 4 - Roofing Materials - Rubber, Tar with Stone, and Particle Board Material	Black Non-Fibrous Homogeneous	65% Cellulose	35% Matrix	None Detected
HA: 4					
4R-B  131604927-0119	Roof Area 4 - Roof Edge Flashing Materials b/w Roof Areas 4 & 5 - Tar Material Shingles, and Fibers	Black Fibrous Homogeneous	20% Cellulose	65% Matrix 12% Non-fibrous (Other)	3% Chrysotile
HA: 4					

Report amended: 10/20/2016 09:41:27 Replaces initial report from: 10/18/2016 13:28:55 Reason Code: Client-Additional Analysis



# EMSL Analytical, Inc.

7 Constitution Way, Suite 107 Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

<http://www.EMSL.com / bostonlab@emsl.com>

EMSL Order: 131604927

Customer ID: AMEC25

Customer PO: C012208776

Project ID:

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
4R-C 131604927-0120	Roof Area 4 - Roof Edge Flashing Materials - Tar Material with Rubber	Black Non-Fibrous Homogeneous		90% Matrix 10% Non-fibrous (Other)	None Detected
HA: 4					
4R-D-Flashing 131604927-0121	Roof Area 4 - Roof Edge Flashing Materials - Tar Material with Wood and Shingles	Black Non-Fibrous Homogeneous		25% Quartz 60% Matrix 15% Non-fibrous (Other)	None Detected
HA: 4					
4R-D-Tar Felt 131604927-0121A	Roof Area 4 - Roof Edge Flashing Materials - Tar Material with Wood and Shingles	Black Non-Fibrous Homogeneous	35% Cellulose	50% Matrix 13% Non-fibrous (Other)	2% Chrysotile
HA: 4					
4R-E 131604927-0122	Roof Area 4 - Exterior Wall Fiber Board	Brown Fibrous Homogeneous	97% Cellulose	3% Non-fibrous (Other)	None Detected
HA: 4					
4R-F-Tar 131604927-0123	Roof Area 4 - Equipment Flashing Materials - Rubber, Black Tar Material, Wood, and Fibers	Black Non-Fibrous Homogeneous		94% Non-fibrous (Other)	6% Chrysotile
HA: 4					
4R-F-Tar Felt 131604927-0123A	Roof Area 4 - Equipment Flashing Materials - Rubber, Black Tar Material, Wood, and Fibers	Black Non-Fibrous Homogeneous	25% Cellulose	60% Non-fibrous (Other)	15% Chrysotile
HA: 4					
5R-A-Insulation 131604927-0124	Roof Area 5 - Roofing Materials - Rubber with Tar, Foam, and Particle Board Material	Brown Non-Fibrous Homogeneous	40% Cellulose 25% Min. Wool	25% Perlite 10% Non-fibrous (Other)	None Detected
HA: 5					
5R-A-Foam 131604927-0124A	Roof Area 5 - Roofing Materials - Rubber with Tar, Foam, and Particle Board Material	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
HA: 5					
5R-A-Tar 131604927-0124B	Roof Area 5 - Roofing Materials - Rubber with Tar, Foam, and Particle Board Material	Black Non-Fibrous Homogeneous		95% Matrix 5% Non-fibrous (Other)	None Detected
HA: 5					
5R-B 131604927-0125	Roof Area 5 - Elevator Shaft Flashing - Rubber, Black Tar Material, and Fiber	Black Fibrous Homogeneous		80% Matrix 8% Non-fibrous (Other)	12% Chrysotile
HA: 5					

Report amended: 10/20/2016 09:41:27 Replaces initial report from: 10/18/2016 13:28:55 Reason Code: Client-Additional Analysis



# EMSL Analytical, Inc.

7 Constitution Way, Suite 107 Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

<http://www.EMSL.com / bostonlab@emsl.com>

EMSL Order: 131604927

Customer ID: AMEC25

Customer PO: C012208776

Project ID:

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
5R-C-Drywall 131604927-0126	Roof Area 5 - Interior Roof Edge Flashing Materials - Tar Material with Shingles, Drywall, and Fibers	Brown Non-Fibrous Homogeneous	3% Cellulose	60% Gypsum 37% Non-fibrous (Other)	None Detected
HA: 5					
5R-C-Flashing 131604927-0126A	Roof Area 5 - Interior Roof Edge Flashing Materials - Tar Material with Shingles, Drywall, and Fibers	Black Non-Fibrous Homogeneous	40% Cellulose	30% Matrix 25% Non-fibrous (Other)	5% Chrysotile
HA: 5					
5R-D-Tar Felt 131604927-0127	Roof Area 5 - Equipment Flashing Materials - Rubber with Tar and Foam	Black Fibrous Homogeneous	25% Glass	60% Matrix 15% Non-fibrous (Other)	None Detected
HA: 5					
5R-D-Tar 131604927-0127A	Roof Area 5 - Equipment Flashing Materials - Rubber with Tar and Foam	Black Non-Fibrous Homogeneous	10% Cellulose	70% Matrix 20% Non-fibrous (Other)	None Detected
HA: 5					
5R-D-Foam Insulation 131604927-0127B	Roof Area 5 - Equipment Flashing Materials - Rubber with Tar and Foam	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
HA: 5					
5R-E-Insulation 131604927-0128	Roof Area 5 - Roof Flashing Materials - Rubber with Tar, Shingle, and Particle Board Material	Brown Fibrous Homogeneous	70% Cellulose	20% Perlite 10% Non-fibrous (Other)	None Detected
HA: 5					
5R-E-Foam Insulation 131604927-0128A	Roof Area 5 - Roof Flashing Materials - Rubber with Tar, Shingle, and Particle Board Material	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
HA: 5					
5R-E-Flashing 131604927-0128B	Roof Area 5 - Roof Flashing Materials - Rubber with Tar, Shingle, and Particle Board Material	Red/Black Non-Fibrous Homogeneous		90% Matrix 10% Non-fibrous (Other)	None Detected
HA: 5					
5R-E-Tar 131604927-0128C	Roof Area 5 - Roof Flashing Materials - Rubber with Tar, Shingle, and Particle Board Material	Black Non-Fibrous Homogeneous		90% Matrix 10% Non-fibrous (Other)	None Detected
HA: 5					
5R-F-Flashing 131604927-0129	Roof Area 5 - Inside Front Wall Flashing and Drywall - Tar Material with Shingles, Drywall, and Fibers	Black Non-Fibrous Homogeneous		60% Matrix 25% Non-fibrous (Other)	15% Chrysotile
HA: 5					

Report amended: 10/20/2016 09:41:27 Replaces initial report from: 10/18/2016 13:28:55 Reason Code: Client-Additional Analysis



# EMSL Analytical, Inc.

7 Constitution Way, Suite 107 Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

<http://www.EMSL.com / bostonlab@emsl.com>

EMSL Order: 131604927

Customer ID: AMEC25

Customer PO: C012208776

Project ID:

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
5R-F-Drywall 131604927-0129A	Roof Area 5 - Inside Front Wall Flashing and Drywall - Tar Material with Shingles, Drywall, and Fibers	Brown Non-Fibrous Homogeneous		15% Ca Carbonate 70% Gypsum 15% Non-fibrous (Other)	None Detected
HA: 5					
5R-F-Foam Insulation 131604927-0129B	Roof Area 5 - Inside Front Wall Flashing and Drywall - Tar Material with Shingles, Drywall, and Fibers	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
HA: 5					
5R-F-Rubber Membrane 131604927-0129C	Roof Area 5 - Inside Front Wall Flashing and Drywall - Tar Material with Shingles, Drywall, and Fibers	Black Non-Fibrous Homogeneous		70% Matrix 30% Non-fibrous (Other)	None Detected
HA: 5					
6R-A-Tar 131604927-0130	Roof Area 6 - Roofing and Flashing Materials - Rubber with Tar and Particle Board Material	Black Non-Fibrous Homogeneous		88% Matrix 9% Non-fibrous (Other)	3% Chrysotile
HA: 6					
6R-A-Insulation 131604927-0130A	Roof Area 6 - Roofing and Flashing Materials - Rubber with Tar and Particle Board Material	Brown Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
HA: 6					
6R-B 131604927-0131	Roof Area 6 - Equipment Flashing Materials - Rubber with Tar	Gray/Black Non-Fibrous Homogeneous		70% Matrix 20% Non-fibrous (Other)	10% Chrysotile
HA: 6					
DA-01 131604927-0132	Dome Area - Dome Area Roof Edge Flashing - Shingle Materials and Tar	Black Non-Fibrous Homogeneous		85% Matrix 10% Non-fibrous (Other)	5% Chrysotile
HA: DA					
CA-01-Roof Insulation 131604927-0133	Collapsed Roof Area - Roofing Materials - Tar with Shingles and Fibers	Brown Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected
HA: CA					
CA-01-Roofing 131604927-0133A	Collapsed Roof Area - Roofing Materials - Tar with Shingles and Fibers	Black Non-Fibrous Homogeneous	15% Cellulose	50% Matrix 35% Non-fibrous (Other)	None Detected
HA: CA					
GL-A-Block 131604927-0134	Grade Level - Block Wall Materials - Loose Insulation from Block Wall Bay	Gray Non-Fibrous Homogeneous		35% Quartz 10% Mica 55% Non-fibrous (Other)	None Detected
HA: GL					

Report amended: 10/20/2016 09:41:27 Replaces initial report from: 10/18/2016 13:28:55 Reason Code: Client-Additional Analysis





# EMSL Analytical, Inc.

7 Constitution Way, Suite 107 Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

<http://www.EMSL.com / bostonlab@emsl.com>

EMSL Order: 131604927

Customer ID: AMEC25

Customer PO: C012208776

Project ID:

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
GL-A-Insulation 131604927-0134A	Grade Level - Block Wall Materials - Loose Insulation from Block Wall Bay	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
HA: GL					
GL-B 131604927-0135	Grade Level - Sill Materials - Copper Flashing with Fiber and Adhesive	Black Non-Fibrous Homogeneous	5% Cellulose	40% Matrix 50% Non-fibrous (Other)	5% Chrysotile
HA: GL					
GL-C 131604927-0136	Grade Level - Roofing Materials - Shingles	Black Non-Fibrous Homogeneous		45% Matrix 55% Non-fibrous (Other)	None Detected
HA: GL					
GL-D 131604927-0137	Grade Level - Transformer Materials - Fiber Strip	Tan Fibrous Homogeneous	95% Glass	5% Non-fibrous (Other)	None Detected
HA: GL					
GL-E 131604927-0138	Grade Level - Brickwork Seam Material - Caulking	Gray Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
HA: GL					

### Analyst(s)

Daena Charles (25)

Emily Myint (28)

Kamel Alawawda (25)

Shahrakur Mahmud (59)

Yolanda Chow (92)

Steve Grise, Laboratory Manager  
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported 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. 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. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. New York, NY AIHA-LAP, LLC--IHLAP Accredited #102581, NVLAP Lab Code 101048-9, NYS ELAP 11506, NJ NY022, CT PH-0170, MAAA000170

Report amended: 10/20/2016 09:41:27 Replaces initial report from: 10/18/2016 13:28:55 Reason Code: Client-Additional Analysis

EMSL ANALYTICAL, INC.  
LABORATORY • PRODUCTS • TRAINING

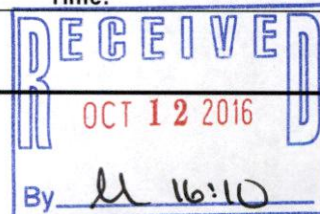
# Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

131604927

 EMSL ANALYTICAL, INC.  
 200 ROUTE 130 NORTH  
 CINNAMINSON, NJ 08077  
 PHONE: (800) 220-3675  
 FAX: (856) 786-5974

<b>Company :</b> Amec Foster Wheeler		<b>EMSL-Bill to:</b> <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
<b>Street:</b> 271 Mill Road		Third Party Billing requires written authorization from third party	
<b>City:</b> Chelmsford	<b>State/Province:</b> MA	<b>Zip/Postal Code:</b> 01824	<b>Country:</b> USA
<b>Report To (Name):</b> Lok Rizal		<b>Telephone #:</b> 978-392-5369	
<b>Email Address:</b> lok.rizal@amecfw.com		<b>Fax #:</b>	<b>Purchase Order:</b> C012208776
<b>Project Name/Number:</b> 7775160013		<b>Please Provide Results:</b> <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email	
<b>U.S. State Samples Taken:</b> massachusetts		<b>CT Samples:</b> <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	
<b>Turnaround Time (TAT) Options* – Please Check</b>			
<input type="checkbox"/> 3 Hour <input type="checkbox"/> 6 Hour <input type="checkbox"/> 24 Hour <input type="checkbox"/> 48 Hour <input checked="" type="checkbox"/> 72 Hour <input type="checkbox"/> 96 Hour <input type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week			
<small>*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.</small>			
<b>PLM - Bulk (reporting limit)</b>		<b>TEM – Bulk</b>	
<input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%)		<input type="checkbox"/> TEM EPA NOB – EPA 600/R-93/116 Section 2.5.5.1	
<input type="checkbox"/> PLM EPA NOB (<1%)		<input type="checkbox"/> NY ELAP Method 198.4 (TEM)	
Point Count <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%)		<input type="checkbox"/> Chatfield Protocol (semi-quantitative)	
Point Count w/Gravimetric <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%)		<input type="checkbox"/> TEM % by Mass – EPA 600/R-93/116 Section 2.5.5.2	
<input type="checkbox"/> NIOSH 9002 (<1%)		<input type="checkbox"/> TEM Qualitative via Filtration Prep Technique	
<input type="checkbox"/> NY ELAP Method 198.1 (friable in NY)		<input type="checkbox"/> TEM Qualitative via Drop Mount Prep Technique	
<input type="checkbox"/> NY ELAP Method 198.6 NOB (non-friable-NY)		<b>Other</b>	
<input type="checkbox"/> OSHA ID-191 Modified		<input type="checkbox"/>	
<input type="checkbox"/> Standard Addition Method			
<input checked="" type="checkbox"/> Check For Positive Stop – Clearly Identify Homogenous Group		<b>Date Sampled:</b> 09/28/2016 09/29/2016, 10/04/2016	
<b>Samplers Name:</b> Lok Rizal, Mark Maggiore, Shaun Burrier, Poul Richard		<b>Samplers Signature:</b>	
<b>Sample #</b>	<b>HA #</b>	<b>Sample Location</b>	<b>Material Description</b>
1A	1	Interior - Plating room balcony, adjacent to elevator	Floor debris ; White, Yellow
1B	1	Interior - Plating room balcony, adjacent to elevator	Floor debris ; Green, brown, white
2A	1	Interior - Plating room balcony, adjacent to elevator	12" x 12" floor tiles/mastics Brown, black
2B	1	Interior - Plating room balcony, adjacent to elevator	12" 12" floor tiles/mastics; Brown, black
3A	1	Interior - Windows through corridor	47" X 45" Window caulking/glazing ; white
4A	1	Interior- Plating floor	Concrete/cement plates; Brown, black
4B	1	Interior- Plating floor	Concrete/cement plates; Brown, black
5A	2	Interior- window in maintenance room	48" x 48" Window caulking/glazing; White, Yellow
5B	2	Interior- Window in conference room	48" x 48" Window caulking/glazing; Blue, white
6A	2	Interior-Layup and Microplate room	Debris from floor; White, yellow, brown
<b>Client Sample # (s):</b> -		<b>Total # of Samples:</b> 138	
<b>Relinquished (Client):</b>		<b>Date:</b> 10-12-16	<b>Time:</b> 16:10
<b>Received (Lab):</b>		<b>Date:</b>	<b>Time:</b>
<b>Comments/Special Instructions:</b>			







EMSL ANALYTICAL, INC.  
LABORATORY • PRODUCTS • TRAINING

## Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

131604927

EMSL ANALYTICAL, INC.  
200 ROUTE 130 NORTH  
CINNAMINSON, NJ 08077

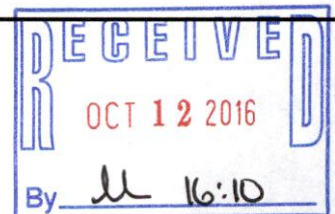
PHONE: (800) 220-3675

FAX: (856) 786-5974

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

Sample #	HA #	Sample Location	Material Description
7A	2	Interior- Lay-up room wall	Drywall ; Brown, white, pink
7B	2	Interior- Process room	Drywall ; Brown, white
7C	2	Interior- Programming room	Drywall c; Brown, White
8A	3	Interior- Walkway adjacent top screening room	9" x9" Floor tiles/mastics; Yellow, brown
8B	3	Interior- Walkway adjacent top oven room	9" x9" Floor tiles/mastics; Green, yellow, brown
8C	3	Interior- Walkway adjacent to photo room	9" x9" Floor tiles/mastics; Brown, black
9A	3	Interior- Screening room	12" x12" Floor tiles/mastics; Brown, black
9B	3	Interior- Photo room	12" x12" Floor tiles/mastics; Brown, black
9C	3	Interior- Photo room	12" x12" Floor tiles/mastics; Black, gray
10A	3	Interior- Photo room	Drywall ; white, brown, yellow
10B	3	Interior- Dark Room	Drywall; white, brown, yellow
10C	3	Interior- Touchup room	Drywall ; Blue, Yellow, gray
11A	3	Interior- Lobby	1' x 2' Ceiling tiles; Brown, white
11B	3	Interior- Lobby	1' x 2' Ceiling tiles; Gray, purple, white
11C	3	Interior- Lobby	1' x 2' Ceiling tiles; Brown, yellow
12A	3	Interior- Photo room	2' x 4' Ceiling tiles; White, dark gray
12B	3	Interior- Touchup room	2' x 4' Ceiling tiles; White, dark gray
12C	3	Interior- Screening room	2' x 4' Ceiling tiles; White, dark gray
13A	3	Interior- Screening room wall end	Wall board end; Yellow, brown
13B	3	Interior- Artwork room	Wall board end; Brown, black
13C	3	Interior- Screen makeup room	Wall board end; Black, yellow
14A	3	Interior-Floor of photo room, Walkway, Screening room, Artwork room	Floor debris; yellow, brown, dark, red
15A	4	Interior- Walkway adjacent to fabrication room	9" x9" Floor tiles/mastics; yellow, brown, black
15B	4	Interior- First aid room	9" x9" Floor tiles/mastics; yellow, brown, black
*Comments/Special Instructions:			

Page 2 of 7 pages





EMSL ANALYTICAL, INC.  
LABORATORY • PRODUCTS • TRAINING

## Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

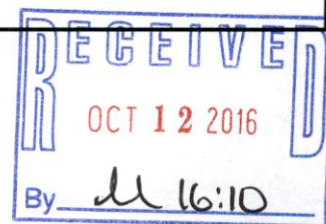
**131604927**

EMSL ANALYTICAL, INC.  
200 ROUTE 130 NORTH  
CINNAMINSON, NJ 08077  
PHONE: (800) 220-3675  
FAX: (856) 786-5974

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

Sample #	HA #	Sample Location	Material Description
15C	4	Interior- Workset Inspect room	9" x9" Floor tiles/mastics; yellow, brown, black
16A	4	Interior- Cafeteria	12" x12" Floor tiles/mastics; Black, brown
16B	4	Interior- Cafeteria	12" x12" Floor tiles/mastics; Black, brown
16C	4	Interior- Cafeteria	12" x12" Floor tiles/mastics; Black, brown
17A	4	Interior- Men's toilet	1" x1" Floor tiles/mastics; Green, white, brown
17B	4	Interior- Men's toilet	1" x1" Floor tiles/mastics; Green, white, brown
18A	4	Interior- Women's toilet	1" x1" Floor tiles/mastics; Green, white, brown
19A	4	Interior- Men's toilet	2" x4" Wet wall board; Green, gray
19B	4	Interior- Men's toilet	2" x4" Wet wall board; Green, gray
20A	4	Interior- Men's toilet	12" x12" Ceiling tiles; Brown, white
20B	4	Interior- Women's toilet	12" x12" Ceiling tiles; Brown, white
21A	4	Interior- Women's toilet	2" x4" Wet wall board; Brown, gray
21B	4	Interior- Women's toilet	2" x4" Wet wall board; Brown, gray
22A	4	Interior- Cafeteria	2' x 4' Ceiling tiles; White, brown
22B	4	Interior- Cafeteria	2' x 4' Ceiling tiles; White, brown
22C	4	Interior- Walkway adjacent to Cafeteria	2' x 4' Ceiling tiles; White, brown
23A	4	Interior- Drill room	Drywall ; Yellow, white, brown
23B	4	Interior- Cafeteria	Drywall; Yellow, white, brown
23C	4	Interior- Fabrication room	Drywall ; Yellow, white, brown
24A	4	Interior- First aid room	Wall board end; Black, white
24B	4	Interior- Fabrication room	Wall board end; Black, white
25A	5	Interior- Corridor adjacent to fabrication room	12" x12" floor tiles/mastics; yellow, brown, black
25B	5	Interior-Corridor adjacent to Test and Adduct room	12" x12" floor tiles/mastics; yellow, brown, black
25C	5	Interior- Equipment receiving area	12" x12" floor tiles/mastics; yellow, brown, black
*Comments/Special Instructions:			

Page 3 of 7 pages







EMSL ANALYTICAL, INC.  
LABORATORY • PRODUCTS • TRAINING

# Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

**131604927**

EMSL ANALYTICAL, INC.  
200 ROUTE 130 NORTH  
CINNAMINSON, NJ 08077

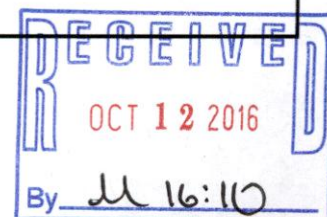
PHONE: (800) 220-3675

FAX: (856) 786-5974

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

Sample #	HA #	Sample Location	Material Description
26A	5	Interior-corridor adjacent to shipping room	2' x 4' Ceiling tiles; White, gray
26B	5	Interior- Women's bathroom	2' x 4' Ceiling tiles; White, gray
26C	5	Interior- Faculties manager room	2' x 4' Ceiling tiles; White, gray
27A	5	Interior- Fabrication room	Drywall ; Gray, brown
27B	5	Interior- Programming room	Drywall; Gray, brown
27C	5	Interior- Men's bathroom	Drywall; Gray, brown
28A	5	Interior- Men's bathroom	12" x12" Floor tiles/mastics; Brown, black
28B	5	Interior-Men's bathroom	12" x12" Floor tiles/mastics; Brown, black
29A	5	Interior- Touchup room	Wall board end; Dark gray
29B	5	Interior- Corridor adjacent to Method room	Wall board end; Dark gray
29C	5	Interior- Equipment receiving area	Wall board end; Dark gray
30A	5	Interior- Fabrication room	Window Caulking/Glazing; White, yellow
30B	5	Interior- Corridor adjacent to Touchup room	Window Caulking/Glazing; White, yellow
30C	5	Interior- Corridor adjacent to Method room	Window Caulking/Glazing; white, yellow
31A	5	Interior- Stairs for going to #7 from #5	Rubber matted stairs; Brown, yellow
31B	5	Interior- Stairs for going to #7 from #5	Rubber matted stairs; Brown, yellow
32A	6	Interior- Men's bathroom	1" X 1" & 1"X .5" Floor tiles/mastics ; Blue, white, yellow
32B	6	Interior- Men's bathroom	1" X 1" & 1"X .5" Floor tiles/mastics; Blue, white, yellow
32C	6	Interior- Men's bathroom	1" X 1" & 1"X .5" Floor tiles; Blue, white, yellow
32D	6	Interior-Women's Bathroom	1" X 1" & 1"X .5" Floor tiles/mastics ; Yellow, white
32E	6	Interior-Women's Bathroom	1" X 1" & 1"X .5" Floor tiles/mastics ; Yellow, white
32F	6	Interior-Women's Bathroom	1" X 1" & 1"X .5" Floor tiles/mastics ; Yellow, white
33A	6	Interior- Accounting room	Drywall; White, brown
33B	6	Interior- Office adjacent to Sales room	Drywall ; White, brown
*Comments/Special Instructions:			

Page 4 of 7 pages







EMSL ANALYTICAL, INC.  
LABORATORY • PRODUCTS • TRAINING

# Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

**131604927**

EMSL ANALYTICAL, INC.  
200 ROUTE 130 NORTH  
CINNAMINSON, NJ 08077

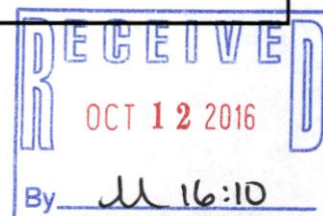
PHONE: (800) 220-3675  
FAX: (856) 786-5974

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

Sample #	HA #	Sample Location	Material Description
33C	6	Interior- Women's bathroom	Drywall; White, brown
34A	6	Interior- Window at sales room	Window Caulking; White
34B	6	Interior- Window at upstairs	Window Caulking; White
35A	6	Interior- Floor of Sale, Office and accounting room	Floor representative sample; White, brown, black
36A	6	Interior- Office corridor	Floor debris; White, gray
37A	6	Interior- Plant manager room	Wall board end; Brown
37B	6	Interior- office adjacent to Women's bathroom	Wall board end; Brown
38A	7	Interior- Corridor adjacent to purchasing room	12" x12" floor tile tiles/mastics; Brown, black
38B	7	Interior- Corridor adjacent to Trash room	12" x12" floor tile tiles/mastics; Brown, black
39A	7	Interior- Corridor adjacent to Trash room	Miscellaneous fiber glass type insulation; Yellow
39B	7	Interior- Corridor adjacent to Trash room	Miscellaneous fiber glass type insulation; Yellow
40A	7	Interior- Corridor adjacent to Trash room	Miscellaneous fiber glass type insulation; Black
40B	7	Interior- Corridor adjacent to Trash room	Miscellaneous fiber glass type insulation; Black
41A	7	Interior- Drilling room	Drywall; Brown, gray
41B	7	Interior- Women's bathroom	Drywall ; Brown, gray
42A	7	Interior- Waiting & reception room	1' x 2' Ceiling tiles; Yellow, gray
42B	7	Interior- Corridor adjacent to laminating room	2' x 4' Ceiling tiles; Yellow, gray
43A	7	Interior- Elevator room	Wall board end; Black, white
43B	7	Interior- Office room adjacent to drilling	Wall board end; Black, White
44A	8	Interior- Receiving and Storage room	Basement floor debris ; Yellow, dark brown
44B	8	Interior- Boiler Room	Boiler room debris; Brown, black

\*Comments/Special Instructions:

Page 5 of 7 pages





# Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

**131604927**

EMSL ANALYTICAL, INC.  
200 ROUTE 130 NORTH  
CINNAMINSON, NJ 08077  
PHONE: (800) 220-3675  
FAX: (856) 786-5974

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

Sample #	HA #	Sample Location	Material Description
1R-A	1	Roof Area 1	Roofing Materials- rubber, tar with stone, and particle board material
1R-B	1	Roof Area 1	Roof Edge Flashing Materials - tar material with wood, concrete, metal, and shingles
1R-C	1	Roof Area 1	Equipment Flashing Materials - black tar material with wood and fibers
2R-A	2	Roof Area 2	Roofing Materials- rubber, with tar and particle board material
2R-B	2	Roof Area 2	Roof Edge Flashing Materials - tar material with shingles
2R-C	2	Roof Area 2	Equipment Flashing Materials - rubber, black tar material and fibers
3R-A	3	Roof Area 3	Roofing Materials- roof shingle
3R-B	3	Roof Area 3	Roofing Materials- rubber, with tar, shingle, and particle board material
3R-C	3	Roof Area 3	Roof Edge Flashing Materials - tar material with rubber, particle board material, and shingles
3R-D	3	Roof Area 3	Equipment Flashing Materials - rubber, black tar material and fibers
3R-E	3	Roof Area 3	Roofing "Cap" Materials- rubber, tar with stone, and particle board material
3R-F	3	Roof Area 3	Roofing Materials- rubber, with tar, shingle, and particle board material
3R-G	3	Roof Area 3	Equipment Flashing Materials - rubber, black tar material
3R-H	3	Roof Area 3	Wall Materials - tar material with shingles and drywall
4R-A	4	Roof Area 4	Roofing Materials- rubber, tar with stone, and particle board material
4R-B	4	Roof Area 4	Roof Edge Flashing Materials b/w Roof Areas 4 & 5- tar material shingles, and fibers
4R-C	4	Roof Area 4	Roof Edge Flashing Materials - tar material with rubber
4R-D	4	Roof Area 4	Roof Edge Flashing Materials - tar material with wood and shingles
4R-E	4	Roof Area 4	Exterior Wall Fiber Board
4R-F	4	Roof Area 4	Equipment Flashing Materials - rubber, black tar material, wood, and fibers
5R-A	5	Roof Area 5	Roofing Materials- rubber, with tar, foam, and particle board material
5R-B	5	Roof Area 5	Elevator Shaft Flashing - rubber, black tar material, and fiber
5R-C	5	Roof Area 5	Interior Roof Edge Flashing Materials - tar material with shingles, drywall, and fibers
5R-D	5	Roof Area 5	Equipment Flashing Materials- rubber with tar and foam
*Comments/Special Instructions:			

Page 6 of 7 pages





**EMSL ANALYTICAL, INC.**  
LABORATORY • PRODUCTS • TRAINING

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

131604927

FAX: (856) 786-5974

[illegible]

Page 7 of 7 pages



---

## **Appendix C: TestAmerica Lab Result for TCLP and PCBs**

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Buffalo

10 Hazelwood Drive

Amherst, NY 14228-2298

Tel: (716)691-2600

TestAmerica Job ID: 480-106424-1

Client Project/Site: MassDEP SARSS Project

For:

AMEC Foster Wheeler E & I, Inc

271 Mill Road

Chelmsford, Massachusetts 01824

Attn: Mr. Sam Farnsworth



Authorized for release by:

10/3/2016 11:57:46 AM

Rebecca Jones, Project Management Assistant I

[rebecca.jones@testamericainc.com](mailto:rebecca.jones@testamericainc.com)

Designee for

John Schove, Project Manager II

(716)504-9838

[john.schove@testamericainc.com](mailto:john.schove@testamericainc.com)

### LINKS

Review your project  
results through

TotalAccess

Have a Question?



Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*



# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Definitions/Glossary . . . . .	3
Case Narrative . . . . .	4
Detection Summary . . . . .	7
Client Sample Results . . . . .	10
Surrogate Summary . . . . .	16
QC Sample Results . . . . .	17
QC Association Summary . . . . .	27
Lab Chronicle . . . . .	32
Certification Summary . . . . .	38
Method Summary . . . . .	39
Sample Summary . . . . .	40
Chain of Custody . . . . .	41
Receipt Checklists . . . . .	43



## Definitions/Glossary

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

### Qualifiers

#### GC Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

#### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
B	Compound was found in the blank and sample.

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

## Case Narrative

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

**Job ID: 480-106424-1**

**Laboratory: TestAmerica Buffalo**

### Narrative

#### Job Narrative 480-106424-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 9/23/2016 1:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.8° C.

#### GC Semi VOA

Method 8082A: Per question G on the MassDEP Analytical Protocol Certification Form, TestAmerica's routine reporting limits after moisture correction do not achieve the CAM reporting limits specified in this CAM protocol; however they do achieve method 1 S1 standards.

Method(s) 8082: The following sample was diluted due to the nature of the sample matrix: ELEVATOR OIL (480-106424-17). As such, surrogate recoveries are estimated and not representative, and elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### Metals

Method(s) 6010: At the request of the client, an abbreviated/modified MCP compound list was reported for this job.

Method(s) 6010C: The Low Level Continuing Calibration Verification (CCVL 480-323019/22) contained TCLP Lead above the upper quality control limit. All reported samples 2-2 (480-106424-2), (480-106424-A-2-F MS), (480-106424-A-2-G MSD), (480-106424-A-2-E PDS) and (480-106424-A-2-E SD) associated with this CCVL were either ND for this analyte or contained this analyte at a concentration greater than 10X the value found in the CCVL; therefore, re-analysis of samples was not performed.

Method(s) 6010C: The following samples was diluted due to the presence of Copper which interferes with TCLP Lead: 2-2 (480-106424-2), (480-106424-A-2-F MS), (480-106424-A-2-G MSD), (480-106424-A-2-E PDS) and (480-106424-A-2-E SD). Elevated reporting limits (RLs) are provided.

Method(s) 6010C: The following sample was diluted for TCLP Selenium due to the nature of the sample matrix: 7-1 (480-106424-10). Elevated reporting limits (RLs) are provided.

Method(s) 6010C: The following samples was diluted due to the presence of Copper which interferes with TCLP Lead: 7-1 (480-106424-10), 7-2 (480-106424-11), 1-1 (480-106424-14) and 1-2 (480-106424-15). Elevated reporting limits (RLs) are provided.

Method(s) 6010C: The Low Level Continuing Calibration Verification (CCVL 480-323020/21) contained TCLP Lead above the upper quality control limit. All reported samples 7-1 (480-106424-10), 7-2 (480-106424-11), 1-1 (480-106424-14) and 1-2 (480-106424-15) associated with this CCVL were either ND for this analyte or contained this analyte at a concentration greater than 10X the value found in the CCVL; therefore, re-analysis of samples was not performed.

Method(s) 6010: The Low Level Continuing Calibration Verification (CCVL 480-322343/14) contained Total Zinc above the upper quality control limit. Sample (LCS 480-321948/2-A) associated with this CCVL was either ND for this analyte or contained this analyte at a concentration greater than 10X the value found in the CCVL; therefore, re-analysis of the sample was not performed.

Method(s) 6010: The following sample was diluted due to the presence of Total Iron which interferes with Lead: 9-1 (480-106424-12). Elevated reporting limits (RLs) are provided.

Method(s) 7470A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for 322823 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 7470A: Due to interference with the sample matrix, the standard mercury preparation procedure was inadequate for the following samples(s): 2-1 (480-106424-1), (480-106424-A-1-B MS) and (480-106424-A-1-B MSD). This was demonstrated when the

## Case Narrative

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

### Job ID: 480-106424-1 (Continued)

#### Laboratory: TestAmerica Buffalo (Continued)

potassium permanganate reagent was added and the characteristic purple color faded rapidly. This loss of color indicates oxidizing conditions were not maintained. The sample(s) was prepared and analyzed at a 1:10 dilution, which maintained the purple color during digestion.

Method(s) 7470A: The following samples was diluted due to the nature of the sample matrix: 2-2 (480-106424-2), (480-106424-A-2-A MS) and (480-106424-A-2-A MSD). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.


#### Organic Prep

Method(s) 1311: Due to the sample matrix and associated reaction to the extraction fluid, the laboratory was unable to perform the leaching procedure with the required 100g for the following samples: 2-2 (480-106424-2). The volume of leaching fluid was adjusted proportionally to maintain a 20:1 ratio of leaching fluid to weight of sample. Reporting limits (RLs) are not affected.

Method(s) 1311: Insufficient samples were provided to perform the leaching procedure with the required 100g for the following samples: 2-1 (480-106424-1), 8-1 (480-106424-6), 8-3 (480-106424-8), 8-4 (480-106424-9) and 7-1 (480-106424-10). The volume of leaching fluid was adjusted proportionally to maintain a 20:1 ratio of leaching fluid to weight of sample. Reporting limits (RLs) are not affected.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

## MassDEP Analytical Protocol Certification Form

Laboratory Name: <b>TestAmerica Buffalo</b>	Project #: <b>480-106424-1</b>				
Project Location: <b>MassDEP SARSS Project</b>	RTN:				
<b>This form provides certifications for the following data set: list Laboratory Sample ID Number(s):</b> <b>480-106424-1(1-20)</b>					
Matrices: <input checked="" type="checkbox"/> Groundwater/Surface Water <input checked="" type="checkbox"/> Soil/Sediment <input type="checkbox"/> Drinking Water <input type="checkbox"/> Air <input type="checkbox"/> Other:					
<b>CAM Protocols (check all that apply below):</b>					
8260 VOC CAM II A <input type="checkbox"/>	7470/7471 Hg CAM III B <input checked="" type="checkbox"/>	Mass DEP VPH CAM IV A <input type="checkbox"/>	8081 Pesticides CAM V B <input type="checkbox"/>	7196 Hex Cr CAM VI B <input type="checkbox"/>	Mass DEP APH CAM IX A <input type="checkbox"/>
8270 SVOC CAM II B <input type="checkbox"/>	7010 Metals CAM III C <input type="checkbox"/>	Mass DEP EPH CAM IV B <input type="checkbox"/>	8151 Herbicides CAM V C <input type="checkbox"/>	8330 Explosives CAM VIII A <input type="checkbox"/>	TO-15 VOC CAM IX B <input type="checkbox"/>
6010 Metals CAM III A <input checked="" type="checkbox"/>	6020 Metals CAM III D <input type="checkbox"/>	8082 PCB CAM V A <input checked="" type="checkbox"/>	9014 Total Cyanide/PAC CAM VI A <input type="checkbox"/>	6860 Perchlorate CAM VIII B <input type="checkbox"/>	
<b>Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status</b>					
<b>A</b>	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding time.				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>D</b>	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>E</b>	a. VPH, EPH and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>F</b>	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Responses to Questions G, H and I below are required for "Presumptive Certainty" status</b>					
<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
<b>Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WCS-07-350</b>					
<b>H</b>	Were all QC performance standards specified in the CAM protocol(s) achieved?				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s) ?				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
<sup>1</sup> All negative responses must be addressed in an attached laboratory narrative.					
<i>I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, is accurate and complete.</i>					
Signature: 		Position: <b>Project Management Assistant</b>			
Printed Name: <b>Rebecca Jones</b>		Date: <b>10/3/16 11:50</b>			



EMSL ANALYTICAL, INC.  
LABORATORY • PRODUCTS • TRAINING

# Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

131604927

 EMSL ANALYTICAL, INC.  
 200 ROUTE 130 NORTH  
 CINNAMINSON, NJ 08077  
 PHONE: (800) 220-3675  
 FAX: (856) 786-5974

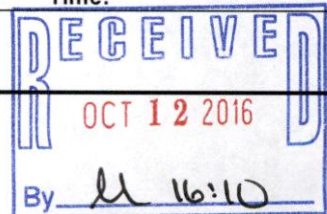
<b>Company :</b> Amec Foster Wheeler		<b>EMSL-Bill to:</b> <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
<b>Street:</b> 271 Mill Road		Third Party Billing requires written authorization from third party	
<b>City:</b> Chelmsford	<b>State/Province:</b> MA	<b>Zip/Postal Code:</b> 01824	<b>Country:</b> USA
<b>Report To (Name):</b> Lok Rizal		<b>Telephone #:</b> 978-392-5369	
<b>Email Address:</b> lok.rizal@amecfw.com		<b>Fax #:</b>	<b>Purchase Order:</b> C012208776
<b>Project Name/Number:</b> 7775160013		<b>Please Provide Results:</b> <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email	
<b>U.S. State Samples Taken:</b> massachusetts		<b>CT Samples:</b> <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	

Turnaround Time (TAT) Options* – Please Check							
<input type="checkbox"/> 3 Hour	<input type="checkbox"/> 6 Hour	<input type="checkbox"/> 24 Hour	<input type="checkbox"/> 48 Hour	<input checked="" type="checkbox"/> 72 Hour	<input type="checkbox"/> 96 Hour	<input type="checkbox"/> 1 Week	<input type="checkbox"/> 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			
<input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%)				<input type="checkbox"/> TEM EPA NOB – EPA 600/R-93/116 Section 2.5.5.1			
<input type="checkbox"/> PLM EPA NOB (<1%)				<input type="checkbox"/> NY ELAP Method 198.4 (TEM)			
Point Count <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%)				<input type="checkbox"/> Chatfield Protocol (semi-quantitative)			
Point Count w/Gravimetric <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%)				<input type="checkbox"/> TEM % by Mass – EPA 600/R-93/116 Section 2.5.5.2			
<input type="checkbox"/> NIOSH 9002 (<1%)				<input type="checkbox"/> TEM Qualitative via Filtration Prep Technique			
<input type="checkbox"/> NY ELAP Method 198.1 (friable in NY)				<input type="checkbox"/> TEM Qualitative via Drop Mount Prep Technique			
<input type="checkbox"/> NY ELAP Method 198.6 NOB (non-friable-NY)				<b>Other</b>			
<input type="checkbox"/> OSHA ID-191 Modified				<input type="checkbox"/>			
<input type="checkbox"/> Standard Addition Method							

<input checked="" type="checkbox"/> Check For Positive Stop – Clearly Identify Homogenous Group	<b>Date Sampled:</b> 09/28/2016 09/29/2016, 10/04/2016
<b>Samplers Name:</b> Lok Rizal, Mark Maggiore, Shaun Burrier, Poul Richard	<b>Samplers Signature:</b> <i>Mark Maggiore</i>

Sample #	HA #	Sample Location	Material Description
1A	1	Interior - Plating room balcony, adjacent to elevator	Floor debris ; White, Yellow
1B	1	Interior - Plating room balcony, adjacent to elevator	Floor debris ; Green, brown, white
2A	1	Interior - Plating room balcony, adjacent to elevator	12" x 12" floor tiles/mastics Brown, black
2B	1	Interior - Plating room balcony, adjacent to elevator	12" 12" floor tiles/mastics; Brown, black
3A	1	Interior - Windows through corridor	47" X 45" Window caulking/glazing ; white
4A	1	Interior- Plating floor	Concrete/cement plates; Brown, black
4B	1	Interior- Plating floor	Concrete/cement plates; Brown, black
5A	2	Interior- window in maintenance room	48" x 48" Window caulking/glazing; White, Yellow
5B	2	Interior- Window in conference room	48" x 48" Window caulking/glazing; Blue, white
6A	2	Interior-Layup and Microplate room	Debris from floor; White, yellow, brown

<b>Client Sample # (s):</b> -	<b>Total # of Samples:</b> 138
<b>Relinquished (Client):</b> <i>Mark Maggiore</i>	<b>Date:</b> 10-12-16 <b>Time:</b> 16:10
<b>Received (Lab):</b>	<b>Date:</b> <b>Time:</b>
<b>Comments/Special Instructions:</b>	







EMSL ANALYTICAL, INC.  
LABORATORY • PRODUCTS • TRAINING

## Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

131604927

EMSL ANALYTICAL, INC.  
200 ROUTE 130 NORTH  
CINNAMINSON, NJ 08077

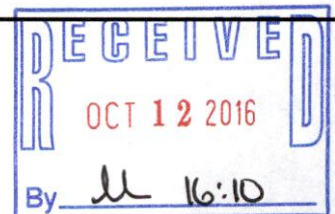
PHONE: (800) 220-3675

FAX: (856) 786-5974

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

Sample #	HA #	Sample Location	Material Description
7A	2	Interior- Lay-up room wall	Drywall ; Brown, white, pink
7B	2	Interior- Process room	Drywall ; Brown, white
7C	2	Interior- Programming room	Drywall c; Brown, White
8A	3	Interior- Walkway adjacent top screening room	9" x9" Floor tiles/mastics; Yellow, brown
8B	3	Interior- Walkway adjacent top oven room	9" x9" Floor tiles/mastics; Green, yellow, brown
8C	3	Interior- Walkway adjacent to photo room	9" x9" Floor tiles/mastics; Brown, black
9A	3	Interior- Screening room	12" x12" Floor tiles/mastics; Brown, black
9B	3	Interior- Photo room	12" x12" Floor tiles/mastics; Brown, black
9C	3	Interior- Photo room	12" x12" Floor tiles/mastics; Black, gray
10A	3	Interior- Photo room	Drywall ; white, brown, yellow
10B	3	Interior- Dark Room	Drywall; white, brown, yellow
10C	3	Interior- Touchup room	Drywall ; Blue, Yellow, gray
11A	3	Interior- Lobby	1' x 2' Ceiling tiles; Brown, white
11B	3	Interior- Lobby	1' x 2' Ceiling tiles; Gray, purple, white
11C	3	Interior- Lobby	1' x 2' Ceiling tiles; Brown, yellow
12A	3	Interior- Photo room	2' x 4' Ceiling tiles; White, dark gray
12B	3	Interior- Touchup room	2' x 4' Ceiling tiles; White, dark gray
12C	3	Interior- Screening room	2' x 4' Ceiling tiles; White, dark gray
13A	3	Interior- Screening room wall end	Wall board end; Yellow, brown
13B	3	Interior- Artwork room	Wall board end; Brown, black
13C	3	Interior- Screen makeup room	Wall board end; Black, yellow
14A	3	Interior-Floor of photo room, Walkway, Screening room, Artwork room	Floor debris; yellow, brown, dark, red
15A	4	Interior- Walkway adjacent to fabrication room	9" x9" Floor tiles/mastics; yellow, brown, black
15B	4	Interior- First aid room	9" x9" Floor tiles/mastics; yellow, brown, black
*Comments/Special Instructions:			

Page 2 of 7 pages





# Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

**131604927**

EMSL ANALYTICAL, INC.  
200 ROUTE 130 NORTH  
CINNAMINSON, NJ 08077  
PHONE: (800) 220-3675  
FAX: (856) 786-5974

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

Sample #	HA #	Sample Location	Material Description
15C	4	Interior- Workset Inspect room	9" x9" Floor tiles/mastics; yellow, brown, black
16A	4	Interior- Cafeteria	12" x12" Floor tiles/mastics; Black, brown
16B	4	Interior- Cafeteria	12" x12" Floor tiles/mastics; Black, brown
16C	4	Interior- Cafeteria	12" x12" Floor tiles/mastics; Black, brown
17A	4	Interior- Men's toilet	1" x1" Floor tiles/mastics; Green, white, brown
17B	4	Interior- Men's toilet	1" x1" Floor tiles/mastics; Green, white, brown
18A	4	Interior- Women's toilet	1" x1" Floor tiles/mastics; Green, white, brown
19A	4	Interior- Men's toilet	2" x4" Wet wall board; Green, gray
19B	4	Interior- Men's toilet	2" x4" Wet wall board; Green, gray
20A	4	Interior- Men's toilet	12" x12" Ceiling tiles; Brown, white
20B	4	Interior- Women's toilet	12" x12" Ceiling tiles; Brown, white
21A	4	Interior- Women's toilet	2" x4" Wet wall board; Brown, gray
21B	4	Interior- Women's toilet	2" x4" Wet wall board; Brown, gray
22A	4	Interior- Cafeteria	2' x 4' Ceiling tiles; White, brown
22B	4	Interior- Cafeteria	2' x 4' Ceiling tiles; White, brown
22C	4	Interior- Walkway adjacent to Cafeteria	2' x 4' Ceiling tiles; White, brown
23A	4	Interior- Drill room	Drywall ; Yellow, white, brown
23B	4	Interior- Cafeteria	Drywall; Yellow, white, brown
23C	4	Interior- Fabrication room	Drywall ; Yellow, white, brown
24A	4	Interior- First aid room	Wall board end; Black, white
24B	4	Interior- Fabrication room	Wall board end; Black, white
25A	5	Interior- Corridor adjacent to fabrication room	12" x12" floor tiles/mastics; yellow, brown, black
25B	5	Interior-Corridor adjacent to Test and Adduct room	12" x12" floor tiles/mastics; yellow, brown, black
25C	5	Interior- Equipment receiving area	12" x12" floor tiles/mastics; yellow, brown, black
*Comments/Special Instructions:			

Page 3 of 7 pages





EMSL ANALYTICAL, INC.  
LABORATORY • PRODUCTS • TRAINING

## Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

131604927

EMSL ANALYTICAL, INC.  
200 ROUTE 130 NORTH  
CINNAMINSON, NJ 08077

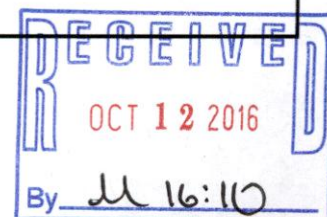
PHONE: (800) 220-3675

FAX: (856) 786-5974

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

Sample #	HA #	Sample Location	Material Description
26A	5	Interior-corridor adjacent to shipping room	2' x 4' Ceiling tiles; White, gray
26B	5	Interior- Women's bathroom	2' x 4' Ceiling tiles; White, gray
26C	5	Interior- Faculties manager room	2' x 4' Ceiling tiles; White, gray
27A	5	Interior- Fabrication room	Drywall ; Gray, brown
27B	5	Interior- Programming room	Drywall; Gray, brown
27C	5	Interior- Men's bathroom	Drywall; Gray, brown
28A	5	Interior- Men's bathroom	12" x12" Floor tiles/mastics; Brown, black
28B	5	Interior-Men's bathroom	12" x12" Floor tiles/mastics; Brown, black
29A	5	Interior- Touchup room	Wall board end; Dark gray
29B	5	Interior- Corridor adjacent to Method room	Wall board end; Dark gray
29C	5	Interior- Equipment receiving area	Wall board end; Dark gray
30A	5	Interior- Fabrication room	Window Caulking/Glazing; White, yellow
30B	5	Interior- Corridor adjacent to Touchup room	Window Caulking/Glazing; White, yellow
30C	5	Interior- Corridor adjacent to Method room	Window Caulking/Glazing; white, yellow
31A	5	Interior- Stairs for going to #7 from #5	Rubber matted stairs; Brown, yellow
31B	5	Interior- Stairs for going to #7 from #5	Rubber matted stairs; Brown, yellow
32A	6	Interior- Men's bathroom	1" X 1" & 1"X .5" Floor tiles/mastics ; Blue, white, yellow
32B	6	Interior- Men's bathroom	1" X 1" & 1"X .5" Floor tiles/mastics; Blue, white, yellow
32C	6	Interior- Men's bathroom	1" X 1" & 1"X .5" Floor tiles; Blue, white, yellow
32D	6	Interior-Women's Bathroom	1" X 1" & 1"X .5" Floor tiles/mastics ; Yellow, white
32E	6	Interior-Women's Bathroom	1" X 1" & 1"X .5" Floor tiles/mastics ; Yellow, white
32F	6	Interior-Women's Bathroom	1" X 1" & 1"X .5" Floor tiles/mastics ; Yellow, white
33A	6	Interior- Accounting room	Drywall; White, brown
33B	6	Interior- Office adjacent to Sales room	Drywall ; White, brown
*Comments/Special Instructions:			

Page 4 of 7 pages





EMSL ANALYTICAL, INC.  
LABORATORY • PRODUCTS • TRAINING

# Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

**131604927**

EMSL ANALYTICAL, INC.  
200 ROUTE 130 NORTH  
CINNAMINSON, NJ 08077

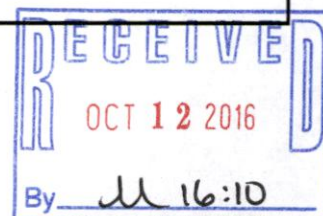
PHONE: (800) 220-3675  
FAX: (856) 786-5974

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

Sample #	HA #	Sample Location	Material Description
33C	6	Interior- Women's bathroom	Drywall; White, brown
34A	6	Interior- Window at sales room	Window Caulking; White
34B	6	Interior- Window at upstairs	Window Caulking; White
35A	6	Interior- Floor of Sale, Office and accounting room	Floor representative sample; White, brown, black
36A	6	Interior- Office corridor	Floor debris; White, gray
37A	6	Interior- Plant manager room	Wall board end; Brown
37B	6	Interior- office adjacent to Women's bathroom	Wall board end; Brown
38A	7	Interior- Corridor adjacent to purchasing room	12" x12" floor tile tiles/mastics; Brown, black
38B	7	Interior- Corridor adjacent to Trash room	12" x12" floor tile tiles/mastics; Brown, black
39A	7	Interior- Corridor adjacent to Trash room	Miscellaneous fiber glass type insulation; Yellow
39B	7	Interior- Corridor adjacent to Trash room	Miscellaneous fiber glass type insulation; Yellow
40A	7	Interior- Corridor adjacent to Trash room	Miscellaneous fiber glass type insulation; Black
40B	7	Interior- Corridor adjacent to Trash room	Miscellaneous fiber glass type insulation; Black
41A	7	Interior- Drilling room	Drywall; Brown, gray
41B	7	Interior- Women's bathroom	Drywall ; Brown, gray
42A	7	Interior- Waiting & reception room	1' x 2' Ceiling tiles; Yellow, gray
42B	7	Interior- Corridor adjacent to laminating room	2' x 4' Ceiling tiles; Yellow, gray
43A	7	Interior- Elevator room	Wall board end; Black, white
43B	7	Interior- Office room adjacent to drilling	Wall board end; Black, White
44A	8	Interior- Receiving and Storage room	Basement floor debris ; Yellow, dark brown
44B	8	Interior- Boiler Room	Boiler room debris; Brown, black

\*Comments/Special Instructions:

Page 5 of 7 pages







# Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

**131604927**

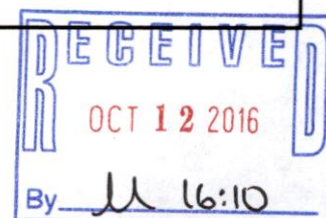
EMSL ANALYTICAL, INC.  
200 ROUTE 130 NORTH  
CINNAMINSON, NJ 08077  
PHONE: (800) 220-3675  
FAX: (856) 786-5974

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

Sample #	HA #	Sample Location	Material Description
1R-A	1	Roof Area 1	Roofing Materials- rubber, tar with stone, and particle board material
1R-B	1	Roof Area 1	Roof Edge Flashing Materials - tar material with wood, concrete, metal, and shingles
1R-C	1	Roof Area 1	Equipment Flashing Materials - black tar material with wood and fibers
2R-A	2	Roof Area 2	Roofing Materials- rubber, with tar and particle board material
2R-B	2	Roof Area 2	Roof Edge Flashing Materials - tar material with shingles
2R-C	2	Roof Area 2	Equipment Flashing Materials - rubber, black tar material and fibers
3R-A	3	Roof Area 3	Roofing Materials- roof shingle
3R-B	3	Roof Area 3	Roofing Materials- rubber, with tar, shingle, and particle board material
3R-C	3	Roof Area 3	Roof Edge Flashing Materials - tar material with rubber, particle board material, and shingles
3R-D	3	Roof Area 3	Equipment Flashing Materials - rubber, black tar material and fibers
3R-E	3	Roof Area 3	Roofing "Cap" Materials- rubber, tar with stone, and particle board material
3R-F	3	Roof Area 3	Roofing Materials- rubber, with tar, shingle, and particle board material
3R-G	3	Roof Area 3	Equipment Flashing Materials - rubber, black tar material
3R-H	3	Roof Area 3	Wall Materials - tar material with shingles and drywall
4R-A	4	Roof Area 4	Roofing Materials- rubber, tar with stone, and particle board material
4R-B	4	Roof Area 4	Roof Edge Flashing Materials b/w Roof Areas 4 & 5- tar material shingles, and fibers
4R-C	4	Roof Area 4	Roof Edge Flashing Materials - tar material with rubber
4R-D	4	Roof Area 4	Roof Edge Flashing Materials - tar material with wood and shingles
4R-E	4	Roof Area 4	Exterior Wall Fiber Board
4R-F	4	Roof Area 4	Equipment Flashing Materials - rubber, black tar material, wood, and fibers
5R-A	5	Roof Area 5	Roofing Materials- rubber, with tar, foam, and particle board material
5R-B	5	Roof Area 5	Elevator Shaft Flashing - rubber, black tar material, and fiber
5R-C	5	Roof Area 5	Interior Roof Edge Flashing Materials - tar material with shingles, drywall, and fibers
5R-D	5	Roof Area 5	Equipment Flashing Materials- rubber with tar and foam

\*Comments/Special Instructions:

Page 6 of 7 pages



**EMSL ANALYTICAL, INC.**  
LABORATORY • PRODUCTS • TRAINING

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

131604927

FAX: (856) 786-5974

[illegible]

Page 7 of 7 pages



# Detection Summary

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

## Client Sample ID: 2-1

## Lab Sample ID: 480-106424-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0064	J	0.015	0.0056	mg/L	1		6010C	TCLP
Lead	0.10		0.020	0.0030	mg/L	1		6010C	TCLP
Silver	0.0070		0.0060	0.0017	mg/L	1		6010C	TCLP
Mercury	0.069	F1	0.0020	0.0012	mg/L	1		7470A	TCLP

## Client Sample ID: 2-2

## Lab Sample ID: 480-106424-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.068		0.015	0.0056	mg/L	1		6010C	TCLP
Selenium	0.75		0.025	0.0087	mg/L	1		6010C	TCLP
Silver	0.49		0.0060	0.0017	mg/L	1		6010C	TCLP

## Client Sample ID: 3-1

## Lab Sample ID: 480-106424-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	17.4		0.52	0.25	mg/Kg	1	✱	6010	Total/NA

## Client Sample ID: 3-2

## Lab Sample ID: 480-106424-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	9.8		0.95	0.46	mg/Kg	1	✱	6010	Total/NA

## Client Sample ID: 3-3

## Lab Sample ID: 480-106424-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	41.2		0.46	0.22	mg/Kg	1	✱	6010	Total/NA

## Client Sample ID: 8-1

## Lab Sample ID: 480-106424-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.48	J	1.0	0.10	mg/L	1		6010C	TCLP
Cadmium	0.0090		0.0020	0.00050	mg/L	1		6010C	TCLP
Lead	0.0040	J	0.020	0.0030	mg/L	1		6010C	TCLP

## Client Sample ID: 8-2

## Lab Sample ID: 480-106424-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.11	J	1.0	0.10	mg/L	1		6010C	TCLP
Cadmium	0.048		0.0020	0.00050	mg/L	1		6010C	TCLP
Lead	0.058		0.020	0.0030	mg/L	1		6010C	TCLP
Silver	0.0043	J	0.0060	0.0017	mg/L	1		6010C	TCLP
Mercury	0.00021		0.00020	0.00012	mg/L	1		7470A	TCLP

## Client Sample ID: 8-3

## Lab Sample ID: 480-106424-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cadmium	0.0086		0.0020	0.00050	mg/L	1		6010C	TCLP
Lead	0.035		0.020	0.0030	mg/L	1		6010C	TCLP
Silver	0.21		0.0060	0.0017	mg/L	1		6010C	TCLP

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

## Detection Summary

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

### Client Sample ID: 8-4

### Lab Sample ID: 480-106424-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0088	J	0.015	0.0056	mg/L	1		6010C	TCLP
Cadmium	0.13		0.0020	0.00050	mg/L	1		6010C	TCLP
Lead	39.4		0.020	0.0030	mg/L	1		6010C	TCLP
Silver	0.034		0.0060	0.0017	mg/L	1		6010C	TCLP
Mercury	0.00052		0.00020	0.00012	mg/L	1		7470A	TCLP

### Client Sample ID: 7-1

### Lab Sample ID: 480-106424-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.11	J	1.0	0.10	mg/L	1		6010C	TCLP
Cadmium	0.0012	J	0.0020	0.00050	mg/L	1		6010C	TCLP
Chromium	0.016	J	0.020	0.010	mg/L	1		6010C	TCLP

### Client Sample ID: 7-2

### Lab Sample ID: 480-106424-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.87	J	1.0	0.10	mg/L	1		6010C	TCLP
Cadmium	0.0024		0.0020	0.00050	mg/L	1		6010C	TCLP

### Client Sample ID: 9-1

### Lab Sample ID: 480-106424-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	111		2.9	1.4	mg/Kg	5	☼	6010	Total/NA

### Client Sample ID: 6-1

### Lab Sample ID: 480-106424-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	3.5		0.57	0.27	mg/Kg	1	☼	6010	Total/NA

### Client Sample ID: 1-1

### Lab Sample ID: 480-106424-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.21	J	1.0	0.10	mg/L	1		6010C	TCLP
Lead	40.5	^	1.0	0.15	mg/L	50		6010C	TCLP
Silver	0.042		0.0060	0.0017	mg/L	1		6010C	TCLP
Mercury	0.00013	J	0.00020	0.00012	mg/L	1		7470A	TCLP

### Client Sample ID: 1-2

### Lab Sample ID: 480-106424-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.18	J	1.0	0.10	mg/L	1		6010C	TCLP
Cadmium	0.0071		0.0020	0.00050	mg/L	1		6010C	TCLP
Chromium	0.016	J	0.020	0.010	mg/L	1		6010C	TCLP
Mercury	0.00028		0.00020	0.00012	mg/L	1		7470A	TCLP

### Client Sample ID: 1-3

### Lab Sample ID: 480-106424-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	91.4		0.55	0.27	mg/Kg	1	☼	6010	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo



## Detection Summary

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

### Client Sample ID: ELEVATOR OIL

Lab Sample ID: 480-106424-17

No Detections.

### Client Sample ID: TRANSFORMER OIL

Lab Sample ID: 480-106424-18

No Detections.

### Client Sample ID: 1-4

Lab Sample ID: 480-106424-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0033	J	0.010	0.00070	mg/L	1		6010	Total/NA
Cadmium	0.012		0.0010	0.00050	mg/L	1		6010	Total/NA
Chromium	0.0023	J	0.0050	0.0010	mg/L	1		6010	Total/NA
Lead	0.072		0.0050	0.0030	mg/L	1		6010	Total/NA
Nickel	0.0025	J	0.010	0.0013	mg/L	1		6010	Total/NA
Silver	0.0017	J	0.0050	0.0017	mg/L	1		6010	Total/NA
Zinc	0.060	B	0.050	0.0015	mg/L	1		6010	Total/NA

### Client Sample ID: 1-5

Lab Sample ID: 480-106424-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0056	J	0.010	0.00070	mg/L	1		6010	Total/NA
Lead	0.11		0.0050	0.0030	mg/L	1		6010	Total/NA
Nickel	0.0042	J	0.010	0.0013	mg/L	1		6010	Total/NA
Zinc	0.15	B F1	0.050	0.0015	mg/L	1		6010	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

# Client Sample Results

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

## Client Sample ID: 2-1

Date Collected: 09/19/16 08:35

Date Received: 09/23/16 01:00

## Lab Sample ID: 480-106424-1

Matrix: Solid

### Method: 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0064	J	0.015	0.0056	mg/L		09/28/16 09:40	09/28/16 18:32	1
Barium	ND		1.0	0.10	mg/L		09/28/16 09:40	09/28/16 18:32	1
Cadmium	ND		0.0020	0.00050	mg/L		09/28/16 09:40	09/28/16 18:32	1
Chromium	ND		0.020	0.010	mg/L		09/28/16 09:40	09/28/16 18:32	1
Lead	0.10		0.020	0.0030	mg/L		09/28/16 09:40	09/28/16 18:32	1
Selenium	ND		0.025	0.0087	mg/L		09/28/16 09:40	09/28/16 18:32	1
Silver	0.0070		0.0060	0.0017	mg/L		09/28/16 09:40	09/28/16 18:32	1

### Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.069	F1	0.0020	0.0012	mg/L		09/29/16 09:30	09/29/16 13:35	1

## Client Sample ID: 2-2

Date Collected: 09/19/16 08:40

Date Received: 09/23/16 01:00

## Lab Sample ID: 480-106424-2

Matrix: Solid

### Method: 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.068		0.015	0.0056	mg/L		09/28/16 10:19	09/28/16 16:33	1
Barium	ND		1.0	0.10	mg/L		09/28/16 10:19	09/28/16 16:33	1
Cadmium	ND		0.0020	0.00050	mg/L		09/28/16 10:19	09/28/16 16:33	1
Chromium	ND		0.020	0.010	mg/L		09/28/16 10:19	09/28/16 16:33	1
Lead	ND	^	0.10	0.015	mg/L		09/28/16 10:19	09/29/16 08:44	5
Selenium	0.75		0.025	0.0087	mg/L		09/28/16 10:19	09/28/16 16:33	1
Silver	0.49		0.0060	0.0017	mg/L		09/28/16 10:19	09/28/16 16:33	1

### Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	F1	0.020	0.012	mg/L		09/29/16 09:30	09/30/16 08:34	10

## Client Sample ID: 3-1

Date Collected: 09/19/16 08:45

Date Received: 09/23/16 01:00

## Lab Sample ID: 480-106424-3

Matrix: Solid

Percent Solids: 96.9

### Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	17.4		0.52	0.25	mg/Kg	☼	09/24/16 14:46	09/26/16 15:58	1

## Client Sample ID: 3-2

Date Collected: 09/19/16 08:50

Date Received: 09/23/16 01:00

## Lab Sample ID: 480-106424-4

Matrix: Solid

Percent Solids: 54.9

### Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	9.8		0.95	0.46	mg/Kg	☼	09/24/16 14:46	09/26/16 16:12	1

TestAmerica Buffalo

# Client Sample Results

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

## Client Sample ID: 3-3

Date Collected: 09/19/16 08:55

Date Received: 09/23/16 01:00

## Lab Sample ID: 480-106424-5

Matrix: Solid

Percent Solids: 100.0

### Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	41.2		0.46	0.22	mg/Kg	☼	09/24/16 14:46	09/26/16 16:15	1

## Client Sample ID: 8-1

Date Collected: 09/19/16 09:00

Date Received: 09/23/16 01:00

## Lab Sample ID: 480-106424-6

Matrix: Solid

### Method: 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		09/28/16 09:40	09/28/16 18:49	1
Barium	0.48	J	1.0	0.10	mg/L		09/28/16 09:40	09/28/16 18:49	1
Cadmium	0.0090		0.0020	0.00050	mg/L		09/28/16 09:40	09/28/16 18:49	1
Chromium	ND		0.020	0.010	mg/L		09/28/16 09:40	09/28/16 18:49	1
Lead	0.0040	J	0.020	0.0030	mg/L		09/28/16 09:40	09/28/16 18:49	1
Selenium	ND		0.025	0.0087	mg/L		09/28/16 09:40	09/28/16 18:49	1
Silver	ND		0.0060	0.0017	mg/L		09/28/16 09:40	09/28/16 18:49	1

### Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		09/29/16 09:30	09/29/16 13:43	1

## Client Sample ID: 8-2

Date Collected: 09/19/16 09:05

Date Received: 09/23/16 01:00

## Lab Sample ID: 480-106424-7

Matrix: Solid

### Method: 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		09/28/16 09:40	09/28/16 18:53	1
Barium	0.11	J	1.0	0.10	mg/L		09/28/16 09:40	09/28/16 18:53	1
Cadmium	0.048		0.0020	0.00050	mg/L		09/28/16 09:40	09/28/16 18:53	1
Chromium	ND		0.020	0.010	mg/L		09/28/16 09:40	09/28/16 18:53	1
Lead	0.058		0.020	0.0030	mg/L		09/28/16 09:40	09/28/16 18:53	1
Selenium	ND		0.025	0.0087	mg/L		09/28/16 09:40	09/28/16 18:53	1
Silver	0.0043	J	0.0060	0.0017	mg/L		09/28/16 09:40	09/28/16 18:53	1

### Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00021		0.00020	0.00012	mg/L		09/29/16 09:30	09/29/16 13:45	1

## Client Sample ID: 8-3

Date Collected: 09/19/16 09:10

Date Received: 09/23/16 01:00

## Lab Sample ID: 480-106424-8

Matrix: Solid

### Method: 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		09/28/16 09:40	09/28/16 19:07	1
Barium	ND		1.0	0.10	mg/L		09/28/16 09:40	09/28/16 19:07	1
Cadmium	0.0086		0.0020	0.00050	mg/L		09/28/16 09:40	09/28/16 19:07	1
Chromium	ND		0.020	0.010	mg/L		09/28/16 09:40	09/28/16 19:07	1
Lead	0.035		0.020	0.0030	mg/L		09/28/16 09:40	09/28/16 19:07	1
Selenium	ND		0.025	0.0087	mg/L		09/28/16 09:40	09/28/16 19:07	1
Silver	0.21		0.0060	0.0017	mg/L		09/28/16 09:40	09/28/16 19:07	1

TestAmerica Buffalo

# Client Sample Results

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

## Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		09/29/16 09:30	09/29/16 13:46	1

## Client Sample ID: 8-4

Lab Sample ID: 480-106424-9

Date Collected: 09/19/16 09:15

Matrix: Solid

Date Received: 09/23/16 01:00

## Method: 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0088	J	0.015	0.0056	mg/L		09/28/16 09:40	09/28/16 19:10	1
Barium	ND		1.0	0.10	mg/L		09/28/16 09:40	09/28/16 19:10	1
Cadmium	0.13		0.0020	0.00050	mg/L		09/28/16 09:40	09/28/16 19:10	1
Chromium	ND		0.020	0.010	mg/L		09/28/16 09:40	09/28/16 19:10	1
Lead	39.4		0.020	0.0030	mg/L		09/28/16 09:40	09/28/16 19:10	1
Selenium	ND		0.025	0.0087	mg/L		09/28/16 09:40	09/28/16 19:10	1
Silver	0.034		0.0060	0.0017	mg/L		09/28/16 09:40	09/28/16 19:10	1

## Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00052		0.00020	0.00012	mg/L		09/29/16 09:30	09/29/16 14:26	1

## Client Sample ID: 7-1

Lab Sample ID: 480-106424-10

Date Collected: 09/19/16 09:20

Matrix: Solid

Date Received: 09/23/16 01:00

## Method: 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		09/28/16 09:40	09/28/16 19:14	1
Barium	0.11	J	1.0	0.10	mg/L		09/28/16 09:40	09/28/16 19:14	1
Cadmium	0.0012	J	0.0020	0.00050	mg/L		09/28/16 09:40	09/28/16 19:14	1
Chromium	0.016	J	0.020	0.010	mg/L		09/28/16 09:40	09/28/16 19:14	1
Lead	ND	^	1.0	0.15	mg/L		09/28/16 09:40	09/29/16 09:04	50
Selenium	ND		0.13	0.044	mg/L		09/28/16 09:40	09/29/16 09:00	5
Silver	ND		0.0060	0.0017	mg/L		09/28/16 09:40	09/28/16 19:14	1

## Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		09/29/16 09:30	09/29/16 14:27	1

## Client Sample ID: 7-2

Lab Sample ID: 480-106424-11

Date Collected: 09/19/16 09:30

Matrix: Solid

Date Received: 09/23/16 01:00

## Method: 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		09/28/16 09:40	09/28/16 19:17	1
Barium	0.87	J	1.0	0.10	mg/L		09/28/16 09:40	09/28/16 19:17	1
Cadmium	0.0024		0.0020	0.00050	mg/L		09/28/16 09:40	09/28/16 19:17	1
Chromium	ND		0.020	0.010	mg/L		09/28/16 09:40	09/28/16 19:17	1
Lead	ND	^	0.10	0.015	mg/L		09/28/16 09:40	09/29/16 09:07	5
Selenium	ND		0.025	0.0087	mg/L		09/28/16 09:40	09/28/16 19:17	1
Silver	ND		0.0060	0.0017	mg/L		09/28/16 09:40	09/28/16 19:17	1

## Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		09/29/16 09:30	09/29/16 14:29	1

TestAmerica Buffalo



# Client Sample Results

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

## Client Sample ID: 9-1

Date Collected: 09/19/16 10:00

Date Received: 09/23/16 01:00

## Lab Sample ID: 480-106424-12

Matrix: Solid

Percent Solids: 89.0

### Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	111		2.9	1.4	mg/Kg	☆	09/24/16 14:46	09/27/16 11:42	5

## Client Sample ID: 6-1

Date Collected: 09/19/16 10:10

Date Received: 09/23/16 01:00

## Lab Sample ID: 480-106424-13

Matrix: Solid

Percent Solids: 90.7

### Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	3.5		0.57	0.27	mg/Kg	☆	09/24/16 14:46	09/26/16 16:22	1

## Client Sample ID: 1-1

Date Collected: 09/19/16 10:15

Date Received: 09/23/16 01:00

## Lab Sample ID: 480-106424-14

Matrix: Solid

### Method: 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		09/28/16 09:40	09/28/16 19:21	1
Barium	0.21	J	1.0	0.10	mg/L		09/28/16 09:40	09/28/16 19:21	1
Cadmium	ND		0.0020	0.00050	mg/L		09/28/16 09:40	09/28/16 19:21	1
Chromium	ND		0.020	0.010	mg/L		09/28/16 09:40	09/28/16 19:21	1
Lead	40.5	^	1.0	0.15	mg/L		09/28/16 09:40	09/29/16 09:11	50
Selenium	ND		0.025	0.0087	mg/L		09/28/16 09:40	09/28/16 19:21	1
Silver	0.042		0.0060	0.0017	mg/L		09/28/16 09:40	09/28/16 19:21	1

### Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00013	J	0.00020	0.00012	mg/L		09/29/16 09:30	09/29/16 14:31	1

## Client Sample ID: 1-2

Date Collected: 09/19/16 10:20

Date Received: 09/23/16 01:00

## Lab Sample ID: 480-106424-15

Matrix: Solid

### Method: 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		09/28/16 09:42	09/28/16 19:25	1
Barium	0.18	J	1.0	0.10	mg/L		09/28/16 09:42	09/28/16 19:25	1
Cadmium	0.0071		0.0020	0.00050	mg/L		09/28/16 09:42	09/28/16 19:25	1
Chromium	0.016	J	0.020	0.010	mg/L		09/28/16 09:42	09/28/16 19:25	1
Lead	ND	^	1.0	0.15	mg/L		09/28/16 09:42	09/29/16 09:26	50
Selenium	ND		0.025	0.0087	mg/L		09/28/16 09:42	09/28/16 19:25	1
Silver	ND		0.0060	0.0017	mg/L		09/28/16 09:42	09/28/16 19:25	1

### Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00028		0.00020	0.00012	mg/L		09/29/16 09:30	09/29/16 14:33	1

TestAmerica Buffalo

# Client Sample Results

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

## Client Sample ID: 1-3

Date Collected: 09/19/16 10:30

Date Received: 09/23/16 01:00

## Lab Sample ID: 480-106424-16

Matrix: Solid

Percent Solids: 98.1

### Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	91.4		0.55	0.27	mg/Kg	☼	09/24/16 14:46	09/26/16 16:26	1

## Client Sample ID: ELEVATOR OIL

Date Collected: 09/20/16 13:00

Date Received: 09/23/16 01:00

## Lab Sample ID: 480-106424-17

Matrix: Waste

### Method: 8082 - Polychlorinated Biphenyls (GC/ECD)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		17	17000	ug/L		09/23/16 12:56	09/26/16 13:55	10
PCB-1221	ND		17	17000	ug/L		09/23/16 12:56	09/26/16 13:55	10
PCB-1232	ND		17	17000	ug/L		09/23/16 12:56	09/26/16 13:55	10
PCB-1242	ND		17	17000	ug/L		09/23/16 12:56	09/26/16 13:55	10
PCB-1248	ND		17	17000	ug/L		09/23/16 12:56	09/26/16 13:55	10
PCB-1254	ND		17	17000	ug/L		09/23/16 12:56	09/26/16 13:55	10
PCB-1260	ND		17	17000	ug/L		09/23/16 12:56	09/26/16 13:55	10
PCB-1262	ND		17	17000	ug/L		09/23/16 12:56	09/26/16 13:55	10
PCB-1268	ND		17	17000	ug/L		09/23/16 12:56	09/26/16 13:55	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	145		30 - 150	09/23/16 12:56	09/26/16 13:55	10
Tetrachloro-m-xylene	109		30 - 150	09/23/16 12:56	09/26/16 13:55	10
DCB Decachlorobiphenyl	153	X	30 - 150	09/23/16 12:56	09/26/16 13:55	10
DCB Decachlorobiphenyl	73		30 - 150	09/23/16 12:56	09/26/16 13:55	10

## Client Sample ID: TRANSFORMER OIL

Date Collected: 09/20/16 13:15

Date Received: 09/23/16 01:00

## Lab Sample ID: 480-106424-18

Matrix: Wipe

### Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		1.0	0.18	ug/Wipe		09/23/16 12:48	09/26/16 15:48	1
PCB-1221	ND		1.0	0.18	ug/Wipe		09/23/16 12:48	09/26/16 15:48	1
PCB-1232	ND		1.0	0.18	ug/Wipe		09/23/16 12:48	09/26/16 15:48	1
PCB-1242	ND		1.0	0.18	ug/Wipe		09/23/16 12:48	09/26/16 15:48	1
PCB-1248	ND		1.0	0.18	ug/Wipe		09/23/16 12:48	09/26/16 15:48	1
PCB-1254	ND		1.0	0.25	ug/Wipe		09/23/16 12:48	09/26/16 15:48	1
PCB-1260	ND		1.0	0.25	ug/Wipe		09/23/16 12:48	09/26/16 15:48	1
PCB-1262	ND		1.0	0.25	ug/Wipe		09/23/16 12:48	09/26/16 15:48	1
PCB-1268	ND		1.0	0.25	ug/Wipe		09/23/16 12:48	09/26/16 15:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	66		57 - 173	09/23/16 12:48	09/26/16 15:48	1
DCB Decachlorobiphenyl	102		59 - 171	09/23/16 12:48	09/26/16 15:48	1

## Client Sample ID: 1-4

Date Collected: 09/21/16 10:00

Date Received: 09/23/16 01:00

## Lab Sample ID: 480-106424-19

Matrix: Water

### Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0060	0.0068	mg/L		09/23/16 09:20	09/24/16 12:37	1

TestAmerica Buffalo

# Client Sample Results

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

**Client Sample ID: 1-4**

**Lab Sample ID: 480-106424-19**

**Date Collected: 09/21/16 10:00**

**Matrix: Water**

**Date Received: 09/23/16 01:00**

## Method: 6010 - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.010	0.0056	mg/L		09/23/16 09:20	09/24/16 12:37	1
<b>Barium</b>	<b>0.0033</b>	<b>J</b>	0.010	0.00070	mg/L		09/23/16 09:20	09/24/16 12:37	1
Beryllium	ND		0.0010	0.00030	mg/L		09/23/16 09:20	09/24/16 12:37	1
<b>Cadmium</b>	<b>0.012</b>		0.0010	0.00050	mg/L		09/23/16 09:20	09/24/16 12:37	1
<b>Chromium</b>	<b>0.0023</b>	<b>J</b>	0.0050	0.0010	mg/L		09/23/16 09:20	09/24/16 12:37	1
<b>Lead</b>	<b>0.072</b>		0.0050	0.0030	mg/L		09/23/16 09:20	09/24/16 12:37	1
<b>Nickel</b>	<b>0.0025</b>	<b>J</b>	0.010	0.0013	mg/L		09/23/16 09:20	09/24/16 12:37	1
Selenium	ND		0.010	0.0087	mg/L		09/23/16 09:20	09/24/16 12:37	1
<b>Silver</b>	<b>0.0017</b>	<b>J</b>	0.0050	0.0017	mg/L		09/23/16 09:20	09/24/16 12:37	1
Thallium	ND		0.020	0.010	mg/L		09/23/16 09:20	09/24/16 12:37	1
Vanadium	ND		0.010	0.0015	mg/L		09/23/16 09:20	09/24/16 12:37	1
<b>Zinc</b>	<b>0.060</b>	<b>B</b>	0.050	0.0015	mg/L		09/23/16 09:20	09/24/16 12:37	1

## Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		09/23/16 10:45	09/23/16 16:38	1

**Client Sample ID: 1-5**

**Lab Sample ID: 480-106424-20**

**Date Collected: 09/21/16 10:10**

**Matrix: Water**

**Date Received: 09/23/16 01:00**

## Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0060	0.0068	mg/L		09/23/16 09:20	09/28/16 11:26	1
Arsenic	ND		0.010	0.0056	mg/L		09/23/16 09:20	09/28/16 11:26	1
<b>Barium</b>	<b>0.0056</b>	<b>J</b>	0.010	0.00070	mg/L		09/23/16 09:20	09/28/16 11:26	1
Beryllium	ND		0.0010	0.00030	mg/L		09/23/16 09:20	09/28/16 11:26	1
Cadmium	ND		0.0010	0.00050	mg/L		09/23/16 09:20	09/28/16 11:26	1
Chromium	ND		0.0050	0.0010	mg/L		09/23/16 09:20	09/28/16 11:26	1
<b>Lead</b>	<b>0.11</b>		0.0050	0.0030	mg/L		09/23/16 09:20	09/28/16 11:26	1
<b>Nickel</b>	<b>0.0042</b>	<b>J</b>	0.010	0.0013	mg/L		09/23/16 09:20	09/28/16 11:26	1
Selenium	ND		0.010	0.0087	mg/L		09/23/16 09:20	09/28/16 11:26	1
Silver	ND		0.0050	0.0017	mg/L		09/23/16 09:20	09/28/16 11:26	1
Thallium	ND		0.020	0.010	mg/L		09/23/16 09:20	09/28/16 11:26	1
Vanadium	ND		0.010	0.0015	mg/L		09/23/16 09:20	09/28/16 11:26	1
<b>Zinc</b>	<b>0.15</b>	<b>B F1</b>	0.050	0.0015	mg/L		09/23/16 09:20	09/28/16 11:26	1

## Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		09/23/16 10:45	09/23/16 16:40	1

TestAmerica Buffalo

## Surrogate Summary

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

### Method: 8082 - Polychlorinated Biphenyls (GC/ECD)

Matrix: Waste

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TCX1 (30-150)	TCX2 (30-150)	DCB1 (30-150)	DCB2 (30-150)
480-106424-17	ELEVATOR OIL	145	109	153 X	73
LCS 480-322041/2-A	Lab Control Sample	151 X	111	142	120
LCSD 480-322041/3-A	Lab Control Sample Dup	146	114	138	119
MB 480-322041/1-A	Method Blank	141	99	133	106

#### Surrogate Legend

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

### Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Wipe

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		TCX1 (57-173)	DCB1 (59-171)
480-106424-18	TRANSFORMER OIL	66	102
LCS 480-322040/2-A	Lab Control Sample	115	123
LCSD 480-322040/3-A	Lab Control Sample Dup	114	125
MB 480-322040/1-A	Method Blank	116	129

#### Surrogate Legend

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl



# QC Sample Results

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

## Method: 8082 - Polychlorinated Biphenyls (GC/ECD)

Lab Sample ID: MB 480-322041/1-A

Matrix: Waste

Analysis Batch: 322385

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 322041

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		2.5	2500	ug/L		09/23/16 12:56	09/26/16 12:51	1
PCB-1221	ND		2.5	2500	ug/L		09/23/16 12:56	09/26/16 12:51	1
PCB-1232	ND		2.5	2500	ug/L		09/23/16 12:56	09/26/16 12:51	1
PCB-1242	ND		2.5	2500	ug/L		09/23/16 12:56	09/26/16 12:51	1
PCB-1248	ND		2.5	2500	ug/L		09/23/16 12:56	09/26/16 12:51	1
PCB-1254	ND		2.5	2500	ug/L		09/23/16 12:56	09/26/16 12:51	1
PCB-1260	ND		2.5	2500	ug/L		09/23/16 12:56	09/26/16 12:51	1
PCB-1262	ND		2.5	2500	ug/L		09/23/16 12:56	09/26/16 12:51	1
PCB-1268	ND		2.5	2500	ug/L		09/23/16 12:56	09/26/16 12:51	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	141		30 - 150	09/23/16 12:56	09/26/16 12:51	1
Tetrachloro-m-xylene	99		30 - 150	09/23/16 12:56	09/26/16 12:51	1
DCB Decachlorobiphenyl	133		30 - 150	09/23/16 12:56	09/26/16 12:51	1
DCB Decachlorobiphenyl	106		30 - 150	09/23/16 12:56	09/26/16 12:51	1

Lab Sample ID: LCS 480-322041/2-A

Matrix: Waste

Analysis Batch: 322385

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 322041

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	50000	56700		ug/L		113	40 - 140
PCB-1260	50000	54600		ug/L		109	40 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	151	X	30 - 150
Tetrachloro-m-xylene	111		30 - 150
DCB Decachlorobiphenyl	142		30 - 150
DCB Decachlorobiphenyl	120		30 - 150

Lab Sample ID: LCSD 480-322041/3-A

Matrix: Waste

Analysis Batch: 322385

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 322041

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	50000	57500		ug/L		115	40 - 140	1	30
PCB-1260	50000	55000		ug/L		110	40 - 140	1	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene	146		30 - 150
Tetrachloro-m-xylene	114		30 - 150
DCB Decachlorobiphenyl	138		30 - 150
DCB Decachlorobiphenyl	119		30 - 150

TestAmerica Buffalo

# QC Sample Results

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 480-322040/1-A

Matrix: Wipe

Analysis Batch: 322388

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 322040

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		1.0	0.18	ug/Wipe		09/23/16 12:48	09/26/16 12:52	1
PCB-1221	ND		1.0	0.18	ug/Wipe		09/23/16 12:48	09/26/16 12:52	1
PCB-1232	ND		1.0	0.18	ug/Wipe		09/23/16 12:48	09/26/16 12:52	1
PCB-1242	ND		1.0	0.18	ug/Wipe		09/23/16 12:48	09/26/16 12:52	1
PCB-1248	ND		1.0	0.18	ug/Wipe		09/23/16 12:48	09/26/16 12:52	1
PCB-1254	ND		1.0	0.25	ug/Wipe		09/23/16 12:48	09/26/16 12:52	1
PCB-1260	ND		1.0	0.25	ug/Wipe		09/23/16 12:48	09/26/16 12:52	1
PCB-1262	ND		1.0	0.25	ug/Wipe		09/23/16 12:48	09/26/16 12:52	1
PCB-1268	ND		1.0	0.25	ug/Wipe		09/23/16 12:48	09/26/16 12:52	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	116		57 - 173	09/23/16 12:48	09/26/16 12:52	1
DCB Decachlorobiphenyl	129		59 - 171	09/23/16 12:48	09/26/16 12:52	1

Lab Sample ID: LCS 480-322040/2-A

Matrix: Wipe

Analysis Batch: 322388

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 322040

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	20.0	22.9		ug/Wipe		114	54 - 182
PCB-1260	20.0	22.2		ug/Wipe		111	53 - 187

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	115		57 - 173
DCB Decachlorobiphenyl	123		59 - 171

Lab Sample ID: LCSD 480-322040/3-A

Matrix: Wipe

Analysis Batch: 322388

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 322040

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	20.0	22.9		ug/Wipe		114	54 - 182	0	50
PCB-1260	20.0	21.9		ug/Wipe		110	53 - 187	1	50

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene	114		57 - 173
DCB Decachlorobiphenyl	125		59 - 171

## Method: 6010 - Metals (ICP)

Lab Sample ID: MB 480-321948/1-A

Matrix: Water

Analysis Batch: 322343

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 321948

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0060	0.0068	mg/L		09/23/16 09:20	09/24/16 11:16	1
Arsenic	ND		0.010	0.0056	mg/L		09/23/16 09:20	09/24/16 11:16	1

TestAmerica Buffalo

# QC Sample Results

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

## Method: 6010 - Metals (ICP) (Continued)

Lab Sample ID: MB 480-321948/1-A

Matrix: Water

Analysis Batch: 322343

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 321948

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	ND		0.010	0.00070	mg/L		09/23/16 09:20	09/24/16 11:16	1
Beryllium	ND		0.0010	0.00030	mg/L		09/23/16 09:20	09/24/16 11:16	1
Cadmium	ND		0.0010	0.00050	mg/L		09/23/16 09:20	09/24/16 11:16	1
Chromium	ND		0.0050	0.0010	mg/L		09/23/16 09:20	09/24/16 11:16	1
Lead	ND		0.0050	0.0030	mg/L		09/23/16 09:20	09/24/16 11:16	1
Nickel	ND		0.010	0.0013	mg/L		09/23/16 09:20	09/24/16 11:16	1
Selenium	ND		0.010	0.0087	mg/L		09/23/16 09:20	09/24/16 11:16	1
Silver	ND		0.0050	0.0017	mg/L		09/23/16 09:20	09/24/16 11:16	1
Thallium	ND		0.020	0.010	mg/L		09/23/16 09:20	09/24/16 11:16	1
Vanadium	ND		0.010	0.0015	mg/L		09/23/16 09:20	09/24/16 11:16	1

Lab Sample ID: MB 480-321948/1-A

Matrix: Water

Analysis Batch: 322428

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 321948

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	0.00370	J	0.050	0.0015	mg/L		09/23/16 09:20	09/26/16 11:27	1

Lab Sample ID: LCS 480-321948/2-A

Matrix: Water

Analysis Batch: 322343

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 321948

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.200	0.201		mg/L		101	80 - 120
Arsenic	0.200	0.200		mg/L		100	80 - 120
Barium	0.200	0.204		mg/L		102	80 - 120
Beryllium	0.200	0.200		mg/L		100	80 - 120
Cadmium	0.200	0.196		mg/L		98	80 - 120
Chromium	0.200	0.197		mg/L		98	80 - 120
Lead	0.200	0.199		mg/L		100	80 - 120
Nickel	0.200	0.199		mg/L		99	80 - 120
Selenium	0.200	0.196		mg/L		98	80 - 120
Silver	0.0500	0.0498		mg/L		100	80 - 120
Thallium	0.200	0.199		mg/L		100	80 - 120
Vanadium	0.200	0.190		mg/L		95	80 - 120
Zinc	0.200	0.194		mg/L		97	80 - 120

Lab Sample ID: LCSD 480-321948/22-A

Matrix: Water

Analysis Batch: 322343

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 321948

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	0.200	0.201		mg/L		101	80 - 120	0	20
Arsenic	0.200	0.199		mg/L		100	80 - 120	0	20
Barium	0.200	0.206		mg/L		103	80 - 120	1	20
Beryllium	0.200	0.202		mg/L		101	80 - 120	1	20
Cadmium	0.200	0.198		mg/L		99	80 - 120	1	20
Chromium	0.200	0.202		mg/L		101	80 - 120	3	20
Lead	0.200	0.201		mg/L		101	80 - 120	1	20

TestAmerica Buffalo

# QC Sample Results

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

## Method: 6010 - Metals (ICP) (Continued)

Lab Sample ID: LCSD 480-321948/22-A

Matrix: Water

Analysis Batch: 322343

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 321948

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nickel	0.200	0.202		mg/L		101	80 - 120	2	20
Selenium	0.200	0.198		mg/L		99	80 - 120	1	20
Silver	0.0500	0.0515		mg/L		103	80 - 120	3	20
Thallium	0.200	0.203		mg/L		102	80 - 120	2	20
Vanadium	0.200	0.194		mg/L		97	80 - 120	2	20
Zinc	0.200	0.198		mg/L		99	80 - 120	2	20

Lab Sample ID: 480-106424-20 MS

Matrix: Water

Analysis Batch: 322858

Client Sample ID: 1-5

Prep Type: Total/NA

Prep Batch: 321948

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	ND		0.200	0.208		mg/L		104	75 - 125		
Arsenic	ND		0.200	0.204		mg/L		102	75 - 125		
Barium	0.0056	J	0.200	0.205		mg/L		100	75 - 125		
Beryllium	ND		0.200	0.206		mg/L		103	75 - 125		
Cadmium	ND		0.200	0.214		mg/L		107	75 - 125		
Chromium	ND		0.200	0.212		mg/L		106	75 - 125		
Lead	0.11		0.200	0.271		mg/L		80	75 - 125		
Nickel	0.0042	J	0.200	0.207		mg/L		101	75 - 125		
Selenium	ND		0.200	0.197		mg/L		99	75 - 125		
Silver	ND		0.0500	0.0519		mg/L		104	75 - 125		
Thallium	ND		0.200	0.191		mg/L		95	75 - 125		
Vanadium	ND		0.200	0.203		mg/L		101	75 - 125		
Zinc	0.15	B F1	0.200	0.265	F1	mg/L		56	75 - 125		

Lab Sample ID: 480-106424-20 MSD

Matrix: Water

Analysis Batch: 322858

Client Sample ID: 1-5

Prep Type: Total/NA

Prep Batch: 321948

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	ND		0.200	0.208		mg/L		104	75 - 125	0	20
Arsenic	ND		0.200	0.206		mg/L		103	75 - 125	1	20
Barium	0.0056	J	0.200	0.205		mg/L		100	75 - 125	0	20
Beryllium	ND		0.200	0.203		mg/L		101	75 - 125	1	20
Cadmium	ND		0.200	0.213		mg/L		107	75 - 125	1	20
Chromium	ND		0.200	0.212		mg/L		106	75 - 125	0	20
Lead	0.11		0.200	0.270		mg/L		80	75 - 125	0	20
Nickel	0.0042	J	0.200	0.204		mg/L		100	75 - 125	1	20
Selenium	ND		0.200	0.199		mg/L		100	75 - 125	1	20
Silver	ND		0.0500	0.0523		mg/L		105	75 - 125	1	20
Thallium	ND		0.200	0.191		mg/L		95	75 - 125	0	20
Vanadium	ND		0.200	0.202		mg/L		101	75 - 125	0	20
Zinc	0.15	B F1	0.200	0.264	F1	mg/L		55	75 - 125	1	20

TestAmerica Buffalo



# QC Sample Results

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

## Method: 6010 - Metals (ICP) (Continued)

Lab Sample ID: MB 480-322205/1-A

Matrix: Solid

Analysis Batch: 322575

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 322205

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.49	0.23	mg/Kg		09/24/16 14:46	09/26/16 15:01	1

Lab Sample ID: LCDSRM 480-322205/19-A

Matrix: Solid

Analysis Batch: 322575

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 322205

Analyte	Spike Added	LCDSRM Result	LCDSRM Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	76.9	79.80		mg/Kg		103.8	68.8 - 131.3	1	30

Lab Sample ID: LCSSRM 480-322205/2-A

Matrix: Solid

Analysis Batch: 322575

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 322205

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits		
Lead	76.9	80.28		mg/Kg		104.4	68.8 - 131.3		

## Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-322804/2-B

Matrix: Solid

Analysis Batch: 322952

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 322804

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		09/28/16 09:40	09/28/16 18:04	1
Barium	ND		1.0	0.10	mg/L		09/28/16 09:40	09/28/16 18:04	1
Cadmium	ND		0.0020	0.00050	mg/L		09/28/16 09:40	09/28/16 18:04	1
Chromium	ND		0.020	0.010	mg/L		09/28/16 09:40	09/28/16 18:04	1
Lead	ND		0.020	0.0030	mg/L		09/28/16 09:40	09/28/16 18:04	1
Selenium	ND		0.025	0.0087	mg/L		09/28/16 09:40	09/28/16 18:04	1
Silver	ND		0.0060	0.0017	mg/L		09/28/16 09:40	09/28/16 18:04	1

Lab Sample ID: LCS 480-322804/18-B

Matrix: Solid

Analysis Batch: 322952

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 322804

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Arsenic	1.00	0.976		mg/L		98	80 - 120		
Barium	1.00	0.979	J	mg/L		98	80 - 120		
Cadmium	1.00	0.983		mg/L		98	80 - 120		
Chromium	1.00	1.00		mg/L		100	80 - 120		
Lead	1.00	1.01		mg/L		101	80 - 120		
Selenium	1.00	0.953		mg/L		95	80 - 120		
Silver	1.00	1.03		mg/L		103	80 - 120		

TestAmerica Buffalo

# QC Sample Results

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

## Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: MB 480-322812/2-A

Matrix: Solid

Analysis Batch: 322951

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 322812

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		09/28/16 10:19	09/28/16 16:22	1
Barium	ND		1.0	0.10	mg/L		09/28/16 10:19	09/28/16 16:22	1
Cadmium	ND		0.0020	0.00050	mg/L		09/28/16 10:19	09/28/16 16:22	1
Chromium	ND		0.020	0.010	mg/L		09/28/16 10:19	09/28/16 16:22	1
Lead	ND		0.020	0.0030	mg/L		09/28/16 10:19	09/28/16 16:22	1
Selenium	ND		0.025	0.0087	mg/L		09/28/16 10:19	09/28/16 16:22	1
Silver	ND		0.0060	0.0017	mg/L		09/28/16 10:19	09/28/16 16:22	1

Lab Sample ID: LCS 480-322812/3-A

Matrix: Solid

Analysis Batch: 322951

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 322812

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.00	0.909		mg/L		91	80 - 120
Barium	1.00	0.964	J	mg/L		96	80 - 120
Cadmium	1.00	0.950		mg/L		95	80 - 120
Chromium	1.00	0.982		mg/L		98	80 - 120
Lead	1.00	0.952		mg/L		95	80 - 120
Selenium	1.00	0.893		mg/L		89	80 - 120
Silver	1.00	0.961		mg/L		96	80 - 120

Lab Sample ID: LB 480-322588/1-C

Matrix: Solid

Analysis Batch: 322952

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 322804

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		09/28/16 09:40	09/28/16 18:00	1
Barium	ND		1.0	0.10	mg/L		09/28/16 09:40	09/28/16 18:00	1
Cadmium	ND		0.0020	0.00050	mg/L		09/28/16 09:40	09/28/16 18:00	1
Chromium	ND		0.020	0.010	mg/L		09/28/16 09:40	09/28/16 18:00	1
Lead	ND		0.020	0.0030	mg/L		09/28/16 09:40	09/28/16 18:00	1
Selenium	ND		0.025	0.0087	mg/L		09/28/16 09:40	09/28/16 18:00	1
Silver	ND		0.0060	0.0017	mg/L		09/28/16 09:40	09/28/16 18:00	1

Lab Sample ID: 480-106424-1 MS

Matrix: Solid

Analysis Batch: 322952

Client Sample ID: 2-1

Prep Type: TCLP

Prep Batch: 322804

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0064	J	1.00	1.01		mg/L		100	75 - 125
Barium	ND		1.00	1.00		mg/L		100	75 - 125
Cadmium	ND		1.00	1.01		mg/L		101	75 - 125
Chromium	ND		1.00	1.00		mg/L		100	75 - 125
Lead	0.10		1.00	1.12		mg/L		103	75 - 125
Selenium	ND		1.00	0.962		mg/L		96	75 - 125
Silver	0.0070		1.00	1.06		mg/L		105	75 - 125

TestAmerica Buffalo

# QC Sample Results

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

## Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 480-106424-1 MSD

Matrix: Solid

Analysis Batch: 322952

Client Sample ID: 2-1

Prep Type: TCLP

Prep Batch: 322804

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.0064	J	1.00	1.00		mg/L		100	75 - 125	0	20
Barium	ND		1.00	1.00		mg/L		100	75 - 125	0	20
Cadmium	ND		1.00	1.01		mg/L		101	75 - 125	0	20
Chromium	ND		1.00	1.01		mg/L		101	75 - 125	0	20
Lead	0.10		1.00	1.14		mg/L		104	75 - 125	1	20
Selenium	ND		1.00	0.954		mg/L		95	75 - 125	1	20
Silver	0.0070		1.00	1.07		mg/L		106	75 - 125	1	20

Lab Sample ID: LB2 480-322590/1-C

Matrix: Solid

Analysis Batch: 322951

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 322812

Analyte	LB2 Result	LB2 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		09/28/16 10:19	09/28/16 16:19	1
Barium	ND		1.0	0.10	mg/L		09/28/16 10:19	09/28/16 16:19	1
Cadmium	ND		0.0020	0.00050	mg/L		09/28/16 10:19	09/28/16 16:19	1
Chromium	ND		0.020	0.010	mg/L		09/28/16 10:19	09/28/16 16:19	1
Lead	0.00349	J	0.020	0.0030	mg/L		09/28/16 10:19	09/28/16 16:19	1
Selenium	ND		0.025	0.0087	mg/L		09/28/16 10:19	09/28/16 16:19	1
Silver	ND		0.0060	0.0017	mg/L		09/28/16 10:19	09/28/16 16:19	1

Lab Sample ID: 480-106424-2 MS

Matrix: Solid

Analysis Batch: 322951

Client Sample ID: 2-2

Prep Type: TCLP

Prep Batch: 322812

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.068		1.00	1.03		mg/L		97	75 - 125
Barium	ND		1.00	0.988	J	mg/L		99	75 - 125
Cadmium	ND		1.00	1.01		mg/L		101	75 - 125
Chromium	ND		1.00	1.00		mg/L		100	75 - 125
Selenium	0.75		1.00	1.74		mg/L		99	75 - 125
Silver	0.49		1.00	1.47		mg/L		98	75 - 125

Lab Sample ID: 480-106424-2 MS

Matrix: Solid

Analysis Batch: 323019

Client Sample ID: 2-2

Prep Type: TCLP

Prep Batch: 322812

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	ND	^	1.00	0.956	^	mg/L		96	75 - 125

Lab Sample ID: 480-106424-2 MSD

Matrix: Solid

Analysis Batch: 322951

Client Sample ID: 2-2

Prep Type: TCLP

Prep Batch: 322812

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.068		1.00	1.02		mg/L		95	75 - 125	1	20
Barium	ND		1.00	0.988	J	mg/L		99	75 - 125	0	20
Cadmium	ND		1.00	0.996		mg/L		100	75 - 125	1	20
Chromium	ND		1.00	0.993		mg/L		99	75 - 125	1	20

TestAmerica Buffalo

# QC Sample Results

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

## Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 480-106424-2 MSD

Matrix: Solid

Analysis Batch: 322951

Client Sample ID: 2-2

Prep Type: TCLP

Prep Batch: 322812

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Selenium	0.75		1.00	1.73		mg/L		98	75 - 125	1	20
Silver	0.49		1.00	1.45		mg/L		95	75 - 125	2	20

Lab Sample ID: 480-106424-2 MSD

Matrix: Solid

Analysis Batch: 323019

Client Sample ID: 2-2

Prep Type: TCLP

Prep Batch: 322812

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	ND	^	1.00	0.941	^	mg/L		94	75 - 125	2	20

## Method: 7470A - TCLP Mercury

Lab Sample ID: MB 480-322823/2-A

Matrix: Solid

Analysis Batch: 323282

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 322823

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		09/29/16 09:30	09/30/16 08:29	1

Lab Sample ID: LCS 480-322823/3-A

Matrix: Solid

Analysis Batch: 323282

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 322823

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00668	0.00617		mg/L		92	80 - 120

Lab Sample ID: LCSD 480-322823/7-A

Matrix: Solid

Analysis Batch: 323282

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 322823

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00668	0.00547		mg/L		82	80 - 120	12	20

Lab Sample ID: MB 480-322824/2-A

Matrix: Solid

Analysis Batch: 323143

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 322824

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		09/29/16 09:30	09/29/16 13:32	1

Lab Sample ID: LCS 480-322824/3-A

Matrix: Solid

Analysis Batch: 323143

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 322824

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00668	0.00568		mg/L		85	80 - 120

TestAmerica Buffalo

# QC Sample Results

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

## Method: 7470A - TCLP Mercury (Continued)

Lab Sample ID: LB2 480-322590/1-D

Matrix: Solid

Analysis Batch: 323282

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 322823

Analyte	LB2 Result	LB2 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		09/29/16 09:30	09/30/16 08:27	1

Lab Sample ID: 480-106424-2 MS

Matrix: Solid

Analysis Batch: 323282

Client Sample ID: 2-2

Prep Type: TCLP

Prep Batch: 322823

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND	F1	0.0668	ND	F1	mg/L		0	80 - 120

Lab Sample ID: 480-106424-2 MSD

Matrix: Solid

Analysis Batch: 323282

Client Sample ID: 2-2

Prep Type: TCLP

Prep Batch: 322823

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD Limit
Mercury	ND	F1	0.0668	ND	F1	mg/L		0	80 - 120	NC 20

Lab Sample ID: LB 480-322588/1-D

Matrix: Solid

Analysis Batch: 323143

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 322824

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		09/29/16 09:30	09/29/16 13:30	1

Lab Sample ID: 480-106424-1 MS

Matrix: Solid

Analysis Batch: 323143

Client Sample ID: 2-1

Prep Type: TCLP

Prep Batch: 322824

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.069	F1	0.0668	0.0723	F1	mg/L		6	80 - 120

Lab Sample ID: 480-106424-1 MSD

Matrix: Solid

Analysis Batch: 323143

Client Sample ID: 2-1

Prep Type: TCLP

Prep Batch: 322824

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD Limit
Mercury	0.069	F1	0.0668	0.0725	F1	mg/L		6	80 - 120	0 20

## Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 480-321968/1-A

Matrix: Water

Analysis Batch: 322371

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 321968

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		09/23/16 10:45	09/23/16 15:51	1

TestAmerica Buffalo



# QC Sample Results

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

## Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 480-321968/2-A

Matrix: Water

Analysis Batch: 322371

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 321968

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00667	0.00705		mg/L		106	80 - 120

Lab Sample ID: LCSD 480-321968/23-A

Matrix: Water

Analysis Batch: 322371

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 321968

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00667	0.00703		mg/L		105	80 - 120	0	20

# QC Association Summary

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

## GC Semi VOA

### Prep Batch: 322040

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-106424-18	TRANSFORMER OIL	Total/NA	Wipe	3550C	
MB 480-322040/1-A	Method Blank	Total/NA	Wipe	3550C	
LCS 480-322040/2-A	Lab Control Sample	Total/NA	Wipe	3550C	
LCSD 480-322040/3-A	Lab Control Sample Dup	Total/NA	Wipe	3550C	

### Prep Batch: 322041

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-106424-17	ELEVATOR OIL	Total/NA	Waste	3580A	
MB 480-322041/1-A	Method Blank	Total/NA	Waste	3580A	
LCS 480-322041/2-A	Lab Control Sample	Total/NA	Waste	3580A	
LCSD 480-322041/3-A	Lab Control Sample Dup	Total/NA	Waste	3580A	

### Analysis Batch: 322385

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-106424-17	ELEVATOR OIL	Total/NA	Waste	8082	322041
MB 480-322041/1-A	Method Blank	Total/NA	Waste	8082	322041
LCS 480-322041/2-A	Lab Control Sample	Total/NA	Waste	8082	322041
LCSD 480-322041/3-A	Lab Control Sample Dup	Total/NA	Waste	8082	322041

### Analysis Batch: 322388

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-106424-18	TRANSFORMER OIL	Total/NA	Wipe	8082A	322040
MB 480-322040/1-A	Method Blank	Total/NA	Wipe	8082A	322040
LCS 480-322040/2-A	Lab Control Sample	Total/NA	Wipe	8082A	322040
LCSD 480-322040/3-A	Lab Control Sample Dup	Total/NA	Wipe	8082A	322040

## Metals

### Prep Batch: 321948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-106424-19	1-4	Total/NA	Water	3005A	
480-106424-20	1-5	Total/NA	Water	3005A	
MB 480-321948/1-A	Method Blank	Total/NA	Water	3005A	
LCS 480-321948/2-A	Lab Control Sample	Total/NA	Water	3005A	
LCSD 480-321948/22-A	Lab Control Sample Dup	Total/NA	Water	3005A	
480-106424-20 MS	1-5	Total/NA	Water	3005A	
480-106424-20 MSD	1-5	Total/NA	Water	3005A	

### Prep Batch: 321968

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-106424-19	1-4	Total/NA	Water	7470A	
480-106424-20	1-5	Total/NA	Water	7470A	
MB 480-321968/1-A	Method Blank	Total/NA	Water	7470A	
LCS 480-321968/2-A	Lab Control Sample	Total/NA	Water	7470A	
LCSD 480-321968/23-A	Lab Control Sample Dup	Total/NA	Water	7470A	

### Prep Batch: 322205

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-106424-3	3-1	Total/NA	Solid	3050B	
480-106424-4	3-2	Total/NA	Solid	3050B	

TestAmerica Buffalo

# QC Association Summary

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

## Metals (Continued)

### Prep Batch: 322205 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-106424-5	3-3	Total/NA	Solid	3050B	
480-106424-12	9-1	Total/NA	Solid	3050B	
480-106424-13	6-1	Total/NA	Solid	3050B	
480-106424-16	1-3	Total/NA	Solid	3050B	
MB 480-322205/1-A	Method Blank	Total/NA	Solid	3050B	
LCDSRM 480-322205/19-A	Lab Control Sample Dup	Total/NA	Solid	3050B	
LCSSRM 480-322205/2-A	Lab Control Sample	Total/NA	Solid	3050B	

### Analysis Batch: 322343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-106424-19	1-4	Total/NA	Water	6010	321948
MB 480-321948/1-A	Method Blank	Total/NA	Water	6010	321948
LCS 480-321948/2-A	Lab Control Sample	Total/NA	Water	6010	321948
LCSD 480-321948/22-A	Lab Control Sample Dup	Total/NA	Water	6010	321948

### Analysis Batch: 322371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-106424-19	1-4	Total/NA	Water	7470A	321968
480-106424-20	1-5	Total/NA	Water	7470A	321968
MB 480-321968/1-A	Method Blank	Total/NA	Water	7470A	321968
LCS 480-321968/2-A	Lab Control Sample	Total/NA	Water	7470A	321968
LCSD 480-321968/23-A	Lab Control Sample Dup	Total/NA	Water	7470A	321968

### Analysis Batch: 322428

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-321948/1-A	Method Blank	Total/NA	Water	6010	321948

### Analysis Batch: 322575

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-106424-3	3-1	Total/NA	Solid	6010	322205
480-106424-4	3-2	Total/NA	Solid	6010	322205
480-106424-5	3-3	Total/NA	Solid	6010	322205
480-106424-13	6-1	Total/NA	Solid	6010	322205
480-106424-16	1-3	Total/NA	Solid	6010	322205
MB 480-322205/1-A	Method Blank	Total/NA	Solid	6010	322205
LCDSRM 480-322205/19-A	Lab Control Sample Dup	Total/NA	Solid	6010	322205
LCSSRM 480-322205/2-A	Lab Control Sample	Total/NA	Solid	6010	322205

### Leach Batch: 322588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-106424-1	2-1	TCLP	Solid	1311	
480-106424-6	8-1	TCLP	Solid	1311	
480-106424-7	8-2	TCLP	Solid	1311	
480-106424-8	8-3	TCLP	Solid	1311	
480-106424-9	8-4	TCLP	Solid	1311	
480-106424-10	7-1	TCLP	Solid	1311	
480-106424-11	7-2	TCLP	Solid	1311	
480-106424-14	1-1	TCLP	Solid	1311	
480-106424-15	1-2	TCLP	Solid	1311	
LB 480-322588/1-C	Method Blank	TCLP	Solid	1311	
LB 480-322588/1-D	Method Blank	TCLP	Solid	1311	

TestAmerica Buffalo

# QC Association Summary

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

## Metals (Continued)

### Leach Batch: 322588 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-106424-1 MS	2-1	TCLP	Solid	1311	
480-106424-1 MSD	2-1	TCLP	Solid	1311	

### Leach Batch: 322590

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-106424-2	2-2	TCLP	Solid	1311	
LB2 480-322590/1-C	Method Blank	TCLP	Solid	1311	
LB2 480-322590/1-D	Method Blank	TCLP	Solid	1311	
480-106424-2 MS	2-2	TCLP	Solid	1311	
480-106424-2 MSD	2-2	TCLP	Solid	1311	

### Analysis Batch: 322648

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-106424-12	9-1	Total/NA	Solid	6010	322205

### Prep Batch: 322804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-106424-1	2-1	TCLP	Solid	3010A	322588
480-106424-6	8-1	TCLP	Solid	3010A	322588
480-106424-7	8-2	TCLP	Solid	3010A	322588
480-106424-8	8-3	TCLP	Solid	3010A	322588
480-106424-9	8-4	TCLP	Solid	3010A	322588
480-106424-10	7-1	TCLP	Solid	3010A	322588
480-106424-11	7-2	TCLP	Solid	3010A	322588
480-106424-14	1-1	TCLP	Solid	3010A	322588
480-106424-15	1-2	TCLP	Solid	3010A	322588
LB 480-322588/1-C	Method Blank	TCLP	Solid	3010A	322588
MB 480-322804/2-B	Method Blank	Total/NA	Solid	3010A	
LCS 480-322804/18-B	Lab Control Sample	Total/NA	Solid	3010A	
480-106424-1 MS	2-1	TCLP	Solid	3010A	322588
480-106424-1 MSD	2-1	TCLP	Solid	3010A	322588

### Prep Batch: 322812

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-106424-2	2-2	TCLP	Solid	3010A	322590
LB2 480-322590/1-C	Method Blank	TCLP	Solid	3010A	322590
MB 480-322812/2-A	Method Blank	Total/NA	Solid	3010A	
LCS 480-322812/3-A	Lab Control Sample	Total/NA	Solid	3010A	
480-106424-2 MS	2-2	TCLP	Solid	3010A	322590
480-106424-2 MSD	2-2	TCLP	Solid	3010A	322590

### Prep Batch: 322823

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-106424-2	2-2	TCLP	Solid	7470A	322590
LB2 480-322590/1-D	Method Blank	TCLP	Solid	7470A	322590
MB 480-322823/2-A	Method Blank	Total/NA	Solid	7470A	
LCS 480-322823/3-A	Lab Control Sample	Total/NA	Solid	7470A	
LCSD 480-322823/7-A	Lab Control Sample Dup	Total/NA	Solid	7470A	
480-106424-2 MS	2-2	TCLP	Solid	7470A	322590
480-106424-2 MSD	2-2	TCLP	Solid	7470A	322590

TestAmerica Buffalo

## QC Association Summary

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

### Metals (Continued)

#### Prep Batch: 322824

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-106424-1	2-1	TCLP	Solid	7470A	322588
480-106424-6	8-1	TCLP	Solid	7470A	322588
480-106424-7	8-2	TCLP	Solid	7470A	322588
480-106424-8	8-3	TCLP	Solid	7470A	322588
480-106424-9	8-4	TCLP	Solid	7470A	322588
480-106424-10	7-1	TCLP	Solid	7470A	322588
480-106424-11	7-2	TCLP	Solid	7470A	322588
480-106424-14	1-1	TCLP	Solid	7470A	322588
480-106424-15	1-2	TCLP	Solid	7470A	322588
LB 480-322588/1-D	Method Blank	TCLP	Solid	7470A	322588
MB 480-322824/2-A	Method Blank	Total/NA	Solid	7470A	
LCS 480-322824/3-A	Lab Control Sample	Total/NA	Solid	7470A	
480-106424-1 MS	2-1	TCLP	Solid	7470A	322588
480-106424-1 MSD	2-1	TCLP	Solid	7470A	322588

#### Analysis Batch: 322858

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-106424-20	1-5	Total/NA	Water	6010	321948
480-106424-20 MS	1-5	Total/NA	Water	6010	321948
480-106424-20 MSD	1-5	Total/NA	Water	6010	321948

#### Analysis Batch: 322951

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-106424-2	2-2	TCLP	Solid	6010C	322812
LB2 480-322590/1-C	Method Blank	TCLP	Solid	6010C	322812
MB 480-322812/2-A	Method Blank	Total/NA	Solid	6010C	322812
LCS 480-322812/3-A	Lab Control Sample	Total/NA	Solid	6010C	322812
480-106424-2 MS	2-2	TCLP	Solid	6010C	322812
480-106424-2 MSD	2-2	TCLP	Solid	6010C	322812

#### Analysis Batch: 322952

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-106424-1	2-1	TCLP	Solid	6010C	322804
480-106424-6	8-1	TCLP	Solid	6010C	322804
480-106424-7	8-2	TCLP	Solid	6010C	322804
480-106424-8	8-3	TCLP	Solid	6010C	322804
480-106424-9	8-4	TCLP	Solid	6010C	322804
480-106424-10	7-1	TCLP	Solid	6010C	322804
480-106424-11	7-2	TCLP	Solid	6010C	322804
480-106424-14	1-1	TCLP	Solid	6010C	322804
480-106424-15	1-2	TCLP	Solid	6010C	322804
LB 480-322588/1-C	Method Blank	TCLP	Solid	6010C	322804
MB 480-322804/2-B	Method Blank	Total/NA	Solid	6010C	322804
LCS 480-322804/18-B	Lab Control Sample	Total/NA	Solid	6010C	322804
480-106424-1 MS	2-1	TCLP	Solid	6010C	322804
480-106424-1 MSD	2-1	TCLP	Solid	6010C	322804

#### Analysis Batch: 323019

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-106424-2	2-2	TCLP	Solid	6010C	322812
480-106424-2 MS	2-2	TCLP	Solid	6010C	322812

TestAmerica Buffalo



# QC Association Summary

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

## Metals (Continued)

### Analysis Batch: 323019 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-106424-2 MSD	2-2	TCLP	Solid	6010C	322812

### Analysis Batch: 323020

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-106424-10	7-1	TCLP	Solid	6010C	322804
480-106424-10	7-1	TCLP	Solid	6010C	322804
480-106424-11	7-2	TCLP	Solid	6010C	322804
480-106424-14	1-1	TCLP	Solid	6010C	322804
480-106424-15	1-2	TCLP	Solid	6010C	322804

### Analysis Batch: 323143

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-106424-1	2-1	TCLP	Solid	7470A	322824
480-106424-6	8-1	TCLP	Solid	7470A	322824
480-106424-7	8-2	TCLP	Solid	7470A	322824
480-106424-8	8-3	TCLP	Solid	7470A	322824
480-106424-9	8-4	TCLP	Solid	7470A	322824
480-106424-10	7-1	TCLP	Solid	7470A	322824
480-106424-11	7-2	TCLP	Solid	7470A	322824
480-106424-14	1-1	TCLP	Solid	7470A	322824
480-106424-15	1-2	TCLP	Solid	7470A	322824
LB 480-322588/1-D	Method Blank	TCLP	Solid	7470A	322824
MB 480-322824/2-A	Method Blank	Total/NA	Solid	7470A	322824
LCS 480-322824/3-A	Lab Control Sample	Total/NA	Solid	7470A	322824
480-106424-1 MS	2-1	TCLP	Solid	7470A	322824
480-106424-1 MSD	2-1	TCLP	Solid	7470A	322824

### Analysis Batch: 323282

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-106424-2	2-2	TCLP	Solid	7470A	322823
LB2 480-322590/1-D	Method Blank	TCLP	Solid	7470A	322823
MB 480-322823/2-A	Method Blank	Total/NA	Solid	7470A	322823
LCS 480-322823/3-A	Lab Control Sample	Total/NA	Solid	7470A	322823
LCSD 480-322823/7-A	Lab Control Sample Dup	Total/NA	Solid	7470A	322823
480-106424-2 MS	2-2	TCLP	Solid	7470A	322823
480-106424-2 MSD	2-2	TCLP	Solid	7470A	322823

## General Chemistry

### Analysis Batch: 322123

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-106424-3	3-1	Total/NA	Solid	Moisture	
480-106424-4	3-2	Total/NA	Solid	Moisture	
480-106424-5	3-3	Total/NA	Solid	Moisture	
480-106424-12	9-1	Total/NA	Solid	Moisture	
480-106424-13	6-1	Total/NA	Solid	Moisture	
480-106424-16	1-3	Total/NA	Solid	Moisture	

TestAmerica Buffalo

# Lab Chronicle

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

## Client Sample ID: 2-1

Date Collected: 09/19/16 08:35

Date Received: 09/23/16 01:00

## Lab Sample ID: 480-106424-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			322588	09/27/16 13:05	CPH	TAL BUF
TCLP	Prep	3010A			322804	09/28/16 09:40	MVZ	TAL BUF
TCLP	Analysis	6010C		1	322952	09/28/16 18:32	AMH	TAL BUF
TCLP	Leach	1311			322588	09/27/16 13:05	CPH	TAL BUF
TCLP	Prep	7470A			322824	09/29/16 09:30	RMZ	TAL BUF
TCLP	Analysis	7470A		1	323143	09/29/16 13:35	JRK	TAL BUF

## Client Sample ID: 2-2

Date Collected: 09/19/16 08:40

Date Received: 09/23/16 01:00

## Lab Sample ID: 480-106424-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			322590	09/27/16 09:37	CPH	TAL BUF
TCLP	Prep	3010A			322812	09/28/16 10:19	MVZ	TAL BUF
TCLP	Analysis	6010C		1	322951	09/28/16 16:33	AMH	TAL BUF
TCLP	Leach	1311			322590	09/27/16 09:37	CPH	TAL BUF
TCLP	Prep	3010A			322812	09/28/16 10:19	MVZ	TAL BUF
TCLP	Analysis	6010C		5	323019	09/29/16 08:44	AMH	TAL BUF
TCLP	Leach	1311			322590	09/27/16 09:37	CPH	TAL BUF
TCLP	Prep	7470A			322823	09/29/16 09:30	RMZ	TAL BUF
TCLP	Analysis	7470A		10	323282	09/30/16 08:34	RMZ	TAL BUF

## Client Sample ID: 3-1

Date Collected: 09/19/16 08:45

Date Received: 09/23/16 01:00

## Lab Sample ID: 480-106424-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	322123	09/23/16 22:48	CMK	TAL BUF

## Client Sample ID: 3-1

Date Collected: 09/19/16 08:45

Date Received: 09/23/16 01:00

## Lab Sample ID: 480-106424-3

Matrix: Solid

Percent Solids: 96.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			322205	09/24/16 14:46	MVZ	TAL BUF
Total/NA	Analysis	6010		1	322575	09/26/16 15:58	LMH	TAL BUF

## Client Sample ID: 3-2

Date Collected: 09/19/16 08:50

Date Received: 09/23/16 01:00

## Lab Sample ID: 480-106424-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	322123	09/23/16 22:48	CMK	TAL BUF

TestAmerica Buffalo

# Lab Chronicle

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

## Client Sample ID: 3-2

Lab Sample ID: 480-106424-4

Date Collected: 09/19/16 08:50

Matrix: Solid

Date Received: 09/23/16 01:00

Percent Solids: 54.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			322205	09/24/16 14:46	MVZ	TAL BUF
Total/NA	Analysis	6010		1	322575	09/26/16 16:12	LMH	TAL BUF

## Client Sample ID: 3-3

Lab Sample ID: 480-106424-5

Date Collected: 09/19/16 08:55

Matrix: Solid

Date Received: 09/23/16 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	322123	09/23/16 22:48	CMK	TAL BUF

## Client Sample ID: 3-3

Lab Sample ID: 480-106424-5

Date Collected: 09/19/16 08:55

Matrix: Solid

Date Received: 09/23/16 01:00

Percent Solids: 100.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			322205	09/24/16 14:46	MVZ	TAL BUF
Total/NA	Analysis	6010		1	322575	09/26/16 16:15	LMH	TAL BUF

## Client Sample ID: 8-1

Lab Sample ID: 480-106424-6

Date Collected: 09/19/16 09:00

Matrix: Solid

Date Received: 09/23/16 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			322588	09/27/16 13:05	CPH	TAL BUF
TCLP	Prep	3010A			322804	09/28/16 09:40	MVZ	TAL BUF
TCLP	Analysis	6010C		1	322952	09/28/16 18:49	AMH	TAL BUF
TCLP	Leach	1311			322588	09/27/16 13:05	CPH	TAL BUF
TCLP	Prep	7470A			322824	09/29/16 09:30	RMZ	TAL BUF
TCLP	Analysis	7470A		1	323143	09/29/16 13:43	JRK	TAL BUF

## Client Sample ID: 8-2

Lab Sample ID: 480-106424-7

Date Collected: 09/19/16 09:05

Matrix: Solid

Date Received: 09/23/16 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			322588	09/27/16 13:05	CPH	TAL BUF
TCLP	Prep	3010A			322804	09/28/16 09:40	MVZ	TAL BUF
TCLP	Analysis	6010C		1	322952	09/28/16 18:53	AMH	TAL BUF
TCLP	Leach	1311			322588	09/27/16 13:05	CPH	TAL BUF
TCLP	Prep	7470A			322824	09/29/16 09:30	RMZ	TAL BUF
TCLP	Analysis	7470A		1	323143	09/29/16 13:45	JRK	TAL BUF

TestAmerica Buffalo

## Lab Chronicle

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

### Client Sample ID: 8-3

Lab Sample ID: 480-106424-8

Date Collected: 09/19/16 09:10

Matrix: Solid

Date Received: 09/23/16 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			322588	09/27/16 13:05	CPH	TAL BUF
TCLP	Prep	3010A			322804	09/28/16 09:40	MVZ	TAL BUF
TCLP	Analysis	6010C		1	322952	09/28/16 19:07	AMH	TAL BUF
TCLP	Leach	1311			322588	09/27/16 13:05	CPH	TAL BUF
TCLP	Prep	7470A			322824	09/29/16 09:30	RMZ	TAL BUF
TCLP	Analysis	7470A		1	323143	09/29/16 13:46	JRK	TAL BUF

### Client Sample ID: 8-4

Lab Sample ID: 480-106424-9

Date Collected: 09/19/16 09:15

Matrix: Solid

Date Received: 09/23/16 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			322588	09/27/16 13:05	CPH	TAL BUF
TCLP	Prep	3010A			322804	09/28/16 09:40	MVZ	TAL BUF
TCLP	Analysis	6010C		1	322952	09/28/16 19:10	AMH	TAL BUF
TCLP	Leach	1311			322588	09/27/16 13:05	CPH	TAL BUF
TCLP	Prep	7470A			322824	09/29/16 09:30	RMZ	TAL BUF
TCLP	Analysis	7470A		1	323143	09/29/16 14:26	JRK	TAL BUF

### Client Sample ID: 7-1

Lab Sample ID: 480-106424-10

Date Collected: 09/19/16 09:20

Matrix: Solid

Date Received: 09/23/16 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			322588	09/27/16 13:05	CPH	TAL BUF
TCLP	Prep	3010A			322804	09/28/16 09:40	MVZ	TAL BUF
TCLP	Analysis	6010C		1	322952	09/28/16 19:14	AMH	TAL BUF
TCLP	Leach	1311			322588	09/27/16 13:05	CPH	TAL BUF
TCLP	Prep	3010A			322804	09/28/16 09:40	MVZ	TAL BUF
TCLP	Analysis	6010C		5	323020	09/29/16 09:00	AMH	TAL BUF
TCLP	Leach	1311			322588	09/27/16 13:05	CPH	TAL BUF
TCLP	Prep	3010A			322804	09/28/16 09:40	MVZ	TAL BUF
TCLP	Analysis	6010C		50	323020	09/29/16 09:04	AMH	TAL BUF
TCLP	Leach	1311			322588	09/27/16 13:05	CPH	TAL BUF
TCLP	Prep	7470A			322824	09/29/16 09:30	RMZ	TAL BUF
TCLP	Analysis	7470A		1	323143	09/29/16 14:27	JRK	TAL BUF

### Client Sample ID: 7-2

Lab Sample ID: 480-106424-11

Date Collected: 09/19/16 09:30

Matrix: Solid

Date Received: 09/23/16 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			322588	09/27/16 13:05	CPH	TAL BUF
TCLP	Prep	3010A			322804	09/28/16 09:40	MVZ	TAL BUF

TestAmerica Buffalo

# Lab Chronicle

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

## Client Sample ID: 7-2

Date Collected: 09/19/16 09:30

Date Received: 09/23/16 01:00

## Lab Sample ID: 480-106424-11

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Analysis	6010C		1	322952	09/28/16 19:17	AMH	TAL BUF
TCLP	Leach	1311			322588	09/27/16 13:05	CPH	TAL BUF
TCLP	Prep	3010A			322804	09/28/16 09:40	MVZ	TAL BUF
TCLP	Analysis	6010C		5	323020	09/29/16 09:07	AMH	TAL BUF
TCLP	Leach	1311			322588	09/27/16 13:05	CPH	TAL BUF
TCLP	Prep	7470A			322824	09/29/16 09:30	RMZ	TAL BUF
TCLP	Analysis	7470A		1	323143	09/29/16 14:29	JRK	TAL BUF

## Client Sample ID: 9-1

Date Collected: 09/19/16 10:00

Date Received: 09/23/16 01:00

## Lab Sample ID: 480-106424-12

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	322123	09/23/16 22:48	CMK	TAL BUF

## Client Sample ID: 9-1

Date Collected: 09/19/16 10:00

Date Received: 09/23/16 01:00

## Lab Sample ID: 480-106424-12

Matrix: Solid

Percent Solids: 89.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			322205	09/24/16 14:46	MVZ	TAL BUF
Total/NA	Analysis	6010		5	322648	09/27/16 11:42	LMH	TAL BUF

## Client Sample ID: 6-1

Date Collected: 09/19/16 10:10

Date Received: 09/23/16 01:00

## Lab Sample ID: 480-106424-13

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	322123	09/23/16 22:48	CMK	TAL BUF

## Client Sample ID: 6-1

Date Collected: 09/19/16 10:10

Date Received: 09/23/16 01:00

## Lab Sample ID: 480-106424-13

Matrix: Solid

Percent Solids: 90.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			322205	09/24/16 14:46	MVZ	TAL BUF
Total/NA	Analysis	6010		1	322575	09/26/16 16:22	LMH	TAL BUF



# Lab Chronicle

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

## Client Sample ID: 1-1

Date Collected: 09/19/16 10:15

Date Received: 09/23/16 01:00

## Lab Sample ID: 480-106424-14

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			322588	09/27/16 13:05	CPH	TAL BUF
TCLP	Prep	3010A			322804	09/28/16 09:40	MVZ	TAL BUF
TCLP	Analysis	6010C		1	322952	09/28/16 19:21	AMH	TAL BUF
TCLP	Leach	1311			322588	09/27/16 13:05	CPH	TAL BUF
TCLP	Prep	3010A			322804	09/28/16 09:40	MVZ	TAL BUF
TCLP	Analysis	6010C		50	323020	09/29/16 09:11	AMH	TAL BUF
TCLP	Leach	1311			322588	09/27/16 13:05	CPH	TAL BUF
TCLP	Prep	7470A			322824	09/29/16 09:30	RMZ	TAL BUF
TCLP	Analysis	7470A		1	323143	09/29/16 14:31	JRK	TAL BUF

## Client Sample ID: 1-2

Date Collected: 09/19/16 10:20

Date Received: 09/23/16 01:00

## Lab Sample ID: 480-106424-15

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			322588	09/27/16 13:05	CPH	TAL BUF
TCLP	Prep	3010A			322804	09/28/16 09:42	MVZ	TAL BUF
TCLP	Analysis	6010C		1	322952	09/28/16 19:25	AMH	TAL BUF
TCLP	Leach	1311			322588	09/27/16 13:05	CPH	TAL BUF
TCLP	Prep	3010A			322804	09/28/16 09:42	MVZ	TAL BUF
TCLP	Analysis	6010C		50	323020	09/29/16 09:26	AMH	TAL BUF
TCLP	Leach	1311			322588	09/27/16 13:05	CPH	TAL BUF
TCLP	Prep	7470A			322824	09/29/16 09:30	RMZ	TAL BUF
TCLP	Analysis	7470A		1	323143	09/29/16 14:33	JRK	TAL BUF

## Client Sample ID: 1-3

Date Collected: 09/19/16 10:30

Date Received: 09/23/16 01:00

## Lab Sample ID: 480-106424-16

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	322123	09/23/16 22:48	CMK	TAL BUF

## Client Sample ID: 1-3

Date Collected: 09/19/16 10:30

Date Received: 09/23/16 01:00

## Lab Sample ID: 480-106424-16

Matrix: Solid

Percent Solids: 98.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			322205	09/24/16 14:46	MVZ	TAL BUF
Total/NA	Analysis	6010		1	322575	09/26/16 16:26	LMH	TAL BUF

TestAmerica Buffalo

## Lab Chronicle

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

### Client Sample ID: ELEVATOR OIL

Lab Sample ID: 480-106424-17

Date Collected: 09/20/16 13:00

Matrix: Waste

Date Received: 09/23/16 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3580A			322041	09/23/16 12:56	CAM	TAL BUF
Total/NA	Analysis	8082		10	322385	09/26/16 13:55	JMO	TAL BUF

### Client Sample ID: TRANSFORMER OIL

Lab Sample ID: 480-106424-18

Date Collected: 09/20/16 13:15

Matrix: Wipe

Date Received: 09/23/16 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			322040	09/23/16 12:48	CAM	TAL BUF
Total/NA	Analysis	8082A		1	322388	09/26/16 15:48	KS	TAL BUF

### Client Sample ID: 1-4

Lab Sample ID: 480-106424-19

Date Collected: 09/21/16 10:00

Matrix: Water

Date Received: 09/23/16 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			321948	09/23/16 09:20	MVZ	TAL BUF
Total/NA	Analysis	6010		1	322343	09/24/16 12:37	AMH	TAL BUF
Total/NA	Prep	7470A			321968	09/23/16 10:45	RMZ	TAL BUF
Total/NA	Analysis	7470A		1	322371	09/23/16 16:38	JRK	TAL BUF

### Client Sample ID: 1-5

Lab Sample ID: 480-106424-20

Date Collected: 09/21/16 10:10

Matrix: Water

Date Received: 09/23/16 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			321948	09/23/16 09:20	MVZ	TAL BUF
Total/NA	Analysis	6010		1	322858	09/28/16 11:26	AMH	TAL BUF
Total/NA	Prep	7470A			321968	09/23/16 10:45	RMZ	TAL BUF
Total/NA	Analysis	7470A		1	322371	09/23/16 16:40	JRK	TAL BUF

#### Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

## Certification Summary

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

### Laboratory: TestAmerica Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Massachusetts	State Program	1	M-NY044	06-30-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6010	3005A	Water	Antimony
6010	3005A	Water	Arsenic
6010	3005A	Water	Barium
6010	3005A	Water	Beryllium
6010	3005A	Water	Cadmium
6010	3005A	Water	Chromium
6010	3005A	Water	Lead
6010	3005A	Water	Nickel
6010	3005A	Water	Selenium
6010	3005A	Water	Silver
6010	3005A	Water	Thallium
6010	3005A	Water	Vanadium
6010	3005A	Water	Zinc
6010	3050B	Solid	Lead
6010C	3010A	Solid	Arsenic
6010C	3010A	Solid	Barium
6010C	3010A	Solid	Cadmium
6010C	3010A	Solid	Chromium
6010C	3010A	Solid	Lead
6010C	3010A	Solid	Selenium
6010C	3010A	Solid	Silver
7470A	7470A	Solid	Mercury
7470A	7470A	Water	Mercury
8082	3580A	Waste	PCB-1016
8082	3580A	Waste	PCB-1221
8082	3580A	Waste	PCB-1232
8082	3580A	Waste	PCB-1242
8082	3580A	Waste	PCB-1248
8082	3580A	Waste	PCB-1254
8082	3580A	Waste	PCB-1260
8082	3580A	Waste	PCB-1262
8082	3580A	Waste	PCB-1268
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

## Method Summary

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

Method	Method Description	Protocol	Laboratory
8082	Polychlorinated Biphenyls (GC/ECD)	MA DEP	TAL BUF
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL BUF
6010	Metals (ICP)	SW846	TAL BUF
6010C	Metals (ICP)	SW846	TAL BUF
7470A	TCLP Mercury	SW846	TAL BUF
7470A	Mercury (CVAA)	SW846	TAL BUF
Moisture	Percent Moisture	EPA	TAL BUF

### Protocol References:

EPA = US Environmental Protection Agency

MA DEP = Massachusetts Department Of Environmental Protection

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

### Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

## Sample Summary

Client: AMEC Foster Wheeler E & I, Inc  
Project/Site: MassDEP SARSS Project

TestAmerica Job ID: 480-106424-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-106424-1	2-1	Solid	09/19/16 08:35	09/23/16 01:00
480-106424-2	2-2	Solid	09/19/16 08:40	09/23/16 01:00
480-106424-3	3-1	Solid	09/19/16 08:45	09/23/16 01:00
480-106424-4	3-2	Solid	09/19/16 08:50	09/23/16 01:00
480-106424-5	3-3	Solid	09/19/16 08:55	09/23/16 01:00
480-106424-6	8-1	Solid	09/19/16 09:00	09/23/16 01:00
480-106424-7	8-2	Solid	09/19/16 09:05	09/23/16 01:00
480-106424-8	8-3	Solid	09/19/16 09:10	09/23/16 01:00
480-106424-9	8-4	Solid	09/19/16 09:15	09/23/16 01:00
480-106424-10	7-1	Solid	09/19/16 09:20	09/23/16 01:00
480-106424-11	7-2	Solid	09/19/16 09:30	09/23/16 01:00
480-106424-12	9-1	Solid	09/19/16 10:00	09/23/16 01:00
480-106424-13	6-1	Solid	09/19/16 10:10	09/23/16 01:00
480-106424-14	1-1	Solid	09/19/16 10:15	09/23/16 01:00
480-106424-15	1-2	Solid	09/19/16 10:20	09/23/16 01:00
480-106424-16	1-3	Solid	09/19/16 10:30	09/23/16 01:00
480-106424-17	ELEVATOR OIL	Waste	09/20/16 13:00	09/23/16 01:00
480-106424-18	TRANSFORMER OIL	Wipe	09/20/16 13:15	09/23/16 01:00
480-106424-19	1-4	Water	09/21/16 10:00	09/23/16 01:00
480-106424-20	1-5	Water	09/21/16 10:10	09/23/16 01:00



## Chain of Custody Record



**TestAmerica**  
THE BEST IN ENVIRONMENTAL TESTING

<b>Client Information</b>			Lab PM: Schove, John R			COC No: 480-87391-21323.1		
Client Contact: Mark Maggioro			E-Mail: john.schove@testamericainc.com			Page: 1 of 2		
Company: AMEC Foster Wheeler E & I, Inc			Phone: 339-927-3797			480-106424 COC		
Address: 107 Audubon Road, Suite 301 Wakefield, MA 01880-01824			City: Wakefield			State, Zip: MA 01880-01824		
Phone: 978-692-9090 (Tel)			PO #: 613208778			Purchase Order Requested		
Email: mark.maggiore@amecfw.com			WO #:					
Project Name: MassDEP SARSS Project			Project #: 48014752					
Site: M. Crofts-Amesbury			SSOW#:					
<b>Sample Identification</b>			<b>Sample Date</b>			<b>Sample Time</b>		
2-1			9-19-16			835		
2-2			9-19-16			840		
3-1			9-19-16			845		
3-2			9-19-16			850		
3-3			9-19-16			855		
8-1			9-19-16			900		
8-2			9-19-16			905		
8-3			9-19-16			910		
8-4			9-19-16			915		
2-10			9-19-16			920		
7-2			9-19-16			930		
<b>Possible Hazard Identification</b>			<b>Sample Type</b>			<b>Matrix</b>		
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological			Comp			Water, Solid, O-wastol, BTP-Tissue, A-Air		
Deliverable Requested: I, II, III, IV, Other (specify)			Comp			Water, Solid		
Empty Kit Relinquished by:			Comp			Water, Solid		
Relinquished by:			Comp			Water, Solid		
Relinquished by:			Comp			Water, Solid		
Relinquished by:			Comp			Water, Solid		
Custody Seals Intact: A Yes A No			Comp			Water, Solid		
Custody Seal No.:			Comp			Water, Solid		

[illegible]

## Login Sample Receipt Checklist

Client: AMEC Foster Wheeler E & I, Inc

Job Number: 480-106424-1

**Login Number: 106424**

**List Source: TestAmerica Buffalo**

**List Number: 1**

**Creator: Williams, Christopher S**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	AMEC
Samples received within 48 hours of sampling.	False	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	