



HAZARDOUS MATERIAL SURVEY

**ROBINSON TERMINAL/ALEXANDRIA MARINE SHOP
ALEXANDRIA, VIRGINIA**

ECS PROJECT NO. 01:21983-B

FOR

EYA

OCTOBER 4, 2013



October 4, 2013

Mr. Adam Hayes
EYA
4800 Hampden Lane, Suite 300
Bethesda, Maryland 20814
ahayes@eya.com

ECS Project No. 01:21983-B

Reference: Hazardous Material Survey
Robinson Terminal, 2 Duke Street, Alexandria, Virginia
Alexandria Marine Shop, 226 Strand Street, Alexandria, Virginia

Dear Mr. Hayes

ECS Mid-Atlantic, LLC (ECS) is pleased to provide EYA with the results of the non-invasive Hazardous Material surveys for the above referenced buildings. This work was performed in general conformance with ECS Proposal No. 01:45569-EP, dated September 19, 2013. The following is a summary of results of the above referenced work performed, in general, on September 30 and October 1, 2013.

ECS was provided with a former hazardous material survey report prepared by WSP dated March 5, 2013. The report included the results of asbestos-containing materials sampling, lead-based paint testing, and other analysis performed for the South Terminal buildings located at 2 Duke Street. The report did not include the Alexandria Marine building in its survey. Therefore, ECS was requested to utilize the data contained in the WSP report and to not re-sample or re-test materials already referenced by WSP. Sampling was performed for materials observed that were not included in the WSP survey report. A hazardous materials survey was also performed by ECS for the Alexandria Marine building which was not previously surveyed. Please note, roof penetrations for collecting samples were not included in the proposed work due to current occupancy, therefore, these materials should be assumed as asbestos containing materials and further investigated prior to renovation or demolition activities.

SITE DESCRIPTION

The assessment was performed for the Robinson Terminal South parcels located at 2 Duke Street and the Alexandria Marine Shop located at 226 Strand Street directly north of the Duke Street building. The Robinson Terminal consists of a main office building structure that was reportedly constructed in the late 1890's and several contiguous warehouse buildings surrounding the original office structure. The facility also includes a welding shop

building and concrete marine dock. The warehouse structures and welding shop building are reportedly proposed for demolition.

During the non-invasive survey, ECS attempted to sample readily accessible building materials. However, due to the destructive means required to access all materials, certain areas (i.e., sub-grade sealants, pipe chases, enclosed wall or ceiling systems, flooring located below underlayments, or within the concrete slab, etc.) were deemed inaccessible and were not assessed. Roofing materials were not included in this assessment due to occupancy. In addition, access to the exterior bathroom of the marine shop was not provided.

METHODS AND RESULTS

Asbestos

The non-invasive asbestos survey was performed by Virginia licensed asbestos inspector who has received EPA accredited training. Samples of suspect asbestos-containing materials (ACMs) were collected utilizing hand tools and placed into individual, labeled plastic bags. Unique bulk suspect ACM samples were sent to Scientific Analytical Institute, Inc. (SAI) in Greensboro, North Carolina for analysis via Polarized Light Microscopy in accordance with current EPA-600 methodology. Materials consisting of additional layers were analyzed separately. SAI is listed as an accredited laboratory by the National Voluntary Laboratory Accreditation Plan (NVLAP) managed by the National Institute of Standards and Technology (NIST) for bulk sample analysis.

Samples were collected in general accordance with EPA Standard 40 CFR 763 Subpart E, Asbestos Hazard Emergency Response Act (AHERA) and OSHA Standard 29 CFR 1926.1101 Inspection Protocol. Collected samples for each unique material were submitted per positive stop analysis. If the first sample of each material is found to contain asbestos, the remaining samples of that material set are not analyzed as they are deemed to contain asbestos by regulation. In total, 15 bulk representative samples were collected from the Robinson Terminal buildings, and 12 bulk samples were collected from the Alexandria Marine shop. The collected samples were submitted to the laboratory of which 27 layers were analyzed.

Tables 1 and 2 below summarize the materials reported to contain asbestos at each building and also include those materials as reported by WPS Survey report. A list of the sampled materials by ECS and reported results is located in Table 4 attached to this report.

**TABLE 1
 ASBESTOS CONTAINING MATERIALS
 ROBINSON TERMINAL BUILDINGS**

<u>Room/Location</u>	<u>Material Description</u>	<u>Friability</u>
Robinson Terminal 1st Floor Boiler Room	White Vibration Cloth on HVAC Unit	Friable
Robinson Terminal Rear of Main Office - Storage Area	Pipe Insulation	Friable
Robinson Terminal Rear of Main Office - Storage Area	Hard Pipe Elbow Insulation	Friable
<u>Assumed Asbestos Containing Materials (Observed but Inaccessible)</u>		
Robinson Terminal Bldgs	Roofing Materials	Category I Non-Friable
Robinson Terminal Bldgs	Fire Rated Doors	Category II Non-Friable
Alex. Marine Shop	Roofing Materials	Category I Non-friable
<u>ACM Materials Reported by WPS</u>		
2 nd Floor Safe & Mechanical Room	9" x 9" Red/Brown Floor Tile & Associated Mastic	Category I Non-friable
2 nd Floor Safe & Mechanical Room	9" x 9" Floor Maroon Tile & Associated Mastic	Category I Non-friable
2nd Floor Mechanical Room	12" x 12" White Floor Tile	Category I Non-friable
2nd Floor Men's Bathroom	Floor Tile Beneath Carpet	Category I Non-friable
Welding Shop	Window Caulking/Glazing	Friable

Similar materials should be assumed to contain asbestos. Materials identified in this table may also be found in other parts of the building. Several doors within the facility were suspected as fire-rated doors and should be assumed to contain asbestos. Sampling of the fire door core is not feasible without damaging the doors.

Interior and exterior window caulking throughout the warehouse, and welding shop were typical. The warehouses have upper windows that were inaccessible, but typical of lower windows. The window glazing throughout the structures was observed to be in poor condition (damaged) and in a friable state when touched. This material should be classified as Friable (Photograph Nos. 6 and 12).

Please note, wood wall panels were observed in areas of the offices and shop offices. ECS is unaware whether mastics are associated with the wall panels, or if the presence of plaster wall materials are present. Destructive methods would be required to sample these materials from this area of the building. If encountered, these materials should be sampled and analyzed for asbestos or assumed to contain asbestos and disposed of accordingly.

Asbestos was not detected in the samples collected from the Alexandria Marine Shop.

In addition, roofing materials should be presumed as asbestos containing materials. Due to occupancy, roof penetrations were not performed. Prior to renovation or demolition activities of the structures, the roofing materials should be sampled and analyzed for asbestos.

Lead-Based Paint

The Lead-Based Paint (LBP) survey was performed by a Virginia licensed lead risk assessor. The inspection was conducted utilizing the Commonwealth of Virginia and U. S. EPA definition of lead-based paint. Under this definition, all painted surfaces which contain lead in concentrations equal to or greater than 1.0 milligrams per square centimeter ($\bullet 1.0 \text{ mg/cm}^2$) are classified as coated with LBP. The U.S. Occupational Safety and Health Administration (OSHA) deems no level of lead-based paint "safe" and thus any paint with a detectable concentration of lead is considered lead-containing paint. Painted surfaces and ceramic glazings were assessed for lead content using a Direct-Read X-Ray Fluorescence (XRF) Spectrometer manufactured by Innov-X Systems.

The representative survey included taking readings from various painted surfaces including walls, columns, ceilings, floors, painted building components, and miscellaneous components. Interior and exterior accessible painted surfaces and ceramic tile glazing were assessed for lead content. A total of 46 readings were collected during the survey including calibration and standardization readings. The survey was generally conducted using the methodology recommended by the U.S. Department of Housing and Urban Development (HUD). Modifications were made where appropriate for this project. It is important to note that this survey was not a comprehensive, surface-by-surface evaluation, but rather a screening survey of major painted components, which may contain LBP.

Table 2 and 3 below summarizes the locations, descriptions, and results of the surfaces detected to contain LBP as referenced by WPS for the Robinson Terminal building and by ECS for the Alexandria Marine building. A complete list of materials sampled by ECS is included in Table 5 attached to this report.

**TABLE 2
 LEAD BASED PAINT CONTAINING SURFACES
 ROBINSON TERMINAL BUILDINGS****

<u>Location</u>	<u>Room</u>	<u>Side</u>	<u>Color</u>	<u>Component</u>	<u>Substrate</u>	<u>Lead Content (mg/cm²)</u>
1 st Level	Hallway/Boiler Room	C	White	Door Casing	Wood	1.96
1 st Level	Boiler Room	Ceiling	Silver	Beam	Wood	5.00
2 nd Level	Boiler Room	Ceiling	Silver	Ceiling	Wood	5.00
2 nd Level	File Room	C	White	Wall	Plaster	1.00
2 nd Level	Boiler Room	B	Green	Wall	Plaster	1.00
2 nd Level	Women's Bathroom	B	White	Wall	Plaster	1.00
Warehouse	File Room	A/C/D	Green	Wall	Plaster	1.00
Warehouse	File Room Closet	A/D	Green	Wall	Plaster	1.00
Warehouse	File Room Exterior	A	Tan	Wall	Plaster	1.00
Warehouse	Warehouse	A	Silver	I-Beam/Column	Metal	2.10
Warehouse	Bay Door	A	Silver	I-Beam/Column	Metal	5.00
Warehouse	Warehouse	C	Silver	I-Beam/Column	Metal	5.00
Warehouse	Warehouse	-	Brown	I-Beam/Column	Metal	3.95
Warehouse	Warehouse	A	Black	I-Beam/Column	Metal	1.90
Warehouse	Warehouse	-	Yellow/Brown	Support Post	Metal	2.93
Warehouse	Sprinkler Room	B	Gray	Window Sill	Concrete	1.00

** Reading results obtained from the WPS Hazardous Material Survey Report for the subject building dated March 5, 2013.

**TABLE 3
LEAD BASED PAINT CONTAINING SURFACES
ALEXANDRIA MARINE SHOP**

<u>Reading No.</u>	<u>Location</u>	<u>Room</u>	<u>Side</u>	<u>Color</u>	<u>Component</u>	<u>Substrate</u>	<u>Lead Content (mg/cm²)</u>
28	Alex. Marine	Exterior	B	White	Door	Wood	1.39
10	Alex. Marine	Exterior	A	Gray	Door	Wood	1.00
19	Alex. Marine	Storage Room Garage Door	B	Green	Wall	Brick	1.00

Key – mg/cm² – milligram per cubic centimeter

Surfaces throughout the structures appeared to have various painting histories with multiple layers and areas of deterioration. Paint within the warehouse areas, warehouse storage, welding shop, and in the marine shop were observed to be in poor condition.

Based on the report prepared by WPS, they indicated that several areas or surfaces were inaccessible. The WPS report did not list sample reading results where lead concentrations were less than 1.0 mg/cm².

The sampling locations listed above were detected to have a concentration at or above 1.0 mg/cm². Additionally, various other readings were also detected by ECS to contain lead concentrations. Since OSHA has no specific action level for lead in paint, all paint on the site should be assumed to be lead containing and regulated under OSHA as referenced under 29 CFR 1926.62. Please refer to the attached Table 4 for the complete listing of readings and results.

Miscellaneous Materials

In addition to surveys for asbestos-containing materials and lead-based paints, ECS surveyed the Alexandria Marine shop building and took an inventory of selected materials which may require special handling or disposal if removed from the building. No sampling or characterization of these materials was included within our scope of services. Materials which may require sampling or characterization prior to disposal are summarized below.

Polychlorinated Biphenyl (PCB) Containing Lamp Ballasts

Polychlorinated biphenyls (PCBs) are toxic coolants or lubricating oils used in some electrical transformers and capacitors, hydraulically-operated equipment, light ballasts, and other similar equipment. Please note, sampling for PCB containing caulking/sealants/paints or other materials other than what is described in this report was not part of this assessment.

As part of our assessment, ECS surveyed the Alexandria Marin Shop for potential PCB containing fluorescent light ballasts. At the time of the survey, ECS visually observed approximately 20 fluorescent light ballasts throughout the structure. These ballasts may contain PCB containing fluids. Power was supplied to the ballasts, therefore disassembly was not performed to assess for non-PCB labeling. At this is it is recommended that all ballasts be assumed to be suspect PCB containing. At the time of our investigation, no evidence of damage or leaking was observed on or in the vicinity of the inspected fixtures.

Mercury Containing Components

The EPA classifies mercury as a hazardous waste under RCRA. The survey included observations for selected building components, equipment or other apparatus, which could contain mercury, specifically thermostats, fluorescent lamps, and switch-containing devices. No other suspect mercury containing materials were surveyed.

Approximately 1 thermostat and approximately 152 linear feet of florescent light tubing was observed within the building associated with approximately 16 light fixtures. These materials should be assumed to contain small quantities of mercury.

Other Materials

ECS observed the presence of various petroleum product storage containers such as 55-gallon drums, Aboveground Storage Tanks (ASTs), and containers of 5-gallons or less in size. Areas of petroleum staining were noted on several concrete floor and/or gravel parking lot areas. If the containers and products will not be utilized, they should be disposed of in accordance with local and state regulations.

In addition, suspect vent and fill ports were observed in the main warehouse near the sprinkler room. The fill and vent ports may be associated with an Underground Storage Tank located beneath the concrete slab.

Previously Reported Hazardous Material – Robinson Terminal Building

The WSP report identified the following components within the Robinson Terminal building: 500 Fluorescent lamps; 200 light ballasts; 10 battery devices, and miscellaneous chemicals.

WSP also collected samples of gray and green paints from the warehouse structures for PCB analysis. Low concentrations of PCB (0.17 and 0.40 mg/kg) were reported for each of the samples. These levels are below regulatory limits.

RECOMMENDATIONS

Asbestos

The materials listed in Table 1 consist of friable (i.e., able to be crumbled, pulverized, and/or reduced to powder by hand pressure when dry) and non-friable materials which contain greater than one percent (> 1%) asbestos. By definition, these materials are considered ACMs. Friable materials will easily produce airborne asbestos fibers if disturbed. Non-Friable materials may also produce airborne asbestos fibers if disturbed.

ECS recommends where a material type has been identified as asbestos containing that similar type materials throughout the building's interior and exterior be assumed to contain asbestos. Suspect asbestos containing materials not observed due to inaccessibility during the survey during the assessment may be encountered during construction. If encountered these materials should be sampled prior to disturbance by an asbestos inspector in accordance with 29 CFR 1926.1101.

Federal and local regulations require asbestos-containing materials be removed prior to disturbance by renovation of the building. ECS recommends the identified asbestos-containing materials and any assumed asbestos-containing materials found to be present within the building during renovations be removed by a Commonwealth of Virginia certified asbestos abatement contractor prior to disturbance.

If asbestos-containing materials are to be removed it is recommended that a Virginia licensed project monitor the project daily. Virginia Department of Professional Occupational Regulation also requires involvement of a project monitor when friable or other regulated ACM is removed. This involves collecting air samples from within and outside abatement work areas to monitor the abatement contractor's work practices over the course of the project. The project monitor will inform the building owner if the asbestos abatement contractor is not performing his work in accordance with project specifications, District of Columbia and local regulations (for asbestos) as well as EPA regulation 40 CFR Part 61- National Emission Standards for Hazardous Air Pollutants Subpart M: National Emission Standard for Asbestos, and U.S. Occupational Safety and Health Administration (OSHA) regulation 29 CFR 1926.1101. The industrial hygienist will also collect air samples from locations outside the abatement areas to monitor and evaluate the effectiveness of dust control measures used by the contractor in controlling fiber releases to occupied areas.

Prior to renovation of the building, ECS recommends that a project specification be developed to delineate and quantify known and suspect asbestos-containing materials in the building and to outline proper procedures for the abatement. This will help protect the owner's liability in better defining the scope of work and contractors' roles and responsibilities in the abatement process and holding the contractor accountable for the performance of the project. The specification typically defines the Contractor's scope of work and outline requirements and procedures that must be followed for this project. The intent of the specification is to give performance requirements for the Contractor so that the project can

be completed safely and in compliance with applicable federal and state regulations. Typically, the specification document serves as part of the site owner's contract with the contractor. If asbestos-containing materials are to be removed, it is recommended that a Commonwealth of Virginia licensed Project Monitor be retained to monitor the abatement project.

Prior to abatement, a 20 day notification to Virginia Department of labor and Industry is required. This notification is typically filed by the demolition contractor.

At the time of the survey, destructive means were not used to locate or sample suspect ACMs; therefore, additional suspect ACMs may remain within the building hidden behind inaccessible areas that include, but are not limited to, sub-grade walls, structural members, topping slabs, exterior areas, sub-grade sealants, flooring located below underlayments, areas behind walls, pipe chases, vapor barriers, etc. were deemed inaccessible and were not assessed. If additional suspect asbestos-containing materials are uncovered during demolition/renovation activities which were not accessible during this survey, it is recommended that these materials be sampled immediately upon discovery for asbestos content by a licensed asbestos inspector in accordance with 29 CFR 1926.1101.

Lead-Based Paint/Lead Containing Dust

Lead-based paint and lead-containing paint is an environmental concern primarily when it becomes airborne or is ingested. Contractors performing work that could impact paint films or glazing (i.e. scrapped or flaked off, or made airborne in a dust media) that have detectable concentrations of lead should be informed of the testing results and should take appropriate actions to comply with OSHA Standard 29 CFR 1926.62. – Lead in Construction.

Positive and negative results are based on U.S. Department of Housing and Urban Development (HUD), U.S. Environmental Protection Agency (EPA), and Commonwealth of Virginia guidelines. It is important to note that even if a component is negative based on HUD, EPA, and VA standards, it may still contain concentrations of lead in the paint, which when disturbed, may generate lead dust greater than the Permissible Exposure Limit (PEL) of 50 micrograms per cubic millimeter ($\mu\text{g}/\text{m}^3$) as an 8-hour Time Weighted Average (TWA) established by the OSHA "Lead Exposure in Construction Rule (29 CFR 1926.62)."

If the lead paint is not abated from the building prior to demolition activities, the EPA requires that a representative sample of the waste stream be collected and analyzed using the EPA TCLP method.

At this time ECS recommends that all painted surfaces in the structure be assumed to have detectable levels of lead and are regulated under OSHA. The OSHA standard under 29 CFR 1926.1101 gives no guidance on acceptable levels of lead in paint at which no exposure to airborne lead (above the action or permissible exposure levels) would be

expected. Rather, OSHA defines airborne concentrations, and references specific types of work practices and operations from which a lead hazard may occur (reference 29 CFR 1926.62, paragraph d). Environmental and personnel monitoring should be conducted during any removal/demolition process (as appropriate) to verify that actual personal exposures are below the OSHA AL and PEL. Under OSHA requirements, the contractor performing renovation/demolition work will be required to conduct this monitoring and follow all applicable requirements under 29 CFR 1926.62.

Miscellaneous Materials

If specific building components or materials are not in use or are to be removed/disposed of as part of future renovation/demolition activities, any identified or suspect PCB containing ballasts, mercury containing fluorescent lamps, unused refrigerants, and other regulated substances should be properly removed from the building. The disposal of such items should be performed according to local and federal regulations.

Generators of spent fluorescent tubing, thermostats, and other mercury containing components are responsible for their proper disposal under the Resource Conservation and Recovery Act (RCRA).

With regard to refrigerant containing equipment, the EPA requires that any equipment dismantled on-site prior to disposal must have its refrigerant recovered in accordance with EPA's Refrigerant Recycling Rules (Section 608). However, equipment that typically enters the waste stream during demolition with the charge intact (e.g. air conditioners, refrigerators, and water fountains) is subject to special safe disposal requirements. Under the EPA requirements, the final party in the disposal chain (e.g. scrap metal recycler or landfill owner) is responsible for ensuring that refrigerants are recovered from equipment prior to final disposition. However, refrigerants can also be evacuated prior to disposal provided proper documentation of the evacuation is provided to the disposal facility.

General

Prior to renovation/demolition of the building, ECS recommends that a project specification be developed to delineate and quantify known and suspect hazardous and regulated materials in the building and to outline proper procedures for the abatement. This will help protect the owner's liability in better defining the scope of work and contractor's roles and responsibilities in the abatement process and holding the contractor accountable for the performance of the project. The specification typically defines the Contractor's scope of work and outline requirements and procedures that must be followed for this project. The intent of the specification is to give performance requirements for the Contractor so that the project can be completed safely and in compliance with applicable federal and state regulations. Typically, the specification document serves as part of the site owner's contract with the contractor.

Limitations

This report summarizes our evaluation of the conditions observed at the site. The findings prepared by ECS are based upon our observations in the building and analysis of the samples collected at the time of this survey. As with any similar survey of this nature, actual conditions exist only at the precise locations from which suspect samples were collected. Certain inferences are based on the results of this sampling and related testing to form a professional opinion of conditions in areas beyond those from which the samples were collected. No other warranty, expressed or implied, is made. Additional hazardous materials may exist in other portions of the building that were not accessible such as behind walls and permanent ceilings and in other areas not included in the survey.

Our recommendations are in part based on federal and state regulations and guidelines. ECS does not assume the responsibility of the person(s) in charge of the site, or otherwise undertake responsibility for reporting to any local, state, or federal public agencies any conditions at the site that may present a potential danger to public health, safety, or the environment. Under this scope of services, ECS assumes no responsibility regarding any response actions initiated as a result of these findings. General compliance with regulations and response actions are the sole responsibility of the Client and should be conducted in accordance with local, state, and/or federal requirements.

The client agrees to notify the appropriate local, state, or federal public agencies as required by law, or otherwise to disclose, in a timely manner, information that may be necessary to prevent any danger to public health, safety, or the environment.

The conclusions and recommendations presented within this report are based upon a reasonable level of investigation within normal bounds and standards of professional practice for a site. ECS is not responsible or liable for the discovery and elimination of hazards that may potentially cause damage, accidents, or injuries. Any conditions discovered which deviate from the data or findings contained in this report should be presented to us for our evaluation.

Observations, conclusions, and recommendations pertaining to environmental conditions at the subject site are necessarily limited to conditions observed, and or materials reviewed at the time this study was undertaken. No other warranty, expressed or implied, is made with regard to the conclusions and recommendations presented within this report. This report is provided for the exclusive use of the client and its designated agents. This report is not intended to be used or relied upon in connection with other projects or by other unidentified third parties without the written consent of the client. The use of this report by any undesignated third party or parties will be at such party's sole risk and ECS disclaims liability for any such third party use or reliance.

ECS appreciates this opportunity to provide hazardous material survey services. If we can be of further assistance to you, please do not hesitate to contact us.

Sincerely,

ECS MID-ATLANTIC, LLC



Beverly E. Sedon
Senior Environmental Project Manager



Stephen Geraci
Senior Environmental Project Manager

Enclosures: Table 4 - Bulk Sampling of Suspect Asbestos-Containing Materials
Table 5 - XRF Lead-Based Paint Data Sheet
Chain of Custody & Laboratory Results
Photographs

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TABLE 5
XRF Lead Based Paint Results

Marine Shop, 226 Strand Street,
Alexandria, VA
ECS Project No. 01:21983-B

<u>Date</u>	<u>Reading</u>	<u>Room</u>	<u>Side</u>	<u>Substrate</u>	<u>Color</u>	<u>Component</u>	<u>Pb</u>	<u>Pb +/-</u>	
30-Sep-13	2	Calibration						1.08	0.04
30-Sep-13	3	Calibration						1.07	0.03
30-Sep-13	4	Calibration						1.09	0.04
30-Sep-13	5	Exterior	A	Concrete	Gray	Wall	0.08	0.04	
30-Sep-13	6	Exterior	A	Concrete	Gray	Wall	0.12	0.03	
30-Sep-13	7	Exterior	A	Brick	Gray	Wall	0.00	0.00	
30-Sep-13	8	Exterior	A	Wood	Gray	Window Sill	0.00	0.00	
30-Sep-13	9	Exterior	A	Wood	Gray	Window Casing	0.03	0.02	
30-Sep-13	10	Exterior	A	Wood	Gray	Door	1.00	0.04	
30-Sep-13	11	Exterior	A	Wood	Gray	Door Casing	0.73	0.10	
30-Sep-13	12	Exterior	A	Concrete	Gray	Stairs	0.05	0.01	
30-Sep-13	13	Exterior	A	Wood	Gray	Siding	0.00	0.00	
1-Oct-13	2	Calibration						1.06	0.04
1-Oct-13	3	Calibration						1.05	0.03
1-Oct-13	4	Calibration						1.07	0.04
1-Oct-13	5	Sales Area	A	Wood	Gray	Door Casing	0.02	0.01	
1-Oct-13	6	Sales Area	A	Wood	Gray	Door	0.02	0.02	
1-Oct-13	7	Sales Area	A	Brick	Gray	Wall	0.00	0.00	
1-Oct-13	8	Sales Area	B	Drywall	Gray	Wall	0.00	0.00	
1-Oct-13	9	Sales Area	C	Brick	Green	Wall	0.07	0.02	
1-Oct-13	10	Sales Area	D	Brick	Green	Wall	0.05	0.03	
1-Oct-13	11	Sales Area	B	Metal	Blue	Column	0.05	0.02	
1-Oct-13	12	Side Room	D	Wood	White	Door	0.00	0.00	
1-Oct-13	13	Side Room	D	Wood	White	Door Casing	0.00	0.00	
1-Oct-13	14	Side Room	A	Brick	White	Wall	0.21	0.04	
1-Oct-13	15	Side Room	A	Wood	White	Window Casing	0.04	0.02	
1-Oct-13	16	Side Room	A	Wood	White	Window Sill	0.05	0.06	
1-Oct-13	17	Side Room	C	Drywall	White	Wall	0.00	0.00	
1-Oct-13	18	Side Room	A	Concrete	Gray	Floor	0.03	0.01	
1-Oct-13	19	Storage Room Garage Do	B	Brick	Green	Wall	1.00	0.05	
1-Oct-13	20	Storage Room Garage Doo	B	Brick	Green	Wall	0.10	0.02	



TABLE 5
XRF Lead Based Paint Results

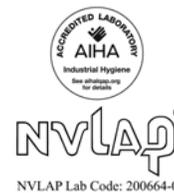
Marine Shop, 226 Strand Street,
Alexandria, VA
ECS Project No. 01:21983-B

<u>Date</u>	<u>Reading</u>	<u>Room</u>	<u>Side</u>	<u>Substrate</u>	<u>Color</u>	<u>Component</u>	<u>Pb</u>	<u>Pb +/-</u>	
1-Oct-13	21	Storage Room Garage Doo	B	Wood	Green	Garage Door Casing	0.05	0.02	
1-Oct-13	22	Exterior	C	Wood	Gray	Wall	0.00	0.00	
1-Oct-13	23	Exterior	C	Wood	Lt Blue	Wall	0.54	0.21	
1-Oct-13	24	Exterior	C	Wood	Lt Blue	Window Sill	0.18	0.04	
1-Oct-13	25	Exterior	C	Wood	Lt Blue	Window Casing	0.14	0.03	
1-Oct-13	26	Exterior	B	Wood	White	Wall	0.00	0.00	
1-Oct-13	27	Exterior	B	Wood	White	Door Casing	0.23	0.04	
1-Oct-13	28	Exterior	B	Wood	White	Door	1.39	0.10	
1-Oct-13	29	Exterior	B	Concrete	Silver	Wall	0.07	0.01	
1-Oct-13	30	Sales Area	C	Wood	Red	Door Header	0.36	0.05	
1-Oct-13	31	<i>Calibration</i>						1.02	0.03
1-Oct-13	32	<i>Calibration</i>						1.07	0.05
1-Oct-13	33	<i>Calibration</i>						1.01	0.02



Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 600/M4-82-020



Customer: ECS Chantilly
14026 Thunderbolt Place
Suite 100
Chantilly VA 20151

Attn: Beverly Sedon

Lab Order ID: 1317818

Analysis ID: 1317818_PLM

Date Received: 10/1/2013

Project: 21983-B; Robinson Terminal/Marine

Date Reported: 10/3/2013

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
1	Brown Insulation	None Detected	95% Cellulose	5% Other	Tan Fibrous Heterogeneous
1317818PLM_1					Teased
2	Brown Insulation	None Detected	95% Cellulose	5% Other	Tan Fibrous Heterogeneous
1317818PLM_2					Teased
3	Brown Insulation	None Detected	95% Cellulose	5% Other	Tan Fibrous Heterogeneous
1317818PLM_3					Teased
4	White Vibration Cloth	40% Chrysotile	55% Cellulose	5% Other	White Fibrous Heterogeneous
1317818PLM_4					Teased
5	White Vibration Cloth	Not Analyzed			
1317818PLM_5					
6	White Vibration Cloth	Not Analyzed			
1317818PLM_6					
7	Brown Insulation Mastic	None Detected		100% Other	Brown Non Fibrous Homogeneous
1317818PLM_7					Crushed, Dissolved
8	Brown Insulation Mastic	None Detected		100% Other	Brown Non Fibrous Homogeneous
1317818PLM_8					Crushed, Dissolved

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Bobby Wheatley (18)

Analyst

Approved Signatory



Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 600/M4-82-020



Customer: ECS Chantilly
14026 Thunderbolt Place
Suite 100
Chantilly VA 20151

Attn: Beverly Sedon

Lab Order ID: 1317818

Analysis ID: 1317818_PLM

Date Received: 10/1/2013

Project: 21983-B; Robinson Terminal/Marine

Date Reported: 10/3/2013

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
9	Brown Insulation Mastic	None Detected		100% Other	Brown Non Fibrous Homogeneous
1317818PLM_9					Crushed, Dissolved
10	Pipe Wrap	60% Chrysotile	30% Cellulose	10% Other	Gray Fibrous Heterogeneous
1317818PLM_10					Ashed
11	Pipe Wrap	Not Analyzed			
1317818PLM_11					
12	Pipe Wrap	Not Analyzed			
1317818PLM_12					
13	Hard Pipe Elbow	40% Chrysotile		60% Other	Gray Fibrous Heterogeneous
1317818PLM_13					Teased
14	Hard Pipe Elbow	Not Analyzed			
1317818PLM_14					
15	Hard Pipe Elbow	Not Analyzed			
1317818PLM_15					
M1	Exterior Window Caulk	None Detected		100% Other	Gray Non Fibrous Homogeneous
1317818PLM_16					Ashed

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Bobby Wheatley (18)

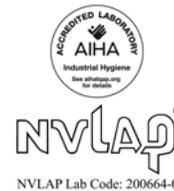
Analyst

Approved Signatory



Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 600/M4-82-020



Customer: ECS Chantilly
14026 Thunderbolt Place
Suite 100
Chantilly VA 20151
Project: 21983-B; Robinson Terminal/Marine

Attn: Beverly Sedon

Lab Order ID: 1317818
Analysis ID: 1317818_PLM
Date Received: 10/1/2013
Date Reported: 10/3/2013

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
M2	Exterior Window Caulk	None Detected		100% Other	Gray Non Fibrous Heterogeneous
1317818PLM_17					Crushed, Dissolved
M3	Exterior Window Caulk	None Detected		100% Other	Gray Non Fibrous Heterogeneous
1317818PLM_18					Crushed, Dissolved

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Bobby Wheatley (18)

Analyst

Approved Signatory

1317818

Client: ECS Mid-Atlantic, LLC Contact: Beverly Sedon Address: 14026 Thunderbolt Place, Suite Phone: 301-672-2096 (cell) Fax: Email: bsedon@ecslimited.com	*Instructions: Use Column "B" for your contact info To See an Example Click the bottom Example Tab. Enter samples between "<<" and ">>" Begin Samples with a "<<" above the first sample and end with a ">>" below the last sample. Only Enter your data on the first sheet "Sheet 1" Note. Data 1 and Data 2 are optional fields that do not show up on the official report, however they will be included in the electronic data returned to you to facilitate your reintegration of the report data.	 Scientific Analytical Institute 4604 Dundas Drive Greensboro, NC 27407 Phone: 336.292.3888 Fax: 336.292.3313 Email: lab@sailab.com
Project: Robinson Terminal/Marine Client Notes: POSITIVE STOP P.O. #: 21999-B Date Submitted: 9/30/2013 0:00 Analysis: PLM EPA 600/R-93/116 TurnAroundTime: 2 Day TAT		

Sample Number	Data 1	Sample Description	Data 2
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Sample Number	Data 1	Sample Description	Data 2
1	Robinson Terminal	Brown Insulation	<p>Accepted <input checked="" type="checkbox"/></p> <p>Rejected <input type="checkbox"/></p> <p>MB-10/11</p> <p>CFM</p>
2	Robinson Terminal	Brown Insulation	
3	Robinson Terminal	Brown Insulation	
4	Robinson Terminal	White Vibration Cloth	
5	Robinson Terminal	White Vibration Cloth	
6	Robinson Terminal	White Vibration Cloth	
7	Robinson Terminal	Brown Insulation Mastic	
8	Robinson Terminal	Brown Insulation Mastic	
9	Robinson Terminal	Brown Insulation Mastic	
10	Robinson Terminal	Pipe Wrap	
11	Robinson Terminal	Pipe Wrap	
12	Robinson Terminal	Pipe Wrap	
13	Robinson Terminal	Hard Pipe Elbow	
14	Robinson Terminal	Hard Pipe Elbow	
15	Robinson Terminal	Hard Pipe Elbow	
M1	Marine Bldg	Exterior Window Caulk	
M2	Marine Bldg	Exterior Window Caulk	
M3	Marine Bldg	Exterior Window Caulk	



Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 600/M4-82-020



Customer: ECS Chantilly
14026 Thunderbolt Place
Suite 100
Chantilly VA 20151
Project: 21983-B; Marine Shop

Attn: Beverly Sedon

Lab Order ID: 1317930
Analysis ID: 1317930_PLM
Date Received: 10/2/2013
Date Reported: 10/3/2013

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
M4	Drywall Wallboard	None Detected	15% Cellulose	80% Gypsum 5% Other	Brown, Gray Fibrous Heterogeneous
1317930PLM_1					Teased
M5	Drywall Wallboard	None Detected	15% Cellulose	80% Gypsum 5% Other	Brown, Gray Fibrous Heterogeneous
1317930PLM_2					Teased
M6	Drywall Wallboard	None Detected	15% Cellulose	80% Gypsum 5% Other	Brown, Gray Fibrous Heterogeneous
1317930PLM_3					Teased
M7	Exterior Garag Door Caulking	None Detected		100% Other	White Non Fibrous Homogeneous
1317930PLM_4					Crushed
M8	Exterior Garag Door Caulking	None Detected		100% Other	White Non Fibrous Homogeneous
1317930PLM_5					Crushed
M9	Exterior Garag Door Caulking	None Detected		100% Other	White Non Fibrous Homogeneous
1317930PLM_6					Crushed
M10	Joint Compound	None Detected		100% Other	White Non Fibrous Homogeneous
1317930PLM_7					Crushed
M11	Joint Compound	None Detected		100% Other	White Non Fibrous Homogeneous
1317930PLM_8					Crushed

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Sharon Donald (9)

Analyst

Approved Signatory



Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 600/M4-82-020



Customer: ECS Chantilly
14026 Thunderbolt Place
Suite 100
Chantilly VA 20151

Attn: Beverly Sedon

Lab Order ID: 1317930

Analysis ID: 1317930_PLM

Date Received: 10/2/2013

Project: 21983-B; Marine Shop

Date Reported: 10/3/2013

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
M12	Joint Compound	None Detected		100% Other	White Non Fibrous Homogeneous
1317930PLM_9					Crushed

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Sharon Donald (9)

Analyst

Approved Signatory

1317930

Client: ECS Mid-Atlantic, LLC Beverly Sedon 14026 Thunderbolt Place, Suite 301-672-2096 (cell) bsedon@ecslimited.com	Instructions: Use Column "B" for your contact info To See an Example Click the bottom Example Tab. Enter samples between "<<" and ">>" Begin Samples with a "<<" above the first sample and end with a ">>" below the last sample. Only Enter your data on the first sheet "Sheet1"	 Scientific Analytical Institute 4604 Dundas Drive Greensboro, NC 27407 Phone: 336.292.3888 Fax: 336.292.3313 Email: lab@sailab.com
Project: Marine Shop Client Notes: POSITIVE STOP	P.O. #: 21983-B Date Submitted: 10/1/2013 0:00 Analysis: PLM EPA 600/R-93/116 TurnAroundTime: 1 Day TAT	

Sample Number Data 1 Sample Description Data 2

Sample Number	Data 1	Sample Description	Data 2
<<			
M4	Marine	Drywall Wallboard	
M5	Marine	Drywall Wallboard	
M6	Marine	Drywall Wallboard	
M7	Marine	Exterior Garag Door Caulking	
M8	Marine	Exterior Garag Door Caulking	
M9	Marine	Exterior Garag Door Caulking	
M10	Marine	Joint Compound	
M11	Marine	Joint Compound	
M12	Marine	Joint Compound	
>>			

Accepted Rejected

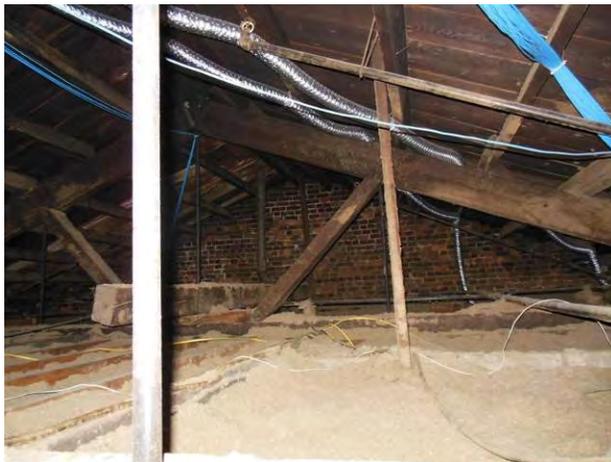
Handwritten signature and date:
 10-2-13
 [Signature]



1. View of the Robinson Terminal Building at 2 Duke Street.



2. View of the warehouse buildings at Robinson Terminal.



3. View of the attic insulation, Samples 1-3.



4. View of the brown duct mastic and white vibration cloth, Samples 4-9.



5. View of pipe insulation and hard elbow insulation, Samples 10-15.



6. View of upper portion of office building within the warehouse area with suspect flashing mastic, inaccessible.

**Hazardous Material Survey
Robinson Terminal/Marine Shop
Alexandria, Virginia**



**Site Photographs
ECS Project No. 01:21983-B
October 2013**



7. View of the Marine Shop at 225 Strand Street.



8. View of window caulk, Samples M1-M3.



9. View of exterior garage door caulking, Samples M7-M9.



10. View of joint compound, Samples M4-M6, M10-M12.



11. View of rear storage room in Marine Shop with LBP on perimeter wall (green surface color).



12. View of the upper windows within the warehouse.

**Hazardous Material Survey
Robinson Terminal/Marine Shop
Alexandria, Virginia**



**Site Photographs
ECS Project No. 01:21983-B
October 2013**