



## **FROEHLING & ROBERTSON, INC.**

**ENGINEERING • ENVIRONMENTAL • GEOTECHNICAL**

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### **LIMITED HAZARDOUS MATERIALS SURVEY REPORT**

**Veterans Administration Medical Center**

**Building 22-H**

**Perry Point, MD**

Prepared For:

TNF Veteran LLC / Penza Bailey Joint Venture

3 Executive Court, Unit 4

South Barrington, IL 60010

Prepared By:

Froehling & Robertson, Inc.

7798 Waterloo Road

Jessup, Maryland 20794

F&R Project Number 68M0120

March 17, 2011

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## **APPENDICES**

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Explanation of XRF Data



## 1.0 Introduction

Froehling and Robertson (F&R) was contracted by TNF Veteran LLC / Penza Bailey Joint Venture to perform a limited, non-destructive hazardous materials survey within areas of the 22-H Building that could potentially be impacted by planned renovations to the building. The survey was performed by an Environmental Protection Agency-Asbestos Hazard Emergency Response Act (EPA-AHERA)-trained asbestos building inspector and EPA-Accredited Lead Inspector, Jason A. Blumenberg, during various visits to the site from December 2010 to January 2011.

The 22-H Building currently houses patient rooms and administrative offices in support of the substance abuse program offered by the Veterans Administration. Typical interior finishes within the 22-H Building consist of plaster walls, sheetrock partitions, lay-in acoustical ceiling tiles, and 12"x12" vinyl floor tiles.

The scope of the hazardous materials survey for the 22-H Building consisted of the following items that would be impacted by the planned renovation:

- Non-invasive survey for suspect asbestos-containing materials (ACMs)
- Screening of surface coatings that may contain lead-based paint (LBP)
- Non-invasive inventory of suspect PCB-containing light ballasts and mercury-containing components

## 2.0 Asbestos-Containing Material (ACM)

### 2.1 Methodology

For this project, a non-invasive visual survey and sampling for suspect ACM was conducted at the 22-H Building. All samples were collected in general accordance with EPA-AHERA protocols and submitted under chain of custody to AMA Analytical Services, Inc. (AMA) located in Lanham, Maryland, for analysis. AMA is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) to analyze suspect asbestos-containing bulk materials. A total of forty one (41) sample layers were analyzed using Polarized Light Microscopy (PLM) via EPA Method 600/R-93/116.

### 2.2 Results (Refer also to Appendix A for Laboratory Reports)

TABLE 1 ACM LABORATORY RESULTS			
Sample #	Sample Location	Sample Description	Analytical Results
01	First Floor Hallway	12"x12" White Vinyl Floor Tile	NAD
		Associated Tan Mastic	Trace Chrysotile
02A	First Floor Conference Room	Skim Coat Plaster	NAD
		Base Coat Plaster	NAD
02B		Skim Coat Plaster	NAD



**TABLE 1  
ACM LABORATORY RESULTS**

Sample #	Sample Location	Sample Description	Analytical Results
		Base Coat Plaster	NAD
02C	Above Ceiling, 1 <sup>st</sup> Floor Hallway	Skim Coat Plaster	NAD
		Base Coat Plaster	NAD
02D	Above Ceiling, 1 <sup>st</sup> Floor Hallway	Skim Coat Plaster	NAD
		Base Coat Plaster	NAD
02E	Above Ceiling, 2 <sup>nd</sup> Floor Hallway	Skim Coat Plaster	NAD
		Base Coat Plaster	NAD
02F	Above Ceiling, 2 <sup>nd</sup> Floor Hallway	Skim Coat Plaster	NAD
		Base Coat Plaster	NAD
02G	Above Ceiling, 2 <sup>nd</sup> Floor Bathroom	Skim Coat Plaster	NAD
		Base Coat Plaster	NAD
03	1 <sup>st</sup> Floor Hallway	Cove Base Molding	NAD
		Associated Mastic	NAD
04	Basement Mechanical Room	White Seam Mastic	NAD
05		Canvas Pipe Wrap	NAD
06	Attic	White Seam Mastic	NAD
07	Roof	Parapet Caulk	Trace Chrysotile
08A	Basement Mechanical Room	Sprayed-on Fireproofing	NAD
08B			NAD
08C			NAD
08D			NAD
08E			NAD
09	1 <sup>st</sup> Floor – Room 129	9"x9" Green Vinyl Floor Tile	5% Chrysotile
		Associated Tan Mastic	Trace Chrysotile
10A	Above Ceiling, 2 <sup>nd</sup> Floor Hallway	Sprayed-on Fireproofing	NAD
10B			NAD
10C			NAD
10D			NAD
10E			NAD
10F			NAD
10G			NAD
11	2 <sup>nd</sup> Floor Hallway	12"x12" Brown Vinyl Floor Tile	NAD
12	2 <sup>nd</sup> Floor Dr's Office	12"x12" Lay-In Ceiling Tiles w/Pinholes	NAD
13	1 <sup>st</sup> Floor Window	Caulking	NAD
14	2 <sup>nd</sup> Floor, Room 201	9"x9" Grey Vinyl Floor Tile	3% Chrysotile
		Associated Black Mastic	5% Chrysotile



NAD = No Asbestos Detected

Trace = < 1% Asbestos

## 2.3 Conclusions and Recommendations

Please see **Table 2** below for a summary of the ACM located within the project scope area.

**TABLE 2  
ACM SUMMARY**

Sample Description	Location	Estimated Quantity	Friable Y/N	Condition	Asbestos Content
12"x12" White Vinyl Floor Tile and Associated Tan Mastic	1 <sup>st</sup> Floor Hallway	2,000 Square Feet	No	Good	No Asbestos Detected on Floor Tile; Trace Chrysotile Detected on Mastic
9" x 9" Green Vinyl Floor Tile and Associated Tan Mastic	1 <sup>st</sup> Floor, Room 129 (Electrical Closet)	150 Square Feet	No	Good	5% Chrysotile (Floor Tile); Trace Chrysotile (Tan Mastic)
9" x 9" Grey Vinyl Floor Tile and Associated Black Mastic	2 <sup>nd</sup> Floor Room 201 (Computer Room)	100 Square Feet	No	Good	3% Chrysotile (Floor Tile); 5% Chrysotile (Black Mastic)
Non-Fiberglass Pipe Insulation/Elbows	Interstitial Cavities	Unknown	Yes	Unknown	Presumed ACM
Pipe Flanges and Gaskets	Throughout	Unknown	No	Unknown	Presumed ACM
Elevator Brakes	Elevator Equipment Room	Unknown	No	Unknown	Presumed ACM
Elevator Cab Insulation	Elevator Cab	1 Cab	Yes	Unknown	Presumed ACM
Elevator Shaft Fireproofing	Elevator Shaft	Unknown	Yes	Unknown	Presumed ACM
Elevator Shaft Walls	Elevator Shaft	Unknown	No	Unknown	Presumed ACM
Fire Doors	Throughout	100 Doors	No	Good	Presumed ACM
Asphalt Roofing Shingles	Roof	5,000 Square Feet	No	Good	Presumed ACM
Boiler Components	Basement	Unknown	Yes	Unknown	Presumed ACM
Mirror / Sink Mastic	Throughout	Unknown	No	Unknown	Presumed ACM

F&R offers the following observations in regards to the information presented in **Table 2**:

- Areas behind solid walls and ceilings were inaccessible and could not be visually surveyed for the presence of ACM. ACM including, but not limited to, thermal pipe and pipe fitting insulation may exist in those locations.
- The estimates provided are preliminary and are not meant for contractor bidding purposes. Additional and/or greater quantities of these ACM's may be discovered during renovation/demolition activities. Additional field verification will be needed to confirm these quantities.



- This survey was limited to rooms that were accessible at the time of the survey. Various rooms were inaccessible or locked at the time of the surveys.
- This survey was limited to those areas delineated by drawings provided by the client. If additional areas not addressed under this limited scope survey are to be impacted, it is recommended that they be evaluated for ACM.
- All vinyl floor tile associated with asbestos-containing mastic should be considered asbestos-containing due to cross-contamination.

Although building materials with trace amounts of asbestos are not regulated by EPA, these materials were identified in our findings due to the fact that activities which impact these materials are regulated by the Occupational Safety and Health Administration (OSHA).

### **2.3.1 Non-Friable Asbestos-Containing Materials**

#### **9"x9" Green Vinyl Floor Tile (5% Chrysotile) and Associated Tan Mastic (Trace Chrysotile) and 9" x 9" Grey Vinyl Floor Tile (3% Chrysotile) and Associated Black Mastic (5% Chrysotile)**

Asbestos was detected in samples of 9"x9" vinyl floor tiles and associated mastics. These materials are classified as Category I non-friable asbestos and were generally in good condition in the areas observed. F&R recommends that all 9"x9" vinyl floor tile and associated mastic within the project scope area be assumed to contain asbestos.

#### **Tan Floor Tile Mastic (Trace Chrysotile) and Associated 12"x12" White Vinyl Floor Tile**

Asbestos was detected in a sample of the tan vinyl floor tile associated with the 12"x12" white vinyl floor tile. No asbestos was detected in the 12"x12" white vinyl floor tile, however this material should be assumed to contain asbestos due to cross-contamination with the mastic. These materials are classified as Category I non-friable asbestos and were generally in good condition in the areas observed. F&R recommends that all 12"x12" vinyl floor tile and associated tan mastic within the project scope area be assumed to contain asbestos.

#### **Roof Parapet Caulk (Trace Chrysotile)**

Asbestos was detected in a sample of roof parapet caulk. This material is classified as a Category I non-friable asbestos and was generally observed in good condition where observed. F&R recommends that all roof parapet caulk within the project scope area be assumed to contain asbestos.

### **2.3.2 Friable Asbestos Containing Materials**

No friable asbestos-containing materials were identified within the project scope area during this survey.



### 2.3.3 Presumed Asbestos-Containing Materials (PACM)

F&R recommends that all pipe/tank/mechanical equipment flanges and gaskets, asphalt roofing shingles covering the structure, elevator components, and all other relevant building materials identified in Table 2 (boiler components, mirror mastic, etc.), and fire doors within the project scope area be considered to be asbestos-containing until sampling determines otherwise.

## 2.4 Applicable Regulations

### EPA/NESHAP Regulations for Asbestos-Containing Materials

The U.S. Environmental Protection Agency promulgated the National Emission Standards for Hazardous Air Pollutants (NESHAP) [40 CFR Part 61], which addresses the application, removal and disposal of ACMs. Under NESHAP, the following categories are defined for ACMs:

**Friable** - When dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

**Non-Friable** - When dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

**Category I Non-friable ACM** - Packings, gaskets, resilient floor coverings, and asphalt roofing products containing more than 1% asbestos.

**Category II Non-friable ACM** – Any non-friable material, excluding Category I Non-friable ACM containing more than 1% asbestos.

### Regulated Asbestos-Containing Material (RACM)-One of the following:

1. Friable ACM
2. Category I Non-friable ACM that has become friable.
3. Category I Non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
4. Category II Non-friable ACM that has a high probability of becoming, or has become, friable by the forces expected to act on the material during demolition or renovation operations.

### Under NESHAP, the following actions are required:

1. Prior to the commencement of demolition or renovation activities, the building owner must inspect the affected facility or part of the facility where the demolition or renovation activities will occur for the presence of asbestos.
2. Remove all RACM from the facility before any activity begins that would break up, dislodge, or similarly disturb the material or preclude access for subsequent removal.
3. RACM need not be removed if:
  - a) It is Category I non-friable ACM that is not in poor condition.
  - b) It is on a facility component that is encased in concrete or other similar material and is adequately wet whenever exposed.
  - c) It was not accessible for testing and was therefore not discovered until after demolition began and because of the demolition the material cannot be safely removed.



- d) It is Category II non-friable ACM and the probability is low that the material will become crumbled, pulverized, or reduced to powder during demolition.

### 3.0 Lead-Based Paint

#### 3.1 Methodology

A lead-based paint (LBP) screening was performed to test a representative number of painted surfaces for the presence of lead. The testing was conducted by using a Niton XL-309 X-Ray Fluorometer (XRF) Lead Paint Analyzer. The XRF contains a small radioisotopic source and operates on the principle of x-ray fluorescence, whereby lead atoms in paint are stimulated to emit characteristic x-rays, which are then detected by the instrument. The XRF can measure surface or non-surface concentrations of lead with 95% accuracy at the State of Maryland action level of  $0.7 \text{ mg/cm}^2$ . Levels of lead are reported in units of milligrams per square centimeter ( $\text{mg/cm}^2$ ). The XRF is able to accurately detect as little as  $0.1 \text{ mg/cm}^2$  of lead. The XRF classifies painted surfaces as “positive” or “negative” for lead content based on the State of Maryland action level ( $0.7 \text{ mg/cm}^2$ ) and the performance characteristics of the XRF.

- Positive: Lead is present at or above the State of Maryland action level of  $0.7 \text{ mg/cm}^2$  on *one or more* layers of paint on a specific component.
- Negative: Lead is not present at or above the State of Maryland action level of  $0.7 \text{ mg/cm}^2$  in any layer of paint on a specific component.

The survey was conducted using the methodology recommended by the U.S. EPA/Department of Housing and Urban Development (HUD). 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.

#### 3.2 Results

A total of 40 readings (including six calibration readings) were taken as part of this survey. Based on the results of this survey the following surfaces should be assumed to contain LBP or lead-based glazing (defined as having a concentration above the State of Maryland action level of 0.7 milligrams per square centimeter):

- Radiators
- Metal window frames
- Stairwell components such as handrails and risers

The following surfaces were determined to contain lead-containing paint (paint with detectable lead concentrations but below the State of Maryland action level):

- Main Level Corridor; Yellow Paint, tested between Rooms 136 and 137, on plaster wall.

Reference the attached XRF Data Table for a complete list of sampled components and results.





### **3.3 Applicable Regulations and Recommendations**

#### **OSHA Regulations for Lead Based Paint**

Positive and negative results are based on the US Department of Housing and Urban Development Guidelines. It is important to note that even if a component is negative based on the State of Maryland standard, 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)."

The OSHA standard gives no guidance on acceptable levels of lead in paint at which no exposure to airborne lead (above the action level) would be expected. Rather, OSHA defines airborne concentrations, and references specific types of work practices and operations from which a lead hazard may be generated (reference 29 CFR 1926.62, section d). Environmental and personnel monitoring should be conducted during any removal/demolition process (as appropriate) to verify that actual personal exposures are below the Permissible Exposure Limit (PEL). Under OSHA requirements, the contractor performing the work will be required to conduct this monitoring and follow all of the other requirements found under 29 CFR 1926.62.

Based on the levels of lead found on painted building components at the 22-H Building, it is anticipated that these components can be disposed of as non-hazardous waste. However, it is recommended that a Toxic Characteristic Leaching Procedure (TCLP) sample of the waste stream from demolition and renovation activities be collected to verify compliance with Resource Conservations and Recovery Act (RCRA) regulations related to lead. Should painted components from this building be sent to a recycling facility, this report should be made available to the accepting facility to properly notify them of the lead contents of these components. Please note that compliance with RCRA regulations does not relieve the demolition contractor of the personnel air monitoring and respiratory protection required under 29 CFR 1926.62.

#### **4.0 PCBs**

##### **4.1 Methodology**

Light ballasts are the electrical components attached to fluorescent light fixtures usually found under a metal cover plate. Prior to 1978, ballasts were commonly manufactured with polychlorinated biphenyls (PCBs). PCBs were used in fluorescent light ballasts because of their electrical insulating properties. Ballasts made after 1978 are usually marked "Non-PCB." F&R conducted a visual non-invasive survey to identify if the "Non-PCB" label was present on ballasts in the project area.

##### **4.2 Results**

F&R observed fluorescent lighting fixtures within the project area and inspected a representative number for the "Non-PCB" label. F&R observed the "Non-PCB" label on all ballasts inspected. During F&R's inspection, F&R observed approximately 140 light fixtures containing an estimated 375 light ballasts throughout the project area.



### **4.3 Recommendations**

F&R recommends that all fluorescent light ballast fixtures in the building that do not contain the “Non-PCB” label be assumed to contain PCBs. Ballasts with a clearly marked “Non-PCB” are not regulated and can be disposed of with general construction and demolition debris. The light fixtures without the “Non-PCB” labeling should be removed, disposed of and/or recycled according to Federal and State of Maryland hazardous waste disposal guidelines, by an appropriately licensed/certified contractor.

The US EPA, as of 2009, issued a guidance document regarding PCBs in caulk for public and commercial buildings. If the door and/or window caulk are to be directly impacted by scheduled renovation activities, they should be sampled for PCBs and disposed of accordingly.

## **5.0 Mercury-Containing Components**

### **5.1 Methodology**

Mercury is used in several building components including fluorescent lamps, thermostats and thermometers. F&R conducted a visual non-invasive survey to identify mercury-containing components throughout the project area.

### **5.2 Results**

During this survey, F&R personnel observed approximately four hundred twenty (420) fluorescent lamps presumed to contain mercury in accessible locations throughout the project area. Although access was not granted to every room located within the survey area, approximately 60% of the rooms that were accessed had “Thermos Johnson Controls” thermostats attached to walls throughout the project area. These thermostats appeared to be original to the building and are suspected to contain mercury.

### **5.3 Recommendations**

F&R recommends that all fluorescent lamps and thermostats be presumed to contain mercury. The mercury-containing fluorescent lamps and thermostats that are to be impacted as part of renovation/demolition activities should be removed, disposed of and/or recycled according to Federal and State of Maryland hazardous waste disposal guidelines by an appropriately licensed/certified contractor.

## **6.0 Limitations**

This report has been prepared for the exclusive use by TNF Veteran, LLC and Penza Bailey Joint Venture and their associates. This service was performed in accordance with Occupational safety and Health Administration (OSHA) and the Environmental Protection Agency (EPA) guidelines. No other warranty, expressed or implied, is made.

Our conclusions and recommendations are based, in part, upon information provided to us by others and on our site observations. We have not verified the completeness or accuracy of the information provided by others, unless otherwise noted. Our observations and recommendations are based upon conditions readily visible at the site at the time of our site visit, and upon current industry standards. During F&R’s non-invasive inspection, accessible areas were visually surveyed for the presence of suspected ACM, LBP, PCB-



containing Light Ballasts and Mercury-containing components. Inaccessible areas, such as patient rooms, locked rooms, behind solid walls or above solid ceilings were not surveyed and therefore suspected ACM, LBP, PCB-containing Light Ballasts and Mercury-containing components may be present in those areas. Areas inspected for the above-referenced materials were limited to those designated by the client.

To preserve the integrity of the roof structure, the roof wasn't sampled because sampling may negatively impact the structure and destroys the matrix.

The investigation was based on materials found in building above soil level. Any materials buried underneath the foundation were not accessible and will be considered to be an asbestos containing material until sampling rebuts the assumption.

During this study, suspect material samples were analyzed for asbestos and/or lead. 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.

Under this scope of services, F&R assumes no responsibility regarding response actions (e.g. O&M Plans, Encapsulation, Abatement, Removal, Notifications, etc.) initiated as a result of these findings. F&R assumes no liability for the duties and responsibilities of the Client with respect to compliance with these regulations. Compliance with regulations is the sole responsibility of the Client and should be conducted in accordance with local, state, and/or federal requirements, whichever is more stringent. All abatement activities or response actions should be performed by appropriately qualified and licensed-personnel and/or companies, as warranted.

Froehling & Robertson, Inc. by virtue of providing the services described in this report, 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. 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, any information that may be necessary to prevent any danger to public health, safety, or the environment. The contents of the report should not be construed in any way as a recommendation to purchase, sell, or develop the project site.



## **APPENDIX A**

### **ASBESTOS DOCUMENTATION, LABORATORY REPORTS**



## CERTIFICATE OF ANALYSIS

Client: Froehling & Robertson  
Address: 7798 Waterloo Road  
Jessup, Maryland 20794  
Attention: Jason Blumenburg

Job Name: Perry Point VAMC  
Job Location: Building 22H  
Job Number: 68M-0120  
P.O. Number: Not Provided

Chain Of Custody: 509492  
Date Analyzed: 1/31/2011  
Person Submitting: Jason Blumenburg

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### Summary of Polarized Light Microscopy

AMA Sample Number	Client Sample #	Total Asbestos	Chrysotile Percent	Amosite Percent	Crocidolite Percent	Other Asbestos Percent	Mineral Wool Percent	Fiberglass Percent	Organic Percent	Synthetic Percent	Other Percent	Particulate Percent	Sample Type	Sample Color	Homogeneity	Analyst ID	Comments
1130974	01 FT	NAD	--	--	--	--	--	--	--	--	--	100	FT	Beige	Homogeneous	SW	
1130975	01 M	TR	TR	--	--	--	--	--	--	--	--	98	MS	Tan	Homogeneous	SW	
1130976	02 A PL	NAD	--	--	--	--	--	--	--	--	--	100	PL	White	Homogeneous	SW	
1130977	02 B PL	NAD	--	--	--	--	--	--	--	--	--	100	PL	White	Homogeneous	SW	
1130978	02 C PL	NAD	--	--	--	--	--	--	TR	--	--	100	PL	White	Homogeneous	SW	
1130979	02 D PL	NAD	--	--	--	--	--	--	TR	--	--	100	PL	White	Homogeneous	SW	
1130980	02 E PL	NAD	--	--	--	--	--	--	TR	--	--	100	PL	White	Homogeneous	SW	
1130981	02 F PL	NAD	--	--	--	--	--	--	TR	--	--	100	PL	White	Homogeneous	SW	
1130982	02 G PL	NAD	--	--	--	--	--	--	TR	--	--	100	PL	White	Homogeneous	SW	
1130983	02 A BC	NAD	--	--	--	--	--	--	TR	--	--	100	BC	Brown	Homogeneous	SW	
1130984	02 B BC	NAD	--	--	--	--	--	--	TR	--	--	100	BC	Brown	Homogeneous	SW	
1130985	02 C BC	NAD	--	--	--	--	--	--	TR	--	--	100	BC	Brown	Homogeneous	SW	
1130986	02 D BC	NAD	--	--	--	--	--	--	TR	--	--	100	BC	Brown	Homogeneous	SW	
1130987	02 E BC	NAD	--	--	--	--	--	--	TR	--	--	100	BC	Brown	Homogeneous	SW	
1130988	02 F BC	NAD	--	--	--	--	--	--	--	--	--	100	BC	Brown	Homogeneous	SW	

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, and these Laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from us. Sample types, locations, and collection protocols are based upon the information provided by the persons submitting them and, unless collected by personnel of these Laboratories, we expressly disclaim any knowledge and liability for the accuracy and completeness of this information. Residual sample material will be discarded in accordance with the appropriate regulatory guidelines, unless otherwise requested by the client. NVLAP accreditation applies only to polarized light microscopy of bulk samples and transmission electron microscopy of AHERA air samples. This report must not be used to claim, and does not imply product certification, approval, or endorsement by NY ELAP, NVLAP, NIST, or any agency of the Federal Government. All rights reserved. AMA Analytical Services, Inc.

An AIHA (#100470), NVLAP (101143-0), and NY ELAP (#10920) Accredited Laboratory

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## CERTIFICATE OF ANALYSIS

Client: Froehling & Robertson  
Address: 7798 Waterloo Road  
Jessup, Maryland 20794  
Attention: Jason Blumenburg

Job Name: Perry Point VAMC  
Job Location: Building 22H  
Job Number: 68M-0120  
P.O. Number: Not Provided

Chain Of Custody: 509492  
Date Analyzed: 1/31/2011  
Person Submitting: Jason Blumenburg

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### Summary of Polarized Light Microscopy

AMA Sample Number	Client Sample #	Total Asbestos	Chrysotile Percent	Amosite Percent	Crocidolite Percent	Other Asbestos Percent	Mineral Wool Percent	Fiberglass Percent	Organic Percent	Synthetic Percent	Other Percent	Particulate Percent	Sample Type	Sample Color	Homogeneity	Analyst ID	Comments
1130989	02 G BC	NAD	--	--	--	--	--	--	TR	--	--	100	BC	Brown	Homogeneous	SW	
1130990	03 CB	NAD	--	--	--	--	--	--	--	--	--	100	CB	Black	Homogeneous	SW	
1130991	03 M	NAD	--	--	--	--	--	--	TR	--	--	100	MS	Tan	Homogeneous	SW	
1130992	04	NAD	--	--	--	--	TR	--	TR	--	--	100	SSL	White	Homogeneous	SW	
1130993	05	NAD	--	--	--	--	2	--	78	--	--	20	CV	Beige	Homogeneous	SW	
1130994	06	NAD	--	--	--	--	TR	--	TR	--	--	100	SSL	White	Homogeneous	SW	
1130995	07	TR	TR	--	--	--	--	--	--	--	5	95	CK	White	Homogeneous	SW	
1130996	08 A	NAD	--	--	--	--	60	--	TR	--	--	40	IN	Gray	Homogeneous	SW	
1130997	08 B	NAD	--	--	--	--	60	--	--	--	--	40	IN	Gray	Homogeneous	SW	
1130998	08 C	NAD	--	--	--	--	60	--	TR	--	--	40	IN	Gray	Homogeneous	SW	
1130999	08 D	NAD	--	--	--	--	60	--	TR	--	--	40	IN	Gray	Homogeneous	SW	
1131000	08 E	NAD	--	--	--	--	60	--	TR	--	--	40	IN	Gray	Homogeneous	SW	
1131001	09 FT	5	5	--	--	--	--	--	--	--	--	95	FT	Multi	Homogeneous	SW	
1131002	09 M	TR	TR	--	--	--	--	--	TR	--	--	100	MS	Beige	Homogeneous	SW	Chrysotile present is possible contamination from FT.

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, and these Laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from us. Sample types, locations, and collection protocols are based upon the information provided by the persons submitting them and, unless collected by personnel of these Laboratories, we expressly disclaim any knowledge and liability for the accuracy and completeness of this information. Residual sample material will be discarded in accordance with the appropriate regulatory guidelines, unless otherwise requested by the client. NVLAP accreditation applies only to polarized light microscopy of bulk samples and transmission electron microscopy of AIHRA air samples. This report must not be used to claim, and does not imply product certification, approval, or endorsement by NY ELAP, NVLAP, NIST, or any agency of the Federal Government. All rights reserved. AMA Analytical Services, Inc.





## CERTIFICATE OF ANALYSIS

<b>Client:</b>	Froehling & Robertson	<b>Job Name:</b>	Perry Point VAMC	<b>Chain Of Custody:</b>	509492
<b>Address:</b>	7798 Waterloo Road	<b>Job Location:</b>	Building 22H	<b>Date Analyzed:</b>	1/31/2011
	Jessup, Maryland 20794	<b>Job Number:</b>	68M-0120	<b>Person Submitting:</b>	Jason Blumenburg
		<b>P.O. Number:</b>	Not Provided		
<b>Attention:</b>	Jason Blumenburg				

Page 3 of 4

### Summary of Polarized Light Microscopy

AMA Sample Number	Client Sample #	Total Asbestos	Chrysotile Percent	Amosite Percent	Crocidolite Percent	Other Asbestos Percent	Mineral Wool Percent	Fiberglass Percent	Organic Percent	Synthetic Percent	Other Percent	Particulate Percent	Sample Type	Sample Color	Homogeneity	Analyst ID	Comments
1131003	10 A	NAD	--	--	--	--	60	--	TR	--	--	40	IN	Gray	Homogeneous	SW	
1131004	10 B	NAD	--	--	--	--	60	--	TR	--	--	40	IN	Beige	Homogeneous	SW	
1131005	10 C	NAD	--	--	--	--	60	--	TR	--	--	40	IN	Beige	Homogeneous	SW	
1131006	10 D	NAD	--	--	--	--	60	--	TR	--	--	40	IN	Beige	Homogeneous	SW	
1131007	10 E	NAD	--	--	--	--	60	--	TR	--	--	40	IN	Beige	Homogeneous	SW	
1131008	10 F	NAD	--	--	--	--	60	--	TR	--	--	40	IN	Beige	Homogeneous	SW	
1131009	10 G	NAD	--	--	--	--	60	--	TR	--	--	40	IN	Beige	Homogeneous	SW	
1131010	11	NAD	--	--	--	--	--	--	--	--	--	100	FT	Multi	Homogeneous	SW	
1131011	12	NAD	--	--	--	--	70	--	--	--	--	30	CT	Multi	Layered	SW	
1131012	13	NAD	--	--	--	--	--	--	--	--	--	100	CK	White	Homogeneous	SW	
1131013	14 FT	3	3	--	--	--	--	--	--	--	--	97	FT	Gray	Homogeneous	SW	
1131014	14 M	5	5	--	--	--	--	--	--	--	--	95	MS	Black	Homogeneous	SW	

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An AIHA (#100470), NVLAP (101143-0), and NY ELAP (#10920) Accredited Laboratory

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## CERTIFICATE OF ANALYSIS

<b>Client:</b>	Froehling & Robertson	<b>Job Name:</b>	Perry Point VAMC	<b>Chain Of Custody:</b>	509492
<b>Address:</b>	7798 Waterloo Road	<b>Job Location:</b>	Building 22H	<b>Date Analyzed:</b>	1/31/2011
	Jessup, Maryland 20794	<b>Job Number:</b>	68M-0120	<b>Person Submitting:</b>	Jason Blumenburg
		<b>P.O. Number:</b>	Not Provided		
<b>Attention:</b>	Jason Blumenburg				

Page 4 of 4

### Summary of Polarized Light Microscopy

AMA Sample Number	Client Sample #	Total Asbestos	Chrysotile Percent	Amosite Percent	Crocidolite Percent	Other Asbestos Percent	Mineral Wool Percent	Fiberglass Percent	Organic Percent	Synthetic Percent	Other Percent	Particulate Percent	Sample Type	Sample Color	Homogeneity	Analyst ID	Comments
-------------------	-----------------	----------------	--------------------	-----------------	---------------------	------------------------	----------------------	--------------------	-----------------	-------------------	---------------	---------------------	-------------	--------------	-------------	------------	----------

The following footnotes only apply to those samples which the total asbestos result is flagged with a note number.

- 1 TEM RECOMMENDATION - Please note, due to resolution limitations with optical microscopy and/or interference from matrix components of this sample, results which are reported via PLM as negative or trace (<1%) for asbestos may contain a significant quantity of asbestos. It is recommended that the additional analytical technique of TEM be used to check for asbestos fibers below the resolution limits of optical microscopy.
- 2 MATRIX REDUCTION RECOMMENDATION - Please note, due to interference from the matrix components of this sample, results which are reported via PLM as negative or trace (<1%) for asbestos may contain a significant quantity of asbestos which is obscured from view. It is recommended that the additional preparation technique of gravimetric reduction be performed on this sample to minimize the obscuring effects of matrix components, followed by reanalysis by PLM and/or TEM.

Analysis Method - EPA/600/R-93/116 dated July 1993

NAD = "No Asbestos Detected" TR = "Trace equals less than 1% of this component"

Uncertainty: For samples containing asbestos in range of 1-10%  
the CV is 0.43, 11-35% CV=0.55, >35 CV=0.23

All results are to be considered preliminary and subject to change  
unless signed by the Technical Director or Deputy.

Technical Director

Pecrawut Chaikenee

Analyst(s)

Surat Watson

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, and these Laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from us. Sample types, locations, and collection protocols are based upon the information provided by the persons submitting them and, unless collected by personnel of these Laboratories, we expressly disclaim any knowledge and liability for the accuracy and completeness of this information. Residual sample material will be discarded in accordance with the appropriate regulatory guidelines, unless otherwise requested by the client. NVLAP accreditation applies only to polarized light microscopy of bulk samples and transmission electron microscopy of AHERA air samples. This report must not be used to claim, and does not imply product certification, approval, or endorsement by NY ELAP, NVLAP, NIST, or any agency of the Federal Government. All rights reserved. AMA Analytical Services, Inc.

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# AMA Analytical Services, Inc.

Focused on Results [www.amalab.com](http://www.amalab.com)  
 AIHA (#100470) NVLAP (#101143-0) NY ELAP (10920)  
 4475 Forbes Blvd. • Lanham, MD 20706  
 (301) 459-2640 • (800) 346-0961 • Fax (301) 459-2643

OWI (410) 247-2024

159202

## CHAIN OF CUSTODY

(Please Refer To This  
Number For Inquires)

509492

1/2

### Mailing/Billing Information:

1. Client Name: Froehling and Robertson  
 2. Address 1: \_\_\_\_\_  
 3. Address 2: \_\_\_\_\_  
 4. Address 3: \_\_\_\_\_  
 5. Phone #: 443 733 1011 Fax #: 443 733 1015

### Submittal Information:

1. Job Name: Perry Point VAMC  
 2. Job Location: Bldg. 22H  
 3. Job #: 68M-0120 P.O. #: \_\_\_\_\_  
 4. Contact Person: Jason B @ phone # 443 768 1606  
 5. Submitted by: Jason B Signature: [Signature]

### Reporting Information (Results will be provided as soon as technically feasible):

<b>AFTER HOURS (must be pre-scheduled)</b> <input type="checkbox"/> Immediate Date Due: _____ <input type="checkbox"/> 24 Hours Time Due: _____ Comments: _____		<b>NORMAL BUSINESS HOURS</b> <input type="checkbox"/> Immediate <input type="checkbox"/> Next Day <input type="checkbox"/> 2 Day <input type="checkbox"/> 3 Day <input checked="" type="checkbox"/> 5 Day + Date Due: <u>1/31/11</u>		<b>REPORT TO:</b> <input type="checkbox"/> Results Required By Noon (Every Attempt Will Be Made to Accommodate) <input checked="" type="checkbox"/> Include COC/Field Data Sheets with Report <input checked="" type="checkbox"/> Email: <u>jblumenberg@fandr.com</u> <input type="checkbox"/> Fax: _____ <input type="checkbox"/> Verbal: _____	
--	--	--	--	---	--

### Asbestos Analysis

#### PCM Air - Please Indicate Filter Type:

- ☐ NIOSH 7400 (QTY) \_\_\_\_\_  
☐ Fiberglass (QTY) \_\_\_\_\_

#### TEM Air - Please Indicate Filter Type:

- ☐ AHERA (QTY) \_\_\_\_\_  
☐ NIOSH 7402 (QTY) \_\_\_\_\_  
☐ Other (specify) \_\_\_\_\_ (QTY) \_\_\_\_\_

#### PLM Bulk

- ☒ EPA 600 - Visual Estimate 29 (QTY) Layers Please  
☐ EPA Point Count (QTY) \_\_\_\_\_  
☐ NY State Friable 198.1 (QTY) \_\_\_\_\_  
☐ Grav. Reduction ELAP 198.6 (QTY) \_\_\_\_\_  
☐ Other (specify) \_\_\_\_\_ (QTY) \_\_\_\_\_

#### MISC

- ☐ Vermiculite  
☐ Asbestos Soil PLM (Qual) PLM (Quan) PLM/TEM (Qual) PLM/TEM (Quan)

### TEM Bulk

- ☐ ELAP 198.4/Chatfield (QTY) \_\_\_\_\_  
☐ NY State PLM/TEM (QTY) \_\_\_\_\_  
☐ Residual Ash (QTY) \_\_\_\_\_

### TEM Dust

- ☐ Qual. (pres/abs) Vacuum/Dust (QTY) \_\_\_\_\_  
☐ Quan. (s/area) Vacuum D5755-95 (QTY) \_\_\_\_\_  
☐ Quan. (s/area) Dust D6480-99 (QTY) \_\_\_\_\_

### TEM Water

- ☐ Qual. (pres/abs) (QTY) \_\_\_\_\_  
☐ ELAP 198.2/EPA 100.2 (QTY) \_\_\_\_\_  
☐ EPA 100.1 (QTY) \_\_\_\_\_

☒ All samples received in good condition unless otherwise noted.  
 (TEM Water samples \_\_\_\_\_ °C)

### Metals Analysis

- ☐ Pb Paint Chip (QTY) \_\_\_\_\_  
☐ Pb Dust Wipe (wipe type \_\_\_\_\_) (QTY) \_\_\_\_\_  
☐ Pb Air (QTY) \_\_\_\_\_  
☐ Pb Soil/Solid (QTY) \_\_\_\_\_  
☐ Pb TCLP (QTY) \_\_\_\_\_  
☐ Drinking Water ☐ Pb (QTY) ☐ Cu (QTY) ☐ As (QTY)  
☐ Waste Water ☐ Pb (QTY) ☐ Cu (QTY) ☐ As (QTY)  
☐ Pb Furnace (Media \_\_\_\_\_) (QTY) \_\_\_\_\_

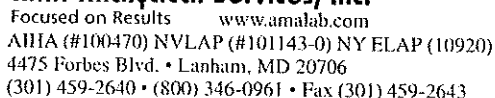
### Fungal Analysis

- Collection Apparatus for Spore Traps/Air Samples: \_\_\_\_\_  
 Collection Media \_\_\_\_\_  
☐ Spore-Trap (QTY) \_\_\_\_\_  
☐ Surface Swab (QTY) \_\_\_\_\_  
☐ Surface Tape (QTY) \_\_\_\_\_  
☐ Other (Specify \_\_\_\_\_) (QTY) \_\_\_\_\_  
☐ Surface Vacuum Dust (QTY) \_\_\_\_\_  
☐ Culturable ID Genus (Media \_\_\_\_\_) (QTY) \_\_\_\_\_  
☐ Culturable ID Species (Media \_\_\_\_\_) (QTY) \_\_\_\_\_

CLIENT ID NUMBER		SAMPLE INFORMATION SAMPLE LOCATION/ IDENTIFICATION		DATE	VOLUME (LITERS)	WIPE AREA	ANALYSIS										MATRIX					CLIENT CONTACT		
							TEM	PCM	PLM	LEAD	MOLD	AIR	BULK	DUST	WATER AND OTHER	SPORE TRAP	TAPE	SWAB	(LABORATORY STAFF ONLY)					
01		White VFT	1/24	1.1M					✓				✓							Date/Time:	Contact:	By:		
02A-E		Plaster -Base Coat																						
		- Smooth Coat			PL/BC																			
03		Core Base			CB/M																			
04		Seam Mastic																						
05		Canvas Wrap																		Date/Time:	Contact:	By:		
06		Seam mastic Above																						
07		Parapet caulk																						
08A-E		Insulation																						
09		Green VFT			1.1M															Date/Time:	Contact:	By:		
10A-E		Insulation																						
11		Beige VFT																						

LABORATORY  
STAFF ONLY:  
(CUSTODY)

1. Date/Time RCVD: 1/24/11 @ 1:55 Via: Dropoff By (Print): Nicole Maxwell Sign: [Signature]  
 2. Date/Time Analyzed: 1/31/11 @ By (Print): Surat Watson Sign: [Signature]  
 3. Results Reported To: Jason Blumentberg Via: Email Date: 1/31/11 Time: \_\_\_\_\_ Initials: SW  
 4. Comments: \_\_\_\_\_



210 REV. 6.08

(Please Refer To This  
Number For Inquires)

509492  
2/2

1. Client Name: F and R  
2. Address 1: \_\_\_\_\_  
3. Address 2: \_\_\_\_\_  
4. Address 3: \_\_\_\_\_  
5. Phone #: 443 Fax #: \_\_\_\_\_

1. Job Name: Perry Point VAMC  
 2. Job Location: Bldg. 22H  
 3. Job #: 68M0120 P.O. #:  
 4. Contact Person: Jason B @ phone # 413 768 1606  
 5. Submitted by: Jason B Signature: [Signature]

Reporting Information (Results will be provided as soon as technically feasible):

Reporting Information (Results will be provided as soon as technically feasible):					
<b>AFTER HOURS (must be pre-scheduled)</b>		<b>NORMAL BUSINESS HOURS</b>		<b>REPORT TO:</b>	
<input type="checkbox"/> Immediate	Date Due: _____	<input type="checkbox"/> Immediate	<input checked="" type="checkbox"/> 3 Day	<input type="checkbox"/> Results Required By Noon (Every Attempt Will Be Made to Accommodate)	<input type="checkbox"/> Include CQC Field Data Sheets with Report
<input checked="" type="checkbox"/> 24 Hours	Time Due: _____	<input type="checkbox"/> Next Day	<input checked="" type="checkbox"/> 5 Day + Date Due: _____		<input checked="" type="checkbox"/> Email: <u>jblumenberg@fandr.com</u>
Comments: _____		<input type="checkbox"/> 2 Day			<input type="checkbox"/> Fax: _____
					<input type="checkbox"/> Verbal: _____

PCMAir – Please Indicate Filter Type:  
☐ NIOSH 7400 \_\_\_\_\_ (QTY)  
☐ Fiberglass \_\_\_\_\_ (QTY)

TEM Air – Please Indicate Filter Type:  
☐ AHERA \_\_\_\_\_ (QTY)  
☐ NIOSH 7402 \_\_\_\_\_ (QTY)  
☐ Other (specify \_\_\_\_\_) \_\_\_\_\_ (QTY)

☐ ELAP 198.4/Chatfield \_\_\_\_\_ (QTY)  
☐ NY State PLM/TEM \_\_\_\_\_ (QTY)  
☐ Residual Ash \_\_\_\_\_ (QTY)

☐ Qual. (pres/abs) Vacuum/Dust \_\_\_\_\_ (QTY)  
☐ Quan. (s/area) Vacuum D5755-95 \_\_\_\_\_ (QTY)  
☐ Quan. (s/area) Dust D6480-99 \_\_\_\_\_ (QTY)

☐ Qual. (pres/abs)\_\_\_\_\_ (QTY)  
☐ ELAP 198.2/EPA 100.2\_\_\_\_\_ (QTY)  
☐ EPA 100.1\_\_\_\_\_ (QTY)

☐ All samples received in good condition unless otherwise noted.  
(TEM Water samples, \_\_\_\_\_ °C)

☐ Pb Paint Chip \_\_\_\_\_ (QTY)  
☐ Pb Dust Wipe (wipe type \_\_\_\_\_) \_\_\_\_\_ (QTY)  
☐ Pb Air \_\_\_\_\_ (QTY)  
☐ Pb Soil/Solid \_\_\_\_\_ (QTY)  
☐ Pb TCLP \_\_\_\_\_ (QTY)  
☐ Drinking Water ☐ Pb \_\_\_\_\_ (QTY) ☐ Cu \_\_\_\_\_ (QTY) ☐ As \_\_\_\_\_ (QTY)  
☐ Waste Water ☐ Pb \_\_\_\_\_ (QTY) ☐ Cu \_\_\_\_\_ (QTY) ☐ As \_\_\_\_\_ (QTY)  
☐ Pb Furnace (Media \_\_\_\_\_) \_\_\_\_\_ (QTY)

Collection Apparatus for Spore Traps/Air Samples: \_\_\_\_\_  
Collection Media \_\_\_\_\_

<input type="checkbox"/> Spore-Trap _____ (QTY)	<input type="checkbox"/> Surface Vacuum Dust _____ (QTY)
<input type="checkbox"/> Surface Swab _____ (QTY)	<input type="checkbox"/> Culturable ID Genus (Media _____) (QTY)
<input type="checkbox"/> Surface Tape _____ (QTY)	<input type="checkbox"/> Culturable ID Species (Media _____) (QTY)
<input type="checkbox"/> Other (Specify _____) (QTY)	

[illegible]

## (LABORATORY STAFF ONLY)

Date/Time:	Contact:	By:
Date/Time:	Contact:	By:
Date/Time:	Contact:	By:

1. Date/Time RCVD: 1/31/11 @ Via: By (Print): Sign:  
2. Date/Time Analyzed: 1/31/11 @ By (Print): Surat Watson Sign: S. S. W  
3. Results Reported To: Jason Blumemberg Via: Email Date: 1/31/11 Time: Initials: SW  
4. Comments:



## **APPENDIX B**

### **XRF DATA TABLES EXPLANATION OF XRF DATA**

Reading No	Area	Component	Substrate	Condition	Color	Action Level	PbC	PbC Error	Lead Based Paint Y/N
1		CALIBRATE				0.7 mg/cm^2	1.1	0.3	N/A
2		CALIBRATE				0.7 mg/cm^2	1	0.1	N/A
3		CALIBRATE				0.7 mg/cm^2	0.9	0.4	N/A
4	Exterior	Wall	EIFS	Good	Orange	0.7 mg/cm^2	0.01	0.04	No
5	Exterior	Wall	EIFS	Good	Beige	0.7 mg/cm^2	0	0.02	No
6	Main Level Foyer	Wall	Plaster	Good	Yellow	0.7 mg/cm^2	0	0.02	No
7	Main Level Foyer	Radiator	Metal	Good	Yellow	0.7 mg/cm^2	2.3	1.3	Yes
8	Main Level Foyer	Elevator Door	Metal	Good	Dk. Yellow	0.7 mg/cm^2	0.02	0.04	No
9	Main Level Foyer	Elevator Frame	Wood	Good	Yellow	0.7 mg/cm^2	0.4	0.6	Yes
10	Main Level Foyer	Elevator Door Jamb	Metal	Good	Yellow	0.7 mg/cm^2	0.4	0.4	No
11	Main Level Corridor	Door Frame	Metal	Good	Yellow	0.7 mg/cm^2	0.01	0.04	No
12	Main Level Corridor	Door Frame	Metal	Good	Yellow	0.7 mg/cm^2	0.01	0.99	No
13	Room 131	Wall	Plaster	Good	Green	0.7 mg/cm^2	0.07	0.07	No
14	Room 131	Radiator	Metal	Good	Green	0.7 mg/cm^2	0.08	0.26	No
15	Room 133 (Bathroom)	Stall	Metal	Good	Brown	0.7 mg/cm^2	0.12	0.2	No
16	Room 133 (Bathroom)	Window Frame	Metal	Good	Brown	0.7 mg/cm^2	1.6	0.7	Yes
17	Room 149	Door	Metal	Good	Dk. Yellow	0.7 mg/cm^2	0	0.02	No
18	Main Level Corridor	Wall	Plaster	Good	Grey	0.7 mg/cm^2	0.16	0.2	No
19	Main Level Corridor	Door Frame	Metal	Good	Grey	0.7 mg/cm^2	0.27	0.47	No
20	Main Level Corridor	Wall	Plaster	Good	Yellow	0.7 mg/cm^2	0.26	0.22	No
21	Room 127	Wall	Plaster	Good	Brown	0.7 mg/cm^2	0	0.02	No
22	Room 127	Wall	Plaster	Good	White	0.7 mg/cm^2	0.08	0.23	No
23	Room 105	Wall	Drywall	Good	Brown	0.7 mg/cm^2	0	0.02	No
24	Room 105	Door Jamb	Metal	Good	Yellow	0.7 mg/cm^2	0	0.02	No
25	Room 105	Door Frame	Metal	Good	Yellow	0.7 mg/cm^2	0	0.02	No
26	Central Stairwell	Post	Metal	Good	Black	0.7 mg/cm^2	1.4	3.2	No
27	Central Stairwell	Stringer	Metal	Good	Black	0.7 mg/cm^2	0.9	1.1	No
28	Central Stairwell	Handrail	Metal	Good	Black	0.7 mg/cm^2	1.2	0.4	Yes
29	Central Stairwell	Riser	Metal	Good	Black	0.7 mg/cm^2	1.2	0.2	Yes
30	Central Stairwell	Wall	Plaster	Good	Yellow	0.7 mg/cm^2	0.23	0.29	No
31	2nd Level Corridor	Wall	Plaster	Good	Brown	0.7 mg/cm^2	0	0.02	No
32	Room 210	Wall	Plaster	Good	Blue	0.7 mg/cm^2	0.11	0.19	No
33	Room 228 (Bathroom)	Stall	Metal	Good	Blue	0.7 mg/cm^2	0	0.02	No

34	Room 205	Wall	Drywall	Good	Rose	0.7 mg/cm^2	0	0.02	No
35	Room 233	Wall	Plaster	Good	Blue	0.7 mg/cm^2	0	0.02	No
36	Rear Stairwell	Wall	Block	Good	Yellow	0.7 mg/cm^2	0	0.02	No
37	Main Level Corridor	Door	Metal	Good	Grey	0.7 mg/cm^2	0	0.02	No
38		CALIBRATE				0.7 mg/cm^2	1.1	0.2	N/A
39		CALIBRATE				0.7 mg/cm^2	0.9	0.1	N/A
40		CALIBRATE				0.7 mg/cm^2	1	0.2	N/A



## EXPLANATION OF XRF DATA

The table header displays Inspector's name and license number, XL-309 serial number, the job site location, and sampling date.

<b><u>Column</u></b>	<b><u>Description</u></b>
<b>Reading No</b>	Consecutive sample numbers assigned by the instrument at testing time.
<b>Site</b>	Testing site location(s).
<b>Component</b>	The major building component being tested.
<b>Substrate</b>	The type of material underlying the painted coating.
<b>Color</b>	Color of the painted or varnished surface.
<b>Result</b>	Result of the test:      NEG      = negative POS      = positive NULL    = incomplete test / reading error  <i>There is no inconclusive range for the Niton XL-309.</i>
<b>Action Level</b>	Concentration of lead defined as lead-based paint.
<b>Pbc</b>	Combined L and K-Shell x-ray readings of lead level.