



SURVEY REPORT FOR ASBESTOS AND LEAD-BASED PAINT

Prepared For:

**TALLEY & SMITH ARCHITECTURE, INC.
409 EAST MARION STREET
SHELBY, NORTH CAROLINA 28150**

Regarding:

**DELIVERY ORDER NO. 0031
RENOVATE BLDG. M100
MARINE CORPS BASE – CAMP JOHNSON
JACKSONVILLE, NORTH CAROLINA**

Prepared By:

**ALLIED CONSULTING & ENVIRONMENTAL SERVICES, LLC
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ISSUE DATE: JUNE 5, 2019

ACES PROJECT: 2019-04-023



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ACES Project No.: 2019-04-023

June 5, 2019

Prepared by:

DeWitt Whitten, CHMM, REM, CES, REPA
General Manager
NC Licensed Asbestos Inspector #10706
NC Licensed LBP Risk Assessor #120118

Reviewed by:

Robert L. Smith, AIA, LEED AP
Managing Partner



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**RENOVATE BLDG. M100
MARINE CORPS BASE – CAMP JOHNSON
JACKSONVILLE, NORTH CAROLINA**

1.0 INTRODUCTION

As authorized by Talley & Smith Architecture, Inc. on May 14, 2019, personnel of Allied Consulting and Environmental Services, LLC (ACES) performed a non-invasive survey for suspect asbestos containing materials (ACM) and a limited lead-based paint (LBP) survey for building M-100 at the Marine Corps Base – Camp Johnson in Jacksonville, North Carolina on March 27, 2019. The surveys were conducted for the purpose of identifying asbestos containing materials and lead-based painted materials that may be impacted by the proposed renovation of the Building M-100.

2.0 GENERAL BACKGROUND INFORMATION

2.1 Asbestos

The term “asbestos” refers to a group of naturally-occurring, fibrous minerals that are commercially mined throughout the world, primarily in Canada, Russia, and South Africa. Asbestos has been used in hundreds of products. Collectively, these products are referred to as asbestos-containing materials (ACMs). Asbestos gained wide use because it is plentiful, readily available, low in cost, and because of its unique properties – fire resistance, high tensile strength, resistance, and insulating characteristics.

As an insulator, asbestos received wide spread use for thermal insulation and condensation control. Asbestos is added to a variety of building materials to enhance strength. It is found in concrete and concrete-like products. Asbestos cement products are used as siding and roofing shingles, wallboard, as corrugated or flat sheets for roofing and partition walls, and as piping. Asbestos has also been added to asphalt, vinyl, and other materials to make products like roofing cements, felts and shingles, exterior siding materials, floor tiles, joint compounds, and mastics/adhesives. Asbestos also proved valuable as a component of acoustical plaster. This material was troweled-on or sprayed-on to ceilings or walls. As a decorative product, asbestos was frequently used to texture ceilings, walls, and other painted surfaces. Asbestos is still mined commercially and used in many common products, including brake shoes, roofing materials, and flooring products. It is important to realize that commercially available products containing asbestos can still be purchased. It is a common misconception that asbestos is no longer used.

The three most commonly encountered types of asbestos are sometimes referred to by their predominant color. Chrysotile (white) is by far the most frequently used asbestos mineral, constituting approximately 95% of all commercial and industrial applications. Chrysotile fibers



are long and flexible and can be spun or woven into cloth. Amosite (brown) and crocidolite (blue) are used in approximately 4-5% of asbestos-containing products.

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 asbestos-containing materials (ACM). Under NESHAP, the following categories are defined for asbestos-containing materials:

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

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

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

Category II Nonfriable ACM – Any material excluding Category I Nonfriable ACM containing more than 1% asbestos.

Regulated Asbestos Containing Material (RACM) – RACM include one of the following:

- 1) Friable ACM
- 2) Category I Nonfriable ACM that has become friable.
- 3) Category I Nonfriable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- 4) Category II Nonfriable ACM that has a high probability of becoming, or has become, friable by the forces expected to act on the material in the course of 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 nonfriable 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.

The Occupational Safety and Health Administration (OSHA) has established three sets of regulatory standards pertaining to asbestos exposure:

29 CFR 1910.1001	General Industry
29 CFR 1926.1101	Construction Industry
29 CFR 1910.134	Respiratory Protection

The construction industry standard covers activities involving asbestos demolition, removal, alteration, repair, maintenance, installation, cleanup, transportation, disposal, and storage. The general industry standard covers other activities where asbestos exposure is possible. Addressed under the OSHA standards are building owner / employer responsibilities regarding the identification of identified or presumed asbestos containing materials (PACM), notification to tenants / employees of the presence of asbestos, employee training, and work procedures.

2.2 Lead-based Paint

Lead-based paint is paint containing lead, a heavy metal, which is used as pigment. Lead chromate (PbCrO_4 - "chrome yellow") and lead carbonate (PbCO_3 - "white lead") are the most common lead compounds used as pigments. Lead is also added to paint to speed drying, increase durability, retain a fresh appearance, and resist moisture that causes corrosion. Paint with significant lead content is still used in industry and by the military. For example, leaded paint is sometimes used to paint roadway markings and parking lot lines.

Although lead improves paint performance, it is a dangerous substance. It is especially damaging to children under age six whose bodies are still developing. Lead causes nervous system damage, hearing loss, stunted growth, and delayed development. It can cause kidney damage and affects every organ system of the body. It also is dangerous to adults, and can cause reproductive problems for both men and women. One myth related to lead-based paint is that the most common cause of poisoning was eating leaded paint chips. In fact, the most common pathway of childhood lead exposure is through ingestion of lead dust through normal hand-to-mouth contact during which children swallow lead dust dislodged from deteriorated paint or lead dust generated during remodeling or painting. Lead dust from remodeling or deteriorated paint lands on the floor near where children play and can ingest it.

Paint containing more than 0.06% (600 ppm) lead was banned for residential use in the United States in 1978 by the U.S. Consumer Product Safety Commission (16 Code of Federal Regulations CFR 1303). The U.S. Government defines "lead-based paint" as any "paint, surface coating that contains lead equal to or exceeding one milligram per square centimeter (1.0 mg/cm^2) or 0.5% by weight." These definitions are used to enforce regulations that apply to certain activities conducted in housing constructed prior to 1978, such as abatement, or the permanent elimination of a "lead-based paint hazard." Construction activities that involve LBP are addressed OSHA in 29 CFR 1926.62 (Lead in Construction).



2.3 Project Scope

The scope of this survey included the interior and exterior of Building M-100 as designated on drawings furnished by Talley & Smith Architecture, Inc., the proposed scope of work provided to ACES, and as discussed in our conversation on March 11, 2019. It is our understanding that the building will be repaired/renovated in the near future.

3.0 METHODOLOGY

3.1 Asbestos

For this project, a visual, non-invasive survey and sampling for suspect asbestos containing materials (ACM) was conducted at the above referenced building. ACES personnel submitted a total of thirteen (13) bulk samples of suspect ACM that may be impacted by the planned renovation project. Samples were collected by a NC Licensed Asbestos Inspector (DeWitt Whitten - #10706) and submitted to a NVLAP Accredited Asbestos Laboratory (EMSL in Charlotte, NC). Samples were analyzed using Polarized Light Microscopy (PLM) by EPA Method 600/R-93/116. Due to some materials consisting of more than one layer, a total of seventeen (17) samples were analyzed by the laboratory. Samples included the following materials: roofing materials, carpet mastic, drywall, spackling, spline ceiling tile, and floor tile and associated mastic. Please refer to the Sample Location Plan (Figure No. 1) and the Chain of Custody sheet in Appendices 1 and 2, respectively, for the approximate sample locations and the specific materials sampled.

During the survey, ACES personnel also reviewed a previously prepared report for Building M-100 provided by personnel of the Camp Lejeune Marine Corps' Environmental Protection office. The report was dated March 29, 2019 (print date). For the purpose of this report, the materials listed in the report are considered presumed asbestos containing materials. These materials are discussed further in Section 4.3 of this report. A copy of the provided report prepared by others is presented in Appendix 3.

3.2 Lead-based Paint

A North Carolina Lead-based Paint Risk Assessor (Mr. DeWitt Whitten, Risk Assessor #120118) performed a limited lead-based paint (LBP) survey of the interior and exterior painted surfaces at thirty-four (34) locations for Building M-100. Please refer to the Sample Location Plans (Figure No. 2) and the XRF Field Data Sheets in Appendices 1 and 4, respectively, for the approximate test locations and the specific materials sampled. The testing was conducted using a INNOV-X Portable X-ray Fluorescence (XRF) Analyzer to screen surface coatings that may contain lead. The sampling for lead-based paint was not a comprehensive surface by surface testing of the paint (*e.g.* a HUD level survey), but consisted of testing representative painted surfaces for the presence of LBP. Surfaces tested included exterior and interior walls, exterior and interior doors and door frames, door overhang components, soffits, fascia boards, and window components.



4.0 FINDINGS AND RECOMMENDATIONS

4.1 Non-asbestos Containing Materials

None of the seventeen (17) samples analyzed by EMSL contained asbestos (i.e. greater than one percent asbestos).

4.2 Asbestos Containing Materials & Presumed Asbestos Containing Materials (PACM)

Asbestos was not detected in the seventeen (17) samples analyzed by EMSL. In addition, an asbestos report prepared by others indicated that friable and/or non-friable ACM was not present in the building.

4.3 Lead-based Paint

The results of the testing (Appendix 3) revealed that lead-based paint was present at five (5) locations associated with Building M-100 as shown in Table 2.

TABLE 2 – SUMMARY OF LEAD-BASED PAINT FINDINGS						
FACILITY ID.	XRF TEST NO.	INT./EXT.	FEATURE	SUBSTRATE	COLOR	XRF RDG. ¹
M-100	160	Interior	Door (back)	Wood	Off-white	4.8
M-100	161	Interior	Door frame	Wood	White	3.09
M-100	164	Interior	Wall	Wood	Green	> 5.0
M-100	165	Interior	Door (front)	Wood	Off-white	> 5.0
M-100	166	Interior	Door (back)	Wood	Off-white	3.63

NOTE: 1) units in milligrams per square centimeter (mg/cm²)

4.4 Recommendations - ACM & Presumed ACM

Asbestos containing materials (ACM) and Presumed Asbestos Containing Materials (PACM) were not identified in the building. Based upon the sampling performed by ACES and a review of the results of the laboratory analysis and the review of the asbestos report prepared by others, no specialized asbestos procedures are required prior to renovation.

4.5 Recommendations - Lead-based Paint

Lead-based paint (LBP), i.e. paint that contains lead equal to or exceeding one milligram per square centimeter (1.0 mg/cm²), was identified at five (5) locations on the painted surfaces tested at the building as shown in Table 2. ACES recommends that the lead paint on the various surfaces not be disturbed as a part of the repair/renovation activities unless necessary as a result of the repair and/or renovation. If the painted surfaces must be disturbed, removal of the LBP should be performed in accordance with local, state, and federal regulations.

In addition, lead was identified on other painted surfaces but the concentration did not meet the definition of LBP. For painted surfaces where LBP was not present but lead was present and would be impacted by the renovation activities, the necessary protection for the potential exposure to lead that may be present should be addressed as outlined in applicable Occupational Safety and Health Administration (OSHA) regulatory standards.



All waste materials from the renovations should be collected and disposed of in accordance with applicable state and federal regulations, the project specifications, and the “Marine Corps Base (MCB) Camp Lejeune Contractor Environmental Guidelines”.

5.0 LIMITATIONS

This report has been prepared for the exclusive use of Talley & Smith Architecture, Inc. and their agents with regard to Building M-100 located at Camp Johnson in Jacksonville, North Carolina. This report has been prepared in accordance with generally accepted environmental practices. No other warranty, expressed or implied, is made. Our observations are based upon conditions readily visible at the time of our site visit. We have not verified the completeness or accuracy of the information provided by others.

Materials identified as presumed ACM should be considered to contain asbestos or additional sampling and analysis should be performed to confirm or deny the presence of asbestos.

During the site visit, accessible areas were visually surveyed for the presence of suspect asbestos containing materials (ACM) and lead-based paints (LBP). Inaccessible areas, such as above ceilings or behind walls may have not been surveyed; therefore, all ACM and/or LBP may not have been identified. Areas inspected were those designated by the scope of services. As with any similar survey of this nature, actual conditions exist only at the precise locations from which bulk samples were collected and/or LBP samples measured. 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, ACES assumes no responsibility regarding response actions (e.g. O&M Plan, encapsulation, abatement, removal, worker notification, etc.) initiated as a result of these findings. It is important to note that the Building Owner has a number of responsibilities and obligations as found under 40 CFR 745 (also known as Title X) including notification and/or disclosure of all information concerning LBP to workers and buyers. ACES assumes no liability for the duties and responsibilities of the Building Owner with respect to compliance with these regulations. Compliance with regulations and response actions are the sole responsibility of the Building Owner and should be conducted in accordance with local, state and/or federal requirements, and should be performed by appropriately qualified and licensed personnel, as warranted.

ACES, 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. It is the client’s responsibility 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 this report

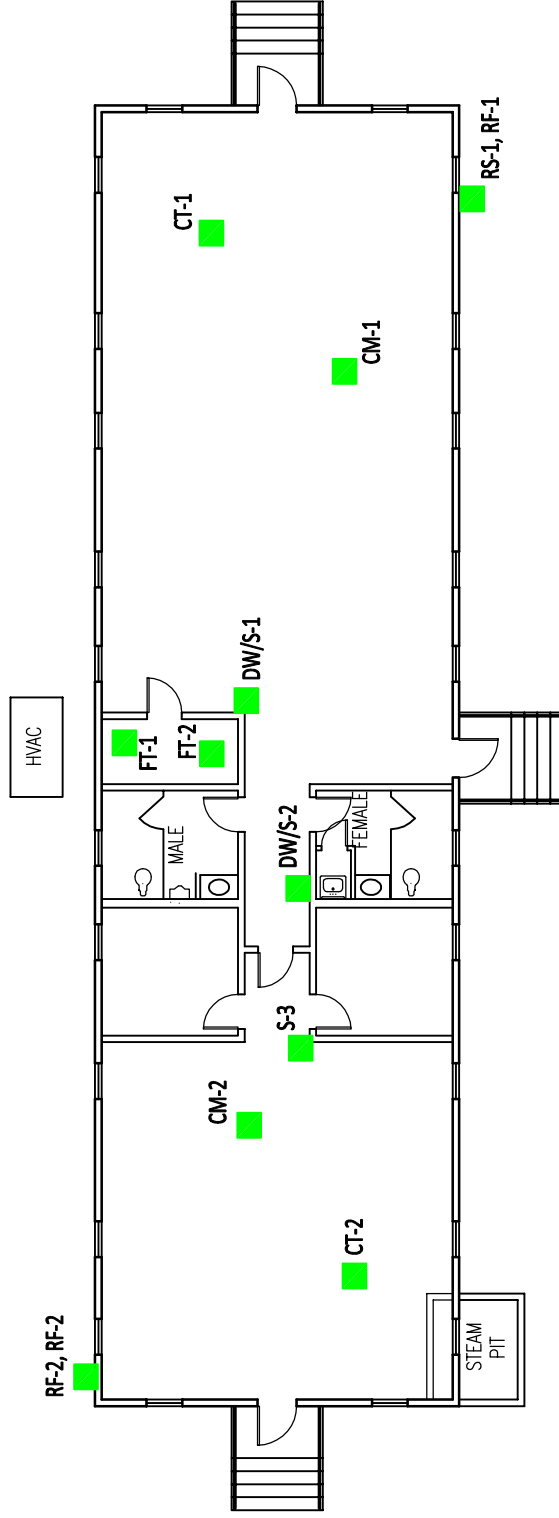


should not be construed in any way as a recommendation to purchase, sell, or further develop the project site.



APPENDIX 1

FIGURES



LEGEND

- Sample ID #
CT-2
FT-2
- Approximate Sample Location - Asbestos Not Detected
Approximate Sample Location - Asbestos Detected

BLDG M-100

PROJ. NUM.: 2019 - 04 - 023

DATE: June 3, 2019

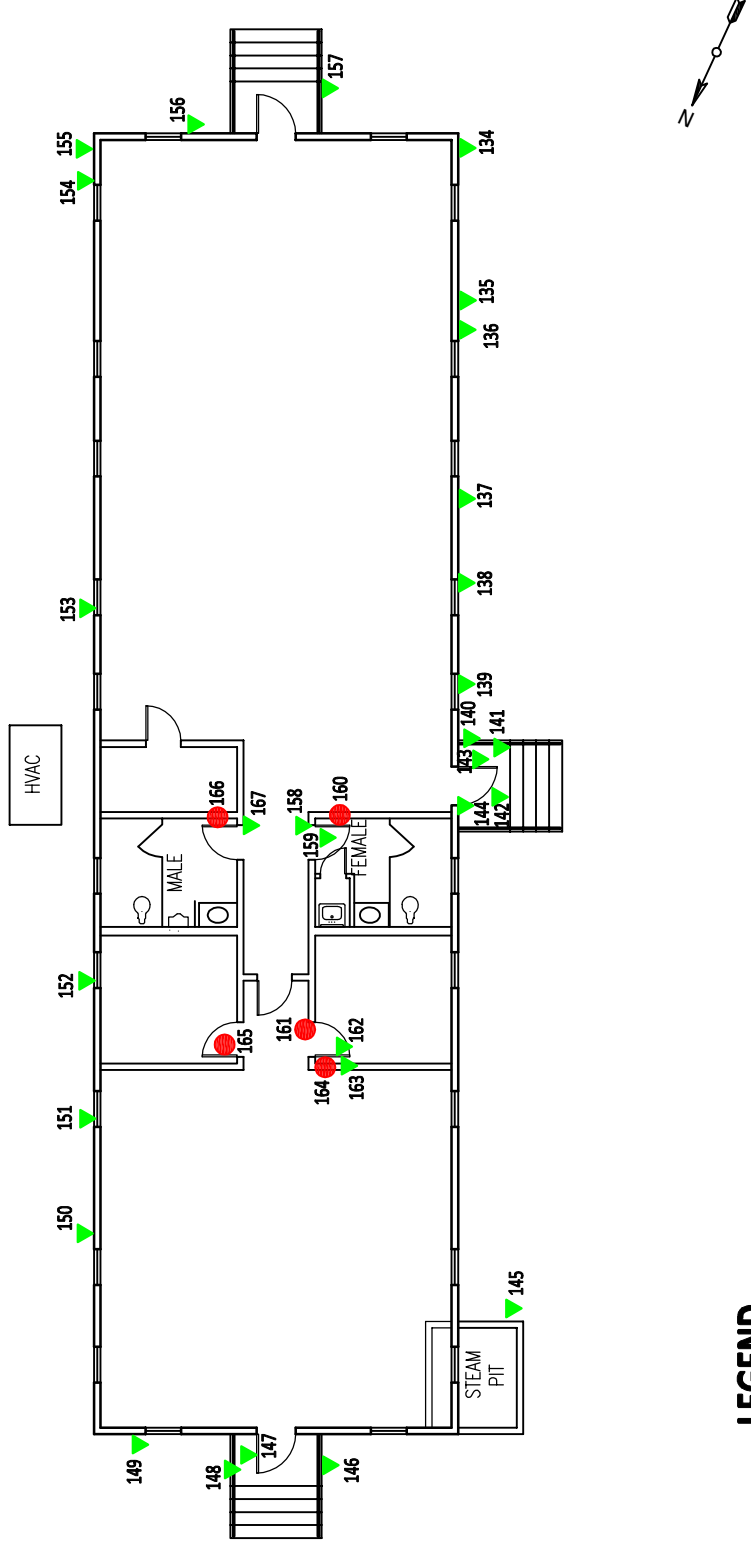
SAMPLE
LOCATION PLAN

ALLIED CONSULTING &
ENVIRONMENTAL SERVICES
SHELBY, NORTH CAROLINA
P.O. BOX 2426 (28151-2426) 704-600-6255
409 E. MARION ST. (28150) FAX 704-482-5596



FIGURE

1

DELIVERY ORDER 0031
RENOVATE BLDG. M 100
MARINE CORPS BASE - CAMP JOHNSON
JACKSONVILLE, NORTH CAROLINA




LEGEND

- Sample ID # 4  Approximate Sample Location - No Lead-based Paint Identified
- 12  Approximate Sample Location - Lead-based Paint Identified

BLDG M-100

PROJ. NUM.: 2019 - 04 - 023
DATE: June 3, 2019

SAMPLE LOCATION PLAN



ALLIED CONSULTING & ENVIRONMENTAL SERVICES
SHELBY, NORTH CAROLINA
P.O. BOX 2426 (28151-2426) 704-600-6255
409 E. MARION ST. (28150) FAX 704-482-5596

DELIVERY ORDER 0031 RENOVATE BLDG. M 100 MARINE CORPS BASE - CAMP JOHNSON JACKSONVILLE, NORTH CAROLINA



APPENDIX 2
ASBESTOS ANALYTICAL RESULTS
CHAIN OF CUSTODY



EMSL Analytical, Inc.

10801 Southern Loop Blvd Pineville, NC 28134

Tel/Fax: (704) 525-2205 / (704) 525-2382

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

EMSL Order: 411903673

Customer ID: ALLC25

Customer PO:

Project ID:

Attention: Dewitt Whitten

Allied Consulting & Environmental Svcs

P.O. Box 2426

Shelby, NC 28151

Phone: (704) 232-0152

Fax:

Received Date: 04/23/2019 11:40 AM

Analysis Date: 04/27/2019 - 04/29/2019

Collected Date: 04/17/2019

Project: M-100/ 2019-04-023

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
RS-1 411903673-0001	Roof Shingle	Gray/Red/Black Fibrous Homogeneous	5% Glass	5% Quartz 15% Ca Carbonate 75% Non-fibrous (Other)	None Detected
RS-2 411903673-0002	Roof Shingle	Gray/Black Fibrous Heterogeneous	5% Glass	10% Quartz 10% Ca Carbonate 75% Non-fibrous (Other)	None Detected
RF-1 411903673-0003	Roof Felt	Black Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected
RF-2 411903673-0004	Roof Felt	Black Fibrous Heterogeneous	65% Cellulose	35% Non-fibrous (Other)	None Detected
CM-1 411903673-0005	Carpet Mastic	Yellow Non-Fibrous Homogeneous	10% Glass	5% Ca Carbonate 85% Non-fibrous (Other)	None Detected
CM-2 411903673-0006	Carpet Mastic	Tan Non-Fibrous Homogeneous	1% Min. Wool	5% Ca Carbonate 94% Non-fibrous (Other)	None Detected
CT-1 411903673-0007	Spline Ceiling Tile	Gray/White Fibrous Homogeneous	80% Min. Wool	20% Perlite	None Detected
CT-2 411903673-0008	Spline Ceiling Tile	Gray/White Fibrous Heterogeneous	3% Cellulose 80% Min. Wool	17% Non-fibrous (Other)	None Detected
FT-1-Floor Tile 411903673-0009	12x12 Floor Tile	Brown Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
FT-1-Mastic 411903673-0009A	12x12 Floor Tile	Tan Non-Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected
FT-2-Floor Tile 411903673-0010	12x12 Floor Tile	Tan Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
FT-2-Mastic 411903673-0010A	12x12 Floor Tile	Tan Non-Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected
DW/S-1-Drywall 411903673-0011	Drywall/Spackling	Gray Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
DW/S-1-Joint Compound 411903673-0011A	Drywall/Spackling	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
DW/S-2-Drywall 411903673-0012	Drywall/Spackling	Gray Non-Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected

Initial report from: 04/29/2019 11:45:10



EMSL Analytical, Inc.

10801 Southern Loop Blvd Pineville, NC 28134

Tel/Fax: (704) 525-2205 / (704) 525-2382

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

EMSL Order: 411903673

Customer ID: ALLC25

Customer PO:

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
DW/S-2-Joint Compound	Drywall/Spackling	White Non-Fibrous Homogeneous		35% Ca Carbonate 65% Non-fibrous (Other)	None Detected
411903673-0012A					
S-3	Drywall/Spackling	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
411903673-0013					

Analyst(s)

Eric Loomis (8)

Lacy Searcy (9)

Lee Plumley, Laboratory Manager
or Other Approved Signatory

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

Samples analyzed by EMSL Analytical, Inc. Pineville, NC NVLAP Lab Code 200841-0, VA 3333 00312

Initial report from: 04/29/2019 11:45:10

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number (Lab Use Only)

411903673

PHONE
FAX

Company Name : Allied Consulting & Environmental Services		EMSL Customer ID:	
Street: Post Office Box 2426		City: Shelby	State/Province: NC
Zip/Postal Code: 28151	Country: USA	Telephone #: 704-600-6255	Fax #: 704-487-5596
Report To (Name): DeWitt Whitten		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email	
Email Address: dewitt@aces-env.com		Purchase Order:	
Project Name/Number: M-100 / 2019-04-023		EMSL Project ID (Internal Use Only):	
U.S. State Samples Taken:		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	
EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different - If Bill to is Different note instructions in Comments** Third Party Billing requires written authorization from third party			
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 type="checkbox"/> 72 Hour <input type="checkbox"/> 96 Hour <input checked="" 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>			
PCM - Air <input type="checkbox"/> Check if samples are from NY <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA PLM - Bulk (reporting limit) <input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%) <input type="checkbox"/> PLM EPA NOB (<1%) Point Count <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%) Point Count w/Gravimetric <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%) <input type="checkbox"/> NYS 198.1 (friable in NY) <input type="checkbox"/> NYS 198.6 NOB (non-friable-NY) <input type="checkbox"/> NYS 198.8 SOF-V <input type="checkbox"/> NIOSH 9002 (<1%)		TEM - Air <input type="checkbox"/> 4-4.5hr TAT (AHERA only) <input type="checkbox"/> AHERA 40 CFR, Part 763 <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II <input type="checkbox"/> ISO 10312 TEM - Bulk <input type="checkbox"/> TEM EPA NOB <input type="checkbox"/> NYS NOB 198.4 (non-friable-NY) <input type="checkbox"/> Chatfield SOP <input type="checkbox"/> TEM Mass Analysis-EPA 600 sec. 2.5 TEM - Water: EPA 100.2 Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking	
TEM - Dust <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167) Soil/Rock/Vermiculite <input type="checkbox"/> PLM EPA 600/R-93/116 with milling prep (<1%) <input type="checkbox"/> PLM EPA 600/R-93/116 with milling prep (<0.25%) <input type="checkbox"/> TEM EPA 600/R-93/116 with milling prep (<0.1%) <input type="checkbox"/> TEM Qualitative via Filtration Prep <input type="checkbox"/> TEM Qualitative via Drop Mount Prep <input type="checkbox"/> Cincinnati Method EPA 600/R-04/004 - PLM/TEM (BC only) Other: <input type="checkbox"/>			
<input type="checkbox"/> Check For Positive Stop - Clearly Identify Homogenous Group		Filter Pore Size (Air Samples): <input type="checkbox"/> 0.8µm <input type="checkbox"/> 0.45µm	
Samplers Name: DeWitt Whitten		Samplers Signature: <i>DeWitt Whitten</i>	
Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
RS-1, 2	Roof Shingle		17 April 19 PM
RF-1, 2	Roof Felt		11
CM-1, 2	Carpet Mastic		11
CT-1, 2	Splined Ceiling Tile		11
FT-1, 2	12x12 Floor Tile		11
DW/S-1, 2, S-3	Drywall (Sprinkler)		
Client Sample # (s): see above		Total # of Samples: 13	
Relinquished (Client): <i>DeWitt Whitten</i>		Date: 28 April 2019	Time: 11:32
Received (Lab): <i>Kylen</i>		Date: 4/23/19	Time: 11:40 AM/12
Comments/Special Instructions:			



APPENDIX 3
ASBESTOS REPORT BY OTHERS

ASBESTOS INSPECTION REPORT of:

Building # M100

MCB CAMP LEJEUNE



Print Date

Friday, March 29, 2019

INSPECTION SUMMARY

BLDG #: M100

YEAR BUILT: 1942

OCCUPANT: LIBRARY READING ROOM

ASBESTOS MANAGER: Billy Parkin 451-5837

BUILDING COMMENTS:

HAZ RANK 0/BLUE [AH MAY2014]
ACM FLOOR TILE AND MASTIC REMOVED
MAY2014
TILE REMOVED, NO KNOWN ACM REMAINS

JAN2010
PVS. ACM REMAINS, ADDL SAMPLING, NO ADDL ACM IDENTIFIED.

INSPECT DEC07
ACM IDENTIFIED INCLUDES:
12" OLIVE TILE AND MASTIC (2ND LAYER)

NOTIFICATION OF ACM IN BUILDING

NOTICE: The following asbestos-containing materials have been identified in this structure. Refer to survey findings for additional information or contact the Asbestos Program Manager. Please note ACM that is intact and undisturbed is not considered a significant health hazard to building occupants.

Friable ACM(s) identified

<i>DESCRIPTION</i>	<i>LOCATION</i>	<i>Date</i>	<i>Quantity</i>
No friable ACM records found in database			

Non-friable ACM(s) identified

<i>DESCRIPTION</i>	<i>LOCATION</i>	<i>Date</i>	<i>Quantity</i>
No non friable ACM records found in database			

Tested Non ACM or REMOVED Materials

<i>DESCRIPTION</i>	<i>LOCATION</i>	<i>Date</i>
12" ACOUSTICAL TILE	CEILING THROUGHOUT, ABOVE HM03	12/4/2007
2'x2' CEILING TILE,	CEILINGS THROUGHOUT, UNDER HM04	12/4/2007
12" BEIGE w/ OLIVE FLOOR TILE AND ADHESIVE	SOUTH CENTER MECHANICAL SPACE (OVER HM02)	12/4/2007
12" OLIVE FLOOR TILE AND ADHESIVE	SOUTH CENTER MECHANICAL SPACE (UNDER HM01)	12/4/2007
CLOTH LAGGING MATERIAL	SOUTH CENTRAL MECHANICAL SPACE PIPING	12/4/2007
BLACK VINYL BASE AND ADHESIVE, 4"	BASE COVE THROUGHOUT	12/4/2007

FIBERGLASS INSULATION SEALANT	SOUTH CENTRAL MECHANICAL ROOM PIPING	1/25/2010
VAPOR BARRIER	UNDER EXTERIOR SIDING (WITHIN WALL)	1/25/2010
LABORATORY COUNTER TOP	WEST MAIN ROOM/ OFFICE, DESKTOPS	12/4/2007
DRYWALL AND JOINT MATERIAL	CENTRAL AREA PARTITION WALLS THROUGHOUT, PERIMETER WALLS	12/4/2007
EXTERIOR SURFACING MATERIAL, STUCCO	FOUNDATION COATING, EXTERIOR PERIMETER (CEMENTITIOUS)	12/4/2007
ASPHALT SHINGLE AND TAR PAPER	EXTERIOR PRIMARY ROOFING SYSTEM	12/4/2007
EXTERIOR CAULKING,	WOOD WINDOWS AND DOORS	1/25/2010
12" OLIVE FLOOR TILE AND ADHESIVE	SOUTH CENTER MECHANICAL SPACE (UNDER HM01)	1/25/2010
DRYWALL AND JOINT MATERIAL	CENTRAL AREA PARTITION WALLS THROUGHOUT, PERIMETER WALLS	1/25/2010

HEALTH ASPECTS:	ACM only presents a health hazard when asbestos fibers are airborne and inhaled. Avoid disturbance which will release fibers. The presence of asbestos does not constitute a health hazard.
CONDITIONS TO AVOID:	Do not disturb or cause damage to ACM. Do not sand, grind or abrade materials or cause damage with any type of equipment.
REPORTS OF DAMAGE:	Report any damage, dust or debris that may come from ACM or suspect ACM, or any change in the condition of materials, or accidental disturbance to the Asbestos Program Manager.
RESPONSE ACTION:	Corrective action initiated to minimize fiber release and protect personnel.
INSPECTION:	ACM will be inspected periodically to evaluate any changes in condition.
RECORDKEEPING:	The Camp Lejeune Asbestos Program Manager maintains a copy of the survey for the building.

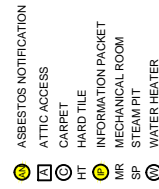
CAMP LEJEUNE Asbestos Program Manager

Phone: (910) 451-5837

SAMPLES COLLECTED

Sample	HA	Description		Sample Date	Sample Location	Chr (%)	Amo (%)	Oth (%)
M100-01-01	01	12" BEIGE w/ OLIVE FLOOR TILE AND ADHESIVE	w/YELLOW	12/4/2007	1ST FL SOUTH CNTR MECH RM	0	0	0
M100-02-00ri09	02	12" OLIVE FLOOR TILE AND ADHESIVE	w/BEIGE	1/25/2010	N/A	9	9	9
M100-02-01	02	12" OLIVE FLOOR TILE AND ADHESIVE	w/BEIGE	12/4/2007	SOUTH CNTR MECH RM	5	0	0
M100-03-01	03	2'x2' CEILING TILE,	PINHOLES	12/4/2007	WEST MAIN ROOM, SW	0	0	0
M100-03-02	03	2'x2' CEILING TILE,	PINHOLES	12/4/2007	EAST MAIN ROOM, NORTH CNTR	0	0	0
M100-04-01	04	12" ACOUSTICAL TILE	PINHOLES, INTERLOCK	12/4/2007	WEST MAIN ROOM, SW	0	0	0
M100-04-02	04	12" ACOUSTICAL TILE	PINHOLES, INTERLOCK	12/4/2007	EAST MAIN ROOM, NORTH CNTR	0	0	0
M100-05-01	05	CLOTH LAGGING MATERIAL	WHITE	12/4/2007	SOUTH CNTR MECH RM	0	0	0
M100-06-01	06	BLACK VINYL BASE AND ADHESIVE, 4"		12/4/2007	WEST MAIN ROOM, SW	0	0	0
M100-06-02	06	BLACK VINYL BASE AND ADHESIVE, 4"		12/4/2007	EAST MAIN ROOM, EAST CNTR	0	0	0
M100-07-01	07	LABORATORY COUNTER TOP	GRAY	12/4/2007	WEST MAIN ROOM, SE	0	0	0
M100-08-01	08	DRYWALL AND JOINT MATERIAL		12/4/2007	WEST MAIN ROOM, NORTH CNTR	0	0	0
M100-08-02	08	DRYWALL AND JOINT MATERIAL		12/4/2007	EAST MAIN ROOM, SOUTH CNTR	0	0	0
M100-08-10	08	DRYWALL AND JOINT MATERIAL		1/25/2010	SOUTH CNTR MECH RM WALL	0	0	0
M100-09-01	09	EXTERIOR SURFACING MATERIAL, STUCCO		12/4/2007	EXTERIOR, SE CORNER DM	0	0	0
M100-10-01	10	ASPHALT SHINGLE AND TAR PAPER	BROWN	12/4/2007	ROOF, NE CORNER	0	0	0
M100-10-02	10	ASPHALT SHINGLE AND TAR PAPER	BROWN	12/4/2007	ROOF, SW CORNER	0	0	0
M100-20-10	20	FIBERGLASS INSULATION SEALANT	WHITE	1/25/2010	SOUTH CNTR MECH RM	0	0	0

Sample	HA	Description		Sample Date	Sample Location	Chr (%)	Amo (%)	Oth (%)
M100-21-10	21	VAPOR BARRIER	BLACK	1/25/2010	SOUTH CNTR MECH RM WALL	0	0	0
M100-22-10	22	EXTERIOR CAULKING,	WHITE	1/25/2010	NORTH CNTR WINDOW	0	0	0
M100-22-11	22	EXTERIOR CAULKING,	WHITE	1/25/2010	NORTH CNTR DOOR	0	0	0
M100-22-12	22	EXTERIOR CAULKING,	WHITE	1/25/2010	SE WINDOW	0	0	0



NO ACM IDENTIFIED
BUILDING M100
FIRST FLOOR



SAMPLE LEGEND ID

SAMPLE IDENTIFICATION

01-01 (+/-)


POSITIVE (+), NEGATIVE (-), OR TRACE (TR) FOR THE PRESENCE OF ASBESTOS

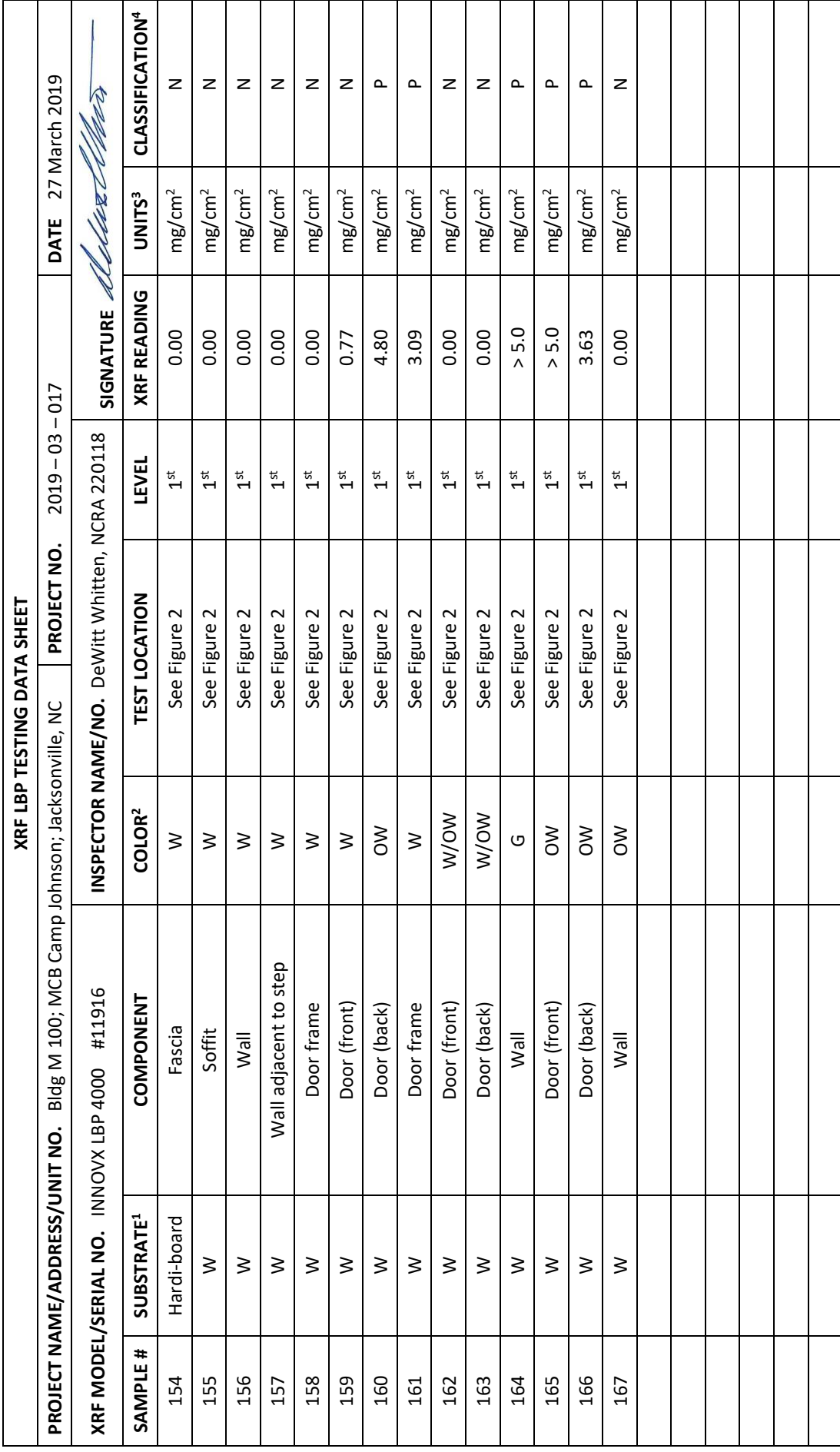
HOMOGENEOUS MATERIAL



APPENDIX 4
XRF FIELD DATA SHEETS



XRF LBP TESTING DATA SHEET									
PROJECT NAME/ADDRESS/UNIT NO. Bldg M 100; MCB Camp Johnson; Jacksonville, NC				PROJECT NO. 2019 – 03 – 017		DATE 27 March 2019			
XRF MODEL/SERIAL NO. INNOVX LBP 4000 #11916			INSPECTOR NAME/NO. DeWitt Whitten, NCRA 220118						
SAMPLE #	SUBSTRATE ¹	COMPONENT	COLOR ²	TEST LOCATION	LEVEL	SIGNATURE	XRF READING	UNITS ³	CLASSIFICATION ⁴
134	Hardi-board	Foundation wall	W	See Figure 2	1 st		0.00	mg/cm ²	N
135	W	Fascia	W	See Figure 2	1 st		0.00	mg/cm ²	N
136	W	Soffit	W	See Figure 2	1 st		0.00	mg/cm ²	N
137	W	Wall	W	See Figure 2	1 st		0.00	mg/cm ²	N
138	W	Window casing	W	See Figure 2	1 st		0.00	mg/cm ²	N
139	W	Window sill	W	See Figure 2	1 st		0.00	mg/cm ²	N
140	W	Overhang support	W	See Figure 2	1 st		0.00	mg/cm ²	N
141	W	Overhang joist	W	See Figure 2	1 st		0.00	mg/cm ²	N
142	W	Overhang ceiling	W	See Figure 2	1 st		0.00	mg/cm ²	N
143	W	Door	W	See Figure 2	1 st		0.00	mg/cm ²	N
144	W	Door casing	W	See Figure 2	1 st		0.00	mg/cm ²	N
145	C	Steam pit wall	W	See Figure 2	1 st		0.00	mg/cm ²	N
146	C	Wall adjacent to steps	W	See Figure 2	1 st		0.00	mg/cm ²	N
147	W	Door	W	See Figure 2	1 st	0.00	mg/cm ²	N	
148	W	Overhang support	W	See Figure 2	1 st	0.00	mg/cm ²	N	
149	W	Wall	W	See Figure 2	1 st	0.00	mg/cm ²	N	
150	W	Wall	W	See Figure 2	1 st	0.00	mg/cm ²	N	
151	W	Window sill	W	See Figure 2	1 st	0.00	mg/cm ²	N	
152	W	Window casing	W	See Figure 2	1 st	0.00	mg/cm ²	N	
153	W	Window screen frame	W	See Figure 2	1 st	0.00	mg/cm ²	N	
1) M – metal W – wood DW – drywall B – Brick C – Concrete CMU – Concrete Masonry Unit P – Plaster			2) W- White B – Blue Y – Yellow Bk – Black Gr – Gray O – Orange Pr – Purple		3) mg/cm2 – milligrams/square centimeter			4) N – Negative P – Positive	



1)	2)	3) mg/cm2 – milligrams/square centimeter	4) N – Negative P – Positive
M – metal	W- White	R – Red	
W – wood	B – Blue	G – Green	
DW – drywall	Y – Yellow	T – Tan	
B – Brick	Bk – Black	Br – Brown	
C – Concrete	Gr – Gray	OW – Off-white	
CMU – Concrete Masonry Unit	O – Orange	P – Pink	
P – Plaster	Pr – Purple	C – Clear	