

*APPENDIX A*  
HAZMAT REPORT

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# Asbestos and Lead Paint Inspection Report

## MCAS Building 1103

MCAS Project ID: BE2054M

CEMS Project ID: 18-154L

Marine Corps Air Station

Beaufort, South Carolina

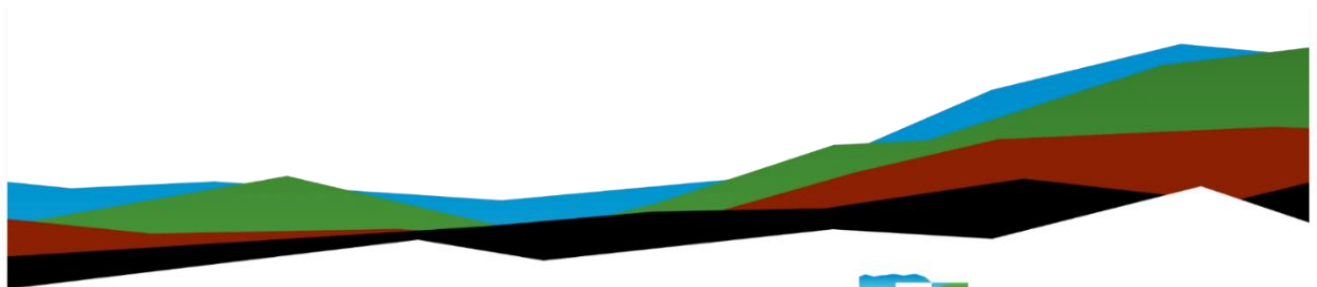
November 30, 2023 | Terracon Project No. EN237355

Prepared for:

CEMS Engineering and Architecture

108 Benton Lodge Road, Suite B

Summerville, South Carolina 29485



Nationwide  
Terracon.com

- Facilities
- Environmental
- Geotechnical
- Materials



1800 Reynolds Avenue  
North Charleston, SC 29405  
D (843) 277-8405  
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**Terracon.com**

November 30, 2023

CEMS Engineering and Architecture  
108 Benton Lodge Road, Suite B  
Summerville, South Carolina 29485

Attn: Mr. Jason Brawley  
Project manager  
E-mail: jbrawley@cems-ae.com

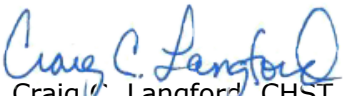
RE: **Asbestos and Lead Paint Inspection Report**  
MCAS Building 1103  
Marine Corps Air Station  
Beaufort, South Carolina  
Terracon Report No: EN237355

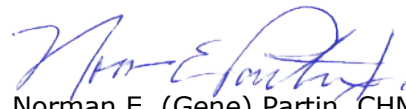
Dear Mr. Brawley:

Terracon Consultants, Inc. (Terracon) is pleased to present the results of the asbestos and lead paint inspection performed on November 9, 2023 for Building 1103 located at the Marine Corps Air Station in Beaufort, South Carolina. We understand that this inspection was requested due to the planned renovations and repairs to the building.

Terracon appreciates the opportunity to provide environmental consulting services for CEMS Engineering and Architecture. If you should have any questions regarding this report, or if you need assistance with bid documents or project oversight during the course of the project, please contact the undersigned at (843) 277-8402.

Sincerely,  
**Terracon Consultants, Inc.**

  
Craig C. Langford, CHST, OHST  
Senior Industrial Hygienist

  
Norman E. (Gene) Partin, CHMM  
Senior Associate | Department Manager  
Authorized Project Reviewer



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## EXECUTIVE SUMMARY

This executive summary is intended as an overview for the convenience of the reader. The report should be reviewed in its entirety prior to making any decisions regarding this site.

Terracon Consultants, Inc. (Terracon) conducted an asbestos and lead paint inspection for Building 1103 located at MCAS in Beaufort, South Carolina. The purpose of this inspection was to sample and identify suspect asbestos-containing materials (ACM) and provide information regarding the identity, location, condition and approximate quantities of ACM in building components. In addition, limited paint sampling was performed on various painted components that may be impacted by construction activities within the structure to determine lead content. The objective of the lead paint evaluation was to identify lead-containing paint systems on building components that may require special handling in accordance with the OSHA *Lead in Construction Standard*.

## Findings

### Asbestos

Based on the results of laboratory analysis, none of the materials were confirmed to contain asbestos at concentrations greater than one percent ( $>1\%$ ).

### Lead

Based on the results of laboratory analysis, two (2) paint chip samples were collected from the interior and exterior walls. The paint chip lead analyses were below the laboratory detection limits.

## Recommendations

- **Accumulation of Paint residue/waste (chips, dust, flakes, etc.)** - Work involving any paint removal such as blasting or manual scraping may require laboratory testing by TCLP to characterize the waste stream and determine proper disposal requirements identified in SCDHEC solid waste regulations or any MCAS Base Environmental requirements.
- If applicable to this project, a copy of this report must be submitted to SCDHEC at least ten (10) working days prior to demolition, which includes if load bearing walls will be impacted.

## 1.0 INTRODUCTION

Terracon Consultants, Inc. (Terracon) conducted an asbestos and lead inspection of Building 1103 located on the Marine Corps Air Station (MCAS) in Beaufort, South Carolina. The purpose of this survey was to sample and identify suspect asbestos-containing materials (ACM) and provide information regarding the identity, location, condition and approximate quantities of ACM in interior building components. In addition, limited paint sampling was performed on various painted components of the structure.

The asbestos inspection was performed on November 9, 2023, by a South Carolina Department of Health and Environmental Control (SCDHEC) licensed asbestos inspector in general accordance with CEMS Project Plan dated July 23, 2023: Repair Building 1103 – BE2054M and the sampling protocols established in EPA 40 CFR 763 (Asbestos Hazard Emergency Response Act, AHERA) and the SCDHEC Regulation 61-86.1 Standards of Performance for Asbestos Projects.

## 2.0 BUILDING DESCRIPTION

Building 1103 is an approximately 1,100 SF structure located on the South end of runway 23-05. It was constructed in 1986 and houses the Runway Approach Lighting Electrical Equipment and associated emergency generator. The building is constructed with CMU block walls and a steel roof decking ceiling. No other interior finishes are in place. The roof is constructed with a rubber membrane over plywood and steel support system. No roofing felt was observed. The building is unconditioned.

## 3.0 ASBESTOS SURVEY

The asbestos survey was conducted by SCDHEC licensed Asbestos Building Inspector Mr. Craig C. Langford (License No. ASB-22775 Exp. 07/19/24). A copy of Mr. Langford's license is included in Appendix D. The survey was conducted on November 9, 2023, in general accordance with the sampling protocols established by EPA Regulation 40 CFR 763 Subpart E 763.86, AHERA and SCDHEC R. 61-86.1. A summary of survey activities is provided below.

### 3.1 Historical Data and Reports

No previous asbestos survey reports were available or provided by the Client.

### 3.2 Regulatory Overview

#### NESHAP

Environmental Protection Agency (EPA) regulation 40 CFR 61, Subpart M, National Emission Standards for Hazardous Air Pollutants (NESHAP), prohibits the release of asbestos fibers to the atmosphere during renovation/demolition activities. NESHAP requires that potentially regulated

## Asbestos and Lead Inspection Report

MCAS Building 1103 | Beaufort, SC

November 30, 2023 | Terracon Project No. EN237355



asbestos-containing building materials be identified, classified and quantified prior to planned disturbances or demolition activities. An ACM is defined as any material containing one or more of the six regulated forms of asbestos in an amount greater than one percent (1%). The asbestos NESHAP regulates asbestos fiber emissions and asbestos waste disposal practices. Under NESHAP, asbestos-containing building materials are classified as either friable, Category I non-friable or Category II non-friable ACM. Friable materials are those that when dry may be crumbled, pulverized or reduced to powder by hand pressure. Non-friable materials contain asbestos fibers which have been "locked in" by a bonding agent, coating, binder or other materials so that the asbestos is bound and will not readily release fibers during normal handling or use. Category I non-friable ACM includes packing materials, gaskets, resilient floor coverings, asphaltic roofing products and pliable mastics containing more than one percent asbestos. Category II non-friable ACM are non-friable materials other than Category I materials that contain more than 1% asbestos.

Friable ACM, Category I and Category II non-friable ACM which is in poor condition and has become friable or which will be subjected to drilling, sanding, grinding, cutting or abrading and which could be crushed or pulverized during anticipated renovation/demolition activities are considered regulated ACM (RACM). RACM must be removed prior to renovation or demolition activities.

### State of South Carolina

In the state of South Carolina, asbestos activities are regulated by SCDHEC under the SCDHEC Regulation 61-86.1 *Standards of Performance for Asbestos Projects*. SCDHEC require that any asbestos-related activity conducted in a public building be performed by personnel licensed by SCDHEC. The owner or operator must provide SCDHEC with written notification of planned abatement and removal activities prior to the commencement of those activities. SCDHEC requires four-day notification for non-friable projects and 10-day notification for RACM projects. Asbestos abatement must be performed by SCDHEC-licensed asbestos abatement contractors. A SCDHEC-licensed Project Designer shall prepare a written abatement design for each abatement renovation project involving the removal of greater than 3,000 square, 1,500 linear, or 656 cubic feet of RACM. Third-party air monitoring must be conducted during the abatement of friable (regulated) ACM. The SCDHEC asbestos regulations can be found at <https://scdhec.gov/environment/your-home/asbestos/asbestos-regulations>.

SCDHEC defines a renovation as "altering a facility or one or more facility components in any way, including the stripping or removal of RACM from any facility component." A demolition is defined as "wrecking or taking out any load-supporting structural member of a facility together with any related handling operations, the burning of any facility, or moving of a structure."

### OSHA

The Occupational Safety and Health Administration (OSHA) Asbestos Standard for Construction Industry (29 CFR 1926.1101) regulates workplace exposure to asbestos. The OSHA standard requires that employee exposure to airborne asbestos fibers be maintained below 0.1 asbestos fibers per cubic centimeter of air (0.1 f/cc). The OSHA standard classifies construction and maintenance activities, which could disturb ACM, and specifies work practices and precautions



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MCAS Building 1103 | Beaufort, SC

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which employers must follow when engaging in each class of regulated work. A full copy of the OSHA asbestos standard for general industry may be found at OSHA's website ([www.osha.gov](http://www.osha.gov)) and should be referred to for specific information.

### 3.3 Visual Assessment

Our survey activities began with visual observation of the interior of the unit within the renovation scope to identify apparent homogeneous areas of suspect ACM. A homogeneous area consists of building materials, which appear similar throughout in terms of color, texture and date of application. Building materials which were not identified as concrete, glass, wood, masonry, metal or rubber were considered suspect ACM.

### 3.4 Physical Assessment

A physical assessment of each homogeneous area of suspect ACM was conducted to assess the friability and condition of the materials. A friable material is defined by the EPA as a material, which can be crumbled, pulverized or reduced to powder by hand pressure when dry. Friability was assessed by physically touching suspect materials.

### 3.5 Sample Collection

Based on our observations, bulk samples of suspect ACMs were collected in general accordance with SCDHEC and EPA sample collection protocols. Random samples of suspect materials were collected in each homogeneous area. Bulk samples were collected using wet methods as applicable to reduce the potential for fiber release. Samples were placed in sealable containers and labeled with unique sample numbers using an indelible marker.

The selection of sample locations and frequency of sampling was based on Terracon's observations and the assumption that like materials in the same area are homogeneous in content.

A brief summary of suspect ACMs observed and sampled throughout the structure were:

- CMU block coating

Non-suspect materials observed include silicon caulking and the rubber membrane roof system. Table 1 in the Appendix A which summarizes the bulk samples collected from the structure, the results of the visual inspection, estimated quantities, and laboratory analyses. Photograph documentation is presented in Appendix B.

### 3.6 Sample Analysis

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Bulk samples were submitted under chain of custody to EMSL Analytical Laboratories in Pineville, North Carolina for analysis by Polarized Light Microscopy (PLM) with dispersion staining techniques per EPA EPA/600/R-93/116. The percentage of asbestos, where applicable, was determined by microscopical visual estimation. EMSL is accredited under the National Voluntary Laboratory Accreditation Program NVLAP.

Per the SCDHEC Regulation 61-86.1 Standards of Performance for Asbestos Projects, negative results for non-friable organically bound (NOB) materials such as flooring and roofing shall be verified with at least one TEM analysis. The additional analysis was performed by TEM in accordance with EPA/600/R-93/116 Section 2.5.5.1.

### 3.7 Findings and Recommendations

Terracon collected a total of three (3) bulk samples of suspect ACMs. **Based on the results of laboratory analysis, none of the materials were identified as asbestos containing materials (ACMs) defined as containing >1% asbestos.**

Asbestos laboratory analytical reports, certificates of analysis with the chain of custody, are included in Appendix C.

### Recommendations

- If applicable to the project, a copy of this report must be submitted to SCDHEC at least ten (10) working days prior to demolition, which includes interior load-bearing walls when applying for a demolition permit.

Should suspect materials other than those which were identified during this survey be uncovered during or prior to the renovation process, those materials should be assumed asbestos-containing until sampling and analysis can confirm or refute their asbestos content. Should future sampling indicate that the other material is asbestos containing, Terracon recommends removal of the asbestos-containing materials by a South Carolina licensed asbestos abatement contractor prior to renovation/demolition of the building.

## 4.0 LEAD-BASED PAINT SURVEY

### 4.1 Regulatory Overview

Lead is regulated by the EPA, SCDHEC and OSHA. The EPA and SCDHEC regulate lead use, removal, and disposal, and OSHA regulates lead exposure to workers. The EPA defines LBP as paint, varnish, stain, or other applied coating that contains lead equal to or greater than 1.0 mg/cm<sup>2</sup>, 5,000 mg/kg, or 0.5% by dry weight as determined by laboratory analysis.

## Asbestos and Lead Inspection Report

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In accordance with SCDHEC solid waste regulations, accumulations of paint wastes (chips, dust, flakes, etc.) and lead contaminated products or other debris shall be tested by the Toxicity Characteristic Leachate Procedure (TCLP) prior to disposal to determine if the waste is classified as hazardous, which would require disposal in a Subtitle C Landfill. Landfills should be contacted to determine their specific disposal requirements.

For the purpose of the OSHA lead standard, lead includes metallic lead, all inorganic lead compounds, and organic lead soaps. The complete OSHA standard for compliance can be found on OSHA's website ([www.osha.gov](http://www.osha.gov)). A synopsis of the OSHA regulations (29 CFR 1926.62) and the applicability are as follows:

The OSHA *Lead Standard for Construction* (29 CFR 1926.62) applies to all construction work where an employee may be occupationally exposed to lead. All work related to construction, alteration, or repair (including painting and decorating) is included. The lead-in-construction standard applies to any detectable concentration of lead in paint, as even small concentrations of lead can result in unacceptable employee exposures depending upon the method of removal and other workplace conditions. Under this standard, construction includes, but is not limited to, the following:

- Demolition or salvage of structures where lead or materials containing lead are present
- Removal or encapsulation of materials containing lead
- New construction, alteration, repair, or renovation of structures, substrates, or portions containing lead, or materials containing lead
- Installation of products containing lead
- Lead contamination/emergency clean-up
- Transportation, disposal, storage, or containment of lead or materials containing lead on the site or location at which construction activities are performed
- Maintenance operations associated with construction activities described above.

### 4.2 Sampling and Analytical Protocol

Mr. Langford of Terracon conducted the lead-based paint (LBP) sampling on November 9, 2023. The LBP sampling was conducted by collecting paint chip samples. The paint chip samples were collected from painted or lacquered surfaces of building components likely to contain LBP, based on apparent date of application. The paint samples were collected down to the surface substrate so as to include any underlying paint systems in the analysis. The random paint chip samples were selected based on current paint schemes and may not be inclusive of old paint systems covered with paneling, or existing painted systems. The paint chip samples were submitted to an ELAP approved laboratory for analysis of lead by NIOSH Method 7082M (atomic absorption).

## Asbestos and Lead Inspection Report

MCAS Building 1103 | Beaufort, SC

November 30, 2023 | Terracon Project No. EN237355



### 4.3 Findings and Recommendations

Based on the results of laboratory analysis, two (2) paint chip samples were collected from the interior and exterior walls. **The paint chip lead analyses were below the laboratory detection limits.**

Based on the scope of services, limitations, and findings of this assessment, Terracon recommends the following:

- **Accumulation of Paint residue/waste (chips, dust, flakes, etc.)** Work involving any paint removal such as blasting or manual scraping may require laboratory testing by TCLP to characterize the waste stream and determine proper disposal requirements identified in SCDHEC solid waste regulations or any MCAS Base Environmental requirements.

The analytical report is included in Appendix C.

### 5.0 LIMITATIONS / GENERAL COMMENTS

This survey was conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the same locale. The results, findings, conclusions and recommendations expressed in this report are based on conditions observed during our survey of the renovation areas. The results included herein apply to the renovation areas described within the scope of work provided by CEMS. If the renovation scope of work changes to include areas or materials other than sampled here, additional investigations will be necessary. The information contained in this report is relevant to the date on which this survey was performed, and should not be relied upon to represent conditions at a later date.

This report has been prepared on behalf of and exclusively for use by CEMS and MCAS for specific application to their project as discussed. Terracon recommends that the client provide copies of this report to the building owner, MCAS, for future reference beyond the completion of this project. Terracon does not warrant the work of regulatory agencies, laboratories or other third parties supplying information, which may have been used in the preparation of this report. No warranty, express or implied is made.

This report is not a bidding document. Contractors or consultants reviewing this report must draw their own conclusions regarding further investigation or remediation deemed necessary.

## **APPENDIX A**

### **TABLE 1 – ASBESTOS SUMMARY**

### **TABLE 2 – LEAD SUMMARY**

TABLE 1  
 ASBESTOS RESULTS SAMPLE SUMMARY  
 MCAS BUILDING 1103  
 MARINE CORPS AIR STATION  
 BEAUFORT, SOUTH CAROLINA  
 TERRACON PROJECT NO. EN237355

Sample Number	Sample Location	Analysis Method	Analytical Results %/Type	Sample Description	HA	Classification	Friable/Non-Friable & Current Condition	Estimated Quantity (Square Feet)
BC-01	Interior Wall	PLM	No Asbestos Detected	CMU Block Coating	HA-01	Miscellaneous	Friable/Damaged	470 SF
BC-02	Interior Wall	PLM	No Asbestos Detected					
BC-03	Interior Wall	TEM	No Asbestos Detected					
1) <b>Bold and shaded</b> items are identified ACMs 2) Quantities listed above are estimates to be used for inspection purposes only and should be field-verified for all other uses. 3) Quantities listed above should not be used in construction documents or bids								
HA - Homogeneous Area PLM - Polarized Light Microscopy TEM - Transmission Electron Microscopy				SF - Square Feet LF - Linear Feet				

TABLE 2  
LEAD PAINT RESULTS SAMPLE SUMMARY  
MCAS BUILDING 1103  
MARINE CORPS AIR STATION  
BEAUFORT, SOUTH CAROLINA  
TERRACON PROJECT NO. EN237355

Sample Number	Description	Location	Lab Results % wt	EPA Lead 0.5%	OSHA 1926.62
PB-01	CMU Interior Paint (Beige/Tan)	Interior Walls	<0.0080%	No	No
PB-02	CMU Exterior Paint (Beige/Tan)	Exterior Walls	<0.0080%	No	No
Notes:					
1) Results above the EPA definition of lead concentration in paint. 2) Results in <b>BOLD</b> face were found above action levels. * Slightly below the EPA definition. 3) OSHA Lead in Construction standard must be followed. 4) Please refer to sample diagrams or photodocumnetation for sample locations.					

**APPENDIX B**  
**PHOTOGRAPH DOCUMENTATION**



## Asbestos Inspection and Lead Paint Sampling Report

MCAS – Building 1103 | Beaufort, South Carolina

Inspection Date: November 9, 2023 | Terracon Project No. EN237355



 A photograph of the exterior of a small, single-story building with light-colored concrete block walls. A black sign with the number '1103' is mounted on the wall. The building is situated on a grassy area with a clear sky in the background. A timestamp '11/09/2023 11:07' is visible in the bottom right corner.	 A photograph of the interior of the building, showing a room with concrete walls and a corrugated metal ceiling. Fluorescent lights are mounted on the ceiling. A large door is visible in the background. A timestamp '11/09/2023 11:07' is visible in the bottom right corner.
<b>Photo 1:</b> Exterior View	<b>Photo 2:</b> Interior View
 A photograph of the interior of the building, showing a room with concrete walls and a corrugated metal ceiling. Fluorescent lights are mounted on the ceiling. A large door is visible in the background. A timestamp '11/09/2023 11:07' is visible in the bottom right corner.	 A close-up photograph of the roofing material, showing a light-colored, textured surface. A timestamp '11/09/2023 11:10' is visible in the bottom right corner.
<b>Photo 3:</b> Interior View	<b>Photo 4:</b> Roofing Material – Rubber Membrane Material with No Felt

## **APPENDIX C**

### **LABORATORY REPORTS**



# 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](mailto:charlottelab@emsl.com)

EMSL Order: 412313490

Customer ID: WPCE62

Customer PO: EN237355

Project ID:

Attention: Craig Langford

Terracon Consultants, Inc.

1800 Reynolds Avenue

North Charleston, SC 29405

Phone: (843) 442-6658

Fax: (843) 884-9234

Received Date: 11/10/2023 9:30 AM

Analysis Date: 11/10/2023

Collected Date:

Project: B1103 MCAC CEMS

## Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
BC-01 <small>412313490-0001</small>	CMU Block Coating	White Non-Fibrous Homogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
BC-02 <small>412313490-0002</small>	CMU Block Coating	White Non-Fibrous Homogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected

Analyst(s)

Jordan Simpson (1)

Kelsie Dwyer (1)

Lee Plumley, Laboratory Manager  
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

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

Initial report from: 11/10/2023 14:17:28



# 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](mailto:charlottelab@emsl.com)

EMSL Order: 412313490

Customer ID: WPCE62

Customer PO: EN237355

Project ID:

**Attention:** Craig Langford  
Terracon Consultants, Inc.  
1800 Reynolds Avenue  
North Charleston, SC 29405

**Phone:** (843) 442-6658

**Fax:** (843) 884-9234

**Received Date:** 11/10/2023 9:30 AM

**Analysis Date:** 11/13/2023

**Collected Date:**

**Project:** B1103 MCAC CEMS

## Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM via EPA/600/R-93/116 Section 2.5.5.1

Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types
BC-03 412313490-0003	CMU Block Coating	Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected

Analyst(s)

Sarah Breneman (1)

Lee Plumley, Laboratory Manager  
or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. EMSL recommends that samples reported as none detected or < 1% undergo additional analysis via PLM to avoid the possibility of false negatives.

Samples analyzed by EMSL Analytical, Inc. Pineville, NC

Initial report from: 11/13/2023 16:55:40

EMSL ANALYTICAL, INC.  
LABORATORY • PRODUCTS • TRAINING

# Asbestos Chain of Custody

## EMSL Order Number (Lab Use Only):

412313490

 EMSL ANALYTICAL, INC.  
 10801 SOUTHERN LOOP BLVD  
 PINEVILLE, NC 28134  
 PHONE: 704-525-2205  
 FAX: 704-525-2382

Company: Terracon		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
Street: 1800 Reynolds Avenue		Third Party Billing requires written authorization from third party	
City: North Charleston	State/Province: SC	Zip/Postal Code: 29405	Country:
Report To (Name): Craig Langford		Fax #:	
Telephone #: 843.442.6658		Email Address: craig.langford@terracon.com	
Project Name/Number: B 1103 MCAC SEMS			
Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email		Purchase Order: 11237355 U.S. State Samples Taken: SC	
Turnaround Time (TAT) Options* - Please Check			
<input type="checkbox"/> 3 Hours <input type="checkbox"/> 6 Hours <input checked="" type="checkbox"/> 24 Hrs <input type="checkbox"/> 48 Hrs <input type="checkbox"/> 3 Days <input type="checkbox"/> 4 Days <input type="checkbox"/> 5 Days <input type="checkbox"/> 10 Days			
<small>*For TEM Air 3 hours/6 hours, please call ahead to schedule. There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.</small>			
<b>PCM - Air</b> <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA <b>PLM - Bulk (reporting limit)</b> <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"/> NIOSH 9002 (<1%)		<b>TEM - Air</b> <input type="checkbox"/> AHERA 40 CFR, Part 763 <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II <input type="checkbox"/> ISO 10312 <b>TEM - Bulk</b> <input checked="" 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 <b>TEM - Water: EPA 100.2</b> Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking	
		<b>TEM- Dust</b> <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167) <b>Soil/Rock/Vermiculite</b> <input type="checkbox"/> PLM CARB 435 - A (0.25% sensitivity) <input type="checkbox"/> PLM CARB 435 - B (0.1% sensitivity) <input type="checkbox"/> TEM CARB 435 - B (0.1% sensitivity) <input type="checkbox"/> TEM CARB 435 - C (0.01% sensitivity) <input type="checkbox"/> EPA Protocol (Semi-Quantitative) <input type="checkbox"/> EPA Protocol (Quantitative) <b>Other:</b>	
<input type="checkbox"/> Check For Positive Stop - Clearly Identify Homogenous Group			
Samplers Name: Craig Langford		Samplers Signature: <i>Craig C. Langford</i>	
Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
B 1103	CMU Block Coating	TEM NOB H03	
Client Sample # (s):		Total # of Samples: 3	
Relinquished (Client): <i>Craig C. Langford</i>		Date: 11/9/23	Time: 1:40
Received (Lab): <i>YLN</i>		Date: 11/16/23	Time: 9:30 AM FX
Comments/Special Instructions:			
7967 3896 SEM			

**EMSL Analytical, Inc.**

10801 Southern Loop Blvd, Pineville, NC 28134

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

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

EMSL Order: 412313491

CustomerID: WPCE62

CustomerPO: EN237355

ProjectID:

Attn: **Craig Langford**  
**Terracon Consultants, Inc.**  
**1800 Reynolds Avenue**  
**North Charleston, SC 29405**

Phone: (843) 884-1234  
Fax: (843) 884-9234  
Received: 11/10/2023 09:30 AM  
Collected:

Project: **B1103 MCAS CEMC****Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)\***

<i>Client Sample Description</i>	<i>Lab ID</i>	<i>Collected</i>	<i>Analyzed</i>	<i>Weight</i>	<i>Lead Concentration</i>
Pb-01	412313491-0001	11/10/2023		0.2589 g	<0.0080 % wt
	Site: Interior CMU Paint				
Pb-02	412313491-0002	11/10/2023		0.2595 g	<0.0080 % wt
	Site: Exterior CMU Paint				

Aaron Hartley, Lead Technical Manager  
or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted.

\* Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.008% wt based on the minimum sample weight per our SOP. "<" (less than) result signifies the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. Definitions of modifications are available upon request.

Samples analyzed by EMSL Analytical, Inc. Pineville, NC AIHA LAP, LLC-ELLAP Accredited #192283

Initial report from 11/10/2023 16:01:49



EMSL ANALYTICAL INC.  
LABORATORY PRODUCTS TRAINING

# Lead (Pb) Chain of Custody

EMSL Order ID (Lab Use Only):

412313491

EMSL ANALYTICAL INC.  
10801 SOUTHERN LOOP  
BLVD  
PINEVILLE, NC 28134  
704-525-2205

Company : Terracon		EMSL-Bill to: <input type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
Street: 1450 Fifth Street West		Third Party Billing requires written authorization from third party	
City: North Charleston	State/Province: SC	Zip/Postal Code: 29405	Country:
Report To (Name): Craig Langford		Fax #:	
Telephone #: 843.442.6658		Email Address: craig.langford@terracon.com	
Project Name/Number: B1103 MCAS CEMC			
Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email		Purchase Order: EN237355 U.S. State Samples Taken:	
Turnaround Time (TAT) Options* - Please Check			
<input type="checkbox"/> 3 Hours	<input type="checkbox"/> 6 Hours	<input checked="" type="checkbox"/> 24 Hours	<input type="checkbox"/> 48 Hours <input type="checkbox"/> 3 Days <input type="checkbox"/> 4 Days <input type="checkbox"/> 5 Days <input type="checkbox"/> 10 Days
*Analysis completed in accordance with EMSL's Terms and Conditions located in the Price Guide			
Matrix	Method	Instrument	Reporting Limit
Chips <input type="checkbox"/> mg/cm <sup>2</sup> <input checked="" type="checkbox"/> % by wt.	SW846-7000B/7420 or AOC 974.02	Flame Atomic Absorption	0.01%
Air	NIOSH 7082	Flame Atomic Absorption	4 µg/filter
	NIOSH 7105	Graphite Furnace AA	0.03 µg/filter
	NIOSH 7300 modified	ICP-AES	0.5 µg/filter
Wipe* <input type="checkbox"/> ASTM <input type="checkbox"/> non ASTM *if no box is checked, non-ASTM Wipe is assumed	SW846-7000B/7420	Flame Atomic Absorption	10 µg/wipe
	SW846-6010B or C	ICP-AES	0.5 µg/wipe
TCLP	SW846-1311/7420/SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)
	SW846-6010B or C	ICP-AES	0.1 mg/L (ppm)
Soil	SW846-7420	Flame Atomic Absorption	40 mg/kg (ppm)
	SW846-7421	Graphite Furnace AA	0.3 mg/kg (ppm)
	SW86-6010B or C	ICP-AES	1 mg/kg (ppm)
Wastewater	SM3111B or SW846-7000B/7420	Flame Atomic Absorption	0.4 mg/L (ppm)
	EPA 200.9	Graphite Furnace AA	0.003 mg/L (ppm)
	SW846-6010B or C	ICP-AES	1 mg/kg (ppm)
Drinking Water	EPA 200.9	Graphite Furnace AA	0.003 mg/L (ppm)
Other:		Preservation Method (Water):	
Name of Sampler: Craig Langford		Signature of Sampler: Craig C. Langford	
Sample #	Location	Volume/Area	Date/Time Sampled
Pb-01	Interior Cmu Paint		
02	Exterior Cmu Paint		
Client Sample #'s	-	Total # of Samples:	2
Relinquished (Client):	Craig C. Langford	Date:	11/9/23
Received (Lab):	Kylin	Date:	11/10/23
Comments:		Time:	1:40
		Time:	930AM FX
7967 3892 5011			

**APPENDIX D**  
**INSPECTOR CREDENTIALS**



CRAIG C. LANGFORD, CHST, OHST

SOUTH CAROLINA DEPARTMENT OF HEALTH AND  
ENVIRONMENTAL CONTROL – ASBESTOS SECTION

CONSULTANT/PROJECT DESIGN – PD-00032\_EXP 08/03/23  
CONSULTANT/MANAGEMENT PLANNER = MP-000302 EXP 07/19/24  
CONSULTANT/BUILDING INSPECTOR ASB-22775\_EXP 07/19/24  
AIR SAMPLER/MONITOR ASB-22599\_EXP 08/01/24  
SUPERVISOR SA-03094\_EXP 08/02/23



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