Asbestos Project Design
Republic Mill #1
Dearborn Street
Great Falls, South Carolina
S&ME Project No. 4226-20-069

PREPARED FOR:

Cardno Inc.
1812 Lincoln Street, Suite 301
Columbia, SC 29201

PREPARED BY:

S&ME, Inc.
48 Brookfield Oaks Drive, Suite F
Greenville, SC 29607

July 24, 2020

July 24, 2020

Cardno, Inc.
1812 Lincoln Street, Suite 301
Columbia, South Carolina 29201

Attention: Ms. Gail Jeter

Reference: **Asbestos Project Design**
Republic Mill #1
Dearborn Street
Great Falls, South Carolina
S&ME Project No. 4269-20-069

Dear Ms. Jeter:

S&ME, Inc. (S&ME) is pleased to provide the attached Asbestos Project Design, in general accordance with S&ME Proposal No. 42-2000659, dated July 14, 2020. The design addresses the abatement actions, personal protective equipment, and disposal of asbestos containing materials (ACMs) and associated contaminated non-asbestos materials in the debris piles on the former Republic Mill #1 site. The purpose of this document is to support the removal, transportation, and disposal of ACMs. The removal of ACMs and contaminated debris is expected to be performed in association with other planned site cleanup activities.

We appreciate the opportunity to provide you with our asbestos project design services. If you have any questions concerning this plan, please call us at (864) 297-9944.

Sincerely,

S&ME, Inc.

Anna Deal, MPH
Industrial Hygienist
adeal@smeinc.com

Sherman Woodson, CIH, CSP
Senior Industrial Hygienist
swoodson@smeinc.com
SCDHEC Project Designer # PD-00091

Enclosures: May 28, 2019 Asbestos-Containing Materials Survey Report (Cardno)

1.0 General

This document is provided as guidance for the removal and disposal of and contaminated debris from the debris piles at the former Republic Mill #1 in Great Falls, South Carolina. This project design references the South Carolina Department of Health and Environmental Control (SCDHEC) asbestos regulation (Standards of Performance for Asbestos Projects 61-86.1) Asbestos activities will be performed in accordance with other applicable Federal regulations to include but not limited to 40 CFR 61 , Subpart M [Environmental Protection Agency (EPA)] and 29 CFR 1926.1101 [Occupational Safety and Health Administration (OSHA)].

Republic Mill #1 is a former textile mill that was destroyed by fire in the early 2000s. Any remaining structures were demolished with the building debris left in place in debris piles spread throughout the site. The only known asbestos assessment was performed for the debris piles in 2019 by licensed asbestos inspectors with Cardno. The May 28, 2019 Cardno report is attached and referenced in this project design.

The removal and disposal of the following asbestos-containing materials (ACMs) and contaminated debris are included as part of this plan:

- Built-Up roofing material along the northern end of the main mill foundation and in the area of the remaining tower,
- Roof flashing and mastic (noted as putty/caulking material in the survey report) along the western end of the main mill foundation,
- Mastic in glass rock insulation around piping and building foundation joints, and
- Vinyl floor tile and mastic in the former office area,

Based on the observations of S&ME, all of the identified ACMs are non-friable materials in damaged condition. These non-friable ACMs have therefore been rendered friable by the damage caused during the fire and subsequent demolition activities. However, all of the ACM's are located in exterior debris piles and the removal of these materials is addressed as outdoor removal activities. The damaged ACMs above are mixed in with other construction debris, including brick, concrete, and wood. See the attached asbestos survey report for summary tables of building materials sampled and figures showing where ACMs are located.

The asbestos abatement contractor (Contractor) will be licensed by the SCDHEC Asbestos Section to perform the abatement activities with appropriate work procedures for outdoor asbestos removal tasks. The Contractor will submit written notification for removal of to the SCDHEC Asbestos Section regarding the estimated quantity and type(s) of ACMs scheduled for removal and obtain landfill approval to dispose the referenced ACMs. The Contractor will assume full responsibility and liability for compliance with all applicable Federal, State, and local regulations pertaining to work practices, hauling, disposal, and protection of workers and visitors to the site. The Contractor will request a Variance for any work practices that differ from the SCDHEC asbestos regulation. The Variance Request must be approved in writing by SCDHEC prior to the start of any work practices that differ from SCDHEC regulations.

2.0 Abatement Submittals

1. The Contractor will maintain the following documentation onsite:

   - - SCDHEC Notification;
   - - SCDHEC worker and supervisor licenses;
   - - SCDHEC landfill approval letter;
   - - Medical and respiratory statement of compliance with 29 CFR 1910.134 and 1926.1101; and
   - - Pollution Liability Insurance.

2. The Contractor will submit to the Owner the following documentation at the completion of work activities:

   - Daily logs
   - Disposal manifest

3.0 Abatement Procedures (Debris Piles)

1. The removal of debris with contamination from asbestos-containing materials will be notified as an outdoor project, in accordance with SCDHEC Regulation 61-86.1.

2. Outdoor removal activities are required to be conducted using wet removal methods with no release of visible emissions during preparation, removal, or cleanup. It is anticipated that the debris will primarily be removed using front end loaders and placed in roll-off dumpsters lined with polyethylene sheeting.

3. Although not required for outdoor removal activities, asbestos air monitoring will be conducted at the perimeter of the site to document daily asbestos concentrations during the removal activities. There are residential and commercial buildings in close proximity to the site perimeter. Air monitoring is addressed in Section 9.0 of this plan.

4.0 Abatement Control Areas

1. The outdoor work area will be secured at the end of each shift to prevent entry into the work areas.

2. An asbestos control area will be established in the areas where asbestos is removed or otherwise disturbed, as required by SCDHEC and OSHA.

3. Asbestos danger signs in accordance with OSHA 29 CFR 1926.1101 will be displayed at all approaches to the asbestos abatement areas.

4. Control boundaries shall be established with a minimum of red, asbestos danger barrier tape.

5.0 Abatement Control of Pollution

1. A visual inspection will be conducted by the owner's representative and the Contractor after the removal of the asbestos materials and contaminated debris included herein. The visual inspection will be complete if no visible debris is identified in the work area.

2. Debris will be placed in polyethylene-lined dumpsters and appropriately labeled in accordance with SCDHEC, EPA, and OSHA regulations.

6.0 Personal Protective Equipment

1. Respiratory protection will be worn as warranted in accordance with 29 CFR 126.1101 and 29 CFR 1910.134.

2. Respirators must be approved by MSHA and the National Institute for Occupational Safety and Health (NIOSH).

3. Additional Personal Protective Equipment to include but not limited to hand, face, foot and eye protection will be provided and employed by the Contractor as required by OSHA.

7.0 Disposal

1. Waste containers used to hold and/or transport asbestos waste will be properly labeled in accordance with OSHA 29 CFR 1926.1101, EPA 40 CFR 61.152 and DOT Regulations.

2. Waste containers will be sealed and locked at all times waste is not being loaded or unloaded. The waste container will be enclosed and lined with (2) layers of 6-mil polyethylene sheeting on all interior surfaces.

3. Waste will be transported and disposed in a manner that will not permit the release of asbestos fibers into the air.

4. Waste will be transported by the Contractor to the appropriate SCDHEC permitted landfill.

5. The Contractor will obtain trip tickets from the landfill to document disposal of all asbestos waste. Trip tickets will be signed by the landfill operator and contractor will submit copies to SCDHEC upon completion of the project.

6. A chain-of-custody form will be used and include the names of the building owner, contractor and disposal site, the estimated quantity of asbestos waste, and the type and number of containers used. Each time the material changes custody, the form will be signed by the persons exchanging custody.

8.0 Interface of Trades

No other contractors or personnel will enter the control area during asbestos abatement activities.

9.0 Air Monitoring

1. Air sampling is not required by SCDHEC for outdoor removal activities. However due to the presence of nearby residences, it is recommended that perimeter air monitoring be performed by a SCDHEC licensed Air Sampler during debris removal activities where ACMs and contaminated debris are present to document airborne asbestos concentrations during these activities.

2. Air Personal sampling will be performed in accordance with OSHA 29 CFR 1926.1101 and is the responsibility of the Contractor.

Attachment: 2019 Asbestos Survey Report

Attachment

Asbestos-Containing Materials Survey

Former Great Falls Republic Mill #1

May 28, 2019

Cardno®

Contact Information

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Telephone: 803.929.6060
www.cardno.com

Author(s)	Peter Whitehouse Geologist I SC Asbestos Inspector #BI-01796
Approved By	Conrad Peters Environmental Scientist II SC Asbestos Inspector #BI-01810

Document Information

Prepared for

Catawba Regional Council of Governments (CRCOG)
212 Hampton Street
Rock Hill, SC 29730

Project Name	Asbestos-Containing Materials Survey Former Great Falls Republic Mill #1
File Reference	Republic_Mill_ACM_Survey
Job Reference	PB00268000
Date	May 2019
Version Number	1.1
Effective Date	May 15, 2019
Date Approved	May 28, 2019

Document History

Version	Effective Date	Description of Revision	Prepared by	Reviewed by
1.0	05/15/2019	Draft	Peter Whitehouse	Conrad Peters
1.1	05/28/2019	Final	Peter Whitehouse	Gail Jeter

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Appendices

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1 Purpose and Scope of Services

Cardno, Inc. (Cardno) has completed an Asbestos-Containing Materials Survey at the Former Great Falls Republic Mill #1 site to observe the remaining building debris and note and/or sample potential asbestos-containing material (ACM) on the subject property. The identification of ACM and presumed ACM ultimately may make it possible to separate the waste into general construction debris and ACM waste for disposal purposes. Cardno provided the services as outlined below for conducting a representative asbestos survey of identified building materials at the site:

1. Review of existing asbestos reports for any previous building areas, if provided.
2. Survey the specified area to identify homogeneous areas (HAs).
3. Identify accessible suspect ACM following AHERA requirements (which also meets the sampling requirements found in 29 CFR 1926.1101), the National Emission Standards for Hazardous Air Pollutants (NESHAP), and SC R.61-86.1.
4. Collect and analyze bulk samples of suspect friable and non-friable materials to evaluate potential asbestos content.
5. Quantify and qualify ACM, including material condition, location, and potential for disturbance.

2 Assumptions and Limitations

The results, findings, conclusions, and recommendations expressed in the report are based only on conditions that were noted during Cardno's assessment of the Former Great Falls Republic Mill #1 site, located on South Dearborn Street in Great Falls, South Carolina, on April 11, 2019.

The selection of sample locations and frequency of sampling was based on Cardno's observations, the assumption that similar materials in the same area are homogeneous, and applicable regulations. Additional ACM may exist in concealed areas not surveyed or identified.

3 General Site Conditions

The site was previously used as a textile mill, and was destroyed by fire in the early 2000s. Since then, the site has been vacant and abandoned, and the former structures have been demolished with building debris left in place. The survey area was limited to visible materials on the ground. The site is lightly vegetated with approximately 10,000 cubic

yards of building debris present in several distinct piles[1]. An aerial layout of the site is included as **Figure 1**, and approximate debris pile extents are shown in **Figure 2**.

4 Previous Reporting

CTC Public Benefit Corporation (CTC) completed a Phase I Environmental Site Assessment (ESA) at the subject property in October 2011. During the course of the Phase I ESA, it was determined that based on the age of the former structures at the site, it is likely that building debris contained ACM. No other previous reporting was provided to Cardno personnel in connection with potential ACM at the site.

5 Asbestos-Containing Material Survey

On April 11, 2019, Mr. Peter Whitehouse (SC Building Inspector # BI-01796) and Mr. Conrad Peters (SC Building Inspector # BI-01810) of Cardno conducted an Asbestos-Containing Materials survey at the Former Great Falls Republic Mill #1, located along South Dearborn St. in Great Falls, SC, to assess the potential presence of ACM in debris piles remaining at the site after a fire destroyed the former main mill structure in the early 2000s. The area was observed to be covered in general construction debris, such as concrete, and wood.

5.1 Homogeneous Areas (HAs)

Prior to collecting samples, HAs were identified to develop a sampling strategy. A homogeneous area can be described as one or more areas of material that are similar in appearance and texture and that have the same known or apparent installation date and function. The number of samples collected from each homogeneous sampling area may vary, based on the type of material and professional judgment.

5.2 Hazard Assessment

A physical assessment was performed for each suspect homogeneous areas, a physical assessment was performed for each material on the list. A physical assessment includes evaluating the condition, assessing the potential for disturbance, and determining the friability of each material (i.e. the potential for a material to be crumbled or reduced to powder by hand pressure when dry). Each material on the list was further classified into one of three categories:

[1] Estimation made with drawn debris pile areas (**Figure 2**), assuming conical volume with an average height of 10 feet.

1. Surfacing Materials: Spray-applied or troweled surfaces such as joint compound, plaster ceilings and walls, fireproofing, textured paints, textured plasters, and spray-applied acoustical surfaces.
2. Thermal System Insulation: Insulation used to inhibit heat gain or loss on pipes, boilers, tanks, ducts, and various other building components.
3. Miscellaneous Materials: Friable and non-friable products and materials that do not fit in any of the above two categories such as resilient floor covering, baseboards, mastics, adhesives, roofing material, caulking, glazing, and siding. This category also contains wallboard and ceiling tile.

Potential ACM were then assessed by their condition as good (intact), fair (damaged) or poor (significantly damaged) per Title 40 Code of Federal Regulations Part 763.

5.3 Sampling Strategy

The asbestos survey was conducted in general accordance with the AHERA requirements (which also meets the sampling requirements found in 29 CFR 1926.1101), the National Emission Standards for Hazardous Air Pollutants (NESHAP), and SC R.61-86.1.

Cardno personnel visually assessed the site for the presence of building materials that are suspected to contain asbestos. Bulk samples of identified suspect ACM were collected by South Carolina licensed asbestos building inspectors (Mr. Peter Whitehouse, # BI-01796 & Mr. Conrad Peters # BI-01810) and placed into individual containers for transport to EMSL, a National Voluntary Laboratory Accreditation Program (NVLAP)/American Industrial Hygiene Association (AIHA)-accredited laboratory, for analysis. Copies of applicable accreditation forms are included in **Appendix A**. Materials visibly identified as non-asbestos (e.g. rubber, wood, vinyl wall panels, foam rubber, etc.) were not sampled. The asbestos survey consisted of three basic procedures:

1. Conducting visual observations of the debris piles;
2. Identifying homogeneous areas (HAs) of suspect surfacing, thermal system insulation, and miscellaneous materials; and
3. Sampling accessible, friable and non-friable suspect ACM.

Collection of bulk asbestos samples involves physically removing a small piece of material and placing it in a marked, airtight container. Sample containers are marked with a unique identification number, which is recorded in the field notes.

5.4 Sampling Activities

On April 11, 2019, Cardno personnel conducted an Asbestos-Containing Materials survey at the Former Great Falls Republic Mill #1. During the course of the site assessment activities, 28 individual bulk samples were collected from across the site. Sample descriptions, locations, and approximate material amounts are included in tabular format as **Table 1**. A sample location map is included as **Figure 3**.

5.5 Sampling Limitations

During the survey, Cardno identified potential ACM in building materials remaining at the site. Though the investigation was conducted to give a representative report of site

conditions, it is possible that additional ACM may be present at the site in inaccessible or concealed spaces, or areas below visible debris. These spaces include, but are not limited to, pipe chases, spaces between wall/ceiling/door/floor cavities, interior of mechanical components such as boiler cavities, interior ducts, beneath foundation pads, etc. If future demolition activities render these areas exposed, Cardno recommends further assessment of these spaces be conducted at that time to identify and confirm the presence or absence of additional ACM. Prior to additional sampling, all such unidentified materials should be treated as Presumed ACM (PACM) in accordance with 29 CFR 1926.1101 and 1910.1001.

6 Results

Bulk samples were analyzed by the EMSL laboratory located in Charlotte, North Carolina using polarized light microscopy (PLM) according to EPA Method 600/M4-82-020. Additionally, per South Carolina Regulation 61-86.1, one of every three non-friable organically bound (NOB) samples were analyzed per homogeneous area via Transmission Electron Microscopy (TEM). EMSL participates in the NVLAP, a quality assurance program for PLM, and is accredited by the National Institute of Standards and Technology (NIST). If multiple components were present within a sample matrix (i.e. floor tile and mastic), each of the components were separated and analyzed individually. Of the 28 bulk samples, a total of 52 individual components were analyzed by EMSL. A summary of the analytical results are included in the EMSL Analytical report as **Appendix B** and are presented in tabular format as **Table 1**.

The following materials were identified as ACM:

- The fibrous layer within built-up roofing material along the northern end of the main mill foundation and in the area of the remaining tower
    - 8% Chrysotile, friable
- White putty/caulking material along the western end of the main mill foundation
    - 60% Chrysotile, NOB
- Black caulking/sealant around piping & building foundation joints
    - 6% Chrysotile, NOB
- Vinyl floor tile and mastic in the former office area
    - 4% - 10% asbestos, NOB

A photographic log of materials identified as containing >1% asbestos by volume is included as **Appendix C**. No other tested materials contained >1% asbestos.

7 Conclusions and Recommendations

General construction debris (e.g., concrete, roofing material, wood) were present in debris piles on the site. These materials were visually assessed to identify potential ACM materials. 28 suspect materials were collected via bulk sample and analyzed for percent asbestos by volume via PLM and/or TEM by EMSL Analytical, Inc., per applicable

regulations. The following materials contained >1% asbestos by volume, and are considered to be ACM:

- Built-up roofing material along the northern end of the main mill foundation and in the area of the remaining tower
    - 8% Chrysotile
- White putty/caulking material along the western end of the main mill foundation
    - 60% Chrysotile, NOB
- Black caulking/sealant around piping & building foundation joints
    - 6% Chrysotile, NOB
- Vinyl floor tile and mastic in the former office area
    - 4% - 10% asbestos, NOB

As shown in **Appendix B**, the fibrous layer within built-up roofing material was always determined to be ACM. Since a fibrous layer is still present within much of the roofing material in the debris piles, and is bound to the rest of the matrix, all roofing material across the site should be considered ACM.

It may be possible for the general debris at the site to be screened by a South Carolina Asbestos Building Inspector during demolition and clean-up activities. Removal of non-ACM debris is possible in certain areas and there is the possibility of separating ACM from non-ACM debris.

There is also the possibility for additional suspect ACM to be present. Any suspect ACM should not be disturbed, and treated as ACM, unless analytical testing proves otherwise. An asbestos project design addressing both general construction debris and ACM debris should be developed by an accredited project designer before work begins. Considerations of the worker training, air monitoring, and a review of disposal facilities should be included in the asbestos project design as well. The South Carolina Department of Health and Environmental Control (SCDHEC) should be consulted about any future disposal plans, necessary permits, and proposed methods.

Contractors and employees working at the site should be made aware of the possibility that concealed ACM may be found during demolition and debris removal and appropriate actions taken (employee training, personal protective equipment, etc.). They should be advised not to disturb known or suspect ACM without owner approval. Any concealed building materials discovered during demolition and disposal activities, which are suspected to contain asbestos, should be sampled and analyzed to confirm the presence of asbestos prior to disturbing. During demolition and excavation, if a material that is a suspect ACM material is observed, the material should be sampled and analyzed to confirm asbestos prior to disturbing.

References

1. 40 Code of Federal Regulations (CFR) Part 763, Subpart E.
2. 40 CFR Part 61, Subpart M – National Emission Standard for Asbestos (NESHAP).
3. CTC Public Benefit Corporation. Former Republic Mill #1 Phase I Environmental Site Assessment. 2011. October.
4. South Carolina Department of Health and Environmental Control, Bureau of Air Quality. 2008. Regulation 61-86.1: Standards of Performance for Asbestos Projects. SC R61-86.1. June.
5. U. S. Department of Labor, Occupational Safety and Health Administration (OSHA). 1986. Asbestos Hazard Emergency Response Act (AHERA) 15 U.S.C. §2651. March.

Former Great Falls
Republic Mill #1

TABLES

Asbestos Inspection Field Sheet

Site Name: Republic Mill #1		**Building No.**: N/A (debris piles)	**Date**: 04/11/2019		**Inspector**: Peter Whitehouse	
Sample #	**Sample Description**	**Locations**	**Condition/Friable?**	**Approximate Amount**	**Asbestos Contents**	**Comments**
RM-01	Built-up roofing	Northern debris pile	Damaged/No	Widespread - all piles	8% Chrysotile (fibrous layer)	When analyzed, fibrous layer always ACM
RM-02	Built-up roofing	Northern debris pile	Damaged/No	Widespread - all piles	Positive stop (fibrous layer)	
RM-03	Putty/flashing, gray	Northern debris pile	Damaged/No	Northernmost piles	60% Chrysotile	
RM-04	Insulation, yellow	Northern debris pile	Damaged/Yes	Widespread - all piles	ND	
RM-05	Reinforced board, silver	Western founation spine	Damaged/No		ND	
RM-06	Built-up roofing	Western founation spine	Damaged/No	Widespread - all piles	ND	
RM-07	Built-up roofing	Western founation spine	Damaged/No	Widespread - all piles	ND	
RM-08	Built-up roofing	Western founation spine	Damaged/No	Widespread - all piles	ND	
RM-09	Foam glass	Western founation spine	Damaged/Yes	Widespread - all piles	ND	
RM-10	Fibrous tubing	Western founation spine	Damaged/No		ND	
RM-11	Foam glass caulking	Western founation spine	Damaged/No		6% Chrysotile	Seen on multiple piping intake joints
RM-12	Rolled flooring, red	Western founation spine	Damaged/No		ND	Overlaying concrete foundation
RM-13	12"x12" FT w/ mastic, wt.	Former office (SE)	Damaged/No	100 sf	4% Chrysotile (mastic only)	12"x12" atop 9"x9" & additional layer
RM-14	9"x9" FT w/ mastic, brown	Former office (SE)	Damaged/No	100 sf	4-10% Chrysotile (all layers)	12"x12" atop 9"x9" & additional layer
RM-15	3 layers FT	Former office (SE)	Damaged/No	100 sf	Positive stop (all layers)	12"x12" atop 9"x9" & additional layer
RM-16	Built-up roofing	Western founation spine	Damaged/No	Widespread - all piles	ND	
RM-17	Reinforced cloth	Western founation spine	Damaged/No		ND	
RM-18	Insulation, yellow	Central piles	Damaged/Yes	Widespread - all piles	ND	
Notes: FT: floor tile; sf: square feet; wt.: white; ND: non-detect						

Asbestos Inspection Field Sheet

Site Name: Republic Mill #1		**Building No.**: N/A (debris piles)	**Date**: 04/11/2019		**Inspector**: Peter Whitehouse	
Sample #	**Sample Description**	**Locations**	**Condition/Friable?**	**Approximate Amount**	**Asbestos Contents**	**Comments**
RM-19	Insulation w/ metallic back	SW piles	Damaged/Yes	Widespread - all piles	ND	
RM-20	Reinforced cloth	SW piles	Damaged/No		ND	
RM-21	Built-up roofing	South central piles	Damaged/No	Widespread - all piles	ND	
RM-22	Bolted-down cloth	South central piles	Damaged/No		ND	
RM-23	Built-up roofing	SE piles	Damaged/No	Widespread - all piles	ND	
RM-24	Built-up roofing	SE piles	Damaged/No	Widespread - all piles	ND	
RM-25	Built-up roofing	Eastern spine piles	Damaged/No	Widespread - all piles	ND	
RM-26	Built-up roofing	Eastern spine piles	Damaged/No	Widespread - all piles	ND	
RM-27	Built-up roofing	Eastern spine piles	Damaged/No	Widespread - all piles	Positive stop (fibrous layer)	
RM-28	Built-up roofing	Eastern pile	Damaged/No	Widespread - all piles	ND	

Notes: FT: floor tile; sf: square feet; wt.: white; ND: non-detect; w/: with

Former Great Falls
Republic Mill #1

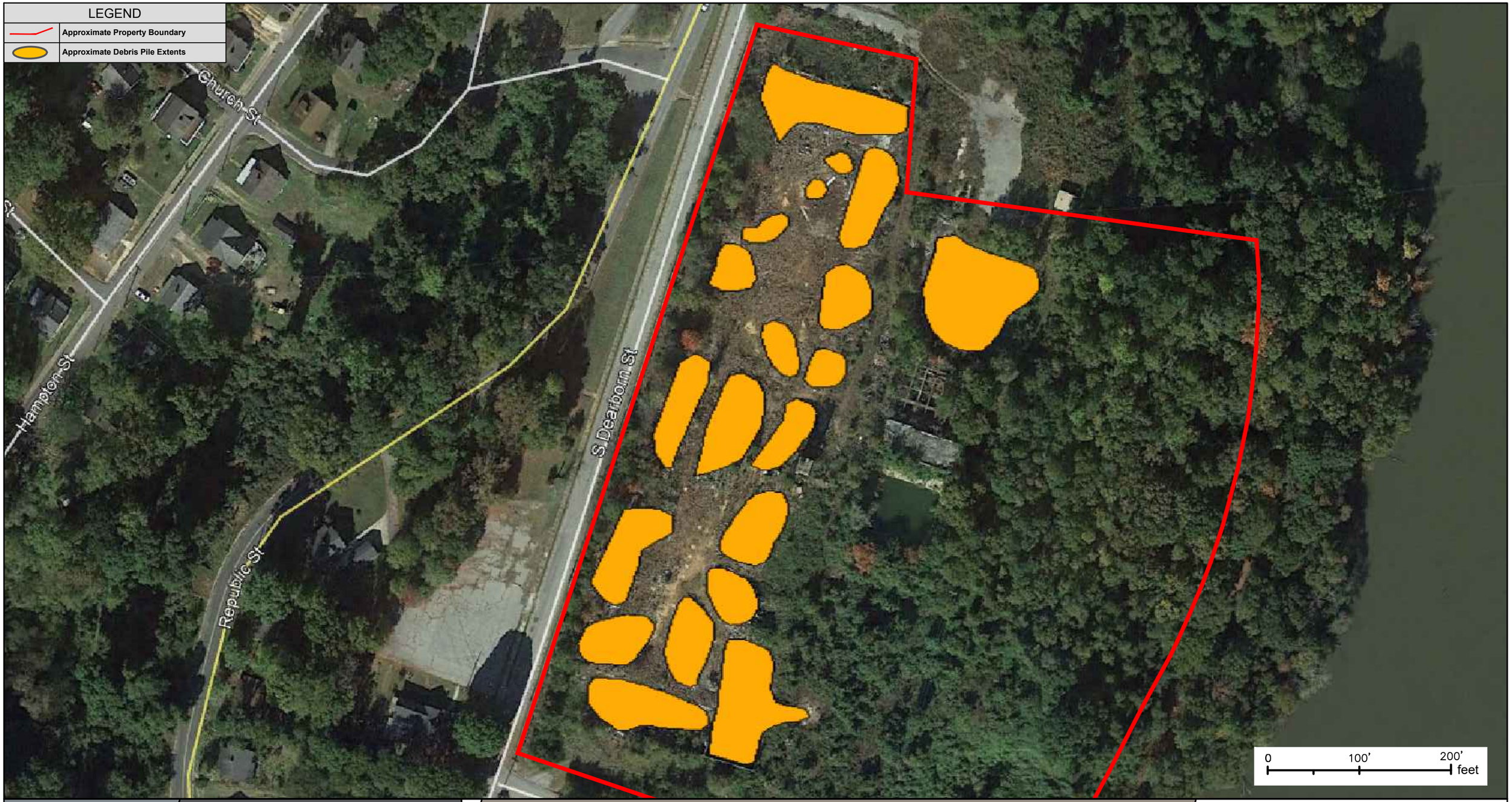
FIGURES

Notes: Imagery from Google Earth
Tax Map boundary from Beacon

FIGURE 1: AERIAL SITE LAYOUT

Former Great Falls Republic Mill #1
Great Falls, SC

Cardno
1812 Lincoln St., Suite 301
Columbia, SC 29201
803-929-6060



Notes: Imagery from Google Earth

FIGURE 2: APPROXIMATE DEBRIS PILE EXTENTS

Former Great Falls Republic Mill #1
Great Falls, SC

Cardno
1812 Lincoln St., Suite 301
Columbia, SC 29201
803-929-6060

LEGEND	
	Approximate Property Boundary
	Approximate Bulk Sample Location
RM-XX	Sample Contains <1% Asbestos
RM-XX	Sample Contains >1% Asbestos (ACM)

2018

Church St

Hampton St

Republic St

RM-01
RM-02
RM-04
RM-03
RM-05
RM-07
RM-06
RM-28
RM-27
RM-08
RM-09
RM-10
RM-16
RM-26
RM-11
RM-12
RM-18
RM-13 - 15
RM-17
RM-25
RM-19
RM-21
RM-20
RM-24
RM-22
RM-23

0 100' 200' feet

N

Notes: Imagery from Google Earth

FIGURE 3: SAMPLE LOCATION MAP

Former Great Falls Republic Mill #1
Great Falls, SC

Cardno
1812 Lincoln St., Suite 301
Columbia, SC 29201
803–929–6060

Former Great Falls
Republic Mill #1

APPENDIX A

RECORDS OF ACCREDITATION

SCDHEC ISSUED

Asbestos ID Card

Peter Whitehouse

CONSULTBI **BI-01796**

Expiration Date:
02/21/20

SCDHEC ISSUED

Asbestos ID Card

Conrad L Peters

CONSULTBI **BI-01810**

Expiration Date:
12/06/19

AIHA Laboratory Accreditation Programs, LLC

acknowledges that

EMSL Analytical, Inc.

10801 Southern Loops Blvd., Pineville, NC 28134

Laboratory ID: 192283

along with all premises from which key activities are performed, as listed above, has fulfilled the requirements of the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC accreditation to the ISO/IEC 17025:2005 international standard, *General Requirements for the Competence of Testing and Calibration Laboratories* in the following:

LABORATORY ACCREDITATION PROGRAMS

✓	**INDUSTRIAL HYGIENE**	Accreditation Expires: September 01, 2020
✓	**ENVIRONMENTAL LEAD**	Accreditation Expires: September 01, 2020
✓	**ENVIRONMENTAL MICROBIOLOGY**	Accreditation Expires: September 01, 2020
☐	**FOOD**	Accreditation Expires:
☐	**UNIQUE SCOPES**	Accreditation Expires:

Specific Field(s) of Testing (FoT)/Method(s) within each Accreditation Program for which the above named laboratory maintains accreditation is outlined on the attached **Scope of Accreditation**. Continued accreditation is contingent upon successful on-going compliance with ISO/IEC 17025:2005 and AIHA-LAP, LLC requirements. This certificate is not valid without the attached **Scope of Accreditation**. Please review the AIHA-LAP, LLC website (www.aihaaccreditedlabs.org) for the most current Scope.

Beth Bair

Elizabeth Bair
Chairperson, Analytical Accreditation Board

Cheryl O. Morton

Cheryl O. Morton
Managing Director, AIHA Laboratory Accreditation Programs, LLC

Revision 16: 03/21/2018

Date Issued: 08/31/2018

AIHA Laboratory Accreditation Programs, LLC
SCOPE OF ACCREDITATION

EMSL Analytical, Inc.
10801 Southern Loops Blvd., Pineville, NC 28134

Laboratory ID: **192283**
Issue Date: 08/31/2018

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

Industrial Hygiene Laboratory Accreditation Program (IHLAP)

Initial Accreditation Date: 10/01/2014

IHLAP Scope Category	**Field of Testing (FoT)** (FoTs cover all relevant IH matrices)	**Technology sub-type/ Detector**	**Published Reference Method/Title of In-house Method**	**Method Description or Analyte** *(for internal methods only)*
Chromatography Core	Gas Chromatography	GC/FID	NIOSH 1003 Modified	
			NIOSH 1500 Modified	
			NIOSH 1501 Modified	
	GC/MS		EPA TO-15	
	Ion Chromatography (IC)		NIOSH 7903	
			OSHA ID-165SG	
	Liquid Chromatography	HPLC/UV	NIOSH 2016 Modified	
Spectrometry Core	Atomic Absorption	CVAA	NIOSH 6009 Modified	
		FAA	NIOSH 7082	
	Inductively-Coupled Plasma	ICP/AES	NIOSH 7300 Modified	
			NIOSH 7303	
	Infrared		NIOSH 7602	
Asbestos/Fiber Microscopy Core	Phase Contrast Microscopy (PCM)		NIOSH 7400	
Miscellaneous Core	Gravimetric		NIOSH 0500	
			NIOSH 0600	
			NIOSH 5000	

A complete listing of currently accredited Industrial Hygiene laboratories is available on the AIHA-LAP, LLC website at: http://www.aihaaccreditedlabs.org

United States Department of Commerce
National Institute of Standards and Technology

Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 200841-0

EMSL Analytical, Inc.

Pineville, NC

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

Asbestos Fiber Analysis

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2018-07-01 through 2019-06-30

Effective Dates

For the National Voluntary Laboratory Accreditation Program

NVLAP® National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

EMSL Analytical, Inc.
10801 Southern Loop Blvd.
Pineville, NC 28134
Mr. Lee Plumley
Phone: 704-525-2205 Fax: 704-525-2382
Email: lplumley@emsl.com
http://www.emsl.com

ASBESTOS FIBER ANALYSIS — NVLAP LAB CODE 200841-0

Bulk Asbestos Analysis

Code	*Description*
18/A01	EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

Airborne Asbestos Analysis

Code	*Description*
18/A02	U.S. EPA's "Interim Transmission Electron Microscopy Analytical Methods-Mandatory and Nonmandatory-and Mandatory Section to Determine Completion of Response Actions" as found in 40 CFR, Part 763, Subpart E, Appendix A.

For the National Voluntary Laboratory Accreditation Program

Former Great Falls
Republic Mill #1

APPENDIX B

EMSL ANALYTICAL REPORT

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:	411903481
Customer ID:	CARN75
Customer PO:	
Project ID:	

Attention:	Peter Whitehouse.	**Phone:**	(803) 929-6060
	Cardno	**Fax:**	
	1812 Lincoln St	**Received Date:**	04/16/2019 12:00 PM
	Ste 301	**Analysis Date:**	04/19/2019 - 04/23/2019
	Columbia, SC 29201	**Collected Date:**	04/11/2019
Project:	Republic Mill #1		

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

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
RM-01-Fibrous Layer *411903481-0001*	Debris Pile atop Foundation - Roofing Material, Black	Black Fibrous Homogeneous		92% Non-fibrous (Other)	8% Chrysotile
RM-01-Tar *411903481-0001A*	Debris Pile atop Foundation - Roofing Material, Black	Black Non-Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected
RM-01-Cellulose Layer *411903481-0001B*	Debris Pile atop Foundation - Roofing Material, Black	Black Non-Fibrous Homogeneous	15% Cellulose	5% Ca Carbonate 80% Non-fibrous (Other)	None Detected
RM-01-Insulation *411903481-0001C*	Debris Pile atop Foundation - Roofing Material, Black	Brown/White Fibrous Homogeneous	60% Cellulose	15% Perlite 25% Non-fibrous (Other)	None Detected
RM-02-Fibrous Layer *411903481-0002*	Debris Pile atop Foundation - Roofing Material, Black				Positive Stop (Not Analyzed)
RM-02-Tar *411903481-0002A*	Debris Pile atop Foundation - Roofing Material, Black	Black Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
RM-02-Cellulose Layer *411903481-0002B*	Debris Pile atop Foundation - Roofing Material, Black	Black Non-Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
RM-02-Insulation *411903481-0002C*	Debris Pile atop Foundation - Roofing Material, Black	Gray Non-Fibrous Homogeneous		15% Perlite 85% Non-fibrous (Other)	None Detected
RM-03 *411903481-0003*	Debris Pile atop Foundation - Putty Material	Gray/White Fibrous Homogeneous		40% Non-fibrous (Other)	60% Chrysotile
RM-04 *411903481-0004*	Debris Pile atop Foundation - Insulation (Yellow)	Tan Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
RM-05 *411903481-0005*	Debris Pile atop Foundation - Fibrous Metallic Material	White/Silver Fibrous Homogeneous	80% Glass	20% Non-fibrous (Other)	None Detected
RM-06-Cellulose Layer *411903481-0006*	Debris Pile atop Foundation - Roofing Material (Black)	Black Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected
RM-06-Tar *411903481-0006A*	Debris Pile atop Foundation - Roofing Material (Black)	Black Non-Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected
RM-06-Insulation *411903481-0006B*	Debris Pile atop Foundation - Roofing Material (Black)	Brown Fibrous Homogeneous	50% Min. Wool	30% Ca Carbonate 20% Non-fibrous (Other)	None Detected
RM-07 *411903481-0007*	Debris Pile atop Foundation - Roofing Material (Black)	Black Non-Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected
RM-08 *411903481-0008*	Debris Pile atop Foundation - Roofing Material (Black)	Black Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected

Initial report from: 04/23/2019 11:13:12

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: 411903481
Customer ID: CARN75
Customer PO:
Project ID:

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

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
RM-09 *411903481-0009*	Debris Pile atop Foundation - Foam Glass	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
RM-10 *411903481-0010*	Debris Pile on Western Building Spine - Fibrous Tubing	Brown/Black Fibrous Homogeneous	20% Fibrous (Other)	80% Non-fibrous (Other)	None Detected
RM-11 *411903481-0011*	Debris Pile atop Foundation - Foam Glass Caulking	Gray/Black Fibrous Homogeneous		5% Ca Carbonate 89% Non-fibrous (Other)	6% Chrysotile
RM-12 *411903481-0012*	Flooring on Foundation - Trowelled-On Flooring (Red)	Tan/Red Non-Fibrous Homogeneous		25% Quartz 20% Ca Carbonate 55% Non-fibrous (Other)	None Detected
RM-13-Floor Tile *411903481-0013*	Flooring on Foundation - 12"x12" Floor Tile (White) & Mastic	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
RM-13-Mastic *411903481-0013A*	Flooring on Foundation - 12"x12" Floor Tile (White) & Mastic	Black Non-Fibrous Homogeneous		96% Non-fibrous (Other)	4% Chrysotile
RM-14-Top Mastic *411903481-0014*	Flooring on Foundation - 9"x9" Floor Tile (Brown) & Mastic	Black Non-Fibrous Homogeneous		96% Non-fibrous (Other)	4% Chrysotile
RM-14-Floor Tile *411903481-0014A*	Flooring on Foundation - 9"x9" Floor Tile (Brown) & Mastic	Brown Non-Fibrous Homogeneous		20% Ca Carbonate 70% Non-fibrous (Other)	10% Chrysotile
RM-14-Bottom Mastic *411903481-0014B*	Flooring on Foundation - 9"x9" Floor Tile (Brown) & Mastic	Black Non-Fibrous Homogeneous		96% Non-fibrous (Other)	4% Chrysotile
RM-15-Top Mastic *411903481-0015* *Sample bag labeled RM-14*	Flooring on Foundation - Rm-13 & Rm-14 Third Layer				Positive Stop (Not Analyzed)
RM-15-Floor Tile *411903481-0015A*	Flooring on Foundation - Rm-13 & Rm-14 Third Layer				Positive Stop (Not Analyzed)
RM-15-Bottom Mastic *411903481-0015B*	Flooring on Foundation - Rm-13 & Rm-14 Third Layer				Positive Stop (Not Analyzed)
RM-16-Tar *411903481-0016*	Debris Pile atop Foundation - Roofing Material, Black	Black Non-Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
RM-16-Cellulose Layer *411903481-0016A*	Debris Pile atop Foundation - Roofing Material, Black	Black Non-Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
RM-17 *411903481-0017*	Debris Pile atop Foundation - Reinforced Cloth	Gray Non-Fibrous Homogeneous	99% Cellulose	1% Non-fibrous (Other)	None Detected
RM-18 *411903481-0018*	Debris Pile atop Foundation - Insulation (Yellow)	Brown/Tan Fibrous Homogeneous	98% Min. Wool	2% Non-fibrous (Other)	None Detected

Initial report from: 04/23/2019 11:13:12

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

EMSL Order: 411903481
Customer ID: CARN75
Customer PO:
Project ID:

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

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
RM-19-Mastic *411903481-0019*	Debris Pile atop Foundation - Insulation w/ Metallic Backing	Black/Silver Non-Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected
RM-19-Insulation *411903481-0019A*	Debris Pile atop Foundation - Insulation w/ Metallic Backing	Brown Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (Other)	None Detected
RM-20 *411903481-0020*	Debris Pile atop Foundation - Reinforced Cloth	Brown/Tan Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (Other)	None Detected
RM-21 *411903481-0021*	Debris Pile atop Foundation - Roofing Material, Black	Black Non-Fibrous Homogeneous	20% Cellulose	2% Ca Carbonate 78% Non-fibrous (Other)	None Detected
RM-22-White Layer *411903481-0022*	Debris Pile atop Foundation - Bolted Cloth & Line	White Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
RM-22-Brown Layer *411903481-0022A*	Debris Pile atop Foundation - Bolted Cloth & Line	Brown Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (Other)	None Detected
RM-23-Tar *411903481-0023*	Debris Pile atop Foundation - Roofing Material, Black	Black Fibrous Homogeneous	4% Cellulose	2% Quartz 94% Non-fibrous (Other)	None Detected
RM-23-Cellulose Layer *411903481-0023A*	Debris Pile atop Foundation - Roofing Material, Black	Black Non-Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
RM-24-Tar *411903481-0024*	Debris Pile atop Foundation - Roofing Material, Black	Black Non-Fibrous Homogeneous	3% Cellulose	97% Non-fibrous (Other)	None Detected
RM-24-Cellulose Layer *411903481-0024A*	Debris Pile atop Foundation - Roofing Material, Black	Black Non-Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
RM-25-Tar *411903481-0025*	Debris Pile atop Foundation - Roofing Material, Black	Black Non-Fibrous Homogeneous	3% Cellulose	97% Non-fibrous (Other)	None Detected
RM-25-Cellulose Layer *411903481-0025A*	Debris Pile atop Foundation - Roofing Material, Black	Black Fibrous Homogeneous	30% Cellulose	70% Non-fibrous (Other)	None Detected
RM-26-Tar *411903481-0026*	Debris Pile atop Foundation - Roofing Material, Black	Black Non-Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected
RM-26-Cellulose Layer *411903481-0026A*	Debris Pile atop Foundation - Roofing Material, Black	Brown/Black Fibrous Homogeneous	30% Cellulose	5% Quartz 8% Ca Carbonate 57% Non-fibrous (Other)	None Detected
RM-27-Fibrous Layer *411903481-0027*	Debris Pile atop Foundation - Roofing Material, Black				Positive Stop (Not Analyzed)
RM-27-Tar *411903481-0027A*	Debris Pile atop Foundation - Roofing Material, Black	Black Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
RM-27-Cellulose Layer *411903481-0027B*	Debris Pile atop Foundation - Roofing Material, Black	Black Fibrous Homogeneous	30% Cellulose	70% Non-fibrous (Other)	None Detected
RM-27-Insulation *411903481-0027C*	Debris Pile atop Foundation - Roofing Material, Black	Brown Fibrous Homogeneous	3% Cellulose 60% Min. Wool	37% Non-fibrous (Other)	None Detected

Initial report from: 04/23/2019 11:13:12

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EMSL Order:	411903481
Customer ID:	CARN75
Customer PO:	
Project ID:	

Analyst(s)

Katherine Sluder (4)
Lacy Searcy (12)
Matthew McDonald (6)
Sarah Breneman (23)

Lee Plumley, Laboratory Manager
or Other Approved Signatory

Initial report from: 04/23/2019 11:13:12

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: 411903481
Customer ID: CARN75
Customer PO:
Project ID:

Attention: Peter Whitehouse.
Cardno
1812 Lincoln St
Ste 301
Columbia, SC 29201
Project: Republic Mill #1

Phone: (803) 929-6060
Fax:
Received Date: 04/16/2019 12:00 PM
Analysis Date: 04/25/2019
Collected Date: 04/11/2019

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
RM-28-Tar *411903481-0028*	Debris Pile atop Foundation - Roofing Material, Black	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
RM-28-Cellulose Layer *411903481-0029*	Debris Pile atop Foundation - Roofing Material, Black	Black Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected

Analyst(s)

Aaron Hartley (2)

Lee Plumley, Laboratory Manager
or other approved signatory

This laboratory is not responsible for % asbestos in total sample when the residue only is submitted for analysis. The above report relates only to the items tested. This report may not be reproduced, except in full, without written approval by EMSL Analytical, Inc. Samples received in good condition unless otherwise noted. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample.

Samples analyzed by EMSL Analytical, Inc. Pineville, NC

Initial report from: 04/25/2019 11:01:38

OrderID: 411903481

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (*Lab Use Only*): 411903481

EMSL Analytical, Inc.
10801 Southern Loop Blvd

Pineville, NC 28134
PHONE: (704) 525-2205
FAX: (704) 525-2382

Company : Cardno	**EMSL-Bill to:** ☐ Same ☑ Different If Bill to is Different note instructions in Comments** *Third Party Billing requires written authorization from third party*
Street: 1812 Lincoln St. Suite 301	
City: Columbia **State/Province:** SC	**Zip/Postal Code:** 29201 **Country:** US
Report To (Name): Peter Whitehouse	**Telephone #:** 8039296060
Email Address: peter.whitehouse@cardno.com	**Fax #:** **Purchase Order:**
Project Name/Number: Republic Mill #1	**Please Provide Results:** ☐ Fax ☑ Email ☐ Mail
U.S. State Samples Taken: SC	**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☐ 1 Week ☑ 2 Week

**For TEM Air 3 hr through 6 hr, please call ahead to schedule.*There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.*

PLM - Bulk (reporting limit)	TEM – Bulk
☑ PLM EPA 600/R-93/116 (<1%)	☐ TEM EPA NOB – EPA 600/R-93/116 Section 2.5.5.1
☐ PLM EPA NOB (<1%)	☐ NY ELAP Method 198.4 (TEM)
Point Count ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ Chatfield Protocol (semi-quantitative)
Point Count w/Gravimetric ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ TEM % by Mass – EPA 600/R-93/116 Section 2.5.5.2
☐ NIOSH 9002 (<1%)	☐ TEM Qualitative via Filtration Prep Technique
☐ NY ELAP Method 198.1 (friable in NY)	☐ TEM Qualitative via Drop Mount Prep Technique
☐ NY ELAP Method 198.6 NOB (non-friable-NY)	**Other**
☐ OSHA ID-191 Modified	☑ If NOB, 2 PLM + 1 TEM, if PLM are non-detect
☐ Standard Addition Method	

☑ **Check For Positive Stop – Clearly Identify Homogenous Group** **Date Sampled:** 4/11/19

Samplers Name: Peter Whitehouse **Samplers Signature:** Peter A. Whitehouse

Sample #	HA #	Sample Location	Material Description
RM-01	1	debris pile atop foundation	roofing material, black
RM-02	1	"	"
RM-03	2	"	putty material
RM-04	3	"	insulation (yellow)
RM-05	4	"	fibrous metalic material
RM-06	1	"	roofing material (black)
RM-07	1	"	"
RM-08	1	"	"
RM-09	5	"	foam glass
RM-10	6	debris pile on western building spine	fibrous tubing

Client Sample # (s): RM-01 through RM-28 **Total # of Samples:** 28

Relinquished (Client): Peter Whitehouse **Date:** 4/11/19 **Time:** 17:00

Received (Lab): Kyle Nixon **Date:** 4/16/19 **Time:** 12pm UPS

Comments/Special Instructions:
BillTo: Cardno, 1812 Lincoln St., Suite 301, Columbia, SC, 29201, US
Attention: Peter Whitehouse Phone: 9105807901 Email: peter.whitehouse@cardno.com Purchase Order: stop positive per material layer

1Z 2E3 4A3 03 5234 4703

OrderID: 411903481

EMSL Analytical, Inc.
10801 Southern Loop Blvd

Pineville, NC 28134
PHONE: (704) 525-2205
FAX: (704) 525-2382

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number *(Lab Use Only)*: 411903481

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

Sample #	HA #	Sample Location	Material Description
RM-11	7	debris pile atop foundation	foam glass caulking
RM-12	8	flooring on foundation	trowelled-on flooring (red)
RM-13	9	"	12" x 12" floor tile (white) +mastic
RM-14	10	"	9" x 9" floor tile (brown) +mastic
RM-15	11	"	RM-13 + RM-14 + third layer +mastic
RM-16	1	debris pile atop foundation	roofing material, black
RM-17	12	"	reinforced cloth
RM-18	3	"	insulation (yellow)
RM-19	13	"	insulation w/ metallic backing
RM-20	12	"	reinforced cloth
RM-21	1	"	roofing material, black
RM-22	14	"	bolted cloth + line
RM-23	1	"	roofing material, black
RM-24	1	"	"
RM-25	1	"	"
RM-26	1	"	"
RM-27	1	"	"
RM-28	1	"	"

***Comments/Special Instructions:**
BillTo: Cardno, 1812 Lincoln St., Suite 301, Columbia, SC, 29201, US
Attention: Peter Whitehouse Phone: 9105807901 Email: peter.whitehouse@cardno.com Purchase Order:

Page 2 of 2 pages

Former Great Falls
Republic Mill #1

APPENDIX C

PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG

Site Location:
Former Great Falls Republic Mill #1
Dearborn St.., Great Falls, Chester County, South Carolina 29055

Project
PB00268000

Photo No.	Date:
1	04/11/2019

Direction Photo Taken:
SE

Description:
The fibrous layer of the black built up roofing found across the site was identified as ACM (8% chrysotile).

Photo No.	Date:
2	04/11/2019

Direction Photo Taken:
E

Description:
A white putty material along the northern spine of the main mill was found to be ACM (60% Chrysotile).

PHOTOGRAPHIC LOG

Site Location:
Former Great Falls Republic Mill #1
Dearborn St.., Great Falls, Chester County, South Carolina 29055

Project
PB00268000

Photo No.	**Date:**
3	**02/28/2019**

Direction Photo Taken:
N

Description:
A view of the former office area where 12” x 12” vinyl floor tile was present atop 9” x 9” vinyl floor tile. The 9” x 9” vinyl floor tile and all mastic were found to be ACM.

Photo No.	**Date:**
4	**04/11/2019**

Direction Photo Taken:
N

Description:
A black caulking material attaching foam glass to utility piping along foundational walls was found to be ACM.

Please Respect the Environment

About Cardno

Cardno is an ASX-200 professional infrastructure and environmental services company, with expertise in the development and improvement of physical and social infrastructure for communities around the world. Cardno's team includes leading professionals who plan, design, manage, and deliver sustainable projects and community programs. Cardno is an international company listed on the Australian Securities Exchange [ASX:CDD].

Cardno Zero Harm

Cardno ZERO HARM EVERY JOB. EVERY DAY.

At Cardno, our primary concern is to develop and maintain safe and healthy conditions for anyone involved at our project worksites. We require full compliance with our Health and Safety Policy Manual and established work procedures and expect the same protocol from our subcontractors. We are committed to achieving our Zero Harm goal by continually improving our safety systems, education, and vigilance at the workplace and in the field. Safety is a Cardno core value and through strong leadership and active employee participation, we seek to implement and reinforce these leading actions on every job, every day.

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