Asbestos Survey Inspection Report

Wood Frame Single Residence & Shed
Southside of US 84
Tullos, Louisiana 71478
State Project Number: H000754
Parcel Number: 3-2-C-1

Prepared For:

Louisiana Department of Transportation & Development
1201 Capitol Access Road
Baton Rouge, LA 70802

October 15, 2018

By:

Newman Marchive Incorporated
A Professional Corporation
A Veteran Owned Small Business
Architecture / Environmental Consulting
2800 Youree Drive, Suite 310
Shreveport, LA 71104
Phone: 318-219-1814

NM #184000
Table of Contents

Table of Contents ................................................................. 2
Executive Summary ............................................................... 3
Sample Results ................................................................. 3
Recommendations ............................................................... 3
Acronyms ............................................................................. 5
Appendix 1 – Sample Results .................................................... 6
Appendix 2 – Laboratory Results ................................................ 9
Appendix 3 – Pictures ............................................................. 10
Appendix 4 – Sample Plans ....................................................... 11
Appendix 5 – Homogenous Plans ............................................... 12
Appendix 6 – Certificates ........................................................ 13
Executive Summary

Cynthia M. Garner from Newman Marchive Incorporated (NMI) performed an asbestos survey in of the wood frame home and adjacent shed located on the Southside of US 34 in Tullos, Louisiana. The survey was completed on October 4, 2018. The survey was performed at the request of Radha Kumar and the state project number is H000754. The purpose of the survey was to verify there were no asbestos containing building materials and to update the existing Management Plan.

Samples were collected and analyzed by an accredited laboratory in accordance with Environmental Protection Agency (EPA) guidance.

Sample Results

The materials listed in Table 1, provided in Appendix 1, were observed and considered suspect materials. Sample locations are identified in Sample Floor Plans included Appendix 4. Homogenous Floor Plans identifying locations of asbestos are included in Appendix 5. All laboratory analysis reports are provided in Appendix 2.

Recommendations

Asbestos abatement is required if materials will be damaged or disturbed during renovations or repairs. An asbestos abatement design by a licensed designer is recommended to protect the owner. Asbestos containing materials are regulated by various State and Federal agencies including:

- Asbestos Hazard Emergency Response Act (AHERA)
- National Emission Standards for Hazardous Air Pollutants (NESHAP)
- Louisiana Emission Standards for Hazardous Air Pollutants (LESHAPS)
- Occupational Safety and Health Administration (OSHA)
- Louisiana Department of Environmental Quality (LDEQ)

Summary

The sample results, observations, and recommendations in this report are based on the conditions observed and recorded on the day of the inspection. The assessment conducted was a limited inspection and did not include an extensive review of all building systems. The areas of the building indicated as a concern were the primary focus of this review.
This report is provided to the client and the results and information contained herein are for the express use of the client relative to the Department of Transportation and Development. The data in this report has not been released to others and will not be released without express written permission of the client.

Prepared by:
Newman Marchivo Incorporated

__________________________
Cynthia M. Garner
Environmental Manager
Acronyms

ACM.......................................................... Asbestos Containing Materials
AHERA .................................................... Asbestos Hazard Emergency Response Act
EPA ............................................................... Environmental Protection Agency
LDEQ ...................................................... Louisiana Department of Environmental Quality
LESHAPS ................................. Louisiana Emission Standards for Hazardous Air Pollutants
NESHA\P ................................................. National Emission Standards for Hazardous Air Pollutants
NMI ............................................................ Newman Marchive Incorporated
O&M ............................................................. Operations and Maintenance
OSHA ..................................................... Occupational Safety and Health Administration
Appendix 1 – Sample Results
<table>
<thead>
<tr>
<th>Sample Number</th>
<th>Homogeneous Area</th>
<th>Description</th>
<th>Condition</th>
<th>Friable</th>
<th>Lab Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>DT001</td>
<td>M1</td>
<td>Cement Board Siding</td>
<td>Poor</td>
<td>No</td>
<td>20% Chrysotile</td>
</tr>
<tr>
<td>DT002</td>
<td>M1</td>
<td>Cement Board Siding</td>
<td>Poor</td>
<td>No</td>
<td>20% Chrysotile</td>
</tr>
<tr>
<td>DT003</td>
<td>F1</td>
<td>Linoleum Flooring – Yellow &amp; Tan Mastic</td>
<td>Poor</td>
<td>Yes</td>
<td>20% Chrysotile</td>
</tr>
<tr>
<td>DT004</td>
<td>F1</td>
<td>Linoleum Flooring – Yellow &amp; Tan Mastic</td>
<td>Poor</td>
<td>Yes</td>
<td>20% Chrysotile</td>
</tr>
<tr>
<td>DT005</td>
<td>F2</td>
<td>Linoleum Flooring – Floral &amp; Tan Mastic</td>
<td>Poor</td>
<td>Yes</td>
<td>None Detected</td>
</tr>
<tr>
<td>DT006</td>
<td>F2</td>
<td>Linoleum Flooring – Floral &amp; Tan Mastic</td>
<td>Poor</td>
<td>Yes</td>
<td>None Detected</td>
</tr>
<tr>
<td>DT007</td>
<td>W1</td>
<td>Wall Board</td>
<td>Poor</td>
<td>No</td>
<td>None Detected</td>
</tr>
<tr>
<td>DT008</td>
<td>W1</td>
<td>Wall Board</td>
<td>Poor</td>
<td>No</td>
<td>None Detected</td>
</tr>
<tr>
<td>DT009</td>
<td>C1</td>
<td>Ceiling Tile – Grooved</td>
<td>Poor</td>
<td>Yes</td>
<td>None Detected</td>
</tr>
<tr>
<td>DT010</td>
<td>C1</td>
<td>Ceiling Tile – Grooved</td>
<td>Poor</td>
<td>Yes</td>
<td>None Detected</td>
</tr>
<tr>
<td>DT011</td>
<td>C2</td>
<td>Gypsum Board Ceiling</td>
<td>Poor</td>
<td>Yes</td>
<td>None Detected</td>
</tr>
<tr>
<td>DT012</td>
<td>C2</td>
<td>Gypsum Board Ceiling</td>
<td>Poor</td>
<td>Yes</td>
<td>None Detected</td>
</tr>
<tr>
<td>DT013</td>
<td>M2</td>
<td>Window Caulking</td>
<td>Poor</td>
<td>Yes</td>
<td>None Detected</td>
</tr>
<tr>
<td>DT014</td>
<td>M2</td>
<td>Window Caulking</td>
<td>Poor</td>
<td>Yes</td>
<td>None Detected</td>
</tr>
<tr>
<td>DT015</td>
<td>C3</td>
<td>Ceiling Tile – Smooth</td>
<td>Poor</td>
<td>Yes</td>
<td>None Detected</td>
</tr>
<tr>
<td>DT016</td>
<td>C3</td>
<td>Ceiling Tile – Smooth</td>
<td>Poor</td>
<td>Yes</td>
<td>None Detected</td>
</tr>
<tr>
<td><strong>House</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DT017</td>
<td>M3</td>
<td>Wall Board</td>
<td>Poor</td>
<td>No</td>
<td>None Detected</td>
</tr>
<tr>
<td>DT018</td>
<td>M3</td>
<td>Wall Board</td>
<td>Poor</td>
<td>No</td>
<td>None Detected</td>
</tr>
</tbody>
</table>

**Shed**

<table>
<thead>
<tr>
<th>Sample Number</th>
<th>Homogeneous Area</th>
<th>Description</th>
<th>Condition</th>
<th>Friable</th>
<th>Lab Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>DT017</td>
<td>M3</td>
<td>Wall Board</td>
<td>Poor</td>
<td>No</td>
<td>None Detected</td>
</tr>
<tr>
<td>DT018</td>
<td>M3</td>
<td>Wall Board</td>
<td>Poor</td>
<td>No</td>
<td>None Detected</td>
</tr>
</tbody>
</table>
Appendix 2 – Laboratory Results
Materials Characterization - Bulk Asbestos Analysis
Laboratory Analysis Report - Polarized Light

Newman Marchive Carlisle
2800 Youree Drive, Suite 310
Shreveport, LA 71104

Attn: John Carlisle
Customer Project: 184000
Reference #: CBR18104658
Date: 10/12/2018

Analysis and Method
Summary of polarizing light microscopy (PLM / Stereomicroscopy bulk asbestos analysis) using the methods described in 40CFR Part 763 Appendix E to Subpart E (Interim and EPA 600 / R-93 / 116 (Improved). The sample is first viewed with the aid of stereomicroscopy. Numerous liquid slide preparations are created for analysis under the polarized microscope where identifications and quantifications are performed. Calibrated liquid refractive oils are used as liquid mounting medium. These oils are used for identification (dispersion staining). A calibrated visual estimation is reported, should any asbestos bearing mineral be present. Other techniques such as acid washing are used in conjunction with refractive oils for detection of smaller quantities of asbestos. All asbestos percentages are based on calibrated visual estimation traceable to NIST standards for regulated asbestos. Traceability to measurement and calibration is achieved by using known amounts and types of asbestos from standards where analyst and laboratory accuracy are measured. As little as 0.001% asbestos can be detected in favorable samples, while detection in unfavorable samples may approach the detection limit of 0.50% (well above the laboratory definition of trace).

Discussion
Vermiculite containing samples may have trace amounts of actinolite tremolite, where not found be PLM should be analyzed using TEM methods and/or water separation techniques. Suspected actinolite/vermiculite presence will be indicated through the sample comment section of this report.

Fibrous talc containing samples may even contain a related asbestos fiber known as anthophyllite. Under certain conditions the same fiber may actually contain both talc and anthophyllite (a phenomenon called intergrowth). Again, TEM detection methods are recommended. CA Labs PLM report comments will denote suspected amounts of asbestos form anthophyllite with talc, where further analysis is recommended.

Some samples (floor tiles, surfacings, etc.) may contain fibers too small to be detectable by PLM analysis and should be analyzed by TEM bulk protocol.

A "trace asbestos" will be reported if the analyst observes far less than 1% asbestos. CA Labs defines "trace asbestos" as a few fibers detected by the analyst in several preparations and will indicate as such under these circumstances.

Quantification of <1% will actually be reported as <=1% (allowable variance close to 1% is high). Such results are ideal for point counting, and the technique is mandatory for friable samples (NESHAP, Nov. 1990 and clarification letter 8 May 1991) under 1% percent asbestos and the "trace asbestos". In order to make all initial PLM reports issued from CA Labs NESHAP compliant, all <1% asbestos results (except floor tiles) will be point counted at no additional charge.

Qualifications
CA Labs is accredited by the National Voluntary Accreditation Program (NVLAP) for selected test methods for airborne fiber analysis (TEM), and for bulk asbestos fiber analysis (PLM). All analysts have a college degree in a natural science (geology, biology, or environmental science) or are recognized by a state professional board in one these disciplines. Extensive in-house training programs are used to augment education background of the analyst. The group leader of polarized light has received supplemental McCrone Research training for asbestos identification. This report is not covered by the scope of AIHA accreditation. Analysis performed at CA Labs, LLC 12232 Industriplex, Suite 32 Baton Rouge, LA 70809.

Baton Rouge NVLAP Lab Code 200772-0 TEM/PLM
LDEQ
TDH 30-0370
## Overview of Project Sample Material Containing Asbestos

<table>
<thead>
<tr>
<th>Customer Project: 184000</th>
<th>CA Labs Project #: CBR18104858</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sample #</strong></td>
<td><strong>Layer</strong></td>
</tr>
<tr>
<td>DT001</td>
<td>1</td>
</tr>
<tr>
<td>DT002</td>
<td>1</td>
</tr>
<tr>
<td>DT003</td>
<td>1</td>
</tr>
<tr>
<td>DT004</td>
<td>1</td>
</tr>
</tbody>
</table>

---

*Glossary of abbreviations (non-asbestos fibers and non-fibrous minerals):

- **ca** - carbonate
- **gypsum**
- **bl** - binder
- **or** - organic
- **ms** - matrix
- **nl** - nickel
- **ve** - vermiculite
- **ot** - other
- **po** - perlite
- **eg** - quartz
- **lg** - fiberglass
- **mr** - mineral wool
- **wo** - wollastonite
- **ts** - talc
- **sy** - synthetic
- **co** - cellulose
- **br** - brucite
- **ka** - kaolinite

*This report relates to the items tested. This report is not to be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST, AIA LAP, LLC, or any other agency of the federal government. This report may not be reproduced except in full without written permission from CA Labs. These results are submitted pursuant to CA Labs' current terms and service, condition of sale, including the company's standard warranty and limitations of liability provisions and no responsibility or liability is assumed for the manner in which the results are used or interpreted. Unless notified in writing to return the samples covered by this report, CA Labs will store the samples for a period of ninety (90) days before discarding. A shipping or handling fee may be assessed for the return of any samples.*
## Polarized Light Asbestiform Materials Characterization

<table>
<thead>
<tr>
<th>Sample #</th>
<th>Comment</th>
<th>Layer #</th>
<th>Analysts Physical Description of Subsample</th>
<th>Homogeneity (Y/N)</th>
<th>Asbestos type / calibrated visual estimate percent</th>
<th>Non-asbestos fiber type / percent</th>
<th>Non-fibrous type / percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>DT001</td>
<td></td>
<td>1</td>
<td>White Surfaced Gray Transite</td>
<td>N</td>
<td>20% Chrysotile</td>
<td>80% qu, ma, bi, ca</td>
<td></td>
</tr>
<tr>
<td>DT002</td>
<td></td>
<td>1</td>
<td>White Surfaced Gray Transite</td>
<td>N</td>
<td>20% Chrysotile</td>
<td>80% qu, ma, bi, ca</td>
<td></td>
</tr>
<tr>
<td>DT003</td>
<td></td>
<td>1</td>
<td>Tan Linoleum</td>
<td>Y</td>
<td>20% Chrysotile</td>
<td>80% qu, ma</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td></td>
<td>Tan Mastic</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DT004</td>
<td></td>
<td>1</td>
<td>Tan Linoleum</td>
<td>Y</td>
<td>20% Chrysotile</td>
<td>80% qu, ma</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td></td>
<td>Tan Mastic</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Red Linoleum with Black Felt</td>
<td></td>
<td></td>
<td>Backing</td>
<td>Y</td>
<td>None Detected</td>
<td>20% ce</td>
<td>80% qu, bi</td>
</tr>
</tbody>
</table>

**LDEQ**
- Preparation Method: HCl acid washing for carbonate based samples, chemical reduction for organically bound components, all immersed for identification of asbestos types by dispersion attaining / batch line method

<table>
<thead>
<tr>
<th>Microscopic Findings from TEM/PLM Test</th>
<th>TDH 30-0370</th>
</tr>
</thead>
<tbody>
<tr>
<td>ca - carbonate</td>
<td></td>
</tr>
<tr>
<td>pyroxyn - pyroxyn</td>
<td></td>
</tr>
<tr>
<td>bi - binder</td>
<td></td>
</tr>
<tr>
<td>or - organic</td>
<td></td>
</tr>
<tr>
<td>ma - matrix</td>
<td></td>
</tr>
<tr>
<td>mg - mica</td>
<td></td>
</tr>
<tr>
<td>fl - flake</td>
<td></td>
</tr>
<tr>
<td>ve - vermiculite</td>
<td></td>
</tr>
<tr>
<td>ma - mineral wool</td>
<td></td>
</tr>
<tr>
<td>wo - wollastilite</td>
<td></td>
</tr>
<tr>
<td>ta - talc</td>
<td></td>
</tr>
<tr>
<td>qu - quartz</td>
<td></td>
</tr>
<tr>
<td>sy - synthetic</td>
<td></td>
</tr>
<tr>
<td>br - brucite</td>
<td></td>
</tr>
<tr>
<td>mka - kaolin (clay)</td>
<td></td>
</tr>
<tr>
<td>ps - polygorskite (clay)</td>
<td></td>
</tr>
</tbody>
</table>

**Approved Signatories:**

- Sidney Pinkerton  
  Analyst

- Alicia Stretz  
  Senior Analyst

- Chris Williams  
  Laboratory Director

---

1. Fiber damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fiber damage no significant fiber damage - reported percentages reflect unaltered fibers
3. Adolof in association with Vermiculite
4. Layer and analyzed - attached to previous positive layer and contamination is suspected
5. Not enough sample to analyze

6. Asbestos fibers in combination with other asbestos fibers
7. Contamination suspected from other building materials
8. Favorable scenario for water separation on vermiculite for positive analysis by another method
9. < 1%. Result is not noted positive
10. TEM analysis suggested
# Polarized Light Asbestiform Materials Characterization

<table>
<thead>
<tr>
<th>Sample #</th>
<th>Comment</th>
<th>Layer</th>
<th>Analysts Physical Description of Subsample</th>
<th>Homogeneous (Y/N)</th>
<th>Asbestos type / calibrated visual estimate percent</th>
<th>Non-asbestos fiber type / percent</th>
<th>Non-fibrous type percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>DT006</td>
<td></td>
<td></td>
<td>Tan Mastic</td>
<td>Y</td>
<td>None Detected</td>
<td>100% qu, bi</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>Red Linoleum with Black Felt</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DT007</td>
<td></td>
<td></td>
<td>1 White Surfacing</td>
<td>Y</td>
<td>None Detected</td>
<td>100% qu, ra, bi</td>
<td></td>
</tr>
<tr>
<td>DT008</td>
<td></td>
<td></td>
<td>1 White Surfacing</td>
<td>Y</td>
<td>None Detected</td>
<td>100% qu, ra, bi</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>Brown Paneling</td>
<td>Y</td>
<td>None Detected</td>
<td>100% ce</td>
<td></td>
</tr>
</tbody>
</table>

---

**CA Labs Project #:** CBR18104858  
**Date:** 10/12/2018  
**Samples Received:** 10/8/2018  
**Turnaround Time:** 5 day  
**Purchase Order #:**

---

**LDEQ**

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600/R-90/116)

Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, all immersion for identification of asbestos types by dispersion attained / beam line method.

- ca - carbonate
- gypsum - gypsum
- br - brucite
- or - organic
- ma - matrix
- mica - micas
- lg - fiberglass
- ms - mineral wool
- ot - other
- pe - perlite
- sp - sparite
- sy - synthetic

Approved Signatories:

- Sidney Pinkerton  
  Analyst
- Alicia Stretz  
  Senior Analyst
- Chris Williams  
  Laboratory Director

---

1. Fire Damage significant fiber damage - reported percentages reflect untreated items
2. Fire Damage no significant fiber damage reflecting fiber percentages
3. Asbestos in association with Vermiculite
4. Layer not analyzed - attached to previous positive layer and contamination is suspected
5. Not enough sample to analyze
6. Asbestos fibers in association with Fibrous Talc
7. Contamination suspected from other building materials
8. Favorable scenario for water separation on vermiculite for possible analysis by another method
9. <1%. Result not counted positive
10. TEM analysis suggested

---

Page 4 of 7
# Polarized Light Asbestiform Materials Characterization

**Customer Info:**
Att: John Carlisle  
Newman Machrise Carlisle  
2800 Youree Drive, Suite 310  
Shreveport, LA 71104  

**Phone #** 318-219-1814  
**Fax #** 318-219-1818

**Customer Project:** 184000  
**CA Labs Project #:** CBR18104858  
**Turnaround Time:** 5 day  
**Date:** 10/12/2018  
**Samples Received:** 10/8/2018  
**Date Of Sampling:**  
**Purchase Order #:**

<table>
<thead>
<tr>
<th>Sample #</th>
<th>Comment</th>
<th>Layer #</th>
<th>Analysts Physical Description of Subsample</th>
<th>Homogeneous (Y/N)</th>
<th>Asbestos type / calibrated visual estimate percent</th>
<th>Non-asbestos fiber type / percent</th>
<th>Non-fibrous type / percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>DT009</td>
<td>1</td>
<td>White Surfacing</td>
<td>Y None Detected</td>
<td>100% qu, bi, ca</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Brown Ceiling Tile</td>
<td>Y None Detected</td>
<td>100% ce</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DT010</td>
<td>1</td>
<td>White Surfacing</td>
<td>Y None Detected</td>
<td>100% qu, b, ca</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Brown Ceiling Tile</td>
<td>Y None Detected</td>
<td>100% ce</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DT011</td>
<td>1</td>
<td>White Drywall with Paper</td>
<td>N None Detected</td>
<td>10% ca 90% qu, gy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DT012</td>
<td>1</td>
<td>White Drywall with Paper</td>
<td>N None Detected</td>
<td>10% ca 90% qu, gy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DT013</td>
<td>1</td>
<td>Gray Sealant</td>
<td>Y None Detected</td>
<td>100% qu, rna, ca</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Analysis Method:**  
Interim (40 CFR Part 173 Appendix E to Subpart E) / Improved (EPA-600/R-90/116)

**Preparation Method:**  
HCL acid washing for carbonate based samples, chemical reduction for organically bound components, all immersion for identification of asbestos types by dispersion attaining by basic line method

- ca - carbonate  
- gypsum - pygsum  
- bi - binder  
- cr - organic  
- ma - matrix  
- mg - mica  
- fg - fiberglass  
- mw - mineral wool  
- ya - wallatrolite  
- ta - talc  
- sa - synthetic

**Approved Signatories:**

Sidney Pinkerton
Analyst

Senior Analyst  
Alicia Stretz

Laboratory Director  
Chris Williams

---

1. Fire Damage significant fiber damage - reported percentages reflect unaltered item  
2. Fire damage no significant fiber damage reflects these percentages  
3. Asbestos in association with Vermiculite  
4. Layer not analyzed - attached to previous pooled layer and contamination is suspected  
5. Not enough sample to analyze  
6. Asbestos Type in association with Fibrous Talc  
7. Contamination suspected on other building materials  
8. Favorable scenario for water separation on vermiculite for possible analysis by another method  
9. < 5%. Result point counted positive  
10. TEM analysis suggested
# Polarized Light Asbestiform Materials Characterization

<table>
<thead>
<tr>
<th>Customer Info:</th>
<th>Attn: John Carlisle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newman Marchive Carlisle</td>
<td></td>
</tr>
<tr>
<td>2800 Yourree Drive, Suite 310</td>
<td></td>
</tr>
<tr>
<td>Shreveport, LA 71104</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Customer Project:</th>
<th>CA Labs Project #:</th>
</tr>
</thead>
<tbody>
<tr>
<td>184000</td>
<td>CBR18104858</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Turnaround Time:</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 day</td>
<td>10/12/2018</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Samples Received:</th>
<th>Date Of Sampling:</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/8/2018</td>
<td></td>
</tr>
</tbody>
</table>

| Purchase Order #: | |
|-------------------| |

<table>
<thead>
<tr>
<th>Sample #</th>
<th>Comment</th>
<th>Layer</th>
<th>Subsample</th>
<th>Homogeneous</th>
<th>Asbestos Type / Calibrated Visual Estimate Percent</th>
<th>Non-asbestos Fiber Type / Percent</th>
<th>Non-fibrous Type / Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>DT014</td>
<td></td>
<td>t</td>
<td>Gray Sealant</td>
<td>Y</td>
<td>None Detected</td>
<td>100% qu, ma, ca</td>
<td></td>
</tr>
<tr>
<td>DT015</td>
<td></td>
<td>t</td>
<td>Gray Surfacing</td>
<td>Y</td>
<td>None Detected</td>
<td>100% qu, b, ca</td>
<td></td>
</tr>
<tr>
<td>DT016</td>
<td></td>
<td>2</td>
<td>Brown Ceiling Tile</td>
<td>Y</td>
<td>None Detected</td>
<td>100% ce</td>
<td></td>
</tr>
<tr>
<td>DT017</td>
<td></td>
<td>2</td>
<td>Brown Ceiling Tile</td>
<td>Y</td>
<td>None Detected</td>
<td>100% ce</td>
<td></td>
</tr>
</tbody>
</table>

---

**Baton Rouge NVLAP Lab Code 200772-0 TEM/PLM**
**TDH 30-0370**

**LDEQ**
Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E)/ Improved (EPA-600/R-93/116)
Preparation Method: HCL acid washing for carbonates based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion staining / backscattering method.

**Approved Signatories:**

Sidney Pinkerton
Analyst

Senior Analyst
Alicia Stretz

Laboratory Director
Chris Williams

---

1. Fiber damage: significant fiber damage - reported percentages reflect unattenuated fibers
2. Fiber damage: no significant fiber damage - reported percentages reflect fiber percentages
3. Articulating in association with Vermiculite
4. Layer not analyzed - attached to previous positive layer and contamination is suspected
5. Not enough sample to analyze
# Polarized Light Asbestiform Materials Characterization

<table>
<thead>
<tr>
<th>Sample #</th>
<th>Comment</th>
<th>Layer</th>
<th>Subsample</th>
<th>Homogeneity</th>
<th>Asbestos Type</th>
<th>Non-asbestos Fiber</th>
<th>Non-fibrous Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>DT018</td>
<td>Gray Surfacing</td>
<td>Y</td>
<td>None Detected</td>
<td>100% cu, bi, ca</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Brown Ceiling Tile</td>
<td>Y</td>
<td>None Detected</td>
<td>100% co</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Baton Rouge NVLAP Lab Code 2000772-0 TEM/PLM**

**LDEQ**

- Analysis Method: IRM (40 CFR Part 763 Appendix E to Subpart E) / Improved (EPA 600 / R-93/116)
- Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersed for Identification of asbestos types by dispersion attaining / bode line method

- ca = carbonate
- m = mica
- lg = fiberglass
- cr = cellulose
- ov = asbestos
- vn = vermiculite
- lb = bruceite
- or = organic
- ps = parilite
- wv = wollastonite
- ta = talc
- m = matrix
- qu = quartz
- sy = synthetic

---

**Approved Signature:**

**Sidney Pinkerton**
Analyst

**Senior Analyst**
Alicia Stretz

**Laboratory Director**
Chris Williams

---

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damage affecting fiber percentage
3. Attic dust in association with Vermiculite
4. Layer not analyzed - attached to previous positive layer and contamination is suspected
5. Not enough sample to analyze
6. Anthophyllite in association with Fibrous Talc
7. Contamination suspected from other building materials
8. Favorable scenario for water separation on vermiculite for possible analysis by another method
9. < 1% Result print counted positive
10. TEM analysis suggested
Newman Marchive Carlisle, Inc.
2800 Youree Drive - Suite 310
Shreveport, Louisiana 71104
318-219-1814 CBR181D4858

<table>
<thead>
<tr>
<th>DATE</th>
<th>PROJECT NO.</th>
<th>QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/4/18</td>
<td>184000</td>
<td>18</td>
</tr>
</tbody>
</table>

- ✔ Bulk Samples
- ✔ Air Samples
- ✔ Soil Samples
- ✔ Wipe Samples

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Asbestos</td>
<td>Lead</td>
<td>Microbial</td>
</tr>
<tr>
<td>PCM - NIOSH 7400</td>
<td>Wipe</td>
<td>Air-O-Cell</td>
</tr>
<tr>
<td>TEM - AHERA 40 CFR</td>
<td>SoI</td>
<td>Wipe</td>
</tr>
<tr>
<td>PLM - EPA 600</td>
<td>Air</td>
<td>Bulk</td>
</tr>
<tr>
<td>Soil</td>
<td>Chips</td>
<td>Culture</td>
</tr>
<tr>
<td>Wipe - TEM</td>
<td>Water</td>
<td>Agar Plate</td>
</tr>
<tr>
<td>Other</td>
<td>Other</td>
<td>Other</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SAMPLE NO:</th>
<th>Vol / Qty / Area</th>
<th>SAMPLE NO:</th>
<th>Vol / Qty / Area</th>
<th>SAMPLE NO:</th>
<th>Vol / Qty / Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DT001</td>
<td>DT016</td>
<td>DT011</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>DT002</td>
<td>DT017</td>
<td>DT012</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>DT003</td>
<td></td>
<td>DT013</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>DT004</td>
<td></td>
<td>DT014</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>DT005</td>
<td></td>
<td>DT015</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>DT006</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>DT007</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>DT008</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>DT009</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>DT010</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>DT011</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>DT012</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>DT013</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>DT014</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>DT015</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

COMMENTS / or Sample Testing Instructions:

SAMPLE TRANSFERRED FROM:

<table>
<thead>
<tr>
<th>DATE</th>
<th>SIGNATURE / COMPANY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Newman Marchive Carlisle, Inc.</td>
</tr>
<tr>
<td>2</td>
<td>10/4/18</td>
</tr>
</tbody>
</table>

SAMPLE TRANSFERRED TO:

<table>
<thead>
<tr>
<th>DATE</th>
<th>SIGNATURE / COMPANY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Newman Marchive Carlisle, Inc.</td>
</tr>
<tr>
<td>2</td>
<td>10/4/18</td>
</tr>
</tbody>
</table>

NMC Office Use

Results To:

Date: Sample Transmit.xls 11/15
Appendix 3 – Pictures
M1 - Cement Board Siding
Appendix 4 – Sample Plans
Appendix 5 – Homogenous Plans
Department of Transportation & Development
US 84: UP Railroad Overpass
Tullos, LA 71748

Scale: Not to Scale
Newman Marchive Incorporated  Project # 184000

Homogeneous ID
M1

Description
Cement Board Siding
Department of Transportation & Development
US 84: UP Railroad Overpass
Tullos, LA 71748

Scale: Not to Scale
Newman Marchive Incorporated

Homogeneous ID
F1

Description
Linoleum Floor & Mastic
Appendix 6 – Certificates
STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
certifies that

**Cynthia M Garner**

Has complied with all requirements of the Louisiana Department of Environmental Quality and is authorized to perform the duties of

**ASBESTOS CONTRACTOR/SUPERVISOR**

Accreditation No. 02008855
Date of Issuance 2/15/2018
Expiration 2/12/2018

Failure to comply with all applicable provisions of La. R.S. 20:232(E-1)(a) and La. R.S. 20:232(F) (1)(a) may result in civil and/or criminal enforcement actions by the State.

Christopher Marcey
Permit Support Services Division
Office of Environmental Services

---

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
certifies that

**Cynthia M Garner**

Has complied with all requirements of the Louisiana Department of Environmental Quality and is authorized to perform the duties of

**ASBESTOS INSPECTOR**

Accreditation No. 21200895
Date of Issuance 2/15/2018
Expiration 1/24/2019

Failure to comply with all applicable provisions of La. R.S. 20:232(E-1)(a) and La. R.S. 20:232(F) (1)(a) may result in civil and/or criminal enforcement actions by the State.

Christopher Marcey
Permit Support Services Division
Office of Environmental Services

---

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
certifies that

**Cynthia M Garner**

Has complied with all requirements of the Louisiana Department of Environmental Quality and is authorized to perform the duties of

**ASBESTOS MANAGEMENT PLANNER**

Accreditation No. 92200895
Date of Issuance 2/15/2018
Expiration 1/24/2019

Failure to comply with all applicable provisions of La. R.S. 20:232(E-1)(a) and La. R.S. 20:232(F) (1)(a) may result in civil and/or criminal enforcement actions by the State.

Christopher Marcey
Permit Support Services Division
Office of Environmental Services