ADDENDUM NO:  01
Montana State University

DATE:  Monday, January 27\textsuperscript{th}, 2020

PROJECT:  MSU CLASSROOM RENOVATIONS 2020 PPA#19-0136B

ARCHITECT:  Mosaic Architecture, 428 No. Last Chance Gulch, Helena, Montana 59601

TO:   All plan holders of record

The above-numbered solicitation is amended as set forth below. Bidders/Offerors must acknowledge receipt of this amendment prior to the hour and date specified for receipt of bids/proposals, by completing the addendum acknowledgement on the form titled “Bid Proposal”.

REVISIONS ARCHITECTURAL:

SPECIFICATION ITEMS

1.  Division 011819: Asbestos Abatement
   a.  Full hazardous material report available and included in this addendum.
   b.  See “Division 024119: MSU Asbestos Abatement Guidance Selective Demolition” for additional requirements

DRAWING ITEMS

1.  Sheet A090 DEMO PLANS – LIN 301: Hazardous materials information updated to include plan diagram.

2.  Sheet A090 DEMO PLANS – PGC 210 & 212: Hazardous materials information updated to include plan diagram.

3.  Sheet A091 DEMO PLANS- PGC 214: Hazardous materials information updated to include plan diagram.

ENCLOSURES:

A090 DEMO PLANS – LIN 301; A090 DEMO PLANS – PGC 210 & 212; A091 DEMO PLANS – PGC 214

Full Hazardous Materials Reports
ALTERNATE: LINFIELD 301
ALTERNATE FOR PPA19-0136B IS ROOM LINFIELD 301 IN ITS ENTIRETY. DO NOT INCLUDE WORK FOR LINFIELD 301 IN BASEBID.

ROOM 301
- 24 INCH X 48 INCH OFF WHITE CEILING TILE (6% AMOSITE)

LIN 301 - HAZARDOUS MATERIALS

1. REMOVE (E) WOOD RISERS, PROTECT WALLS, PREP FLOOR FOR NEW CARPET
2. WALLS TO BE REPAIRED AS REQUIRED AND PREPPED FOR PAINT
3. REMOVE (E) WINDOW COVERINGS (BLINDS AND SOLID PANELS), CLEAN GLASS AND FRAME
4. WHITEBOARDS, PROJECTOR AND PROJECTOR SCREEN TO BE REMOVED AND RETURNED TO OWNER
5. EXISTING PICTURE RAIL TO BE PROTECTED
6. REMOVE (E) ACT CEILING TILES AND GRID. LIGHTING AND FAN TO BE REMOVED. ACOUSTIC CEILING TILES MAY CONTAIN HAZARDOUS MATERIAL, SEE HAZMAT REPORT
7. REMOVE LOWER PORTION OF WINDOW TRIM. CAREFULLY CUT, SAND, FINISH, TO CREATE FINISHED TRIM LOOK.
8. KEEP, PROTECT, & REINSTALL (E) CLOCK

GENERAL DEMOLITION NOTES:
A. PATCH AND PREP ALL WALLS FOR PAINT UNLESS OTHERWISE INDICATED.
B. VERIFY ALL CONDITIONS AND COORDINATE WITH ALL DISCIPLINES OF CONTRACT. UNDOCUMENTED FIELD CHANGES MAY HAVE OCCURRED AND ARE TO BE BROUGHT TO THE ATTENTION OF THE ARCHITECT WHEN DISCOVERED.
C. WHERE DEMOLITION IS INDICATED, WALLS SHALL BE REMOVED AND CEILING SHALL BE PATCHED, REPAIRED AND PAINTED TO MATCH EXISTING.
D. UNLESS DEMOLITION IS INDICATED, PATCH AND PROTECT EXISTING CEILING.
E. COORDINATE ALL MECHANICAL, ELECTRICAL, FIRE SYSTEMS, COMMUNICATIONS AND UTILITY SHUT-DOWNS WITH OWNER PRIOR TO REMOVING AND OR RELOCATING, PER MSU REQUIREMENTS.
F. ALL DEMOLITION DRAWINGS ARE INTENDED TO SHOW GENERAL SCOPE OF WORK WITHIN THE INTENT OF THE PROJECT DOCUMENTS. CONTRACTOR SHOULD ASSUME ADDITIONAL MINOR DEMOLITION ITEMS NOT SHOWN ON PLANS, NO ADDITIONAL PAYMENT WILL BE MADE FOR SUCH MINOR ELEMENTS.
G. THESE DRAWINGS INDICATE STRUCTURAL AND NON-STRUCTURAL DEMOLITION THAT IS TO OCCUR TO MAKE WAY FOR NEW CONSTRUCTION. ADDITIONAL STRUCTURAL DEMOLITION WORK, CONSTRUCTION OR SHORING REQUIREMENT THAT IS INDICATED ON THE STRUCTURAL DRAWINGS.
H. SEE MECH. AND ELEC. DEMOLITION PLANS FOR SPECIFIC DEMO OF MECHANICAL AND ELECTRICAL SYSTEMS.
I. SEE HAZARDOUS MATERIALS ABATEMENT REPORT FOR ADDITIONAL INFORMATION AND COORDINATION (THIS HAS NOT BEEN COMPLETED AT THIS TIME. COORDINATE WITH ARCHITECT BEFORE CONSTRUCTION)
J. REMOVE AND DISPOSE OF ALL LOOSE FURNITURE INCLUDING CHAIRS, TABLES, AND LECTERN.

DEMOLITION NOTES:
A. REMOVE, REASSEMBLE, PROTECT WALLS, PATCH FOR NEW CARPET
B. WALLS TO BE REPAIRED AS REQUIRED AND PREPPED FOR PAINT
C. REMOVE (E) WINDOW COVERINGS (BLINDS AND SOLID PANELS), CLEAN GLASS AND FRAME
D. VERIFY ALL CONDITIONS AND COORDINATE WITH ALL DISCIPLINES OF CONTRACT. UNDOCUMENTED FIELD CHANGES MAY HAVE OCCURRED AND ARE TO BE BROUGHT TO THE ATTENTION OF THE ARCHITECT WHEN DISCOVERED.
E. EXISTING PICTURE RAIL TO BE PROTECTED
F. REMOVE (E) ACT CEILING TILES AND GRID. LIGHTING AND FAN TO BE REMOVED. ACOUSTIC CEILING TILES MAY CONTAIN HAZARDOUS MATERIAL, SEE HAZMAT REPORT
G. REMOVE (E) WINDOW COVERINGS (BLINDS AND SOLID PANELS), CLEAN GLASS AND FRAME
H. REMOVE (E) WINDOW COVERINGS (BLINDS AND SOLID PANELS), CLEAN GLASS AND FRAME
I. REMOVE (E) WINDOW COVERINGS (BLINDS AND SOLID PANELS), CLEAN GLASS AND FRAME
J. REMOVE (E) WINDOW COVERINGS (BLINDS AND SOLID PANELS), CLEAN GLASS AND FRAME
K. REMOVE (E) WINDOW COVERINGS (BLINDS AND SOLID PANELS), CLEAN GLASS AND FRAME
L. REMOVE (E) WINDOW COVERINGS (BLINDS AND SOLID PANELS), CLEAN GLASS AND FRAME
M. REMOVE (E) WINDOW COVERINGS (BLINDS AND SOLID PANELS), CLEAN GLASS AND FRAME
N. REMOVE (E) WINDOW COVERINGS (BLINDS AND SOLID PANELS), CLEAN GLASS AND FRAME
O. REMOVE (E) WINDOW COVERINGS (BLINDS AND SOLID PANELS), CLEAN GLASS AND FRAME
P. REMOVE (E) WINDOW COVERINGS (BLINDS AND SOLID PANELS), CLEAN GLASS AND FRAME
Q. REMOVE (E) WINDOW COVERINGS (BLINDS AND SOLID PANELS), CLEAN GLASS AND FRAME
R. REMOVE (E) WINDOW COVERINGS (BLINDS AND SOLID PANELS), CLEAN GLASS AND FRAME
S. REMOVE (E) WINDOW COVERINGS (BLINDS AND SOLID PANELS), CLEAN GLASS AND FRAME
T. REMOVE (E) WINDOW COVERINGS (BLINDS AND SOLID PANELS), CLEAN GLASS AND FRAME
U. REMOVE (E) WINDOW COVERINGS (BLINDS AND SOLID PANELS), CLEAN GLASS AND FRAME
V. REMOVE (E) WINDOW COVERINGS (BLINDS AND SOLID PANELS), CLEAN GLASS AND FRAME
W. REMOVE (E) WINDOW COVERINGS (BLINDS AND SOLID PANELS), CLEAN GLASS AND FRAME
X. REMOVE (E) WINDOW COVERINGS (BLINDS AND SOLID PANELS), CLEAN GLASS AND FRAME
Y. REMOVE (E) WINDOW COVERINGS (BLINDS AND SOLID PANELS), CLEAN GLASS AND FRAME
Z. REMOVE (E) WINDOW COVERINGS (BLINDS AND SOLID PANELS), CLEAN GLASS AND FRAME
DEMOLITION NOTES 211

1. REMOVE ALL WALLS NOT INDICATED ON DRAWINGS, PROTECT REMAINING WALLS.
2. REMOVE EXISTING DOOR AND FRAMING, REFER TO DRAWING AND PLANS FOR LOCATION.
3. DEMOLISH WALL FOR NEW DOOR AND INFWILL WALL, SEE FLOOR PLAN FOR LOCATION.
4. REMOVE (E) WALLS PER ORIGINAL DRAWINGS, PROTECT REMAINING WALLS.
5. REMOVE AND DISPOSE OF ALL LOOSE FURNITURE, REMAINING WALLS.
6. REMOVE EXISTING DOOR & FRAME, DOOR & FRAME TO BE SAVV FOR REINSTALL.
7. REMOVE (E) TALL STORAGE CABINETS ENTIRELY (SAVE FOR REINSTALL, COORDINATE WITH MSU-CPDC EXISTING ROOM 210, ROOM 211, ROOM 212)
8. REMOVE AND DISPOSE OF ALL LOOSE FURNITURE, INCLUDING LECTERN.
9. REMOVE ALL PROJECTORS, SCREENS, AND WHITEBOARDS.
10. REMOVE (E) ACT CEILING AND GRID.
11. REMOVE AND DISPOSE OF ALL CONDUIT ON WALLS.
12. REMOVE AND DISPOSE OF (E) CLOCK.
13. REMOVE (E) VENTILATION HOOD UNIT IN ROOM 214.
14. REMOVE ALL MACHINERY, FIXTURES, ETC. REMAINING.

HAZARDOUS MATERIALS

- GRAY HVAC JOINT CONNECTION Mastic (0% CHRYSOTILE)
- GRAY PUTTY ASSOCIATED WITH HVAC DUCT CONNECTIONS

GENERAL DEMOLITION NOTES:

a. PATCH AND PREP ALL WALLS FOR PAINT UNLESS OTHERWISE INDICATED.
c. REMOVE PROJECTOR, SCREEN, AND WHITEBOARDS.

- UNDOCUMENTED FIELD CHANGES MAY HAVE OCCURRED AND ARE TO BE BROUGHT TO THE ATTENTION OF THE ARCHITECT WHEN DISCOVERED.
- WHERE DEMOLITION IS INDICATED, WALLS SHALL BE REMOVED AND CEILING SHALL BE PATCHED, REPAIRED AND PAINTED TO MATCH EXISTING.
- ALL DEMOLITION DRAWINGS ARE INTENDED TO SHOW GENERAL SCOPE OF WORK WITHIN THE INTENT OF THE PROJECT AND ARE NOT INTENDED TO EXCLUDE ANY DEMOLITION WORK NECESSARY FOR PRIOR COMPLETION OF THE WORK OUTLINED IN THE PROJECT DOCUMENTS. CONTRACTOR SHOULD ASSUME ADDITIONAL MINOR WORK FOR SUCH MINOR ELEMENTS.
- SEE MECH. AND ELEC. DEMOLITION PLANS FOR SPECIFIC DEMOLITION OF MECHANICAL AND ELECTRICAL SYSTEMS.
- SEE HAZARDOUS MATERIALS ABATEMENT REPORT FOR ADDITIONAL INFORMATION AND REMEDIATION OF HAZARDOUS MATERIALS MAY BE REQUIRED.

NOTE: ROOM NUMBERS ON THIS PLAN ARE EXISTING AND APPLY ONLY TO THIS SHEET. SEE FLOOR PLAN FOR NEW ROOM NUMBERS.

DATE
01/14/2020
1. REMOVE (E) WALL (1/2" GYP STUD WALLS PER ORIGINAL DRAWINGS) PROTECT REMAINING WALLS

2. REMOVE EXISTING DOOR & FRAME, DOORS TO BE SAVED FOR REINSTALL

3. DEMOLISH WALL FOR NEW DOOR, SEE FLOOR PLAN FOR LOCATION

4. REMOVE ALL (E) FIXED FURNITURE TO BE REMOVED ENTIRELY & DISPOSED OF

5. REMOVE (E) TALL STORAGE CABINETS ENTIRELY (SAVE FOR REINSTALL, COORDINATE WITH OWNER FOR TEMP. STO. LOCATION).

6. REMOVE (E) AV EQUIPMENT & RETURN TO MSU - SCREENS, PROJECTORS

7. WHITEBOARDS TO BE REMOVED & RETURNED TO MSU

8. SINK TO BE REMOVED

9. ALL (E) WINDOW COVERINGS TO BE REMOVED

10. REMOVE (E) CEILING, LIGHTING, AND GRID

11. ALL (E) SURFACE MOUNTED CONDUIT TO BE REMOVED

12. REMOVE (E) ACT CEILING, LIGHTING, AND GRID

13. ALL (E) CORK/PIN BOARDS TO BE REMOVED AND DISPOSED OF

14. ALL DEMOLITION DRAWINGS ARE INTENDED TO SHOW GENERAL SCOPE OF WORK WITHIN THE INTENT OF THE PROJECT AND ARE NOT INTENDED TO EXCLUDE ANY DEMOLITION WORK NECESSARY FOR PRIOR COMPLETION OF THE WORK OUTLINED IN THE PROJECT DOCUMENTS. CONTRACTOR SHOULD ASSUME ADDITIONAL MINOR DEMOLITION ITEMS NOT SHOWN ON PLANS, NO ADDITIONAL PAYMENT WILL BE MADE FOR SUCH MINOR ELEMENTS.

GENERAL DEMOLITION NOTES:

a. VERIFY ALL CONDITIONS AND COORDINATE WITH ALL DISCIPLINES OF CONTRACT.

b. REMOVE PROJECTOR, SCREEN, AND WHITEBOARDS

c. VERIFY ALL CONDITIONS AND COORDINATE WITH ALL DISCIPLINES OF CONTRACT.

Where demolition is indicated, walls shall be removed and ceiling shall be patched, repaired and painted to match existing.

f. Coordinate all mechanical, electrical, fire systems, communications and plant growth systems with the owner before removing any installed systems. Coordinate with the owner for the removal of any special systems or conditions.

g. See hazardous materials abatement report for additional information and coordination.

i. Contractor to clean all window glass and frames.

J. Contractor to remove all hazardous materials.

This area has been tested for hazardous materials. Preliminary findings indicate this area has the following hazardous materials:

1. - Gray HVAC joint connection mastic (2% chrysotile)

2. - Gray HVAC joint connection mastic (2% chrysotile)
January 16, 2020

Ms. Jaclyn Liebscher  
Campus Planning, Design, and Construction  
Montana State University  
P.O. Box 172760  
Bozeman, Montana 59717

Delivered via email: jaclyn.liebscher@montana.edu

SUBJECT: Pre-Renovation Asbestos Inspection Report  
Room 301  
Linfield Hall  
Montana State University  
Bozeman, Montana  
Tetra Tech Project No. 117-8598024.100

Dear Ms. Liebscher:

On December 6, 2019, Tetra Tech, Inc. (Tetra Tech) conducted a pre-renovation asbestos inspection at the above referenced site. Based on correspondence with you prior to commencement of the project, Tetra Tech was instructed to conduct an inspection for suspect asbestos-containing materials (ACM) associated with Room 301. Details of our inspection is provided below.

PRE-RENOVATION ASBESTOS INSPECTION

The pre-renovation asbestos inspection was conducted in accordance with the Administrative Rules of Montana 17.74.354, using the currently recognized standard protocol developed under the National Emission Standards for Hazardous Air Pollutants (NESHAP) and the Asbestos Hazard Emergency Response Act (AHERA), as administered by the State of Montana Department of Environmental Quality (MDEQ).

Mr. Shane Matolyak of Tetra Tech, MDEQ Accredited Asbestos Inspector, collected samples of suspect ACM. His Inspector Accreditation Certification is presented in Attachment A.

The bulk samples were shipped, along with completed chain-of-custody documentation, to Crisp Analytical of Carrollton, Texas for the analysis of asbestos fibers by polarized light microscopy (PLM) using U.S. Environmental Protection Agency (EPA) Methods described in 40 CFR Part 763 Appendix E Subpart E (Interim and EPA 600/R-93 / 116 (Improved). Only one of the samples from each homogenous material was tested if the initial sample tested positive for asbestos. A copy of the laboratory analytical report is contained in Attachment B.

A summary of the ACMs identified to contain greater than 1% asbestos are provided in Table 1. Approximate sample collection locations are presented on Figure 1 and approximate ACM locations are presented on Figure 2.
In accordance with state and federal regulations pertaining to asbestos, the ACMs identified in Table 1 are required to be abated prior to disturbance. The ACMs are required to be removed by a licensed asbestos abatement contractor using appropriate asbestos abatement methods and procedures in accordance with applicable state and federal regulations. Following the completion of asbestos abatement, a visual inspection and asbestos air clearance need to be conducted as required by ARM 17.74.357. Any contractor preparing to bid or perform work on the site should be informed of the potential presence of ACMs. Contractors should also be informed of compliance requirements under current state and federal regulations.

The following materials sampled from the site were suspected to contain asbestos but were found not to contain asbestos by laboratory analysis:

- Gray mastic associated with rubber covering to stair edges located along steps in seating area (LH-F5.1A, B, C)
- Brown mastic associated with carpet located throughout (LH-F6.1A, B, C)
- Wallboard system located on west wall (LH-M3.1A, B, C)
- White 2-foot by 4-foot ceiling panels with pinholes and fissures located along west wall (LH-M5.2A, B, C)
- Dark brown mastic associated with black 4-inch rubber cove base located along north, east, and south walls (LH-M12.1A, B, C)
- Yellow mastic associated with black 4-inch rubber cove base located along west wall (LH-M12.2A, B, C)
- Textured concrete located on east and south walls (LH-M18.1A, B, C)
- Rough textured plaster located on north wall and above 2-foot by 4-foot ceiling panels (LH-S1.1A, B, C)
- Texture coating on ductwork located above heaters (LH-S6.1A, B, C)

LIMITATIONS

Our opinions are intended exclusively for use by Montana State University. The scope of services performed by Tetra Tech may not be appropriate to satisfy the needs of other users, and any use or re-use of this document, or the findings presented herein is prohibited and at the sole risk of the user. No additions or deletions are permitted without the express written consent of Tetra Tech. Furthermore, the opinions presented herein are limited by the requested scope of services and the site conditions existing at the time of our investigation. Therefore, our opinions and
recommendations may not apply to future site conditions which we have not had the opportunity to evaluate.

It has been a pleasure assisting you with this project. If you should have any questions or need any additional information please contact me in our Tetra Tech Billings, Montana office at (406) 248-9161.

Respectfully submitted,

Tetra Tech, Inc.

Roger W. Herman, Jr.
Asbestos, Lead & IH Services Manager

PB/RWH

Figures
Attachment A – Inspector Accreditation Certification
Attachment B – Laboratory Analytical Report
FIGURES
Pre-Renovation Asbestos Inspection
Sample Collection Location
Linfield Hall - Room 301
Montana State University
Bozeman, Montana

DATE: 1-16-2020
DRAWN BY: RWH
REVIEWED BY: RWH
PROJECT NO. 117-8598023
FIGURE NO. 1

Not to Scale
ATTACHMENT A

Inspector Accreditation Certification
SHANE MATOLYAK

has met the requirements of Montana Administrative Rule
17.74.362 and/or 17.74.363 for accreditation in the following
asbestos occupation(s) through the specified expiration date(s).

MTA-5586

Asbestos Inspector
Project Contractor/Supervisor

08/21/2020
08/09/2020

MT DEQ Asbestos Control Program
ATTACHMENT B

Asbestos Laboratory Analytical Report
Material Characterization - Bulk Asbestos Analysis

Laboratory Analysis Report - Polarized Light

Tetra Tech
7100 Commercial Ave. Ste 4
Billings, MT 59101

Customer Project: 117-8598024, MSU Linfield Hall
Reference #: CAL19128684AG
Date: 12/23/2019

Analysis and Method

Summary of polarized 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 a stereomicroscope. 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 asbestiform 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 contain trace amounts of actinolite/tremolite. When not detected by PLM, these samples 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 contain a regulated 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 asbestiform 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 protocols.

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.

Since allowable variation in quantification of samples close to 1% is high, <1% may be reported. 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 or "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). CA Labs is also accredited by AIHA LAP, LLC. in the PLM asbestos field of testing for Industrial Hygiene. All analysts have completed college courses or hold a degree in a natural science (geology, biology, or environmental science). Recognition by a state professional board in one these disciplines is preferred, but not required. Extensive in-house training programs are used to augment the educational background of the analyst. The Laboratory Director and Quality Manager have received supplemental McCrone Research training for asbestos identification. Analysis performed at Crisp Analytical Labs, LLC 1929 Old Denton Road Carrollton, TX 75006

Dallas NVLAP Lab Code 200349-0 TEM/PLM TCEQ# T104704513-15-3 TDH 30-0235 AIHA LAP, LLC Laboratory #102929
## Overview of Project Sample Material Containing Asbestos

<table>
<thead>
<tr>
<th>Customer Project:</th>
<th>117-8598024, MSU Linfield Hall</th>
</tr>
</thead>
<tbody>
<tr>
<td>CA Labs Project #:</td>
<td>CAL19128684AG</td>
</tr>
<tr>
<td>Sample #</td>
<td>LH-M5.1A</td>
</tr>
<tr>
<td>Layer #</td>
<td>M5.1</td>
</tr>
<tr>
<td>Analysts Physical Description of Subsample</td>
<td>2x4 Ceiling Panels/ white surfaced white ceiling tile</td>
</tr>
<tr>
<td>Asbestos type / calibrated visual estimate percent</td>
<td>white surfaced white ceiling tile</td>
</tr>
<tr>
<td>List of Affected Building Material Types</td>
<td>6% Amosite</td>
</tr>
</tbody>
</table>

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

- **ca**: carbonate
- **gypsum**: gypsum
- **bi**: binder
- **or**: organic
- **ma**: matrix
- **mi**: mica
- **ve**: vermiculite
- **ot**: other
- **pe**: perlite
- **qu**: quartz
- **fg**: fiberglass
- **nw**: mineral wool
- **wo**: wollastonite
- **ta**: talc
- **sy**: synthetic
- **ce**: cellulose
- **br**: brucite
- **ka**: kaolin (clay)

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, AIHA 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 sale, 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

#### Customer Info:

**Attn:** Tetra Tech  
7100 Commercial Ave. Ste 4  
Billings, MT 59101  

**Phone #** 406-248-9161  
**Fax #** 406-248-9282  

#### Customer Project:

**117-8598024, MSU Linfield Hall**  
**Samples Received:** 406-248-9282  
**Date Of Sampling:** 406-248-9161  
**Date Of Sampling:** 5 days  
**Purchase Order #:**  
**Samples Received:** None Given  
**Date Of Sampling:** None Given  

#### CA Labs Project #:  
**CAL19128684AG**  
**Date:** 12/23/2019  
**Turnaround Time:** None

#### Analysts Physical Description of Subsample

<table>
<thead>
<tr>
<th>Sample #</th>
<th>Comment</th>
<th>Layer #</th>
<th>Analytical Description of Subsample</th>
<th>Homogenenous (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>LH-F5.1A</td>
<td></td>
<td>1</td>
<td>Mastic, Rubber Covering/ gray and brown mastic</td>
<td>n</td>
<td>None Detected</td>
<td>100% qu,bi</td>
<td></td>
</tr>
<tr>
<td>LH-F5.1B</td>
<td></td>
<td>1</td>
<td>Mastic, Rubber Covering/ gray and brown mastic</td>
<td>n</td>
<td>None Detected</td>
<td>100% qu,bi</td>
<td></td>
</tr>
<tr>
<td>LH-F5.1C</td>
<td></td>
<td>1</td>
<td>Mastic, Rubber Covering/ gray and brown mastic</td>
<td>n</td>
<td>None Detected</td>
<td>100% qu,bi</td>
<td></td>
</tr>
<tr>
<td>LH-F6.1A</td>
<td></td>
<td>1</td>
<td>Mastic, Carpet to Wooden Floor/ tan and brown mastic</td>
<td>n</td>
<td>None Detected</td>
<td>100% qu,bi</td>
<td></td>
</tr>
<tr>
<td>LH-F6.1B</td>
<td></td>
<td>1</td>
<td>Mastic, Carpet to Wooden Floor/ tan and brown mastic</td>
<td>n</td>
<td>None Detected</td>
<td>100% qu,bi</td>
<td></td>
</tr>
<tr>
<td>LH-F6.1C</td>
<td></td>
<td>1</td>
<td>Mastic, Carpet to Wooden Floor/ tan and brown mastic</td>
<td>n</td>
<td>None Detected</td>
<td>100% qu,bi</td>
<td></td>
</tr>
<tr>
<td>LH-M3.1A</td>
<td></td>
<td>A-1</td>
<td>Wallboard System, Surface Compound/ white surfaced white</td>
<td>n</td>
<td>None Detected</td>
<td>100% qu,pe,bi,ca</td>
<td></td>
</tr>
</tbody>
</table>

#### AIHA LAP, LLC Laboratory #102929

**Analysis Method:** Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116). All samples received in good condition unless noted.  
**Preparation Method:** HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.  

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers  
2. Fire Damage no significant fiber damages effecting fibrous percentages  
3. Actinolite 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 point counted positive  
10. TEM analysis suggested
# Polarized Light Asbestiform Materials Characterization

**Customer Info:**

**Attn:** Customer Project:

12/23/2019

**Date:**

12/17/19 11:00AM

**Turnaround Time:**

None Given

**Samples Received:**

None Given

**Date Of Sampling:**

None Given

**Purchase Order #:**

None Given

## Wallboard System, Surface

### M3.1 Wallboard System, Surface

**Texture:** Surface

**Subsample:** Chopped sample

**Layer #**

1. **B-1**

   **Compound:** White compound

   **Asbestos type:** None Detected

   **Non-asbestos fiber type:** 100% qu,pe,bi,ca

   **Non-fibrous type:** 100% qu,pe,ca

2. **B-2**

   **Compound:** White compound (beneath tape)

   **Asbestos type:** None Detected

   **Non-asbestos fiber type:** 100% qu,pe,ca

   **Non-fibrous type:** 100% qu,pe,ca

3. **B-3**

   **Compound:** White drywall with paper

   **Asbestos type:** None Detected

   **Non-asbestos fiber type:** 10% ce

   **Non-fibrous type:** 90% qu,gy

**LH-M3.1B**

### M3.1 Wallboard System, Surface

**Texture:** Surface

**Subsample:** Chopped sample

**Layer #**

1. **C-1**

   **Compound:** White drywall with paper

   **Asbestos type:** None Detected

   **Non-asbestos fiber type:** 10% ce

   **Non-fibrous type:** 90% qu,gy

**LH-M3.1C**

## 2x4 Ceiling Panels

### M5.1 2x4 Ceiling Panels

**Texture:** Surface

**Subsample:** Chopped sample

**Layer #**

1. **A-1**

   **Compound:** Surface white ceiling tile

   **Asbestos type:** 6% Amosite

   **Non-asbestos fiber type:** 20% fg

   **Non-fibrous type:** 74% qu,ma,ot

**LH-M5.1A**

### M5.1 2x4 Ceiling Panels

**Texture:** Surface

**Subsample:** Chopped sample

**Layer #**

1. **B-1**

   **Compound:** Surface white ceiling tile

   **Asbestos type:** Positive Stop

   **Non-asbestos fiber type:**

   **Non-fibrous type:**

**LH-M5.1B**

---

**Analysis Method:** Interim (40CFR 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 immersion for identification of asbestos types by dispersion attaining / becke line method.

**Dedicated to Quality**

**CA Labs**

12232 Industriplex, Suite 32

Baton Rouge, LA 70809

**CA Labs**

1929 Old Denton Road

Carrollton, TX 75006

**Crisp Analytical, L.L.C.**

1929 Old Denton Road

Carrollton, TX 75006

**Phone:** 972-242-2754

**Fax:** 972-242-2798

**Crisp Analytical, L.L.C.**

1929 Old Denton Road

Carrollton, TX 75006

**Phone:** 972-242-2754

**Fax:** 972-242-2798

**AIHA LAP, LLC Laboratory #102929**

Dallas NVLAP Lab Code 200349-0 TEM/PLM

TCEQ# T104704513-15-3

TDH 30-0235

**Approved Signatories:**

Stanley Massett

Technical Manager

Tanner Rasmussen

Senior Analyst

Julio Robles

---

1. Fire Damage - significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage  - no significant fiber damages effecting fibrous percentages
3. Actinolite 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 point counted positive
10. TEM analysis suggested
## Polarized Light Asbestiform Materials Characterization

<table>
<thead>
<tr>
<th>Sample #</th>
<th>Component</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>LH-M5.1C</td>
<td>M5.1</td>
<td>C-1</td>
<td>2x4 Ceiling Panels/ white surface white ceiling tile</td>
<td>Positive Stop</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LH-M5.2A</td>
<td>M5.2</td>
<td>A-1</td>
<td>2x4 Ceiling Panels/ white surfacing</td>
<td>None Detected</td>
<td>100% qu,bi</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>M5.2</td>
<td>A-2</td>
<td>tan ceiling tile</td>
<td>None Detected</td>
<td>10% fg</td>
<td>40% ce</td>
<td>50% qu,pe,ma</td>
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<tr>
<td>LH-M5.2B</td>
<td>M5.2</td>
<td>B-1</td>
<td>2x4 Ceiling Panels/ white surfacing</td>
<td>None Detected</td>
<td>100% qu,bi</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>M5.2</td>
<td>B-2</td>
<td>tan ceiling tile</td>
<td>None Detected</td>
<td>10% fg</td>
<td>40% ce</td>
<td>50% qu,pe,ma</td>
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<tr>
<td>LH-M5.2C</td>
<td>M5.2</td>
<td>C-1</td>
<td>2x4 Ceiling Panels/ white surfacing</td>
<td>None Detected</td>
<td>100% qu,bi</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>M5.2</td>
<td>C-2</td>
<td>tan ceiling tile</td>
<td>None Detected</td>
<td>10% fg</td>
<td>40% ce</td>
<td>50% qu,pe,ma</td>
</tr>
</tbody>
</table>

**Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116). All samples received in good condition unless noted.**

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

**Sample # Com ment**
- M5.1: 2x4 Ceiling Panels/ white surface white ceiling tile
- M5.2: 2x4 Ceiling Panels/ white surfacing
- LH-M5.2B: 2x4 Ceiling Panels/ white surfacing
- LH-M5.2C: 2x4 Ceiling Panels/ white surfacing

**Sample Details:**
1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damages affecting fibrous percentages
3. Actinolite 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 point counted 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>LH-M12.1A</td>
<td>M12.1</td>
<td>4&quot; Cove Base w/ Mastic/</td>
<td>brown and tan mastic</td>
<td>n</td>
<td>None Detected</td>
<td>2% ta</td>
<td>98% qu,bi</td>
</tr>
<tr>
<td>LH-M12.1B</td>
<td>M12.1</td>
<td>4&quot; Cove Base w/ Mastic/</td>
<td>brown and tan mastic</td>
<td>n</td>
<td>None Detected</td>
<td>2% ta</td>
<td>98% qu,bi</td>
</tr>
<tr>
<td>LH-M12.1C</td>
<td>M12.1</td>
<td>4&quot; Cove Base w/ Mastic/</td>
<td>brown and tan mastic</td>
<td>n</td>
<td>None Detected</td>
<td>2% ta</td>
<td>98% qu,bi</td>
</tr>
<tr>
<td>LH-M12.2A</td>
<td>M12.2</td>
<td>4&quot; Cove Base w/ Mastic/</td>
<td>mastic</td>
<td>y</td>
<td>None Detected</td>
<td>100% qu,bi</td>
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<tr>
<td>LH-M12.2B</td>
<td>M12.2</td>
<td>4&quot; Cove Base w/ Mastic/</td>
<td>mastic</td>
<td>y</td>
<td>None Detected</td>
<td>100% qu,bi</td>
<td></td>
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<tr>
<td>LH-M12.2C</td>
<td>M12.2</td>
<td>4&quot; Cove Base w/ Mastic/</td>
<td>mastic</td>
<td>y</td>
<td>None Detected</td>
<td>100% qu,bi</td>
<td></td>
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<tr>
<td>LH-M18.1A</td>
<td>M18.1</td>
<td>Surface/</td>
<td>tan surfaced white</td>
<td>n</td>
<td>None Detected</td>
<td>100% qu,bi,ca</td>
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</table>

**Concrete Wall, Textured**

<table>
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<tr>
<th>Sample #</th>
<th>Comment</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>
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<tbody>
<tr>
<td>LH-M18.1A</td>
<td>M18.1</td>
<td>Surface/</td>
<td>tan surfaced white</td>
<td>n</td>
<td>None Detected</td>
<td>100% qu,bi,ca</td>
</tr>
</tbody>
</table>

---

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damages affecting fibrous percentages
3. Actinolite 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 point counted positive
10. TEM analysis suggested
### Polarized Light Asbestiform Materials Characterization

**Customer Info:**
- **Attn:** Tetra Tech
- **Address:** 7100 Commercial Ave. Ste 4
- **City:** Billings, MT 59101
- **Phone #:** 406-248-9161
- **Fax #:** 406-248-9282

**Customer Project:**
- **117-8598024, MSU Linfield Hall**
- **Date:** 12/23/2019
- **Date Of Sampling:** None Given

**CA Labs Project #:** CAL19128684AG

**Turnaround Time:** 5 days
**Samples Received:** 406-248-9161 5 days
**Purchase Order #:** 406-248-9282

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<tr>
<th>Sample #</th>
<th>Com</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>
</tr>
</thead>
<tbody>
<tr>
<td>LH-M18.1B</td>
<td>M18.1</td>
<td>Concrete Wall, Textured Surface/ tan surfaced white</td>
<td></td>
<td>n</td>
<td>None Detected</td>
</tr>
<tr>
<td>LH-M18.1C</td>
<td>M18.1</td>
<td>Concrete Wall, Textured Surface/ tan surfaced white</td>
<td></td>
<td>n</td>
<td>None Detected</td>
</tr>
<tr>
<td>LH-S1.1A</td>
<td>S1.1A-1</td>
<td>Plaster Wall and Ceiling w/ Texture/ tan surfaced white</td>
<td></td>
<td>n</td>
<td>None Detected</td>
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<tr>
<td>LH-S1.1B</td>
<td>S1.1B-1</td>
<td>Plaster Wall and Ceiling w/ Texture/ white plaster</td>
<td></td>
<td>y</td>
<td>None Detected</td>
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<tr>
<td>LH-S1.1C</td>
<td>S1.1C-1</td>
<td>Plaster Wall and Ceiling w/ Texture/ tan surfaced white</td>
<td></td>
<td>n</td>
<td>None Detected</td>
</tr>
<tr>
<td>LH-S1.1D</td>
<td>S1.1D-1</td>
<td>Plaster Wall and Ceiling w/ Texture/ tan surfaced white</td>
<td></td>
<td>n</td>
<td>None Detected</td>
</tr>
</tbody>
</table>


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

**Approval Signatories:**
- **Stanley Massett**
  - Technical Manager
- **Tanner Rasmussen**
  - Senior Analyst
- **Julio Robles**
  - Analyst

---

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant damages affecting fibrous percentages
3. Actinolite 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 point counted positive
10. TEM analysis suggested
## Polarized Light Asbestiform Materials Characterization

### Customer Info:
- **Attn:** Customer Project:
- **12/23/19**
- **12/17/19 11:00AM**
- **Phone # None Given**
- **Fax #**

### Senior Analyst
- **Julio Robles**

### Customer Project:
- **117-8598024, MSU Linfield Hall**
- **CA Labs Project #:**
- **CAL19128684AG**

### Date:
- **12/23/2019**

### Turnaround Time:
- **5 days**

### Samples Received:
- **Date Of Sampling:**
- **Purchase Order #:**

### Sample 
<table>
<thead>
<tr>
<th>#</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>
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<tbody>
<tr>
<td>LH-S1.1E</td>
<td>S1.1E-1</td>
<td>plaster</td>
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<tr>
<td>LH-S1.1F</td>
<td>S1.1F-1</td>
<td>plaster</td>
<td>None Detected</td>
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<tr>
<td>LH-S1.1G</td>
<td>S1.1G-1</td>
<td>plaster</td>
<td>None Detected</td>
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</tr>
<tr>
<td>LH-S6.1A</td>
<td>S6.1A-1</td>
<td>Ductwork/ tan surfacing</td>
<td>None Detected</td>
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<tr>
<td>LH-S6.1B</td>
<td>S6.1B-1</td>
<td>Ductwork/ tan surfacing</td>
<td>None Detected</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LH-S6.1C</td>
<td>S6.1C-1</td>
<td>Ductwork/ tan surfacing</td>
<td>None Detected</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Analysis Method:
- **Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116).**
- All samples received in good condition unless noted.
- Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

### Approved Signatories:
- **Stanley Massett, Technical Manager**
- **Tanner Rasmussen, Analyst**
- **Julio Robles, Senior Analyst**

---

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damages affecting fibrous percentages
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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 point counted positive
10. TEM analysis suggested
**FEDEx**

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<tr>
<th>Received By</th>
<th>Date &amp; Time</th>
<th>VIA</th>
<th>Date &amp; Time</th>
<th>Receiving By</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TURNAROUND TIME**

- Analyze until Positive Stop: Positive Stop by Material Type as Noted
- Analyze and Report All Separable Layers per EPA 600
- Multi-Layered Samples:  
  - Plan Point Count, PC 400 Points (All samples greater than 0%, but less than 10%)
- Plan EPA 600/93/116

**PLM INSTRUCTIONS**

**Client:**
- MSU

**Project Information**

- Project Number: 117-8598024
- Project Name: MSU Limited Hall
- Sample Location:
  - Location: Bozeman
  - Client: MSU

- Sampler Signature(s):
- Roger Herman
  - Cell: 406.870.4484
  - Cell: 406.384.0297
  - Cell: 406.381.3077
  - Email: RogerHerman@tetrotech.com
- Shane Matoyak
  - Cell: 406.249.9161
  - Email: shanematoyak@tetrotech.com

**Contact Information**

- Phone: 406.249.9161
- Fax: 406.248.9292
- Address: 1011 W. Montana St., Missoula, MT 59802

**Asbestos PLM Chain of Custody**

- CAL191286804
<table>
<thead>
<tr>
<th>NOTES</th>
<th>SAMPLE DESCRIPTION AND LOCATION</th>
<th>LAB ID</th>
<th>HOMOGENEOUS ID</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2-foot by 4-foot profile and issue ceiling panels (dirty white).</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Wallboard system, yellow with rough surface texture. West wall.</td>
<td></td>
<td>LH-M3.1-A</td>
</tr>
<tr>
<td></td>
<td>Wallboard system, yellow with rough surface texture. West wall.</td>
<td></td>
<td>LH-M3.1-B</td>
</tr>
<tr>
<td></td>
<td>Wallboard system, yellow with rough surface texture. West wall.</td>
<td></td>
<td>LH-M3.1-A</td>
</tr>
<tr>
<td></td>
<td>Brown mastic adhering carpet to wooden floor.</td>
<td></td>
<td>LH-M6.1-C</td>
</tr>
<tr>
<td></td>
<td>Brown mastic adhering carpet to wooden floor.</td>
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</tr>
<tr>
<td></td>
<td>Brown mastic adhering carpet to wooden floor.</td>
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<td>LH-M6.1-A</td>
</tr>
<tr>
<td></td>
<td>Grey mastic adhering rubber covering to stair edges.</td>
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<td>LH-F5.1-C</td>
</tr>
<tr>
<td></td>
<td>Grey mastic adhering rubber covering to stair edges.</td>
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<td>LH-F5.1-B</td>
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<tr>
<td></td>
<td>Grey mastic adhering rubber covering to stair edges.</td>
<td></td>
<td>LH-F5.1-A</td>
</tr>
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ASBESTOS PLAN CHAIN OF CUSTODY

CAL/19128684

TETRA TECH
<table>
<thead>
<tr>
<th>Sample Description and Location</th>
<th>Lab ID</th>
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<tbody>
<tr>
<td>Black 4-inch cover base associated with yellow mastical along west wall. and south walls.</td>
<td>LH-M122-B</td>
</tr>
<tr>
<td>2-tool by 4-foot pinhole and issue ceiling panels (bright white). Front of</td>
<td>LH-M121-C</td>
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<tr>
<td>2-tool by 4-foot pinhole and issue ceiling panels (bright white). Front of</td>
<td>LH-M121-B</td>
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<td>2-tool by 4-foot pinhole and issue ceiling panels (dirty white). Front of</td>
<td>LH-M121-A</td>
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<tr>
<td>2-tool by 4-foot pinhole and issue ceiling panels (dirty white). Front of</td>
<td>LH-M52-B</td>
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<td>LH-M52-A</td>
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<td>2-tool by 4-foot pinhole and issue ceiling panels (dirty white). Front of</td>
<td>LH-M51-C</td>
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<td>2-tool by 4-foot pinhole and issue ceiling panels (dirty white). Front of</td>
<td>LH-M51-B</td>
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NOTES
<table>
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<tr>
<td>LH-S1.1-G</td>
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</tr>
</tbody>
</table>
January 17, 2020

Ms. Jaclyn Liebscher  
Campus Planning, Design, and Construction  
Montana State University  
P.O. Box 172760  
Bozeman, Montana 59717

Delivered via email: jaclyn.liebscher@montana.edu

SUBJECT: Pre-Renovation Asbestos Inspection Report
Room 210 thorough 216
Plant Growth Center
Montana State University
Bozeman, Montana
Tetra Tech Project No. 117-8598024.100

Dear Ms. Liebscher:

On December 11, 2019, Tetra Tech, Inc. (Tetra Tech) conducted a pre-renovation asbestos inspection at the above referenced site. Based on correspondence with you prior to commencement of the project, Tetra Tech was instructed to conduct an inspection for suspect asbestos-containing materials (ACM) associated with Rooms 210 through 216. Details of our inspection is provided below.

PRE-RENOVATION ASBESTOS INSPECTION

The pre-renovation asbestos inspection was conducted in accordance with the Administrative Rules of Montana 17.74.354, using the currently recognized standard protocol developed under the National Emission Standards for Hazardous Air Pollutants (NESHAP) and the Asbestos Hazard Emergency Response Act (AHERA), as administered by the State of Montana Department of Environmental Quality (MDEQ).

Mr. Shane Matolyak of Tetra Tech, MDEQ Accredited Asbestos Inspector, collected samples of suspect ACM. His Inspector Accreditation Certification is presented in Attachment A.

The bulk samples were shipped, along with completed chain-of-custody documentation, to Crisp Analytical of Carrollton, Texas for the analysis of asbestos fibers by polarized light microscopy (PLM) using U.S. Environmental Protection Agency (EPA) Methods described in 40 CFR Part 763 Appendix E Subpart E (Interim and EPA 600/R-93 / 116 (Improved). Only one of the samples from each homogenous material was tested if the initial sample tested positive for asbestos. A copy of the laboratory analytical report is contained in Attachment B.

A summary of the ACMs identified to contain greater than 1% asbestos are provided in Table 1. Approximate sample collection locations are presented on Figure 1 and approximate ACM location is presented on Figure 2.
Table 1
Summary of ACM
Room 210 through 216
Plant Growth Center
Montana State University
Bozeman, Montana

<table>
<thead>
<tr>
<th>HA Number</th>
<th>Material Description</th>
<th>Percent Asbestos</th>
<th>Material Type</th>
<th>NESHAP Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>PGC-T4.2</td>
<td>Gray putty associated with HVAC duct joint connections</td>
<td>2% Chrysotile</td>
<td>Miscellaneous</td>
<td>Category II Non-Friable</td>
</tr>
</tbody>
</table>

HA: Homogeneous Area Number
NESHAP: National Emission Standard for Hazardous Air Pollutants
RACM: Regulated Asbestos Containing Material

In accordance with state and federal regulations pertaining to asbestos, the ACMs identified in Table 1 are required to be abated prior to disturbance. The ACMs are required to be removed by a licensed asbestos abatement contractor using appropriate asbestos abatement methods and procedures in accordance with applicable state and federal regulations. Following the completion of asbestos abatement, a visual inspection and asbestos air clearance need to be conducted as required by ARM 17.74.357. Any contractor preparing to bid or perform work on the site should be informed of the potential presence of ACMs. Contractors should also be informed of compliance requirements under current state and federal regulations.

The following materials sampled from the site were suspected to contain asbestos but were found not to contain asbestos by laboratory analysis:

- Blotchy textured wallboard system located throughout (PGC-M3.1 A, B, C, D, E, F, G)
- Unfinished wallboard located in Room 215 (PGC-M3.2 A, B, C)
- 2-foot by 4-foot white ceiling panels with pinholes and large fissures located throughout (PGC-M5.1A, B, C)
- Black sink undercoating located in Room 210 (PGC-M10.1A, B, C)
- White sink undercoating located in Room 211 and 214 (PGC-M10.2A, B, C)
- Yellow mastic associated with gray 4-inch rubber cove base located throughout (PGC-M12.1A, B, C)
- Brown mastic associated with gray 4-inch rubber cove base located on south side of Room 216 (PGC-M12.2A, B, C)
- Tan mastic associated with black 4-inch rubber cove base located in corridors (PGC-M12.3A, B, C)
- Black laboratory countertops located in Room 210 (PGC-M15.1A, B, C)
- Concrete wall located in Room 216 (PGC-M18.1A, B, C)
- Concrete floor located throughout (PGC-M18.2A, B, C)
- 4-foot by 4-foot chalkboards located in Room 210 (PGC-M23.1A, B, C)
- Sound deadening soundboard located on walls of Room 214 (PGC-M28.1A, B, C)
- Paper and mastic associated with duct wrap insulation located above ceiling in Room 212 (PGC-M32.1A, B, C)
- Tan mastic associated with plasticized splash guard panels located at utility sink in Room 215 (PGC-M33.1A, B, C)
• Woven joint connection tape sealant associated with HVAC located throughout various locations above ceiling (PGC-T4.1A, B, C)

LIMITATIONS

Our opinions are intended exclusively for use by Montana State University. The scope of services performed by Tetra Tech may not be appropriate to satisfy the needs of other users, and any use or re-use of this document, or the findings presented herein is prohibited and at the sole risk of the user. No additions or deletions are permitted without the express written consent of Tetra Tech. Furthermore, the opinions presented herein are limited by the requested scope of services and the site conditions existing at the time of our investigation. Therefore, our opinions and recommendations may not apply to future site conditions which we have not had the opportunity to evaluate.

It has been a pleasure assisting you with this project. If you should have any questions or need any additional information please contact me in our Tetra Tech Billings, Montana office at (406) 248-9161.

Respectfully submitted,

Tetra Tech, Inc.

Roger W. Herman, Jr.
Asbestos, Lead & IH Services Manager

PB/RWH

Figures
Attachment A – Inspector Accreditation Certification
Attachment B – Laboratory Analytical Report
Pre-Renovation Asbestos Inspection
ACM Location
Growth Plant Center
Rooms 210 through 216
Montana State University
Bozeman, Montana

Legend

PGC-T4.2 - Gray putty associated with HVAC duct joint connections
ATTACHMENT A

Inspector Accreditation Certification
SHANE MATOLYAK
has met the requirements of Montana Administrative Rule
17.74.362 and/or 17.74.363 for accreditation in the following
asbestos occupation(s) through the specified expiration date(s).

Asbestos Inspector
Project Contractor/Supervisor

MT DEQ Asbestos Control Program
ATTACHMENT B

Asbestos Laboratory Analytical Report
Materials Characterization - Bulk Asbestos Analysis

Laboratory Analysis Report - Polarized Light

Customer Project: MSU Plant Growth Center
Reference #: CAL19128620AG
Date: 12/19/2019

Analysis and Method

Summary of polarized 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 a stereomicroscope. 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 asbestiform 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 contain trace amounts of actinolite/tremolite. When not detected by PLM, these samples 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 contain a regulated 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 asbestiform 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 protocols.

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.

Since allowable variation in quantification of samples close to 1% is high, <1% may be reported. 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 or "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). CA Labs is also accredited by AIHA LAP, LLC. in the PLM asbestos field of testing for Industrial Hygiene. All analysts have completed college courses or hold a degree in a natural science (geology, biology, or environmental science). Recognition by a state professional board in one these disciplines is preferred, but not required. Extensive in-house training programs are used to augment the educational background of the analyst. The Laboratory Director and Quality Manager have received supplemental McCrone Research training for asbestos identification. Analysis performed at Crisp Analytical Labs, LLC 1929 Old Denton Road Carrollton, TX 75006
## Overview of Project Sample Material Containing Asbestos

<table>
<thead>
<tr>
<th>Sample #</th>
<th>Layer #</th>
<th>Analysts Physical Description of Subsample</th>
<th>Asbestos type / calibrated visual estimate percent</th>
<th>List of Affected Building Material Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>PGC-T4.2A</td>
<td>T4.2A-1</td>
<td>gray sealant</td>
<td>2% Chrysotile</td>
<td></td>
</tr>
</tbody>
</table>

---

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

- ca - carbonate
- gypsum - gypsum
- or - organic
- ma - matrix
- ma - mica
- ve - vermiculite
- ot - other
- pe - perlite
- qu - quartz
- fg - fiberglass
- mw - mineral wool
- wo - wollastonite
- ta - talc
- sy - synthetic
- ce - cellulose
- br - brucite
- ka - kaolin (clay)

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, AIHA 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 sale, 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

## Customer Info

**Attn:**

**Customer Project:**

**CA Labs Project #:**

**Customer Info:**

**Tetra Tech**

7100 Commercial Ave. Ste 4

Billings, MT 59101

**Date:** 12/19/2019

**Samples Received:** 12/13/19 10:30AM

**Date Of Sampling:** None Given

**Date Of Sampling:**

**Purchase Order #:**

**Phone #**

**Fax #**

---

<table>
<thead>
<tr>
<th>Sample #</th>
<th>Com ment</th>
<th>Layer #</th>
<th>Analysts Physical Description of Subsample</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>M3.1</td>
<td>A-1</td>
<td>white surfaced white compound</td>
<td>n</td>
<td>None Detected</td>
<td>100% qu,bi,ca</td>
<td></td>
</tr>
<tr>
<td>M3.1</td>
<td>A-2</td>
<td>white drywall with brown paper</td>
<td>n</td>
<td>None Detected</td>
<td>20% ce 80% qu,gy</td>
<td></td>
</tr>
<tr>
<td>M3.1</td>
<td>B-1</td>
<td>white surfaced white compound</td>
<td>n</td>
<td>None Detected</td>
<td>100% qu,bi,ca</td>
<td></td>
</tr>
<tr>
<td>M3.1</td>
<td>B-2</td>
<td>white compound (beneath tape)</td>
<td>y</td>
<td>None Detected</td>
<td>100% qu,ca</td>
<td></td>
</tr>
<tr>
<td>M3.1</td>
<td>B-3</td>
<td>white drywall with brown paper</td>
<td>n</td>
<td>None Detected</td>
<td>20% ce 80% qu,gy</td>
<td></td>
</tr>
<tr>
<td>M3.1</td>
<td>C-1</td>
<td>white surfaced white compound</td>
<td>n</td>
<td>None Detected</td>
<td>100% qu,bi,ca</td>
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</tr>
</tbody>
</table>

---

**CA Labs, L.L.C.**

12232 Industriplex, Suite 32

Baton Rouge, LA 70809

Phone 225-751-5632

Fax 225-751-5634

---

**CA Labs**

1929 Old Denton Road

Carrollton, TX 75006

Phone 972-242-2754

Fax 972-242-2798

---

**Crisp Analytical, L.L.C.**

Dedicated to Dedicated to Dedicated to Dedicated to

Quality Quality Quality Quality

Crisp Analytical, L.L.C.

1929 Old Denton Road

Carrollton, TX  75006

Phone 972-242-2754

Fax 972-242-2798

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Phone 972-242-2754

Fax 972-242-2798

---

**AIHA LAP, LLC Laboratory #102929**

**Analysis Method:** Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116). All samples received in good condition unless noted.

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

<table>
<thead>
<tr>
<th>ca - carbonate</th>
<th>mi - mica</th>
<th>fg - fiberglass</th>
<th>ce - cellulose</th>
</tr>
</thead>
<tbody>
<tr>
<td>gy - gypsum</td>
<td>ve - vermiculite</td>
<td>mw - mineral wool</td>
<td>br - brucite</td>
</tr>
<tr>
<td>bi - binder</td>
<td>ot - other</td>
<td>wo - wollastonite</td>
<td>ka - kaolin (clay)</td>
</tr>
<tr>
<td>or - organic</td>
<td>pe - perlite</td>
<td>ta - talc</td>
<td>pa - palygorskite (clay)</td>
</tr>
<tr>
<td>ma - matrix</td>
<td>qu - quartz</td>
<td>sy - synthetic</td>
<td></td>
</tr>
</tbody>
</table>

---

**Approved Signatories:**

---

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damages affecting fibrous percentages
3. Actinolite 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 point counted positive
10. TEM analysis suggested

---

**Julio Robles**

Technical Manager

**Tanner Rasmussen**

Senior Analyst

---

**Julio Robles**

Analyist

**C. T. Ren**

Senior Analyst

---

Page 3 of 14
### Polarized Light Asbestiform Materials Characterization

**Customer Info:**

**Attn:** Customer Project:

12/19/2019

**Date:** 12/19/2019

**12/13/19 10:30AM**

**Samples Received:** None Given

**Date Of Sampling:** None Given

**Purchase Order #:**

**CA Labs Project #:**

CAL19128620AG

**Customer Project:**

MSU Plant Growth Center

**Samples Received:** 5 days

**Samples Received:**

**Samples Received:** 5 days

**Samples Received:**

**Samples Received:** 5 days

<table>
<thead>
<tr>
<th>Sample #</th>
<th>Com ment</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>M3.1</td>
<td>C-3</td>
<td>n</td>
<td>white drywall with brown paper</td>
<td>None Detected</td>
<td>20% ce</td>
<td>80% qu,gy</td>
<td></td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>

**Analysis Method:** Interim (40CFR 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 immersion for identification of asbestos types by dispersion attaining / becke line method.

**AIHA LAP, LLC Laboratory #102929**

**Dallas NVLAP Lab Code 200349-0 TEM/PLM**

**TCEQ# T104704513-15-3**

**TDH 30-0235**

**Approved Signatories:**

**Julio Robles**

**Technical Manager**

**Tanner Rasmussen**

**Senior Analyst**

**Julio Robles**

**Analyst**

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damages affecting fibrous percentages
3. Actinolite 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 of other building materials
8. Favorable scenario for water separation on vermiculite for another analysis by another method
9. < 1% Result point counted 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>
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<th>Non-fibrous type / percent</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>M3.1F-</th>
<th>2</th>
<th>white compound (beneath tape)</th>
<th>y</th>
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<tbody>
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<td>M3.1F-</td>
<td>3</td>
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<td>n</td>
<td>None Detected</td>
<td>20% ce</td>
</tr>
<tr>
<td>PGC-M3.1G</td>
<td>G-1</td>
<td>white surfaced white compound</td>
<td>n</td>
<td>None Detected</td>
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<tr>
<td>M3.1</td>
<td>G-2</td>
<td>white compound (beneath tape)</td>
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<td>100% qu.ca</td>
</tr>
<tr>
<td>M3.1</td>
<td>G-3</td>
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<td>n</td>
<td>None Detected</td>
<td>20% ce</td>
</tr>
<tr>
<td>PGC-M3.2A</td>
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<td>100% qu.ca</td>
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<tr>
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<td>white compound (beneath tape)</td>
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<td>100% qu.ca</td>
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</tbody>
</table>

**Dallas NVLAP Lab Code 200349-0 TEM/PLM**

**AIHA LAP, LLC Laboratory #102929**

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116). All samples received in good condition unless noted.

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

Approved Signatories:

- Julio Robles, Technical Manager
- Tanner Rasmussen, Senior Analyst
- Julio Robles, Analyst

---

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damages effecting fibers percentages
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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 point counted positive
10. TEM analysis suggested
## Polarized Light Asbestiform Materials Characterization

<table>
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<th>Sample #</th>
<th>Comment</th>
<th>Layer #</th>
<th>Analysts Physical Description of Subsample</th>
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<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>M3.2</td>
<td></td>
<td>A-3</td>
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<td>n</td>
<td>None Detected</td>
<td>20% ce</td>
<td>80% qu,gy</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>PGC-M3.2B</td>
<td></td>
<td>B-1</td>
<td>white compound</td>
<td>y</td>
<td>None Detected</td>
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<td></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>PGC-M3.2C</td>
<td></td>
<td>C-1</td>
<td>white compound</td>
<td>y</td>
<td>None Detected</td>
<td>100% qu,ca</td>
<td></td>
</tr>
<tr>
<td>M3.2</td>
<td></td>
<td>C-2</td>
<td>white compound (beneath tape)</td>
<td>y</td>
<td>None Detected</td>
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Dallas NVLAP Lab Code 200349-0 TEM/PLM  
TCEQ# T104704513-15-3  
TDH 30-0235  

**AIHA LAP, LLC Laboratory #102929**

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116). All samples received in good condition unless noted.

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

Approved Signatories:

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Polarized Light Asbestiform Materials Characterization

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<tr>
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<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>PGC-M5.1A</td>
<td>M5.1</td>
<td>A-1</td>
<td>white surfacing</td>
<td>y</td>
<td>None Detected</td>
<td>Homogeneous (Y/N)</td>
<td>Asbestos type / calibrated visual estimate percent</td>
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<tr>
<td>M5.1</td>
<td>A-2</td>
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<td>y</td>
<td>None Detected</td>
<td>Homogeneous (Y/N)</td>
<td>Asbestos type / calibrated visual estimate percent</td>
<td>Non-asbestos fiber type / percent</td>
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<tr>
<td>PGC-M5.1B</td>
<td>M5.1</td>
<td>B-1</td>
<td>white surfacing</td>
<td>y</td>
<td>None Detected</td>
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<td>Asbestos type / calibrated visual estimate percent</td>
</tr>
<tr>
<td>M5.1</td>
<td>B-2</td>
<td>tan ceiling tile</td>
<td>y</td>
<td>None Detected</td>
<td>Homogeneous (Y/N)</td>
<td>Asbestos type / calibrated visual estimate percent</td>
<td>Non-asbestos fiber type / percent</td>
</tr>
<tr>
<td>PGC-M5.1C</td>
<td>M5.1</td>
<td>C-1</td>
<td>white surfacing</td>
<td>y</td>
<td>None Detected</td>
<td>Homogeneous (Y/N)</td>
<td>Asbestos type / calibrated visual estimate percent</td>
</tr>
<tr>
<td>M5.1</td>
<td>C-2</td>
<td>tan ceiling tile</td>
<td>y</td>
<td>None Detected</td>
<td>Homogeneous (Y/N)</td>
<td>Asbestos type / calibrated visual estimate percent</td>
<td>Non-asbestos fiber type / percent</td>
</tr>
<tr>
<td>PGC- M10.1A</td>
<td>M10.1</td>
<td>A-1</td>
<td>black sealant</td>
<td>y</td>
<td>None Detected</td>
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<tr>
<td>Dallas NVLAP Lab Code 200349-0 TEM/PLM</td>
<td>TCEQ# T104704513-15-3</td>
<td>TDH 30-0235</td>
<td>AIHA LAP, LLC Laboratory #102929</td>
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<td></td>
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</table>

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116). All samples received in good condition unless noted.

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

Approved Signatories:

Julio Robles
Technical Manager

Tanner Rasmussen
Senior Analyst

Julio Robles
Analyst

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damages effecting fibrous percentages
3. Actinole 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 point counted positive
10. TEM analysis suggested
### Polarized Light Asbestiform Materials Characterization

<table>
<thead>
<tr>
<th>Customer Info:</th>
<th>Attn:</th>
<th>Customer Project:</th>
<th>CA Labs Project #:</th>
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<tbody>
<tr>
<td>Tetra Tech</td>
<td></td>
<td>MSU Plant Growth Center</td>
<td>CAL19128620AG</td>
</tr>
<tr>
<td>7100 Commercial Ave. Ste 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Billings, MT 59101</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phone #</td>
<td>406-248-9161</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fax #</td>
<td>406-248-9282</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Samples Received:

- **Date Of Sampling:** None Given
- **Turnaround Time:** 5 days
- **Samples Received:** 12/13/19 10:30AM
- **Samples Delivered:** 12/19/2019

#### Sample Table:

<table>
<thead>
<tr>
<th>Sample #</th>
<th>Com</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>PGC-M10.1B</td>
<td>A-1</td>
<td>gray sealant</td>
<td>y</td>
<td>None Detected</td>
<td>100% qu, gy, bi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PGC-M10.1C</td>
<td>B-1</td>
<td>black sealant</td>
<td>y</td>
<td>None Detected</td>
<td>100% qu, gy, bi</td>
<td></td>
<td></td>
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<tr>
<td>PGC-M10.2A</td>
<td>C-1</td>
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<td>y</td>
<td>None Detected</td>
<td>100% qu, mi, bi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PGC-M10.2B</td>
<td>D-1</td>
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<td>None Detected</td>
<td>100% qu, mi, bi</td>
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<td>y</td>
<td>None Detected</td>
<td>100% qu, mil</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damage affecting fibrous 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. 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 point counted positive
10. TEM analysis suggested
## Polarized Light Asbestiform Materials Characterization

### Customer Info:
- **Attn:** Customer Project:
- **MSU Plant Growth Center**
- **Date:** 12/19/2019
- **Turnaround Time:** 5 days
- **Samples Received:** 12/13/19 10:30AM
- **Date Of Sampling:** None Given
- **Purchase Order #:**
- **Senior Analyst:** Julio Robles

### CA Labs Project #:
- **CAL19128620AG**

### Sample Analysis

<table>
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<tr>
<th>Sample #</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>PGC-M12.1C</td>
<td>C-1</td>
<td>tan mastic</td>
<td>y</td>
<td>None Detected</td>
<td>100% gy,bi</td>
<td></td>
</tr>
<tr>
<td>PGC-M12.2A</td>
<td>A-1</td>
<td>brown mastic</td>
<td>y</td>
<td>None Detected</td>
<td>2% wo</td>
<td>98% gy,bi</td>
</tr>
<tr>
<td>PGC-M12.2B</td>
<td>B-1</td>
<td>brown mastic</td>
<td>y</td>
<td>None Detected</td>
<td>2% wo</td>
<td>98% gy,bi</td>
</tr>
<tr>
<td>PGC-M12.2C</td>
<td>C-1</td>
<td>brown mastic</td>
<td>y</td>
<td>None Detected</td>
<td>2% wo</td>
<td>98% gy,bi</td>
</tr>
<tr>
<td>PGC-M12.3A</td>
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<td>tan mastic</td>
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<td>100% gy,bi</td>
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<tr>
<td>PGC-M12.3B</td>
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<td>tan mastic</td>
<td>y</td>
<td>None Detected</td>
<td>100% gy,bi</td>
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### Analysis Method:
- Interim (40CFR 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 immersion for identification of asbestos types by dispersion attaining / becke line method.

### Approved Signatories:
- **Julio Robles**
  - Technical Manager
- **Tanner Rasmussen**
  - Senior Analyst
- **Julio Robles**
  - Analyst

---

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
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8. Favorable scenario for water separation on vermiculite for possible analysis by another method
9. < 1% Result point counted positive
10. TEM analysis suggested
<table>
<thead>
<tr>
<th>Sample #</th>
<th>Comment</th>
<th>Layer #</th>
<th>Analysts Physical Description of Subsample</th>
<th>Asbestos type / calibrated visual estimate percent</th>
<th>Non-asbestos fiber type / percent</th>
<th>Non-fibrous type / percent</th>
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</thead>
<tbody>
<tr>
<td>PGC-M15.1A</td>
<td>A-1</td>
<td>black countertop</td>
<td>y</td>
<td>None Detected</td>
<td>100% qu,ca</td>
<td></td>
</tr>
<tr>
<td>PGC-M15.1B</td>
<td>B-1</td>
<td>black countertop</td>
<td>y</td>
<td>None Detected</td>
<td>100% qu,ca</td>
<td></td>
</tr>
<tr>
<td>PGC-M15.1C</td>
<td>C-1</td>
<td>black countertop</td>
<td>y</td>
<td>None Detected</td>
<td>100% qu,ca</td>
<td></td>
</tr>
<tr>
<td>PGC-M18.1A</td>
<td>A-1</td>
<td>gray concrete</td>
<td>y</td>
<td>None Detected</td>
<td>100% qu,ca</td>
<td></td>
</tr>
<tr>
<td>PGC-M18.1B</td>
<td>B-1</td>
<td>gray concrete</td>
<td>y</td>
<td>None Detected</td>
<td>100% qu,ca</td>
<td></td>
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<tr>
<td>PGC-M18.1C</td>
<td>C-1</td>
<td>gray concrete</td>
<td>y</td>
<td>None Detected</td>
<td>100% qu,ca</td>
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<tr>
<td>PGC-M18.2A</td>
<td>A-1</td>
<td>gray concrete</td>
<td>y</td>
<td>None Detected</td>
<td>100% qu,ca</td>
<td></td>
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</tbody>
</table>

**Dallas NVLAP Lab Code 200349-0 TEM/PLM**

**AIHA LAP, LLC Laboratory #102929**

**Analysis Method:** Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116). All samples received in good condition unless noted.

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

**Approved Signatories:**

Julio Robles  
Technical Manager

Tanner Rasmussen  
Senior Analyst

Julio Robles  
Analyst

---

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damages affecting fibrous percentages
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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 point counted 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>Asbestos type / calibrated visual estimate percent</th>
<th>Non-asbestos fiber type / percent</th>
<th>Non-fibrous type / percent</th>
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</thead>
<tbody>
<tr>
<td>PGC- M18.2B</td>
<td>M18.2</td>
<td>B-1</td>
<td>gray concrete</td>
<td>y</td>
<td>None Detected</td>
<td>100% qu, ca</td>
</tr>
<tr>
<td>PGC- M18.2C</td>
<td>M18.2</td>
<td>C-1</td>
<td>gray concrete</td>
<td>y</td>
<td>None Detected</td>
<td>100% qu, ca</td>
</tr>
<tr>
<td>PGC- M23.1A</td>
<td>M23.1</td>
<td>A-1</td>
<td>black fibrous paneling</td>
<td>y</td>
<td>None Detected</td>
<td>60% ce</td>
</tr>
<tr>
<td>PGC- M23.1B</td>
<td>M23.1</td>
<td>B-1</td>
<td>black fibrous paneling</td>
<td>y</td>
<td>None Detected</td>
<td>60% ce</td>
</tr>
<tr>
<td>PGC- M23.1C</td>
<td>M23.1</td>
<td>C-1</td>
<td>black fibrous paneling</td>
<td>y</td>
<td>None Detected</td>
<td>60% ce</td>
</tr>
<tr>
<td>PGC- M28.1A</td>
<td>M28.1</td>
<td>A-1</td>
<td>brown fibrous ceiling tile</td>
<td>y</td>
<td>None Detected</td>
<td>100% ce</td>
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<tr>
<td>PGC- M28.1B</td>
<td>M28.1</td>
<td>B-1</td>
<td>brown fibrous ceiling tile</td>
<td>y</td>
<td>None Detected</td>
<td>100% ce</td>
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</table>

Dallas NVLAP Lab Code 200349-0 TEM/PLM  TCEQ# T104704513-15-3  TDH 30-0235

**Analysis Method:** Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116). All samples received in good condition unless noted.

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

Approved Signatories:

---

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damages affecting fibrous percentages
3. Actinolite 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 point counted positive
10. TEM analysis suggested
## Polarized Light Asbestiform Materials Characterization

### Customer Info:
- **Attn:** Customer Project:
  - Tetra Tech
  - MSU Plant Growth Center
  - Date: 12/19/2019
  - Turnaround Time: 5 days
  - Samples Received: 12/13/19 10:30AM
  - Fax #: None Given
  - Phone #: 406-248-9161

### CA Labs Project #:
- CAL19128620AG

### Purchase Order #:
- CAL19128620AG

### Sample Description:

<table>
<thead>
<tr>
<th>Sample #</th>
<th>Comment</th>
<th>Layer</th>
<th>Subsample</th>
<th>Asbestos type</th>
<th>Non-asbestos fiber type</th>
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<tr>
<td>PGC-M28.1C</td>
<td>M28.1 C-1</td>
<td>brown fibrous ceiling tile</td>
<td>y</td>
<td>None Detected</td>
<td>100% ce</td>
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<tr>
<td>PGC-M32.1A</td>
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<td>tan paper with foil</td>
<td>n</td>
<td>None Detected</td>
<td>30% ce 70% qu,bi,ot</td>
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</tr>
<tr>
<td>PGC-M32.1B</td>
<td>M32.1 B-1</td>
<td>tan paper with foil</td>
<td>n</td>
<td>None Detected</td>
<td>30% ce 70% qu,bi,ot</td>
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</tr>
<tr>
<td>PGC-M32.1C</td>
<td>M32.1 C-1</td>
<td>tan paper with foil</td>
<td>n</td>
<td>None Detected</td>
<td>30% ce 70% qu,bi,ot</td>
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</table>

### Analysis Details:

- **Analysis Method:** Interim (40CFR 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 immersion for identification of asbestos types by dispersion attaining / becke line method.

### Approved Signatories:
- Julio Robles
  - Technical Manager
- Tanner Rasmussen
  - Analyst
- Julio Robles
  - Senior Analyst
Polarized Light Asbestiform Materials Characterization

Customer Info:
Attn: Customer Project:

Tetra Tech
7100 Commercial Ave. Ste 4
Billings, MT 59101

MSU Plant Growth Center

Date: 12/19/2019

Samples Received: 12/13/19 10:30AM

MSU Plant Growth Center

Date Of Sampling: None Given

CA Labs Project #: CAL19128620AG

Purchase Order #: T4.T-4.1A

<table>
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<th>Sample #</th>
<th>Comment</th>
<th>Layer #</th>
<th>Analysts Physical Description of Subsample</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>PGC- M33.1A</td>
<td>M33.1</td>
<td>A-1</td>
<td>tan mastic</td>
<td>y</td>
<td>None Detected</td>
<td>100% gy.bi</td>
</tr>
<tr>
<td>PGC- M33.1B</td>
<td>M33.1</td>
<td>B-1</td>
<td>tan mastic</td>
<td>y</td>
<td>None Detected</td>
<td>100% gy.bi</td>
</tr>
<tr>
<td>PGC- M33.1C</td>
<td>M33.1</td>
<td>C-1</td>
<td>tan mastic</td>
<td>y</td>
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<td>100% gy.bi</td>
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<tr>
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<td>n</td>
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<td>PGC-T4.1B</td>
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<td>80% qu.bi</td>
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<tr>
<td>PGC-T4.1C</td>
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<td>covering</td>
<td>n</td>
<td>None Detected</td>
<td>20% ce</td>
<td>80% qu.bi</td>
</tr>
<tr>
<td>PGC-T4.2A</td>
<td>1</td>
<td>gray sealant</td>
<td>y</td>
<td>None Detected</td>
<td>2% Chrysotile</td>
<td>98% qu,gy.bi</td>
</tr>
</tbody>
</table>

Dallas NVLAP Lab Code 200349-0 TEM/PLM TCEO# T104704513-15-3 TDH 30-0235

All samples received in good condition unless noted.

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

Approved Signatories:

Julio Robles
Technical Manager

Tanner Rasmussen
Senior Analyst

Julio Robles
Analyst

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damages affecting fibrous percentages
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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 point counted positive
10. TEM analysis suggested
### Polarized Light Asbestiform Materials Characterization

**Customer Info:**
**Attn:**
**Tetra Tech**
7100 Commercial Ave. Ste 4
Billings, MT 59101

**Phone #** 406-248-9161
**Fax #** 406-248-9282

**CA Labs Project #:**
**CAL19128620AG**

**Customer Project:**
MSU Plant Growth Center
**Date:** 12/19/2019

**Turnaround Time:** 5 days

**Samples Received:**
**Date Of Sampling:**

<table>
<thead>
<tr>
<th>Sample #</th>
<th>Comment</th>
<th>Layer</th>
<th>Analysts Physical Description of Subsample</th>
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</thead>
<tbody>
<tr>
<td>PGC-T4.2B</td>
<td>1</td>
<td>gray sealant</td>
<td>Positive Stop</td>
</tr>
<tr>
<td>PGC-T4.2C</td>
<td>1</td>
<td>gray sealant</td>
<td>Positive Stop</td>
</tr>
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</table>

**Analysis Method:** Interim (40CFR 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 immersion for identification of asbestos types by dispersion attaining / becke line method.

**Dallas NVLAP Lab Code 200349-0 TEM/PLM**

**AIHA LAP, LLC Laboratory #102929**

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8. Favorable scenario for water separation on vermiculite for possible analysis by another method
9. < 1% Result point counted positive
10. TEM analysis suggested

**Approved Signatories:**

Julio Robles
Technical Manager

Tanner Rasmussen
Senior Analyst

Julio Robles
Analyst
**ASBESTOS PLM CHAIN OF CUSTOMY**

<table>
<thead>
<tr>
<th>12/1/9126020</th>
</tr>
</thead>
</table>

**CONTACT INFORMATION**

- **Primary Contact:** TeraTech, Inc.
  - **Name:** Shane Malloy
  - **Phone:** 406.248.9161
  - **Email:** shane.malloy@teratech.com

- **Additional Contact:** Roger W. Hermann, Jr.
  - **Phone:** 406.670.4844
  - **Email:** roger.hermann@teratech.com

- **Sample Signatures:** Shane Malloy

**PROJECT INFORMATION**

- **Client:** MSU Plant Growth Center
- **Project Name:** Bozeman
- **Project Location:** MSU Plant Growth Center

**PLM INSTRUCTIONS**

- **PLM Point Contact:** PC 400 Points (All samples greater than 0%, but less than 1%)
- **PLM EPA 600/R-93/116:**

**TIME**

- **Turnaround Time:** Analyze until positive stop: Positive Stop by Material Type as noted
  - **RUSH:** Only analyze specifically noted by

<table>
<thead>
<tr>
<th>Time</th>
<th>10 Day</th>
<th>5 Day</th>
<th>3 Day</th>
<th>2 Day</th>
<th>1 Day</th>
<th>Same Day</th>
<th>Rush</th>
<th>None</th>
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<tbody>
<tr>
<td>Received By</td>
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### Wall Board System, no paint or surface texture, RM 215.

<table>
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<tr>
<th>DEC 1 3 2019</th>
<th>10:30AM</th>
<th>PGC-M3.2-C</th>
<th>PGC-M3.2-B</th>
<th>PGC-M3.2-A</th>
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</thead>
<tbody>
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### Wall Board System, of white, "picketry" surface texture, RM 216.

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<table>
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### Wall Board System, of white, "picketry" surface texture, RM 212.

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<table>
<thead>
<tr>
<th>NOTES</th>
<th>SAMPLE DESCRIPTION AND LOCATION</th>
<th>LAB ID</th>
<th>HOMOGENEOUS ID</th>
<th>ID</th>
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**Asbestos Plm Chain of Custody**

CAL191286420
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<tr>
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<th>Grey cover base associated with yellow mast. Rm 214A</th>
<th>PEC-M12.1-A</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>White sink undercoating. Rm 211.</td>
<td>PEC-M12.2-C</td>
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<tr>
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<td>White sink undercoating. Rm 211.</td>
<td>PEC-M12.5-B</td>
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<tr>
<td></td>
<td>White sink undercoating. Rm 211.</td>
<td>PEC-M12.6-A</td>
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<tr>
<td></td>
<td>Black sink undercoating. Rm 210.</td>
<td>PEC-M10.1-C</td>
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<td>Black sink undercoating. Rm 210.</td>
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<td>Black sink undercoating. Rm 210.</td>
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<td>White. Rm 216. 2-loop by 4-foot drop-in ceiling pans. White. Primrose and Large Issue.</td>
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<td>White. Rm 212. 2-loop by 4-foot drop-in ceiling pans. White. Primrose and Large Issue.</td>
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<td>White. Rm 214. 2-loop by 4-foot drop-in ceiling pans. White. Primrose and Large Issue.</td>
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**NOTES**

**SAMPLE DESCRIPTION AND LOCATION**

**HOMOGENEOUS ID**

**LAB ID**

CAL19128420

**ASBESTOS PLAN CHAIN OF CUSTODY**
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<tr>
<th>Date</th>
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<th>Sample Description and Location</th>
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<tbody>
<tr>
<td>DEC 1 3 2019</td>
<td>Block Lab counter top. Fm 210 middle table.</td>
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<tr>
<td>10:30 AM</td>
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<tr>
<td></td>
<td>Block cover base associated with yellow mastic. Hallway.</td>
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<tr>
<td></td>
<td>Block cover base associated with yellow mastic. Hallway.</td>
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<tr>
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<td>Block cover base associated with yellow mastic. Hallway.</td>
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<tr>
<td></td>
<td>Grey cover base associated with brown mastic. Fm 216.</td>
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<tr>
<td></td>
<td>Grey cover base associated with brown mastic. Fm 216.</td>
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<td></td>
<td>Grey cover base associated with brown mastic. Fm 216.</td>
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<tr>
<td></td>
<td>Grey cover base associated with yellow mastic. Fm 210.</td>
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<tr>
<td></td>
<td>Grey cover base associated with yellow mastic. Fm 216.</td>
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**ASBESTOS PLAN CHAIN OF CUSTODY**

CAL19128620
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<th>Sample Description and Location</th>
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<td>DEC 13 2019</td>
<td>Black Chalkboard, Rm 210</td>
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<td>PEC-M23.2-B</td>
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<tr>
<td></td>
<td>Concrete floor, Rm 215</td>
<td>PEC-M18.2-B</td>
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<td>PEC-M18.2-A</td>
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<tr>
<td></td>
<td>Concrete wall with subflooring, Rm 215</td>
<td>PEC-M18.1-C</td>
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<td>Concrete wall with subflooring, Rm 215</td>
<td>PEC-M18.1-B</td>
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<tr>
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<td>Concrete wall with subflooring, Rm 215</td>
<td>PEC-M18.1-A</td>
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<tr>
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<td>Black Lab counter top, Rm 210 South Table</td>
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ASBESTOS PLM CHAIN OF CUSTODY

CAL19J122620
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<tr>
<th>DEC 13 2019 10:30AM</th>
<th>WHITE HVAC Joint connection tape/adhesive Rm 216. plastiq splash guard panels associated with tan mastic Rm 215. plastiq splash guard panels associated with tan mastic Rm 215 plastiq splash guard panels associated with tan mastic Rm 215 fiberglass batting mastic Rm 212 fiberglass batting mastic Rm 212 fiberglass batting mastic Rm 212 fiberglass batting mastic Rm 212 Sound deadening / poster hanging board Rm 216 east end Sound deadening / poster hanging board Rm 216 middle Sound deadening / poster hanging board Rm 216 west end</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOTES</td>
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ASBESTOS PLM CHAIN OF CUSTODY

CAL19128420

TETRA TECH
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<th>Sample Description and Location</th>
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<tbody>
<tr>
<td>Grey HVAC Joint Connection Metallic, Rm 215</td>
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<tr>
<td>Grey HVAC Joint Connection Metallic, Rm 215</td>
<td>PGC-4.2-B</td>
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<tr>
<td>Grey HVAC Joint Connection Metallic, Rm 215</td>
<td>PGC-4.2-C</td>
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<td>White HVAC Joint Connection Tapered, Rm 216</td>
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<tr>
<td>White HVAC Joint Connection Tapered, Rm 216</td>
<td>PGC-4.1-B</td>
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ASBESTOS PLM CHAIN OF CUSTODY

CAL19128620