February 11, 2019

GEM Environmental  
P.O. Box 9053  
Missoula, MT 59807

CLIENT PROJECT: U of M-ASUM Childcare - The X's,19-031  
LAB CODE: T190540

Dear Customer:

Eurofins CEI has completed the analysis of the air samples we received from your office on February 11, 2019. These samples represent the final clearance TEM samples for the U of M-ASUM Childcare - The X's,19-031 project.

The TEM counting procedures described for the asbestos-containing materials in schools under the Asbestos Hazard Emergency Response Act (AHERA) were used during the analyses. Specifically, structures were counted in two categories: 0.5 to 5.0 micrometers in length and greater than 5 micrometers in length, which were added together for a total asbestos structure count.

The results for the set of five samples taken inside the work area are summarized on the attached report. Please note that the average number of asbestos structures per square millimeter (s/mm²) is estimated 10, which is below the specified clearance level of 70 s/mm² (40CFR Part 763).

Thank you for your business and we look forward to continuing good relations.

Kind Regards,

Tianbao Bai, Ph.D., CIH  
Laboratory Director
ASBESTOS ANALYTICAL REPORT
By: Transmission Electron Microscopy

Prepared for
GEM Environmental

CLIENT PROJECT: U of M-ASUM Childcare - The X's,19-031
LAB CODE: T190540
TEST METHOD: EPA AHERA
REPORT DATE: 02/11/19
**ASBESTOS AIR ANALYSIS**  
By: TRANSMISSION ELECTRON MICROSCOPY

**Client:**  
GEM Environmental  
P.O. Box 9053  
Missoula, MT 59807

**Lab Code:** T190540  
**Date Received:** 02-11-19  
**Date Analyzed:** 02-11-19  
**Date Reported:** 02-11-19

**Project:** U of M-ASUM Childcare - The X's,19-031

**TEM AIR AHERA**

<table>
<thead>
<tr>
<th>Client ID</th>
<th>Lab ID</th>
<th>Volume (Liters)</th>
<th>Area Analyzed mm²</th>
<th>Grid Openings Examined</th>
<th>Analytical Sensitivity S/cc</th>
<th>Asbestos Identification Type</th>
<th>Asbestos Structures ≥5 µm</th>
<th>Asbestos Structures 0.5 - &lt;5.0 µm</th>
<th>Asbestos Concentration S/mm² S/cc</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEM-A-05</td>
<td>T93276</td>
<td>1369</td>
<td>0.0594</td>
<td>6</td>
<td>0.005</td>
<td>None Detected</td>
<td>0</td>
<td>0</td>
<td>&lt;16.8</td>
</tr>
<tr>
<td>TEM-A-02</td>
<td>T93277</td>
<td>1369</td>
<td>0.0594</td>
<td>6</td>
<td>0.005</td>
<td>None Detected</td>
<td>0</td>
<td>0</td>
<td>&lt;16.8</td>
</tr>
<tr>
<td>TEM-A-03</td>
<td>T93278</td>
<td>1628</td>
<td>0.0495</td>
<td>5</td>
<td>0.005</td>
<td>None Detected</td>
<td>0</td>
<td>0</td>
<td>&lt;20.2</td>
</tr>
<tr>
<td>TEM-A-01</td>
<td>T93279</td>
<td>1706</td>
<td>0.0495</td>
<td>5</td>
<td>0.005</td>
<td>None Detected</td>
<td>0</td>
<td>0</td>
<td>&lt;20.2</td>
</tr>
<tr>
<td>TEM-A-04</td>
<td>T93280</td>
<td>1369</td>
<td>0.0594</td>
<td>6</td>
<td>0.005</td>
<td>None Detected</td>
<td>0</td>
<td>0</td>
<td>&lt;16.8</td>
</tr>
</tbody>
</table>
LEGEND: None

METHOD: EPA AHERA

AVERAGE GRID OPENING SIZE: .0099 mm²

ANALYTICAL SENSITIVITY: 0.005 structures/cc

REGULATORY LIMIT: 70 structures / mm²

ANALYTICAL EQUIPMENT: JEOL Electron Microscope (JEM-1200 EXII) NORAN EDS System 7 (NSS112E)

This report relates only to the samples tested or analyzed and may not be reproduced, except in full, without written approval by Eurofins CEI. Eurofins CEI makes no warranty representation regarding the accuracy of client submitted information in preparing and presenting analytical results. Interpretation of the analytical results is the sole responsibility of the client. Samples were received in acceptable condition unless otherwise noted. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U. S. Government.

Digital images of diffraction patterns and copies of analytical bench sheets pertaining to this project are available upon request. The estimated measurement of uncertainty for the test results is also available upon request.

The laboratory is not responsible for data collected by personnel who are not part of the laboratory. Results reported in both structures/cm³ and structures/mm² are dependent on the volume of air sampled and measured by non-laboratory personnel and are not covered by the laboratory's NVLAP accreditation.

Information provided by customer includes customer sample ID, location, volume and area as well as date and time of sampling.

No Field Blanks were submitted for project T190540.

ANALYST: Brunilda Gjoka

APPROVED BY: Tianbao Bai, Ph.D., CIH
Laboratory Director
**CHAIN OF CUSTODY**

**LAB USE ONLY:**

**CEI Lab Code:**

**CEI Lab I.D. Range:**

### COMPANY INFORMATION

**ECEI CLIENT #:**

Company: GEM Environmental, Inc.

Address: P.O. Box 9053

Missoula, MT 59807

Email: chris.casas@gem-environmental.com

Tel: 406-370-4139

### PROJECT INFORMATION

**Job Contact:** Christopher Casas

**Email / Tel:** chris.casas@gem-environmental.com

**Project Name:** 04EM-Asym Childcare-Akt's

**Project ID #:** 09-031

**PO #:**

**STATE SAMPLES COLLECTED IN:** MT

---

**IF TAT IS NOT MARKED STANDARD 3 DAY TAT APPLIES.**

<table>
<thead>
<tr>
<th>ASBESTOS</th>
<th>METHOD</th>
<th>4 HR</th>
<th>8 HR</th>
<th>1 DAY</th>
<th>2 DAY</th>
<th>3 DAY</th>
<th>5 DAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLM BULK</td>
<td>EPA 600</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>PLM POINT COUNT (400)</td>
<td>EPA 600</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>PLM POINT COUNT (1000)</td>
<td>EPA 600</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>PLM GRAV w/POINT COUNT</td>
<td>EPA 600</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>PLM BULK</td>
<td>CARB 435</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>PCM AIR*</td>
<td>NIOSH 7400</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>TEM AIR</td>
<td>EPA AHERA</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>TEM AIR</td>
<td>NIOSH 7402</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>TEM AIR (PCME)</td>
<td>ISO 10312</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>TEM AIR</td>
<td>ASTM 6281-15</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>TEM BULK</td>
<td>CHATFIELD</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>TEM DUST WIPE</td>
<td>ASTM D6480-05 (2010)</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>TEM DUST MICROVAC</td>
<td>ASTM D5755-09 (2014)</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>TEM SOIL</td>
<td>ASTM D7521-16</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>TEM VERMICULITE</td>
<td>CINCINNATI METHOD</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>TEM QUALITATIVE</td>
<td>IN-HOUSE METHOD</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>OTHER:</td>
<td></td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
</tbody>
</table>

*Blanks should be taken from the same sample lot as field samples.*

**REMARKS / SPECIAL INSTRUCTIONS:**

---

**Relinquished By:**

[Signature]

**Date/Time:** 02/09/19

**Received By:**

EM

**Date/Time:** 2-11-2019 8:00AM

---

By submitting samples, you are agreeing to ECEI's Terms and Conditions.

Samples will be disposed of 30 days after analysis.
<table>
<thead>
<tr>
<th>SAMPLE ID#</th>
<th>DESCRIPTION / LOCATION</th>
<th>VOLUME / AREA</th>
<th>TEST</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEM-A-05</td>
<td>Area Air Sample 111A - Northside</td>
<td>1369</td>
<td>PLM</td>
</tr>
<tr>
<td>TEM-A-02</td>
<td>Area Air Sample 111A - Southside</td>
<td>1369</td>
<td>PLM</td>
</tr>
<tr>
<td>TEM-A-03</td>
<td>Area Air Sample 114 - South Side</td>
<td>1628</td>
<td>PLM</td>
</tr>
<tr>
<td>TEM-A-01</td>
<td>Area Air Sample 115 - South Side</td>
<td>1706</td>
<td>PLM</td>
</tr>
<tr>
<td>TEM-A-04</td>
<td>Area Air Sample 115 - Middle Bath</td>
<td>1369</td>
<td>PLM</td>
</tr>
</tbody>
</table>

Page of

Version: CCOC.07.18.2/2.LD