# PHASE II ENVIRONMENTAL SITE ASSESSMENT
# FOR
# LIVINGSTON MEMORIAL HOSPITAL
# 504 SOUTH 13TH STREET
# LIVINGSTON, PARK COUNTY, MONTANA

Prepared for:

**U.S. ENVIRONMENTAL PROTECTION AGENCY**
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| U.S. EPA Work Assignment Manager | Stephanie Shen |

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# LIST OF ACRONYMS

| | |
|---|---|
| ACM | asbestos-containing material |
| AHERA | Asbestos Hazard Emergency Response Act |
| ASTM | ASTM International |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act |
| CFR | Code of Federal Regulations |
| $cm^2$ | square centimeter |
| CO | Colorado |
| COC | contaminant of concern |
| CY | cubic yards |
| DEQ | Department of Environmental Quality |
| EPA | United States Environmental Protection Agency |
| ESA | Environmental Site Assessment |
| HA | homogeneous area |
| HUD | United States Department of Housing and Urban Development |
| IEUBK | Integrated Exposure Uptake Biokinetic |
| LBP | lead-based paint |
| LF | linear feet |
| $mg/cm^2$ | milligrams per square centimeter |
| mg/kg | milligrams per kilogram |
| MT | Montana |
| O&M | Operations and Maintenance |
| NIH | Northern Industrial Hygiene |
| PCB | polychlorinated biphenyl |
| P.E. | Professional Engineer |
| PLM | Polarized Light Microscopy |
| QA | Quality Assurance |
| QC | Quality Control |
| RACM | regulated asbestos-containing material |
| RSL | Regional Screening Level |
| SAP | Sampling and Analysis Plan |
| sq. ft. | square feet |
| START | Superfund Technical Assessment and Response Team |
| SOO | Statement of Objectives |
| TBA | Targeted Brownfields Assessment |
| TCLP | Toxicity Characteristic Leaching Procedure |
| TDD | Technical Direction Document |
| TEM | Transmission Electron Microscopy |
| TSI | Thermal System Insulation |
| WESTON | Weston Solutions, Inc. |
| XRF | X-ray fluorescence |



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# SUMMARY

The United States Environmental Protection Agency (EPA) tasked the Weston Solutions, Inc. (WESTON) Superfund Technical Assessment and Response Team (START) to assist the EPA in conducting a Phase II Environmental Site Assessment (ESA) at the Livingston Memorial Hospital building located at 504 South 13th Street in Livingston, Montana (MT) (Site).

## SCOPE OF WORK

This Phase II ESA was conducted in accordance with Technical Direction Document (TDD) 0003/1802-06 and ASTM International (ASTM) E1903-11 – Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process. The purpose of a Phase II ESA is to achieve the objectives set forth in the Statement of Objectives (SOO) developed by the EPA, user(s), and the Phase II Assessor. Goals for this Phase II ESA were to acquire and evaluate sufficient information to determine the location and concentration of potential environmental contamination at the Site, if present. The specific SOO for this Phase II ESA were as follows:

- To further refine the extent of asbestos-containing material (ACM) identified in the previous asbestos inspection, to address data gaps, and to investigate the potential presence of other environmental contamination;
- Conduct dust wipe sampling to evaluate the potential migration of known asbestos fibers from the crawlspace areas;
- Assess and evaluate on-site buildings for lead-based paint (LBP);
- Assess and evaluate potential lead impacts to surface soils at the Site, if exterior LBP was identified on the buildings and bare soils were present beneath the LBP;
- Determine extent of lead-lined construction materials;
- Conduct visual inspections of on-site buildings to determine presence/absence of Polychlorinated biphenyl (PCB)-containing equipment, mercury-containing equipment, and mold;
- Develop sufficient information to render a reasonable professional opinion whether hazardous substances either are or are not present at the Site with respect to the potential concerns assessed. If present, include concentrations of hazardous substances based on field screening and/or laboratory analysis of samples;
- Gather and provide sufficient data to assist the TBA recipient in making informed decisions with regard to the future use of the property; and
- Obtain sufficient data to support conceptual remediation cost estimating, if necessary.



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## SITE BACKGROUND

The Livingston Memorial Hospital is an approximately 40,000 square feet (sq. ft.) single-story brick building with a basement which was constructed in 1950, with additions in 1987 and 1989 (Figure 2). The building was utilized solely as a hospital until being vacated in 2015. The property also features two ancillary buildings, Home Oxygen Building (built in 1960), Mental Health Building (built in 2004), and a utility shed (construction date unknown). Results of a previous 2016 building assessment performed by Northern Industrial Hygiene (NIH) identified ACM in the hospital building, though a complete inspection of the building with estimated extents of hazardous building materials present was not conducted at the time. Renovation for residential housing is the intended future use of the building; however, redevelopment cannot proceed until additional assessment is performed.

## SUMMARY OF RESULTS AND CONCLUSIONS

Phase II ESA fieldwork was conducted on April 17th and 18th, 2018. Results of the Phase II ESA have confirmed the presence of contaminants of concern (COCs) at the Site. The following is a summary of the results and conclusions regarding COCs and associated media identified by START at the Site:

### Asbestos-Containing Material

**Bulk Building Material Samples:** Of the twenty-seven (27) bulk samples submitted for laboratory analysis by START, two (2) samples were determined to be ACM. In addition to the ACM identified by START, the thermal systems insulation (TSI) debris mixed with soil in the crawlspaces, floor tiles and mastics, linoleum, pipe insulation and fittings, window caulking and glazing, and black sink undercoating were identified as ACM in the previous NIH asbestos survey of the building (NIH, 2016). START did not re-sample these materials and considers them to be ACM. ACM is considered a COC in relation to the Site. The following table indicates estimated extent and location of ACM identified by both START and NIH to be present in the building.

| ACM | Location | Estimated Volume / Extent |
|---|---|---|
| **ACM Identified by START** | | |
| Incinerator Transite Flue | Boiler Room | 500 sq. ft. |
| Pipe Gasket | Boiler Room | 5 Gaskets |
| **ACM Identified by NIH** | | |
| TSI Debris and Soil | Crawlspaces | 790 CY* |
| Floor Tile and Mastic | Throughout | 10,700 sq. ft. |
| Linoleum | Basement | 60 sq. ft. |



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| ACM | Location | Estimated Volume / Extent |
|---|---|---|
| Pipe Fittings | Throughout | 100 fittings |
| Pipe Insulation | Throughout | 1,000 LF |
| Roof Drain Bowls | Main Floor | 7 bowls |
| Sink Undercoating | Basement | 2 Sinks (observed by START) |
| Window Caulk | Exterior | 1,330 LF |
| Window Glazing | Exterior | 460 LF |

Notes:
* = Estimated volume determined by START assuming asbestos material is 1-2 ft thick
CY = cubic yards
LF = linear feet
sq. ft. = square feet

**Dust Wipe Samples:** Results for all 10 dust wipe samples collected had asbestos present. Asbestos dust was identified on flooring surfaces within the basement and main level of the hospital building. Additional wipe samples, microvac samples, and/or air samples are needed during the next phase of assessment and/or remediation of the Site. The following table summarizes sample collection locations and asbestos minerals present.

| Sample ID | Location | Asbestos Minerals Present |
|---|---|---|
| **Basement** | | |
| LMH-WP01 | Near door to east wing crawlspace | Chrysotile |
| LMH-WP02 | Near door to west crawlspace | Chrysotile |
| LMH-WP03 | Main hallway | Chrysotile and Amosite |
| LMH-WP04 | Boiler room | Chrysotile |
| LMH-WP05 | Large room in northern addition | Chrysotile |
| **Main Level** | | |
| LMH-WP06 | Room in the south wing | Chrysotile |
| LMH-WP07 | Hallway of east wing | Chrysotile |
| LMH-WP08 | Hallway of southwest wing | Chrysotile and Amosite |
| LMH-WP09 | Room in the west wing | Chrysotile |

*Note: Asbestos dust wipe samples were collected for informational purposes only (presence/absence) to assist with determining if asbestos fibers were present on building surfaces. These results are not conclusive and are not valid for determining future building use and/or*



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*subsequent assessment/remediation activities. Additional sampling is needed to determine the actual concentration and extent of asbestos dust in the building.*

## Lead-Based Paint

**Limited XRF Survey:** Of the 902 XRF readings taken from the buildings, 86 readings were positive for LBP contamination (≥1 mg/cm$^2$). Elevated lead concentrations are present throughout the basement and main floor of the hospital building. LBP was also identified on the exterior trim of the hospital building. LBP is considered a COC in relation to the Site. The following table lists the location, current surface paint color, and estimated extent of LBP present at the Site.

| Location | Current Surface Paint Color | Estimated Extent |
|---|---|---|
| **Basement - Hospital** | | |
| Ceiling | Green | 525 sq. ft. |
| | White | 1,000 sq. ft. |
| Door | Gray | 1 Door |
| Floor | Gray | 200 sq. ft. |
| Wall | Blue | 275 sq. ft. |
| | Brown | 120 sq. ft. |
| | Gray | 1,000 sq. ft. |
| | Green | 150 sq. ft. |
| | Light Blue | 275 sq. ft. |
| | White | 4,000 sq. ft. |
| **Main Level - Hospital** | | |
| Ceiling | White | 300 sq. ft. |
| Floor | Gray | 100 sq. ft. |
| Wall | Cream | 250 sq. ft. |
| | Green | 450 sq. ft. |
| | Light Blue | 325 sq. ft. |
| | Red | 50 sq. ft. |
| | White | 8,000 sq. ft. |
| | Yellow | 225 sq. ft. |
| **Exterior - Hospital** | | |
| Trim | Yellow | 1,000 LF |

Notes:
LF = linear feet



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sq. ft. = square feet

**Lead-in-Soils:** While there were positive readings on the exterior of the hospital building, bare soils and chipping paint were only present around the ends of the two southwest wings. One composite sample and duplicate were collected to evaluate potential lead impacts to surface soils. Based on the laboratory results, lead concentrations did not exceed the MT Department of Environmental Quality (DEQ) Integrated Exposure Uptake Biokinetic (IEUBK) model value (153 milligrams per kilogram [mg/kg]) in either sample. Lead impacts to surface soils are not considered a COC in relation to the hospital.

**PCBs, Mercury, and Mold**

A summary of the observations regarding the visual inspections conducted are presented below:

- All potential PCBs ballasts were removed from the buildings; however, approximately ½-gallon of transformer oil assumed to contain PCBs was found in the basement of the hospital. PCBs are considered COCs in relation to the Site.
- Seven (7) mercury thermostat switches were observed in the buildings. Mercury is considered a COC in relation to the Site.
- No mold was observed in the buildings. Mold is not considered a COC in relation to the Site.

## RECOMMENDATIONS

Based on the results of the Phase II ESA conducted, START recommends the following:

- START recommends contracting an accredited asbestos remediation company to further assess asbestos dust at the Site and determine appropriate remedial actions to address ACM during the cleanup phase of redevelopment (e.g., abatement, encapsulation, cleaning of all surfaces, etc.). The presence of asbestos dust indicates building surfaces and the surface of items stored in the building may need to be cleaned/decontaminated by an asbestos remediation contractor prior to reuse or disposal; otherwise, they may need to be disposed of as asbestos waste. ACM remediation is recommended prior to any renovation or demolition activities at the Site in order to permanently mitigate exposure risk.
- However, pending final redevelopment/reuse plans for the Site and considering the type and condition of ACM identified, development of an ACM Operations and Maintenance (O&M) Plan to monitor the condition of ACM identified at the Site, removal of select ACM (e.g., friable pipe insulation), and/or a combination of these remediation methods could be implemented. START recommends contracting an accredited asbestos remediation company to create and implement an ACM O&M Plan to monitor the condition of ACM identified.



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- START recommends contracting an accredited lead remediation company to determine appropriate remedial actions needed to address the LBP at the Site during the cleanup phase of redevelopment (e.g., encapsulation, chemical stripping, removal, etc.). Dust control methods should be implemented for the debris. It is recommended that all work be performed by an EPA Lead-Safe certified firm. If construction materials are to be removed, it is recommended that the construction debris disposal facility be contacted to determine if Toxicity Characteristic Leaching Procedure (TCLP) samples will be required.
- Lead sheet metal found in the walls, lead-lined doors, and leaded glass should be properly disposed of or recycled during renovation activities.
- Potential PCB-containing oil and mercury ampules should be removed and properly disposed of prior to demolition or renovation.

This summary is intended to be a general description of the scope of work, results, conclusions, and recommendations identified based on the Phase II ESA of the Site; however, this section is not intended to be a "stand alone" document or to include the basis of all conclusions presented. The report should be read and used in its entirety. Information included in this section is subject to the scope of services and limitations noted in the original TDD and in this complete report.



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# 1.0 INTRODUCTION

## 1.1 SCOPE OF WORK AND PURPOSE

The Weston Solutions, Inc. (WESTON) Superfund Technical Assessment and Response Team (START) conducted a Phase II Environmental Site Assessment (ESA) at the Livingston Memorial Hospital located at 504 South 13th Street in Livingston, Montana (MT) (Site - Figure 1). The ESA was conducted in accordance with Technical Direction Document (TDD) 0003/1802-06 and ASTM International (ASTM) E1903-11 – Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process. The purpose of a Phase II ESA is to acquire and evaluate information sufficient to achieve the objectives set forth in the Statement of Objectives (SOO) developed by the user(s) and the Phase II Assessor. The scope of work for a Phase II ESA is related to the activities agreed upon to meet the objectives of the investigation as defined in the SOO that are subject to ongoing evaluation and refinement as the assessment progresses. The SOO developed for this Site is presented in Section 1.2.

This Phase II ESA report contains the results of the data collection activities and associated quality assurance (QA)/quality control (QC) measures conducted specific to the Site. Information used to conduct this Phase II ESA was based upon reasonably ascertainable, visually and physically observable conditions, and included testing or sampling of materials. The structure of this report is based on the ASTM E1903-11 standard.

## 1.2 STATEMENT OF OBJECTIVES

The objectives were developed by Homeword, Inc. (User), START (Phase II Assessor), and the United States Environmental Protection Agency (EPA). The objectives were developed to obtain sound, scientifically valid data concerning actual property conditions at the Site with respect to the presence or the likely presence of target analytes/substances including, but not limited to, those within the scope of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The SOO for the Site were determined during the project-scoping meeting held on February 14th, 2018. The Phase II ESA objectives determined for the Site were as follows:

- To further refine the extent of asbestos-containing material (ACM) identified in the previous asbestos inspection, to address data gaps, and to investigate the potential presence of other environmental contamination;
- Conduct dust wipe sampling to evaluate the potential migration of known asbestos fibers from the crawlspace areas;
- Assess and evaluate on-site buildings for lead-based paint (LBP);
- Assess and evaluate potential lead impacts to surface soils at the Site, if exterior LBP was identified on the buildings and bare soils were present beneath the LBP;
- Determine extent of lead-lined construction materials;



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- Conduct visual inspections of on-site buildings to determine presence/absence of Polychlorinated biphenyl (PCB)-containing equipment, mercury-containing equipment, and mold;
- Develop sufficient information to render a reasonable professional opinion whether hazardous substances either are or are not present at the Site with respect to the potential concerns assessed. If present, include concentrations of hazardous substances based on field screening and/or laboratory analysis of samples;
- Gather and provide sufficient data to assist the TBA recipient in making informed decisions with regard to the future use of the property; and
- Obtain sufficient data to support conceptual remediation cost estimating, if necessary.



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# 2.0 SUMMARY OF BACKGROUND INFORMATION

## 2.1 PROPERTY DESCRIPTION, LOCATION, AND HISTORY

The Site is approximately 2.571 acres and is located at 504 South 13th Street in Livingston, MT at 45.648890°N latitude and -110.569502°W longitude. There are currently three buildings and a utility shed at the Site (Figure 2) as described below:

- Livingston Memorial Hospital: One-story building, with a basement, totaling approximately 40,000 square feet (sq. ft.). The main portion of the hospital was built in 1950, with additions in 1987 and 1989. Renovations were performed in 2013/2014 and a partial demolition of select materials was done in 2015-2017.
- Shed: One-story utility shed with a footprint of approximately 172 sq. ft. The date of construction is unknown.
- Home Oxygen Building: One-story office building, constructed in 1960, with a footprint of approximately 800 sq. ft.
- Mental Health Building: Single-story office building, constructed in 2004, with a footprint of approximately 4,000 sq. ft. Due to the age of construction, this building was not evaluated for presence of hazardous building materials.

Montana Homeownership Network Inc. owns the property and is currently holding the property until Homeword, Inc. secures funding for the project. In March 2016, a previous inspection performed by Northern Industrial Hygiene (NIH) identified the presence of ACM in the hospital (NIH, 2016). However, a complete inspection of the building with estimated extents of hazardous building materials present was not conducted at the time. In addition, ACM, LBP, and other environmental hazards that may be present based on the ages of the building, were not included in the previous building inspection. Homeword, Inc. is planning on redeveloping the former hospital into a multi-family housing complex; however, redevelopment cannot proceed until additional assessment is performed.

## 2.2 PREVIOUS ENVIRONMENTAL REPORTS AND RECORDS

Previous environmental reports and/or records, if available, were obtained by START from various sources, including local agencies, and reviewed for information relating to the Site. A summary of records obtained is provided in the following table.



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|---|---|
| **Document:** Phase I ESA for Livingston Memorial Hospital 504 South 13th Street Livingston, Park County, Montana (WESTON, 2018a)<br>**Prepared for:** EPA and Homeword, Inc.<br>**Prepared by:** START<br>**Date:** April 2018<br>**Report Source:** START | **Document Summary:** This Phase I ESA lists the known presence of friable ACM in the crawlspace soils as a recognized environmental condition at the subject property. Other non-scope considerations include other ACM, LBP, lead-lined construction materials, and mercury thermostat switches.<br>**Information Relating to the Subject Property:** Historic records indicate that the subject property has been utilized as a hospital since 1955; however, the current structure was built in 1950, with additions in 1987 and 1989. An interview with Mr. Gene Struthers revealed that PCB-containing light ballasts were removed in 2002. |
| **Document:** TBA Application<br>**Prepared for:** EPA<br>**Prepared by:** Homeword, Inc.<br>**Date:** Unknown<br>**Report Source:** EPA | **Document Summary:** The application gives a brief summary of subject property background information and environmental conditions at the subject property (including potential contaminants). The application also provides contact names(s) and phone numbers for stakeholders, owner and redevelopers.<br>**Information Relating to the Subject Property:** The main hospital building was constructed in 1950, opened in 1955, with additions in 1987 and 1989, and was utilized as a hospital until 2015. A partial demolition of the building systems was performed and the current owner purchased the building in 2017 to hold until the TBA recipient secures funding for the project. Proposed redevelopment of the subject property will transform the hospital into a multi-family affordable housing complex. A Phase I ESA and asbestos inspection have been performed for the hospital. |
| **Document:** NESHAP Asbestos Renovation Survey, Former Livingston Hospital, 504 South 13th Street Livingston, Montana, Project No. 999-3019 (NIH, 2016)<br>**Prepared for:** A&E, LLC<br>**Prepared by:** NIH<br>**Date:** March 7, 2016<br>**Report Source:** TBA Recipient | **Document Summary:** The hospital portion of the subject property inspected in this report identified 27 building materials as ACM and assumed two other materials as ACM. ACM identified included crawlspace debris, floor tiles, linoleum, mastics, pipe insulation, pipe fittings, roof drain bowl insulation, sink undercoating, transite wallboard, and window caulk and glazing. The roof and MRI unit were not inspected.<br>**Information Relating to the Subject Property:** Inspections were only conducted on the hospital building portion of the subject property. The identified ACM in building materials is considered a non-scope consideration in relation to the subject property. |



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# 3.0 DESCRIPTION OF WORK PERFORMED AND RATIONALE

This section summarizes the work performed and rationale for the work conducted to meet the SOO developed for the investigation as documented in the approved Sampling and Analysis Plan (SAP) for the Site (WESTON, 2018b). Deviations from the approved SAP for this Phase II ESA are presented in Section 3.4.

Based upon the SOO developed for the Site, a building inspection was conducted as part of this Phase II ESA. The assessment included visual inspections, field screening, and/or sample collection for laboratory analysis. Details of the individual media investigations along with rationale are presented below. Photographs of field activities are included in the Photograph Log presented in Appendix A. The Phase II fieldwork was conducted on April 17$^{th}$ and 18$^{th}$, 2018.

## 3.1 ASBESTOS-CONTAINING MATERIAL SURVEY

### 3.1.1 Bulk Building Material Samples

This Phase II ESA included a limited ACM survey with the collection of bulk asbestos samples to supplement the previous asbestos inspection (NIH, 2016) in order to determine the location and extent of ACM. The survey was conducted by Montana Accredited Asbestos Building Inspector: Mr. Michael Cherny. Visual inspections were conducted on areas of the structure where an individual performing demolition or renovation operations may encounter regulated asbestos-containing material (RACM). Sample locations and the total number of samples were based on Asbestos Hazard Emergency Response Act (AHERA) standards (EPA, 1985) and/or the best professional judgment of the inspector. Each potential RACM location was touched to determine if it was friable. Though previous ACM survey results were taken into consideration, bulk samples were collected of suspect friable and non-friable RACM and submitted to an asbestos-certified laboratory for analysis.

### 3.1.2 Dust Wipe Samples

Due to friable asbestos pipe insulation identified in the crawlspace (NIH, 2016), this Phase II ESA included the collection of dust wipe samples to help aid in determining if asbestos fibers have migrated from the crawlspace areas and deposited as dust in other areas of the building. Sample locations were based on the best professional judgment of the inspector. Dust wipe samples collected were submitted to an asbestos-certified laboratory for analysis.

## 3.2 LEAD-BASED PAINT SURVEY

### 3.2.1 Limited XRF Survey

Due to the age of the building at the Site, this Phase II ESA involved a LBP survey by EPA Certified LBP Inspector: Mr. Elliott Petri. To conduct the LBP survey, an X-ray fluorescence (XRF) instrument was used on painted surface locations to determine if materials were “positive”



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for lead (≥1 milligram per square centimeter [mg/cm$^2$]). Visual inspections were conducted on interior and exterior areas of the building to identify painted surfaces and XRF readings were collected based upon the best professional judgment of the inspector.

### 3.2.2 Lead-in-Soil

Due to the potential for lead contamination in the surface soils adjacent to the exterior walls of the buildings, discrete and biased surface soil samples were collected at locations where potential lead contamination would most likely be found. Soil samples were only collected in areas with positive LBP readings on the exterior, bare soils next to the location of the reading, and chipping paint. Five-point composite samples were collected at the dripline to characterize the lead contamination at the Site. Composite samples were sieved using a No. 60 mesh (250 micron) prior to submittal to the laboratory.

## 3.3 VISUAL INSPECTIONS

Visual inspections were conducted to identify the presence or absence of lead-lined materials, PCB-containing equipment (e.g., fluorescent light ballasts, electrical transformers, etc.), mercury-containing equipment (e.g., thermostat switches), and mold. The extent of visual inspections was limited to areas visually observable, easily accessible, and deemed safe to enter by the field team. Quantity and location information was documented where possible, but no samples were collected.

## 3.4 DEVIATIONS FROM THE SAMPLING AND ANALYSIS PLAN

Due to the ongoing evaluation and refinement of the SOO, changes can occur to the approved SAP based upon site conditions encountered. No deviations from the approved SAP were identified during this Phase II ESA.



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# 4.0 DESCRIPTION OF METHODS USED

## 4.1 ASBESTOS-CONTAINING MATERIAL

### 4.1.1 Bulk Building Material Samples

**Asbestos Bulk Sampling**

Personnel performing the sampling wore personal protective equipment appropriate to the hazard(s) presented and included gloves, Tyvek, booties, hard hats, and/or high-efficiency particulate air respiratory protection. Asbestos bulk samples were randomly collected using the grid system described in the EPA publication "*Asbestos in Buildings – Simplified Sampling Scheme for Friable Surfacing Materials"* (EPA, 1985). The following general sampling guidelines were followed during the inspection, as applicable:

- In areas where homogeneous suspected RACM (surfacing) was less than 1,000 square feet (sq. ft.), three randomly collected bulk samples were collected from each area;
- In areas where homogeneous suspected RACM (surfacing) was at least 1,000 sq. ft. but less than 5,000 sq. ft., five randomly collected bulk samples were collected from each area;
- In areas where homogeneous suspect RACM (surfacing) was at least 5,000 sq. ft., seven randomly selected bulk samples were collected from each area;
- At least one sample was taken from pipe fittings;
- Three samples were taken from thermal systems insulation (TSI); and
- For miscellaneous materials, a minimum of one bulk sample was collected for each type.

**Quality Assurance (QA)/Quality Control (QC) Activities**

The following QA/QC activities were conducted as part of this investigation:

- Field Duplicate Samples – Field duplicate samples were collected at the frequency of one per 20 bulk samples. The following table indicates the original sample and duplicate sample collected.

| Original Sample | QA/QC Duplicate Sample |
|---|---|
| HOB-DW01-06 | HOB-DW01-07 |

Based on the laboratory results, no discrepancies were reported and all results are considered acceptable. Results for the original and QA/QC sample are presented in Table 2.



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**Laboratory Analytical Methods**

Samples collected were sent to Reservoirs Environmental Inc. in Denver, Colorado (CO) for polarized light microscopy (PLM) analysis by Method EPA 600/R-93/116 to determine a visual estimation of asbestos content and, if applicable, Method EPA 600/R-93/116 (400 Point Count).

### 4.1.2 Dust Wipe Samples

**Asbestos Dust Wipe Sampling**

Dust wipe samples were collected using a pre-moistened ghost wipe within a 100-square centimeter ($cm^2$) area. The sample was collected: first, by using a side to side wiping technique. After the first pass, the wipe was rotated 180° and the surface was wiped in the reverse direction. Then, the wipe was folded and a top to bottom wiping method was used. The wipe was then folded once more and the perimeter was wiped with a clean side. Finally, the wipe was folded again and placed into the provided sample container.

**QA/QC Activities**

The following QA/QC activities were conducted as part of this investigation:

- One media blank wipe (LMH-WP00) was submitted to the laboratory. No asbestos minerals were detected on the blank sample.

**Laboratory Analytical Methods**

Samples collected were sent to Reservoirs Environmental Inc. in Denver, CO for Transmission Electron Microscopy (TEM) analysis by Method ASTM D-6480 (Wipe) TEM to determine the "Presence/Absence" of asbestos fibers.

## 4.2 LEAD-BASED PAINT

### 4.2.1 Limited XRF Survey

**XRF Readings**

XRF in-situ readings were collected using an Innov-X Alpha Series™ handheld XRF instrument to analyze painted and coated surfaces (interior and exterior) for lead during this Phase II ESA. XRF readings of walls, windows, and other painted surfaces in each room equivalent were collected. Room equivalents include painted or coated surfaces that are not considered separate rooms such as hallways and closets. A representative number of sample readings were collected from a subset of rooms considered by the certified LBP inspector to be of like coated surfaces.

In general, locations where the paint appeared to be thickest were selected for XRF analysis. Locations where paint was worn away or scraped off were avoided. Areas over pipes, electrical surfaces, nails, and other possible interferences were also avoided. The XRF probe faceplate was allowed to lie flat against the surface of the test location to obtain a quality reading.



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**QA/QC Activities**

The following QA/QC activities were conducted as part of this investigation:

- XRF Standardization Readings – XRF standardization readings were collected prior to use, every four hours during use (as applicable), and following use to verify accuracy.

No other QA/QC activities or sample types were required based upon the assessment techniques and sample collection methods. Based on the results of the standardization readings, all results reported are considered acceptable. XRF standardization readings are presented in Table 5.

**Laboratory Analytical Methods**

Due to no "inconclusive" readings by the XRF instrument, paint chip samples were not collected for laboratory analysis.

### 4.2.2 Lead-in-Soil

**Sample Collection**

A thorough walkthrough and visual inspection were conducted around the perimeter of the building to locate areas where contaminants may be present in the surface soils. Lead in soil samples were collected as 5-point composite samples from 0 - 1 inch with aliquots from several sides of the building based upon XRF screening indicating LBP and visual screening (if paint chips were visible in soil or paint was chipping). Samples were collected from the drip line of the building (12 in. – 30 in. from the exterior). Samples were placed into sealable baggies and homogenized. Once composited the sample was field screened with the XRF. None of the XRF screening of the composite soil samples collected from 0 - 1 in. was near or exceeding the MT Department of Environmental Quality (DEQ) Integrated Exposure Uptake Biokinetic (IEUBK) model value of 153 mg/kg. Therefore, no additional in-situ soil XRF screening was conducted. Surface soils were collected using a disposable plastic scoop and transferred into laboratory-supplied containers. Disposable gloves were used during sample collection and preparation procedures. The soil samples were labeled and stored until shipment for laboratory analysis accompanied by chain-of-custody documentation.

**QA/QC Samples**

The following QA/QC activities were conducted as part of this investigation:

- One duplicate sample, LMH-SO91-0001, was submitted in conjunction with the parent sample. Based on the laboratory results, no discrepancies were reported and all results are considered acceptable. Results for the original and QA/QC sample are presented in Table 2.

**Laboratory Analytical Methods**

Samples collected were delivered to Reservoirs in Denver, Colorado for lead analysis by EPA Method SW846 3050B / AA (7420).



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## 4.3 VISUAL INSPECTIONS

**Lead-Lined Materials, PCBs, Mercury, and Mold**

Visual inspections were conducted for presence/non-presence of lead-lined materials, mercury thermostat switches, PCB ballasts, and mold. Suspect hazards encountered, if any, were documented in field notes and/or photographed.



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# 5.0 PRESENTATION OF INFORMATION AND DATA ACQUIRED

## 5.1 ASBESTOS-CONTAINING MATERIAL

### 5.1.1 Bulk Building Material Samples

A total of 27 bulk samples were collected and submitted for PLM analysis. Of the samples collected, the following number of samples were collected of each bulk material.

| Building | Bulk Material | Number of Samples Collected |
|---|---|---|
| Shed | Drywall | 3 |
| | Roofing Material | 1 |
| Home Oxygen Building | Cove Base | 2 |
| | Drywall | 7 |
| | Linoleum | 2 |
| | Roofing Material | 1 |
| Hospital | Cove Base | 1 |
| | Duct Tape | 1 |
| | Floor Insulation | 1 |
| | Fridge Material | 1 |
| | Incinerator Transite | 1 |
| | Pipe Gasket | 2 |
| | Roofing Material | 1 |
| | Terrazzo | 2 |
| | Wall Felt | 1 |

In addition, the following assumptions and items of note were observed during the ACM survey:

**Shed**

- When possible, samples were collected from areas of the building material already damaged or disturbed.
- Taped/mudded drywall was present inside the shed.
- No suspect insulation, flooring, cove base, ceiling tiles, window glazing, or caulking were observed.
- The roof was comprised of asphalt shingles with roofing felt.



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**Home Oxygen Building**

- When possible, samples were collected from areas of the building material already damaged or disturbed.
- Two finished drywall homogeneous areas (HAs) were identified and were sampled independently of each other.
- Two types of linoleum were present in the building, with a concrete subfloor.
- Two types of cove base and mastic were sampled; however, no suspect insulation, ceiling tiles, window glazing, or caulking were observed.
- The roof was comprised of asphalt shingles with roofing felt.

**Hospital**

- When possible, samples were collected from areas of the building material already damaged or disturbed.
- A mixture of plaster and sheetrock walls were observed throughout the building. In some areas, there were multiple layers of materials on the walls.
- All wall and air handler insulations observed were fiberglass. The inner boiler insulation was also fiberglass. Pipe insulations were a mixture of fiberglass and ACM Air Cell. Mudded fittings previously identified as ACM were also observed.
- The mixture of known asbestos TSI and soil was observed in the crawlspaces. Since the crawlspaces were not entered, the average depth of material is estimated to be approximately 1 – 2 feet thick based on visual inspection of the entrance and personal interviews.
- All ceiling tiles and associated glue dots were previously sampled by NIH and confirmed to be non-ACM.
- Sinks were removed and stored in the basement. Black sink insulation observed on two of the sinks was confirmed to be ACM by NIH and was not re-sampled.
- Ceramic floor tiles were observed in the bathrooms, but are not considered to be suspect and were not sampled.
- Flooring consisted of ACM floor tile, carpet (some with ACM mastics underneath), ACM linoleum, concrete, and terrazzo. A concrete subfloor was present below all flooring types.
- ACM window glazing was primarily observed on the southwest wing and two windows on the northeast side. Most windows had a gray or white ACM caulking present.
- The exterior of the building is brick and different types of bricks were used between all the additions to the original building.



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- The roof was a membrane system and was sampled discretely to not compromise the integrity of the roof.

### 5.1.2 Dust Wipe Samples

Ten (10) dust wipe samples and one blank were collected and submitted for TEM analysis. The following table indicates the number of samples collected from each area of the building:

| Area of Building | Number of Samples |
|---|---|
| Basement | 5 |
| Main Level | 5 |

## 5.2 LEAD-BASED PAINT

### 5.2.1 Limited XRF Survey

A total of 902 XRF readings were taken at the Site. The following number of readings were collected from each area of the buildings:

| Building | Area of Building | Readings Count |
|---|---|---|
| Shed | Exterior | 4 |
| Home Oxygen Building | Exterior | 23 |
| | Interior | 6 |
| Hospital | Basement | 224 |
| | Main Level | 634 |
| | Exterior | 11 |

In addition, the following assumptions and items of note were observed during the LBP survey:

- Due to the complex painting history and multi-layered wall systems inside the hospital, it is possible that additional LBP is present which could not be assessed using an XRF. Toxicity Characteristic Leaching Procedure TCLP samples are recommended for all demolition debris.
- No LBP was present on the shed or Home Oxygen Building.

### 5.2.2 Lead-in-Soils

One composite surface soil sample and duplicate were collected from the ends of the two southwest wings of the hospital. The following table presents the sample location information and the laboratory results are summarized in Table 6.



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| Location | Soil Sample ID |
|---|---|
| The Two Southwest Wings | LMH-SO01-0001 |
| | LMH-SO91-0001 |

## 5.3 VISUAL INSPECTIONS

The following observations were made during the visual inspections.

**Lead-Lined Materials**

- Lead sheeting behind the drywall, lead-lined doors, and a leaded glass window were observed in the computerized axial tomography (CAT) scan, X-ray, and/or nuclear medicine rooms in the hospital building.

**PCBs, Mercury, and Mold**

- Fluorescent light fixtures were observed throughout the buildings; however, all of the ballasts were newer and had stickers indicating they did not contain PCBs. An approximately half full gallon jug of Victor X-ray Corporation transformer oil was discovered in the elevator room of the hospital basement. This was likely used for the X-ray machine, which had been removed, and is assumed to contain PCBs.
- Mercury thermostat switches were observed on the boiler and generator as well as one wall-mounted device in the basement of the hospital. One switch was also present in the Home Oxygen Building.
- No mold was observed in the buildings.



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# 6.0 EVALUATION AND INTERPRETATION OF INFORMATION, DATA, AND RESULTS

This section summarizes the evaluation and interpretation of field screening data and laboratory results obtained to identify the location and extent of contamination. Benchmarks used for comparison are listed below:

**ACM**

- **Asbestos-Containing Materials in Schools Rule (40 Code of Federal Regulations [CFR] Part 763, Subpart E) -** ACM is defined as any material containing more than one percent (>1%) asbestos.

**LBP**

- **U.S. Department of Housing and Urban Development (HUD) Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing (2012 Edition) -** The HUD benchmark for lead-based paint is greater than or equal to 1.0 milligrams per square centimeter (≥1.0 mg/cm$^2$).

**Lead-in-Soil**

- **EPA Regional Screening Levels (RSLs) - Generic Tables (November 2017): Target Cancer Risk (TR) = 1E-6 and Target Hazard Quotient (THQ) = 1.0 (EPA, 2017) -** The EPA Residential and Industrial RSLs for lead are 400 milligrams/kilogram (mg/kg) and 800 mg/kg, respectively.
- Though not a current benchmark required for comparison, MT DEQ anticipates the EPA to update the IEUBK model to reflect a 5 µg/dl blood lead level endpoint, which correlates to an associated lead value of 153 mg/kg that is used by the State of MT.

The locations of samples and extent of hazardous building materials exceeding benchmarks are depicted on Figures 3 through 11. Field readings and laboratory results for the samples collected are summarized in Tables 1 through 6. Photographs of the field activities conducted are presented in Appendix A. Copies of the laboratory reports are presented in Appendix B. A copy of the 2016 asbestos survey completed by NIH is provided as Appendix C.



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## 6.1 ASBESTOS-CONTAINING MATERIAL

### 6.1.1 Bulk Building Material Samples

Of the twenty-seven (27) bulk samples submitted for laboratory analysis, two (2) samples were reported as "positive" (>1%) for asbestos and were determined to be ACM. The following table indicates the type, condition, and number of samples identified as ACM.

| Identified ACM | Condition | Number of ACM Samples |
|---|---|---|
| Incinerator Transite Flue | Non-Friable | 1 |
| Pipe Gasket | Non-Friable | 1 |

ACM sample collection locations and approximate extent of ACM are presented on Figures 3 - 6. The confirmed ACM sample(s), the asbestos-containing layer(s), and the estimated volume of ACM is presented in Table 1. A list of the samples collected that were reported as non-detect for asbestos is presented in Table 2.

**Interpretation of Results**

No ACM was identified in the utility shed or the Home Oxygen Building. The ACM discussed in this section is related to the hospital only.

Samples collected by START confirmed the presence of ACM in what is assumed to be flue material, which had recently fallen inside the incinerator, and a pipe gasket found on piping associated with the steam tunnel in the boiler room. In addition to the ACM identified by START, TSI debris mixed with soil in the crawlspaces, floor tiles and mastics, linoleum, pipe insulation and fittings, window caulking and glazing, and black sink undercoating were identified as ACM in the previous asbestos survey of the building (NIH, 2016). START did not re-sample these materials and considers them to be ACM. A summary of the NIH sampling results is provided in Table 3.

The previously assumed refrigerator transite was sampled by START and is not ACM. START was able to observe the TSI debris and soil present in all crawlspace entrances except the one underneath the southernmost hospital wing. Conversations with the maintenance manager, Mr. Gene Struthers, depicted the conditions of that crawlspace. It is assumed that the average depth of asbestos impacted soil is approximately 1 – 2 feet thick. Floor tiles and mastics were still present but some were underneath carpeted areas. An attempt was made to further refine the extents of the TSI; however, it is likely additional TSI exists inside walls and above ceilings that may be encountered once renovation work occurs. It should be assumed all TSI which is not fiberglass and all hard fittings, including roof drain bowls, are ACM. All sinks with ACM undercoating were removed and stockpiled in a room in the basement. ACM is considered a contaminant of concern



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(COC) in relation to the Site. The following table indicates estimated extent and location of ACM identified by both START and NIH to be present in the building.

| ACM | Location | Estimated Volume / Extent |
|---|---|---|
| **ACM Identified by START** | | |
| Incinerator Transite Flue | Boiler Room | 500 sq. ft. |
| Pipe Gasket | Boiler Room | 5 Gaskets |
| **ACM Identified by NIH** | | |
| TSI Debris and Soil | Crawlspaces | 790 CY* |
| Floor Tile and Mastic | Throughout | 10,700 sq. ft. |
| Linoleum | Basement | 60 sq. ft. |
| Pipe Fittings | Throughout | 100 fittings |
| Pipe Insulation | Throughout | 1,000 LF |
| Roof Drain Bowls | Main Floor | 7 bowls |
| Sink Undercoating | Basement | 2 Sinks (observed by START) |
| Window Caulk | Exterior | 1,330 LF |
| Window Glazing | Exterior | 460 LF |

Notes:
* = Estimated volume determined by START assuming asbestos material is 1-2 ft thick
CY = cubic yards
LF=linear feet
sq. ft. = square feet

### 6.1.2 Dust Wipe Samples

Results for all ten (10) dust wipe samples collected had asbestos present. The following table summarizes sample collection locations and asbestos minerals present.

| Sample ID | Location | Asbestos Minerals Present |
|---|---|---|
| **Basement** | | |
| LMH-WP01 | Near door to east wing crawlspace | Chrysotile |
| LMH-WP02 | Near door to west crawlspace | Chrysotile |
| LMH-WP03 | Main hallway | Chrysotile and Amosite |
| LMH-WP04 | Boiler room | Chrysotile |
| LMH-WP05 | Large room in northern addition | Chrysotile |



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| Sample ID | Location | Asbestos Minerals Present |
|---|---|---|
| **Main Level** | | |
| LMH-WP06 | Room in the south wing | Chrysotile |
| LMH-WP07 | Hallway of east wing | Chrysotile |
| LMH-WP08 | Hallway of southwest wing | Chrysotile and Amosite |
| LMH-WP09 | Room in the west wing | Chrysotile |

Asbestos dust wipe sample collection locations are presented on Figures 3 - 6. A summary of the analytical results is presented in Table 4.

**Interpretation of Results**

Asbestos dust was identified on flooring surfaces within the basement and throughout the main level of the hospital building. The source of the asbestos fibers is not definitively known, but when evaluating friable ACM present at the Site, it is possible it is sourced from the TSI debris and soil within the crawlspace. Chrysotile was identified in all ACM but the amosite is associated with mudded fittings, magnesia TSI, and/or roof drain bowls. Since dust wipe samples were analyzed for presence/absence of asbestos only, the total number of asbestos structures present on the wipes is not known. According to ASTM D6480-99 – Standard Test Method for Wipe Sampling of Surfaces, Indirect Preparation, and Analysis for Asbestos Structure Number Concentration by Transmission Electron Microscopy, "there is no direct correlation of asbestos dust to human exposure risk" (ASTM, 1999).

Additional wipe samples, microvac samples, and/or air samples are needed during the next phase of assessment and/or remediation of the Site. The presence of asbestos dust indicates building surfaces may need to be cleaned by an asbestos remediation contractor prior to reuse or demolition. In addition, samples from the surface of items stored in the building may be needed prior to removal as they could need to be decontaminated prior to disposal or be disposed of as asbestos waste.

*Note: Asbestos dust wipe samples were collected for informational purposes only (presence/absence) to assist with determining if asbestos fibers were present on building surfaces. These results are not conclusive and are not valid for determining future building use and/or subsequent assessment/remediation activities. Additional sampling is needed to determine the actual concentration and extent of asbestos dust in the building.*



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## 6.2 LEAD-BASED PAINT

### 6.2.1 Limited XRF Survey

Of the 902 XRF readings taken from the buildings, 86 readings were positive for LBP contamination (≥1 mg/cm$^2$). The following table indicates the location, current surface paint color, and area concentration for LBP identified at the Site.

| Location (# of Positive Readings) | Current Surface Paint Color | Area Concentration of LBP (± Error) |
|---|---|---|
| **Basement - Hospital** | | |
| Ceiling (8) | Green | 1 mg/cm$^2$ (± 0.05) |
| | White | 1 mg/cm$^2$ (± 0.03 to 0.15) |
| Door (1) | Gray | 3.77 mg/cm$^2$ (± 0.36) |
| Floor (2) | Gray | 1 mg/cm$^2$ (± 0.02 to 0.04) |
| Wall (26) | Blue | 1 mg/cm$^2$ (± 0.03 to 0.04) |
| | Brown | 1 mg/cm$^2$ (± 0.04) |
| | Gray | 1 mg/cm$^2$ (± 0.02 to 0.04) |
| | Green | 1 mg/cm$^2$ (± 0.09) |
| | Light Blue | 1 mg/cm$^2$ (± 0.04) |
| | White | 1 mg/cm$^2$ (± 0.02 to 0.16) |
| **Main Level - Hospital** | | |
| Ceiling (3) | White | 1 mg/cm$^2$ (± 0.03 to 0.05) |
| Floor (1) | Gray | 1 mg/cm$^2$ (± 0.03) |
| Wall (43) | Cream | 1 mg/cm$^2$ (± 0.03) |
| | Green | 1 mg/cm$^2$ (± 0.02 to 0.09) |
| | Light Blue | 1 mg/cm$^2$ (± 0.04 to 0.05) |
| | Red | 1 mg/cm$^2$ (± 0.13) |
| | White | 1 mg/cm$^2$ (± 0.02 to 0.16) |
| | Yellow | 1 mg/cm$^2$ (± 0.06 to 0.08) |
| **Exterior - Hospital** | | |
| Trim (2) | Yellow | 1.26 mg/cm$^2$ (± 0.13) to 1.37 mg/cm$^2$ (± 0.17) |

A complete list of XRF readings is presented in Table 5. The location and approximate extent of LBP identified is presented on Figures 7 - 10.



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**Interpretation of Results**

Based on the XRF results, elevated lead concentrations are present throughout the basement and main floor of the hospital building. LBP was also identified on the exterior trim of the hospital building. The following table lists the location, current surface paint color, and estimated extent of LBP present at the Site. LBP is considered a COC in relation to the Site.

| Location | Current Surface Paint Color | Estimated Extent |
|---|---|---|
| **Basement - Hospital** | | |
| Ceiling | Green | 525 sq. ft. |
| | White | 1,000 sq. ft. |
| Door | Gray | 1 Door |
| Floor | Gray | 200 sq. ft. |
| Wall | Blue | 275 sq. ft. |
| | Brown | 120 sq. ft. |
| | Gray | 1,000 sq. ft. |
| | Green | 150 sq. ft. |
| | Light Blue | 275 sq. ft. |
| | White | 4,000 sq. ft. |
| **Main Level - Hospital** | | |
| Ceiling | White | 300 sq. ft. |
| Floor | Gray | 100 sq. ft. |
| Wall | Cream | 250 sq. ft. |
| | Green | 450 sq. ft. |
| | Light Blue | 325 sq. ft. |
| | Red | 50 sq. ft. |
| | White | 8,000 sq. ft. |
| | Yellow | 225 sq. ft. |
| **Exterior - Hospital** | | |
| Trim | Yellow | 1,000 LF |

Notes:
LF = linear feet
sq. ft. = square feet

### 6.2.2 Lead-in-Soils



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**Evaluation of Laboratory Sample Results**

Of the two lead-in-soil surface soils samples collected from the two southwest hospital wings, lead was detected above the reporting limits but not above applicable benchmarks. The following table summarizes the lead results for both lead-in-soil samples collected.

| Soil Sample ID | Location | MT DEQ IEUBK Model (mg/kg) | EPA RSL – Residential Soil (mg/kg) | EPA RSL – Industrial Soil (mg/kg) | Lead Results (mg/kg) |
|---|---|---|---|---|---|
| LMH-SO01-0001 | Ends of the two southwest wings | 153 | 400 | 800 | **30** |
| LMH-SO91-0001 | | | | | **25.7** |

The location of the lead-in-soil surface soil samples are presented in Figure 9 and 10. A summary of the analytical results is presented in Table 6.

**Interpretation of Results**

Based on the laboratory results, lead concentrations did not exceed comparison standards within the bare soil in the dripline around the perimeter of the hospital. Lead is not considered a COC in surface soils at the Site.

## 6.3 VISAUL INSPECTIONS

**Lead-Lined Materials:** Lead-lined materials were observed in the north wing on the main floor of the hospital building. The following table lists the location, material, and estimated extent. Lead-lined materials are considered a COC in relation to the Site.

| Location | Material | Estimated Extent/Quantity |
|---|---|---|
| Room 203 | Sheet Metal Behind Drywall | 6 LF |
| Room 139 | Door | 1 |
| | Sheet Metal Behind Drywall | 5 LF |
| Room 109 | Door | 1 |
| | Sheet Metal Behind Drywall | 16 LF |
| Room 109A | Door | 1 |
| | Sheet Metal Behind Drywall | 8 LF |
| Room 107 | Door | 1 |
| | Glass | 1 |



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| Location | Material | Estimated Extent/Quantity |
|---|---|---|
| | Sheet Metal Behind Drywall | 14 LF |

The location and approximate extent of the lead-lined materials are presented in Figure 9.

**PCBs:** All ballasts were replaced in 2002. Approximately ½-gallon of transformer oil was observed in a jug in the basement of the hospital and is assumed to contain PCBs. PCBs are considered a COC at the Site.

**Mercury:** The following number of mercury ampules were observed in the thermostats at the Site.

- Hospital Boiler Room = 5 Ampules
- Hospital Basement = 1 Ampule
- Home Oxygen Building = 1 Ampule

The location of the mercury thermostat ampules is presented in Figures 3 and 11. Mercury is considered a COC at the Site.

**Mold:** Mold was not observed within the building. Mold is not considered a COC at the Site.

## 6.4 CONCEPTUAL SITE MODEL

Per ASTM E1903-11 (Section 6.4.6), validation of the conceptual site model is conducted by evaluating testing results and other investigation findings to determine whether available information is sufficient to support sound conclusions regarding the presence of the target analytes. The presence of the target analytes investigated as part of this Phase II ESA along with the current exposure pathways, as applicable, for the Site is presented in the following table.



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| Target Analytes | Media | Contaminants Present Above Screening Benchmarks | Exposure Pathway | Exposure Route | Human Receptors | |
|---|---|---|---|---|---|---|
| | | | | | Residential | Workers |
| ACM | Building Materials and Dust | Yes (Building Materials and Dust) | Complete | Dermal | -- | X |
| | | | | Ingestion | -- | X |
| | | | | Inhalation | -- | X |
| LBP | Building Materials | Yes | Potentially Complete | Dermal | -- | X |
| | | | | Ingestion | -- | X |
| | | | | Inhalation | -- | X |
| Lead | Soil | No | Incomplete | Dermal | -- | -- |
| | | | | Ingestion | -- | -- |
| | | | | Inhalation | -- | -- |
| Lead | Lead-Lined Building Materials | Yes | Potentially Complete | Dermal | -- | X |
| | | | | Ingestion | -- | X |
| | | | | Inhalation | -- | X |
| PCBs, Mercury, and Mold | Building Materials | Yes (Mercury and PCBs) | Potentially Complete | Dermal | -- | X |
| | | | | Ingestion | -- | X |
| | | | | Inhalation | -- | X |

Notes: -- = Receptor not at risk (Currently) X = Receptor at risk to exposure (Currently or Potentially)

**Explanation:** Evaluation of exposure pathway completeness is based upon the existing site use as vacant and assumes that no people are currently accessing the Site or will be accessing the Site other than workers during future assessment/redevelopment or maintenance workers. Once future site-specific activities are determined or if a change in current use occurs, exposure pathways should be re-assessed as they may alter the pathway completeness presented in this report and require further evaluation prior to conducting subsequent activities or changes at the Site.

## 6.5 DISCLOSURE OF AVAILABLE DATA INSUFFICIENT TO MEET OBJECTIVES

Per ASTM E1903-11 (Section 1.3.2), all Phase II ESA reports must disclose any respect in which available data are insufficient to meet the objectives of the assessment. Listed below are the disclosures in which the available data set for this investigation were insufficient to meet the objectives of this Phase II ESA, if any.

- Based upon the objectives for this Phase II ESA, no insufficiencies were encountered.



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# 7.0 CONCLUSIONS OF THE PHASE II ESA

START performed a Phase II ESA in conformance with the scope and limitations of ASTM Practice E1903-11 for the Livingston Memorial Hospital located at 504 South 13th Street in Livingston, MT. The following list is a summary of the conclusions regarding COCs and associated media identified by START at the Site:

**Asbestos-Containing Material**

- **Bulk Building Material Samples:** Results of the ACM survey indicate asbestos incinerator flue and pipe gaskets are present in the hospital building along with the previously identified floor tiles and mastics, linoleum, TSI, window glazing and caulking, roof drain bowl insulation, undercoating on sinks, and crawlspace TSI debris and soil. ACM is considered a COC in relation to the Site.
- **Dust Wipe Samples:** Results for all ten (10) dust wipe samples collected had asbestos present. Asbestos dust was identified on flooring surfaces within the basement and main floor of the hospital. Additional wipe samples, microvac samples, and/or air samples are needed during the next phase of assessment and/or remediation of the Site.

**Lead-Based Paint**

- **Limited XRF Survey:** Results of the LBP survey indicate LBP is present throughout basement, main floor, and on the exterior trim of the hospital building. LBP is considered a COC at the Site.
- **Lead-in-Soil:** Based on the results of the lead-in-soil samples, lead-in-soil is present but not above screening benchmarks. Lead-in-soil is not considered to be a COC in relation to the Site.

**Lead-Lined Materials**

- Lead-lined doors, drywall, and one glass window were observed in the north wing on the main floor of the hospital building. Lead-lined materials are considered a COC in relation to the Site.

**PCBs, Mercury, and Mold**

A summary of the observations regarding the visual inspections conducted are presented below:

- All potential PCBs ballasts were removed from the buildings; however, a partial gallon of transformer oil assumed to contain PCBs was found in the basement of the hospital. PCBs are considered COCs in relation to the Site.
- Seven (7) mercury thermostat switches were observed in the buildings. Mercury is considered a COC in relation to the Site.



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- No mold was observed in the building. Mold is not considered a COC in relation to the Site.

## RECOMMENDATIONS

Based on the results of the Phase II ESA conducted, START recommends the following:

- START recommends contracting an accredited asbestos remediation company to further assess asbestos dust at the Site and determine appropriate remedial actions to address ACM during the cleanup phase of redevelopment (e.g., abatement, encapsulation, cleaning of all surfaces, etc.). The presence of asbestos dust indicates building surfaces and the surface of items stored in the building may need to be cleaned/decontaminated by an asbestos remediation contractor prior to reuse or disposal; otherwise, they may need to be disposed of as asbestos waste. ACM remediation is recommended prior to any renovation or demolition activities at the Site in order to permanently mitigate exposure risk.
- However, pending final redevelopment/reuse plans for the Site and considering the type and condition of ACM identified, development of an ACM Operations and Maintenance (O&M) Plan to monitor the condition of ACM identified at the Site, removal of select ACM (e.g., friable pipe insulation), and/or a combination of these remediation methods could be implemented. START recommends contracting an accredited asbestos remediation company to create and implement an ACM Operations and Maintenance (O&M) Plan to monitor the condition of ACM identified.
- START recommends contracting an accredited lead remediation company to determine appropriate remedial actions needed to address the LBP at the Site during the cleanup phase of redevelopment (e.g., encapsulation, chemical stripping, removal, etc.). Dust control methods should be implemented for the debris. It is recommended that all work be performed by an EPA Lead-Safe certified firm. If construction materials are to be removed, it is recommended that the construction debris disposal facility be contacted to determine if Toxicity Characteristic Leaching Procedure (TCLP) samples will be required.
- Lead sheet metal found in the walls, lead-lined doors, and leaded glass should be properly disposed of or recycled during renovation activities.
- Potential PCB-containing oil and mercury ampules should be removed and properly disposed of prior to demolition or renovation.



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# 8.0 SIGNATURE OF PHASE II ASSESSOR AND SEAL

This Phase II ESA was completed by the following START personnel and subcontractor(s), if applicable. Qualifications are provided at the end of the report:

- Ms. Natalie Quiet – Project Manager, Environmental Professional;
- Mr. Elliott Petri, P.E. – Engineer, Environmental Professional, and Montana-Accredited Asbestos and EPA Lead-Based Paint Inspector
- Mr. Michael Cherny, Scientist – Montana-Accredited Asbestos and EPA Lead-Based Paint Inspector; and

Ms. Natalie Quiet has undertaken the role of Phase II Assessor for this assessment. The following is the certification statement as defined in ASTM Practice E1903-11 (Section 9.2.1):

*We have performed a Phase II environmental site assessment at the Livingston Memorial Hospital site located at 504 South 13th Street, Livingston, MT in conformance with the scope and limitations of ASTM Practice E1903-11 and for the following objectives:*

- *To further refine the extent of ACM identified in the previous asbestos inspection, to address data gaps, and to investigate the potential presence of other environmental contamination;*
- *Conduct dust wipe sampling to evaluate the potential migration of known asbestos fibers from the crawlspace areas;*
- *Assess and evaluate on-site buildings for LBP;*
- *Assess and evaluate potential lead impacts to surface soils at the Site, if exterior LBP is identified on the buildings and bare soils are present beneath the LBP;*
- *Determine extent of lead-lined construction materials;*
- *Conduct visual inspections of on-site buildings to determine presence/absence of PCB-containing equipment, mercury-containing equipment, and mold;*
- *Develop sufficient information to render a reasonable professional opinion whether hazardous substances either are or are not present at the Site with respect to the potential concerns assessed. If present, include concentrations of hazardous substances based on field screening and/or laboratory analysis of samples;*
- *Gather and provide sufficient data to assist the TBA recipient in making informed decisions with regard to the future use of the property; and*
- *Obtain sufficient data to support conceptual remediation cost estimating, if necessary.*

Natalie Quiet
Certifying Environmental Professional (Print)

Project Manager
Title

Natalie Quiet
Signature

5/25/2018
Date



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# 9.0 SPECIFICATIONS FOR ASTM E1903-11 REPORT USE AND RELIANCE

## 9.1 SPECIAL TERMS AND CONDITIONS

This document has been prepared by the WESTON START-IV team as tasked by the EPA solely for the use and benefit of the EPA and Homeword, Inc. Any use of this document or information herein by persons or entities other than the EPA or Homeword, Inc., without the express written consent of START, will be at the sole risk and liability of said person or entity. START will not be liable to the EPA, Homeword, Inc., or such persons or entities, for any damages resulting therefrom. It is understood that this document may not include all information pertaining to the described site.

## 9.2 LIMITATIONS AND EXCEPTIONS OF ASSESSMENT

ASTM E1903-11 (Section 4.2.1) acknowledges, "No Phase II ESA can eliminate all uncertainty. Furthermore, any sample, either surface or subsurface, taken for chemical testing may or may not be representative of a larger population. Professional judgment and interpretation are inherent in the process, and even when exercised in accordance with objective scientific principles, uncertainty is inevitable. Additional assessment beyond that which was reasonably undertaken may reduce the uncertainty". ASTM E1903-11 (Section 4.2.1.2) acknowledges, "The effectiveness of a Phase II ESA may be compromised by limitations or defects in the information used to define the objectives and scope of the investigation, including inability to obtain information concerning historic site uses or prior site assessment activities despite the efforts of the user and Phase II Assessor to obtain such information in accordance with 5.1.3". Furthermore, the ASTM E1903-11 (Section 4.2.2) states, "Phase II ESAs do not generally require an exhaustive assessment of environmental conditions on a property. There is a point at which the cost of information obtained and the time required to obtain it outweigh the benefit of the information and, in the context of private transactions and contractual responsibilities, may become a material detriment to the orderly conduct of business. If the presence of target analytes is confirmed on a property, the extent of further assessment is a function of the degree of confidence required and the degree of uncertainty acceptable in relation to the objectives of the assessment".

## 9.3 DISCLAIMERS

START has performed this Phase II ESA in general conformance with the scope and limitations of ASTM E1903-11 standards and TDD 0003/1802-06. The Phase II ESA findings and conclusions presented herein are professional opinions based solely on data collected during the assessment and/or interpretation of information and past data provided for review. The information and data collected from the Site by START is based on the conditions existing on the date(s) of START's assessment activities at the property. START does not warrant or guarantee information obtained from third parties used for this assessment are correct, complete, and/or current.



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Though START did collect samples and/or perform testing during this assessment, it is possible that contamination remains undiscovered or that property conditions will change in the future. START does not warrant or guarantee the property suitable for any particular purpose or certify the property as "clean."

ASTM E1903-11 (Section 1.5) states, "This practice is not intended to supersede applicable requirements imposed by regulatory authorities. This practice does not attempt to define a legal standard of care either for the performance of professional services with respect to matters within its scope, or for the performance of any individual *Phase II Environmental Site Assessment"*.

Information, limitations, and disclaimers provided in this general section apply to all of the sections included in this report.



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# 10.0 REFERENCES

ASTM, International (ASTM), 2011. E1903-11, *Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process.* West Conshohocken, Pennsylvania.

| Citation | Reference Type | Assessment Factor | | | | |
|---|---|---|---|---|---|---|
| | | Soundness | Applicability and Utility | Clarity and Completeness | Uncertainty and Variability | Evaluation and Review |
| ASTM, 2011 | Guidance | Acceptable | Acceptable | Acceptable | Acceptable | Acceptable |

ASTM, 1999. D 6480-99, *Standard Test Method for Wipe Sampling of Surfaces, Indirect Preparation, and Analysis for Asbestos Structure Number Concentration by Transmission Electron Microscopy.*

| Citation | Reference Type | Assessment Factor | | | | |
|---|---|---|---|---|---|---|
| | | Soundness | Applicability and Utility | Clarity and Completeness | Uncertainty and Variability | Evaluation and Review |
| ASTM, 1999 | Guidance | Acceptable | Acceptable | Acceptable | Acceptable | Acceptable |

EPA, 2018. *Technical Direction Document (TDD)* 0003/1802-06.

| Citation | Reference Type | Assessment Factor | | | | |
|---|---|---|---|---|---|---|
| | | Soundness | Applicability and Utility | Clarity and Completeness | Uncertainty and Variability | Evaluation and Review |
| EPA, 2018 | Guidance | Acceptable | Acceptable | Acceptable | Acceptable | Acceptable |

EPA, October 1985. EPA's "Pink Book", *Asbestos in Buildings: Simplified Sampling Scheme for Friable Surfacing Materials.* (EPA 560/5-85-030a).

| Citation | Reference Type | Assessment Factor | | | | |
|---|---|---|---|---|---|---|
| | | Soundness | Applicability and Utility | Clarity and Completeness | Uncertainty and Variability | Evaluation and Review |
| EPA, 1985 | Guidance | Acceptable | Acceptable | Acceptable | Acceptable | Acceptable |

NIH, 2016. *NESHAP Asbestos Renovation Survey, Former Livingston Hospital, 504 South 13th Street Livingston, Montana, Project No. 999-3019*. March 7, 2016.

| Citation | Reference Type | Assessment Factor | | | | |
|---|---|---|---|---|---|---|
| | | Soundness | Applicability and Utility | Clarity and Completeness | Uncertainty and Variability | Evaluation and Review |
| NIH, 2016 | Guidance | Acceptable | Acceptable | Acceptable | Acceptable | Acceptable |



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WESTON, 2018. *Phase I ESA, Livingston Memorial Hospital, 504 South 13th Street, Livingston, Park County, Montana.* April 2018.

| Citation | Reference Type | Assessment Factor | | | | |
|---|---|---|---|---|---|---|
| | | Soundness | Applicability and Utility | Clarity and Completeness | Uncertainty and Variability | Evaluation and Review |
| WESTON, 2018a | Document | Acceptable | Acceptable | Acceptable | Acceptable | Acceptable |

WESTON, 2018. *Sampling and Analysis Plan, Livingston Memorial Hospital, 504 South 13th Street, Livingston, Park County, Montana.* April 2018.

| Citation | Reference Type | Assessment Factor | | | | |
|---|---|---|---|---|---|---|
| | | Soundness | Applicability and Utility | Clarity and Completeness | Uncertainty and Variability | Evaluation and Review |
| WESTON, 2018b | Document | Acceptable | Acceptable | Acceptable | Acceptable | Acceptable |



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# 11.0 QUALIFICATIONS

START utilized qualified, professional staff, trained in performing the scope of work required for this Phase II ESA. The START team personnel included a project manager and technical specialist(s). Their roles are described in more detail as follows:

- Project Manager and Environmental Professional – Ms. Natalie Quiet is a senior project scientist with over 15 years of experience in the field of environmental sciences. Ms. Quiet specializes in the development and implementation of site investigation plans, analysis of soil, sediment, groundwater, and surface water data, evaluation of remediation options, and conducting Phase I/II investigations, Preliminary Assessment (PA)/Site Inspection (SI), and Remedial Investigation (RI)/Feasibility Studies (FS). She is experienced in projects involving initial site assessment, soil, sediment, surface water, and groundwater investigations, remedial action/corrective action plans, risk assessment, closure plan development, and agency negotiation.
- Engineer and Environmental Professional – Mr. Elliott Petri, P.E. has a M.S. in Environmental Science and Engineering with 8+ years of experience in the field of environmental sciences including site management, Phase I/II ESAs, site investigations, assessments and remediation; Mr. Petri has managed/conducted quality control on projects from $20,000 to 4 million dollars for the United States Air Force and the EPA.
- Scientist – Mr. Michael Cherny has 2+ years of project experience collecting soil, groundwater, surface water, and air samples, and conducting air monitoring. His experience includes conducting site assessments, removals, technical report documentation, and field instrument proficiency. Mr. Cherny is a certified asbestos and LBP inspector in Colorado, Montana, and EPA Region 8 administered states.



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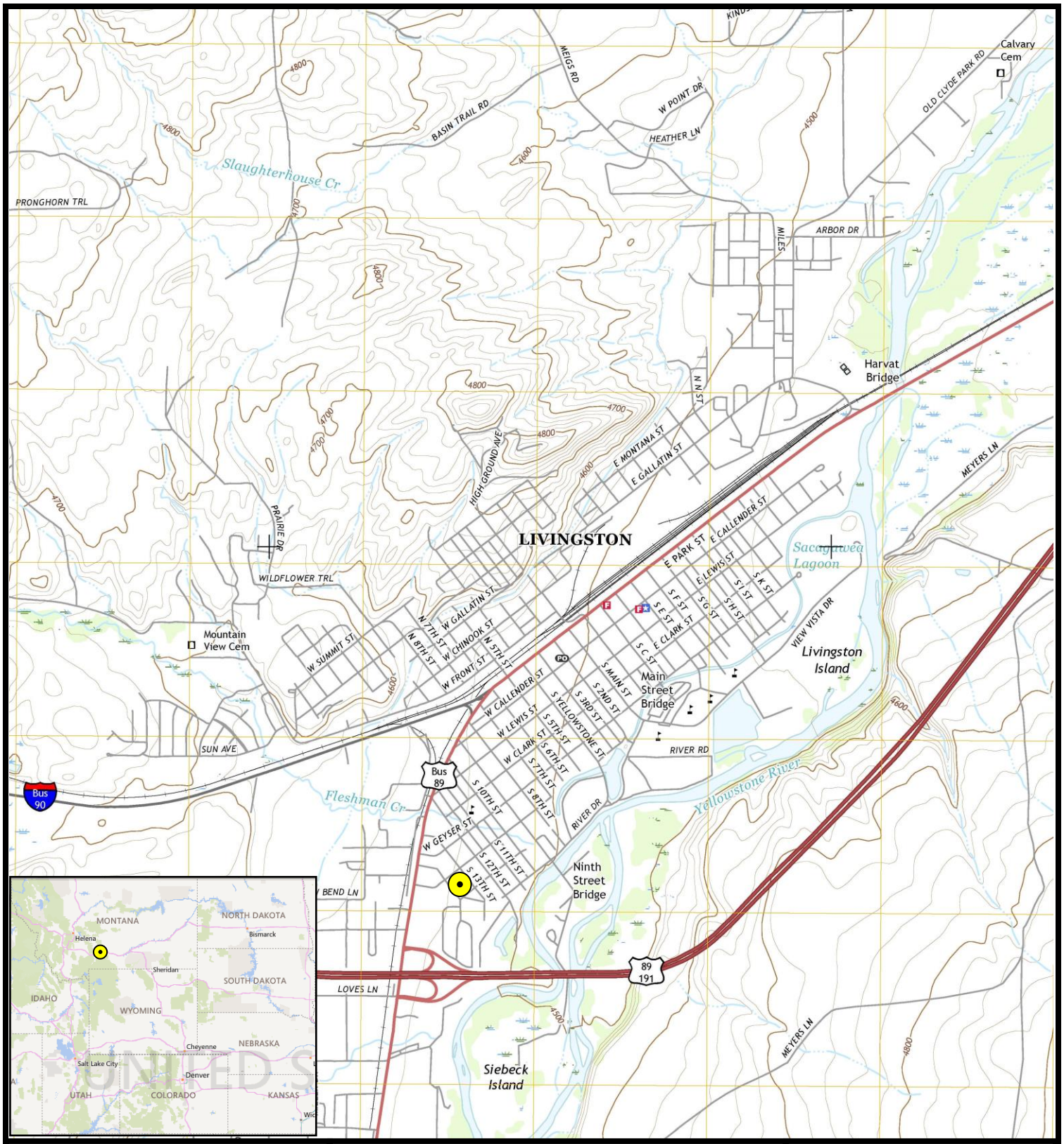
# FIGURES




## Legend

Site Location (Approximate)

0 1,200 2,400 feet

N W E S

**Prepared for:**
**U.S. EPA Region 8**

**Contract No.:**
**EP-S8-13-01**

**TDD:**
**1802-06**

**TO:**
**0003**

**Prepared By:**
**Weston Solutions, Inc.**
**START IV**

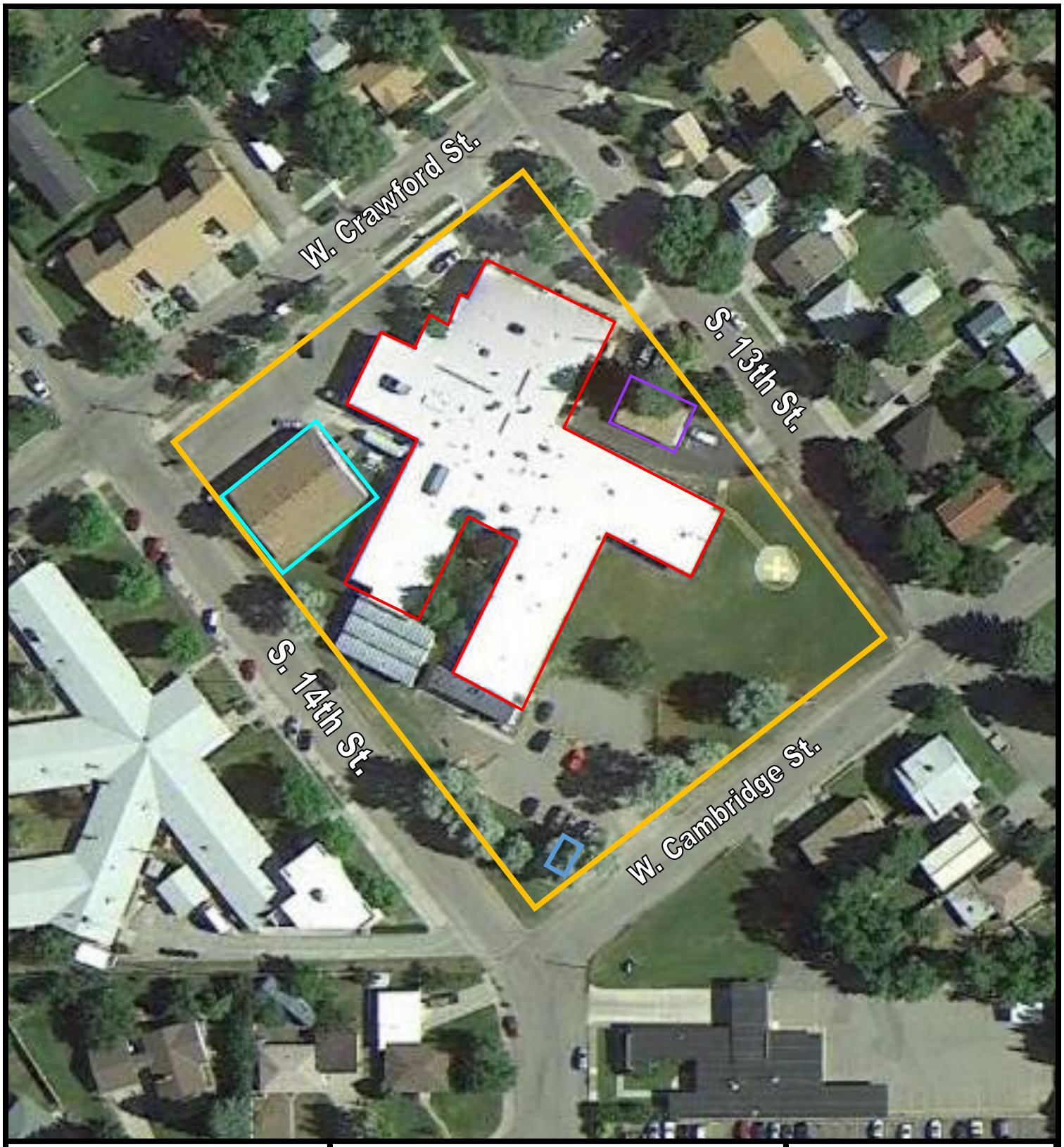
**Suite 100**
**1435 Garrison Street**
**Lakewood, CO 80215**

**FIGURE 1**

**SITE LOCATION MAP**

**LIVINGSTON MEMORIAL HOSPITAL**
**LIVINGSTON,**
**PARK COUNTY, MONTANA**

DATE: 3/8/2018




## Legend

- Property Boundary
- Home Oxygen Building
- Livingston Memorial Hospital
- Maintenance Shed
- Mental Health Building

0 50 100 feet

N W E S

**Prepared for:**
**U.S. EPA Region 8**

**Contract No.:**
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**TO:**
**0003**

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**START IV**

**Suite 100**
**1435 Garrison Street**
**Lakewood, CO 80215**

**FIGURE 2**

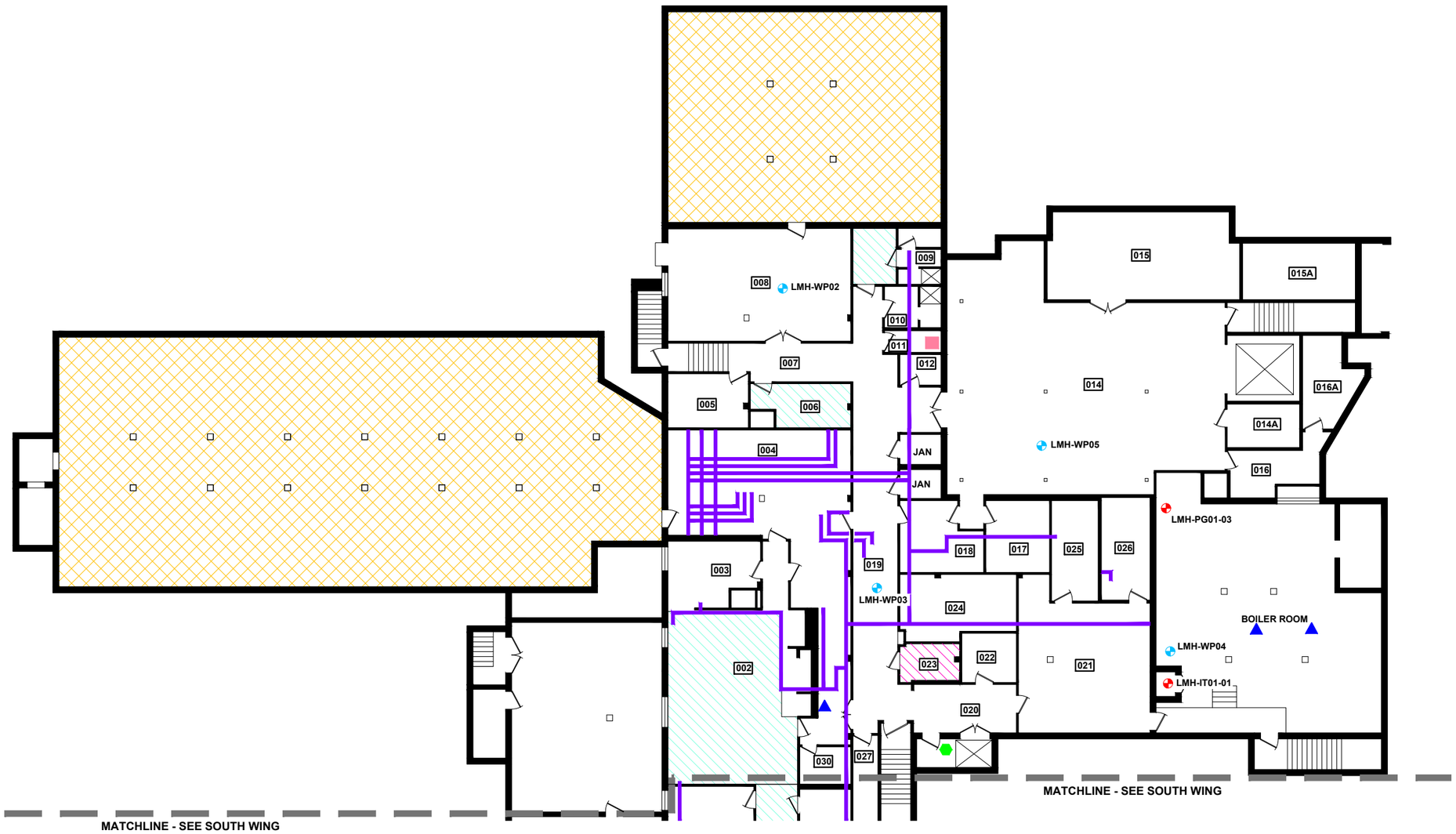
**SITE VICINITY**

**LIVINGSTON MEMORIAL HOSPITAL**
**LIVINGSTON, PARK COUNTY, MONTANA**

DATE: 5/21/2018

## LEGEND:

| | |
|---|---|
| ACM | ASBESTOS CONTAINING MATERIAL |
| | ACM SAMPLE LOCATION (APPROXIMATE) |
| | ASBESTOS WIPE SAMPLE LOCATION (APPROXIMATE) |
| | ACM LINOLEUM EXTENT |
| | ACM FLOOR TILE AND MASTIC EXTENT |
| | PIPE INSULATION DEBRIS EXTENT |
| | ACM PIPE INSULATION AND FITTINGS EXTENT |
| | SINKS WITH ACM UNDERCOATING |
| | MERCURY SWITCH |
| | PCB TRANSFORMER OIL |

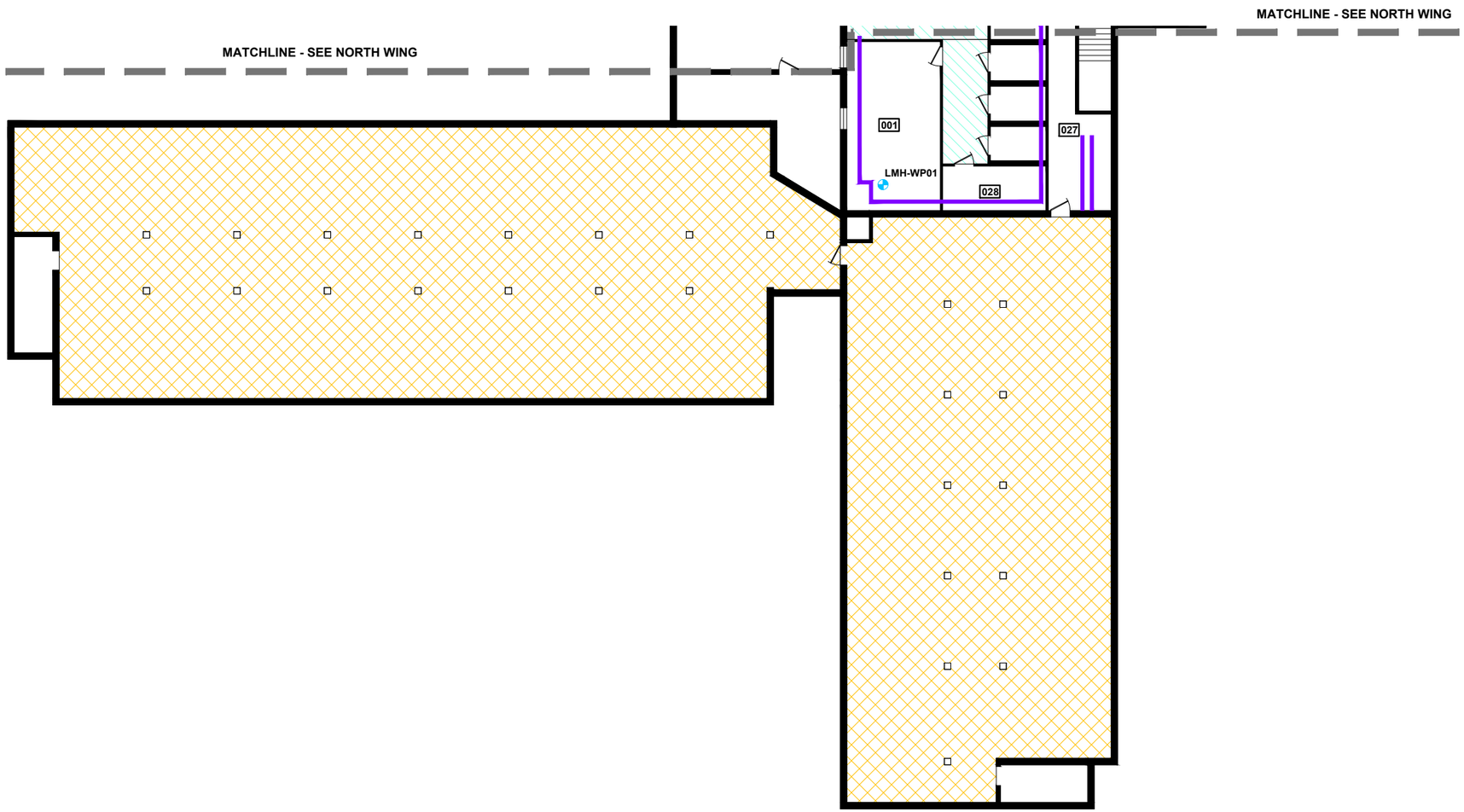



N

0 20'

Scale:1" = 20'

| | | | | |
|---|---|---|---|---|
| Contract No.: EP-S8-13-01 TDD: 1802-06 TO: 0003 | Prepared By: Weston Solutions, Inc. START IV Suite 100 1435 Garrison Street Lakewood, CO 80215 | ACM SAMPLE LOCATION AND EXTENT MAP NORTH WING - BASEMENT FLOOR LIVINGSTON MEMORIAL HOSPITAL HAZARDOUS BUILDING MATERIALS SURVEY | DATE: 5/2/18 SCALE: 1"=20' | Figure 3 |




## LEGEND:

| | |
|---|---|
| ACM | ASBESTOS CONTAINING MATERIAL |
| | ASBESTOS WIPE SAMPLE LOCATION (APPROXIMATE) |
| | PIPE INSULATION DEBRIS EXTENT |
| | ACM FLOOR TILE AND MASTIC EXTENT |
| | ACM PIPE INSULATION AND FITTINGS EXTENT |

N

0 20'

Scale:1" = 20'

Contract No.:
EP-S8-13-01
TDD: 1802-06
TO: 0003

Prepared By:
Weston Solutions, Inc.
START IV
Suite 100
1435 Garrison Street
Lakewood, CO 80215

**ACM SAMPLE LOCATION AND EXTENT MAP**
**SOUTH WING - BASEMENT FLOOR**
**LIVINGSTON MEMORIAL HOSPITAL**
**HAZARDOUS BUILDING MATERIALS SURVEY**

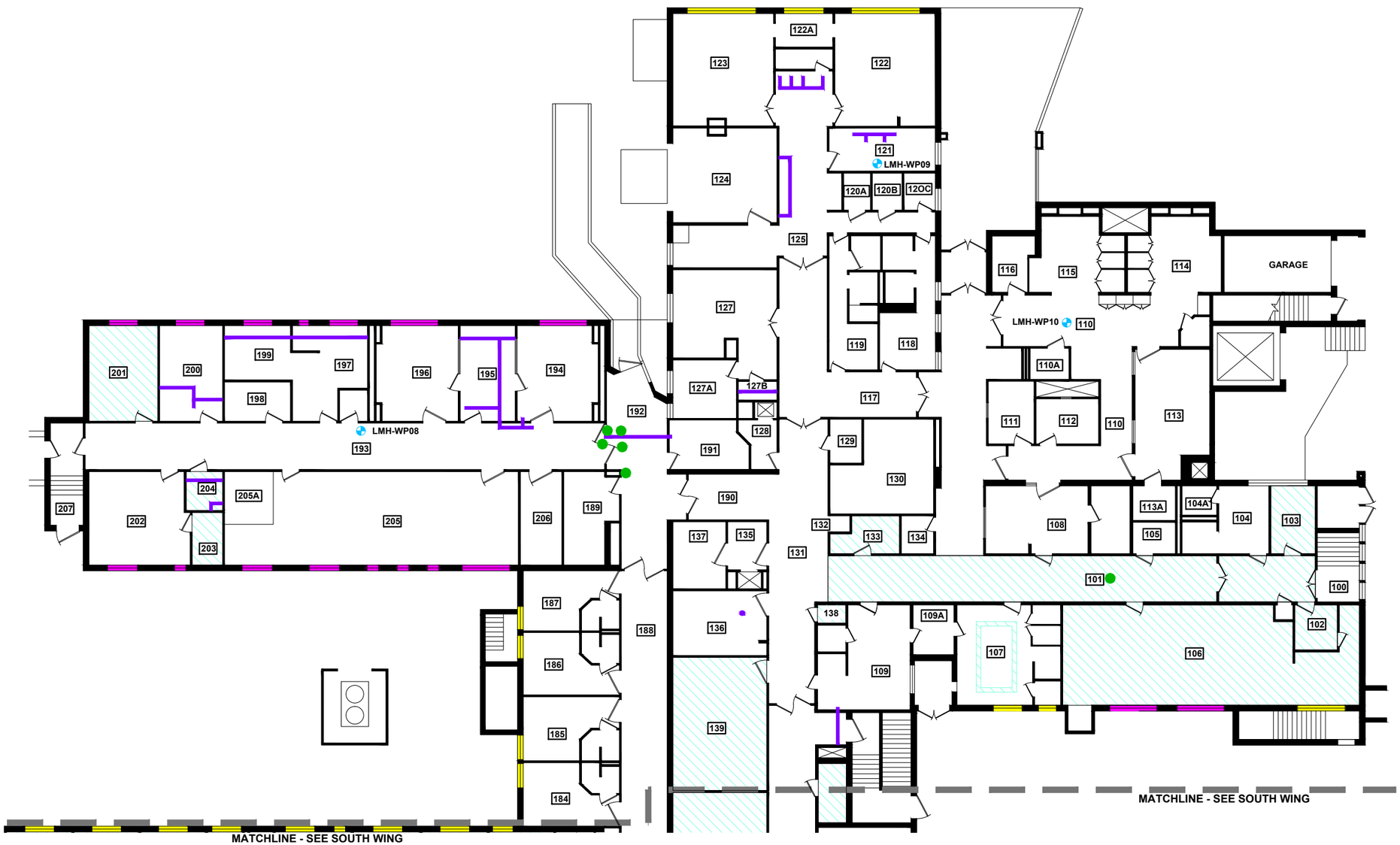
DATE: 5/2/18

SCALE: 1"=20'

Figure 4

## LEGEND:

- ACM — ASBESTOS CONTAINING MATERIAL
- ASBESTOS WIPE SAMPLE LOCATION (APPROXIMATE)
- ACM FLOOR TILE AND/OR MASTIC EXTENT
- ACM PIPE INSULATION AND FITTINGS EXTENT
- ACM WINDOW CAULK EXTENT
- ACM WINDOW GLAZING EXTENT
- ACM ROOF DRAIN BOWL




0 20'
Scale:1" = 20'

| | | | | |
|---|---|---|---|---|
| Contract No.: EP-S8-13-01 TDD: 1802-06 TO: 0003 | Prepared By: Weston Solutions, Inc. START IV Suite 100 1435 Garrison Street Lakewood, CO 80215 | ACM SAMPLE LOCATION AND EXTENT MAP NORTH WING - MAIN FLOOR LIVINGSTON MEMORIAL HOSPITAL HAZARDOUS BUILDING MATERIALS SURVEY | DATE: 5/2/18 SCALE: 1"=20' | Figure 5 |

## LEGEND:

| | |
|---|---|
| ACM | ASBESTOS CONTAINING MATERIAL |
| | ASBESTOS WIPE SAMPLE LOCATION (APPROXIMATE) |
| | ACM FLOOR TILE AND/OR MASTIC EXTENT |
| | ACM PIPE INSULATION AND FITTINGS EXTENT |
| | ACM WINDOW CAULK EXTENT |
| | ACM ROOF DRAIN BOWL |

N

0 20'

Scale:1" = 20'

| | | | |
|---|---|---|---|
| Contract No.: EP-S8-13-01 TDD: 1802-06 TO: 0003 | Prepared By: Weston Solutions, Inc. START IV Suite 100 1435 Garrison Street Lakewood, CO 80215 | ACM SAMPLE LOCATION AND EXTENT MAP SOUTH WING - MAIN FLOOR LIVINGSTON MEMORIAL HOSPITAL HAZARDOUS BUILDING MATERIALS SURVEY | DATE: 5/2/18 SCALE: 1"=20' | Figure 6 |

## LEGEND:

| | |
|---|---|
| LBP | LEAD BASED PAINT |
| | LBP CEILING EXTENT |
| | LBP FLOOR EXTENT |
| | LBP WALLS/BUILT-INS EXTENT |

N

0 20'

Scale:1" = 20'

Contract No.:
EP-S8-13-01
TDD: 1802-06
TO: 0003

Prepared By:
Weston Solutions, Inc.
START IV
Suite 100
1435 Garrison Street
Lakewood, CO 80215

**LBP LOCATION AND EXTENT MAP**
**NORTH WING - BASEMENT FLOOR**
**LIVINGSTON MEMORIAL HOSPITAL**
**HAZARDOUS BUILDING MATERIALS SURVEY**

DATE:
5/2/18

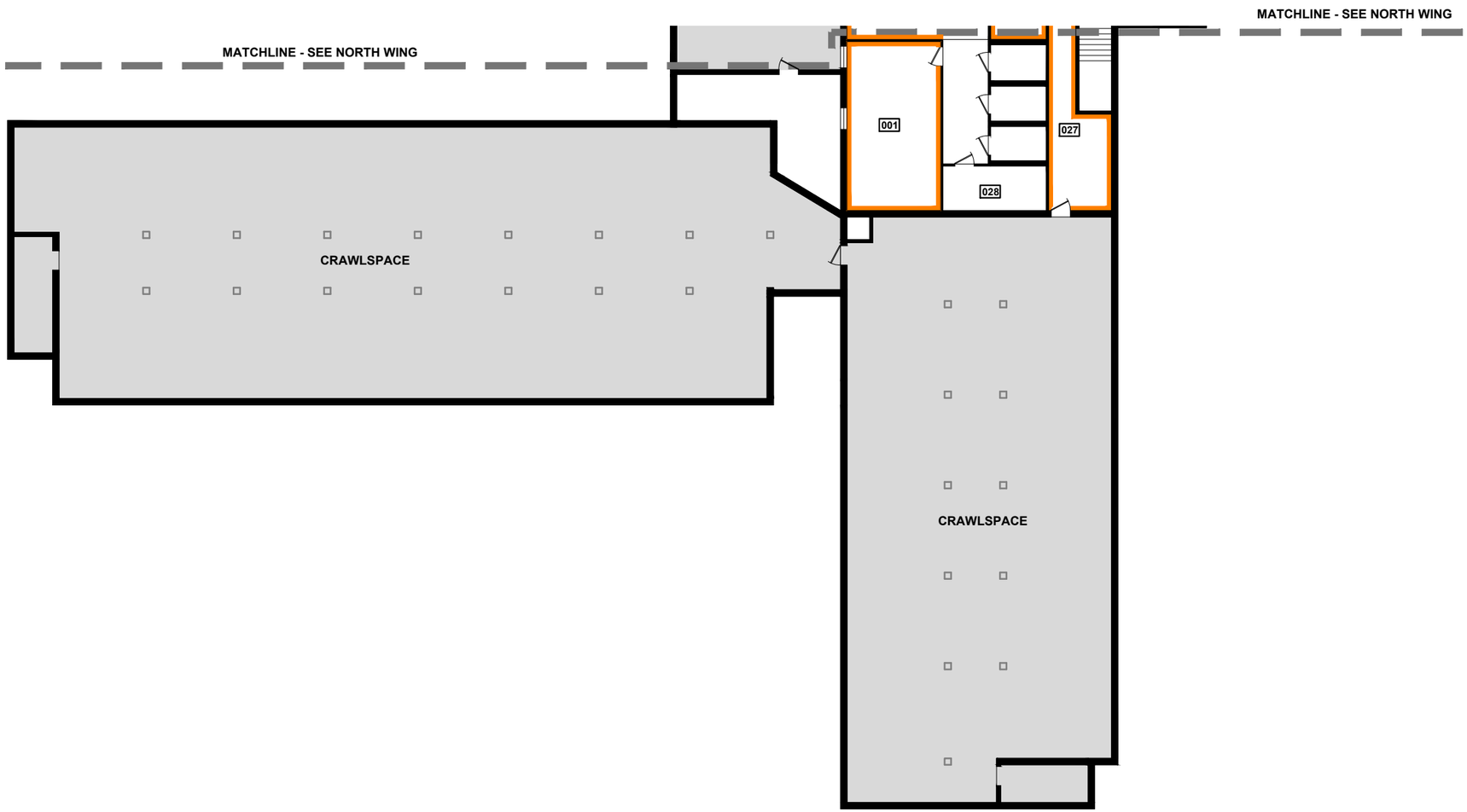
SCALE:
1"=20'

Figure
7

## LEGEND:

LBP LEAD BASED PAINT

LBP WALLS EXTENT




N

0 20'

Scale:1" = 20'

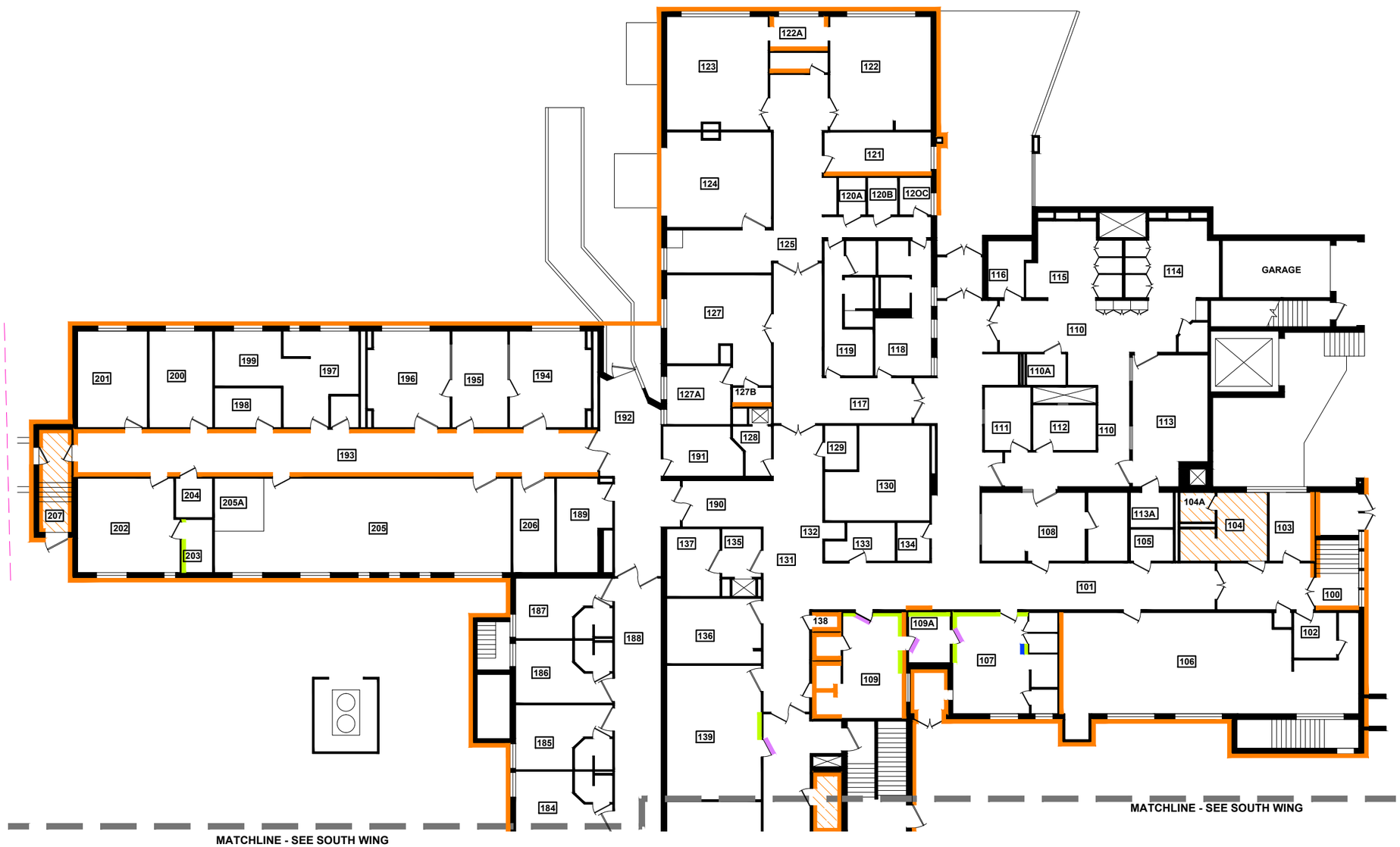
| | | | | |
|---|---|---|---|---|
| Contract No.: EP-S8-13-01 TDD: 1802-06 TO: 0003 | Prepared By: Weston Solutions, Inc. START IV Suite 100 1435 Garrison Street Lakewood, CO 80215 | LBP LOCATION AND EXTENT MAP SOUTH WING - BASEMENT FLOOR LIVINGSTON MEMORIAL HOSPITAL HAZARDOUS BUILDING MATERIALS SURVEY | DATE: 5/2/18 SCALE: 1"=20' | Figure 8 |

## LEGEND:

| | |
|---|---|
| LBP | LEAD BASED PAINT |
| | LBP EXTENT |
| | LBP WALLS EXTENT |
| | LEAD LINED DRYWALL EXTENT |
| | LEAD LINED DOORS EXTENT |
| | LEADED GLASS EXTENT |
| | LEAD IN SOIL ALIQUOT AREA |

**NOTES:**

LMH-S001-0001 = 30 mg/Kg
LMH-S091-0001 = 25.7 mg/Kg




N

0 20'

Scale:1" = 20'

| | | | | |
|---|---|---|---|---|
| Contract No.: EP-S8-13-01 TDD: 1802-06 TO: 0003 | Prepared By: Weston Solutions, Inc. START IV Suite 100 1435 Garrison Street Lakewood, CO 80215 | LBP LOCATION AND EXTENT MAP NORTH WING - MAIN FLOOR LIVINGSTON MEMORIAL HOSPITAL HAZARDOUS BUILDING MATERIALS SURVEY | DATE: 5/2/18 SCALE: 1"=20' | Figure 9 |

## LEGEND:

LBP LEAD BASED PAINT

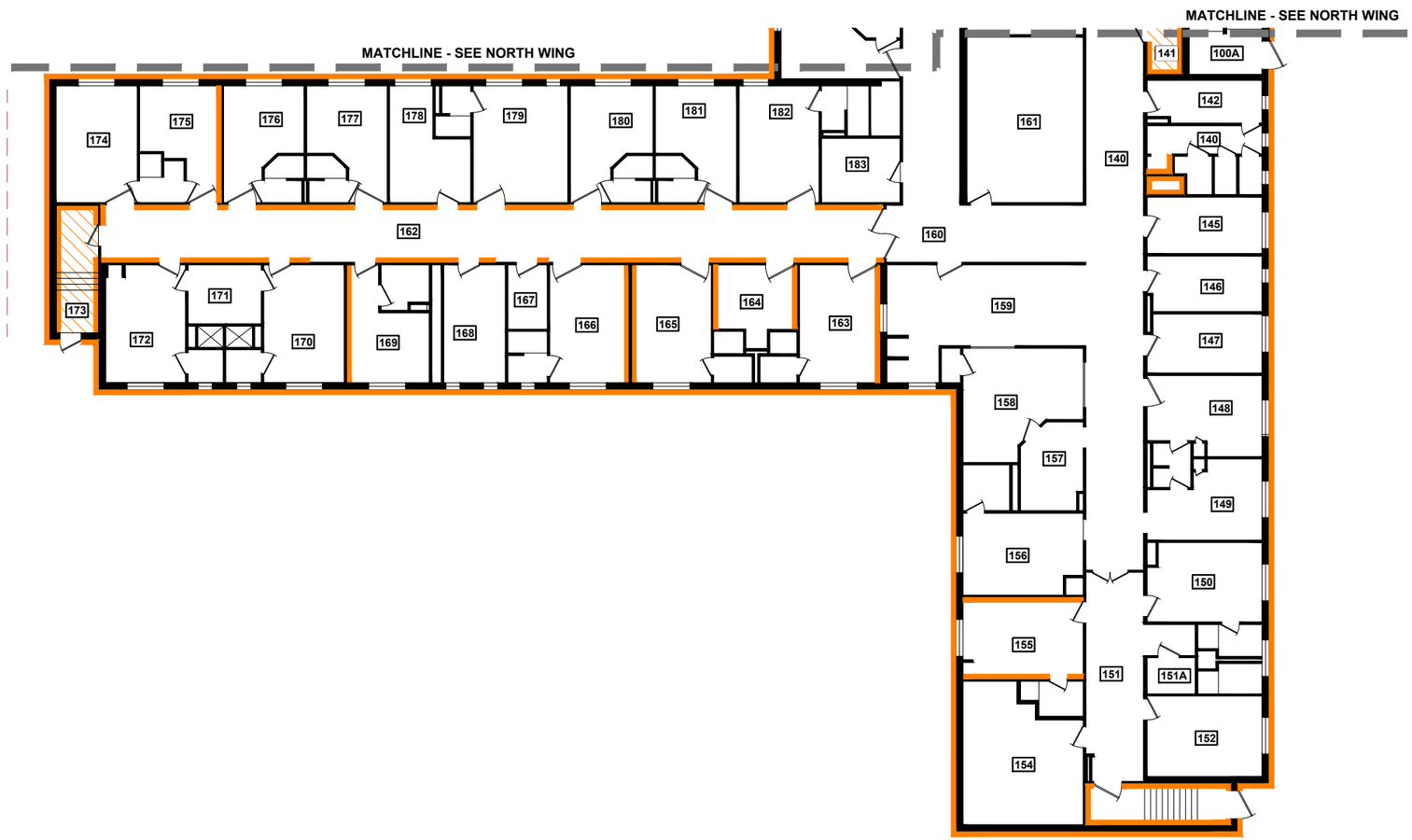
LBP EXTENT

LEAD - IN - SOIL ALIQUOT AREA

**NOTES:**

LMH-S001-0001 = 30 mg/Kg

LMH-S091-0001 = 25.7 mg/Kg




N

0 20'

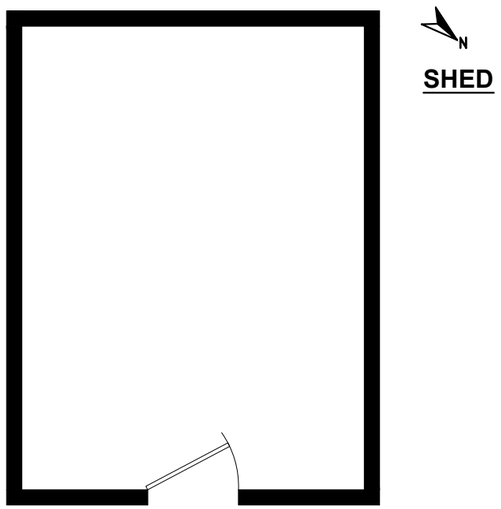
Scale:1" = 20'

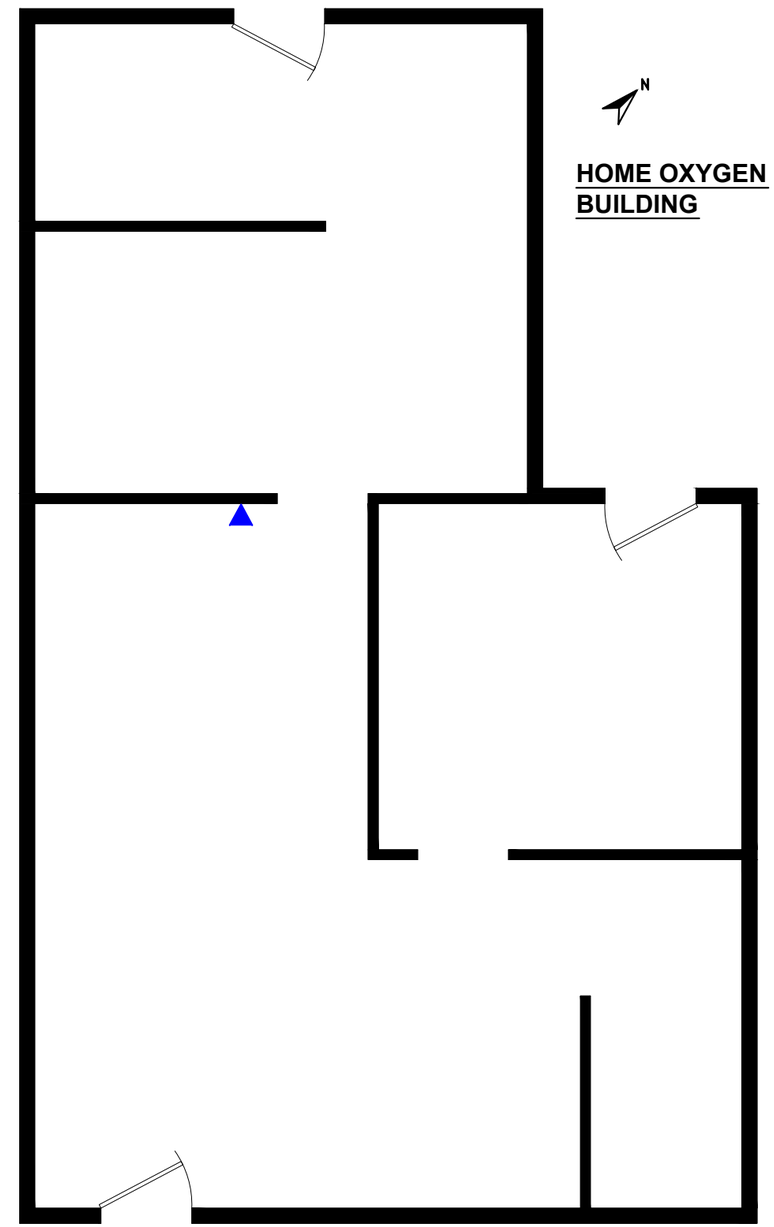
| | | | | |
|---|---|---|---|---|
| Contract No.: EP-S8-13-01 TDD: 1802-06 TO: 0003 | Prepared By: Weston Solutions, Inc. START IV Suite 100 1435 Garrison Street Lakewood, CO 80215 | LBP LOCATION AND EXTENT MAP SOUTH WING - MAIN FLOOR LIVINGSTON MEMORIAL HOSPITAL HAZARDOUS BUILDING MATERIALS SURVEY | DATE: 5/2/18 SCALE: 1"=20' | Figure 10 |

**LEGEND:**

ACM ASBESTOS CONTAINING MATERIAL

▲ MERCURY SWITCH




0 5'

Scale:1" = 5'

| | | | | |
|---|---|---|---|---|
| Contract No.: EP-S8-13-01 TDD: 1802-06 TO: 0003 | Prepared By: Weston Solutions, Inc. START IV Suite 100 1435 Garrison Street Lakewood, CO 80215 | ACM SAMPLE LOCATION AND EXTENT MAP HOME OXYGEN BUILDING AND SHED LIVINGSTON MEMORIAL HOSPITAL HAZARDOUS BUILDING MATERIALS SURVEY | DATE: 5/2/18 SCALE: 1"=20' | Figure 11 |

# TABLES

# ACM Sample Results and Estimated Volumes

**Table 1**

| Sample ID | Physical Description | ACM Layer | Asbestos Type and Percent Composition | Estimated Volume |
|---|---|---|---|---|
| **Hospital Basement** | | | | |
| LMH-IT01-01 | Incinerator Transite Flue | B - Gray fibrous cementitious material | Chrysotile 12% | 500 sq. ft. |
| LMH-PG01-03 | Pipe Gasket | A - Brown/multi-colored gasket | Chrysotile 55% | 5 gaskets |

Notes:
sq. ft. = square feet

# Non-detect for Asbestos Samples

**Table 2**

| Sample ID | Physical Description | Sample Layer(s) |
|---|---|---|
| **Shed** | | |
| SH-DW01-01 | Drywall | A - White compound |
| | | B - Light pink/tan drywall |
| SH-DW01-02 | Drywall | A - Off white compound |
| | | B - White compound |
| | | C - Light pink/tan drywall |
| SH-DW01-03 | Drywall | A - Off white compound |
| | | B - White compound |
| | | C - Light pink/tan drywall |
| SH-RM01-04 | Roofing Material | A - Black fibrous resinous material |
| | | B - Light gray shingle w/ a trace of black tar |
| **Home Oxygen Building** | | |
| HOB-RM01-01 | Roofing Material | A - Black fibrous resinous material |
| | | B - Tan/multi-colored shingle |
| HOB-CB01-02 | Cove Base | A - White compound |
| | | B - Off white adhesive |
| | | C - Tan cove base |
| HOB-LN01-03 | Linoleum | A - White compound |
| | | B - Off white adhesive |
| | | C - Gray/multi-colored sheet vinyl w/ off white fibrous backing material |
| HOB-DW01-04 | Drywall | A - White fibrous woven material |
| | | B - White texture w/ off white paint |
| | | C - Light pink/tan drywall |
| HOB-DW01-05 | Drywall | A - White fibrous woven material |
| | | B - White texture w/ off white paint |
| | | C - Light pink/tan drywall |
| HOB-DW01-06 | Drywall | A - White texture w/ off white paint |
| | | B - Light pink/tan drywall |
| HOB-DW01-07 | Drywall | A - White texture w/ off white paint |
| | | B - Light pink/tan drywall |
| HOB-CB02-08 | Cove Base | A - White compound |
| | | B - Off white adhesive |
| | | C - Tan cove base |
| HOB-LN02-09 | Linoleum | A - Tan adhesive |
| | | B - Tan/multi-colored sheet vinyl |
| HOB-DW02-10 | Drywall | A - Off white/multi-colored paint w/ white compound |
| | | B - Off white/tan drywall |
| HOB-DW02-11 | Drywall | A - White fibrous woven material |
| | | B - Tan/off white drywall |
| | | C - White texture w/ off white/multi-colored paint |
| HOB-DW02-12 | Drywall | A - White compound w/ off white/multi-colored paint |
| | | B - Light pink/tan drywall |
| **Hospital Basement** | | |
| LMH-HG01-02 | Heat Exchanger Gasket | A - Tan/multi-colored fibrous material |
| LMH-FI01-04 | Floor Insulation | A - Brown rock w/ off white compound |
| LMH-CB01-05 | Cove Base | A - Off white adhesive |
| | | B - Light gray cove base |
| LMH-DT01-06 | Duct Tape | A - Off white fibrous woven material w/ tan paint |
| | | B - White compound |
| LMH-FM01-07 | Fridge Material | A - Off white perlitic cementitious material w/ off white/multi-colored paint |
| **Hospital Roof** | | |
| LMH-RM01-08 | Roofing Material | A - Tan adhesive |
| | | B - Tan cementitious material |
| | | C - Off white/multi-colored fibrous resinous material |
| **Hospital Main Level** | | |
| LMH-WF01-09 | Wall Felt | A - Black felt |
| LMH-TF01-10 | Terrazzo Flooring | A - Gray/multi-colored granular flooring |
| LMH-TF02-11 | Terrazzo Flooring | A - Tan/multi-colored granular flooring |

## Previous Asbestos Sample Results Table 3

| Building Material | Homogeneous Area | 2016 ACM Result | Location/Room(s) |
|---|---|---|---|
| Pipe insulation debris | D-1, D-3, D-4, D-5, D-6 | 3-45% Chrysotile | East, laundry, and dining crawlspaces |
| Linoleum - tan tile under carpet | F1.1 | 10% Chrysotile | 023 |
| Floor tile - 12"x12" purple marbled | F2.6 | 2% Chrysotile (mastic) | 101, 107, 204 |
| Floor tile - 12"x12" ivory with tan marbling | F2.8 | 5% Chrysotile (mastic) | 133, 138 |
| Floor tile - 12"x12" off-white and tan marbled | F2.11 | 3% Chrysotile (mastic) | 145, 163, 174 |
| Floor tile - 12"x12" rose marbled | F2.12 | 2-3% Chrysotile (tile and mastic) | 130, 203 |
| Floor tile - 12"x12" white and black granite | F2.16 | 5% Chrysotile (mastic) | 151 |
| Floor tile - 9"x9" brown with black streaks | F3.1 | 4-8% Chrysotile (tile and mastic) | 009 |
| Floor tile - 9"x9" light brown with brown streaks | F3.2 | 5-6% Chrysotile (tile and mastic) | 006 |
| Floor tile - 9"x9" green | F3.3 | 4-5% Chrysotile (tile and mastic) | 029 |
| Floor tile - 9"x9" red | F3.3 | 5-8% Chrysotile (tile and mastic) | 106 |
| Floor tile - 9"x9" tan | F3.4 | 4-5% Chrysotile (tile and mastic) | 160 |
| Floor tile - 9"x9" gray | F3.4 | 4-5% Chrysotile (tile and mastic) | 160 |
| Floor tile - 9"x9" green | F3.5 | 6-8% Chrysotile (tile and mastic) | 201 |
| Floor tile - 4"x2' brown | F9.1 | 4% crocidolite (mastic) | 103, 183 |
| Transite wall board | M4.1 | Assumed | refrigeration rooms |
| Window caulk - gray with white | M8.1 | 8% Chrysotile | 146, 149, 155 |
| Window glazing - white | M8.2 | 4% Chrysotile | 106, 196, 201 |
| Window caulk - white | M8.3 | 12% Chrysotile | 106, 196, 201 |
| Sink undercoating - black | M10.1 | 4% Chrysotile | 111, 126, 127 |
| Mudded fitting | T2.1 | 12% Chrysotile, 8% Amosite | Boiler room, 200 |
| Magnesia pipe insulation | T3.3 | 12% Chrysotile, 8% Amosite | Boiler room |
| Air-Cell pipe insulation | T3.4 | Assumed | Boiler room |
| Duplex pipe insulation | T3.5 | 5% Chrysotile | Boiler room |
| Roof drain bowl insulation | T12.1 | 15% Chrysotile, 8% Amosite | 101 |
| Hard fitting debris | D-2 | ND | East crawlspace |
| Linoleum - beige | F1.2 | ND | 011 |
| Linoleum - beige and brown | F1.3 | ND | 104A |
| Linoleum - purple and gray | F1.4 | ND | 109 |
| Linoleum - 12"x12" white tile pattern | F1.6 | ND | 161 |
| Floor tile - 12"12" beige with black dots | F2.1 | ND | 019, 020, 024 |
| Floor tile - 12"12" pink with black spots | F2.2 | ND | 007, 009 |
| Floor tile - 12"12" white with grey specks | F2.3 | ND | 10 |
| Floor tile - 12"12" white with gray marble pattern | F2.4 | ND | 002, 029 |
| Floor tile - 12"12" white with beige specks | F2.5 | ND | 101 |
| Floor tile - 12"12" green marbled | F2.7 | ND | 101 |
| Floor tile - 12"12" white with gray marbling | F2.9 | ND | 104, 134 |
| Floor tile - 12"12" light blue marbled | F2.10 | ND | 107 |
| Floor tile - 12"12" white with green and brown specks | F2.13 | ND | 202 |
| Floor tile - 12"12" brown marbled | F2.14 | ND | 202 |
| Floor tile - 12"12" white with blue specks | F2.15 | ND | 107 |
| Carpet - teal | F5.1 | ND | 022 |
| Carpet - blue | F5.2 | ND | 017, 018 |
| Carpet - brown | F5.3 | ND | 137, 159, 189 |
| Carpet - blue | F5.4 | ND | 160, 162, 190 |
| Leveling compound | F6.1 | ND | 018 |
| Ceramic tile - 1"x1" brown | F7.1 | ND | 164, 172, 185 |
| Ceramic tile - 6"x6" red | F8.1 | ND | 100, 100A |
| Gypsum board assembly | M3.1 | ND | Boiler room |
| Sheetrock & joint compound - original building | M3.2 | ND | 137, 157, 165 |
| Gypsum board assembly - addition | M3.3 | ND | 015, 016, 106A |
| Sheetrock & joint compound - 1989 addition | M3.4 | ND | 184, 185, 188 |
| Gypsum board behind plaster | M3.5 | ND | 101, 127, 151 |
| Ceiling panel - 2'x4' medium fissure and pinhole | M5.1 | ND | 021 |
| Ceiling panel - 2'x4' heavy texture, fissure, and pinholes | M5.2 | ND | 024 |
| Ceiling panel - 2'x4' light texture, fissure, and pinholes | M5.3 | ND | 022 |
| Ceiling panel - 2'x4' pinhole and small fissure | M5.4 | ND | 020 |
| Ceiling panel - 2'x4' 5"x5" pattern | M5.5 | ND | 017, 018 |
| Ceiling panel - 2'x4' deep fissure, pinhole, light texture | M5.6 | ND | 014, 017 |
| Ceiling panel - 2'x4' gypsum board panel with vinyl cover | M5.7 | ND | 002 |
| Ceiling panel - 1'x1' wood-based | M6.1 | Not sampled (non-suspect) | basement |
| Ceiling panel - 1'x1' white with heavy fissures | M6.2 | ND | 103, 153 |
| Ceiling panel - 1'x1' patterned holes | M6.3 | ND | 106 |
| Ceiling panel - 1'x1' white with heavy fissures | M6.4 | ND | 194 |

## Previous Asbestos Sample Results

**Table 3**

| Building Material | Homogeneous Area | 2016 ACM Result | Location/Room(s) |
|---|---|---|---|
| Plaster wall system | M7.1 | ND | 101, 140, 127, 162, 193 |
| Window glazing - brown vinyl | M8.4 | ND | 146, 149, 155 |
| Ceramic tile - 4"x4" white | M8.5 | ND | 164, 172, 185 |
| Sink undercoating - white | M10.2 | ND | 157, 158, 195 |
| Sink undercoating - grey | M10.3 | ND | 159, 205 |
| Cove base - light brown | M12.1 | ND | 022 |
| Cove base - beige | M12.2 | ND | 014 |
| Cove base - black | M12.3 | ND | 009 |
| Cove base - brown | M12.4 | ND | 104A, 179, 203 |
| Cove base mastic - white | M12.5 | ND | 110, 126, 205 |
| Cove base mastic - yellowish brown | M12.6 | ND | 116 |
| Concrete | M16.1 | ND | Boiler room |
| Concrete - addition | M16.2 | ND | 016 |
| Concrete - 1989 addition | M16.3 | ND | Exterior foundation wall |
| Brick/mortar | M17.1 | ND | Incinerator exterior |
| Firebrick/mortar | M17.2 | ND | Incinerator interior |
| Red clay block and mortar | M17.3 | ND | 101, 163, 170 |
| Light brown brick and mortar - exterior | M17.4 | ND | 122, 154, 192 |
| Concrete block/mortar | M18.1 | ND | Boiler room |
| Fiberglass reinforced plastic | M19.1 | ND | 002 |
| Ceramic tile - 4"x4" green | M19.1 | ND | 122, 123, 124 |
| Boiler ribbon gasket | T1.1 | ND | Large boiler |
| Boiler ribbon gasket - white | T1.2 | ND | Small boiler |
| Boiler flange gasket - red | T1.3 | ND | Small boiler |
| Pipe flange gasket - white | T1.4 | ND | Small boiler |
| Flange gasket - red | T1.5 | ND | Main water line |
| Mudded fitting on fiberglass run | T2.2 | ND | Boiler room |
| Fiberglass straight run piping - mechanical | T3.1 | Not sampled (non-suspect) | Boiler room |
| Fiberglass straight run piping - domestic water | T3.2 | Not sampled (non-suspect) | Boiler room |
| Boiler breaching | T7.1 | ND | Boiler room |
| Vibration joint collar - black | T8.1 | ND | 029 |
| Gray duct sealant | T9.1 | ND | 016 |
| Red fire stop | T11.1 | ND | 026 |

Table 4

## Asbestos Wipe Sample Results

| Sample ID | Sample Location | Asbestos Minerals Present |
|---|---|---|
| **Blank** | | |
| LMH-WP00 | N/A | None |
| **Basement** | | |
| LMH-WP01 | Near door to east wing crawlspace | **Chrysotile** |
| LMH-WP02 | Near door to west crawlspace | **Chrysotile** |
| LMH-WP03 | Main hallway | **Chrysotile and Amosite** |
| LMH-WP04 | Boiler room | **Chrysotile** |
| LMH-WP05 | Large room in northern addition | **Chrysotile** |
| **Main Level** | | |
| LMH-WP06 | Room in the south wing | **Chrysotile** |
| LMH-WP07 | Hallway of east wing | **Chrysotile** |
| LMH-WP08 | Hallway of southwest wing | **Chrysotile and Amosite** |
| LMH-WP09 | Room in the west wing | **Chrysotile** |
| LMH-WP10 | Large room in northern additon | **Chrysotile** |

# Lead-Based Paint Screening Results

**Table 5**

| Date | Time | Building | Room | Component | Substrate | Color | Lead mg/cm$^2$ | (+/-) Error |
|---|---|---|---|---|---|---|---|---|
| ***XRF - Calibration Checks*** | | | | | | | | |
| 4/17/2018 | 8:50:33 | N/A | N/A | N/A | SRM 2570 | WHITE | 0 | 0 |
| 4/17/2018 | 9:18:04 | N/A | N/A | N/A | SRM 2571 | YELLOW | 3.51 | 0.34 |
| 4/17/2018 | 9:18:26 | N/A | N/A | N/A | SRM 2572 | ORANGE | 1.8 | 0.18 |
| 4/17/2018 | 9:18:55 | N/A | N/A | N/A | SRM 2573 | RED | 1.27 | 0.13 |
| 4/17/2018 | 9:19:24 | N/A | N/A | N/A | SRM 2574 | GOLD | 0.62 | 0.08 |
| 4/17/2018 | 9:19:49 | N/A | N/A | N/A | SRM 2575 | GREEN | 0.3 | 0.05 |
| 4/17/2018 | 13:10:25 | N/A | N/A | N/A | SRM 2570 | WHITE | 0 | 0 |
| 4/17/2018 | 16:40:33 | N/A | N/A | N/A | SRM 2570 | WHITE | 0 | 0 |
| 4/17/2018 | 17:36:21 | N/A | N/A | N/A | SRM 2570 | WHITE | 0 | 0 |
| 4/18/2018 | 8:19:59 | N/A | N/A | N/A | SRM 2570 | WHITE | 0 | 0 |
| 4/18/2018 | 11:26:35 | N/A | N/A | N/A | SRM 2570 | WHITE | 0 | 0 |
| 4/18/2018 | 12:29:19 | N/A | N/A | N/A | SRM 2570 | WHITE | 0 | 0 |
| 4/18/2018 | 14:02:00 | N/A | N/A | N/A | SRM 2570 | WHITE | 0 | 0 |
| 4/18/2018 | 11:27:03 | N/A | N/A | N/A | SRM 2571 | YELLOW | 3.11 | 0.3 |
| 4/18/2018 | 8:20:36 | N/A | N/A | N/A | SRM 2571 | YELLOW | 3.24 | 0.32 |
| 4/17/2018 | 16:41:01 | N/A | N/A | N/A | SRM 2571 | YELLOW | 3.63 | 0.34 |
| 4/17/2018 | 13:10:55 | N/A | N/A | N/A | SRM 2571 | YELLOW | 3.68 | 0.35 |
| 4/18/2018 | 14:02:23 | N/A | N/A | N/A | SRM 2571 | YELLOW | 3.76 | 0.37 |
| 4/17/2018 | 17:36:46 | N/A | N/A | N/A | SRM 2571 | YELLOW | 3.93 | 0.37 |
| 4/18/2018 | 12:29:53 | N/A | N/A | N/A | SRM 2571 | YELLOW | 4.38 | 0.42 |
| 4/17/2018 | 16:41:26 | N/A | N/A | N/A | SRM 2572 | ORANGE | 1.47 | 0.14 |
| 4/18/2018 | 12:30:20 | N/A | N/A | N/A | SRM 2572 | ORANGE | 1.5 | 0.14 |
| 4/17/2018 | 13:11:28 | N/A | N/A | N/A | SRM 2572 | ORANGE | 1.54 | 0.15 |
| 4/18/2018 | 14:02:55 | N/A | N/A | N/A | SRM 2572 | ORANGE | 1.58 | 0.15 |
| 4/18/2018 | 8:21:01 | N/A | N/A | N/A | SRM 2572 | ORANGE | 1.59 | 0.15 |
| 4/18/2018 | 11:27:26 | N/A | N/A | N/A | SRM 2572 | ORANGE | 1.67 | 0.14 |
| 4/17/2018 | 17:37:57 | N/A | N/A | N/A | SRM 2572 | ORANGE | 1.84 | 0.19 |
| 4/17/2018 | 17:38:22 | N/A | N/A | N/A | SRM 2573 | RED | 0.93 | 0.05 |
| 4/17/2018 | 13:12:07 | N/A | N/A | N/A | SRM 2573 | RED | 1.01 | 0.05 |
| 4/18/2018 | 11:27:56 | N/A | N/A | N/A | SRM 2573 | RED | 1.04 | 0.05 |
| 4/18/2018 | 8:21:32 | N/A | N/A | N/A | SRM 2573 | RED | 1.07 | 0.05 |
| 4/17/2018 | 16:41:50 | N/A | N/A | N/A | SRM 2573 | RED | 1.08 | 0.05 |
| 4/18/2018 | 14:03:18 | N/A | N/A | N/A | SRM 2573 | RED | 1.08 | 0.05 |
| 4/18/2018 | 12:30:46 | N/A | N/A | N/A | SRM 2573 | RED | 1.14 | 0.07 |
| 4/17/2018 | 13:13:02 | N/A | N/A | N/A | SRM 2574 | GOLD | 0.55 | 0.07 |
| 4/18/2018 | 8:22:26 | N/A | N/A | N/A | SRM 2574 | GOLD | 0.62 | 0.07 |
| 4/17/2018 | 17:39:14 | N/A | N/A | N/A | SRM 2574 | GOLD | 0.66 | 0.09 |
| 4/18/2018 | 14:04:13 | N/A | N/A | N/A | SRM 2574 | GOLD | 0.68 | 0.09 |
| 4/18/2018 | 11:28:50 | N/A | N/A | N/A | SRM 2574 | GOLD | 0.69 | 0.09 |
| 4/17/2018 | 16:42:45 | N/A | N/A | N/A | SRM 2574 | GOLD | 0.74 | 0.09 |
| 4/18/2018 | 12:31:34 | N/A | N/A | N/A | SRM 2574 | GOLD | 0.79 | 0.09 |
| 4/18/2018 | 8:22:52 | N/A | N/A | N/A | SRM 2575 | GREEN | 0.24 | 0.05 |
| 4/17/2018 | 13:13:31 | N/A | N/A | N/A | SRM 2575 | GREEN | 0.29 | 0.05 |
| 4/17/2018 | 16:43:12 | N/A | N/A | N/A | SRM 2575 | GREEN | 0.31 | 0.06 |
| 4/18/2018 | 12:32:06 | N/A | N/A | N/A | SRM 2575 | GREEN | 0.31 | 0.06 |
| 4/17/2018 | 17:40:12 | N/A | N/A | N/A | SRM 2575 | GREEN | 0.34 | 0.06 |
| 4/18/2018 | 11:29:15 | N/A | N/A | N/A | SRM 2575 | GREEN | 0.35 | 0.06 |
| 4/18/2018 | 14:04:42 | N/A | N/A | N/A | SRM 2575 | GREEN | 0.37 | 0.06 |
| ***Hospital Building - Screening Results*** | | | | | | | | |
| 4/17/2018 | 11:37:49 | Basement | Room 001 | FLOOR | CONCRETE | GRAY | 0.08 | 0.02 |
| **4/17/2018** | **11:36:23** | **Basement** | **Room 001** | **WALL** | **DRYWALL** | **BROWN** | **1** | **0.04** |
| **4/17/2018** | **11:37:02** | **Basement** | **Room 001** | **WALL** | **CONCRETE** | **WHITE** | **1** | **0.06** |
| 4/17/2018 | 11:28:56 | Basement | Room 002 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 11:29:13 | Basement | Room 002 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 11:29:39 | Basement | Room 002 | BUILT-IN | WOOD | WHITE | 0 | 0 |
| 4/17/2018 | 11:27:59 | Basement | Room 002 | WALL | DRYWALL | WHITE | 0.01 | 0.02 |
| 4/17/2018 | 11:27:35 | Basement | Room 002 | WALL | DRYWALL | WHITE | 0.02 | 0.03 |
| 4/17/2018 | 11:28:20 | Basement | Room 002 | WALL | DRYWALL | WHITE | 0.03 | 0.04 |
| 4/17/2018 | 11:33:40 | Basement | Room 002 | WALL | DRYWALL | WHITE | 0.04 | 0.04 |

# Lead-Based Paint Screening Results

**Table 5**

| Date | Time | Building | Room | Component | Substrate | Color | Lead mg/cm$^2$ | (+/-) Error |
|---|---|---|---|---|---|---|---|---|
| 4/17/2018 | 11:19:09 | Basement | Room 002 | BUILT-IN | DRYWALL | WHITE | 0.06 | 0.03 |
| 4/17/2018 | 11:26:20 | Basement | Room 002 | WALL | DRYWALL | WHITE | 0.06 | 0.06 |
| 4/17/2018 | 11:16:16 | Basement | Room 002 | WALL | DRYWALL | WHITE | 0.08 | 0.03 |
| 4/17/2018 | 11:25:53 | Basement | Room 002 | BUILT-IN | WOOD | WHITE | 0.08 | 0.03 |
| 4/17/2018 | 11:30:29 | Basement | Room 002 | FLOOR | CONCRETE | GRAY | 0.08 | 0.02 |
| 4/17/2018 | 11:29:59 | Basement | Room 002 | BUILT-IN | WOOD | WHITE | 0.12 | 0.04 |
| 4/17/2018 | 11:35:45 | Basement | Room 002 | CEILING | DRYWALL | WHITE | 0.12 | 0.05 |
| 4/17/2018 | 11:26:41 | Basement | Room 002 | WALL | DRYWALL | WHITE | 0.16 | 0.15 |
| **4/17/2018** | **11:15:23** | **Basement** | **Room 002** | **WALL** | **DRYWALL** | **WHITE** | **1** | **0.04** |
| **4/17/2018** | **11:15:54** | **Basement** | **Room 002** | **WALL** | **DRYWALL** | **WHITE** | **1** | **0.16** |
| **4/17/2018** | **11:27:01** | **Basement** | **Room 002** | **WALL** | **DRYWALL** | **WHITE** | **1** | **0.07** |
| 4/17/2018 | 11:11:36 | Basement | Room 003 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 11:12:43 | Basement | Room 003 | CEILING | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 11:12:15 | Basement | Room 003 | WALL | DRYWALL | WHITE | 0.09 | 0.04 |
| 4/17/2018 | 11:11:56 | Basement | Room 003 | WALL | DRYWALL | WHITE | 0.1 | 0.04 |
| 4/17/2018 | 11:04:29 | Basement | Room 004 | WALL | PLASTER | YELLOW | 0 | 0 |
| 4/17/2018 | 11:06:49 | Basement | Room 004 | WALL | PLASTER | GREEN | 0 | 0 |
| 4/17/2018 | 11:05:26 | Basement | Room 004 | WALL | PLASTER | BROWN | 0.23 | 0.07 |
| 4/17/2018 | 11:04:10 | Basement | Room 004 | WALL | PLASTER | YELLOW | 0.26 | 0.07 |
| 4/17/2018 | 11:04:58 | Basement | Room 004 | WALL | PLASTER | BROWN | 0.28 | 0.09 |
| **4/17/2018** | **11:03:28** | **Basement** | **Room 004** | **CEILING** | **PLASTER** | **WHITE** | **1** | **0.03** |
| **4/17/2018** | **11:06:07** | **Basement** | **Room 004** | **CEILING** | **PLASTER** | **GREEN** | **1** | **0.05** |
| 4/17/2018 | 9:37:43 | Basement | Room 005 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 9:38:19 | Basement | Room 005 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 9:39:56 | Basement | Room 005 | CEILING | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 10:02:47 | Basement | Room 005 | DOOR FRAME | METAL | CREAM | 0 | 0 |
| 4/17/2018 | 9:41:05 | Basement | Room 005 | CEILING | DRYWALL | WHITE | 0.13 | 0.04 |
| 4/17/2018 | 9:37:21 | Basement | Room 005 | WALL | PLASTER | WHITE | 0.16 | 0.06 |
| **4/17/2018** | **9:36:30** | **Basement** | **Room 005** | **FLOOR** | **CONCRETE** | **GRAY** | **1** | **0.02** |
| 4/17/2018 | 9:43:35 | Basement | Room 006 | WALL | DRYWALL | WHITE | 0.09 | 0.03 |
| 4/17/2018 | 9:45:21 | Basement | Room 006 | WALL | DRYWALL | WHITE | 0.23 | 0.08 |
| **4/17/2018** | **9:42:48** | **Basement** | **Room 006** | **CEILING** | **DRYWALL** | **WHITE** | **1** | **0.15** |
| **4/17/2018** | **9:43:56** | **Basement** | **Room 006** | **WALL** | **DRYWALL** | **WHITE** | **1** | **0.05** |
| **4/17/2018** | **9:44:52** | **Basement** | **Room 006** | **WALL** | **DRYWALL** | **WHITE** | **1** | **0.05** |
| 4/17/2018 | 11:43:57 | Basement | Room 007 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 11:45:04 | Basement | Room 007 | CEILING | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 11:43:34 | Basement | Room 007 | WALL | DRYWALL | WHITE | 0.15 | 0.04 |
| 4/17/2018 | 11:44:32 | Basement | Room 007 | DOOR | METAL | RED | 0.26 | 0.05 |
| 4/17/2018 | 9:31:22 | Basement | Room 008 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 10:02:22 | Basement | Room 008 | DOOR FRAME | METAL | CREAM | 0 | 0 |
| 4/17/2018 | 9:34:30 | Basement | Room 008 | FLOOR | CONCRETE | GRAY | 0.07 | 0.01 |
| 4/17/2018 | 9:30:22 | Basement | Room 008 | WALL | PLASTER | WHITE | 0.14 | 0.04 |
| 4/17/2018 | 9:30:53 | Basement | Room 008 | WALL | PLASTER | WHITE | 0.16 | 0.05 |
| 4/17/2018 | 9:32:00 | Basement | Room 008 | WALL | DRYWALL | WHITE | 0.21 | 0.06 |
| **4/17/2018** | **9:33:05** | **Basement** | **Room 008** | **CEILING** | **DRYWALL** | **WHITE** | **1** | **0.06** |
| **4/17/2018** | **9:33:26** | **Basement** | **Room 008** | **CEILING** | **DRYWALL** | **WHITE** | **1** | **0.06** |
| 4/17/2018 | 9:49:43 | Basement | Room 009 | CEILING | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 9:51:18 | Basement | Room 009 | WALL | DRYWALL | WHITE | 0.07 | 0.03 |
| 4/17/2018 | 9:51:31 | Basement | Room 009 | WALL | DRYWALL | WHITE | 0.09 | 0.03 |
| 4/17/2018 | 9:47:50 | Basement | Room 009 | WALL | DRYWALL | WHITE | 0.12 | 0.05 |
| 4/17/2018 | 9:52:14 | Basement | Room 009 | WALL | DRYWALL | LT BLUE | 0.12 | 0.04 |
| 4/17/2018 | 9:52:47 | Basement | Room 009 | WALL | DRYWALL | LT BLUE | 0.12 | 0.04 |
| 4/17/2018 | 9:52:30 | Basement | Room 009 | WALL | DRYWALL | LT BLUE | 0.35 | 0.13 |
| **4/17/2018** | **9:47:14** | **Basement** | **Room 009** | **WALL** | **DRYWALL** | **WHITE** | **1** | **0.04** |
| **4/17/2018** | **9:47:33** | **Basement** | **Room 009** | **WALL** | **DRYWALL** | **WHITE** | **1** | **0.03** |
| **4/17/2018** | **9:48:11** | **Basement** | **Room 009** | **WALL** | **DRYWALL** | **WHITE** | **1** | **0.03** |
| **4/17/2018** | **9:48:39** | **Basement** | **Room 009** | **CEILING** | **DRYWALL** | **WHITE** | **1** | **0.07** |
| **4/17/2018** | **9:50:21** | **Basement** | **Room 009** | **CEILING** | **DRYWALL** | **WHITE** | **1** | **0.1** |
| **4/17/2018** | **9:50:51** | **Basement** | **Room 009** | **WALL** | **DRYWALL** | **WHITE** | **1** | **0.08** |
| **4/17/2018** | **9:51:46** | **Basement** | **Room 009** | **WALL** | **DRYWALL** | **WHITE** | **1** | **0.06** |

# Lead-Based Paint Screening Results

**Table 5**

| Date | Time | Building | Room | Component | Substrate | Color | Lead mg/cm$^2$ | (+/-) Error |
|---|---|---|---|---|---|---|---|---|
| **4/17/2018** | **9:53:04** | **Basement** | **Room 009** | **WALL** | **DRYWALL** | **LT BLUE** | **1** | **0.04** |
| 4/17/2018 | 9:54:54 | Basement | Room 010 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 9:55:11 | Basement | Room 010 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 9:55:25 | Basement | Room 010 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 9:56:08 | Basement | Room 010 | WALL | DRYWALL | PINK | 0 | 0 |
| 4/17/2018 | 9:56:34 | Basement | Room 010 | CEILING | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 9:54:40 | Basement | Room 010 | WALL | DRYWALL | WHITE | 0.11 | 0.04 |
| 4/17/2018 | 9:57:40 | Basement | Room 011 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 9:58:37 | Basement | Room 011 | WALL | DRYWALL | WHITE | 0.12 | 0.04 |
| 4/17/2018 | 9:57:16 | Basement | Room 011 | CEILING | DRYWALL | WHITE | 0.25 | 0.07 |
| **4/17/2018** | **9:58:18** | **Basement** | **Room 011** | **WALL** | **DRYWALL** | **WHITE** | **1** | **0.03** |
| 4/17/2018 | 10:00:23 | Basement | Room 012 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 10:01:07 | Basement | Room 012 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 10:03:42 | Basement | Room 012 | DOOR FRAME | METAL | CREAM | 0 | 0 |
| 4/17/2018 | 10:01:32 | Basement | Room 012 | WALL | CONCRETE | WHITE | 0.01 | 0.01 |
| 4/17/2018 | 10:00:48 | Basement | Room 012 | WALL | DRYWALL | WHITE | 0.02 | 0.02 |
| 4/17/2018 | 10:55:56 | Basement | Jan | CEILING | DRYWALL | WHITE | 0.01 | 0.01 |
| 4/17/2018 | 10:54:29 | Basement | Jan | WALL | CONCRETE | WHITE | 0.02 | 0.02 |
| 4/17/2018 | 10:54:10 | Basement | Jan | WALL | CONCRETE | WHITE | 0.07 | 0.07 |
| 4/17/2018 | 10:57:01 | Basement | Jan | FLOOR | CONCRETE | GRAY | 0.07 | 0.02 |
| 4/17/2018 | 10:59:59 | Basement | Jan | WALL | CONCRETE | WHITE | 0.14 | 0.07 |
| **4/17/2018** | **10:54:50** | **Basement** | **Jan** | **WALL** | **CONCRETE** | **WHITE** | **1** | **0.06** |
| **4/17/2018** | **10:55:15** | **Basement** | **Jan** | **WALL** | **CONCRETE** | **WHITE** | **1** | **0.02** |
| **4/17/2018** | **10:58:27** | **Basement** | **Jan** | **FLOOR** | **CONCRETE** | **GRAY** | **1** | **0.04** |
| **4/17/2018** | **10:59:08** | **Basement** | **Jan** | **WALL** | **CONCRETE** | **WHITE** | **1** | **0.06** |
| **4/17/2018** | **10:59:36** | **Basement** | **Jan** | **WALL** | **CONCRETE** | **WHITE** | **1** | **0.05** |
| **4/17/2018** | **11:00:23** | **Basement** | **Jan** | **CEILING** | **CONCRETE** | **WHITE** | **1** | **0.07** |
| 4/17/2018 | 10:04:55 | Basement | Room 014 | DOOR FRAME | METAL | CREAM | 0 | 0 |
| 4/17/2018 | 10:05:23 | Basement | Room 014 | DOOR FRAME | METAL | CREAM | 0 | 0 |
| 4/17/2018 | 10:05:40 | Basement | Room 014 | DOOR FRAME | METAL | CREAM | 0 | 0 |
| 4/17/2018 | 10:06:12 | Basement | Room 014 | DOOR FRAME | METAL | CREAM | 0 | 0 |
| 4/17/2018 | 10:07:17 | Basement | Room 014 | DOOR FRAME | METAL | CREAM | 0 | 0 |
| 4/17/2018 | 10:07:40 | Basement | Room 014 | DOOR FRAME | METAL | CREAM | 0 | 0 |
| 4/17/2018 | 10:08:04 | Basement | Room 014 | DOOR FRAME | METAL | CREAM | 0 | 0 |
| 4/17/2018 | 10:08:45 | Basement | Room 014 | DOOR | METAL | CREAM | 0 | 0 |
| 4/17/2018 | 10:09:22 | Basement | Room 014 | DOOR | METAL | CREAM | 0 | 0 |
| 4/17/2018 | 10:09:39 | Basement | Room 014 | DOOR | METAL | CREAM | 0 | 0 |
| 4/17/2018 | 10:10:04 | Basement | Room 014 | DOOR | METAL | CREAM | 0 | 0 |
| 4/17/2018 | 10:10:26 | Basement | Room 014 | DOOR | METAL | CREAM | 0 | 0 |
| 4/17/2018 | 10:11:12 | Basement | Room 014 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 10:11:34 | Basement | Room 014 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 10:11:58 | Basement | Room 014 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 10:12:19 | Basement | Room 014 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 10:12:47 | Basement | Room 014 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 10:13:14 | Basement | Room 014 | BUILT-IN | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 10:13:46 | Basement | Room 014 | FLOOR | CONCRETE | GRAY | 0 | 0 |
| 4/17/2018 | 10:24:01 | Basement | Room 014 | FLOOR | CONCRETE | GRAY | 0 | 0 |
| 4/17/2018 | 10:24:26 | Basement | Room 014 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 10:24:45 | Basement | Room 014 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 10:25:02 | Basement | Room 014 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 10:25:17 | Basement | Room 014 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 10:25:45 | Basement | Room 014 | DOOR FRAME | METAL | CREAM | 0 | 0 |
| 4/17/2018 | 10:26:07 | Basement | Room 014 | DOOR | METAL | CREAM | 0 | 0 |
| 4/17/2018 | 10:26:45 | Basement | Room 014 | DOOR | METAL | DK BLUE | 0 | 0 |
| 4/17/2018 | 10:27:09 | Basement | Room 014 | WALL | METAL | DK BROWN | 0 | 0 |
| 4/17/2018 | 10:27:52 | Basement | Room 014 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/17/2018 | 10:28:28 | Basement | Room 014 | DOOR FRAME | METAL | CREAM | 0 | 0 |
| 4/17/2018 | 10:28:50 | Basement | Room 014 | DOOR | METAL | CREAM | 0 | 0 |
| 4/17/2018 | 10:29:20 | Basement | Room 014 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 10:29:42 | Basement | Room 014 | WALL | DRYWALL | WHITE | 0 | 0 |

# Lead-Based Paint Screening Results

**Table 5**

| Date | Time | Building | Room | Component | Substrate | Color | Lead mg/cm$^2$ | (+/-) Error |
|---|---|---|---|---|---|---|---|---|
| 4/17/2018 | 10:30:08 | Basement | Room 014 | BUILT-IN | METAL | WHITE | 0 | 0 |
| 4/17/2018 | 10:30:27 | Basement | Room 014 | BUILT-IN | METAL | WHITE | 0 | 0 |
| 4/17/2018 | 10:30:55 | Basement | Room 014 | WALL | CONCRETE | WHITE | 0 | 0 |
| 4/17/2018 | 10:32:34 | Basement | Room 015 | WALL | CONCRETE | WHITE | 0 | 0 |
| 4/17/2018 | 10:32:56 | Basement | Room 015 | WALL | CONCRETE | WHITE | 0 | 0 |
| 4/17/2018 | 10:33:19 | Basement | Room 015 | WALL | CONCRETE | WHITE | 0 | 0 |
| 4/17/2018 | 10:33:39 | Basement | Room 015 | WALL | CONCRETE | WHITE | 0 | 0 |
| 4/17/2018 | 10:34:08 | Basement | Room 015 | CEILING | METAL | WHITE | 0 | 0 |
| 4/17/2018 | 10:34:42 | Basement | Room 015 | FLOOR | CONCRETE | GRAY | 0 | 0 |
| 4/17/2018 | 10:35:11 | Basement | Room 015 | DOOR FRAME | METAL | CREAM | 0 | 0 |
| 4/17/2018 | 10:35:37 | Basement | Room 015 | DOOR | METAL | CREAM | 0 | 0 |
| 4/17/2018 | 10:36:54 | Basement | Room 015 | CEILING | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 10:37:22 | Basement | Room 015 | WALL | CONCRETE | WHITE | 0 | 0 |
| 4/17/2018 | 10:37:39 | Basement | Room 015 | WALL | CONCRETE | WHITE | 0 | 0 |
| 4/17/2018 | 10:38:32 | Basement | Room 015 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 10:38:54 | Basement | Room 015 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 10:39:25 | Basement | Room 015 | FLOOR | CONCRETE | GRAY | 0 | 0 |
| 4/17/2018 | 10:40:43 | Basement | Room 016 | FLOOR | CONCRETE | GRAY | 0 | 0 |
| 4/17/2018 | 10:41:26 | Basement | Room 016 | WALL | CONCRETE | WHITE | 0 | 0 |
| 4/17/2018 | 10:41:43 | Basement | Room 016 | WALL | CONCRETE | WHITE | 0 | 0 |
| 4/17/2018 | 10:42:01 | Basement | Room 016 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 10:42:19 | Basement | Room 016 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 10:43:31 | Basement | Room 016 | CEILING | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 10:44:03 | Basement | Room 016 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 10:44:21 | Basement | Room 016 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 10:44:42 | Basement | Room 016 | WALL | CONCRETE | WHITE | 0 | 0 |
| 4/17/2018 | 10:45:30 | Basement | Room 016 | DOOR FRAME | METAL | CREAM | 0 | 0 |
| 4/17/2018 | 10:45:54 | Basement | Room 016 | DOOR | METAL | CREAM | 0 | 0 |
| 4/17/2018 | 11:52:42 | Basement | Room 017 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 11:53:14 | Basement | Room 017 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 11:53:42 | Basement | Room 017 | WALL | DRYWALL | GREEN | 0 | 0 |
| 4/17/2018 | 11:51:37 | Basement | Room 018 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 11:51:54 | Basement | Room 018 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 11:52:13 | Basement | Room 018 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 11:45:33 | Basement | Room 019 | BUILT-IN | METAL | WHITE | 0 | 0 |
| 4/17/2018 | 11:46:03 | Basement | Room 019 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 11:46:28 | Basement | Room 019 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 11:46:57 | Basement | Room 019 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 11:47:18 | Basement | Room 020 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 11:48:17 | Basement | Room 020 | DOOR | METAL | BROWN | 0 | 0 |
| 4/17/2018 | 11:47:45 | Basement | Room 020 | CEILING | DRYWALL | WHITE | 0.14 | 0.05 |
| 4/17/2018 | 12:14:25 | Basement | Room 021 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 12:14:44 | Basement | Room 021 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 12:15:01 | Basement | Room 021 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 12:16:04 | Basement | Room 021 | WALL | DRYWALL | RED | 0 | 0 |
| 4/17/2018 | 12:15:33 | Basement | Room 021 | WALL | DRYWALL | WHITE | 0.1 | 0.05 |
| 4/17/2018 | 12:13:52 | Basement | Room 021 | WALL | PLASTER | YELLOW | 0.27 | 0.11 |
| **4/17/2018** | **12:16:30** | **Basement** | **Room 021** | **WALL** | **DRYWALL** | **GREEN** | **1** | **0.09** |
| 4/17/2018 | 11:58:26 | Basement | Room 022 | WALL | DRYWALL | GREEN | 0 | 0 |
| 4/17/2018 | 11:58:43 | Basement | Room 022 | WALL | DRYWALL | GREEN | 0 | 0 |
| 4/17/2018 | 11:58:58 | Basement | Room 022 | WALL | DRYWALL | GREEN | 0 | 0 |
| 4/17/2018 | 11:59:15 | Basement | Room 022 | WALL | DRYWALL | GREEN | 0 | 0 |
| 4/17/2018 | 11:54:59 | Basement | Room 023 | WALL | DRYWALL | LT BLUE | 0 | 0.01 |
| 4/17/2018 | 11:55:12 | Basement | Room 023 | WALL | DRYWALL | LT BLUE | 0.01 | 0.02 |
| 4/17/2018 | 11:54:41 | Basement | Room 023 | WALL | DRYWALL | LT BLUE | 0.06 | 0.07 |
| 4/17/2018 | 12:01:55 | Basement | Room 024 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 12:02:32 | Basement | Room 024 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 12:02:48 | Basement | Room 024 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 12:03:07 | Basement | Room 024 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 12:03:25 | Basement | Room 024 | WALL | DRYWALL | WHITE | 0 | 0 |

# Lead-Based Paint Screening Results

**Table 5**

| Date | Time | Building | Room | Component | Substrate | Color | Lead mg/cm$^2$ | (+/-) Error |
|---|---|---|---|---|---|---|---|---|
| 4/17/2018 | 12:03:43 | Basement | Room 024 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 12:04:18 | Basement | Room 024 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 12:04:01 | Basement | Room 024 | WALL | DRYWALL | WHITE | 0.06 | 0.03 |
| 4/17/2018 | 12:02:11 | Basement | Room 024 | WALL | DRYWALL | WHITE | 0.16 | 0.05 |
| 4/17/2018 | 12:09:40 | Basement | Room 025 | WALL | CONCRETE | WHITE | 0 | 0 |
| 4/17/2018 | 12:08:54 | Basement | Room 025 | WALL | DRYWALL | WHITE | 0.06 | 0.04 |
| 4/17/2018 | 12:10:28 | Basement | Room 025 | FLOOR | CONCRETE | GRAY | 0.07 | 0.04 |
| **4/17/2018** | **12:09:21** | **Basement** | **Room 025** | **WALL** | **CONCRETE** | **WHITE** | **1** | **0.06** |
| **4/17/2018** | **12:09:57** | **Basement** | **Room 025** | **WALL** | **CONCRETE** | **WHITE** | **1** | **0.05** |
| 4/17/2018 | 12:11:41 | Basement | Room 026 | FLOOR | CONCRETE | GRAY | 0 | 0 |
| 4/17/2018 | 12:12:09 | Basement | Room 026 | WALL | CONCRETE | WHITE | 0 | 0 |
| 4/17/2018 | 12:12:26 | Basement | Room 026 | WALL | CONCRETE | WHITE | 0 | 0 |
| 4/17/2018 | 12:12:45 | Basement | Room 026 | WALL | CONCRETE | WHITE | 0 | 0 |
| 4/17/2018 | 12:13:07 | Basement | Room 026 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 11:41:10 | Basement | Room 027 | WALL | CONCRETE | WHITE | 0.05 | 0.04 |
| 4/17/2018 | 11:39:57 | Basement | Room 027 | WALL | CONCRETE | WHITE | 0.08 | 0.04 |
| 4/17/2018 | 11:40:22 | Basement | Room 027 | WALL | CONCRETE | WHITE | 0.17 | 0.06 |
| **4/17/2018** | **11:40:45** | **Basement** | **Room 027** | **WALL** | **CONCRETE** | **WHITE** | **1** | **0.14** |
| 4/17/2018 | 11:09:28 | Basement | Room 030 | DOOR FRAME | WOOD | WHITE | 0 | 0 |
| 4/17/2018 | 11:08:50 | Basement | Room 030 | CEILING | PLASTER | WHITE | 0.06 | 0.03 |
| **4/17/2018** | **11:07:20** | **Basement** | **Room 030** | **WALL** | **PLASTER** | **BLUE** | **1** | **0.03** |
| **4/17/2018** | **11:07:40** | **Basement** | **Room 030** | **WALL** | **PLASTER** | **BLUE** | **1** | **0.04** |
| 4/17/2018 | 12:17:24 | Basement | Boiler Room | WALL | CONCRETE | WHITE | 0 | 0 |
| 4/17/2018 | 12:18:10 | Basement | Boiler Room | WALL | CONCRETE | WHITE | 0 | 0 |
| 4/17/2018 | 12:18:51 | Basement | Boiler Room | WALL | CONCRETE | WHITE | 0 | 0 |
| 4/17/2018 | 12:19:30 | Basement | Boiler Room | TRIM | CONCRETE | YELLOW | 0 | 0 |
| 4/17/2018 | 12:20:00 | Basement | Boiler Room | TRIM | CONCRETE | LT BLUE | 0 | 0 |
| 4/17/2018 | 12:25:47 | Basement | Boiler Room | FLOOR | CONCRETE | GRAY | 0 | 0 |
| 4/17/2018 | 12:22:57 | Basement | Boiler Room | DOOR FRAME | METAL | GRAY | 0.02 | 0.01 |
| 4/17/2018 | 12:23:19 | Basement | Boiler Room | DOOR | METAL | GRAY | 0.02 | 0.01 |
| 4/17/2018 | 12:22:17 | Basement | Boiler Room | DOOR FRAME | METAL | WHITE | 0.19 | 0.05 |
| **4/17/2018** | **12:24:06** | **Basement** | **Boiler Room** | **WALL** | **CONCRETE** | **GRAY** | **1** | **0.04** |
| **4/17/2018** | **12:25:14** | **Basement** | **Boiler Room** | **WALL** | **CONCRETE** | **GRAY** | **1** | **0.02** |
| **4/17/2018** | **12:21:46** | **Basement** | **Boiler Room** | **DOOR** | **METAL** | **GRAY** | **3.77** | **0.36** |
| 4/18/2018 | 8:35:35 | Main Floor | Room 100 | WALL | PLASTER | GREEN | 0.33 | 0.07 |
| 4/18/2018 | 8:34:37 | Main Floor | Room 100 | WALL | PLASTER | WHITE | 0.4 | 0.09 |
| **4/18/2018** | **8:35:00** | **Main Floor** | **Room 100** | **WALL** | **PLASTER** | **WHITE** | **1** | **0.12** |
| **4/18/2018** | **8:35:55** | **Main Floor** | **Room 100** | **WALL** | **PLASTER** | **GREEN** | **1** | **0.09** |
| 4/18/2018 | 9:27:05 | Main Floor | Room 101 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:27:25 | Main Floor | Room 101 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:28:13 | Main Floor | Room 101 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:24:31 | Main Floor | Room 101 | WALL | PLASTER | WHITE | 0.19 | 0.25 |
| 4/18/2018 | 9:25:00 | Main Floor | Room 101 | WALL | PLASTER | BLUE | 0.31 | 0.16 |
| 4/18/2018 | 9:27:53 | Main Floor | Room 101 | WALL | PLASTER | WHITE | 0.32 | 0.1 |
| 4/18/2018 | 9:25:29 | Main Floor | Room 101 | WALL | PLASTER | BLUE | 0.43 | 0.16 |
| 4/18/2018 | 9:24:14 | Main Floor | Room 101 | WALL | PLASTER | WHITE | 0.45 | 0.14 |
| **4/18/2018** | **9:25:52** | **Main Floor** | **Room 101** | **WALL** | **PLASTER** | **YELLOW** | **1** | **0.06** |
| 4/18/2018 | 8:38:11 | Main Floor | Room 102 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 8:38:28 | Main Floor | Room 102 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 8:39:20 | Main Floor | Room 102 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/18/2018 | 8:37:45 | Main Floor | Room 102 | WALL | PLASTER | GRAY | 0.08 | 0.05 |
| 4/18/2018 | 8:37:28 | Main Floor | Room 102 | WALL | PLASTER | GRAY | 0.13 | 0.09 |
| 4/18/2018 | 8:39:50 | Main Floor | Room 103 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/18/2018 | 8:40:34 | Main Floor | Room 103 | WALL | PLASTER | PINK | 0 | 0 |
| 4/18/2018 | 8:40:50 | Main Floor | Room 103 | WALL | PLASTER | PINK | 0 | 0 |
| 4/18/2018 | 8:41:07 | Main Floor | Room 103 | WALL | PLASTER | PINK | 0 | 0 |
| 4/18/2018 | 8:41:21 | Main Floor | Room 103 | WALL | PLASTER | PINK | 0 | 0 |
| 4/18/2018 | 8:42:14 | Main Floor | Room 104 | WALL | PLASTER | CORAL | 0 | 0 |
| 4/18/2018 | 8:42:47 | Main Floor | Room 104 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 8:44:46 | Main Floor | Room 104 | WALL | PLASTER | BROWN | 0 | 0 |

# Lead-Based Paint Screening Results

**Table 5**

| Date | Time | Building | Room | Component | Substrate | Color | Lead mg/cm$^2$ | (+/-) Error |
|---|---|---|---|---|---|---|---|---|
| 4/18/2018 | 8:45:05 | Main Floor | Room 104 | WALL | PLASTER | BROWN | 0 | 0 |
| 4/18/2018 | 8:45:27 | Main Floor | Room 104 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 8:45:58 | Main Floor | Room 104 | DOOR FRAME | WOOD | WHITE | 0 | 0 |
| 4/18/2018 | 8:46:23 | Main Floor | Room 104 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/18/2018 | 8:43:37 | Main Floor | Room 104 | WALL | PLASTER | WHITE | 0.03 | 0.02 |
| 4/18/2018 | 8:43:05 | Main Floor | Room 104 | WALL | PLASTER | WHITE | 0.06 | 0.03 |
| 4/18/2018 | 8:43:19 | Main Floor | Room 104 | WALL | PLASTER | WHITE | 0.07 | 0.03 |
| **4/18/2018** | **8:44:08** | **Main Floor** | **Room 104** | **CEILING** | **PLASTER** | **WHITE** | **1** | **0.03** |
| 4/18/2018 | 8:47:35 | Main Floor | Room 105 | DOOR FRAME | METAL | LT BLUE | 0 | 0 |
| 4/18/2018 | 8:48:16 | Main Floor | Room 105 | WALL | PLASTER | LT BLUE | 0 | 0 |
| 4/18/2018 | 8:48:34 | Main Floor | Room 105 | WALL | PLASTER | LT BLUE | 0 | 0 |
| 4/18/2018 | 8:49:00 | Main Floor | Room 105 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 8:48:00 | Main Floor | Room 105 | WALL | PLASTER | LT BLUE | 0.23 | 0.07 |
| 4/18/2018 | 8:50:51 | Main Floor | Room 106 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 8:51:57 | Main Floor | Room 106 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 8:52:27 | Main Floor | Room 106 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 8:53:18 | Main Floor | Room 106 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 8:53:59 | Main Floor | Room 106 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 8:54:16 | Main Floor | Room 106 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 8:55:40 | Main Floor | Room 106 | CEILING | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 8:52:58 | Main Floor | Room 106 | WALL | PLASTER | WHITE | 0.14 | 0.06 |
| **4/18/2018** | **8:51:19** | **Main Floor** | **Room 106** | **WALL** | **PLASTER** | **GREEN** | **1** | **0.03** |
| **4/18/2018** | **8:54:34** | **Main Floor** | **Room 106** | **WALL** | **PLASTER** | **WHITE** | **1** | **0.04** |
| 4/18/2018 | 9:00:49 | Main Floor | Room 107 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:01:07 | Main Floor | Room 107 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:01:23 | Main Floor | Room 107 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:02:29 | Main Floor | Room 107 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/18/2018 | 9:00:11 | Main Floor | Room 107 | WALL | PLASTER | WHITE | 0.04 | 0.05 |
| 4/18/2018 | 8:59:25 | Main Floor | Room 107 | WALL | PLASTER | DK BLUE | 0.08 | 0.06 |
| 4/18/2018 | 9:00:30 | Main Floor | Room 107 | WALL | PLASTER | WHITE | 0.16 | 0.05 |
| 4/18/2018 | 9:01:48 | Main Floor | Room 107 | WALL | PLASTER | WHITE | 0.18 | 0.09 |
| 4/18/2018 | 8:59:51 | Main Floor | Room 107 | WALL | PLASTER | WHITE | 0.2 | 0.12 |
| 4/18/2018 | 9:07:34 | Main Floor | Room 108 | WALL | PLASTER | LT BLUE | 0 | 0 |
| 4/18/2018 | 9:07:54 | Main Floor | Room 108 | WALL | PLASTER | LT BLUE | 0 | 0 |
| 4/18/2018 | 9:08:14 | Main Floor | Room 108 | WALL | PLASTER | LT BLUE | 0 | 0 |
| 4/18/2018 | 9:08:38 | Main Floor | Room 108 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:08:59 | Main Floor | Room 108 | WALL | PLASTER | LT BLUE | 0 | 0 |
| 4/18/2018 | 9:11:18 | Main Floor | Room 108 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:11:35 | Main Floor | Room 108 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:06:59 | Main Floor | Room 108 | DOOR FRAME | METAL | WHITE | 0.05 | 0.07 |
| 4/18/2018 | 9:20:21 | Main Floor | Room 109 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:17:54 | Main Floor | Room 109 | WALL | PLASTER | WHITE | 0.15 | 0.07 |
| 4/18/2018 | 9:18:23 | Main Floor | Room 109 | WALL | PLASTER | WHITE | 0.19 | 0.07 |
| 4/18/2018 | 9:20:03 | Main Floor | Room 109 | WALL | PLASTER | WHITE | 0.24 | 0.09 |
| 4/18/2018 | 9:19:25 | Main Floor | Room 109 | WALL | PLASTER | WHITE | 0.25 | 0.13 |
| **4/18/2018** | **9:18:38** | **Main Floor** | **Room 109** | **WALL** | **PLASTER** | **WHITE** | **1** | **0.06** |
| **4/18/2018** | **9:19:02** | **Main Floor** | **Room 109** | **WALL** | **PLASTER** | **WHITE** | **1** | **0.07** |
| **4/18/2018** | **9:19:43** | **Main Floor** | **Room 109** | **WALL** | **PLASTER** | **WHITE** | **1** | **0.02** |
| 4/18/2018 | 9:14:35 | Main Floor | Room 109a | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:14:52 | Main Floor | Room 109a | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:15:07 | Main Floor | Room 109a | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:15:23 | Main Floor | Room 109a | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:15:52 | Main Floor | Room 109a | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/18/2018 | 9:16:16 | Main Floor | Room 109a | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/18/2018 | 9:29:23 | Main Floor | Room 110 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:29:41 | Main Floor | Room 110 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:30:03 | Main Floor | Room 110 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:30:21 | Main Floor | Room 110 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:51:21 | Main Floor | Room 110a | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/18/2018 | 9:51:58 | Main Floor | Room 110a | WALL | PLASTER | BROWN | 0 | 0 |

# Lead-Based Paint Screening Results

**Table 5**

| Date | Time | Building | Room | Component | Substrate | Color | Lead mg/cm$^2$ | (+/-) Error |
|---|---|---|---|---|---|---|---|---|
| 4/18/2018 | 9:31:23 | Main Floor | Room 111 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:31:41 | Main Floor | Room 111 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:31:58 | Main Floor | Room 111 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:32:18 | Main Floor | Room 111 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:37:28 | Main Floor | Room 112 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:37:46 | Main Floor | Room 112 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:38:11 | Main Floor | Room 112 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:38:28 | Main Floor | Room 112 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:39:01 | Main Floor | Room 112 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/18/2018 | 9:39:54 | Main Floor | Room 113 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/18/2018 | 9:40:12 | Main Floor | Room 113 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/18/2018 | 9:40:33 | Main Floor | Room 113 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/18/2018 | 9:41:05 | Main Floor | Room 113 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:41:39 | Main Floor | Room 113 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:42:23 | Main Floor | Room 113 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:42:41 | Main Floor | Room 113 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:41:23 | Main Floor | Room 113 | WALL | PLASTER | WHITE | 0.19 | 0.07 |
| 4/18/2018 | 9:44:46 | Main Floor | Room 114 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:45:08 | Main Floor | Room 114 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:45:25 | Main Floor | Room 114 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:45:42 | Main Floor | Room 114 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:46:39 | Main Floor | Room 115 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:46:56 | Main Floor | Room 115 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:47:14 | Main Floor | Room 115 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:48:00 | Main Floor | Room 116 | WALL | PLASTER | BROWN | 0 | 0 |
| 4/18/2018 | 9:48:18 | Main Floor | Room 116 | WALL | PLASTER | BROWN | 0 | 0 |
| 4/18/2018 | 9:48:29 | Main Floor | Room 116 | WALL | PLASTER | BROWN | 0 | 0 |
| 4/18/2018 | 9:48:50 | Main Floor | Room 116 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:49:20 | Main Floor | Room 116 | DOOR FRAME | METAL | BROWN | 0 | 0 |
| 4/18/2018 | 9:53:46 | Main Floor | Room 117 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:54:28 | Main Floor | Room 117 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 9:55:33 | Main Floor | Room 118 | WALL | PLASTER | CREAM | 0 | 0 |
| 4/18/2018 | 9:55:50 | Main Floor | Room 118 | WALL | PLASTER | CREAM | 0 | 0 |
| 4/18/2018 | 9:56:07 | Main Floor | Room 118 | WALL | PLASTER | CREAM | 0 | 0 |
| 4/18/2018 | 9:56:30 | Main Floor | Room 118 | WALL | PLASTER | CREAM | 0 | 0 |
| 4/18/2018 | 9:56:43 | Main Floor | Room 118 | WALL | PLASTER | CREAM | 0 | 0 |
| 4/18/2018 | 9:57:29 | Main Floor | Room 118 | DOOR FRAME | METAL | CREAM | 0 | 0 |
| 4/18/2018 | 9:57:47 | Main Floor | Room 118 | DOOR FRAME | METAL | CREAM | 0 | 0 |
| 4/18/2018 | 9:59:26 | Main Floor | Room 119 | DOOR FRAME | METAL | CREAM | 0 | 0 |
| 4/18/2018 | 9:59:45 | Main Floor | Room 119 | DOOR FRAME | METAL | CREAM | 0 | 0 |
| 4/18/2018 | 10:00:02 | Main Floor | Room 119 | DOOR FRAME | METAL | CREAM | 0 | 0 |
| 4/18/2018 | 10:00:31 | Main Floor | Room 119 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 10:00:49 | Main Floor | Room 119 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 10:01:14 | Main Floor | Room 119 | CEILING | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 10:03:32 | Main Floor | Room 120a | WALL | PLASTER | WHITE | 0.05 | 0.05 |
| 4/18/2018 | 10:03:13 | Main Floor | Room 120a | WALL | PLASTER | WHITE | 0.06 | 0.05 |
| 4/18/2018 | 10:04:12 | Main Floor | Room 120b | WALL | PLASTER | WHITE | 0.06 | 0.04 |
| 4/18/2018 | 10:03:57 | Main Floor | Room 120b | WALL | PLASTER | WHITE | 0.15 | 0.24 |
| 4/18/2018 | 10:04:40 | Main Floor | Room 120c | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 10:05:21 | Main Floor | Room 120c | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/18/2018 | 10:04:55 | Main Floor | Room 120c | WALL | PLASTER | WHITE | 0.02 | 0.01 |
| 4/18/2018 | 10:06:40 | Main Floor | Room 121 | WALL | PLASTER | WHITE | 0.06 | 0.03 |
| 4/18/2018 | 10:09:56 | Main Floor | Room 121 | CEILING | PLASTER | WHITE | 0.06 | 0.03 |
| 4/18/2018 | 10:06:59 | Main Floor | Room 121 | WALL | PLASTER | WHITE | 0.1 | 0.04 |
| **4/18/2018** | **10:10:53** | **Main Floor** | **Room 121** | **WALL** | **PLASTER** | **GREEN** | **1** | **0.02** |
| 4/18/2018 | 10:12:15 | Main Floor | Room 122 | WALL | PLASTER | CREAM | 0.11 | 0.04 |
| 4/18/2018 | 10:12:36 | Main Floor | Room 122 | WALL | PLASTER | CREAM | 0.11 | 0.04 |
| 4/18/2018 | 10:12:56 | Main Floor | Room 122 | WALL | PLASTER | CREAM | 0.2 | 0.1 |
| 4/18/2018 | 10:13:09 | Main Floor | Room 122 | WALL | PLASTER | CREAM | 0.22 | 0.08 |
| 4/18/2018 | 10:13:37 | Main Floor | Room 122a | WALL | PLASTER | CREAM | 0.09 | 0.04 |

# Lead-Based Paint Screening Results

**Table 5**

| Date | Time | Building | Room | Component | Substrate | Color | Lead mg/cm$^2$ | (+/-) Error |
|---|---|---|---|---|---|---|---|---|
| 4/18/2018 | 10:13:51 | Main Floor | Room 122a | WALL | PLASTER | CREAM | 0.12 | 0.06 |
| **4/18/2018** | **10:14:17** | **Main Floor** | **Room 122a** | **WALL** | **PLASTER** | **GREEN** | **1** | **0.03** |
| 4/18/2018 | 10:14:53 | Main Floor | Room 123 | WALL | PLASTER | CREAM | 0.17 | 0.05 |
| 4/18/2018 | 10:15:31 | Main Floor | Room 123 | WALL | PLASTER | CREAM | 0.22 | 0.06 |
| 4/18/2018 | 10:15:12 | Main Floor | Room 123 | WALL | PLASTER | CREAM | 0.26 | 0.09 |
| 4/18/2018 | 10:16:42 | Main Floor | Room 123a | WALL | PLASTER | CREAM | 0 | 0 |
| 4/18/2018 | 10:16:58 | Main Floor | Room 123a | WALL | PLASTER | CREAM | 0.01 | 0.01 |
| **4/18/2018** | **10:16:25** | **Main Floor** | **Room 123a** | **WALL** | **PLASTER** | **CREAM** | **1** | **0.03** |
| 4/18/2018 | 10:34:53 | Main Floor | Room 124 | WALL | PLASTER | CREAM | 0 | 0 |
| 4/18/2018 | 10:35:53 | Main Floor | Room 124 | WALL | PLASTER | CREAM | 0 | 0 |
| 4/18/2018 | 10:35:10 | Main Floor | Room 124 | WALL | PLASTER | CREAM | 0.03 | 0.02 |
| 4/18/2018 | 10:34:36 | Main Floor | Room 124 | WALL | PLASTER | CREAM | 0.18 | 0.15 |
| 4/18/2018 | 10:39:26 | Main Floor | Room 125 | CEILING | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 10:37:42 | Main Floor | Room 125 | WALL | PLASTER | WHITE | 0.02 | 0.02 |
| 4/18/2018 | 10:38:42 | Main Floor | Room 125 | WALL | PLASTER | WHITE | 0.1 | 0.04 |
| 4/18/2018 | 10:38:22 | Main Floor | Room 125 | WALL | PLASTER | WHITE | 0.13 | 0.06 |
| 4/18/2018 | 10:38:59 | Main Floor | Room 125 | WALL | PLASTER | WHITE | 0.16 | 0.06 |
| 4/18/2018 | 10:38:02 | Main Floor | Room 125 | WALL | PLASTER | WHITE | 0.25 | 0.07 |
| 4/18/2018 | 10:40:32 | Main Floor | Room 126 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 10:40:14 | Main Floor | Room 126 | WALL | PLASTER | WHITE | 0.21 | 0.15 |
| 4/18/2018 | 10:44:37 | Main Floor | Room 127 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 10:44:56 | Main Floor | Room 127 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 10:45:15 | Main Floor | Room 127 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 10:45:33 | Main Floor | Room 127 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 10:44:19 | Main Floor | Room 127 | WALL | PLASTER | WHITE | 0.05 | 0.03 |
| 4/18/2018 | 10:46:24 | Main Floor | Room 127 | WALL | PLASTER | WHITE | 0.08 | 0.05 |
| **4/18/2018** | **10:46:02** | **Main Floor** | **Room 127** | **WALL** | **PLASTER** | **WHITE** | **1** | **0.02** |
| 4/18/2018 | 10:47:07 | Main Floor | Room 127a | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 10:47:27 | Main Floor | Room 127a | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 10:47:44 | Main Floor | Room 127a | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 10:48:09 | Main Floor | Room 127a | WALL | PLASTER | GREEN | 0 | 0 |
| 4/18/2018 | 10:48:54 | Main Floor | Room 127a | CEILING | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 10:50:36 | Main Floor | Room 128 | CEILING | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 10:51:00 | Main Floor | Room 128 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 10:51:29 | Main Floor | Room 128 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 10:51:51 | Main Floor | Room 128 | TRIM | WOOD | WHITE | 0 | 0 |
| 4/18/2018 | 10:54:49 | Main Floor | Room 128 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/18/2018 | 10:51:15 | Main Floor | Room 128 | WALL | PLASTER | WHITE | 0.23 | 0.1 |
| 4/18/2018 | 10:54:21 | Main Floor | Room 128 | BUILT-IN | METAL | WHITE | 0.24 | 0.09 |
| 4/18/2018 | 10:53:40 | Main Floor | Room 128 | BUILT-IN | METAL | WHITE | 0.46 | 0.16 |
| 4/18/2018 | 10:55:42 | Main Floor | Room 129 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 10:56:36 | Main Floor | Room 129 | WALL | PLASTER | GREEN | 0.05 | 0.03 |
| 4/18/2018 | 10:56:08 | Main Floor | Room 129 | WALL | PLASTER | WHITE | 0.12 | 0.09 |
| 4/18/2018 | 10:59:03 | Main Floor | Room 130 | WALL | PLASTER | PINK | 0 | 0 |
| 4/18/2018 | 10:59:21 | Main Floor | Room 130 | WALL | PLASTER | PINK | 0 | 0 |
| 4/18/2018 | 10:59:40 | Main Floor | Room 130 | WALL | PLASTER | PINK | 0 | 0 |
| 4/18/2018 | 10:58:43 | Main Floor | Room 130 | WALL | PLASTER | PINK | 0.07 | 0.03 |
| 4/18/2018 | 11:00:05 | Main Floor | Room 130 | WALL | PLASTER | WHITE | 0.1 | 0.05 |
| 4/18/2018 | 11:00:51 | Main Floor | Room 131 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 11:01:19 | Main Floor | Room 131 | WALL | PLASTER | WHITE | 0.24 | 0.09 |
| 4/18/2018 | 11:01:41 | Main Floor | Room 131 | WALL | PLASTER | WHITE | 0.26 | 0.12 |
| 4/18/2018 | 11:02:34 | Main Floor | Room 131 | WALL | PLASTER | GREEN | 0.26 | 0.13 |
| 4/18/2018 | 11:02:02 | Main Floor | Room 131 | WALL | PLASTER | WHITE | 0.35 | 0.19 |
| 4/18/2018 | 11:03:48 | Main Floor | Room 132 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 11:04:05 | Main Floor | Room 132 | WALL | PLASTER | WHITE | 0.16 | 0.07 |
| 4/18/2018 | 11:06:21 | Main Floor | Room 133 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 11:07:53 | Main Floor | Room 133 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/18/2018 | 11:06:38 | Main Floor | Room 133 | WALL | PLASTER | WHITE | 0.15 | 0.05 |
| 4/18/2018 | 11:06:55 | Main Floor | Room 133 | WALL | PLASTER | WHITE | 0.19 | 0.09 |
| 4/18/2018 | 11:07:19 | Main Floor | Room 133 | WALL | PLASTER | GREEN | 0.21 | 0.06 |

# Lead-Based Paint Screening Results

**Table 5**

| Date | Time | Building | Room | Component | Substrate | Color | Lead mg/cm$^2$ | (+/-) Error |
|---|---|---|---|---|---|---|---|---|
| 4/18/2018 | 11:10:08 | Main Floor | Room 134 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/18/2018 | 11:10:33 | Main Floor | Room 134 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 11:10:48 | Main Floor | Room 134 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 11:11:01 | Main Floor | Room 134 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 11:12:50 | Main Floor | Room 135 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 11:13:06 | Main Floor | Room 135 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 11:12:33 | Main Floor | Room 135 | WALL | PLASTER | WHITE | 0.08 | 0.05 |
| 4/18/2018 | 11:13:47 | Main Floor | Room 135 | BUILT-IN | METAL | WHITE | 0.08 | 0.05 |
| 4/18/2018 | 11:13:33 | Main Floor | Room 135 | BUILT-IN | METAL | WHITE | 0.1 | 0.05 |
| 4/18/2018 | 11:14:43 | Main Floor | Room 136 | WALL | PLASTER | GREEN | 0 | 0 |
| 4/18/2018 | 11:16:13 | Main Floor | Room 136 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 11:15:33 | Main Floor | Room 136 | WALL | PLASTER | GREEN | 0.04 | 0.03 |
| 4/18/2018 | 11:15:56 | Main Floor | Room 136 | WALL | PLASTER | WHITE | 0.07 | 0.05 |
| 4/18/2018 | 11:16:49 | Main Floor | Room 137 | WALL | PLASTER | BROWN | 0 | 0 |
| 4/18/2018 | 11:17:07 | Main Floor | Room 137 | WALL | PLASTER | BROWN | 0 | 0 |
| 4/18/2018 | 11:17:25 | Main Floor | Room 137 | WALL | PLASTER | BROWN | 0 | 0 |
| 4/18/2018 | 11:17:41 | Main Floor | Room 137 | WALL | PLASTER | BROWN | 0 | 0 |
| **4/18/2018** | **11:19:05** | **Main Floor** | **Room 138** | **WALL** | **PLASTER** | **WHITE** | **1** | **0.07** |
| **4/18/2018** | **11:19:23** | **Main Floor** | **Room 138** | **WALL** | **PLASTER** | **WHITE** | **1** | **0.09** |
| **4/18/2018** | **11:19:40** | **Main Floor** | **Room 138** | **WALL** | **PLASTER** | **WHITE** | **1** | **0.12** |
| 4/18/2018 | 11:20:47 | Main Floor | Room 139 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 11:21:00 | Main Floor | Room 139 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 11:21:19 | Main Floor | Room 139 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 11:23:21 | Main Floor | Stairs | DOOR | METAL | WHITE | 0 | 0 |
| 4/18/2018 | 11:23:43 | Main Floor | Stairs | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/18/2018 | 11:24:52 | Main Floor | Stairs | DOOR | METAL | YELLOW | 0 | 0 |
| 4/18/2018 | 11:22:40 | Main Floor | Stairs | WALL | PLASTER | WHITE | 0.02 | 0.02 |
| 4/18/2018 | 11:22:14 | Main Floor | Stairs | WALL | PLASTER | WHITE | 0.07 | 0.08 |
| 4/18/2018 | 11:24:24 | Main Floor | Stairs | WALL | PLASTER | WHITE | 0.12 | 0.09 |
| 4/18/2018 | 11:24:10 | Main Floor | Stairs | WALL | PLASTER | WHITE | 0.13 | 0.08 |
| 4/18/2018 | 11:22:57 | Main Floor | Stairs | WALL | PLASTER | WHITE | 0.22 | 0.13 |
| 4/17/2018 | 16:09:38 | Main Floor | Room 140 | WALL | PLASTER | GREEN | 0 | 0 |
| 4/17/2018 | 16:10:07 | Main Floor | Room 140 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 16:10:25 | Main Floor | Room 140 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 16:09:19 | Main Floor | Room 140 | WALL | PLASTER | GREEN | 0.18 | 0.07 |
| 4/17/2018 | 15:16:26 | Main Floor | Room 140h | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 15:16:40 | Main Floor | Room 140h | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 15:16:12 | Main Floor | Room 140h | WALL | PLASTER | WHITE | 0.02 | 0.01 |
| 4/17/2018 | 15:16:56 | Main Floor | Room 140h | WALL | PLASTER | WHITE | 0.04 | 0.02 |
| 4/17/2018 | 15:17:14 | Main Floor | Room 140h | WALL | PLASTER | WHITE | 0.12 | 0.08 |
| **4/17/2018** | **15:17:50** | **Main Floor** | **Room 140h** | **WALL** | **PLASTER** | **WHITE** | **1** | **0.06** |
| **4/17/2018** | **15:18:09** | **Main Floor** | **Room 140h** | **WALL** | **PLASTER** | **WHITE** | **1** | **0.1** |
| 4/17/2018 | 15:10:47 | Main Floor | Room 141 | WALL | PLASTER | WHITE | 0.08 | 0.11 |
| 4/17/2018 | 15:09:48 | Main Floor | Room 141 | WALL | PLASTER | WHITE | 0.14 | 0.05 |
| 4/17/2018 | 15:09:27 | Main Floor | Room 141 | WALL | PLASTER | WHITE | 0.17 | 0.06 |
| 4/17/2018 | 15:14:54 | Main Floor | Room 141 | DOOR FRAME | METAL | WHITE | 0.3 | 0.1 |
| **4/17/2018** | **15:10:05** | **Main Floor** | **Room 141** | **WALL** | **PLASTER** | **WHITE** | **1** | **0.07** |
| **4/17/2018** | **15:10:27** | **Main Floor** | **Room 141** | **WALL** | **PLASTER** | **WHITE** | **1** | **0.06** |
| **4/17/2018** | **15:11:31** | **Main Floor** | **Room 141** | **CEILING** | **PLASTER** | **WHITE** | **1** | **0.04** |
| 4/17/2018 | 15:12:56 | Main Floor | Room 142 | CEILING | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 15:13:19 | Main Floor | Room 142 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 15:13:32 | Main Floor | Room 142 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 15:14:31 | Main Floor | Room 142 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/17/2018 | 15:14:07 | Main Floor | Room 142 | WALL | PLASTER | WHITE | 0.05 | 0.04 |
| 4/17/2018 | 15:13:50 | Main Floor | Room 142 | WALL | PLASTER | WHITE | 0.23 | 0.15 |
| 4/17/2018 | 15:19:18 | Main Floor | Room 145 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 15:19:35 | Main Floor | Room 145 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 15:19:49 | Main Floor | Room 145 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 15:20:06 | Main Floor | Room 145 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 15:20:28 | Main Floor | Room 145 | DOOR FRAME | METAL | WHITE | 0 | 0 |

# Lead-Based Paint Screening Results

**Table 5**

| Date | Time | Building | Room | Component | Substrate | Color | Lead mg/cm$^2$ | (+/-) Error |
|---|---|---|---|---|---|---|---|---|
| 4/17/2018 | 15:23:05 | Main Floor | Room 146 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/17/2018 | 15:23:34 | Main Floor | Room 146 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 15:23:47 | Main Floor | Room 146 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 15:24:05 | Main Floor | Room 146 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 15:24:31 | Main Floor | Room 146 | WALL | PLASTER | BROWN | 0 | 0 |
| 4/17/2018 | 15:25:09 | Main Floor | Room 147 | WALL | PLASTER | BLUE | 0 | 0 |
| 4/17/2018 | 15:25:27 | Main Floor | Room 147 | WALL | PLASTER | BLUE | 0 | 0 |
| 4/17/2018 | 15:25:44 | Main Floor | Room 147 | WALL | PLASTER | BLUE | 0 | 0 |
| 4/17/2018 | 15:26:09 | Main Floor | Room 147 | WALL | PLASTER | RED | 0 | 0 |
| 4/17/2018 | 15:26:34 | Main Floor | Room 147 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/17/2018 | 15:27:40 | Main Floor | Room 148 | WALL | PLASTER | GREEN | 0 | 0 |
| 4/17/2018 | 15:27:59 | Main Floor | Room 148 | WALL | PLASTER | GREEN | 0 | 0 |
| 4/17/2018 | 15:28:17 | Main Floor | Room 148 | WALL | PLASTER | GREEN | 0.15 | 0.14 |
| 4/17/2018 | 15:27:22 | Main Floor | Room 148 | WALL | PLASTER | GREEN | 0.17 | 0.25 |
| 4/17/2018 | 15:29:06 | Main Floor | Room 149 | WALL | PLASTER | GREEN | 0 | 0 |
| 4/17/2018 | 15:30:25 | Main Floor | Room 149 | WALL | PLASTER | YELLOW | 0 | 0 |
| 4/17/2018 | 15:30:48 | Main Floor | Room 149 | CEILING | PLASTER | YELLOW | 0 | 0 |
| 4/17/2018 | 15:30:09 | Main Floor | Room 149 | WALL | PLASTER | YELLOW | 0.04 | 0.03 |
| 4/17/2018 | 15:29:51 | Main Floor | Room 149 | WALL | PLASTER | YELLOW | 0.11 | 0.06 |
| 4/17/2018 | 15:29:32 | Main Floor | Room 149 | WALL | PLASTER | YELLOW | 0.12 | 0.21 |
| 4/17/2018 | 15:32:04 | Main Floor | Room 150 | WALL | PLASTER | LT BLUE | 0 | 0 |
| 4/17/2018 | 15:32:21 | Main Floor | Room 150 | WALL | PLASTER | LT BLUE | 0 | 0 |
| 4/17/2018 | 15:33:02 | Main Floor | Room 150 | WALL | PLASTER | GREEN | 0 | 0 |
| 4/17/2018 | 15:31:48 | Main Floor | Room 150 | WALL | PLASTER | LT BLUE | 0.1 | 0.05 |
| 4/17/2018 | 15:32:38 | Main Floor | Room 150 | WALL | PLASTER | LT BLUE | 0.1 | 0.06 |
| 4/17/2018 | 16:08:34 | Main Floor | Room 151 | WALL | PLASTER | GREEN | 0.34 | 0.11 |
| 4/17/2018 | 16:08:49 | Main Floor | Room 151 | WALL | PLASTER | GREEN | 0.35 | 0.11 |
| 4/17/2018 | 15:35:38 | Main Floor | Room 151a | WALL | PLASTER | YELLOW | 0 | 0 |
| 4/17/2018 | 15:35:52 | Main Floor | Room 151a | WALL | PLASTER | YELLOW | 0 | 0 |
| 4/17/2018 | 15:35:13 | Main Floor | Room 151a | WALL | PLASTER | WHITE | 0.1 | 0.05 |
| 4/17/2018 | 15:34:43 | Main Floor | Room 151a | WALL | PLASTER | WHITE | 0.11 | 0.07 |
| 4/17/2018 | 15:34:57 | Main Floor | Room 151a | WALL | PLASTER | WHITE | 0.14 | 0.09 |
| 4/17/2018 | 15:37:04 | Main Floor | Room 152 | WALL | PLASTER | LT BLUE | 0 | 0 |
| 4/17/2018 | 15:37:42 | Main Floor | Room 152 | WALL | PLASTER | WHITE | 0.07 | 0.05 |
| 4/17/2018 | 15:36:44 | Main Floor | Room 152 | WALL | PLASTER | LT BLUE | 0.09 | 0.06 |
| 4/17/2018 | 15:37:18 | Main Floor | Room 152 | WALL | PLASTER | LT BLUE | 0.1 | 0.06 |
| 4/17/2018 | 15:39:49 | Main Floor | Room 153 | FLOOR | PLASTER | GRAY | 0.09 | 0.03 |
| **4/17/2018** | **15:38:33** | **Main Floor** | **Room 153** | **WALL** | **PLASTER** | **WHITE** | **1** | **0.05** |
| **4/17/2018** | **15:39:02** | **Main Floor** | **Room 153** | **WALL** | **PLASTER** | **WHITE** | **1** | **0.07** |
| **4/17/2018** | **15:39:20** | **Main Floor** | **Room 153** | **WALL** | **PLASTER** | **WHITE** | **1** | **0.09** |
| 4/17/2018 | 15:45:55 | Main Floor | Room 154 | WALL | PLASTER | YELLOW | 0 | 0 |
| 4/17/2018 | 15:46:35 | Main Floor | Room 154 | WALL | PLASTER | YELLOW | 0 | 0 |
| 4/17/2018 | 15:46:54 | Main Floor | Room 154 | WALL | PLASTER | YELLOW | 0 | 0 |
| 4/17/2018 | 15:47:12 | Main Floor | Room 154 | WALL | PLASTER | YELLOW | 0 | 0 |
| 4/17/2018 | 15:49:16 | Main Floor | Room 155 | WALL | PLASTER | YELLOW | 0 | 0 |
| 4/17/2018 | 15:50:21 | Main Floor | Room 155 | WALL | PLASTER | LT BLUE | 0 | 0 |
| 4/17/2018 | 15:51:32 | Main Floor | Room 155 | WALL | PLASTER | YELLOW | 0 | 0 |
| 4/17/2018 | 15:48:41 | Main Floor | Room 155 | WALL | PLASTER | YELLOW | 0.09 | 0.1 |
| 4/17/2018 | 15:50:34 | Main Floor | Room 155 | WALL | PLASTER | LT BLUE | 0.09 | 0.04 |
| 4/17/2018 | 15:49:37 | Main Floor | Room 155 | WALL | PLASTER | RED | 0.19 | 0.14 |
| 4/17/2018 | 15:51:00 | Main Floor | Room 155 | WALL | PLASTER | YELLOW | 0.22 | 0.07 |
| **4/17/2018** | **15:48:57** | **Main Floor** | **Room 155** | **WALL** | **PLASTER** | **YELLOW** | **1** | **0.08** |
| **4/17/2018** | **15:50:03** | **Main Floor** | **Room 155** | **WALL** | **PLASTER** | **LT BLUE** | **1** | **0.04** |
| 4/17/2018 | 15:54:47 | Main Floor | Room 156 | WALL | PLASTER | GREEN | 0 | 0 |
| 4/17/2018 | 15:55:01 | Main Floor | Room 156 | WALL | PLASTER | GREEN | 0 | 0 |
| 4/17/2018 | 15:55:13 | Main Floor | Room 156 | WALL | PLASTER | GREEN | 0 | 0 |
| 4/17/2018 | 15:55:30 | Main Floor | Room 156 | WALL | PLASTER | PINK | 0 | 0 |
| 4/17/2018 | 15:53:38 | Main Floor | Room 156 | WALL | PLASTER | GREEN | 0.24 | 0.19 |
| 4/17/2018 | 15:54:24 | Main Floor | Room 156 | WALL | PLASTER | GREEN | 0.27 | 0.2 |
| 4/17/2018 | 15:54:03 | Main Floor | Room 156 | WALL | PLASTER | GREEN | 0.28 | 0.21 |

# Lead-Based Paint Screening Results

**Table 5**

| Date | Time | Building | Room | Component | Substrate | Color | Lead mg/cm$^2$ | (+/-) Error |
|---|---|---|---|---|---|---|---|---|
| 4/17/2018 | 15:58:15 | Main Floor | Room 157 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/17/2018 | 15:59:00 | Main Floor | Room 157 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/17/2018 | 15:59:26 | Main Floor | Room 157 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 15:59:43 | Main Floor | Room 157 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 15:59:59 | Main Floor | Room 157 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 16:00:29 | Main Floor | Room 158 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 16:00:56 | Main Floor | Room 158 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 16:01:15 | Main Floor | Room 158 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 16:01:32 | Main Floor | Room 158 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 16:01:53 | Main Floor | Room 158 | WALL | PLASTER | PINK | 0 | 0 |
| 4/17/2018 | 16:02:32 | Main Floor | Room 159 | WALL | PLASTER | PINK | 0 | 0 |
| 4/17/2018 | 16:03:02 | Main Floor | Room 159 | WALL | PLASTER | LT BLUE | 0 | 0 |
| 4/17/2018 | 16:03:32 | Main Floor | Room 159 | WALL | PLASTER | LT BLUE | 0 | 0 |
| 4/17/2018 | 16:03:49 | Main Floor | Room 159 | WALL | PLASTER | LT BLUE | 0 | 0 |
| 4/17/2018 | 16:04:15 | Main Floor | Room 159 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 16:11:26 | Main Floor | Room 160 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 16:11:05 | Main Floor | Room 160 | WALL | PLASTER | WHITE | 0.43 | 0.26 |
| 4/17/2018 | 16:05:55 | Main Floor | Room 161 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 16:06:14 | Main Floor | Room 161 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 16:06:30 | Main Floor | Room 161 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 16:07:25 | Main Floor | Room 161 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/17/2018 | 16:05:38 | Main Floor | Room 161 | WALL | PLASTER | WHITE | 0.14 | 0.05 |
| 4/17/2018 | 16:06:45 | Main Floor | Room 161 | WALL | PLASTER | WHITE | 0.16 | 0.05 |
| 4/17/2018 | 16:05:23 | Main Floor | Room 161 | WALL | PLASTER | WHITE | 0.26 | 0.07 |
| 4/17/2018 | 16:07:04 | Main Floor | Room 161 | WALL | PLASTER | WHITE | 0.35 | 0.14 |
| 4/17/2018 | 15:00:09 | Main Floor | Room 162 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 15:01:12 | Main Floor | Room 162 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 15:01:45 | Main Floor | Room 162 | WALL | PLASTER | BLUE | 0 | 0 |
| 4/17/2018 | 15:02:06 | Main Floor | Room 162 | WALL | PLASTER | BLUE | 0.31 | 0.12 |
| 4/17/2018 | 14:59:49 | Main Floor | Room 162 | WALL | PLASTER | WHITE | 0.34 | 0.16 |
| **4/17/2018** | **15:00:26** | **Main Floor** | **Room 162** | **WALL** | **PLASTER** | **WHITE** | **1** | **0.13** |
| **4/17/2018** | **15:00:50** | **Main Floor** | **Room 162** | **WALL** | **PLASTER** | **WHITE** | **1** | **0.13** |
| 4/17/2018 | 14:46:34 | Main Floor | Room 163 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/17/2018 | 14:46:51 | Main Floor | Room 163 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/17/2018 | 14:47:45 | Main Floor | Room 163 | CEILING | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:48:14 | Main Floor | Room 163 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:48:31 | Main Floor | Room 163 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:48:48 | Main Floor | Room 163 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:49:05 | Main Floor | Room 163 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:49:23 | Main Floor | Room 163 | WALL | PLASTER | WHITE | 0 | 0 |
| **4/17/2018** | **14:49:50** | **Main Floor** | **Room 163** | **WALL** | **PLASTER** | **LT BLUE** | **1** | **0.05** |
| 4/17/2018 | 14:38:43 | Main Floor | Room 164 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/17/2018 | 14:39:12 | Main Floor | Room 164 | CEILING | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:39:40 | Main Floor | Room 164 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:40:14 | Main Floor | Room 164 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:40:28 | Main Floor | Room 164 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:40:45 | Main Floor | Room 164 | WALL | PLASTER | WHITE | 0 | 0 |
| **4/17/2018** | **14:39:54** | **Main Floor** | **Room 164** | **WALL** | **PLASTER** | **WHITE** | **1** | **0.07** |
| 4/17/2018 | 14:30:10 | Main Floor | Room 165 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/17/2018 | 14:30:28 | Main Floor | Room 165 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/17/2018 | 14:30:55 | Main Floor | Room 165 | CEILING | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:31:56 | Main Floor | Room 165 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:32:32 | Main Floor | Room 165 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:31:21 | Main Floor | Room 165 | WALL | PLASTER | WHITE | 0.06 | 0.02 |
| 4/17/2018 | 14:31:39 | Main Floor | Room 165 | WALL | PLASTER | WHITE | 0.09 | 0.05 |
| **4/17/2018** | **14:32:13** | **Main Floor** | **Room 165** | **WALL** | **PLASTER** | **WHITE** | **1** | **0.03** |
| 4/17/2018 | 14:23:21 | Main Floor | Room 166 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/17/2018 | 14:23:54 | Main Floor | Room 166 | CEILING | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:25:11 | Main Floor | Room 166 | WALL | PLASTER | WHITE | 0.03 | 0.02 |
| 4/17/2018 | 14:24:26 | Main Floor | Room 166 | TRIM | METAL | BROWN | 0.05 | 0.02 |

# Lead-Based Paint Screening Results

**Table 5**

| Date | Time | Building | Room | Component | Substrate | Color | Lead mg/cm$^2$ | (+/-) Error |
|---|---|---|---|---|---|---|---|---|
| 4/17/2018 | 14:24:52 | Main Floor | Room 166 | WALL | PLASTER | WHITE | 0.06 | 0.02 |
| 4/17/2018 | 14:25:25 | Main Floor | Room 166 | WALL | PLASTER | WHITE | 0.06 | 0.04 |
| 4/17/2018 | 14:25:42 | Main Floor | Room 166 | WALL | PLASTER | WHITE | 0.06 | 0.04 |
| 4/17/2018 | 14:20:56 | Main Floor | Room 167 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:21:12 | Main Floor | Room 167 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:21:27 | Main Floor | Room 167 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:21:52 | Main Floor | Room 167 | CEILING | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:22:18 | Main Floor | Room 167 | DOOR | METAL | WHITE | 0 | 0 |
| 4/17/2018 | 14:22:37 | Main Floor | Room 167 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/17/2018 | 14:12:22 | Main Floor | Room 168 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/17/2018 | 14:13:07 | Main Floor | Room 168 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:13:23 | Main Floor | Room 168 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:13:50 | Main Floor | Room 168 | TRIM | PLASTER | YELLOW | 0.06 | 0.02 |
| 4/17/2018 | 14:12:50 | Main Floor | Room 168 | WALL | PLASTER | WHITE | 0.16 | 0.06 |
| 4/17/2018 | 14:09:37 | Main Floor | Room 169 | WALL | PLASTER | WHITE | 0.02 | 0.02 |
| 4/17/2018 | 14:09:55 | Main Floor | Room 169 | WALL | PLASTER | WHITE | 0.08 | 0.04 |
| 4/17/2018 | 14:10:12 | Main Floor | Room 169 | WALL | PLASTER | WHITE | 0.11 | 0.07 |
| 4/17/2018 | 14:10:57 | Main Floor | Room 169 | CEILING | PLASTER | WHITE | 0.14 | 0.06 |
| 4/17/2018 | 14:10:29 | Main Floor | Room 169 | WALL | PLASTER | WHITE | 0.15 | 0.07 |
| **4/17/2018** | **14:09:18** | **Main Floor** | **Room 169** | **WALL** | **PLASTER** | **WHITE** | **1** | **0.06** |
| 4/17/2018 | 13:48:03 | Main Floor | Room 170 | DOOR FRAME | METAL | PINK | 0 | 0 |
| 4/17/2018 | 13:49:52 | Main Floor | Room 170 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 13:50:09 | Main Floor | Room 170 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 13:51:08 | Main Floor | Room 170 | TRIM | METAL | GREEN | 0.05 | 0.02 |
| 4/17/2018 | 13:51:39 | Main Floor | Room 170 | WALL | DRYWALL | LT BLUE | 0.09 | 0.06 |
| 4/17/2018 | 13:50:36 | Main Floor | Room 170 | CEILING | DRYWALL | WHITE | 0.14 | 0.04 |
| 4/17/2018 | 13:52:10 | Main Floor | Room 170 | WALL | DRYWALL | WHITE | 0.15 | 0.05 |
| 4/17/2018 | 13:52:41 | Main Floor | Room 170 | WALL | DRYWALL | WHITE | 0.22 | 0.09 |
| 4/17/2018 | 13:47:19 | Main Floor | Room 171 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 13:47:33 | Main Floor | Room 171 | WALL | DRYWALL | WHITE | 0.2 | 0.25 |
| 4/17/2018 | 13:44:23 | Main Floor | Room 172 | WALL | PLASTER | PINK | 0 | 0 |
| 4/17/2018 | 13:44:49 | Main Floor | Room 172 | WALL | PLASTER | PINK | 0 | 0 |
| 4/17/2018 | 13:45:11 | Main Floor | Room 172 | WALL | DRYWALL | PINK | 0.04 | 0.03 |
| 4/17/2018 | 13:45:59 | Main Floor | Room 172 | CEILING | DRYWALL | WHITE | 0.16 | 0.05 |
| 4/17/2018 | 13:46:24 | Main Floor | Room 172 | WALL | DRYWALL | WHITE | 0.17 | 0.07 |
| 4/17/2018 | 13:38:55 | Main Floor | Room 173 | DOOR | WOOD | WHITE | 0.01 | 0.01 |
| **4/17/2018** | **13:39:23** | **Main Floor** | **Room 173** | **WALL** | **DRYWALL** | **WHITE** | **1** | **0.08** |
| **4/17/2018** | **13:39:42** | **Main Floor** | **Room 173** | **WALL** | **DRYWALL** | **WHITE** | **1** | **0.07** |
| **4/17/2018** | **13:40:05** | **Main Floor** | **Room 173** | **WALL** | **DRYWALL** | **WHITE** | **1** | **0.12** |
| **4/17/2018** | **13:40:33** | **Main Floor** | **Room 173** | **FLOOR** | **CONCRETE** | **GRAY** | **1** | **0.03** |
| 4/17/2018 | 13:36:32 | Main Floor | Room 174 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 13:36:50 | Main Floor | Room 174 | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 13:37:49 | Main Floor | Room 174 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/17/2018 | 13:37:10 | Main Floor | Room 174 | WALL | DRYWALL | WHITE | 0.19 | 0.07 |
| 4/17/2018 | 13:36:00 | Main Floor | Room 174 | WALL | DRYWALL | WHITE | 0.34 | 0.32 |
| 4/17/2018 | 13:59:09 | Main Floor | Room 175 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 13:59:28 | Main Floor | Room 175 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 13:59:59 | Main Floor | Room 175 | CEILING | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:00:54 | Main Floor | Room 175 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/17/2018 | 13:58:53 | Main Floor | Room 175 | WALL | PLASTER | WHITE | 0.04 | 0.02 |
| **4/17/2018** | **13:58:36** | **Main Floor** | **Room 175** | **WALL** | **PLASTER** | **WHITE** | **1** | **0.03** |
| **4/17/2018** | **14:00:25** | **Main Floor** | **Room 175** | **WALL** | **PLASTER** | **WHITE** | **1** | **0.16** |
| 4/17/2018 | 14:01:37 | Main Floor | Room 176 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/17/2018 | 14:01:54 | Main Floor | Room 176 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/17/2018 | 14:02:26 | Main Floor | Room 176 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:02:59 | Main Floor | Room 176 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:03:28 | Main Floor | Room 176 | WALL | PLASTER | PINK | 0 | 0 |
| 4/17/2018 | 14:03:52 | Main Floor | Room 176 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:04:12 | Main Floor | Room 176 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:04:31 | Main Floor | Room 176 | CEILING | PLASTER | WHITE | 0 | 0 |

# Lead-Based Paint Screening Results

**Table 5**

| Date | Time | Building | Room | Component | Substrate | Color | Lead mg/cm$^2$ | (+/-) Error |
|---|---|---|---|---|---|---|---|---|
| 4/17/2018 | 14:02:42 | Main Floor | Room 176 | WALL | PLASTER | WHITE | 0.02 | 0.02 |
| 4/17/2018 | 14:06:13 | Main Floor | Room 177 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:06:28 | Main Floor | Room 177 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:06:44 | Main Floor | Room 177 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:07:01 | Main Floor | Room 177 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:07:23 | Main Floor | Room 177 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:07:50 | Main Floor | Room 177 | CEILING | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:08:18 | Main Floor | Room 177 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/17/2018 | 14:08:34 | Main Floor | Room 177 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/17/2018 | 14:14:49 | Main Floor | Room 178 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:15:02 | Main Floor | Room 178 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:15:18 | Main Floor | Room 178 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:15:31 | Main Floor | Room 178 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:15:46 | Main Floor | Room 178 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:16:00 | Main Floor | Room 178 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:16:31 | Main Floor | Room 178 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/17/2018 | 14:16:56 | Main Floor | Room 178 | DOOR | METAL | WHITE | 0 | 0 |
| 4/17/2018 | 14:17:46 | Main Floor | Room 179 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/17/2018 | 14:18:23 | Main Floor | Room 179 | DOOR FRAME | METAL | BROWN | 0 | 0 |
| 4/17/2018 | 14:18:48 | Main Floor | Room 179 | DOOR FRAME | METAL | BROWN | 0 | 0 |
| 4/17/2018 | 14:19:15 | Main Floor | Room 179 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:19:33 | Main Floor | Room 179 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:19:50 | Main Floor | Room 179 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:20:07 | Main Floor | Room 179 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:27:18 | Main Floor | Room 180 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:27:35 | Main Floor | Room 180 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:27:51 | Main Floor | Room 180 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:28:08 | Main Floor | Room 180 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:28:44 | Main Floor | Room 180 | CEILING | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:29:07 | Main Floor | Room 180 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/17/2018 | 14:29:24 | Main Floor | Room 180 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/17/2018 | 14:27:00 | Main Floor | Room 180 | WALL | PLASTER | WHITE | 0.07 | 0.04 |
| 4/17/2018 | 14:35:58 | Main Floor | Room 181 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:36:15 | Main Floor | Room 181 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:36:32 | Main Floor | Room 181 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:36:49 | Main Floor | Room 181 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:37:15 | Main Floor | Room 181 | CEILING | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:37:43 | Main Floor | Room 181 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/17/2018 | 14:38:01 | Main Floor | Room 181 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/17/2018 | 14:35:40 | Main Floor | Room 181 | WALL | PLASTER | WHITE | 0.16 | 0.08 |
| 4/17/2018 | 14:42:05 | Main Floor | Room 182 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:42:22 | Main Floor | Room 182 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:42:39 | Main Floor | Room 182 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:43:05 | Main Floor | Room 182 | CEILING | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:43:31 | Main Floor | Room 182 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/17/2018 | 14:41:30 | Main Floor | Room 182 | WALL | PLASTER | WHITE | 0.03 | 0.03 |
| 4/17/2018 | 14:41:47 | Main Floor | Room 182 | WALL | PLASTER | WHITE | 0.08 | 0.1 |
| 4/17/2018 | 14:57:50 | Main Floor | Room 183 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:58:05 | Main Floor | Room 183 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:58:18 | Main Floor | Room 183 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/17/2018 | 14:58:35 | Main Floor | Room 183 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 12:40:31 | Main Floor | Room 183 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 12:40:48 | Main Floor | Room 183 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 12:41:03 | Main Floor | Room 183 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 12:41:18 | Main Floor | Room 183 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 12:41:42 | Main Floor | Room 183 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/18/2018 | 12:42:48 | Main Floor | Room 184 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/18/2018 | 12:43:05 | Main Floor | Room 184 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/18/2018 | 12:43:47 | Main Floor | Room 184 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 12:44:05 | Main Floor | Room 184 | WALL | PLASTER | WHITE | 0 | 0 |

# Lead-Based Paint Screening Results

**Table 5**

| Date | Time | Building | Room | Component | Substrate | Color | Lead mg/cm$^2$ | (+/-) Error |
|---|---|---|---|---|---|---|---|---|
| 4/18/2018 | 12:44:22 | Main Floor | Room 184 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 12:44:39 | Main Floor | Room 184 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 12:45:13 | Main Floor | Room 184 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 12:45:42 | Main Floor | Room 184 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 12:46:23 | Main Floor | Room 184 | CEILING | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 12:47:19 | Main Floor | Room 185 | CEILING | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 12:48:05 | Main Floor | Room 185 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 12:49:07 | Main Floor | Room 185 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 12:49:26 | Main Floor | Room 185 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 12:49:43 | Main Floor | Room 185 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 12:50:24 | Main Floor | Room 185 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/18/2018 | 12:51:08 | Main Floor | Room 185 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/18/2018 | 12:52:16 | Main Floor | Room 186 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/18/2018 | 12:52:33 | Main Floor | Room 186 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/18/2018 | 12:53:00 | Main Floor | Room 186 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 12:53:20 | Main Floor | Room 186 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 12:53:37 | Main Floor | Room 186 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 12:53:56 | Main Floor | Room 186 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 12:54:21 | Main Floor | Room 186 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 12:54:46 | Main Floor | Room 186 | CEILING | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 13:00:28 | Main Floor | Room 187 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 13:00:45 | Main Floor | Room 187 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 13:01:02 | Main Floor | Room 187 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 13:01:19 | Main Floor | Room 187 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 13:01:44 | Main Floor | Room 187 | CEILING | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 13:02:08 | Main Floor | Room 187 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/18/2018 | 13:02:28 | Main Floor | Room 187 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/18/2018 | 12:55:43 | Main Floor | Room 188 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 12:57:51 | Main Floor | Room 188 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 12:58:59 | Main Floor | Room 188 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 12:59:33 | Main Floor | Room 188 | WALL | PLASTER | GREEN | 0 | 0 |
| 4/18/2018 | 13:04:39 | Main Floor | Room 189 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/18/2018 | 13:05:13 | Main Floor | Room 189 | WALL | PLASTER | BROWN | 0 | 0 |
| 4/18/2018 | 13:05:50 | Main Floor | Room 189 | WALL | PLASTER | BROWN | 0 | 0 |
| 4/18/2018 | 13:06:06 | Main Floor | Room 189 | WALL | PLASTER | BROWN | 0 | 0 |
| 4/18/2018 | 13:05:31 | Main Floor | Room 189 | WALL | PLASTER | BROWN | 0.04 | 0.04 |
| 4/18/2018 | 13:06:45 | Main Floor | Room 190 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 13:07:02 | Main Floor | Room 190 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 13:07:25 | Main Floor | Room 190 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/18/2018 | 13:07:48 | Main Floor | Room 190 | DOOR | METAL | WHITE | 0 | 0 |
| 4/18/2018 | 13:08:21 | Main Floor | Room 191 | DOOR | METAL | WHITE | 0 | 0 |
| 4/18/2018 | 13:08:40 | Main Floor | Room 191 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/18/2018 | 13:09:10 | Main Floor | Room 191 | WALL | PLASTER | LT BLUE | 0 | 0 |
| 4/18/2018 | 13:09:32 | Main Floor | Room 191 | WALL | PLASTER | LT BLUE | 0 | 0 |
| 4/18/2018 | 13:10:05 | Main Floor | Room 191 | WALL | PLASTER | LT BLUE | 0 | 0 |
| 4/18/2018 | 13:09:49 | Main Floor | Room 191 | WALL | PLASTER | LT BLUE | 0.48 | 0.23 |
| 4/18/2018 | 13:10:53 | Main Floor | Room 192 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 13:11:13 | Main Floor | Room 192 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 13:11:35 | Main Floor | Room 192 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 13:11:50 | Main Floor | Room 192 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 13:12:20 | Main Floor | Room 192 | WALL | PLASTER | GREEN | 0 | 0 |
| 4/18/2018 | 13:12:56 | Main Floor | Room 192 | DOOR | METAL | WHITE | 0 | 0 |
| 4/18/2018 | 13:13:24 | Main Floor | Room 192 | DOOR FRAME | METAL | GRAY | 0 | 0 |
| 4/18/2018 | 13:15:09 | Main Floor | Room 193 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 13:15:29 | Main Floor | Room 193 | WALL | PLASTER | WHITE | 0.13 | 0.11 |
| **4/18/2018** | **13:14:42** | **Main Floor** | **Room 193** | **WALL** | **PLASTER** | **WHITE** | **1** | **0.15** |
| **4/18/2018** | **13:16:12** | **Main Floor** | **Room 193** | **WALL** | **PLASTER** | **WHITE** | **1** | **0.12** |
| **4/18/2018** | **13:16:40** | **Main Floor** | **Room 193** | **WALL** | **PLASTER** | **RED** | **1** | **0.13** |
| 4/18/2018 | 13:19:33 | Main Floor | Room 194 | WALL | PLASTER | WHITE | 0.05 | 0.03 |
| 4/18/2018 | 13:20:03 | Main Floor | Room 194 | WALL | PLASTER | WHITE | 0.16 | 0.09 |

# Lead-Based Paint Screening Results

**Table 5**

| Date | Time | Building | Room | Component | Substrate | Color | Lead mg/cm$^2$ | (+/-) Error |
|---|---|---|---|---|---|---|---|---|
| 4/18/2018 | 13:23:14 | Main Floor | Room 195 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 13:21:54 | Main Floor | Room 195 | WALL | PLASTER | BROWN | 0.04 | 0.02 |
| 4/18/2018 | 13:23:31 | Main Floor | Room 195 | WALL | PLASTER | WHITE | 0.04 | 0.02 |
| 4/18/2018 | 13:22:14 | Main Floor | Room 195 | WALL | PLASTER | BROWN | 0.1 | 0.12 |
| 4/18/2018 | 13:22:49 | Main Floor | Room 195 | WALL | PLASTER | BROWN | 0.1 | 0.07 |
| 4/18/2018 | 13:22:31 | Main Floor | Room 195 | WALL | PLASTER | BROWN | 0.17 | 0.13 |
| 4/18/2018 | 13:25:11 | Main Floor | Room 196 | WALL | PLASTER | WHITE | 0.06 | 0.04 |
| 4/18/2018 | 13:25:39 | Main Floor | Room 196 | WINDOW SILL | WOOD | WHITE | 0.12 | 0.05 |
| 4/18/2018 | 13:24:51 | Main Floor | Room 196 | WALL | PLASTER | WHITE | 0.14 | 0.08 |
| 4/18/2018 | 13:28:48 | Main Floor | Room 197 | WALL | PLASTER | YELLOW | 0 | 0 |
| 4/18/2018 | 13:29:05 | Main Floor | Room 197 | WALL | PLASTER | YELLOW | 0 | 0 |
| 4/18/2018 | 13:28:13 | Main Floor | Room 197 | WALL | PLASTER | YELLOW | 0.05 | 0.04 |
| 4/18/2018 | 13:29:34 | Main Floor | Room 197 | WALL | PLASTER | WHITE | 0.08 | 0.04 |
| 4/18/2018 | 13:27:56 | Main Floor | Room 197 | WALL | PLASTER | YELLOW | 0.12 | 0.05 |
| 4/18/2018 | 13:28:32 | Main Floor | Room 197 | WALL | PLASTER | YELLOW | 0.13 | 0.1 |
| 4/18/2018 | 13:26:40 | Main Floor | Room 197a | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 13:26:57 | Main Floor | Room 197a | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 13:27:10 | Main Floor | Room 197a | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 13:30:28 | Main Floor | Room 198 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 13:30:44 | Main Floor | Room 198 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 13:30:58 | Main Floor | Room 198 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 13:31:12 | Main Floor | Room 198 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 13:31:53 | Main Floor | Room 199 | WALL | PLASTER | YELLOW | 0 | 0 |
| 4/18/2018 | 13:32:38 | Main Floor | Room 199 | WALL | PLASTER | YELLOW | 0 | 0 |
| 4/18/2018 | 13:32:23 | Main Floor | Room 199 | WALL | PLASTER | YELLOW | 0.1 | 0.16 |
| 4/18/2018 | 13:32:07 | Main Floor | Room 199 | WALL | PLASTER | YELLOW | 0.17 | 0.19 |
| 4/18/2018 | 13:33:04 | Main Floor | Room 199 | WINDOW SILL | WOOD | YELLOW | 0.19 | 0.08 |
| 4/18/2018 | 13:35:05 | Main Floor | Room 200 | WALL | PLASTER | LT BLUE | 0 | 0 |
| 4/18/2018 | 13:35:21 | Main Floor | Room 200 | WALL | PLASTER | LT BLUE | 0 | 0 |
| 4/18/2018 | 13:34:34 | Main Floor | Room 200 | WALL | PLASTER | LT BLUE | 0.04 | 0.03 |
| 4/18/2018 | 13:34:48 | Main Floor | Room 200 | WALL | PLASTER | LT BLUE | 0.1 | 0.07 |
| 4/18/2018 | 13:34:07 | Main Floor | Room 200 | WINDOW SILL | WOOD | WHITE | 0.16 | 0.09 |
| 4/18/2018 | 13:37:23 | Main Floor | Room 201 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 13:36:11 | Main Floor | Room 201 | WALL | PLASTER | WHITE | 0.05 | 0.03 |
| 4/18/2018 | 13:37:47 | Main Floor | Room 201 | WINDOW SILL | WOOD | WHITE | 0.11 | 0.05 |
| **4/18/2018** | **13:36:34** | **Main Floor** | **Room 201** | **WALL** | **PLASTER** | **WHITE** | **1** | **0.08** |
| **4/18/2018** | **13:37:00** | **Main Floor** | **Room 201** | **WALL** | **PLASTER** | **WHITE** | **1** | **0.04** |
| 4/18/2018 | 13:42:12 | Main Floor | Room 202 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 13:41:13 | Main Floor | Room 202 | WALL | PLASTER | WHITE | 0.06 | 0.05 |
| 4/18/2018 | 13:41:34 | Main Floor | Room 202 | WALL | PLASTER | WHITE | 0.07 | 0.03 |
| 4/18/2018 | 13:41:51 | Main Floor | Room 202 | WALL | PLASTER | WHITE | 0.12 | 0.04 |
| 4/18/2018 | 13:42:29 | Main Floor | Room 203 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 13:43:00 | Main Floor | Room 203 | WALL | PLASTER | WHITE | 0.08 | 0.04 |
| 4/18/2018 | 13:42:43 | Main Floor | Room 203 | WALL | PLASTER | WHITE | 0.13 | 0.07 |
| 4/18/2018 | 13:43:16 | Main Floor | Room 203 | WALL | PLASTER | WHITE | 0.21 | 0.26 |
| 4/18/2018 | 13:46:30 | Main Floor | Room 204 | DOOR FRAME | METAL | LT BLUE | 0 | 0 |
| 4/18/2018 | 13:45:31 | Main Floor | Room 204 | WALL | PLASTER | LT BLUE | 0.06 | 0.1 |
| 4/18/2018 | 13:45:52 | Main Floor | Room 204 | WALL | PLASTER | LT BLUE | 0.12 | 0.08 |
| 4/18/2018 | 13:47:43 | Main Floor | Room 205 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/18/2018 | 13:48:05 | Main Floor | Room 205 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/18/2018 | 13:48:23 | Main Floor | Room 205 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/18/2018 | 13:49:09 | Main Floor | Room 205 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 13:49:25 | Main Floor | Room 205 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 13:49:44 | Main Floor | Room 205 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 13:50:03 | Main Floor | Room 205 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 13:50:22 | Main Floor | Room 205 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 13:51:07 | Main Floor | Room 205 | WINDOW SILL | WOOD | WHITE | 0.15 | 0.05 |
| 4/18/2018 | 13:51:45 | Main Floor | Room 205a | CEILING | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 13:53:01 | Main Floor | Room 205b | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 13:53:28 | Main Floor | Room 205b | DOOR FRAME | METAL | WHITE | 0 | 0 |

# Lead-Based Paint Screening Results

**Table 5**

| Date | Time | Building | Room | Component | Substrate | Color | Lead mg/cm$^2$ | (+/-) Error |
|---|---|---|---|---|---|---|---|---|
| 4/18/2018 | 13:54:05 | Main Floor | Room 206 | DOOR FRAME | METAL | WHITE | 0 | 0 |
| 4/18/2018 | 13:54:30 | Main Floor | Room 206 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 13:54:48 | Main Floor | Room 206 | WALL | PLASTER | WHITE | 0 | 0 |
| 4/18/2018 | 13:55:05 | Main Floor | Room 206 | WALL | PLASTER | WHITE | 0 | 0 |
| **4/18/2018** | **13:38:51** | **Main Floor** | **Room 207** | **WALL** | **PLASTER** | **WHITE** | **1** | **0.07** |
| **4/18/2018** | **13:39:08** | **Main Floor** | **Room 207** | **WALL** | **PLASTER** | **WHITE** | **1** | **0.05** |
| **4/18/2018** | **13:39:30** | **Main Floor** | **Room 207** | **WALL** | **PLASTER** | **WHITE** | **1** | **0.08** |
| **4/18/2018** | **13:39:59** | **Main Floor** | **Room 207** | **CEILING** | **PLASTER** | **WHITE** | **1** | **0.05** |
| 4/17/2018 | 16:24:53 | Hospital | Exterior | DOOR | METAL | YELLOW | 0 | 0 |
| 4/17/2018 | 16:25:31 | Hospital | Exterior | DOOR FRAME | METAL | PINK | 0 | 0 |
| 4/17/2018 | 16:26:23 | Hospital | Exterior | TRIM | WOOD | YELLOW | 0 | 0 |
| 4/17/2018 | 16:27:04 | Hospital | Exterior | DOOR | METAL | YELLOW | 0 | 0 |
| 4/17/2018 | 16:27:37 | Hospital | Exterior | TRIM | WOOD | YELLOW | 0 | 0 |
| 4/17/2018 | 16:29:09 | Hospital | Exterior | DOOR | METAL | DK BROWN | 0 | 0 |
| 4/17/2018 | 16:29:45 | Hospital | Exterior | WALL | WOOD | ORANGE | 0.05 | 0.02 |
| 4/17/2018 | 16:23:39 | Hospital | Exterior | DOOR | WOOD | YELLOW | 0.25 | 0.06 |
| 4/17/2018 | 16:32:32 | Hospital | Exterior | TRIM | WOOD | YELLOW | 0.89 | 0.09 |
| **4/17/2018** | **16:32:00** | **Hospital** | **Exterior** | **TRIM** | **WOOD** | **YELLOW** | **1.26** | **0.13** |
| **4/17/2018** | **16:31:15** | **Hospital** | **Exterior** | **TRIM** | **WOOD** | **YELLOW** | **1.37** | **0.17** |
| ***Shed - Screening Results*** | | | | | | | | |
| 4/17/2018 | 16:19:25 | Shed | Exterior | WALL | WOOD | YELLOW | 0 | 0 |
| 4/17/2018 | 16:20:11 | Shed | Exterior | WALL | WOOD | YELLOW | 0 | 0 |
| 4/17/2018 | 16:20:33 | Shed | Exterior | WALL | WOOD | YELLOW | 0 | 0 |
| 4/17/2018 | 16:19:48 | Shed | Exterior | WALL | WOOD | YELLOW | 0.26 | 0.05 |
| ***Home Oxygen Building - Screening Results*** | | | | | | | | |
| 4/17/2018 | 17:22:06 | Home O2 Building | Room A | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 17:22:32 | Home O2 Building | Room A | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 17:22:54 | Home O2 Building | Room A | WALL | WOOD | WHITE | 0 | 0 |
| 4/17/2018 | 17:23:21 | Home O2 Building | Room A | WALL | WOOD | YELLOW | 0 | 0 |
| 4/17/2018 | 17:23:52 | Home O2 Building | Room A | CEILING | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 17:24:33 | Home O2 Building | Room A | FLOOR | CONCRETE | GRAY | 0 | 0 |
| 4/17/2018 | 17:25:06 | Home O2 Building | Room A | DOOR FRAME | WOOD | CREAM | 0 | 0 |
| 4/17/2018 | 17:25:56 | Home O2 Building | Room A | DOOR FRAME | WOOD | YELLOW | 0 | 0 |
| 4/17/2018 | 17:26:21 | Home O2 Building | Room A | DOOR | WOOD | WHITE | 0 | 0 |
| 4/17/2018 | 17:28:52 | Home O2 Building | Room A | DOOR | METAL | BROWN | 0 | 0 |
| 4/17/2018 | 17:30:03 | Home O2 Building | Room B | WALL | DRYWALL | BROWN | 0 | 0 |
| 4/17/2018 | 17:30:20 | Home O2 Building | Room B | WALL | DRYWALL | BROWN | 0 | 0 |
| 4/17/2018 | 17:30:38 | Home O2 Building | Room B | WALL | DRYWALL | BROWN | 0 | 0 |
| 4/17/2018 | 17:30:58 | Home O2 Building | Room B | WALL | DRYWALL | BROWN | 0 | 0 |
| 4/17/2018 | 17:31:20 | Home O2 Building | Room B | CEILING | DRYWALL | BROWN | 0 | 0 |
| 4/17/2018 | 17:31:45 | Home O2 Building | Room B | DOOR | METAL | BROWN | 0 | 0 |
| 4/17/2018 | 17:32:13 | Home O2 Building | Room B | TRIM | WOOD | BROWN | 0 | 0 |
| 4/17/2018 | 17:32:56 | Home O2 Building | Room C | DOOR FRAME | WOOD | BROWN | 0 | 0 |
| 4/17/2018 | 17:33:31 | Home O2 Building | Room C | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 17:33:49 | Home O2 Building | Room C | WALL | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 17:34:15 | Home O2 Building | Room C | CEILING | DRYWALL | WHITE | 0 | 0 |
| 4/17/2018 | 17:34:45 | Home O2 Building | Room C | WALL | DRYWALL | RED | 0 | 0 |
| 4/17/2018 | 17:35:14 | Home O2 Building | Room C | DOOR | METAL | RED | 0 | 0 |
| 4/17/2018 | 16:35:51 | Home O2 Building | Exterior | WALL | WOOD | YELLOW | 0 | 0 |
| 4/17/2018 | 16:36:16 | Home O2 Building | Exterior | WALL | WOOD | YELLOW | 0 | 0 |
| 4/17/2018 | 16:36:45 | Home O2 Building | Exterior | WALL | WOOD | YELLOW | 0 | 0 |
| 4/17/2018 | 16:37:08 | Home O2 Building | Exterior | TRIM | WOOD | YELLOW | 0 | 0 |
| 4/17/2018 | 16:37:32 | Home O2 Building | Exterior | TRIM | WOOD | YELLOW | 0 | 0 |
| 4/17/2018 | 16:38:04 | Home O2 Building | Exterior | TRIM | WOOD | YELLOW | 0 | 0 |

## Lead-in-Soil Analytical Results

**Table 6**

| Soil Sample ID | Location | MT DEQ IEUBK Model (mg/kg) | EPA RSL – Residential Soil (mg/kg) | EPA RSL – Industrial Soil (mg/kg) | Lead Results (mg/kg) |
|---|---|---|---|---|---|
| LMH-SO01-0001 | Ends of the two southwest wings | 153 | 400 | 800 | **30** |
| LMH-SO91-0001 | | | | | **25.7** |

# APPENDIX A
# PHOTOGRAPH LOG

# PHOTOGRAPH LOG

| Project Name: | Site Location: | Project No. |
|---|---|---|
| Livingston Memorial Hospital | Livingston, MT | 0003/1802-06 |

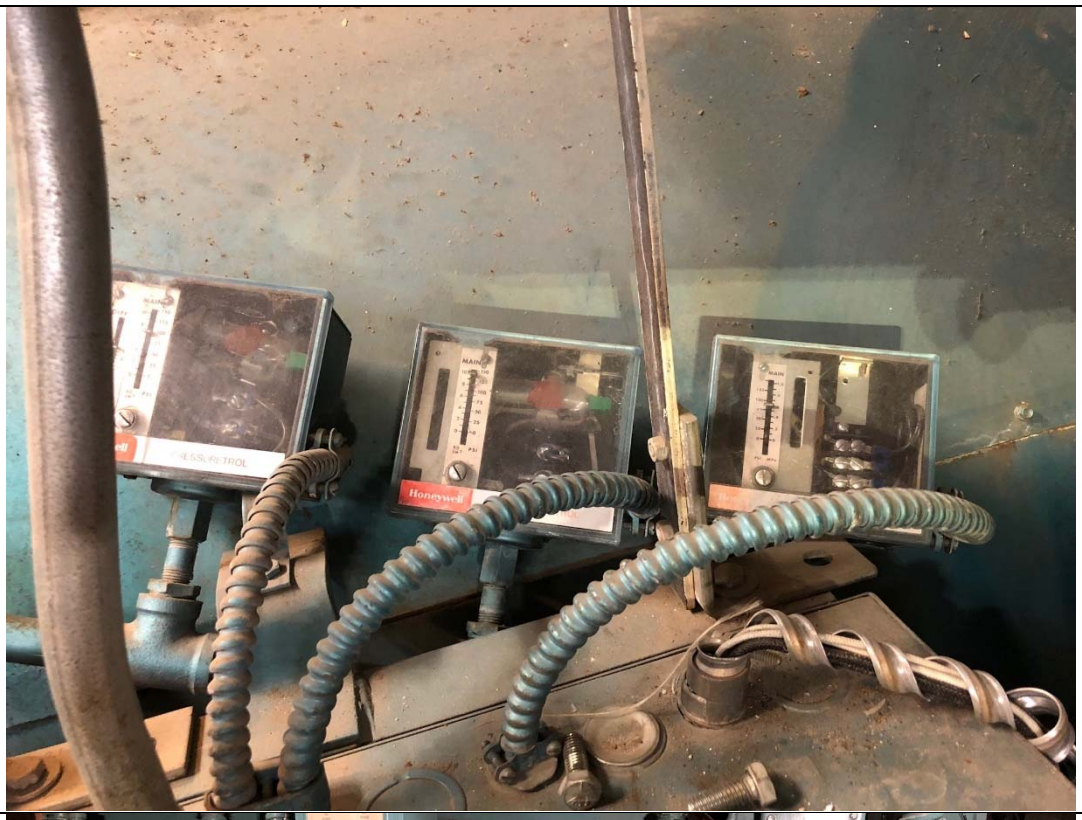
| Photo No. | Date: |
|---|---|
| 1 | 04/17/2018 |

| Photo Coordinates | |
|---|---|
| Lat | 45.649811 |
| Long | -110.568878 |

**Direction Photo Taken:**
224.946308724832

**Description:**

Two mercury ampules observed on the boiler in the hospital.




| Photo No. | Date: |
|---|---|
| 2 | 04/17/2018 |

| Photo Coordinates | |
|---|---|
| Lat | 45.649547 |
| Long | -110.568817 |

**Direction Photo Taken:**
249.808580858086

**Description:**

Three mercury ampules observed on the generator in the hospital.

# PHOTOGRAPH LOG

| Project Name: | Site Location: | Project No. |
|---|---|---|
| Livingston Memorial Hospital | Livingston, MT | 0003/1802-06 |

| Photo No. | Date: |
|---|---|
| 3 | 04/17/2018 |

| Photo Coordinates | |
|---|---|
| Lat | 45.649247 |
| Long | -110.568711 |

**Direction Photo Taken:**
205.334821428571

**Description:**

Transite flue material in the incinerator. Location of ACM sample LMH-IT01-01.

| Photo No. | Date: |
|---|---|
| 4 | 04/17/2018 |

| Photo Coordinates | |
|---|---|
| Lat | 45.648239 |
| Long | -110.572114 |

**Direction Photo Taken:**
213.640138408304

**Description:**

ACM pipe flange gasket on steam tunnel piping. Location of sample LMH-PG01-03.

# PHOTOGRAPH LOG

| Project Name: | Site Location: | Project No. |
|---|---|---|
| Livingston Memorial Hospital | Livingston, MT | 0003/1802-06 |

| Photo No. | Date: |
|---|---|
| 5 | 04/17/2018 |

| Photo Coordinates | |
|---|---|
| Lat | 45.653286 |
| Long | -110.566894 |

**Direction Photo Taken:**
242.482051282051

**Description:**

Air Cell piping observed above the dropped ceiling in the basement of the hospital.

| Photo No. | Date: |
|---|---|
| 6 | 04/17/2018 |

| Photo Coordinates | |
|---|---|
| Lat | 45.649417 |
| Long | -110.568756 |

**Direction Photo Taken:**
352.317406143345

**Description:**

Container of transformer oil assumed to contain PCBs found in the basement of the hospital.

# PHOTOGRAPH LOG

| Project Name: | Site Location: | Project No. |
|---|---|---|
| Livingston Memorial Hospital | Livingston, MT | 0003/1802-06 |

| Photo No. | Date: |
|---|---|
| 7 | 04/17/2018 |

| Photo Coordinates | |
|---|---|
| Lat | 45.649192 |
| Long | -110.568603 |

**Direction Photo Taken:**
106.608308605341

**Description:**

TSI debris in the soil of one of the crawlspaces.

| Photo No. | Date: |
|---|---|
| 8 | 04/17/2018 |

| Photo Coordinates | |
|---|---|
| Lat | 45.648117 |
| Long | -110.594344 |

**Direction Photo Taken:**
134.821276595745

**Description:**

Mechanical room with no suspect materials observed.

# PHOTOGRAPH LOG

| Project Name: | Site Location: | Project No. |
|---|---|---|
| Livingston Memorial Hospital | Livingston, MT | 0003/1802-06 |

| Photo No. | Date: |
|---|---|
| 9 | 04/17/2018 |

| Photo Coordinates | |
|---|---|
| Lat | 45.649411 |
| Long | -110.569528 |

**Direction Photo Taken:**
155.754838709677

**Description:**

Membrane roof on the hospital building.

| Photo No. | Date: |
|---|---|
| 10 | 04/17/2018 |

| Photo Coordinates | |
|---|---|
| Lat | 45.649558 |
| Long | -110.569061 |

**Direction Photo Taken:**
60.4169014084507

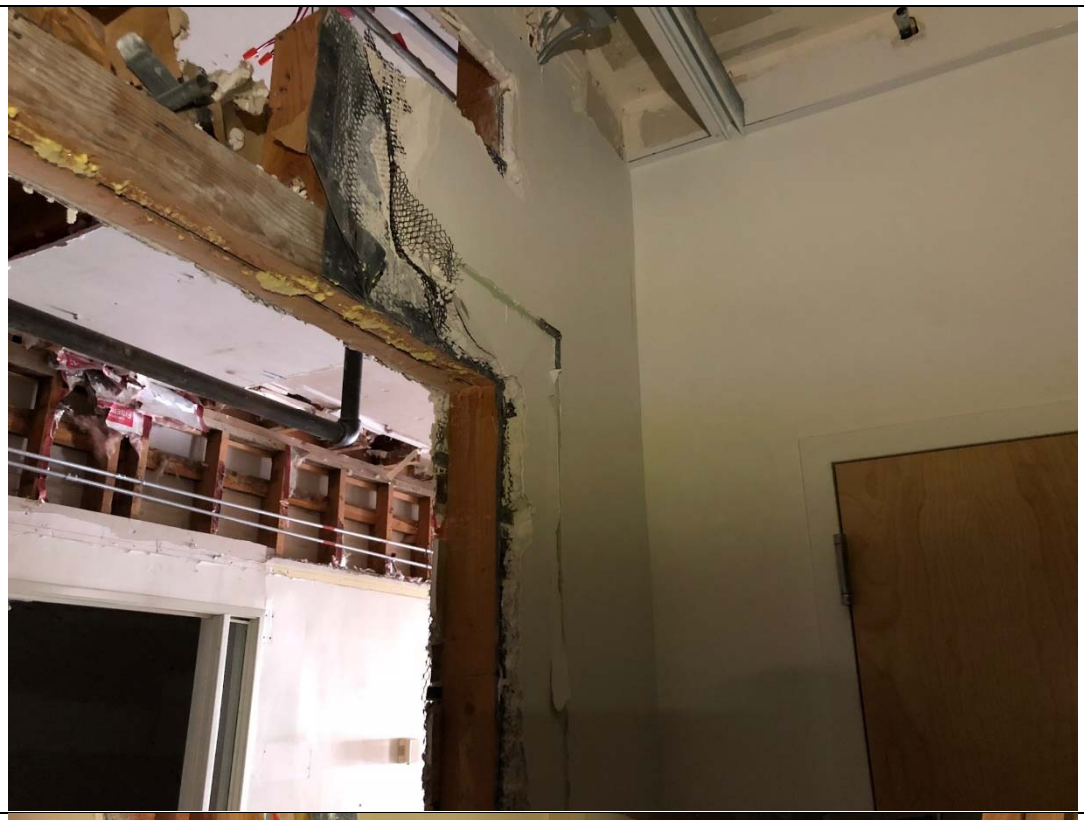
**Description:**

ACM floor tile inside the hospital.

# PHOTOGRAPH LOG

| Project Name: | Site Location: | Project No. |
|---|---|---|
| Livingston Memorial Hospital | Livingston, MT | 0003/1802-06 |

| Photo No. 11 | Date: 04/17/2018 |
|---|---|
| **Photo Coordinates** | |
| **Lat** | 45.649464 |
| **Long** | -110.569192 |
| **Direction Photo Taken:** 9.33245844269466 | |
| **Description:** Lead sheet metal in walls of the hospital building. | |



| Photo No. 12 | Date: 04/17/2018 |
|---|---|
| **Photo Coordinates** | |
| **Lat** | 45.649097 |
| **Long** | -110.5691 |
| **Direction Photo Taken:** 2.3511354079058 | |
| **Description:** Note multiple layers of wall material present. | |

# PHOTOGRAPH LOG

| Project Name: | Site Location: | Project No. |
|---|---|---|
| Livingston Memorial Hospital | Livingston, MT | 0003/1802-06 |

| Photo No. 13 | Date: 04/17/2018 |
|---|---|
| Photo Coordinates | |
| Lat | 45.649236 |
| Long | -110.570083 |
| Direction Photo Taken: 274.873873873874 | |
| Description: Air Cell TSI and mudded asbestos fittings. | |

| Photo No. 14 | Date: 04/17/2018 |
|---|---|
| Photo Coordinates | |
| Lat | 45.649094 |
| Long | -110.569206 |
| Direction Photo Taken: 199.436363636364 | |
| Description: Ceiling has been removed throughout most of the main level of the hospital. | |

# PHOTOGRAPH LOG

| Project Name: | Site Location: | Project No. |
|---|---|---|
| Livingston Memorial Hospital | Livingston, MT | 0003/1802-06 |

| Photo No. 15 | Date: 04/17/2018 |
|---|---|
| **Photo Coordinates** | |
| **Lat** | 45.64935 |
| **Long** | -110.569008 |
| **Direction Photo Taken:** 333.996632996633 | |
| **Description:** Asbestos roof drain bowl in the hospital. | |

| Photo No. 16 | Date: 04/17/2018 |
|---|---|
| **Photo Coordinates** | |
| **Lat** | 45.648181 |
| **Long** | -110.592772 |
| **Direction Photo Taken:** 32.3823857302118 | |
| **Description:** Room with sinks with asbestos black undercoating in the basement of the hospital. | |

# PHOTOGRAPH LOG

| Project Name: | Site Location: | Project No. |
|---|---|---|
| Livingston Memorial Hospital | Livingston, MT | 0003/1802-06 |

| Photo No. 17 | Date: 04/17/2018 |
|---|---|
| **Photo Coordinates** | |
| **Lat** | 45.648556 |
| **Long** | -110.569214 |
| **Direction Photo Taken:** 215.200980392157 | |
| **Description:** Utility shed with no ACM or LBP present. | |

| Photo No. 18 | Date: 04/17/2018 |
|---|---|
| **Photo Coordinates** | |
| **Lat** | 45.649106 |
| **Long** | -110.56945 |
| **Direction Photo Taken:** 314.789644012945 | |
| **Description:** Chipping LBP on exterior trim. Lead-in-soil aliquots were collected at these two building ends. | |

# PHOTOGRAPH LOG

| Project Name: | Site Location: | Project No. |
|---|---|---|
| Livingston Memorial Hospital | Livingston, MT | 0003/1802-06 |

| Photo No. | Date: |
|---|---|
| 19 | 04/18/2018 |

| Photo Coordinates | |
|---|---|
| Lat | 45.649303 |
| Long | -110.568808 |

**Direction Photo Taken:**
113.316602316602

**Description:**

No ACM or LBP present in the Home Oxygen Building.

| Photo No. | Date: |
|---|---|
| 20 | 04/18/2018 |

| Photo Coordinates | |
|---|---|
| Lat | 45.649414 |
| Long | -110.568847 |

**Direction Photo Taken:**
350.165605095541

**Description:**

Mercury thermostat observed in the Home Oxygen Building.

# PHOTOGRAPH LOG

| Project Name: | Site Location: | Project No. |
|---|---|---|
| Livingston Memorial Hospital | Livingston, MT | 0003/1802-06 |

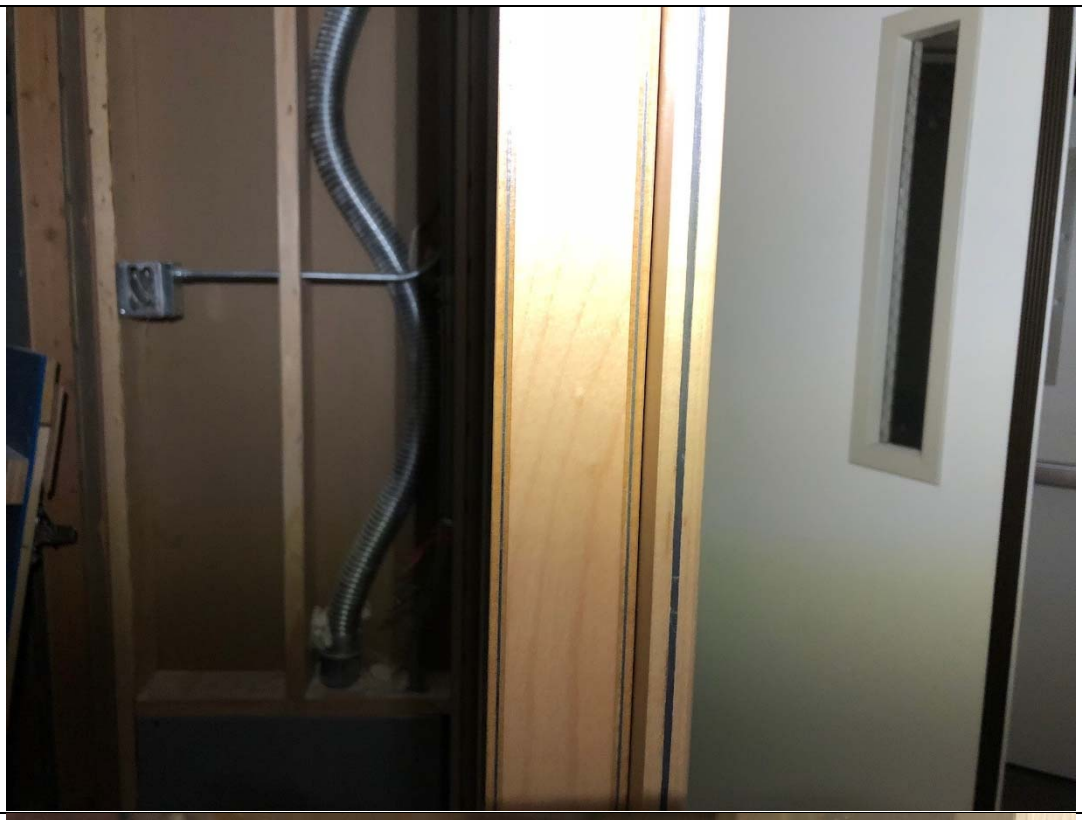
| Photo No. | Date: |
|---|---|
| 21 | 04/18/2018 |

| Photo Coordinates | |
|---|---|
| Lat | 45.649269 |
| Long | -110.569222 |

**Direction Photo Taken:**
317.488038277512

**Description:**

Lead-lined door observed in the hospital.



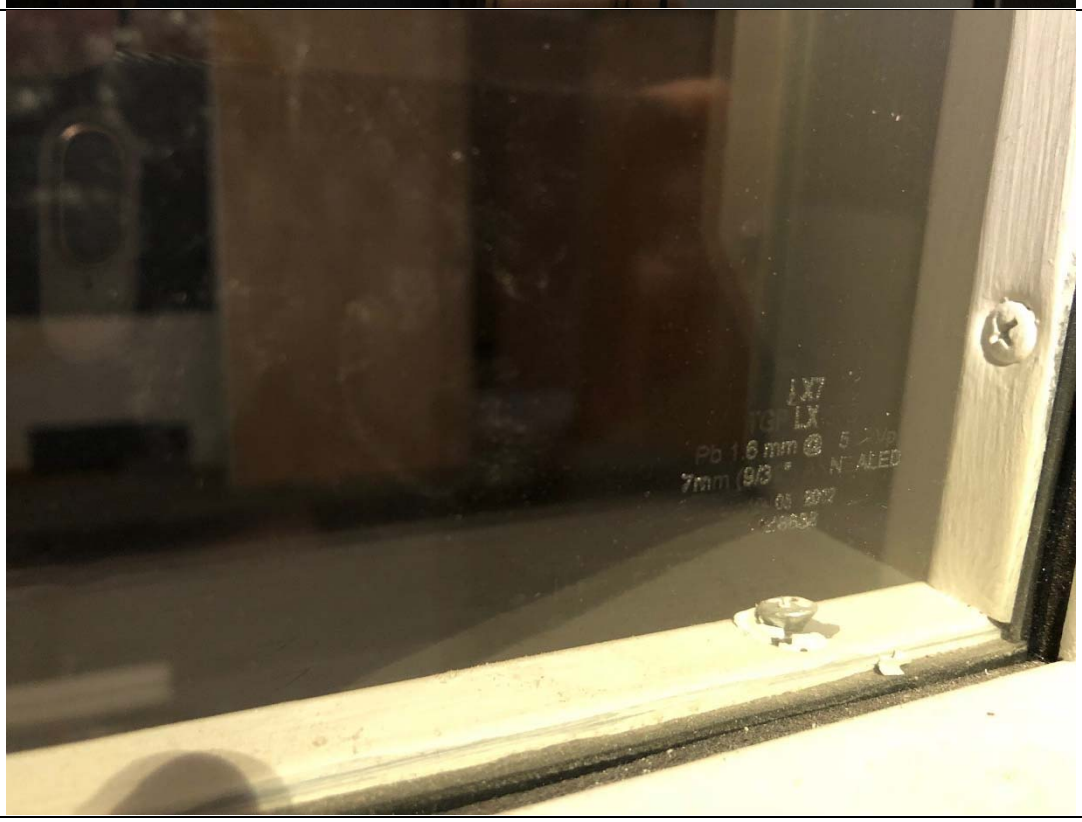
| Photo No. | Date: |
|---|---|
| 22 | 04/18/2018 |

| Photo Coordinates | |
|---|---|
| Lat | 45.649369 |
| Long | -110.569022 |

**Direction Photo Taken:**
193.232524964337

**Description:**

Leaded glass observed in the hospital.



# PHOTOGRAPH LOG

| Project Name: | Site Location: | Project No. |
|---|---|---|
| Livingston Memorial Hospital | Livingston, MT | 0003/1802-06 |

| Photo No. | Date: |
|---|---|
| 23 | 04/18/2018 |

| Photo Coordinates | |
|---|---|
| Lat | 45.649314 |
| Long | -110.569039 |

**Direction Photo Taken:**
185.268292682927

**Description:**

Gray asbestos window caulking.

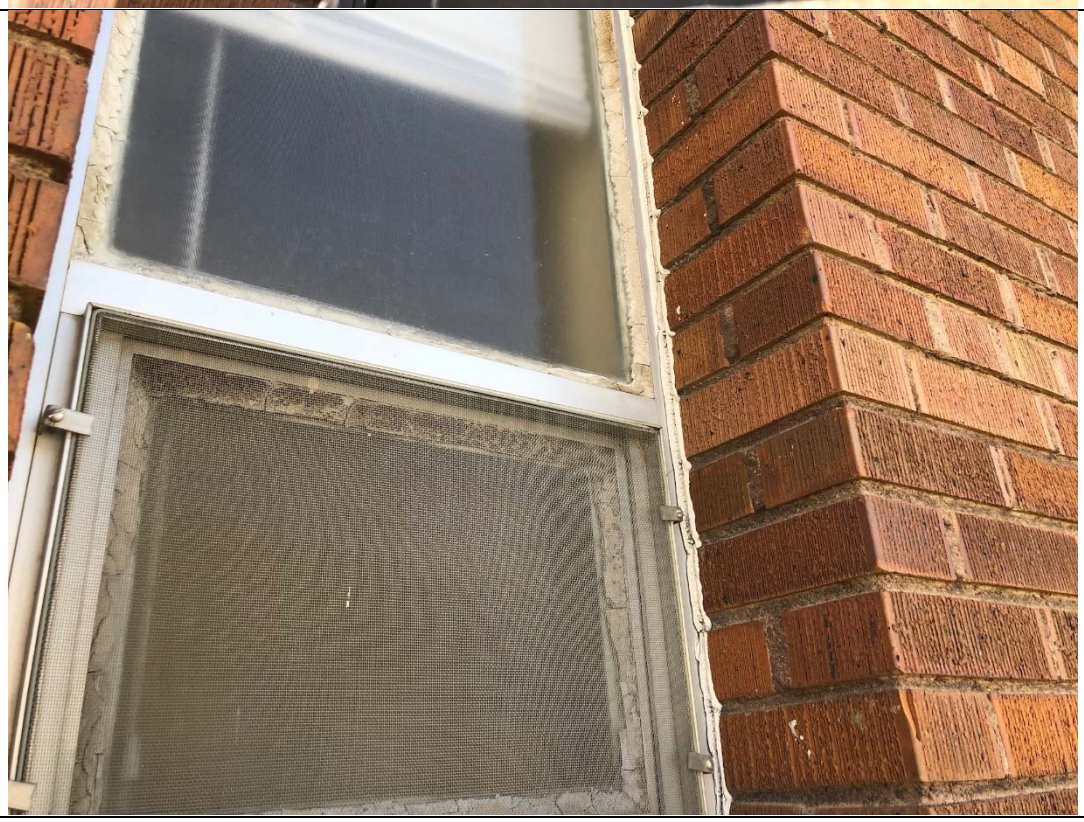
| Photo No. | Date: |
|---|---|
| 24 | 04/18/2018 |

| Photo Coordinates | |
|---|---|
| Lat | 45.649222 |
| Long | -110.569847 |

**Direction Photo Taken:**
158.89519650655

**Description:**

White asbestos window caulking and glazing.



# APPENDIX B
# LABORATORY REPORT

REI LAB **Reservoirs Environmental, Inc.**

May 1, 2018

| | |
|---|---|
| **Subcontract Number:** | **NA** |
| **Laboratory Report:** | **RES 406437-1** |
| **Project # / P.O. #** | **20408.016.003.0572.00** |
| **Project Description:** | **Livingston Memorial Hospital** |

Michael Cherney
Weston Solutions, Inc. (CO)
1435 Garrison St. Ste. 100
Lakewood CO 80215

Dear Customer,

Reservoirs Environmental, Inc. is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 101896-0 for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analysis and the American Industrial Hygiene Association (AIHA), Lab ID 101533 - Accreditation Certificate #480 for Phase Contrast Microscopy (PCM) analysis. This laboratory is currently proficient in both Proficiency Testing and PAT programs respectively.

Reservoirs Environmental, Inc. has analyzed the following samples for asbestos content as per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the attached analysis table. The results have been submitted to your office.

**RES 406437-1** is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Reservoirs Environmental, Inc. will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Reservoirs Environmental, Inc. Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,

Elizabeth Martel for

Jeanne Spencer
President

# RESERVOIRS ENVIRONMENTAL INC.

**NVLAP Lab Code 101896-0**

## TABLE: PLM BULK ANALYSIS, PERCENTAGE COMPOSITION BY VOLUME

RES Job Number: **RES 406437-1**
Client: **Weston Solutions, Inc. (CO)**
Client Project Number / P.O.: **20408.016.003.0572.00**
Client Project Description: **Livingston Memorial Hospital**
Date Samples Received: **April 19, 2018**
Method: **EPA 600/R-93/116 - Short Report, Bulk**
Turnaround: **3-5 Day**
Date Samples Analyzed: **May 01, 2018**

ND=None Detected
TR=Trace, <1% Visual Estimate
Trem/Act=Tremolite/Actinolite

| Client Sample Number | Lab ID Number | LAYER | Physical Description | Sub Part (%) | Asbestos Content: Mineral | Asbestos Content: Visual Estimate (%) | Non Asbestos Fibrous Components (%) | Non-Fibrous Components (%) |
|---|---|---|---|---|---|---|---|---|
| SH-DW01-01 | EM 2070178 | A | White compound | TR | | **ND** | 0 | 100 |
| | | B | Light pink/tan drywall | 100 | | **ND** | 18 | 82 |
| SH-DW01-02 | EM 2070179 | A | Off white compound | 5 | | **ND** | 0 | 100 |
| | | B | White compound | 15 | | **ND** | 0 | 100 |
| | | C | Light pink/tan drywall | 80 | | **ND** | 19 | 81 |
| SH-DW01-03 | EM 2070180 | A | Off white compound | 5 | | **ND** | 0 | 100 |
| | | B | White compound | 15 | | **ND** | 0 | 100 |
| | | C | Light pink/tan drywall | 80 | | **ND** | 17 | 83 |
| SH-RM01-04 | EM 2070181 | A | Black fibrous resinous material | 30 | | **ND** | 30 | 70 |
| | | B | Light gray shingle w/ a trace of black tar | 70 | | **ND** | 28 | 72 |
| LMH-IT01-01 | EM 2070182 | A | Gray fibrous cementitious material | 100 | **Chrysotile** | **12** | 0 | 88 |
| LMH-HG01-02 | EM 2070183 | A | Tan/multi-colored fibrous material | 100 | | **ND** | 90 | 10 |
| LMH-PG01-03 | EM 2070184 | A | Brown/multi-colored gasket | 100 | **Chrysotile** | **55** | 20 | 25 |
| LMH-FI01-04 | EM 2070185 | A | Brown rock w/ off white compound | 100 | | **ND** | 0 | 100 |

TEM Analysis recommended for organically bound material (i.e. floor tile) if PLM results are <1%.

# RESERVOIRS ENVIRONMENTAL INC.

**NVLAP Lab Code 101896-0**

## TABLE: PLM BULK ANALYSIS, PERCENTAGE COMPOSITION BY VOLUME

RES Job Number: **RES 406437-1**
Client: **Weston Solutions, Inc. (CO)**
Client Project Number / P.O.: **20408.016.003.0572.00**
Client Project Description: **Livingston Memorial Hospital**
Date Samples Received: **April 19, 2018**
Method: **EPA 600/R-93/116 - Short Report, Bulk**
Turnaround: **3-5 Day**
Date Samples Analyzed: **May 01, 2018**

ND=None Detected
TR=Trace, <1% Visual Estimate
Trem/Act=Tremolite/Actinolite

| Client Sample Number | Lab ID Number | LAYER | Physical Description | Sub Part (%) | Asbestos Content: Mineral | Asbestos Content: Visual Estimate (%) | Non Asbestos Fibrous Components (%) | Non-Fibrous Components (%) |
|---|---|---|---|---|---|---|---|---|
| LMH-CB01-05 | EM 2070186 | A | Off white adhesive | 1 | | **ND** | 0 | 100 |
| | | B | Light gray cove base | 99 | | **ND** | 0 | 100 |
| LMH-DT01-06 | EM 2070187 | A | Off white fibrous woven material w/ tan paint | 30 | | **ND** | 60 | 40 |
| | | B | White compound | 70 | | **ND** | 0 | 100 |
| LMH-FM01-07 | EM 2070188 | A | Off white perlitic cementitious material w/ off white/multi-colored paint | 100 | | **ND** | 0 | 100 |
| LMH-RM01-08 | EM 2070189 | A | Tan adhesive | 5 | | **ND** | 0 | 100 |
| | | B | Tan cementitious material | 5 | | **ND** | 0 | 100 |
| | | C | Off white/multi-colored fibrous resinous material | 90 | | **ND** | 17 | 83 |
| LMH-WF01-09 | EM 2070190 | A | Black felt | 100 | | **ND** | 40 | 60 |
| LMH-TF01-10 | EM 2070191 | A | Gray/multi-colored granular flooring | 100 | | **ND** | 0 | 100 |
| LMH-TF02-11 | EM 2070192 | A | Tan/multi-colored granular flooring | 100 | | **ND** | 0 | 100 |
| HOB-RM01-01 | EM 2070193 | A | Black fibrous resinous material | 30 | | **ND** | 25 | 75 |
| | | B | Tan/multi-colored shingle | 70 | | **ND** | 22 | 78 |

TEM Analysis recommended for organically bound material (i.e. floor tile) if PLM results are <1%.

# RESERVOIRS ENVIRONMENTAL INC.

**NVLAP Lab Code 101896-0**

## TABLE: PLM BULK ANALYSIS, PERCENTAGE COMPOSITION BY VOLUME

RES Job Number: **RES 406437-1**
Client: **Weston Solutions, Inc. (CO)**
Client Project Number / P.O.: **20408.016.003.0572.00**
Client Project Description: **Livingston Memorial Hospital**
Date Samples Received: **April 19, 2018**
Method: **EPA 600/R-93/116 - Short Report, Bulk**
Turnaround: **3-5 Day**
Date Samples Analyzed: **May 01, 2018**

ND=None Detected
TR=Trace, <1% Visual Estimate
Trem/Act=Tremolite/Actinolite

| Client Sample Number | Lab ID Number | LAYER | Physical Description | Sub Part (%) | Asbestos Content: Mineral | Asbestos Content: Visual Estimate (%) | Non Asbestos Fibrous Components (%) | Non-Fibrous Components (%) |
|---|---|---|---|---|---|---|---|---|
| HOB-CB01-02 | EM 2070194 | A | White compound | 7 | | **ND** | 0 | 100 |
| | | B | Off white adhesive | 13 | | **ND** | 0 | 100 |
| | | C | Tan cove base | 80 | | **ND** | 0 | 100 |
| HOB-LN01-03 | EM 2070195 | A | White compound | 2 | | **ND** | 0 | 100 |
| | | B | Off white adhesive | 3 | | **ND** | 0 | 100 |
| | | C | Gray/multi-colored sheet vinyl w/ off white fibrous backing material | 95 | | **ND** | 28 | 72 |
| HOB-DW01-04 | EM 2070196 | A | White fibrous woven material | 5 | | **ND** | 90 | 10 |
| | | B | White texture w/ off white paint | 15 | | **ND** | 0 | 100 |
| | | C | Light pink/tan drywall | 80 | | **ND** | 18 | 82 |
| HOB-DW01-05 | EM 2070197 | A | White fibrous woven material | 5 | | **ND** | 95 | 5 |
| | | B | White texture w/ off white paint | 30 | | **ND** | 0 | 100 |
| | | C | Light pink/tan drywall | 65 | | **ND** | 32 | 68 |

TEM Analysis recommended for organically bound material (i.e. floor tile) if PLM results are <1%.

# RESERVOIRS ENVIRONMENTAL INC.

**NVLAP Lab Code 101896-0**

## TABLE: PLM BULK ANALYSIS, PERCENTAGE COMPOSITION BY VOLUME

RES Job Number: **RES 406437-1**
Client: **Weston Solutions, Inc. (CO)**
Client Project Number / P.O.: **20408.016.003.0572.00**
Client Project Description: **Livingston Memorial Hospital**
Date Samples Received: **April 19, 2018**
Method: **EPA 600/R-93/116 - Short Report, Bulk**
Turnaround: **3-5 Day**
Date Samples Analyzed: **May 01, 2018**

ND=None Detected
TR=Trace, <1% Visual Estimate
Trem/Act=Tremolite/Actinolite

| **Client Sample Number** | **Lab ID Number** | LAYER | Physical Description | Sub Part (%) | **Asbestos Content** **Mineral** | **Visual Estimate (%)** | Non Asbestos Fibrous Components (%) | Non-Fibrous Components (%) |
|---|---|---|---|---|---|---|---|---|
| HOB-DW01-06 | EM 2070198 | A | White texture w/ off white paint | 14 | | **ND** | 0 | 100 |
| | | B | Light pink/tan drywall | 86 | | **ND** | 18 | 82 |
| HOB-DW01-07 | EM 2070199 | A | White texture w/ off white paint | 12 | | **ND** | 0 | 100 |
| | | B | Light pink/tan drywall | 88 | | **ND** | 18 | 82 |
| HOB-CB02-08 | EM 2070200 | A | White compound | 2 | | **ND** | 0 | 100 |
| | | B | Off white adhesive | 3 | | **ND** | 0 | 100 |
| | | C | Tan cove base | 95 | | **ND** | 0 | 100 |
| HOB-LN02-09 | EM 2070201 | A | Tan adhesive | 2 | | **ND** | 0 | 100 |
| | | B | Tan/multi-colored sheet vinyl | 98 | | **ND** | 30 | 70 |
| HOB-DW02-10 | EM 2070202 | A | Off white/multi-colored paint w/ white compound | 15 | | **ND** | 0 | 100 |
| | | B | Off white/tan drywall | 85 | | **ND** | 17 | 83 |

TEM Analysis recommended for organically bound material (i.e. floor tile) if PLM results are <1%.

# RESERVOIRS ENVIRONMENTAL INC.

**NVLAP Lab Code 101896-0**

## TABLE: PLM BULK ANALYSIS, PERCENTAGE COMPOSITION BY VOLUME

RES Job Number: **RES 406437-1**
Client: **Weston Solutions, Inc. (CO)**
Client Project Number / P.O.: **20408.016.003.0572.00**
Client Project Description: **Livingston Memorial Hospital**
Date Samples Received: **April 19, 2018**
Method: **EPA 600/R-93/116 - Short Report, Bulk**
Turnaround: **3-5 Day**
Date Samples Analyzed: **May 01, 2018**

ND=None Detected
TR=Trace, <1% Visual Estimate
Trem/Act=Tremolite/Actinolite

| Client Sample Number | Lab ID Number | LAYER | Physical Description | Sub Part (%) | Asbestos Content: Mineral | Asbestos Content: Visual Estimate (%) | Non Asbestos Fibrous Components (%) | Non-Fibrous Components (%) |
|---|---|---|---|---|---|---|---|---|
| HOB-DW02-11 | EM 2070203 | A | White fibrous woven material | 5 | | **ND** | 95 | 5 |
| | | B | Tan/off white drywall | 15 | | **ND** | 55 | 45 |
| | | C | White texture w/ off white/multi-colored paint | 80 | | **ND** | 0 | 100 |
| HOB-DW02-12 | EM 2070204 | A | White compound w/ off white/multi-colored paint | 9 | | **ND** | 0 | 100 |
| | | B | Light pink/tan drywall | 91 | | **ND** | 18 | 82 |

TEM Analysis recommended for organically bound material (i.e. floor tile) if PLM results are <1%.

Daniel Erhard

Daniel Erhard

Analyst / Data QA

Due Date: 4-24-4-26
Due Time: _____

-1PLM -2TEM

# Reservoirs Environmental, Inc.

5801 Logan St. Denver, CO 80216 • Ph: 303 964-1986 • Fax 303-477-4275 • Toll Free :866 RESI-ENV

RES 406437

After Hours Cell Phone: 720-339-9228

**INVOICE TO: (IF DIFFERENT)**

**CONTACT INFORMATION:** -3MM

| | | | |
|---|---|---|---|
| Company: **Weston Solutions, Inc** | Company: **Weston Solutions, Inc** | Contact: **Michael Cherny** | Contact: |
| Address: 1435 Garrison St Suite 100 | Address: | Phone: | Phone: |
| Lakewood, CO 80215 | | Fax: | Fax: |
| | | Cell/pager: 720-206-8724 | Cell/pager: |
| Project Number and/or P.O. #: 20408.016.003.0572.00 | | Final Data Deliverable Email Address: | |
| Project Description/Location: Livingston Memorial Hospital | | michael.cherny@mecx.net | |

**ASBESTOS LABORATORY HOURS: Weekdays: 7am - 7pm**

**PLM / PCM / TEM** ___ RUSH (Same Day) ___ PRIORITY (Next Day) X STANDARD
**(Rush PCM = 2hr, TEM = 6hr.)**

**CHEMISTRY LABORATORY HOURS: Weekdays: 8am - 5pm**

**Metal(s) / Dust** ___ RUSH ___ 24 hr. X 3-5 Day
**RCRA 8 / Metals & Welding Fume Scan / TCLP** ___ RUSH ___ 5 day ___ 10 day
**Organics** ___ 24 hr. ___ 3 day ___ 5 Day
****Prior notification is required for RUSH turnarounds.****

**MICROBIOLOGY LABORATORY HOURS: Weekdays: 9am - 6pm**

**E.coli O157:H7, Coliforms, S.aureus** ___ 24 hr. ___ 2 Day ___ 3-5 Day
**Salmonella, Listeria, E.coli, APC, Y & M** ___ 48 Hr. ___ 3-5 Day
**Mold** ___ RUSH ___ 24 Hr ___ 48 Hr ___ 3 Day ___ 5 Day

****Turnaround times establish a laboratory priority, subject to laboratory volume and are not guaranteed. Additional fees apply for afterhours, weekends and holidays.****

**Special Instructions:**

**VALID MATRIX CODES**

| | |
|---|---|
| Air = A | Bulk = B |
| Dust = D | Paint = P |
| Soil = S | Wipe = W |
| Swab = SW | F = Food |
| Drinking Water = DW | Waste Water = WW |
| O = Other | |

**ASTM E1792 approved wipe media only**

**LAB NOTES:**

**REQUESTED ANALYSIS**

| | Client sample ID number (Sample ID's must be unique) | PLM - Short report, Long report, Point Count | TEM - AHERA, Level II (7402), ISO, +/-, Quant, Semi-quant, Micro-vac, ISO-Indirect Preps | PCM - 7400A, 7400B, OSHA | DUST - Total, Respirable | METALS - Analyte(s) Lead, RCRA 8, TCLP, Welding Fume, Metals Scan | ORGANICS - METH | MICROBIOLOGY: Salmonella: +/- | E.coli O157:H7: +/- | Listeria: +/- | Aerobic Plate Count: +/- or Quantification | E.coli: +/- or Quantification | Coliforms: +/- or Quantification | S.aureus: +/- or Quantification | Y & M: +/- or Quantification | Mold: +/-, Identification, Quantification | SAMPLER'S INITIALS OR OTHER NOTES | Sample Volume (L) / Area | Matrix Code | # Containers | Date Collected mm/dd/yy | Time Collected hh/mm a/p | EM Number (Laboratory Use Only) 78 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SH-DW01-01 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 207075 |
| 2 | SH-DW01-02 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 96 |
| 3 | SH-DW01-03 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 807 |
| 4 | SH-RM01-04 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 18 |
| 5 | LMH-IT01-01 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 29 |
| 6 | LMH-HG01-02 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 380 |
| 7 | LMH-PG01-03 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 47 |
| 8 | LMH-FI01-04 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 52 |
| 9 | LMH-CB01-05 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 63 |
| 10 | LMH-DT01-06 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 74 |

Number of samples received: 40 (Additional samples shall be listed on attached long form.)

NOTE: REI will analyze incoming samples based upon information received and will not be responsible for errors or omissions in calculations resulting from the inaccuracy of original data. By signing client/company representative agrees that submission of the following samples for requested analysis as indicated on this Chain of Custody shall constitute an analytical services agreement with payment terms of NET 30 days, failure to comply with payment terms may result in a 1.5% monthly interest surcharge.

**Relinquished By:** [signature] Date/Time: 4/18/18 17:00

Sample Condition: On Ice Yes / No Sealed Yes / No Intact Yes / No
Temp. (F°) _____

**Laboratory Use Only**
Received By: Date/Time: Carrier:

| Results: | Contact | Phone Email Fax | Date | Time | Initials | Contact | Phone Email Fax | Date | Time | Initials |
|---|---|---|---|---|---|---|---|---|---|---|
| | Contact | Phone Email Fax | Date | Time | Initials | Contact | Phone Email Fax | Date | Time | Initials |

**Reservoirs Environmental, Inc.**
5801 Logan St. Denver, CO 80216 • Ph: 303 964-1986 • Fax 303-477-4275 • Toll Free 866 RESI-ENV

RES Job # 406437



Submitted by: _____

**VALID MATRIX CODES**

| | |
|---|---|
| Air = A | Bulk = B |
| Dust = D | Paint = P |
| Soil = S | Wipe = W |
| Swab = SW | F = Food |
| Drinking Water = DW | Waste Water = WW |
| O = Other | |

**ASTM E1792 approved wipe media only**

**LAB NOTES:**

**REQUESTED ANALYSIS**

| | Client sample ID number (Sample ID's must be unique) | PLM - Short report, Long report, Point Count | TEM - AHERA, Level II, 7402 ISO +/-, Quant, Semi-quant, Micro-vac, ISO-Indirect Preps | PCM - 7400A, 7400B, OSHA | DUST - Total, Respirable | METALS - Analyte(s) Lead RCRA 8, TCLP, Welding Fume, Metals Scan | ORGANICS - METH | MICROBIOLOGY: Salmonella: +/- | E.coli O157:H7: +/- | Listeria: +/- | Aerobic Plate Count: +/- or Quantification | E.coli: +/- or Quantification | Coliforms: +/- or Quantification | S.aureus: +/- or Quantification | Y & M: +/- or Quantification | Mold: +/- or Quantification | OTHER - | Sample Volume (L) / Area | Matrix Code | # Containers | Date Collected mm/dd/yy | Time Collected hh/mm a/p | EM Number (Laboratory Use Only) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | LMH-FM01-07 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 207168 |
| 12 | LMH-RM01-08 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 9 67 |
| 13 | LMH-WF01-09 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 90 7 |
| 14 | LMH-TF01-10 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 1 8 |
| 15 | LMH-TF02-11 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 2 9 |
| 16 | HOB-RM01-01 | X | | | | | | | | | | | | | | | | | B | 1 | 4/18/2018 | | 3 90 |
| 17 | HOB-CB01-02 | X | | | | | | | | | | | | | | | | | B | 1 | 4/18/2018 | | 4 1 |
| 18 | HOB-LN01-03 | X | | | | | | | | | | | | | | | | | B | 1 | 4/18/2018 | | 5 2 |
| 19 | HOB-DW01-04 | X | | | | | | | | | | | | | | | | | B | 1 | 4/18/2018 | | 6 3 |
| 20 | HOB-DW01-05 | X | | | | | | | | | | | | | | | | | B | 1 | 4/18/2018 | | 7 4 |
| 21 | HOB-DW01-06 | X | | | | | | | | | | | | | | | | | B | 1 | 4/18/2018 | | 8 5 |
| 22 | HOB-DW01-07 | X | | | | | | | | | | | | | | | | | B | 1 | 4/18/2018 | | 9 6 |
| 23 | HOB-CB02-08 | X | | | | | | | | | | | | | | | | | B | 1 | 4/18/2018 | | 200 7 |
| 24 | HOB-LN02-09 | X | | | | | | | | | | | | | | | | | B | 1 | 4/18/2018 | | 1 8 |
| 25 | HOB-DW02-10 | X | | | | | | | | | | | | | | | | | B | 1 | 4/18/2018 | | 2 9 |
| 26 | HOB-DW02-11 | X | | | | | | | | | | | | | | | | | B | 1 | 4/18/2018 | | 3 200 |
| 27 | HOB-DW02-12 | X | | | | | | | | | | | | | | | | | B | 1 | 4/18/2018 | | 4 1 |
| 28 | LMH-WP00 | | X | | | | | | | | | | | | | | | | W | 1 | 4/18/2018 | | 5 2 |
| 29 | LMH-WP01 | | X | | | | | | | | | | | | | | | | W | 1 | 4/18/2018 | | 6 3 |
| 30 | LMH-WP02 | | X | | | | | | | | | | | | | | | | W | 1 | 4/18/2018 | | 7 4 |
| 31 | LMH-WP03 | | X | | | | | | | | | | | | | | | | W | 1 | 4/18/2018 | | 8 5 |
| 32 | LMH-WP04 | | X | | | | | | | | | | | | | | | | W | 1 | 4/18/2018 | | 9 6 |
| 33 | LMH-WP05 | | X | | | | | | | | | | | | | | | | W | 1 | 4/18/2018 | | 10 7 |
| 34 | LMH-WP06 | | X | | | | | | | | | | | | | | | | W | 1 | 4/18/2018 | | 1 8 |
| 35 | LMH-WP07 | | X | | | | | | | | | | | | | | | | W | 1 | 4/18/2018 | | 2 9 |
| 36 | LMH-WP08 | | X | | | | | | | | | | | | | | | | W | 1 | 4/18/2018 | | 3 10 |
| 37 | LMH-WP09 | | X | | | | | | | | | | | | | | | | W | 1 | 4/18/2018 | | 4 1 |
| 38 | LMH-WP10 | | X | | | | | | | | | | | | | | | | W | 1 | 4/18/2018 | | 5 2 |
| 39 | LMH-SO01-0001 | | | | | X | | | | | | | | | | | | | S | 1 | 4/17/2018 | | 6 3 |
| 40 | LMH-SO91-0001 | | | | | X | | | | | | | | | | | | | S | 1 | 4/17/2018 | | 7 4 |
| 41 | | | | | | | | | | | | | | | | | | | | | | | |

REI LAB **Reservoirs Environmental, Inc.**

April 26, 2018

| | |
|---|---|
| **Subcontract Number:** | **NA** |
| **Laboratory Report:** | **RES 406437-2** |
| **Project # / P.O. #** | **20408.016.003.0572.00** |
| **Project Description:** | **Livingston Memorial Hospital** |

Michael Cherney
Weston Solutions, Inc. (CO)
1435 Garrison St. Ste. 100
Lakewood CO 80215

Dear Customer,

Reservoirs Environmental, Inc. is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 101896-0 for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analysis and the American Industrial Hygiene Association (AIHA), Lab ID 101533 - Accreditation Certificate #480 for Phase Contrast Microscopy (PCM) analysis. This laboratory is currently proficient in both Proficiency Testing and PAT programs respectively.

Reservoirs Environmental, Inc. has analyzed the following samples for asbestos content as per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the attached analysis table. The results have been submitted to your office.

**RES 406437-2** is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Reservoirs Environmental, Inc. will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Reservoirs Environmental, Inc. Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,

Gina Vettraino for

Jeanne Spencer
President

# RESERVOIRS ENVIRONMENTAL, INC.

NVLAP Lab Code 101896-0

## TABLE : TEM QUALITATIVE PRESENCE/ABSENCE ANALYSIS

| | |
|---|---|
| RES Job Number: | **RES 406437-2** |
| Client: | **Weston Solutions, Inc. (CO)** |
| Client Project Number/P.O: | **20408.016.003.0572.00** |
| Client Project Description | **Livingston Memorial Hospital** |
| Date Samples Received: | **April 19, 2018** |
| Method: | **ASTM 6480 - M Qual. Presence/Absence, Wipe** |
| Turnaround: | **3-5 Day** |
| Date Analyzed: | **April 22, 2018** |

| Client ID Number | Lab ID Number | | Asbestos Minerals Present |
|---|---|---|---|
| LMH-WP00 | EM | 2070205 | ND |
| LMH-WP01 | EM | 2070206 | Chrysotile |
| LMH-WP02 | EM | 2070207 | Chrysotile |
| LMH-WP03 | EM | 2070208 | Chrysotile<br>Amosite |
| LMH-WP04 | EM | 2070209 | Chrysotile |
| LMH-WP05 | EM | 2070210 | Chrysotile |
| LMH-WP06 | EM | 2070211 | Chrysotile |
| LMH-WP07 | EM | 2070212 | Chrysotile |
| LMH-WP08 | EM | 2070213 | Chrysotile<br>Amosite |
| LMH-WP09 | EM | 2070214 | Chrysotile |
| LMH-WP10 | EM | 2070215 | Chrysotile |

Data QA: Gina Vettraino

Due Date: 4-24-4-26
Due Time:

-1PLM -2TEM

RES 406437

# REI LAB Reservoirs Environmental, Inc.

5801 Logan St. Denver, CO 80216 • Ph: 303 964-1986 • Fax 303-477-4275 • Toll Free :866 RESI-ENV

**After Hours Cell Phone: 720-339-9228**

**INVOICE TO: (IF DIFFERENT)**

| | |
|---|---|
| Company: | Weston Solutions, Inc |
| Address: | 1435 Garrison St Suite 100<br>Lakewood, CO 80215 |
| Company: | Weston Solutions, Inc |
| Address: | |

**CONTACT INFORMATION:** -3MM

| | |
|---|---|
| Contact: | Michael Cherny |
| Phone: | |
| Fax: | |
| Cell/pager: | 720-206-8724 |
| Final Data Deliverable Email Address: | michael.cherny@mecx.net |
| Contact: | |
| Phone: | |
| Fax: | |
| Cell/pager: | |

| | |
|---|---|
| Project Number and/or P.O. #: | 20408.016.003.0572.00 |
| Project Description/Location: | Livingston Memorial Hospital |

**ASBESTOS LABORATORY HOURS: Weekdays: 7am - 7pm**

**PLM / PCM / TEM** ____ RUSH (Same Day) ___ PRIORITY (Next Day) X STANDARD
**(Rush PCM = 2hr, TEM = 6hr.)**

**CHEMISTRY LABORATORY HOURS: Weekdays: 8am - 5pm**

**Metal(s) / Dust** ___ RUSH ___ 24 hr. X 3-5 Day
**RCRA 8 / Metals & Welding Fume Scan / TCLP** ___ RUSH ___ 5 day ___10 day
**Organics** ___ 24 hr. ___ 3 day ___5 Day
****Prior notification is required for RUSH turnarounds.****

**MICROBIOLOGY LABORATORY HOURS: Weekdays: 9am - 6pm**

**E.coli O157:H7, Coliforms, S.aureus** ___ 24 hr. ___2 Day ___3-5 Day
**Salmonella, Listeria, E.coli, APC, Y & M** ___ 48 Hr. ___3-5 Day
**Mold** ___ RUSH ___24 Hr ___48 Hr ___3 Day ___5 Day

****Turnaround times establish a laboratory priority, subject to laboratory volume and are not guaranteed. Additional fees apply for afterhours, weekends and holidays.****

**Special Instructions:**

**VALID MATRIX CODES**

| | |
|---|---|
| Air = A | Bulk = B |
| Dust = D | Paint = P |
| Soil = S | Wipe = W |
| Swab = SW | F = Food |
| Drinking Water = DW | Waste Water = WW |
| O = Other | |

**ASTM E1792 approved wipe media only**

**LAB NOTES:**

**REQUESTED ANALYSIS**

| | Client sample ID number (Sample ID's must be unique) | PLM - Short report, Long report, Point Count | TEM - AHERA, Level II, 7402, ISO, +/-, Quant, Semi-quant, Micro-vac, ISO-Indirect Preps | PCM - 7400A, 7400B, OSHA | DUST - Total, Respirable | METALS - Analyte(s) LEAD RCRA 8, TCLP, Welding Fume, Metals Scan | ORGANICS - METH | MICROBIOLOGY: Salmonella: +/- | E.coli O157:H7: +/- | Listeria: +/- | Aerobic Plate Count: +/- or Quantification | E.coli: +/- or Quantification | Coliforms: +/- or Quantification | S.aureus: +/- or Quantification | Y & M: +/- or Quantification | Mold: +/-, Identification, Quantification | SAMPLER'S INITIALS OR OTHER NOTES | Sample Volume (L) / Area | Matrix Code | # Containers | Date Collected mm/dd/yy | Time Collected hh/mm a/p | EM Number (Laboratory Use Only) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SH-DW01-01 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 2070178 |
| 2 | SH-DW01-02 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 96 |
| 3 | SH-DW01-03 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 807 |
| 4 | SH-RM01-04 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 18 |
| 5 | LMH-IT01-01 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 25 |
| 6 | LMH-HG01-02 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 380 |
| 7 | LMH-PG01-03 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 41 |
| 8 | LMH-FI01-04 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 52 |
| 9 | LMH-CB01-05 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 63 |
| 10 | LMH-DT01-06 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 74 |

Number of samples received: 40 (Additional samples shall be listed on attached long form.)

**NOTE:** REI will analyze incoming samples based upon information received and will not be responsible for errors or omissions in calculations resulting from the inaccuracy of original data. By signing client/company representative agrees that submission of the following samples for requested analysis as indicated on this Chain of Custody shall constitute an analytical services agreement with payment terms of NET 30 days, failure to comply with payment terms may result in a 1.5% monthly interest surcharge.

**Relinquished By:** Date/Time: 4/18/18 17:00

**Laboratory Use Only**
Received By: Elizabeth Mauk Date/Time: 4.19.18 12 Carrier: Fedex

Sample Condition: On Ice Yes / No Sealed Yes / No Intact Yes / No
Temp. (F°) _____

| Results: | Contact | Phone | Email | Fax | Date | Time | Initials | Contact | Phone | Email | Fax | Date | Time | Initials |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Contact | Phone | Email | Fax | Date | Time | Initials | Contact | Phone | Email | Fax | Date | Time | Initials |

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RES Job # 406437

Page 2 of 2

Submitted by: _____

| | Client sample ID number (Sample ID's must be unique) | PLM - Short report, Long report, Point Count | TEM - AHERA, Level II, (7402) ISO, +/-, Quant, Semi-quant, Micro-vac, ISO-Indirect Preps | PCM - 7400A, 7400B, OSHA | DUST - Total, Respirable | METALS - Analyte(s) Lead RCRA 8, TCLP, Welding Fume, Metals Scan | ORGANICS - METH | MICROBIOLOGY: Salmonella: +/- | E.coli O157:H7: +/- | Listeria: +/- | Aerobic Plate Count: +/- or Quantification | E.coli: +/- or Quantification | Coliforms: +/- or Quantification | S.aureus: +/- or Quantification | Y & M: +/- or Quantification | Mold: +/- or Quantification | OTHER - | Sample Volume (L) / Area | Matrix Code | # Containers | Date Collected mm/dd/yy | Time Collected hh/mm a/p | EM Number (Laboratory Use Only) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | LMH-FM01-07 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 2071188 |
| 12 | LMH-RM01-08 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 9 67 |
| 13 | LMH-WF01-09 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 90 7 |
| 14 | LMH-TF01-10 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 1 8 |
| 15 | LMH-TF02-11 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 2 9 |
| 16 | HOB-RM01-01 | X | | | | | | | | | | | | | | | | | B | 1 | 4/18/2018 | | 3 90 |
| 17 | HOB-CB01-02 | X | | | | | | | | | | | | | | | | | B | 1 | 4/18/2018 | | 4 1 |
| 18 | HOB-LN01-03 | X | | | | | | | | | | | | | | | | | B | 1 | 4/18/2018 | | 5 2 |
| 19 | HOB-DW01-04 | X | | | | | | | | | | | | | | | | | B | 1 | 4/18/2018 | | 6 3 |
| 20 | HOB-DW01-05 | X | | | | | | | | | | | | | | | | | B | 1 | 4/18/2018 | | 7 4 |
| 21 | HOB-DW01-06 | X | | | | | | | | | | | | | | | | | B | 1 | 4/18/2018 | | 8 5 |
| 22 | HOB-DW01-07 | X | | | | | | | | | | | | | | | | | B | 1 | 4/18/2018 | | 9 6 |
| 23 | HOB-CB02-08 | X | | | | | | | | | | | | | | | | | B | 1 | 4/18/2018 | | 200 7 |
| 24 | HOB-LN02-09 | X | | | | | | | | | | | | | | | | | B | 1 | 4/18/2018 | | 1 8 |
| 25 | HOB-DW02-10 | X | | | | | | | | | | | | | | | | | B | 1 | 4/18/2018 | | 2 9 |
| 26 | HOB-DW02-11 | X | | | | | | | | | | | | | | | | | B | 1 | 4/18/2018 | | 3 200 |
| 27 | HOB-DW02-12 | X | | | | | | | | | | | | | | | | | B | 1 | 4/18/2018 | | 4 1 |
| 28 | LMH-WP00 | | X | | | | | | | | | | | | | | | | W | 1 | 4/18/2018 | | 5 2 |
| 29 | LMH-WP01 | | X | | | | | | | | | | | | | | | | W | 1 | 4/18/2018 | | 6 3 |
| 30 | LMH-WP02 | | X | | | | | | | | | | | | | | | | W | 1 | 4/18/2018 | | 7 4 |
| 31 | LMH-WP03 | | X | | | | | | | | | | | | | | | | W | 1 | 4/18/2018 | | 8 5 |
| 32 | LMH-WP04 | | X | | | | | | | | | | | | | | | | W | 1 | 4/18/2018 | | 9 6 |
| 33 | LMH-WP05 | | X | | | | | | | | | | | | | | | | W | 1 | 4/18/2018 | | 10 7 |
| 34 | LMH-WP06 | | X | | | | | | | | | | | | | | | | W | 1 | 4/18/2018 | | 1 8 |
| 35 | LMH-WP07 | | X | | | | | | | | | | | | | | | | W | 1 | 4/18/2018 | | 2 9 |
| 36 | LMH-WP08 | | X | | | | | | | | | | | | | | | | W | 1 | 4/18/2018 | | 3 10 |
| 37 | LMH-WP09 | | X | | | | | | | | | | | | | | | | W | 1 | 4/18/2018 | | 4 1 |
| 38 | LMH-WP10 | | X | | | | | | | | | | | | | | | | W | 1 | 4/18/2018 | | 5 2 |
| 39 | LMH-SO01-0001 | | | | | X | | | | | | | | | | | | | S | 1 | 4/17/2018 | | 6 5 |
| 40 | LMH-SO91-0001 | | | | | X | | | | | | | | | | | | | S | 1 | 4/17/2018 | | 7 6 |
| 41 | | | | | | | | | | | | | | | | | | | | | | | |

**VALID MATRIX CODES**

| | |
|---|---|
| Air = A | Bulk = B |
| Dust = D | Paint = P |
| Soil = S | Wipe = W |
| Swab = SW | F = Food |
| Drinking Water = DW | Waste Water = WW |
| O = Other | |

**ASTM E1792 approved wipe media only**

**LAB NOTES:**

REI LAB **Reservoirs Environmental, Inc.**

April 26, 2018

| | |
|---|---|
| **Laboratory Code:** | **RES** |
| **Subcontract Number:** | **NA** |
| **Laboratory Report:** | **RES 406437-3** |
| **Project # / PO #:** | **20408.016.003.0572.00** |
| **Project Description:** | **Livingston Memorial Hospital** |

Michael Cherney
Weston Solutions, Inc. (CO)
1435 Garrison St. Ste. 100
Lakewood CO 80215

Dear Customer,

Reservoirs Environmental, Inc. is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the American Industrial Hygiene Association, Lab ID 101533 - Accreditation Certificate #480. The laboratory is currently proficient in both IHPAT & ELPAT programs respectively.

Reservoirs has analyzed the following sample(s) using Atomic Absorption Spectroscopy (AAS) / Atomic Emission Spectroscopy - Mass Spectrometry (ICP-MS) per your request. Reported sample results were not blank corrected. The analysis has been completed in general accordance with the appropriate methodology as stated in the analysis table. Results have been sent to your office.

**RES 406437-3** is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Reservoirs Environmental, Inc. will not discuss any part of this study with personnel other than those authorized by the client. The results described in this report only apply to the samples analyzed. This report shall not be reproduced except in full, without written approval from Reservoirs Environmental, Inc. Samples will be disposed of after sixty days unless longer storage is requested. If you should have any questions about this report, please feel free to call me at 303-964-1986.

Sincerely,

Jeanne Spencer
President

# RESERVOIRS ENVIRONMENTAL, INC.

**5801 Logan St., Suite 100**
**Denver CO 80216**

## TABLE ANALYSIS: LEAD IN SOIL

| | |
|---|---|
| RES Job Number: | **RES 406437-3** |
| Client: | **Weston Solutions, Inc. (CO)** |
| Client Project Number / P.O.: | **20408.016.003.0572.00** |
| Client Project Description: | **Livingston Memorial Hospital** |
| Date Samples Received: | **April 19, 2018** |
| Analysis Type: | **USEPA SW846 3050B / AA (7420)** |
| Turnaround: | **3-5 Day** |
| Date Samples Analyzed: | **April 24, 2018** |

| **Client ID Number** | **Lab ID Number** | **Reporting Limit (mg/kg)** | **LEAD CONCENTRATION (mg/kg)** |
|---|---|---|---|
| **LMH-SO01-0001** | EM 2070216 | 24.3 | 30.1 |
| **LMH-SO91-0001** | EM 2070217 | 7.9 | 25.7 |

*** Unless otherwise noted all quality control samples performed within specifications established by the laboratory.**

Renee A. Cortez

**Analyst / Data QA:**_____

Due Date: 4-24-4-26
Due Time:

-1PLM -2TEM

RES 406437

# REI LAB Reservoirs Environmental, Inc.

5801 Logan St. Denver, CO 80216 • Ph: 303 964-1986 • Fax 303-477-4275 • Toll Free :866 RESI-ENV

**After Hours Cell Phone: 720-339-9228**

**INVOICE TO: (IF DIFFERENT)**

| | |
|---|---|
| Company: | Weston Solutions, Inc |
| Address: | 1435 Garrison St Suite 100<br>Lakewood, CO 80215 |
| Company: | Weston Solutions, Inc |
| Address: | |

**CONTACT INFORMATION:** -3MM

| | |
|---|---|
| Contact: | Michael Cherny |
| Phone: | |
| Fax: | |
| Cell/pager: | 720-206-8724 |
| Final Data Deliverable Email Address: | michael.cherny@mecx.net |
| Contact: | |
| Phone: | |
| Fax: | |
| Cell/pager: | |

| | |
|---|---|
| Project Number and/or P.O. #: | 20408.016.003.0572.00 |
| Project Description/Location: | Livingston Memorial Hospital |

**ASBESTOS LABORATORY HOURS: Weekdays: 7am - 7pm**

**PLM / PCM / TEM** ____ RUSH (Same Day) ___ PRIORITY (Next Day) X STANDARD
**(Rush PCM = 2hr, TEM = 6hr.)**

**CHEMISTRY LABORATORY HOURS: Weekdays: 8am - 5pm**

**Metal(s) / Dust** ___ RUSH ___ 24 hr. X 3-5 Day
**RCRA 8 / Metals & Welding Fume Scan / TCLP** ___ RUSH ___ 5 day ___10 day
**Organics** ___ 24 hr. ___ 3 day ___5 Day
****Prior notification is required for RUSH turnarounds.****

**MICROBIOLOGY LABORATORY HOURS: Weekdays: 9am - 6pm**

**E.coli O157:H7, Coliforms, S.aureus** ___ 24 hr. ___2 Day ___3-5 Day
**Salmonella, Listeria, E.coli, APC, Y & M** ___ 48 Hr. ___3-5 Day
**Mold** ___ RUSH ___24 Hr ___48 Hr ___3 Day ___5 Day

****Turnaround times establish a laboratory priority, subject to laboratory volume and are not guaranteed. Additional fees apply for afterhours, weekends and holidays.****

**Special Instructions:**

**VALID MATRIX CODES**

| | |
|---|---|
| Air = A | Bulk = B |
| Dust = D | Paint = P |
| Soil = S | Wipe = W |
| Swab = SW | F = Food |
| Drinking Water = DW | Waste Water = WW |
| O = Other | |

**ASTM E1792 approved wipe media only**

**LAB NOTES:**

**REQUESTED ANALYSIS**

| | Client sample ID number (Sample ID's must be unique) | PLM - Short report, Long report, Point Count | TEM - AHERA, Level II, 7402, ISO, +/-, Quant, Semi-quant, Micro-vac, ISO-Indirect Preps | PCM - 7400A, 7400B, OSHA | DUST - Total, Respirable | METALS - Analyte(s) LEAD RCRA 8, TCLP, Welding Fume, Metals Scan | ORGANICS - METH | MICROBIOLOGY: Salmonella: +/- | E.coli O157:H7: +/- | Listeria: +/- | Aerobic Plate Count: +/- or Quantification | E.coli: +/- or Quantification | Coliforms: +/- or Quantification | S.aureus: +/- or Quantification | Y & M: +/- or Quantification | Mold: +/-, Identification, Quantification | SAMPLER'S INITIALS OR OTHER NOTES | Sample Volume (L) / Area | Matrix Code | # Containers | Date Collected mm/dd/yy | Time Collected hh/mm a/p | EM Number (Laboratory Use Only) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SH-DW01-01 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 2070178 |
| 2 | SH-DW01-02 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 96 |
| 3 | SH-DW01-03 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 807 |
| 4 | SH-RM01-04 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 18 |
| 5 | LMH-IT01-01 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 25 |
| 6 | LMH-HG01-02 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 380 |
| 7 | LMH-PG01-03 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 41 |
| 8 | LMH-FI01-04 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 52 |
| 9 | LMH-CB01-05 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 63 |
| 10 | LMH-DT01-06 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 74 |

Number of samples received: 40 (Additional samples shall be listed on attached long form.)

**NOTE:** REI will analyze incoming samples based upon information received and will not be responsible for errors or omissions in calculations resulting from the inaccuracy of original data. By signing client/company representative agrees that submission of the following samples for requested analysis as indicated on this Chain of Custody shall constitute an analytical services agreement with payment terms of NET 30 days, failure to comply with payment terms may result in a 1.5% monthly interest surcharge.

**Relinquished By:** Date/Time: 4/18/18 17:00

**Laboratory Use Only**
Received By: Elizabeth Mauk Date/Time: 4.19.18 12 Carrier: Fedex

Sample Condition: On Ice Yes / No Sealed Yes / No Intact Yes / No
Temp. (F°) _____

| Results: | Contact | Phone | Email | Fax | Date | Time | Initials | Contact | Phone | Email | Fax | Date | Time | Initials |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Contact | Phone | Email | Fax | Date | Time | Initials | Contact | Phone | Email | Fax | Date | Time | Initials |

**REI LAB Reservoirs Environmental, Inc.**
5801 Logan St. Denver, CO 80216 • Ph: 303 964-1986 • Fax 303-477-4275 • Toll Free :866 RESI-ENV

RES Job # 406437

Page 2 of 2

Submitted by: _____

| | Client sample ID number (Sample ID's must be unique) | PLM - Short report, Long report, Point Count | TEM - AHERA, Level II, (7402) ISO, +/-, Quant, Semi-quant, Micro-vac, ISO-Indirect Preps | PCM - 7400A, 7400B, OSHA | DUST - Total, Respirable | METALS - Analyte(s) Lead RCRA 8, TCLP, Welding Fume, Metals Scan | ORGANICS - METH | MICROBIOLOGY: Salmonella: +/- | E.coli O157:H7: +/- | Listeria: +/- | Aerobic Plate Count: +/- or Quantification | E.coli: +/- or Quantification | Coliforms: +/- or Quantification | S.aureus: +/- or Quantification | Y & M: +/- or Quantification | Mold: +/- or Quantification | OTHER - | Sample Volume (L) / Area | Matrix Code | # Containers | Date Collected mm/dd/yy | Time Collected hh/mm a/p | EM Number (Laboratory Use Only) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | LMH-FM01-07 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 2071188 |
| 12 | LMH-RM01-08 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 9 67 |
| 13 | LMH-WF01-09 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 90 7 |
| 14 | LMH-TF01-10 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 1 8 |
| 15 | LMH-TF02-11 | X | | | | | | | | | | | | | | | | | B | 1 | 4/17/2018 | | 2 9 |
| 16 | HOB-RM01-01 | X | | | | | | | | | | | | | | | | | B | 1 | 4/18/2018 | | 3 90 |
| 17 | HOB-CB01-02 | X | | | | | | | | | | | | | | | | | B | 1 | 4/18/2018 | | 4 1 |
| 18 | HOB-LN01-03 | X | | | | | | | | | | | | | | | | | B | 1 | 4/18/2018 | | 5 2 |
| 19 | HOB-DW01-04 | X | | | | | | | | | | | | | | | | | B | 1 | 4/18/2018 | | 6 3 |
| 20 | HOB-DW01-05 | X | | | | | | | | | | | | | | | | | B | 1 | 4/18/2018 | | 7 4 |
| 21 | HOB-DW01-06 | X | | | | | | | | | | | | | | | | | B | 1 | 4/18/2018 | | 8 5 |
| 22 | HOB-DW01-07 | X | | | | | | | | | | | | | | | | | B | 1 | 4/18/2018 | | 9 6 |
| 23 | HOB-CB02-08 | X | | | | | | | | | | | | | | | | | B | 1 | 4/18/2018 | | 200 7 |
| 24 | HOB-LN02-09 | X | | | | | | | | | | | | | | | | | B | 1 | 4/18/2018 | | 1 8 |
| 25 | HOB-DW02-10 | X | | | | | | | | | | | | | | | | | B | 1 | 4/18/2018 | | 2 9 |
| 26 | HOB-DW02-11 | X | | | | | | | | | | | | | | | | | B | 1 | 4/18/2018 | | 3 200 |
| 27 | HOB-DW02-12 | X | | | | | | | | | | | | | | | | | B | 1 | 4/18/2018 | | 4 1 |
| 28 | LMH-WP00 | | X | | | | | | | | | | | | | | | | W | 1 | 4/18/2018 | | 5 2 |
| 29 | LMH-WP01 | | X | | | | | | | | | | | | | | | | W | 1 | 4/18/2018 | | 6 3 |
| 30 | LMH-WP02 | | X | | | | | | | | | | | | | | | | W | 1 | 4/18/2018 | | 7 4 |
| 31 | LMH-WP03 | | X | | | | | | | | | | | | | | | | W | 1 | 4/18/2018 | | 8 5 |
| 32 | LMH-WP04 | | X | | | | | | | | | | | | | | | | W | 1 | 4/18/2018 | | 9 6 |
| 33 | LMH-WP05 | | X | | | | | | | | | | | | | | | | W | 1 | 4/18/2018 | | 10 7 |
| 34 | LMH-WP06 | | X | | | | | | | | | | | | | | | | W | 1 | 4/18/2018 | | 1 8 |
| 35 | LMH-WP07 | | X | | | | | | | | | | | | | | | | W | 1 | 4/18/2018 | | 2 9 |
| 36 | LMH-WP08 | | X | | | | | | | | | | | | | | | | W | 1 | 4/18/2018 | | 3 10 |
| 37 | LMH-WP09 | | X | | | | | | | | | | | | | | | | W | 1 | 4/18/2018 | | 4 1 |
| 38 | LMH-WP10 | | X | | | | | | | | | | | | | | | | W | 1 | 4/18/2018 | | 5 2 |
| 39 | LMH-SO01-0001 | | | | | X | | | | | | | | | | | | | S | 1 | 4/17/2018 | | 6 5 |
| 40 | LMH-SO91-0001 | | | | | X | | | | | | | | | | | | | S | 1 | 4/17/2018 | | 7 6 |
| 41 | | | | | | | | | | | | | | | | | | | | | | | |

**VALID MATRIX CODES**

| | |
|---|---|
| Air = A | Bulk = B |
| Dust = D | Paint = P |
| Soil = S | Wipe = W |
| Swab = SW | F = Food |
| Drinking Water = DW | Waste Water = WW |
| O = Other | |

**ASTM E1792 approved wipe media only**

**LAB NOTES:**

# APPENDIX C
# SUPPLEMENTARY INFORMATION

# ASBESTOS SURVEY

**Former Livingston Hospital**
**504 South 13th Street**
**Livingston, Montana**

# NESHAP Asbestos Renovation Survey

**Former Livingston Hospital**
**504 South 13th Street**
**Livingston, Montana**

**Prepared for:**

**A&E, LLC**
**PO Box 2031**
**Livingston, Montana 59047**

**Prepared by:**

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, Montana 59101**

**Project No. 999-3019**

**March 7, 2016**

**Robert B Brownell** **MTA-3542** **Expires 03/10/2016**

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| **2.0 SURVEY PROCEDURES** | 4 |
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| Quality Assurance and Quality Control | 5 |
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| Survey Findings | 6 |
| **4.0 CONCLUSIONS AND RECOMMENDATIONS** | 7 |
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| **5.0 LIMITATIONS** | 9 |
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**TABLES**

Table 1 - Summary of Materials Suspected to Contain Asbestos

Table 2 - Summary of Confirmed or Assumed Asbestos-Containing Building Materials and Recommended Response Action

**FIGURES**

Figure Set 1 - Asbestos-Containing Building Material Location Drawings

**APPENDIX A**

ASBESTOS LABORATORY ANALYSIS REPORTS

**APPENDIX B**

ASBESTOS SAMPLE COLLECTION REQUIREMENTS AND MATERIAL CATEGORY DESCRIPTIONS

**APPENDIX C**

INSPECTOR ASBESTOS TRAINING CERTIFICATES

# EXECUTIVE SUMMARY

At your request, Northern Industrial Hygiene (Northern) conducted an asbestos survey of the former Livingston Hospital located at 504 South 13th Street in Livingston, Montana. This report provides the summarized results of the survey conducted by Mr. Robert Brownell (MTA-3542), Mr. Logan Silveira (MTA-4712) and Mr. Kevin Oliver (MTA-1308) from December 22 through December 31, 2015. The survey was conducted to identify potential hazardous materials (asbestos) that may be disturbed during renovation of the building.

## *Overview of Building*

The former Livingston Hospital building is a single story masonry structure with a flat roof and combination basement /crawlspace. The building was constructed in 1950 with additions in 1987 and 1989 and comprises a floor space area of approximately 43,100 square feet (SF). The exterior building finish consists of a brick masonry veneer with plywood soffits. The interior finishes at the time of the survey consisted of: ceiling tile, lay-in panel, gypsum board and plaster ceilings; gypsum board, plaster, concrete and concrete masonry unit (CMU) walls, and; carpet, vinyl sheet, vinyl tile and concrete floors.

Heat is provided by tube type hot water boilers located in the basement boiler room.

Mechanical and domestic water system piping is insulated with fiberglass, Air-cell, Duplex and magnesium silicate on straight runs with mudded and fiberglass insulated joints/fittings.

Mechanical piping is routed above the basement ceiling and through crawlspaces to heat exchangers and above the first floor ceilings to radiant panel heaters in the hallways and one forced air heat exchanger in the surgical area. Domestic water piping is routed above the basement ceiling and through crawlspaces.

Conditioned air is routed to the building interior through un-insulated metal or fiberglass insulated flexible ducts connected to air diffusers located in the drop ceiling.

The Magnetic Resonance Imaging unit and the roof of the building were not included in this inspection.

## *Survey Findings*

A total of one hundred and one suspect building materials were identified in this building. Upon further visual examination, two materials, (Transite wall board in the refrigeration rooms and Air-cell pipe insulation throughout the building), were assumed to be asbestos-containing material (ACM). One material (wood-based 12"x12" mechanically fastened ceiling tiles) was determined to be non-suspect. The remaining ninety-eight (98) materials were sampled in accordance with current regulatory requirements. Laboratory analysis found that twenty-seven (27) of the sampled materials contain asbestos. A list of these materials and a summary of the laboratory analysis results are included in Table 1.

# 1.0 INTRODUCTION

Northern conducted an asbestos survey of the former Livingston Hospital building located at 504 South 13th Street in Livingston, Montana. The purpose of the asbestos survey was to identify friable and non-friable suspect asbestos-containing building materials (ACBM's), if any, in this space.

The scope of the asbestos survey included the following activities:

- Surveying, identifying, assessing the material's condition and sampling suspect friable and non-friable ACBM's; and

- Reviewing laboratory results of sampled or assumed suspect materials and preparing ACBM material location drawings.

Following completion of the survey, prepare this report documenting the sampling procedures and results of the asbestos survey and provide recommendations for management of the identified ACBM's).

***Asbestos Overview***

Asbestos is a trade name for a group of fibrous naturally occurring minerals that were used widely in building materials because of its ability to bind, resist chemicals, insulate, and fireproof. Exposure to elevated levels of asbestos fibers has been documented to cause a variety of diseases including asbestosis and cancer. Consequently, the application, removal, and disposal of asbestos-containing materials are regulated by several agencies.

Asbestos in most building materials poses little threat to human health as long as the asbestos fibers are securely bound within the building material. However, as the materials deteriorate because of time or exposure, or are disturbed because of human or other activities, the potential increases for the fibers to become airborne. When this occurs, the risk to human health increases significantly when the fibers are inhaled.

The National Emissions Standards for Hazardous Air Pollutants (NESHAP) defines ACM as a material containing greater than (>)1% asbestos and assigns ACM to three categories: regulated asbestos-containing material (RACM), Category I, and Category II. RACM is defined as an ACM that, when dry, can be crumbled, pulverized or reduced to powder by hand pressure (friable). RACM also includes: Category I and Category II materials that will be (or have been) subjected to sanding, grinding, cutting or abrading, or; Category II materials that have a high probability of becoming (or have become) crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition/renovation operations. Category I ACMs are non-friable packings, gaskets, resilient floor coverings, and asphalt roofing products. Category II ACMs are non-friable materials, excluding Category I non-friable ACMs, that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. The Administrative Rules of Montana (ARM) adopts the NESHAP by reference.

The NESHAP requires that the building owner or operator provide notification at least 10 working days prior to commencing renovation activities that will disturb more than 160 square feet (SF) or 260 linear feet (LF) of RACM, or prior to any demolition activities. The NESHAP also requires that RACM be removed prior to renovation/demolition activities that will disturb the material.

The MDEQ adopted the NESHAP by reference and requires the building owner/operator to apply for an Asbestos Abatement Permit at least 5 working days prior to commencing asbestos abatement project involving > 10 SF but less than (<) 160 SF in surface area or >3 LF but < 260 LF of RACM. The permit application must be submitted at least ten working days prior to commencing an asbestos abatement project involving >160 SF or 260 LF of RACM or prior to any demolition. Notification of the MDEQ satisfies the NESHAP notification requirement.

The MDEQ requires that personnel conducting permitted asbestos abatement projects be accredited by the State of Montana. The MDEQ also requires an asbestos abatement design be prepared by a State of Montana accredited asbestos project designer for projects requiring an Asbestos Abatement Project Permit.

The Occupational Safety and Health Administration (OSHA) requires that employees that will be exposed to any amount of asbestos be trained in accordance with the provisions of 29 CFR 1926.1101. The OSHA standard also requires that employee exposure to asbestos fibers not exceed either the permissible exposure limit (PEL) of 0.1 fibers per cubic centimeter (f/cc) of air for an eight (8) hour time-weighted average (TWA) or the excursion limit (EL) of 1.0 f/cc for any thirty (30) minute work period.

# 2.0 SURVEY PROCEDURES

The asbestos survey was conducted using the applicable portions of the currently recognized standard protocol developed for schools under AHERA, as promulgated in Title 40, Code of Federal Regulations (40 CFR), Part 763 as amended in the Federal Register and the ARM 17.74.354. Since the primary purpose of this survey was to identify potential asbestos hazards in the portion of the building surveyed, Northern representatives visually assessed existing conditions considering each construction, addition, or renovation date as a separate, unique building.

***Asbestos Survey and Sampling***

The survey was conducted by our accredited inspectors, and consisted of a detailed visual survey of surfacing materials, thermal system insulation, and miscellaneous materials throughout the building. Suspect ACBM was then grouped into homogeneous materials and sampling plans were developed. Components of the survey included:

- Identification of homogeneous suspect materials on a room-by-room basis. Areas from which samples were to be obtained were also identified during this task.

- Collection and analysis of bulk samples to confirm whether or not the suspect materials contain asbestos.

- An assessment of known or assumed ACBMs, generally classifying the materials using categories defined in the NESHAP regulations.

- Homogeneous suspect ACBMs were, for the purposes of this study and as outlined in the AHERA sampling protocol, placed into the following material type categories: thermal system insulation (TSI), surfacing materials and miscellaneous. AHERA sampling protocol specifies sampling procedures for each material type.

Sample locations for this survey were selected in a non-random fashion, with emphasis placed on collecting samples of each type of accessible, suspect material and minimizing damage to the material being sampled. Samples were collected by carefully removing small portions of the suspect material in a non-abrasive manner using techniques such as wet slicing, wet boring or similar methods designed to limit contamination of the area during sampling. Samples were collected from existing damaged areas or loose pieces of material where possible. The samples were placed in pre-labeled plastic containers. Immediately after sample collection. Containers with samples were then placed in a large resealable plastic bag for transportation to the laboratory. The sampled area was sealed using patching compounds, duct tape, or spray encapsulants as appropriate to the material being sampled.

## *Laboratory Analysis of Bulk Asbestos Samples*

Bulk samples collected during the inspection were assigned bulk sample numbers and entered on sample summary/chain-of-custody forms. The samples were transported to the laboratory by overnight courier under standard chain-of-custody procedures. The analysis was performed in accordance with EPA Method 600/R-93/116, which employs polarized light microscopic techniques with dispersion staining for identification of mineral forms of asbestos. The quantification of asbestos in the sample is intended to be an estimate only and the limit of detection for this method is approximately 1% by volume. Sample laboratory analysis results are presented in Table 1.

## *Quality Assurance and Quality Control*

Quality Assurance and quality control (QA/QC) measures adopted by Northern involved field and office components. Key parameters are summarized below:

### Field QA/QC

- Review inspection forms for completeness;
- Check Homogeneous Materials Listing for sufficient number of collected samples; and
- Verify locations of major mechanical components.

### Office QA/QC

- Review lab results for completeness;
- Ensure appropriate cross-referencing of results from forms for each given ACBM;
- Ensure drawings are updated as necessary following field QC;
- Verify approximate quantities of ACBM based on drawing review; and
- Review recorded field comments for meaning, incorporate as necessary into report.

# 3.0 FINDINGS

Survey results are presented in the following paragraphs. Additional information is presented in the Report Tables, drawings, and Appendices located at the end of this report.

***Overview of Building***

The former Livingston Hospital building is a single story masonry structure with a flat roof and combination basement /crawlspace. The building was constructed in 1950 with additions in 1987 and 1989 and comprises a floor space area of approximately 43,100 SF. The exterior building finish consists of a brick masonry veneer with plywood soffits. The interior finishes at the time of the survey consisted of: ceiling tile, lay-in panel, gypsum board and plaster ceilings; gypsum board, plaster, concrete and concrete masonry unit (CMU) walls, and; carpet, vinyl sheet, vinyl tile and concrete floors. Heat is provided by tube type hot water boilers located in the basement boiler room.

Mechanical and domestic water system piping is insulated with fiberglass, Air-cell, Duplex and magnesium silicate on straight runs with mudded and fiberglass insulated joints/fittings.

Mechanical piping is routed above the basement ceiling and through crawlspaces to heat exchangers and above the first floor ceilings to radiant panel heaters in the hallways and one forced air heat exchanger in the surgical area. Domestic water piping is routed above the basement ceiling and through crawlspaces.

Conditioned air is routed to the building interior through un-insulated metal or fiberglass insulated flexible ducts connected to air diffusers located in the drop ceiling.

The Magnetic Resonance Imaging unit and the roof of the building were not included in this inspection.

***Inspection Findings***

A total of one hundred and one 101 suspect materials were identified in this building. Upon further visual examination, two (2) materials, (Transite wall board in the refrigeration rooms and Air-cell pipe insulation throughout the building), were assumed to be asbestos-containing material (ACM). One material (wood based 12"x12" mechanically fastened ceiling tiles) was determined to be non-suspect. The remaining ninety-eight (98) materials were sampled in accordance with current regulatory requirements. Laboratory analysis found that twenty-seven (27) of the sampled materials contain asbestos. A list of these materials and a summary of the laboratory analysis results are included in Table 1.

# 4.0 CONCLUSIONS AND RECOMMENDATIONS

***Conclusions***

Asbestos was confirmed to be present in 27 of the sampled suspect building materials and assumed present in two additional suspect building materials.

***Recommendations***

Category I Materials (F2.6, F2.8, F2.11, F2.12, F2.16, F3.1, F3.2, F3.3, F3.3*, F3.4, F3.4*, F3.5, F9.1)

These materials are non-friable and generally in good condition. If these materials will not be disturbed during renovation activities, they may be left in place. If renovation activities will disturb the materials, Northern recommends the materials be removed and properly disposed of by a Montana-accredited asbestos abatement contractor prior to renovation activities that would disturb the materials.

Montana requires an asbestos abatement permit if removal activities will subject these materials to grinding, cutting, sanding, abrading or other removal procedures that would render the materials friable. Montana also requires a project design by a Montana-accredited project designer, final visual clearance inspection(s), and air clearance monitoring for all permitted asbestos abatement projects. Montana does not require an asbestos abatement permit or project design if the materials are removed using methods that do not render the materials friable.

Category II Materials (M4.1, M8.1, M8.2, M8.3, M10.1)

These materials are non-friable and generally in good condition. If these materials will not be disturbed during renovation activities, they may be left in place. If renovation activities will disturb the materials, Northern recommends the materials be removed and properly disposed of by a Montana-accredited asbestos abatement contractor prior to renovation activities that would disturb the materials.

Montana requires an asbestos abatement permit if removal activities will subject these materials to grinding, cutting, sanding, abrading or other removal procedures that would render the materials friable. Montana also requires a project design by a Montana-accredited project designer, final visual clearance inspection(s), and air clearance monitoring for all permitted asbestos abatement projects. Montana does not require an asbestos abatement permit or project design if the materials are removed using methods that do not render the materials friable.

RACM (F1.1, T2.1, T3.3, T3.4, T3.5, T12.1)

These materials are friable and generally in good condition. If these materials will not be disturbed during renovation activities, they may be left in place.

If renovation activities will disturb the materials, they must be removed and properly disposed of by a Montana-accredited asbestos abatement contractor prior to renovation activities that would disturb the materials.

RACM DEBRIS (IN CRAWLSPACES) (D-1, D-3, D-4, D-5, D-6)

The asbestos-containing debris is friable and widely scattered throughout the crawlspaces. Crawlspace access should be restricted to properly trained personnel. Northern recommends the removal and disposal of this debris when financially feasible or before conducting any renovation or demolition work that will impact this debris.

Montana requires an asbestos abatement permit for the removal and/or disposal of >3 LF, 10 SF or 3 CF of RACM. Montana also requires a project design by a Montana-accredited project designer, final visual clearance inspection(s), and air clearance monitoring for all permitted asbestos abatement projects.

A copy of this asbestos survey should be kept on the project during renovation activities and made available to State of Montana representatives upon request.

# 5.0 LIMITATIONS

This asbestos survey report was prepared based on information obtained during the survey, and interpretation of the laboratory results of bulk samples of building materials collected during the survey. The conclusions of this report are professional opinions based solely upon visual site observations and interpretations of laboratory analyses and field data as described in our report.

This report has been prepared to provide information concerning the various types and estimated quantities of ACBMs present at this site. It includes only those materials that were visible and accessible at the time of our inspection. We did not remove any permanent building enclosures or disassemble any equipment to determine if any ACBMs were present. No samples were collected if the mechanical integrity of the material would be compromised. As a result, additional ACBMs may be present in inaccessible areas (e.g., between walls, beneath floors, etc.) of the buildings. Permanent building enclosures were not opened or disassembled for inspection and additional ACBMs may also be present in these areas.

This survey and report is intended to identify and assess ACBMs. It is not intended to be used for purposes of obtaining bids for removal from abatement contractors.

Our opinions are intended exclusively for use by A&E, LLC. The scope of services provided by Northern 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 at the sole risk of the user.

The opinions presented herein apply to the site conditions existing at the time of our investigation. Therefore, our opinions and recommendations may not apply to future conditions that may exist at the site that we have not had the opportunity to evaluate.

# 6.0 REFERENCES

Environmental Protection Agency (EPA)
National Emission Standard for Hazardous Air Pollutants, 40 CFR 61 Subpart M.

Environmental Protection Agency (EPA)
Asbestos Hazard Emergency Response Act (AHERA), 40 CFR 763.

Occupational Safety and Health Administration (OSHA)
Construction Industry Standard (1994), 29 CFR 1926.1101.

State of Montana Asbestos Regulations
Administrative Rules of Montana, Title 17, Chapter 74, Subchapter 3

# TABLES

**Table 1 - Summary of Materials Suspected to Contain Asbestos**

**Table 2 - Summary of Confirmed or Assumed Asbestos-Containing Materials and Recommended Response Action**

# TABLE 1
# SUMMARY OF MATERIALS SUSPECTED TO CONTAIN ASBESTOS AND LABORATORY RESULTS
## Former Livingston Hospital
## 504 South 13th Street
## Livingston, Montana

| Material Number | Material Description | Material Sample Locations | Laboratory Results |
|---|---|---|---|
| **D - 1** | **Paper Debris** | **East Crawlspace** | **45% Chrysotile** |
| D - 2 | Hard Fitting Debris - White | East Crawlspace | ND |
| **D - 3** | **Paper Debris - White** | **Laundry Crawlspace** | **25% Chrysotile** |
| **D - 4** | **Paper Debris - Brown** | **Laundry Crawlspace** | **3% Chrysotile** |
| **D - 5** | **Paper Debris - Brown & White** | **Dining Area Crawlspace** | **Layer 1 45% Chrysotile / Layer 2 2% Chrysotile** |
| **D - 6** | **Magnesia Debris** | **Dining Area Crawlspace** | **5% Amosite / 35% Chrysotile** |
| **F1.1** | **Vinyl Sheet Flooring - Tan Tile Pattern (under carpet)** | **Room 023** | Carpet Mastic ND / **VSF 10% Chrysotile** / Mastic: ND |
| F1.2 | Vinyl Sheet Flooring - Beige | Room 011 | All Layers ND |
| F1.3 | Vinyl Sheet Flooring - Beige & Brown w/Mastic | Room 104A | All Layers ND |
| F1.4 | Vinyl Sheet Flooring - Purple & Gray w/Mastic | Room 109 | All Layers ND |
| F1.6 | Vinyl Sheet Flooring - 12"x12" White Tile Pattern w/Mastic | Room 161 | ND |
| F2.1 | 12"x12" Vinyl Floor Tile - Beige w/Black Dots | Rooms 019, 020, 024 | All Layers ND |
| F2.2 | 12'x12" Floor Tile - Pink w/Black Spots | Rooms 007, 009 | All Layers ND |
| F2.3 | 12"x12" Floor Tile - White w/Gray Specs | Room 010 | All Layers ND |
| F2.4 | 12"x12" Floor Tile - White w/Gray Marble Pattern | Rooms 002, 029 | All Layers ND |

Confirmed or Assumed Asbestos Containing Materials in Bold Type

ND = Non Detected
NS = Not Sampled

* Some material numbers used more than once.

# TABLE 1
# SUMMARY OF MATERIALS SUSPECTED TO CONTAIN ASBESTOS AND LABORATORY RESULTS
## Former Livingston Hospital
## 504 South 13th Street
## Livingston, Montana

| Material Number | Material Description | Material Sample Locations | Laboratory Results |
|---|---|---|---|
| F2.5 | 12"x12" Floor Tile - White with Beige Specks w/Yellow Mastic & Leveling Compound | Room 101 | All Layers ND |
| **F2.6** | **12"x12" Floor Tile - Purple Marbled w/Mastic** | **Rooms 101, 107, 204** | **Tile ND / Mastic 2% Chrysotile** |
| F2.7 | 12"x12" Floor Tile - Green Marbled & Mastic | Room 101 | All Layers ND |
| **F2.8** | **12"x12" Floor Tile - Ivory with Tan Marbling w/Mastic** | **Rooms 133, 138** | **Tile ND / Mastic 5% Chrysotile** |
| F2.9 | 12"x12" Floor Tile - White w/Gray Marbled w/Mastic | Rooms 104, 134 | All Layers ND |
| F2.10 | 12"x12" Floor tile - Lt Blue Marbled w/Mastic | Room 107 | All Layers ND |
| **F2.11** | **12"x12" Floor Tile - Off-white & Tan Marbled w/Mastic** | **Rooms 145, 163, 174** | **Tile ND / Mastic 3% Chrysotile** |
| **F2.12** | **12"x12" Floor Tile - Rose Marbled w/Mastic** | **Rooms 130, 203** | **Tile 2% Chrysotile / Mastic 3% Chrysotile** |
| F2.13 | 12"x12" Floor Tile - White w/Green & Brow Specks w/Mastic | Room 202 | All Layers ND |
| F2.14 | 12"x12" Floor Tile - Brown Marbled & Mastic | Room 202 | All Layers ND |
| F2.15 | 12"x12" Floor Tile - White with Blue Specks w/Mastic | Room 107 | All Layers ND |
| **F2.16** | **12'x12" Floor Tile - White & Black Granite w/Mastic** | **Room 151** | **Tile ND / Mastic 5% Chrysotile** |

Confirmed or Assumed Asbestos Containing Materials in Bold Type

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# TABLE 1
# SUMMARY OF MATERIALS SUSPECTED TO CONTAIN ASBESTOS AND LABORATORY RESULTS
## Former Livingston Hospital
## 504 South 13th Street
## Livingston, Montana

| Material Number | Material Description | Material Sample Locations | Laboratory Results |
|---|---|---|---|
| **F3.1** | **9"x9" Floor Tile - Brown with Black Streaks w/Mastic (residual black and brown mastic present on tile)** | **Room 009** | **Residual Mastic 4% Chrysotile / Tile 6% Chrysotile / Mastic 8% Chrysotile** |
| **F3.2** | **9"x9" Floor Tile - Lt. Brown with Brown Streaks w/Mastic** | **Room 006** | **Tile 6% Chrysotile / Mastic 5% Chrysotile** |
| **F3.3** | **9"x9" Floor Tile - Green w/Mastic** | **Room 029** | **Tile 5% Chrysotile / Mastic 4% Chrysotile** |
| **F3.3*** | **9"x9" Floor Tile - Red w/Mastic** | **Room 106** | **Tile 8% Chrysotile / Mastic 5% Chrysotile** |
| **F3.4** | **9"x9" Floor Tile - Tan w/Mastic** | **Room 160** | **Tile 5% Chrysotile / Mastic 4% Chrysotile** |
| **F3.4*** | **9"x9" Floor Tile - Gray w/Mastic** | **Room 160** | **Tile 5% Chrysotile / Mastic 4% Chrysotile** |
| **F3.5** | **9"x9" Floor Tile - Green w/Mastic** | **Room 201** | **Tile: 6% Chrysotile<br>Mastic: 8% Chrysotile** |
| F5.1 | Carpet - Teal w/Mastic | Room 022 | All Layers ND |
| F5.2 | Carpet - Blue | Rooms 017, 018 | ND |
| F5.3 | Carpet - Brown w/Mastic | Rooms 137, 159, 189 | All Layers ND |
| F5.4 | Carpet - Blue w/Mastic | Rooms 160, 162, 190 | All Layers ND |
| F6.1 | Leveling Compound | Room 018 | ND |
| F7.1 | 1"x1" Ceramic Tile - Brown w/Grout | Rooms 164, 172, 185 | All Layers ND |

Confirmed or Assumed Asbestos Containing Materials in Bold Type

* Some material numbers used more than once.

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NS = Not Sampled

# TABLE 1
# SUMMARY OF MATERIALS SUSPECTED TO CONTAIN ASBESTOS AND LABORATORY RESULTS
## Former Livingston Hospital
## 504 South 13th Street
## Livingston, Montana

| Material Number | Material Description | Material Sample Locations | Laboratory Results |
|---|---|---|---|
| F8.1 | 6"x6" Ceramic Tile - Red w/Grout | Rooms 100, 100A | All Layers ND |
| **F9.1** | **4"x2' Floor Tile - Brown w/Mastic** | **Rooms 103, 183** | **Tile ND / Mastic 4% Crocidolite** |
| M3.1 | Gypsum Board Assembly | Boiler Room | All Layers ND |
| M3.2 | Sheetrock & Joint Compound - Orig. Building | Rooms 137, 157, 165 | All Layers ND |
| M3.3 | Gypsum Board Assembly - Addition | Rooms 015, 016, 106A | All Layers ND |
| M3.4 | Sheetrock & Joint Compound - 1989 Addition | Rooms 184, 185, 188 | All Layers ND |
| M3.5 | Gypsum Board - Behind Plaster | Rooms 101, 127, 151 | All Layers ND |
| **M4.1** | **Transite Wall Board (Assumed ACM)** | **Refrigeration Rooms** | **NS - Assumed** |
| M5.1 | 2'x4' Ceiling Panel - Medium Fissure and Pinhole | Room 021 | ND |
| M5.2 | 2'x4' Ceiling Panel - Heavy Texture, Fissure & Pinholes | Room 024 | ND |
| M5.3 | 2'x4' Ceiling Panel, Light Texture, Fissure Pinhole | Room 022 | ND |
| M5.4 | 2'x4' Ceiling Panel - Pinhole and Small Fissure | Room 020 | ND |
| M5.5 | 2'x4' Ceiling Panel - 5"x5" Pattern | Rooms 017, 018 | ND |
| M5.6 | 2'x4' Ceiling Panel - Deep Fissure, Pinhole, Light Texture | Rooms 014, 017 | ND |

Confirmed or Assumed Asbestos Containing Materials in Bold Type

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NS = Not Sampled

* Some material numbers used more than once.

# TABLE 1
# SUMMARY OF MATERIALS SUSPECTED TO CONTAIN ASBESTOS AND LABORATORY RESULTS
## Former Livingston Hospital
## 504 South 13th Street
## Livingston, Montana

| Material Number | Material Description | Material Sample Locations | Laboratory Results |
|---|---|---|---|
| M5.7 | 2'x4' Gypsum Board Panel W/Vinyl Cover | Room 002 | All Layers ND |
| M6.1 | 1'x1' Ceiling Tile - Wood-based, Mechanically Fastened (not suspect) | Basement | NS |
| M6.2 | 1'x1' Ceiling Tile - White w/Heavy Fissures & Brown Mastic | Rooms 103, 153 | All Layers ND |
| M6.3 | 1'x1' Ceiling Tile - Patterned Holes & Brown Mastic | Room 106 | All Layers ND |
| M6.4 | 1'x1' Ceiling Tile - White w/Heavy Fissures & Black Mastic | Room 194 | All Layers ND |
| M7.1 | Plaster Wall System - Over Expanded Metal & Gypsum Board | Rooms 101, 140, 127, 162, 193 | ND |
| **M8.1** | **Window Caulk - Gray w/White** | **Rooms 146, 149, 155** | **8% Chrysotile** |
| **M8.2** | **Window Glazing Compound - White** | **Rooms 106, 196, 201** | **4% Chrysotile** |
| **M8.3** | **Window Caulk - White** | **Rooms 106, 196, 201** | **12% Chrysotile** |
| M8.4 | Window Glazing - Brown Vinyl | Rooms 146, 149, 155 | ND |
| M8.5 | 4"x4" Ceramic Tile - White w/Mastic & Grout | Rooms 164, 172, 185 | All Layers ND |
| **M10.1** | **Sink Undercoating - Black** | **Rooms 111, 126, 127** | **4% Chrysotile** |
| M10.2 | Sink Undercoating - White | Rooms 157, 158, 195 | ND |
| M10.3 | Sink Undercoating - Grey | Rooms 159, 205 | ND |

Confirmed or Assumed Asbestos Containing Materials in Bold Type

ND = Non Detected
NS = Not Sampled

* Some material numbers used more than once.

# TABLE 1
# SUMMARY OF MATERIALS SUSPECTED TO CONTAIN ASBESTOS AND LABORATORY RESULTS
## Former Livingston Hospital
## 504 South 13th Street
## Livingston, Montana

| Material Number | Material Description | Material Sample Locations | Laboratory Results |
|---|---|---|---|
| M12.1 | 4" Cove Base - Light Brown w/Mastic | Room 022 | All Layers ND |
| M12.2 | 4" Cove Base - Beige w/White Adhesive | Room 014 | All Layers ND |
| M12.3 | 4" Black Cove Base w/Brown Adhesive | Room 009 | All Layers ND |
| M12.4 | 4" Vinyl Cove Base - Brown w/Lt. Brown Mastic | Rooms 104A, 179, 203 | All Layers ND |
| M12.5 | Cove Base Mastic - White w/Mastic | Rooms 110, 126, 205 | All Layers ND |
| M12.6 | Cove Base Mastic - Yellowish Brown | Room 116 | All Layers ND |
| M16.1 | Concrete | Boiler Room | All Layers ND |
| M16.2 | Concrete - Addition | Room 016 | All Layers ND |
| M16.3 | Concrete - 1989 Addition | Exterior Foundation Wall | All Layers ND |
| M17.1 | Brick/Mortar | Incinerator Exterior | All Layers ND |
| M17.2 | Firebrick/Mortar | Incinerator Interior | ND |
| M17.3 | Red Clay Block & Mortar | Rooms 101, 163, 170 | All Layers ND |
| M17.4 | Light Brown Brick & Mortar - Exterior | Rooms 122, 154, 192 | All Layers ND |
| M18.1 | Concrete Block/Mortar | Boiler Room | All Layers ND |

Confirmed or Assumed Asbestos Containing Materials in Bold Type

* Some material numbers used more than once.

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NS = Not Sampled

# TABLE 1
# SUMMARY OF MATERIALS SUSPECTED TO CONTAIN ASBESTOS AND LABORATORY RESULTS
## Former Livingston Hospital
## 504 South 13th Street
## Livingston, Montana

| Material Number | Material Description | Material Sample Locations | Laboratory Results |
|---|---|---|---|
| M19.1 | Fiberglass Reinforced Plastic | Room 002 | All Layers ND |
| M19.1* | 4"x4" Ceramic Tile - Green w/Mortar and Grout | Rooms 122, 123, 124 | All Layers ND |
| T1.1 | Boiler Ribbon Gasket | Large Boiler | ND |
| T1.2 | Boiler Ribbon Gasket - White | Small Boiler | ND |
| T1.3 | Boiler Flange Gasket - Red | Small Boiler | ND |
| T1.4 | Pipe Flange Gasket - White | Small Boiler | ND |
| T1.5 | Flange Gasket - Red | Main Water Line | ND |
| **T2.1** | **Mudded Fitting - Original** | **Boiler Room, Room 200** | **12% Chrysotile / 8% Amosite** |
| T2.2 | Mudded Pipe Fitting Insulation on Fiberglass Insulated Straight Run Piping | Boiler Room | ND |
| T3.1 | Metal-foil Faced Fiberglass Straight Run Pipe Insulation on Mechanical System Lines (not suspect) | Boiler Room | NS |
| T3.2 | Paper & Metal-foil Faced Fiberglass Straight Run Pipe Insulation on Domestic System Lines (not suspect) | Boiler Room | NS |
| **T3.3** | **Magnesia Straight Run Pipe Insulation** | **Boiler Room** | **12% Chrysotile / 8% Amosite** |
| **T3.4** | **Air-Cell Straight Run Pipe Insulation (Assumed ACM)** | **Boiler Room** | **NS - Assumed** |
| **T3.5** | **Duplex Straight Run Pipe Insulation** | **Boiler Room** | **5% Chrysotile** |

Confirmed or Assumed Asbestos Containing Materials in Bold Type

ND = Non Detected
NS = Not Sampled

* Some material numbers used more than once.

# TABLE 1
# SUMMARY OF MATERIALS SUSPECTED TO CONTAIN ASBESTOS AND LABORATORY RESULTS
## Former Livingston Hospital
## 504 South 13th Street
## Livingston, Montana

| Material Number | Material Description | Material Sample Locations | Laboratory Results |
|---|---|---|---|
| T7.1 | Boiler Breaching | Boiler Room | ND |
| T8.1 | Vibration Joint Collar Black | Room 029 | ND |
| T9.1 | Gray Duct Sealant | Room 016 | ND |
| T11.1 | Red Fire Stop | Room 026 | ND |
| **T12.1** | **Roof Drain Bowl Insulation** | **Room 101** | **15% Chrysotile / 8% Amosite** |

Confirmed or Assumed Asbestos Containing Materials in Bold Type

ND = Non Detected

* Some material numbers used more than once.

NS = Not Sampled

# TABLE 2
# SUMMARY OF CONFIRMED OR ASSUMED ASBESTOS-CONTAINING MATERIALS AND RECOMMENDED RESPONSE ACTION
## Former Livingston Hospital
## 504 South 13th Street
## Livingston, Montana

| Material Number | Material Description | NESHAP Category | Recommended Response Action |
|---|---|---|---|
| F1.1 | Vinyl Sheet Flooring - Tan Tile Pattern | RACM | Retain Accredited Asbestos Abatement Contractor to Remove Prior to Conducting Any Renovation or Demolition Work That Will Impact The Asbestos-Containing Materials |
| F2.6 | 12"x12" Floor Tile - Purple Marbled (Tile ND) w/Black Mastic | Category I | |
| F2.8 | 12"x12" Floor Tile - Ivory with Tan marbling (Tile ND) w/Black Mastic | Category I | |
| F2.11 | 12"x12" Floor Tile - Off White with Tan Marbling (Tile ND) w/Black Mastic | Category I | |
| F2.12 | 12"x12" Floor Tile - Rose Marbled w/Black Mastic | Category I | |
| F2.16 | 12"x12" Floor Tile - White with Black Granite Pattern (Tile ND) w/Black Mastic | Category I | |
| F3.1 | 9"x9" Floor Tile - Brown with Black Streaks w/Black Mastic | Category I | |
| F3.2 | 9"x9" Floor Tile - Lt. Brown with Streaks w/Black Mastic | Category I | |

Category I Nonfriable ACM such as packings, gaskets, resilient floor covering, and asphalt roofing products.

Category II All nonfriable ACM, excluding Category I materials.

RACM Friable ACM; Category I material that has become friable; Category I material that will be subjected to sanding, grinding, cutting, or abrading; or Category II material that has a high probability of becoming friable.

# TABLE 2
# SUMMARY OF CONFIRMED OR ASSUMED ASBESTOS-CONTAINING MATERIALS AND RECOMMENDED RESPONSE ACTION
## Former Livingston Hospital
## 504 South 13th Street
## Livingston, Montana

| Material Number | Material Description | NESHAP Category | Recommended Response Action |
|---|---|---|---|
| F3.3 | 9"x9" Floor Tile - Green w/Black Mastic | Category I | Retain Accredited Asbestos Abatement Contractor to Remove Prior to Conducting Any Renovation or Demolition Work That Will Impact The Asbestos-Containing Materials |
| F3.3* | 9"x9" Floor Tile - Red w/Black Mastic | Category I | |
| F3.4 | 9"x9" Floor Tile - Tan w/Black Mastic | Category I | |
| F3.4* | 9"x9" Floor Tile - Gray w/ Black Mastic | Category I | |
| F3.5 | 9"x9" Floor Tile - Green with White Streaks w/Black Mastic | Category I | |
| F9.1 | 4"x2' Floor Tile (brown) & Mastic (black) | Category I | |
| M4.1 | Transite Wall Board (Assumed ACM) | Category II | |
| M8.1 | Window Caulk - Gray w/White | Category II | |

Category I Nonfriable ACM such as packings, gaskets, resilient floor covering, and asphalt roofing products.

Category II All nonfriable ACM, excluding Category I materials.

RACM Friable ACM; Category I material that has become friable; Category I material that will be subjected to sanding, grinding, cutting, or abrading; or Category II material that has a high probability of becoming friable.

# TABLE 2
# SUMMARY OF CONFIRMED OR ASSUMED ASBESTOS-CONTAINING MATERIALS AND RECOMMENDED RESPONSE ACTION
## Former Livingston Hospital
## 504 South 13th Street
## Livingston, Montana

| Material Number | Material Description | NESHAP Category | Recommended Response Action |
|---|---|---|---|
| M8.2 | Window Glazing Compound - White | RACM | Retain Accredited Asbestos Abatement Contractor to Remove Prior to Conducting Any Renovation or Demolition Work That Will Impact The Asbestos-Containing Materials |
| M8.3 | Window Caulk - White | Category II | |
| M10.1 | Sink Undercoating - Black | Category II | |
| T2.1 | Mudded Fitting - Original | RACM | |
| T3.3 | Magnesia Straight Run Pipe Insulation | RACM | |
| T3.4 | Air Cell Straight Run Pipe Insulation (Assumed ACM) | RACM | |
| T3.5 | Duplex Straight Run Pipe Insulation | RACM | |
| T12.1 | Roof Drain Bowl Insulation | RACM | |

Category I Nonfriable ACM such as packings, gaskets, resilient floor covering, and asphalt roofing products.

Category II All nonfriable ACM, excluding Category I materials.

RACM Friable ACM; Category I material that has become friable; Category I material that will be subjected to sanding, grinding, cutting, or abrading; or Category II material that has a high probability of becoming friable.

# TABLE 2
# SUMMARY OF CONFIRMED OR ASSUMED ASBESTOS-CONTAINING MATERIALS AND RECOMMENDED RESPONSE ACTION
## Former Livingston Hospital
## 504 South 13th Street
## Livingston, Montana

| Material Number | Material Description | NESHAP Category | Recommended Response Action |
|---|---|---|---|
| D - 1 | Paper Debris in East Crawlspace | RACM | Restrict Access to Asbestos Debris Contaminated Crawlspaces to Authorized Personnel Wearing Appropriate Personal Protective Equipment as Required by OSHA. |
| D - 3 | White Paper Debris in Laundry Crawlspace | RACM | |
| D - 4 | Brown Paper Debris in Laundry Crawlspace | RACM | |
| D - 5 | Brown and White Paper Debris in Dining Area Crawlspace | RACM | |
| D - 6 | Magnesia Debris in Dining Area Crawlspace | RACM | |

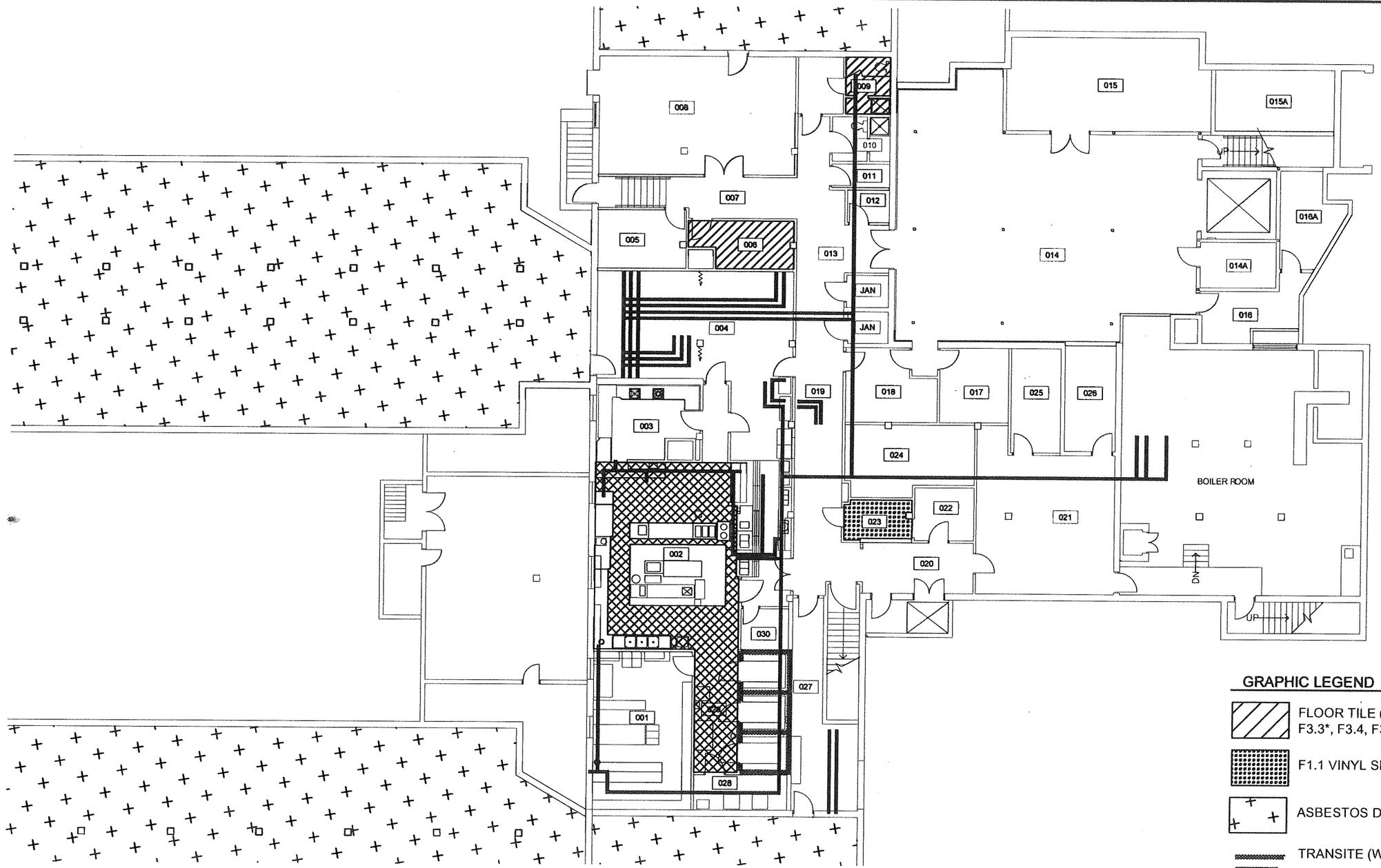
Category I Nonfriable ACM such as packings, gaskets, resilient floor covering, and asphalt roofing products.

Category II All nonfriable ACM, excluding Category I materials.

RACM Friable ACM; Category I material that has become friable; Category I material that will be subjected to sanding, grinding, cutting, or abrading; or Category II material that has a high probability of becoming friable.

# FIGURES

**Figure Set 1 - Asbestos-Containing Building Material Location Drawings**




## GRAPHIC LEGEND

- FLOOR TILE (F2.12, F3.1, F3.2, F3.3, F3.3*, F3.4, F3.4*, F3.5)
- F1.1 VINYL SHEET FLOORING
- ASBESTOS DEBRIS
- TRANSITE (WALL AND CEILING)
- ACM THERMAL SYSTEM INSULATION W/ ACM MUDDED JOINTS/ FITTINGS
- ROOF DRAIN BOWL

# GROUND FLOOR MATERIAL LOCATION PLAN

SCALE: 1/16" = 1'-0"

NORTHERN INDUSTRIAL HYGIENE, INC.

| | | | |
|---|---|---|---|
| DATE: | 03/08/16 | PROJECT NAME: | FORMER LIVINGSTON HOSPITAL |
| DRAWN BY: | CS | | |
| CHK BY: | KO | LOCATION: | LIVINGSTON, MT |
| CAD FILE: | 999-3019.dwg | NIH PROJECT NUMBER: | 999-3019 |

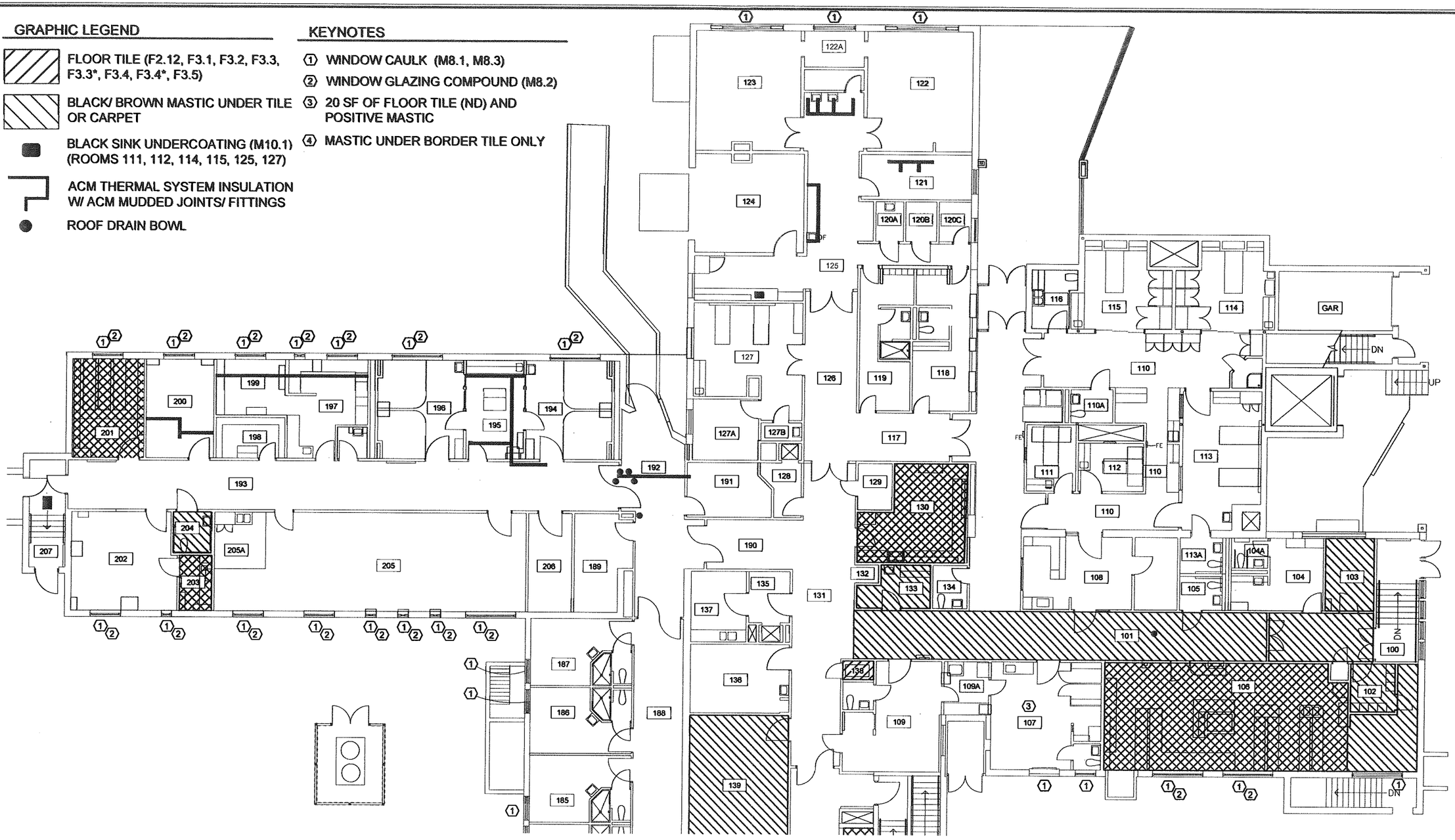
FIG. 1.1: GROUND FLOOR ASBESTOS MATERIAL LOCATION PLAN

## GRAPHIC LEGEND

- FLOOR TILE (F2.12, F3.1, F3.2, F3.3, F3.3*, F3.4, F3.4*, F3.5)
- BLACK/ BROWN MASTIC UNDER TILE OR CARPET
- BLACK SINK UNDERCOATING (M10.1) (ROOMS 111, 112, 114, 115, 125, 127)
- ACM THERMAL SYSTEM INSULATION W/ ACM MUDDED JOINTS/ FITTINGS
- ROOF DRAIN BOWL

## KEYNOTES

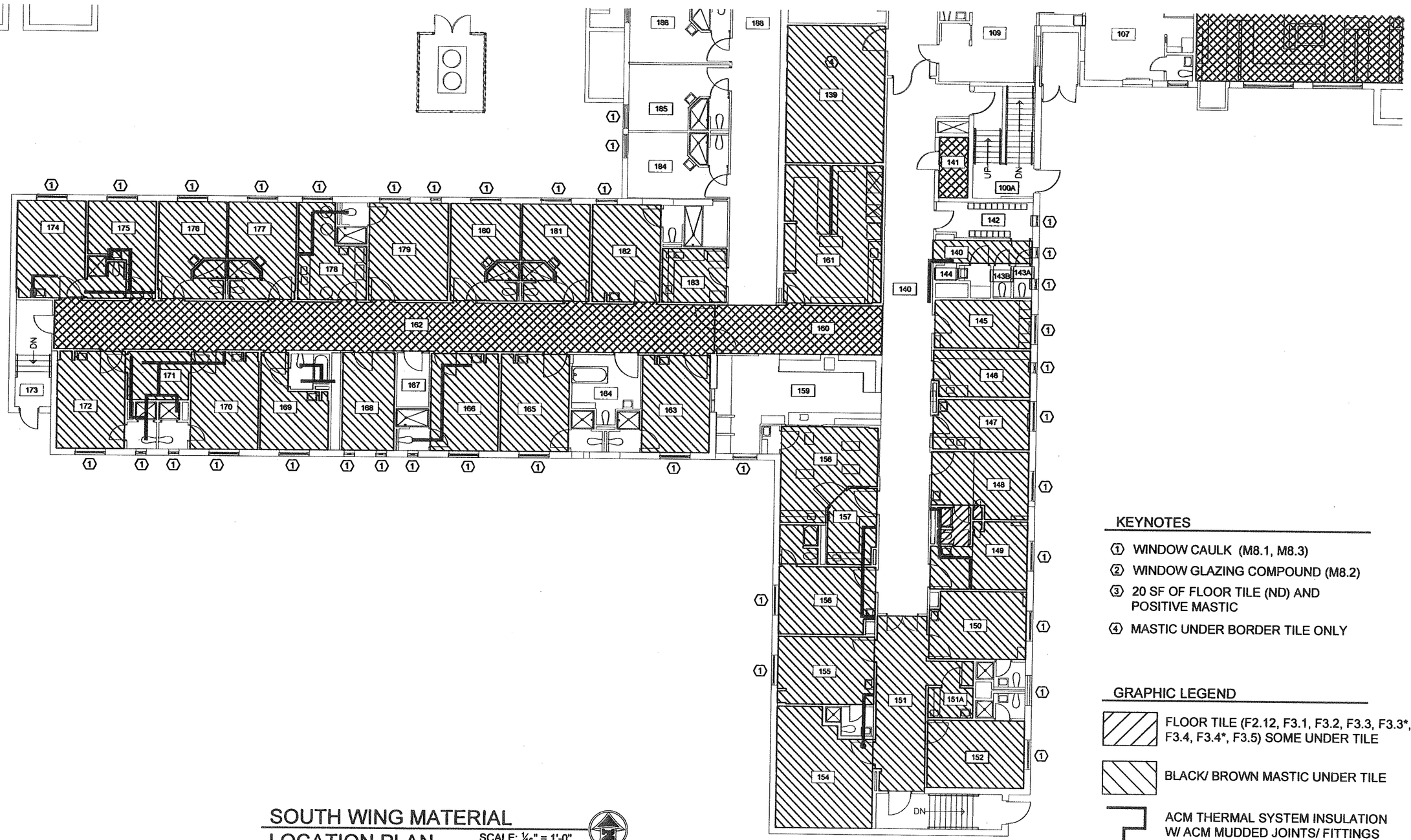
1. WINDOW CAULK (M8.1, M8.3)
2. WINDOW GLAZING COMPOUND (M8.2)
3. 20 SF OF FLOOR TILE (ND) AND POSITIVE MASTIC
4. MASTIC UNDER BORDER TILE ONLY




# NORTH WING MATERIAL LOCATION PLAN

SCALE: 1/16" = 1'-0"

| | | | |
|---|---|---|---|
| NORTHERN INDUSTRIAL HYGIENE, INC. | DATE: 03/08/16<br>DRAWN BY: CS<br>CHK BY: KO<br>CAD FILE: 999-3019.dwg | PROJECT NAME: FORMER LIVINGSTON HOSPITAL<br>LOCATION: LIVINGSTON, MT<br>NIH PROJECT NUMBER: 999-3019 | FIG. 2.1: NORTH WING ASBESTOS MATERIAL LOCATION PLAN |




## KEYNOTES

1. WINDOW CAULK (M8.1, M8.3)
2. WINDOW GLAZING COMPOUND (M8.2)
3. 20 SF OF FLOOR TILE (ND) AND POSITIVE MASTIC
4. MASTIC UNDER BORDER TILE ONLY

## GRAPHIC LEGEND

- FLOOR TILE (F2.12, F3.1, F3.2, F3.3, F3.3*, F3.4, F3.4*, F3.5) SOME UNDER TILE
- BLACK/ BROWN MASTIC UNDER TILE
- ACM THERMAL SYSTEM INSULATION W/ ACM MUDDED JOINTS/ FITTINGS
- ROOF DRAIN BOWL

# SOUTH WING MATERIAL LOCATION PLAN

SCALE: 1/16" = 1'-0"

NORTHERN INDUSTRIAL HYGIENE, INC.

| | | | |
|---|---|---|---|
| DATE: | 03/08/16 | PROJECT NAME: | FORMER LIVINGSTON HOSPITAL |
| DRAWN BY: | CS | | |
| CHK BY: | KO | LOCATION: | LIVINGSTON, MT |
| CAD FILE: | 999-3019.dwg | NIH PROJECT NUMBER: | 999-3019 |

FIG. 2.2: SOUTH WING ASBESTOS MATERIAL LOCATION PLAN

# APPENDIX A

## ASBESTOS LABORATORY ANALYSIS REPORTS

NORTHERN INDUSTRIAL HYGIENE, INC.
Billings, MT • Helena, MT • Seattle, WA

215 SW 153rd Street Burien, WA 98166
OFFICE: (206) 988-1746 FAX: (206) 988-1978
EMAIL: Rmelgoza@bridgeband.com
NVLAP Lab Code: 200511-0

1/5/2016

Kevin Oliver
Northern Industrial Hygiene, Inc.
201 South 30th Street
Billings, MT 59101-

RE: Bulk Asbestos Fiber Analysis; Batch # 16-00005
Project Location *Old Livingston Hospital-Basement*

Dear Kevin Oliver,

Thank you for choosing Northern Industrial Hygiene, Inc. as your laboratory. Enclosed you will find analytical results for the bulk samples submitted to the laboratory.

Northern Industrial Hygiene is accredited by NVLAP Lab Code: 200511-0. Accreditation by NVLAP does not indicate endorsement by NVLAP or any other government agency. All bulk samples are analyzed in accordance with U.S. EPA Method -600/M4-82-020, December 1982 and EPA Method 600/R-93-116, July 1993. "Method for Determination of Asbestos in Bulk Building Materials"(NESHAP, 40 CFR-Part 61) protocol.

Analysis is cross checked through our inter or intra laboratory quality assurance program for verification. The percent values reported are based on calibrated visual estimates by volume unless verification by Point Count is indicated. Test results reported relate only to the samples submitted by the customer to Northern Industrial Hygiene, Inc. Trace amounts of asbestos are below the limit of detection and asbestos fibers with diameters below approximately 0.25 micrometers are not detectable with the Polarized Light Microscopy (PLM) analytical procedure. A trace amount of asbestos is defined as one to five fibers in three slide mounts. Asbestos found in this amount will be reported as "< 1.0%" by PLM analysis.

This report is highly confidential and shall not be reproduced without your written approval and the written approval of Northern Industrial Hygiene, Inc.

Samples are archived for thirty (30) days following analysis. Please contact us if samples need to be archived longer than the standard holding time.

Thank you for using Northern Industrial Hygiene, Inc. If you have any questions or concerns please contact us.

Sincerely,

Jude Cummings

Reviewed by: Jude Cummings

Enclosure: Bulk Sample Results

NORTHERN INDUSTRIAL HYGIENE, INC.
Billings, MT • Helena, MT • Seattle, WA

215 SW 153rd Street Burien, WA 98166
OFFICE: (206) 988-1746 FAX: (206) 988-1978
NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Basement*

NIH Batch Number: **16-00005**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **30**

Client Sample Number: **M3.1A**
Client Sample Description: **Gypsum Board Assembly**
Client Sample Location: **Boiler Room**
Sample Comments:

Lab Sample Number: **16-00005.0001**
Checked If Sample Not Analyzed ☐

**Layer 1** **White powdery compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 2% Cellulose | 98% Filler and Binder |

**Layer 2** **White papery material with white powdery residue**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 90% Cellulose | 10% Filler and Binder |

**Layer 3** **Brown papery on white compressed powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 15% Cellulose<br>2% Fiberglass | 83% Filler and Binder |

**Comments:** **Materials distinguishable but inseparable**

Client Sample Number: **M3.1B**
Client Sample Description: **Gypsum Board Assembly**
Client Sample Location: **Boiler Room**
Sample Comments:

Lab Sample Number: **16-00005.0002**
Checked If Sample Not Analyzed ☐

**Layer 1** **White compressed powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 5% Cellulose | 95% Filler and Binder |

**Layer 2** **White papery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 95% Cellulose | 5% Filler and Binder |

**Layer 3** **Brown papery on white compressed powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 15% Cellulose<br>2% Fiberglass | 83% Filler and Binder |

**Comments:** **Materials distinguishable but inseparable**

(Sample results continued on next page.)

**Sampled by: Kevin Oliver** **12/30/2015**
**Received by: Regina Mirabal** **1/5/2016**
**Analyzed by: Jude Cummings** **1/5/2016**

Jude Cummings

**Reviewed 1/5/2016 by: Jude Cummings**

NORTHERN INDUSTRIAL HYGIENE, INC.
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OFFICE: (206) 988-1746 FAX: (206) 988-1978
NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Basement*

NIH Batch Number: **16-00005**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **30**

Client Sample Number: **M3.1C**
Client Sample Description: **Gypsum Board Assembly**
Client Sample Location: **Boiler Room**
Sample Comments:

Lab Sample Number: **16-00005.0003**
Checked If Sample Not Analyzed ☐

**Layer 1 White powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 2% Cellulose | 98% Filler and Binder |

**Layer 2 White papery material with white powdery residue**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 88% Cellulose | 12% Filler and Binder |

**Layer 3 Brown papery on white compressed powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 15% Cellulose | 83% Filler and Binder |
| | 2% Fiberglass | |

**Comments: Materials distinguishable but inseparable**

Client Sample Number: **M5.1A**
Client Sample Description: **2'x4' Medium Fissure & Pinhole Ceiling Panel**
Client Sample Location: **Room 021**
Sample Comments: **Materials distinguishable but inseparable**

Lab Sample Number: **16-00005.0004**
Checked If Sample Not Analyzed ☐

**White paint on off-white fibrous compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 30% Cellulose | 3% Paint |
| | 20% Mineral Wool and Beads | 47% Filler and Binder |

Client Sample Number: **M5.1B**
Client Sample Description: **2'x4' Medium Fissure & Pinhole Ceiling Panel**
Client Sample Location: **Room 021**
Sample Comments: **Materials distinguishable but inseparable**

Lab Sample Number: **16-00005.0005**
Checked If Sample Not Analyzed ☐

**White paint on off-white fibrous compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 30% Cellulose | 3% Paint |
| | 20% Mineral Wool and Beads | 47% Filler and Binder |

(Sample results continued on next page.)

**Sampled by: Kevin Oliver** 12/30/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Jude Cummings** 1/5/2016

Jude Cummings

**Reviewed 1/5/2016 by: Jude Cummings**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Basement*

NIH Batch Number: **16-00005**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **30**

Client Sample Number: **M5.1C**
Client Sample Description: **2'x4' Medium Fissure & Pinhole Ceiling Panel**
Client Sample Location: **Room 021**
Sample Comments:

Lab Sample Number: **16-00005.0006**
Checked If Sample Not Analyzed ☐

**Off-white compressed fibrous material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 32% Cellulose | 48% Filler and Binder |
| | 20% Mineral Wool and Beads | |

Client Sample Number: **T11.1A**
Client Sample Description: **Red Fire Stop**
Client Sample Location: **Room 026**
Sample Comments:

Lab Sample Number: **16-00005.0007**
Checked If Sample Not Analyzed ☐

**Red soft sticky material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 5% Synthetic | 85% Filler and Binder |
| | 10% Cellulose | |

Client Sample Number: **T11.1B**
Client Sample Description: **Red Fire Stop**
Client Sample Location: **Room 026**
Sample Comments:

Lab Sample Number: **16-00005.0008**
Checked If Sample Not Analyzed ☐

**Red soft flexible material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 10% Cellulose | 85% Filler and Binder |
| | 5% Synthetic | |

Client Sample Number: **T11.1C**
Client Sample Description: **Red Fire Stop**
Client Sample Location: **Room 026**
Sample Comments:

Lab Sample Number: **16-00005.0009**
Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Kevin Oliver** 12/30/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Jude Cummings** 1/5/2016

Jude Cummings

**Reviewed 1/5/2016 by: Jude Cummings**

NORTHERN INDUSTRIAL HYGIENE, INC.
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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Basement*

NIH Batch Number: **16-00005**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **30**

**Red soft flexible material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 10% Cellulose | 85% Filler and Binder |
| | 5% Synthetic | |

Client Sample Number: **F2.1A**
Client Sample Description: **12"x12" VFT - Beige W/Black Dots**
Client Sample Location: **Room 020**
Sample Comments:
Lab Sample Number: **16-00005.0010**
Checked If Sample Not Analyzed ☐

**Layer 1** **Tan vinyl with black spots**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 30% Aggregate |
| | | 70% Vinyl Filler and Binder |

**Layer 2** **Opaque sticky material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 3% Cellulose | 97% Filler and Binder |

Client Sample Number: **F2.1B**
Client Sample Description: **12"x12" VFT - Beige W/Black Dots**
Client Sample Location: **Room 024**
Sample Comments:
Lab Sample Number: **16-00005.0011**
Checked If Sample Not Analyzed ☐

**Layer 1** **Tan vinyl with black spots**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 30% Aggregate |
| | | 70% Vinyl Filler and Binder |

**Layer 2** **Opaque sticky material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 10% Cellulose | 90% Filler and Binder |

Client Sample Number: **F2.1C**
Client Sample Description: **12"x12" VFT - Beige W/Black Dots**
Client Sample Location: **Room 019**
Sample Comments:
Lab Sample Number: **16-00005.0012**
Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Kevin Oliver** 12/30/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Jude Cummings** 1/5/2016

Jude Cummings

**Reviewed 1/5/2016 by: Jude Cummings**

NORTHERN INDUSTRIAL HYGIENE, INC.
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215 SW 153rd Street Burien, WA 98166
OFFICE: (206) 988-1746 FAX: (206) 988-1978
NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Basement*

NIH Batch Number: **16-00005**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **30**

**Layer 1** **Tan vinyl with black spots**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
30% Aggregate
70% Vinyl Filler and Binder

**Layer 2** **Opaque sticky material with gray residue**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
100% Filler and Binder

Client Sample Number: **F5.1A**
Client Sample Description: **Carpet - Teal**
Client Sample Location: **Room 022**
Sample Comments:

Lab Sample Number: **16-00005.0013**

Checked If Sample Not Analyzed ☐

**Layer 1** **Blue, white and black carpet fibers**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:
95% Synthetic

Non-Fibrous Components:
5% Filler and Binder

**Layer 2** **Brown mastic**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:
6% Synthetic

Non-Fibrous Components:
94% Filler and Binder

Client Sample Number: **F5.1B**
Client Sample Description: **Carpet - Teal**
Client Sample Location: **Room 022**
Sample Comments:

Lab Sample Number: **16-00005.0014**

Checked If Sample Not Analyzed ☐

**Layer 1** **Blue, white and black carpet fibers**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:
98% Synthetic

Non-Fibrous Components:
2% Miscellaneous Particles

**Layer 2** **Brown mastic**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:
10% Synthetic

Non-Fibrous Components:
90% Filler and Binder

Client Sample Number: **F5.1C**
Client Sample Description: **Carpet - Teal**
Client Sample Location: **Room 022**
Sample Comments:

Lab Sample Number: **16-00005.0015**

Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Kevin Oliver** **12/30/2015**
**Received by: Regina Mirabal** **1/5/2016**
**Analyzed by: Jude Cummings** **1/5/2016**

Jude Cummings

**Reviewed 1/5/2016 by: Jude Cummings**

NORTHERN INDUSTRIAL HYGIENE, INC.
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215 SW 153rd Street Burien, WA 98166
OFFICE: (206) 988-1746 FAX: (206) 988-1978
NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Basement*

NIH Batch Number: **16-00005**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **30**

**Layer 1** **Blue, white and black carpet fibers**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 90% Synthetic | 4% Miscellaneous Particles |
| | | 6% Filler and Binder |

**Layer 2** **Brown mastic**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 5% Synthetic | 95% Filler and Binder |

Client Sample Number: **M5.2A** Lab Sample Number: **16-00005.0016**
Client Sample Description: **2'x4' Heavy Texture - Fissure/Pinhole Ceiling Panel**
Client Sample Location: **Room 024**
Sample Comments: **Materials distinguishable but inseparable** Checked If Sample Not Analyzed ☐

**White paint on off-white fibrous compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 35% Cellulose | 3% Paint |
| | 15% Mineral Wool and Beads | 47% Filler and Binder |

Client Sample Number: **M5.2B** Lab Sample Number: **16-00005.0017**
Client Sample Description: **2'x4' Heavy Texture - Fissure/Pinhole Ceiling Panel**
Client Sample Location: **Room 024**
Sample Comments: **Materials distinguishable but inseparable** Checked If Sample Not Analyzed ☐

**White paint on off-white fibrous compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 35% Cellulose | 2% Paint |
| | 15% Mineral Wool and Beads | 48% Filler and Binder |

Client Sample Number: **M5.2C** Lab Sample Number: **16-00005.0018**
Client Sample Description: **2'x4' Heavy Texture - Fissure/Pinhole Ceiling Panel**
Client Sample Location: **Room 024**
Sample Comments: **Materials distinguishable but inseparable** Checked If Sample Not Analyzed ☐

**White paint on off-white fibrous compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 15% Mineral Wool and Beads | 3% Paint |
| | 35% Cellulose | 47% Filler and Filler and Binder |

(Sample results continued on next page.)

**Sampled by: Kevin Oliver** 12/30/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Jude Cummings** 1/5/2016

Jude Cummings

**Reviewed 1/5/2016 by: Jude Cummings**

NORTHERN INDUSTRIAL HYGIENE, INC.
Billings, MT • Helena, MT • Seattle, WA

215 SW 153rd Street Burien, WA 98166
OFFICE: (206) 988-1746 FAX: (206) 988-1978
NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Basement*

NIH Batch Number: **16-00005**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **30**

Client Sample Number: **M5.3A** — Lab Sample Number: **16-00005.0019**
Client Sample Description: **2'x4' Light Texture - Fissure/Pinhole Ceiling Panel**
Client Sample Location: **Room 022**
Sample Comments: **Materials distinguishable but inseparable** — Checked If Sample Not Analyzed ☐

**White paint on off-white fibrous compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 35% Cellulose | 2% Paint |
| | 15% Mineral Wool and Beads | 48% Filler and Binder |

Client Sample Number: **M5.3B** — Lab Sample Number: **16-00005.0020**
Client Sample Description: **2'x4' Light Texture - Fissure/Pinhole Ceiling Panel**
Client Sample Location: **Room 022**
Sample Comments: **Materials distinguishable but inseparable** — Checked If Sample Not Analyzed ☐

**White paint on off-white fibrous compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 35% Cellulose | 3% Paint |
| | 15% Mineral Wool and Beads | 47% Filler and Binder |

Client Sample Number: **M5.3C** — Lab Sample Number: **16-00005.0021**
Client Sample Description: **2'x4' Light Texture - Fissure/Pinhole Ceiling Panel**
Client Sample Location: **Room 022**
Sample Comments: **Materials distinguishable but inseparable** — Checked If Sample Not Analyzed ☐

**White paint on off-white fibrous compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 35% Cellulose | 4% Paint |
| | 15% Mineral Wool and Beads | 46% Filler and Binder |

Client Sample Number: **M12.1A** — Lab Sample Number: **16-00005.0022**
Client Sample Description: **4" Cove Base - Light Brown**
Client Sample Location: **Room 022**
Sample Comments: — Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Kevin Oliver** 12/30/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Jude Cummings** 1/5/2016

Jude Cummings

**Reviewed 1/5/2016 by: Jude Cummings**

NORTHERN INDUSTRIAL HYGIENE, INC.
Billings, MT • Helena, MT • Seattle, WA

215 SW 153rd Street Burien, WA 98166
OFFICE: (206) 988-1746 FAX: (206) 988-1978
NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Basement*

NIH Batch Number: **16-00005**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **30**

**Layer 1** **Gray vinyl**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components: 100% Vinyl Filler and Binder

**Layer 2** **Tan mastic with white and papery residue**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components: 10% Cellulose

Non-Fibrous Components: 90% Filler and Binder

**Comments:** **Materials distinguishable but inseparable**

Client Sample Number: **M12.1B**
Client Sample Description: **4" Cove Base - Light Brown**
Client Sample Location: **Room 022**
Sample Comments:

Lab Sample Number: **16-00005.0023**

Checked If Sample Not Analyzed ☐

**Layer 1** **Gray vinyl**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components: 100% Vinyl Filler and Binder

**Layer 2** **Tan mastic with white compressed residue**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components: 100% Filler and Binder

**Comments:** **Materials distinguishable but inseparable**

**Layer 3** **Green paint on tan mastic**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components: 35% Paint
65% Filler and Binder

**Comments:** **Materials distinguishable but inseparable**

Client Sample Number: **M12.1C**
Client Sample Description: **4" Cove Base - Light Brown**
Client Sample Location: **Room 022**
Sample Comments:

Lab Sample Number: **16-00005.0024**

Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by:** **Kevin Oliver** **12/30/2015**
**Received by:** **Regina Mirabal** **1/5/2016**
**Analyzed by:** **Jude Cummings** **1/5/2016**

Jude Cummings

**Reviewed 1/5/2016 by: Jude Cummings**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Basement*

NIH Batch Number: **16-00005**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **30**

**Layer 1** **Gray vinyl**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
100% Vinyl Filler and Binder

**Layer 2** **Tan mastic with green paint and white compressed powder**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
15% Paint
85% Filler and Binder

**Comments:** **Materials distinguishable but inseparable**

**Layer 3** **Brown papery material with tan mastic**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:
50% Cellulose

Non-Fibrous Components:
50% Filler and Binder

**Comments:** **Materials distinguishable but inseparable**

Client Sample Number: **M5.4A**
Client Sample Description: **2'x4' Pinhole & Small Fissure Ceiling Panel**
Client Sample Location: **Room 020**
Sample Comments: **Materials distinguishable but inseparable**

Lab Sample Number: **16-00005.0025**
Checked If Sample Not Analyzed ☐

**White paint on off-white fibrous compressed material**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:
35% Cellulose
15% Mineral Wool and Beads

Non-Fibrous Components:
2% Paint
48% Filler and Binder

Client Sample Number: **M5.4B**
Client Sample Description: **2'x4' Pinhole & Small Fissure Ceiling Panel**
Client Sample Location: **Room 020**
Sample Comments: **Materials distinguishable but inseparable**

Lab Sample Number: **16-00005.0026**
Checked If Sample Not Analyzed ☐

**White paint on off-white fibrous compressed material**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:
35% Cellulose
15% Mineral Wool and Beads

Non-Fibrous Components:
3% Paint
47% Filler and Binder

(Sample results continued on next page.)

**Sampled by:** **Kevin Oliver** **12/30/2015**
**Received by:** **Regina Mirabal** **1/5/2016**
**Analyzed by:** **Jude Cummings** **1/5/2016**

Jude Cummings

**Reviewed 1/5/2016 by: Jude Cummings**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Basement*

NIH Batch Number: **16-00005**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **30**

Client Sample Number: **M5.4C**
Client Sample Description: **2'x4' Pinhole & Small Fissure Ceiling Panel**
Client Sample Location: **Room 020**
Sample Comments: **Materials distinguishable but inseparable**

Lab Sample Number: **16-00005.0027**
Checked If Sample Not Analyzed ☐

**White paint on off-white fibrous compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 35% Cellulose | 4% Paint |
| | 15% Mineral Wool and Beads | 46% Filler and Binder |

Client Sample Number: **F2.2A**
Client Sample Description: **12"x12" Floor Tile - Pink W/Black Spots**
Client Sample Location: **Room 009**
Sample Comments:

Lab Sample Number: **16-00005.0028**
Checked If Sample Not Analyzed ☐

**Layer 1** **Tan vinyl with black spots**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | | 30% Aggregate |
| | | 70% Vinyl Filler and Binder |

**Layer 2** **Opaque mastic**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | | 100% Filler and Binder |

Client Sample Number: **F2.2B**
Client Sample Description: **12"x12" Floor Tile - Pink W/Black Spots**
Client Sample Location: **Room 009**
Sample Comments:

Lab Sample Number: **16-00005.0029**
Checked If Sample Not Analyzed ☐

**Layer 1** **Tan vinyl with black spots**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | | 30% Aggregate |
| | | 70% Vinyl Filler and Binder |

**Layer 2** **Opaque mastic**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 1% Cellulose | 99% Filler and Binder |

(Sample results continued on next page.)

**Sampled by: Kevin Oliver** **12/30/2015**
**Received by: Regina Mirabal** **1/5/2016**
**Analyzed by: Jude Cummings** **1/5/2016**

Jude Cummings

**Reviewed 1/5/2016 by: Jude Cummings**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Basement*

NIH Batch Number: **16-00005**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **30**

Client Sample Number: **F2.2C**
Client Sample Description: **12"x12" Floor Tile - Pink W/Black Spots**
Client Sample Location: **Room 007**
Sample Comments:

Lab Sample Number: **16-00005.0030**
Checked If Sample Not Analyzed ☐

**Layer 1** **Tan vinyl with black spots**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 30% Aggregate<br>70% Vinyl Filler and Binder |

**Layer 2** **Opaque and gray mastic with fibrous residue**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 3% Synthetic | 97% Filler and Binder |

**Sampled by: Kevin Oliver** 12/30/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Jude Cummings** 1/5/2016

Jude Cummings

**Reviewed 1/5/2016 by: Jude Cummings**

# Chain of Custody

NVLAP Lab Code 200511-0

**Northern Industrial Hygiene, Inc.**
201 South 30th Street
Billings, MT 59101
Office Phone: (406) 245-7766
Cell Phone: (406) 670-5582
Email: koliver@bridgeband.com
Inspector/Contact: Kevin Oliver

| | |
|---|---|
| NIH Lab Batch ID: | 16-00005 |
| Project Name: | Old Livingston Hospital |
| Project Number: | 999-3019 |
| Date Samples Taken: | 12/30/15 |
| Type of Analysis: | PLM |

| Turnaround Time Requested | |
|---|---|
| 2 Hour: | |
| Same Day: | |
| 24 Hour: | |
| 48 Hour: | |
| 5 Day: | 5-Day |
| 10 Day: | |

For Lab Use Only
Sample(s) Size: ___ Accepted ___ Rejected
Non-Conformance Memo: ___ Yes ___ No
Package Condition: ___ Good ___ Damaged ___ Severe Damage

Page 2 of 2

| NIH LAB ID | SAMPLE # | SAMPLE DESCRIPTION | SAMPLE LOCATION |
|---|---|---|---|
| 10 | F21 A | 12"x12" VFT Beige w/ Black Dots | Room 020 |
| 11 | B | | 024 |
| 12 | C | | 019 |
| 13 | F5 1 A | Teal Carpet | RM 022 |
| 14 | B | | |
| 15 | C | | |
| 16 | M52 A | 2'x4' Heavy Texture, Fissure, Pinhole | RM 024 |
| 17 | B | Ceiling Panel | |
| 18 | C | " " | |
| 19 | M5.3 A | 2'x4' Light Texture, Fissure Pinhole | Room 022 |
| 20 | B | Ceiling panel | |
| 21 | C | | |
| 22 | M12.1 A | 4" Light Brown Cove Base | RM 022 |
| 23 | B | | |
| 24 | C | | |
| 25 | M54 A | 2'x4' Pinhole And Small Fissure | Rm 020 |
| 26 | B | Ceiling Panel | |
| 27 | C | | |
| 28 | F22 A | 12"x12" Pink w/ Black Spots | Rm 009 |
| 29 | B | Floor tile | |
| 30 | C | | 007 |

Special Instructions: Analyze Group Method - Stop at First Positive ✓ Yes No
Number of samples shipped this page: 21
Total number of samples shipped: 274

| | | | |
|---|---|---|---|
| Relinquished By: [signature] | Date: 1/4/16 | Time: 17:00 | Firm: NIH |
| Received By: [signature] | Date: 1/5/16 | Time: 11:50 | Firm: NIH Billings |
| Analyzed By: [signature] | Date: 1-5-16 | Time: 13:05 | Firm: Lab |

Revised 01/20/15 RIM

# Chain of Custody

NVLAP Lab Code 200511-0

**Northern Industrial Hygiene, Inc.**
201 South 30th Street
Billings, MT 59101
Office Phone: (406) 245-7766
Cell Phone: (406) 670-5582
Email: koliver@bridgeband.com
Inspector/Contact: Kevin Oliver

| | |
|---|---|
| NIH Lab Batch ID: | 16-000005 |
| Project Name: | Old Livingston Hospital |
| Project Number: | 999-3019 |
| Date Samples Taken: | 12/30/15 |
| Type of Analysis: | PLM |

| Turnaround Time Requested | |
|---|---|
| 2 Hour: | |
| Same Day: | |
| 24 Hour: | |
| 48 Hour: | |
| 5 Day: | 5-day |
| 10 Day: | |

For Lab Use Only
Sample(s) Size: Accepted ___ Rejected
Non-Conformance Memo: ___ Yes ___ No
Package Condition: Good ___ Damaged ___ Severe Damage

Page 1 of 2

| NIH LAB ID | SAMPLE # | SAMPLE DESCRIPTION | SAMPLE LOCATION |
|---|---|---|---|
| 1 | M3.1 A | Gypsum Board Assembly | Boiler Room |
| 2 | B | | |
| 3 | C | | |
| | ~~M3.2 A~~ | ~~Gypsum Board Assembly CR16 Construction~~ | |
| | ~~B~~ | | |
| | ~~C~~ | | |
| 4 | M5.1 A | 2'x4' Medium Fissure And Pin hole | Room 021 |
| 5 | B | Ceiling Panel | |
| 6 | C | | |
| 7 | T11 1 A | Red Fire Stop | RM 026 |
| 8 | B | | |
| 9 | C | | |
| | ~~M7.1 A~~ | ~~Plaster on Expanded Metal~~ | |
| | ~~B~~ | | |
| | ~~C~~ | | |
| | ~~D~~ | | |
| | ~~E~~ | | |
| | ~~F~~ | | |
| | ~~G~~ | | |

Special Instructions: Analyze Group Method - Stop at First Positive ✓ Yes ___ No
Number of samples shipped this page: 9
Total number of samples shipped: 274

| | | | |
|---|---|---|---|
| Relinquished By: [signature] | Date: 1/4/16 | Time: 17:00 | Firm: NIH |
| Received By: [signature] | Date: 1/5/16 | Time: 11:50 | Firm: NIH Billings |
| Analyzed By: [signature] | Date: 1-5-16 | Time: 13:05 | Firm: [illegible] |

Revised 01/20/15 RIM

NORTHERN INDUSTRIAL HYGIENE, INC.
Billings, MT • Helena, MT • Seattle, WA

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OFFICE: (206) 988-1746 FAX: (206) 988-1978
EMAIL: Rmelgoza@bridgeband.com
NVLAP Lab Code: 200511-0

1/5/2016

Kevin Oliver
Northern Industrial Hygiene, Inc.
201 South 30th Street
Billings, MT 59101-

RE: Bulk Asbestos Fiber Analysis; Batch # 16-00006
Project Location *Old Livingston Hospital-Basement*

Dear Kevin Oliver,

Thank you for choosing Northern Industrial Hygiene, Inc. as your laboratory. Enclosed you will find analytical results for the bulk samples submitted to the laboratory.

Northern Industrial Hygiene is accredited by NVLAP Lab Code: 200511-0. Accreditation by NVLAP does not indicate endorsement by NVLAP or any other government agency. All bulk samples are analyzed in accordance with U.S. EPA Method -600/M4-82-020, December 1982 and EPA Method 600/R-93-116, July 1993. "Method for Determination of Asbestos in Bulk Building Materials"(NESHAP, 40 CFR-Part 61) protocol.

Analysis is cross checked through our inter or intra laboratory quality assurance program for verification. The percent values reported are based on calibrated visual estimates by volume unless verification by Point Count is indicated. Test results reported relate only to the samples submitted by the customer to Northern Industrial Hygiene, Inc. Trace amounts of asbestos are below the limit of detection and asbestos fibers with diameters below approximately 0.25 micrometers are not detectable with the Polarized Light Microscopy (PLM) analytical procedure. A trace amount of asbestos is defined as one to five fibers in three slide mounts. Asbestos found in this amount will be reported as "< 1.0%" by PLM analysis.

This report is highly confidential and shall not be reproduced without your written approval and the written approval of Northern Industrial Hygiene, Inc.

Samples are archived for thirty (30) days following analysis. Please contact us if samples need to be archived longer than the standard holding time.

Thank you for using Northern Industrial Hygiene, Inc. If you have any questions or concerns please contact us.

Sincerely,

Jude Cummings

Reviewed by: Jude Cummings

Enclosure: Bulk Sample Results

NORTHERN INDUSTRIAL HYGIENE, INC.
Billings, MT • Helena, MT • Seattle, WA

215 SW 153rd Street Burien, WA 98166
OFFICE: (206) 988-1746 FAX: (206) 988-1978
NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Basement*

NIH Batch Number: **16-00006**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **21**

Client Sample Number: **F5.2A**
Client Sample Description: **Carpet - Blue**
Client Sample Location: **Room 18**
Sample Comments: **Materials distinguishable but inseparable**

Lab Sample Number: **16-00006.0001**
Checked If Sample Not Analyzed ☐

**Blue, white and black carpet fibers with tan mastic residue**

**Asbestos Fibrous Components:**
**No Asbestos Detected**

Non-Asbestos Fibrous Components:
92% Synthetic

Non-Fibrous Components:
3% Miscellaneous Materials
5% Filler and Binder

Client Sample Number: **F5.2B**
Client Sample Description: **Carpet - Blue**
Client Sample Location: **Room 18**
Sample Comments: **Materials distinguishable but inseparable**

Lab Sample Number: **16-00006.0002**
Checked If Sample Not Analyzed ☐

**Blue, white and black carpet fibers with tan mastic residue**

**Asbestos Fibrous Components:**
**No Asbestos Detected**

Non-Asbestos Fibrous Components:
92% Synthetic

Non-Fibrous Components:
8% Filler and Binder

Client Sample Number: **F5.2C**
Client Sample Description: **Carpet - Blue**
Client Sample Location: **Room 17**
Sample Comments: **Materials distinguishable but inseparable**

Lab Sample Number: **16-00006.0003**
Checked If Sample Not Analyzed ☐

**Blue, white and black carpet fibers with tan mastic residue**

**Asbestos Fibrous Components:**
**No Asbestos Detected**

Non-Asbestos Fibrous Components:
90% Synthetic

Non-Fibrous Components:
2% Miscellaneous Particles
8% Filler and Binder

Client Sample Number: **F1.1A**
Client Sample Description: **Vinyl Sheet Floor - Tan Tile Pattern**
Client Sample Location: **Room 23**
Sample Comments:

Lab Sample Number: **16-00006.0004**
Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Kevin Oliver** 12/30/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Jude Cummings** 1/5/2016

Jude Cummings

**Reviewed 1/5/2016 by: Jude Cummings**

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215 SW 153rd Street Burien, WA 98166
OFFICE: (206) 988-1746 FAX: (206) 988-1978
NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Basement*

NIH Batch Number: **16-00006**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **21**

**Layer 1** **Medium brown carpet mastic**

**Asbestos Fibrous Components:** **No Asbestos Detected**
Non-Asbestos Fibrous Components: 6% Synthetic
Non-Fibrous Components: 94% Filler and Binder

**Layer 2** **Medium brown vinyl with white fibrous backing**

**Asbestos Fibrous Components:** **10% Chrysotile Asbestos**
Non-Asbestos Fibrous Components:
Non-Fibrous Components: 35% Filler and Binder; 55% Vinyl Filler and Binder

**Comments:** **Materials distinguishable but inseparable**

Client Sample Number: **F1.1B**
Client Sample Description: **Vinyl Sheet Floor - Tan Tile Pattern**
Client Sample Location: **Room 23**
Sample Comments:
Lab Sample Number: **16-00006.0005**
Checked If Sample Not Analyzed ☐

**Layer 1** **Medium brown carpet mastic**

**Asbestos Fibrous Components:** **No Asbestos Detected**
Non-Asbestos Fibrous Components: 8% Synthetic
Non-Fibrous Components: 92% Filler and Binder

**Layer 2** **Vinyl**

**Asbestos Fibrous Components:** **Not Analyzed Per Client**
Non-Asbestos Fibrous Components:
Non-Fibrous Components:

Client Sample Number: **F1.1C**
Client Sample Description: **Vinyl Sheet Floor - Tan Tile Pattern**
Client Sample Location: **Room 23**
Sample Comments:
Lab Sample Number: **16-00006.0006**
Checked If Sample Not Analyzed ☐

**Layer 1** **Medium brown carpet mastic**

**Asbestos Fibrous Components:** **No Asbestos Detected**
Non-Asbestos Fibrous Components: 6% Synthetic
Non-Fibrous Components: 94% Filler and Binder

**Layer 2** **Vinyl**

**Asbestos Fibrous Components:** **Not Analyzed Per Client**
Non-Asbestos Fibrous Components:
Non-Fibrous Components:

(Sample results continued on next page.)

**Sampled by:** **Kevin Oliver** **12/30/2015**
**Received by:** **Regina Mirabal** **1/5/2016**
**Analyzed by:** **Jude Cummings** **1/5/2016**

Jude Cummings

**Reviewed 1/5/2016 by: Jude Cummings**

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Billings, MT • Helena, MT • Seattle, WA

215 SW 153rd Street Burien, WA 98166
OFFICE: (206) 988-1746 FAX: (206) 988-1978
NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Basement*

NIH Batch Number: **16-00006**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **21**

Client Sample Number: **F6.1A** — Lab Sample Number: **16-00006.0007**
Client Sample Description: **Leveling Compound**
Client Sample Location: **Room 18**
Sample Comments: **Materials distinguishable but inseparable** — Checked If Sample Not Analyzed ☐

**White compressed powdery material with tan mastic residue**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 3% Synthetic | 97% Filler and Binder |

Client Sample Number: **F6.1B** — Lab Sample Number: **16-00006.0008**
Client Sample Description: **Leveling Compound**
Client Sample Location: **Room 18**
Sample Comments: — Checked If Sample Not Analyzed ☐

**White compressed powdery material with tan mastic residueTan mastic with white powdery resi**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 3% Synthetic | 97% Filler and Binder |

Client Sample Number: **F6.1C** — Lab Sample Number: **16-00006.0009**
Client Sample Description: **Leveling Compound**
Client Sample Location: **Room 18**
Sample Comments: **Materials distinguishable but inseparable** — Checked If Sample Not Analyzed ☐

**White compressed powdery material with tan mastic residue**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 3% Synthetic | 97% Filler and Binder |

Client Sample Number: **M5.5A** — Lab Sample Number: **16-00006.0010**
Client Sample Description: **2' X 4' - 5"x5" Pattern Ceiling Panel**
Client Sample Location: **Room 18**
Sample Comments: **Materials distinguishable but inseparable** — Checked If Sample Not Analyzed ☐

**White paint on off-white fibrous compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 35% Cellulose | 2% Paint |
| | 15% Mineral Wool and Beads | 48% Filler and Binder |

(Sample results continued on next page.)

**Sampled by: Kevin Oliver** 12/30/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Jude Cummings** 1/8/2016

Jude Cummings

**Reviewed 1/5/2016 by: Jude Cummings**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Basement*

NIH Batch Number: **16-00006**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **21**

Client Sample Number: **M5.5B** — Lab Sample Number: **16-00006.0011**
Client Sample Description: **2' X 4' - 5"x5" Pattern Ceiling Panel**
Client Sample Location: **Room 18**
Sample Comments: **Materials distinguishable but inseparable** — Checked If Sample Not Analyzed ☐

**White paint on off-white fibrous compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 30% Cellulose | 1% Paint |
| | 15% Mineral Wool and Beads | 54% Filler and Binder |

Client Sample Number: **M5.5C** — Lab Sample Number: **16-00006.0012**
Client Sample Description: **2' X 4' - 5"x5" Pattern Ceiling Panel**
Client Sample Location: **Room 17**
Sample Comments: **Materials distinguishable but inseparable** — Checked If Sample Not Analyzed ☐

**White paint on off-white fibrous compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 30% Cellulose | 4% Paint |
| | 15% Mineral Wool and Beads | 51% Filler and Binder |

Client Sample Number: **M16.2A** — Lab Sample Number: **16-00006.0013**
Client Sample Description: **Concrete**
Client Sample Location: **Room 016 - Addition**
Sample Comments: **Materials distinguishable but inseparable** — Checked If Sample Not Analyzed ☐

**Pieces of white paint mixed with white gritty material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 6% Paint |
| | | 70% Aggregate |
| | | 24% Filler and Binder |

Client Sample Number: **M16.2B** — Lab Sample Number: **16-00006.0014**
Client Sample Description: **Concrete**
Client Sample Location: **Room 016 - Addition**
Sample Comments: **Materials distinguishable but inseparable** — Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Kevin Oliver** 12/30/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Jude Cummings** 1/8/2016

Jude Cummings

**Reviewed 1/5/2016 by: Jude Cummings**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Basement*

NIH Batch Number: **16-00006**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **21**

**White paint on white gritty compressed material**

**Asbestos Fibrous Components:**
No Asbestos Detected

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
10% Paint
70% Aggregate
20% Filler and Binder

Client Sample Number: **M16.2C**
Client Sample Description: **Concrete**
Client Sample Location: **Room 016 - Addition**
Sample Comments: **Materials distinguishable but inseparable**

Lab Sample Number: **16-00006.0015**

Checked If Sample Not Analyzed ☐

**White paint on off-white gritty material**

**Asbestos Fibrous Components:**
No Asbestos Detected

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
5% Paint
80% Aggregate
15% Filler and Binder

Client Sample Number: **M3.3A**
Client Sample Description: **Gypsum Board Assembly**
Client Sample Location: **Room 016A - Addition**
Sample Comments:

Lab Sample Number: **16-00006.0016**

Checked If Sample Not Analyzed ☐

**Layer 1** **White paint on white compressed powder**

**Asbestos Fibrous Components:**
No Asbestos Detected

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
30% Paint
70% Filler and Binder

**Comments:** **Materials distinguishable but inseparable**

**Layer 2** **Gray paint on white compressed powdery material**

**Asbestos Fibrous Components:**
No Asbestos Detected

Non-Asbestos Fibrous Components:
2% Cellulose

Non-Fibrous Components:
30% Paint
68% Filler and Binder

**Comments:** **Materials distinguishable but inseparable**

(Sample results continued on next page.)

**Sampled by:** **Kevin Oliver** **12/30/2015**
**Received by:** **Regina Mirabal** **1/5/2016**
**Analyzed by:** **Jude Cummings** **1/8/2016**

Jude Cummings

**Reviewed 1/5/2016 by: Jude Cummings**

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# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Basement*

NIH Batch Number: **16-00006**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **21**

**Layer 3** **Gray and brown paper on white compressed powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 20% Cellulose | 77% Filler and Binder |
| | 3% Fiberglass | |

**Comments:** **Materials distinguishable but inseparable**

Client Sample Number: **M3.3B**
Client Sample Description: **Gypsum Board Assembly**
Client Sample Location: **Room 016 - Addition**
Sample Comments:

Lab Sample Number: **16-00006.0017**
Checked If Sample Not Analyzed ☐

**Layer 1** **White paint on white compressed powder**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 2% Cellulose | 25% Paint |
| | | 73% Filler and Binder |

**Comments:** **Materials distinguishable but inseparable**

**Gray paint on brown papery on white compressed powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 20% Cellulose | 3% Paint |
| | 2% Fiberglass | 75% Filler and Binder |

**Comments:** **Materials distinguishable but inseparable**

Client Sample Number: **M3.3C**
Client Sample Description: **Gypsum Board Assembly**
Client Sample Location: **Room 015 - Addition**
Sample Comments:

Lab Sample Number: **16-00006.0018**
Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by:** **Kevin Oliver** **12/30/2015**
**Received by:** **Regina Mirabal** **1/5/2016**
**Analyzed by:** **Jude Cummings** **1/8/2016**

Jude Cummings

**Reviewed 1/5/2016 by: Jude Cummings**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

| | | | |
|---|---|---|---|
| **Northern Industrial Hygiene, Inc.** | | NIH Batch Number: | **16-00006** |
| **201 South 30th Street** | | Client Job Number: | **999-3019** |
| **Billings, MT 59101-** | | Turn Around Time: | **5 Day** |
| Project Location: | *Old Livingston Hospital-Basement* | Samples Analyzed: | **21** |

**Layer 1** **White paint on white compressed powder**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 2% Cellulose | 25% Paint |
| | | 73% Filler and Binder |

**Comments:** **Materials distinguishable but inseparable**

**Layer 2** **White papery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 88% Cellulose | 12% Filler and Binder |

**Layer 3** **Gray and brown papery on white compressed powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 20% Cellulose | 77% Filler and Binder |
| | 3% Fiberglass | |

**Comments:** **Materials distinguishable but inseparable**

Client Sample Number: **M12.2A** Lab Sample Number: **16-00006.0019**
Client Sample Description: **4" Beige Cove Base W/White Adhesive**
Client Sample Location: **Room 014**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **Off-white vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | | 100% Vinyl Filler and Binder |

**Layer 2** **White mastic with white powdery residue**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | | 100% Filler and Binder |

**Comments:** **Materials distinguishable but inseparable**

Client Sample Number: **M12.2B** Lab Sample Number: **16-00006.0020**
Client Sample Description: **4" Beige Cove Base W/White Adhesive**
Client Sample Location: **Room 014**
Sample Comments: Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

| | | |
|---|---|---|
| **Sampled by:** | **Kevin Oliver** | **12/30/2015** |
| **Received by:** | **Regina Mirabal** | **1/5/2016** |
| **Analyzed by:** | **Jude Cummings** | **1/8/2016** |

Jude Cummings

**Reviewed 1/5/2016 by: Jude Cummings**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Basement*

NIH Batch Number: **16-00006**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **21**

**Layer 1** **Off-white vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | | 100% Vinyl Filler and Binder |

**Layer 2** **White mastic with white powdery residue and paper**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 5% Cellulose | 95% Filler and Binder |

Client Sample Number: **M12.2C**
Lab Sample Number: **16-00006.0021**
Client Sample Description: **4" Beige Cove Base W/White Adhesive**
Client Sample Location: **Room 014**
Sample Comments:
Checked If Sample Not Analyzed ☐

**Layer 1** **Off-white vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | | 100% Vinyl Filler and Binder |

**Layer 2** **White mastic with white compressed powdery residue**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 2% Cellulose | 98% Filler and Binder |

**Sampled by:** Kevin Oliver 12/30/2015
**Received by:** Regina Mirabal 1/5/2016
**Analyzed by:** Jude Cummings 1/8/2016

Jude Cummings

**Reviewed 1/5/2016 by: Jude Cummings**

# Chain of Custody

NVLAP Lab Code 200511-0


**Northern Industrial Hygiene, Inc.**
201 South 30th Street
Billings, MT 59101
Office Phone: (406) 245-7766
Cell Phone: (406) 670-5582
Email: koliver@bridgeband.com
Inspector/Contact: Kevin Oliver


| | |
|---|---|
| NIH Lab Batch ID: | 16-000006 |
| Project Name: | Old Livingston Hospital |
| Project Number: | 999-3019 |
| Date Samples Taken: | 12/30/15 |
| Type of Analysis: | PLM |

| Turnaround Time Requested | |
|---|---|
| 2 Hour: | |
| Same Day: | |
| 24 Hour: | |
| 48 Hour: | |
| 5 Day: | 5-day |
| 10 Day: | |

For Lab Use Only
Sample(s) Size: ___ Accepted ___ Rejected
Non-Conformance Memo: ___ Yes ___ No
Package Condition: ___ Good ___ Damaged ___ Severe Damage

Page 3 of ___

| NIH LAB ID | SAMPLE # | SAMPLE DESCRIPTION | SAMPLE LOCATION |
|---|---|---|---|
| 1 | F5.2 A | Blue Carpet | Rm 18 |
| 2 | B | | 18 |
| 3 | C | | 17 |
| 4 | F1.1 A | Tan tile Pattern Vinyl Sheet | Rm 23 |
| 5 | B | Floor | |
| 6 | C | | |
| 7 | F6.1 A | Leveling Compound | Rm 18 |
| 8 | B | | |
| 9 | C | | |
| 10 | M5.5 A | 2'x4' 5"x5" pattern Ceiling Panel | Rm 18 |
| 11 | B | | 18 |
| 12 | C | | 17 |
| 13 | M16.2 A | Concrete Addition | Rm 016 |
| 14 | B | | |
| 15 | C | | |
| 16 | M3.3 A | Gypsum Board Assembly - | Room 016A |
| 17 | B | Addition | 016 |
| 18 | C | | 015 |
| 19 | M12.2 A | 4" Black Cove Base w/ white | Room 014 |
| 20 | B | Adhesive | |
| 21 | C | | |

Special Instructions: Analyze Group Method - Stop at First Positive ✓ Yes ___ No
Number of samples shipped this page: 21
Total number of samples shipped: ~~21~~ 274

| | | | |
|---|---|---|---|
| Relinquished By: [signature] | Date: 1/4/16 | Time: 12:00 | Firm: NIH |
| Received By: [signature] | Date: 1/5/16 | Time: 11:50 | Firm: NIH Billings |
| Analyzed By: [signature] | Date: 1-6-16 | Time: 11:25 | Firm: LAB |

Revised 01/20/15 RIM

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215 SW 153rd Street Burien, WA 98166
OFFICE: (206) 988-1746 FAX: (206) 988-1978
EMAIL: Rmelgoza@bridgeband.com
NVLAP Lab Code: 200511-0

1/9/2016

Kevin Oliver
Northern Industrial Hygiene, Inc.
201 South 30th Street
Billings, MT 59101-

RE: Bulk Asbestos Fiber Analysis; Batch # 16-00007
Project Location *Old Livingston Hospital-Basement*

Dear Kevin Oliver,

Thank you for choosing Northern Industrial Hygiene, Inc. as your laboratory. Enclosed you will find analytical results for the bulk samples submitted to the laboratory.

Northern Industrial Hygiene is accredited by NVLAP Lab Code: 200511-0. Accreditation by NVLAP does not indicate endorsement by NVLAP or any other government agency. All bulk samples are analyzed in accordance with U.S. EPA Method -600/M4-82-020, December 1982 and EPA Method 600/R-93-116, July 1993. "Method for Determination of Asbestos in Bulk Building Materials"(NESHAP, 40 CFR-Part 61) protocol.

Analysis is cross checked through our inter or intra laboratory quality assurance program for verification. The percent values reported are based on calibrated visual estimates by volume unless verification by Point Count is indicated. Test results reported relate only to the samples submitted by the customer to Northern Industrial Hygiene, Inc. Trace amounts of asbestos are below the limit of detection and asbestos fibers with diameters below approximately 0.25 micrometers are not detectable with the Polarized Light Microscopy (PLM) analytical procedure. A trace amount of asbestos is defined as one to five fibers in three slide mounts. Asbestos found in this amount will be reported as "< 1.0%" by PLM analysis.

This report is highly confidential and shall not be reproduced without your written approval and the written approval of Northern Industrial Hygiene, Inc.

Samples are archived for thirty (30) days following analysis. Please contact us if samples need to be archived longer than the standard holding time.

Thank you for using Northern Industrial Hygiene, Inc. If you have any questions or concerns please contact us.

Sincerely,

Jude Cummings

Reviewed by: Jude Cummings

Enclosure: Bulk Sample Results

NORTHERN INDUSTRIAL HYGIENE, INC.
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OFFICE: (206) 988-1746 FAX: (206) 988-1978
NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Basement*

NIH Batch Number: **16-00007**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **31**

Client Sample Number: **M5.6A** — Lab Sample Number: **16-00007.0001**
Client Sample Description: **2' X 4' Deep Fissure/Pinhole/Light Texture Panel**
Client Sample Location: **Room 14**
Sample Comments: **Materials distinguishable but inseparable** — Checked If Sample Not Analyzed ☐

**White paint on off-white fibrous compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 30% Cellulose | 2% Paint |
| | 15% Mineral Wool and Beads | 53% Filler and Binder |

Client Sample Number: **M5.6B** — Lab Sample Number: **16-00007.0002**
Client Sample Description: **2' X 4' Deep Fissure/Pinhole/Light Texture Panel**
Client Sample Location: **Room 14**
Sample Comments: **Materials distinguishable but inseparable** — Checked If Sample Not Analyzed ☐

**White paint on off-white fibrous compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 30% Cellulose | 5% Paint |
| | 15% Mineral Wool and Beads | 50% Filler and Binder |

Client Sample Number: **M5.6C** — Lab Sample Number: **16-00007.0003**
Client Sample Description: **2' X 4' Deep Fissure/Pinhole/Light Texture Panel**
Client Sample Location: **Room 07**
Sample Comments: **Materials distinguishable but inseparable** — Checked If Sample Not Analyzed ☐

**White paint on off-white fibrous compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 30% Cellulose | 4% Paint |
| | 15% Mineral Wool and Beads | 51% Filler and Binder |

Client Sample Number: **T9.1A** — Lab Sample Number: **16-00007.0004**
Client Sample Description: **Duct Sealant - Gray**
Client Sample Location: **Room 016**
Sample Comments: — Checked If Sample Not Analyzed ☐

**Dark gray non-fibrous firm material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 100% Filler and Binder |

(Sample results continued on next page.)

**Sampled by: Kevin Oliver** 12/30/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Jude Cummings** 1/9/2016

Jude Cummings

**Reviewed 1/9/2016 by: Jude Cummings**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Basement*

NIH Batch Number: **16-00007**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **31**

Client Sample Number: **T9.1B** Lab Sample Number: **16-00007.0005**
Client Sample Description: **Duct Sealant - Gray**
Client Sample Location: **Room 016**
Sample Comments: Checked If Sample Not Analyzed ☐

**Dark gray non-fibrous firm material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 1% Cellulose | 99% Filler and Binder |

Client Sample Number: **T9.1C** Lab Sample Number: **16-00007.0006**
Client Sample Description: **Duct Sealant - Gray**
Client Sample Location: **Room 016**
Sample Comments: Checked If Sample Not Analyzed ☐

**Dark gray non-fibrous firm material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 100% Filler and Binder |

Client Sample Number: **F1.2A** Lab Sample Number: **16-00007.0007**
Client Sample Description: **Vinyl Sheet Flooring - Beige**
Client Sample Location: **Room 11**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **Light brown swirl pattern vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 100% Vinyl Filler and Binder |

**Layer 2** **Tan sticky material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 2% Cellulose | 98% Filler and Binder |

Client Sample Number: **F1.2B** Lab Sample Number: **16-00007.0008**
Client Sample Description: **Vinyl Sheet Flooring - Beige**
Client Sample Location: **Room 11**
Sample Comments: Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Kevin Oliver** **12/30/2015**
**Received by: Regina Mirabal** **1/5/2016**
**Analyzed by: Jude Cummings** **1/9/2016**

Jude Cummings

**Reviewed 1/9/2016 by: Jude Cummings**

NORTHERN INDUSTRIAL HYGIENE, INC.
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OFFICE: (206) 988-1746 FAX: (206) 988-1978
NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Basement*

NIH Batch Number: **16-00007**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **31**

**Layer 1** **Light brown swirl pattern vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 100% Vinyl Filler and Binder |

**Layer 2** **Tan and black sticky material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 2% Cellulose | 2% Asphalt Filler and Binder |
| | | 96% Filler and Binder |

Client Sample Number: **F1.2C** Lab Sample Number: **16-00007.0009**
Client Sample Description: **Vinyl Sheet Flooring - Beige**
Client Sample Location: **Room 11**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **Light brown swirl pattern vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 100% Vinyl Filler and Binder |

**Layer 2** **Tan sticky material with gritty residue**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 2% Cellulose | 10% Miscellaneous Materials |
| | | 88% Filler and Binder |

Client Sample Number: **F2.3A** Lab Sample Number: **16-00007.0010**
Client Sample Description: **12"x12" White W/Gray Specks FloorTile**
Client Sample Location: **Room 10**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **White vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 30% Aggregate |
| | | 70% Vinyl Filler and Binder |

**Layer 2** **Opaque sticky material with gray residue**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 3% Cellulose | 10% Miscellaneous Materials |
| | | 87% Filler and Binder |

(Sample results continued on next page.)

**Sampled by: Kevin Oliver** **12/30/2015**
**Received by: Regina Mirabal** **1/5/2016**
**Analyzed by: Jude Cummings** **1/9/2016**

Jude Cummings

**Reviewed 1/9/2016 by: Jude Cummings**

NORTHERN INDUSTRIAL HYGIENE, INC.
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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Basement*

NIH Batch Number: **16-00007**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **31**

Client Sample Number: **F2.3B**
Client Sample Description: **12"x12" White W/Gray Specks FloorTile**
Client Sample Location: **Room 10**
Sample Comments:

Lab Sample Number: **16-00007.0011**
Checked If Sample Not Analyzed ☐

**Layer 1 White vinyl**

**Asbestos Fibrous Components:**
**No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
30% Aggregate
70% Vinyl Filler and Binder

**Layer 2 Opaque sticky material with gray residue**

**Asbestos Fibrous Components:**
**No Asbestos Detected**

Non-Asbestos Fibrous Components:
5% Cellulose

Non-Fibrous Components:
10% Miscellaneous Materials
85% Filler and Binder

Client Sample Number: **F2.3C**
Client Sample Description: **12"x12" White W/Gray Specks FloorTile**
Client Sample Location: **Room 10**
Sample Comments:

Lab Sample Number: **16-00007.0012**
Checked If Sample Not Analyzed ☐

**Layer 1 White vinyl**

**Asbestos Fibrous Components:**
**No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
100% Vinyl Filler and Binder

**Layer 2 Opaque sticky material with gray residue**

**Asbestos Fibrous Components:**
**No Asbestos Detected**

Non-Asbestos Fibrous Components:
2% Cellulose

Non-Fibrous Components:
15% Miscellaneous Materials
83% Filler and Binder

Client Sample Number: **M19.1A**
Client Sample Description: **Fiberglass Reinforced Plastic**
Client Sample Location: **Room 002**
Sample Comments:

Lab Sample Number: **16-00007.0013**
Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Kevin Oliver** **12/30/2015**
**Received by: Regina Mirabal** **1/5/2016**
**Analyzed by: Jude Cummings** **1/9/2016**

Jude Cummings

**Reviewed 1/9/2016 by: Jude Cummings**

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# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Basement*

NIH Batch Number: **16-00007**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **31**

**Layer 1** **Medium brown non-fibrous stiff material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 100% Filler and Binder |

**Layer 2** **Clear sticky material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 100% Filler and Binder |

Client Sample Number: **M19.1B** Lab Sample Number: **16-00007.0014**
Client Sample Description: **Fiberglass Reinforced Plastic**
Client Sample Location: **Room 002**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **Medium brown non-fibrous stiff material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 100% Filler and Binder |

**Layer 2** **Opaque sticky material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 1% Cellulose | 99% Filler and Binder |

Client Sample Number: **M19.1C** Lab Sample Number: **16-00007.0015**
Client Sample Description: **Fiberglass Reinforced Plastic**
Client Sample Location: **Room 002**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **Medium brown non-fibrous stiff material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 100% Filler and Binder |

**Layer 2** **Opaque sticky material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 3% Cellulose | 97% Filler and Binder |

Client Sample Number: **F3.1A** Lab Sample Number: **16-00007.0016**
Client Sample Description: **9"x9" Floor Tile - Brown W/Black Streaks**
Client Sample Location: **Room 009**
Sample Comments: Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Kevin Oliver** **12/30/2015**
**Received by: Regina Mirabal** **1/5/2016**
**Analyzed by: Jude Cummings** **1/9/2016**

Jude Cummings

**Reviewed 1/9/2016 by: Jude Cummings**

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# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Basement*

NIH Batch Number: **16-00007**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **31**

**Layer 1** **Dark brown and black residue**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **4% Chrysotile Asbestos** | 5% Cellulose | 30% Filler and Binder |
| | | 61% Asphalt Filler and Binder |

**Layer 2** **Brown, gray and black vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **6% Chrysotile Asbestos** | | 30% Aggregate |
| | | 64% Vinyl Filler and Binder |

**Layer 3** **Black asphalt**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **8% Chrysotile Asbestos** | 2% Cellulose | 90% Asphalt Filler and Binder |

Client Sample Number: **F3.1B** — Lab Sample Number: **16-00007.0017**
Client Sample Description: **9"x9" Floor Tile - Brown W/Black Streaks**
Client Sample Location: **Room 009**
Sample Comments: **Not Analyzed Per Client Request** — Checked If Sample Not Analyzed ☑

Client Sample Number: **F3.1C** — Lab Sample Number: **16-00007.0018**
Client Sample Description: **9"x9" Floor Tile - Brown W/Black Streaks**
Client Sample Location: **Room 009**
Sample Comments: **Not Analyzed Per Client Request** — Checked If Sample Not Analyzed ☑

Client Sample Number: **M12.3A** — Lab Sample Number: **16-00007.0019**
Client Sample Description: **4" Black Cove Base W/Brown Adhesive**
Client Sample Location: **Room 009**
Sample Comments: — Checked If Sample Not Analyzed ☐

**Layer 1** **Black vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 100% Vinyl Filler and Binder |

**Layer 2** **Various shades of brown brittle material with paint residue**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 98% Filler and Binder |
| | | 2% Paint |

(Sample results continued on next page.)

**Sampled by: Kevin Oliver** 12/30/2015
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Jude Cummings

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# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Basement*

NIH Batch Number: **16-00007**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **31**

Client Sample Number: **M12.3B**
Client Sample Description: **4" Black Cove Base W/Brown Adhesive**
Client Sample Location: **Room 009**
Sample Comments:

Lab Sample Number: **16-00007.0020**
Checked If Sample Not Analyzed ☐

**Layer 1** **Black vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 1% Cellulose | 100% Vinyl Filler and Binder |

**Layer 2** **Various shades of brown brittle material with paint residue**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 1% Paint |
| | | 99% Filler and Binder |

Client Sample Number: **M12.3C**
Client Sample Description: **4" Black Cove Base W/Brown Adhesive**
Client Sample Location: **Room 009**
Sample Comments:

Lab Sample Number: **16-00007.0021**
Checked If Sample Not Analyzed ☐

**Layer 1** **Black vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 100% Vinyl Filler and Binder |

**Layer 2** **Various shades of brown brittle material with paint residue**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 2% Paint |
| | | 98% Filler and Binder |

Client Sample Number: **F3.2A**
Client Sample Description: **9"x9" Floor Tile/Mastic - Light Brown W/Streaks**
Client Sample Location: **Room 006**
Sample Comments:

Lab Sample Number: **16-00007.0022**
Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Kevin Oliver** 12/30/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Jude Cummings** 1/9/2016

Jude Cummings

**Reviewed 1/9/2016 by: Jude Cummings**

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# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Basement*

NIH Batch Number: **16-00007**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **31**

**Layer 1 Brown streaked vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **6% Chrysotile Asbestos** | | 30% Aggregate |
| | | 64% Vinyl Filler and Binder |

**Layer 2 Black Mastic**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **5% Chrysotile Asbestos** | 5% Cellulose | 90% Asphalt Filler and Binder |

Client Sample Number: **F3.2B** — Lab Sample Number: **16-00007.0023**
Client Sample Description: **9"x9" Floor Tile/Mastic - Light Brown W/Streaks**
Client Sample Location: **Room 006**
Sample Comments: **Not Analyzed Per Client Request** — Checked If Sample Not Analyzed ☑

Client Sample Number: **F3.2C** — Lab Sample Number: **16-00007.0024**
Client Sample Description: **9"x9" Floor Tile/Mastic - Light Brown W/Streaks**
Client Sample Location: **Room 006**
Sample Comments: **Not Analyzed Per Client Request** — Checked If Sample Not Analyzed ☑

Client Sample Number: **F2.4A** — Lab Sample Number: **16-00007.0025**
Client Sample Description: **12"x12" Floor Tile - White W/Gray Marble Pattern**
Client Sample Location: **Room 002**
Sample Comments: — Checked If Sample Not Analyzed ☐

**Layer 1 White streaked vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 30% Aggregate |
| | | 70% Vinyl Filler and Binder |

**Layer 2 Orange mastic**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 3% Cellulose | 97% Filler and Binder |

Client Sample Number: **F2.4B** — Lab Sample Number: **16-00007.0026**
Client Sample Description: **12"x12" Floor Tile - White W/Gray Marble Pattern**
Client Sample Location: **Room 002**
Sample Comments: — Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Kevin Oliver** 12/30/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Jude Cummings** 1/9/2016

Jude Cummings

**Reviewed 1/9/2016 by: Jude Cummings**

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# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Basement*

NIH Batch Number: **16-00007**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **31**

**Layer 1** **White streaked vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 1% Cellulose | 30% Aggregate |
| | | 69% Vinyl Filler and Binder |

**Layer 2** **Orange mastic**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 3% Cellulose | 3% Miscellaneous Materials |
| | | 94% Filler and Binder |

Client Sample Number: **F2.4C** Lab Sample Number: **16-00007.0027**
Client Sample Description: **12"x12" Floor Tile - White W/Gray Marble Pattern**
Client Sample Location: **Room 029**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **White streaked vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 30% Aggregate |
| | | 70% Vinyl Filler and Binder |

**Layer 2** **Orange and black mastics**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 3% Cellulose | 12% Asphalt Filler and Binder |
| | | 85% Filler and Binder |

Client Sample Number: **M5.7A** Lab Sample Number: **16-00007.0028**
Client Sample Description: **2'x4' Gypsum Board Panel**
Client Sample Location: **Room 002**
Sample Comments: Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Kevin Oliver** **12/30/2015**
**Received by: Regina Mirabal** **1/5/2016**
**Analyzed by: Jude Cummings** **1/9/2016**

Jude Cummings

**Reviewed 1/9/2016 by: Jude Cummings**

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# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Basement*

NIH Batch Number: **16-00007**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **31**

**Layer 1** **White shiney thin material on white fibers**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 40% Cellulose | 60% Coating |

**Comments:** **Materials distinguishable but inseparable**

**Layer 2** **Brown papery on white compressed powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 18% Cellulose | 80% Filler and Binder |
| | 2% Fiberglass | |

**Comments:** **Materials distinguishable but inseparable**

Client Sample Number: **M5.7B**
Lab Sample Number: **16-00007.0029**
Client Sample Description: **2'x4' Gypsum Board Panel**
Client Sample Location: **Room 002**
Sample Comments:
Checked If Sample Not Analyzed ☐

**Layer 1** **White shiney thin material on white fibers**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 35% Cellulose | 65% Coating |

**Comments:** **Materials distinguishable but inseparable**

**Layer 2** **Brown papery on white compressed powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 18% Cellulose | 80% Filler and Binder |
| | 2% Fiberglass | |

**Comments:** **Materials distinguishable but inseparable**

Client Sample Number: **M5.7C**
Lab Sample Number: **16-00007.0030**
Client Sample Description: **2'x4' Gypsum Board Panel**
Client Sample Location: **Room 002**
Sample Comments:
Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by:** **Kevin Oliver** **12/30/2015**
**Received by:** **Regina Mirabal** **1/5/2016**
**Analyzed by:** **Jude Cummings** **1/9/2016**

Jude Cummings

**Reviewed 1/9/2016 by: Jude Cummings**

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# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Basement*

NIH Batch Number: **16-00007**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **31**

**Layer 1** **White shiney thin material on white fibers**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 35% Cellulose | 65% Coating |

**Comments:** **Materials distinguishable but inseparable**

**Layer 2** **Brown papery on white compressed powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 20% Cellulose | 77% Filler and Binder |
| | 3% Fiberglass | |

**Comments:** **Materials distinguishable but inseparable**

Client Sample Number: **T8.1A** Lab Sample Number: **16-00007.0031**
Client Sample Description: **Vibration Joint Collar - Black**
Client Sample Location: **Room 029**
Sample Comments: **Materials distinguishable but inseparable** Checked If Sample Not Analyzed ☐

**Black flexible material with white fibers with sticky residue**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 35% Synthetic | 65% Filler and Binder |

Client Sample Number: **T8.1B** Lab Sample Number: **16-00007.0032**
Client Sample Description: **Vibration Joint Collar - Black**
Client Sample Location: **Room 029**
Sample Comments: **Materials distinguishable but inseparable** Checked If Sample Not Analyzed ☐

**Black flexible material with white fibers with sticky residue**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 35% Synthetic | 65% Filler and Binder |

Client Sample Number: **T8.1C** Lab Sample Number: **16-00007.0033**
Client Sample Description: **Vibration Joint Collar - Black**
Client Sample Location: **Room 029**
Sample Comments: **Materials distinguishable but inseparable** Checked If Sample Not Analyzed ☐

**Black flexible material with white fibers with sticky residue**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 35% Synthetic | 64% Filler and Binder |
| | 1% Cellulose | |

(Sample results continued on next page.)

**Sampled by: Kevin Oliver** **12/30/2015**
**Received by: Regina Mirabal** **1/5/2016**
**Analyzed by: Jude Cummings** **1/9/2016**

Jude Cummings

**Reviewed 1/9/2016 by: Jude Cummings**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Basement*

NIH Batch Number: **16-00007**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **31**

Client Sample Number: **F3.3A** — Lab Sample Number: **16-00007.0034**
Client Sample Description: **9"x9" Floor Tile/Mastic - Green**
Client Sample Location: **Room 029**
Sample Comments: — Checked If Sample Not Analyzed ☐

**Layer 1** **Green streaked vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **5% Chrysotile Asbestos** | | 30% Aggregate |
| | | 65% Vinyl Filler and Binder |

**Layer 2** **Black and brown mastics**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **4% Chrysotile Asbestos** | 1% Synthetic | 30% Filler and Binder |
| | 2% Cellulose | 63% Asphalt Filler and Binder |

**Comments:** **Materials distinguishable but inseparable**

Client Sample Number: **F3.3B** — Lab Sample Number: **16-00007.0035**
Client Sample Description: **9"x9" Floor Tile/Mastic - Green**
Client Sample Location: **Room 029**
Sample Comments: **Not Analyzed Per Client Request** — Checked If Sample Not Analyzed ☑

Client Sample Number: **F3.3C** — Lab Sample Number: **16-00007.0036**
Client Sample Description: **9"x9" Floor Tile/Mastic - Green**
Client Sample Location: **Room 029**
Sample Comments: **Not Analyzed Per Client Request** — Checked If Sample Not Analyzed ☑

Client Sample Number: **F3.4A** — Lab Sample Number: **16-00007.0037**
Client Sample Description: **9"x9" Floor Tile - Tan**
Client Sample Location: **Room 029**
Sample Comments: — Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Kevin Oliver** 12/30/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Jude Cummings** 1/9/2016

Jude Cummings

**Reviewed 1/9/2016 by: Jude Cummings**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Basement*

NIH Batch Number: **16-00007**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **31**

**Layer 1** **Tan vinyl with black pitts**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **2% Chrysotile Asbestos** | | 30% Aggregate |
| | | 68% Vinyl Filler and Binder |

**Layer 2** **Brown and black mastics**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **5% Chrysotile Asbestos** | 2% Cellulose | 35% Filler and Binder |
| | | 58% Asphalt Filler and Binder |

Client Sample Number: **F3.4B** — Lab Sample Number: **16-00007.0038**
Client Sample Description: **9"x9" Floor Tile - Tan**
Client Sample Location: **Room 029**
Sample Comments: **Not Analyzed Per Client Request** — Checked If Sample Not Analyzed ☑

Client Sample Number: **F3.4C** — Lab Sample Number: **16-00007.0039**
Client Sample Description: **9"x9" Floor Tile - Tan**
Client Sample Location: **Room 029**
Sample Comments: **Not Analyzed Per Client Request** — Checked If Sample Not Analyzed ☑

**Sampled by: Kevin Oliver** 12/30/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Jude Cummings** 1/9/2016

Jude Cummings

**Reviewed 1/9/2016 by: Jude Cummings**

# Chain of Custody

NVLAP Lab Code 200511-0

**Northern Industrial Hygiene, Inc.**
201 South 30th Street
Billings, MT 59101
Office Phone: (406) 245-7766
Cell Phone: (406) 670-5582
Email: koliver@bridgeband.com
Inspector/Contact: Kevin Oliver

| | |
|---|---|
| NIH Lab Batch ID: | 16-000007 |
| Project Name: | Old Livingston Hospital |
| Project Number: | 999-3079 |
| Date Samples Taken: | 12/30/15 |
| Type of Analysis: | PLM |

| Turnaround Time Requested | |
|---|---|
| 2 Hour: | |
| Same Day: | |
| 24 Hour: | |
| 48 Hour: | |
| 5 Day: | 5-day |
| 10 Day: | |

For Lab Use Only
Sample(s) Size: ___ Accepted ___ Rejected
Non-Conformance Memo: ___ Yes ___ No
Package Condition: ___ Good ___ Damaged ___ Severe Damage

Page 4 of 14

| NIH LAB ID | SAMPLE # | SAMPLE DESCRIPTION | SAMPLE LOCATION |
|---|---|---|---|
| 1 | M5.6A | 2'x4' DEEP Fissure, Pin Hole, Light | Room 14 |
| 2 | B | Texture Paint | 14 |
| 3 | C | | 07 |
| 4 | T9.1 A | Gray Duct Sealant | Rm 016 |
| 5 | B | | |
| 6 | C | | |
| 7 | F1.2 A | Beige Vinyl Sheet Flooring | Room 11 |
| 8 | B | | |
| 9 | C | | |
| 10 | F2.3 A | 12"x12" white w/ Gray specs Floor | Room 10 |
| 11 | B | tile | |
| 12 | C | | |
| 13 | M19.1A | Fiberglass Reinforced Plastic | Room 002 |
| 14 | B | | |
| 15 | C | | |
| 16 | F3.1 A | 9"x9" Brown w/ Black streaks | Room 009 |
| 17 | B | Floor tile | |
| 18 | C | | |
| 19 | M12.3A | 4" Black Cove Base w/ Brown | Room 009 |
| 20 | B | Mastic | |
| 21 | C | | |

**Special Instructions: Analyze Group Method - Stop at First Positive** ✓ Yes ___ No

Number of samples shipped this page: 21
Total number of samples shipped: 274

| | | | |
|---|---|---|---|
| Relinquished By: [signature] | Date: 1/4/16 | Time: 12:00 | Firm: NIH |
| Received By: [signature] | Date: 1/5/16 | Time: 11:50 | Firm: NIH Bldg |
| Analyzed By: [signature] | Date: 1/9/16 | Time: 11:12 | Firm: NIH |

Revised 01/20/15 RIM

# Chain of Custody

NVLAP Lab Code 200511-0

**Northern Industrial Hygiene, Inc.**
201 South 30th Street
Billings, MT 59101
Office Phone: (406) 245-7766
Cell Phone: (406) 670-5582
Email: koliver@bridgeband.com
Inspector/Contact: Kevin Oliver

| | |
|---|---|
| NIH Lab Batch ID: | 16-00007 |
| Project Name: | Old Livingston Hospital |
| Project Number: | 999-3019 |
| Date Samples Taken: | 12/30/15 |
| Type of Analysis: | PLM |

| Turnaround Time Requested | |
|---|---|
| 2 Hour: | |
| Same Day: | |
| 24 Hour: | |
| 48 Hour: | |
| 5 Day: | 5 day |
| 10 Day: | |

For Lab Use Only
Sample(s) Size: (Accepted) Rejected
Non-Conformance Memo: Yes (No)
Package Condition: (Good) Damaged Severe Damage



| NIH LAB ID | SAMPLE # | SAMPLE DESCRIPTION | SAMPLE LOCATION |
|---|---|---|---|
| 22 | F3.2 A | 9"x9" Light Brn. w/ brown streaks | Room 006 |
| 23 | B | Floor tile/mastic | ↓ |
| 24 | C | ↓ | ↓ |
| 25 | F2.4 A | 12"x12" white w/ gray marble pattern | Room 002 |
| 26 | B | Floor tile | " 002 |
| 27 | C | ↓ | Room 029 |
| 28 | MS.7 A | 2'x4' Gypsum board Panel | Rm 002 |
| 29 | B | ↓ | ↓ |
| 30 | C | ↓ | ↓ |
| | ~~T9.2 A~~ | ~~White DUCT SEALANT~~ | |
| | ~~B~~ | ~~↓ ↓ tape~~ | |
| | ~~C~~ | | |
| 31 | T8.1 A | Vibration Joint collar Black | Rm 029 |
| 32 | B | ↓ ↓ | ↓ |
| 33 | C | ↓ | ↓ |
| 34 | F3.3 A | 9"x9" Green Floor tile/mastic | Rm 029 |
| 35 | B | ↓ ↓ | ↓ |
| 36 | C | ↓ | ↓ |
| 37 | F3.4 A | 9"x9" tan Floor tile | ↓ |
| 38 | B | ↓ ↓ | ↓ |
| 39 | C | ↓ | ↓ |

**Special Instructions: Analyze Group Method - Stop at First Positive** ✓ Yes ___ No

Number of samples shipped this page: 18
Total number of samples shipped: 274

| | | | | | | |
|---|---|---|---|---|---|---|
| Relinquished By: | [signature] | Date: 1/4/16 | Time: 17:00 | Firm: NIH | | |
| Received By: | [signature] | Date: 1/5/16 | Time: 11:50 | Firm: NIH BOX | | |
| Analyzed By: | [signature] | Date: 1/8/16 | Time: 11:2 | Firm: | | |

Revised 01/20/15 RIM

NORTHERN INDUSTRIAL HYGIENE, INC.
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OFFICE: (206) 988-1746 FAX: (206) 988-1978
EMAIL: Rmelgoza@bridgeband.com
NVLAP Lab Code: 200511-0

1/11/2016

Kevin Oliver
Northern Industrial Hygiene, Inc.
201 South 30th Street
Billings, MT 59101-

RE: Bulk Asbestos Fiber Analysis; Batch # 16-00008
Project Location *Old Livingston Hospital-Boiler Room*

Dear Kevin Oliver,

Thank you for choosing Northern Industrial Hygiene, Inc. as your laboratory. Enclosed you will find analytical results for the bulk samples submitted to the laboratory.

Northern Industrial Hygiene is accredited by NVLAP Lab Code: 200511-0. Accreditation by NVLAP does not indicate endorsement by NVLAP or any other government agency. All bulk samples are analyzed in accordance with U.S. EPA Method -600/M4-82-020, December 1982 and EPA Method 600/R-93-116, July 1993. "Method for Determination of Asbestos in Bulk Building Materials"(NESHAP, 40 CFR-Part 61) protocol.

Analysis is cross checked through our inter or intra laboratory quality assurance program for verification. The percent values reported are based on calibrated visual estimates by volume unless verification by Point Count is indicated. Test results reported relate only to the samples submitted by the customer to Northern Industrial Hygiene, Inc. Trace amounts of asbestos are below the limit of detection and asbestos fibers with diameters below approximately 0.25 micrometers are not detectable with the Polarized Light Microscopy (PLM) analytical procedure. A trace amount of asbestos is defined as one to five fibers in three slide mounts. Asbestos found in this amount will be reported as "< 1.0%" by PLM analysis.

This report is highly confidential and shall not be reproduced without your written approval and the written approval of Northern Industrial Hygiene, Inc.

Samples are archived for thirty (30) days following analysis. Please contact us if samples need to be archived longer than the standard holding time.

Thank you for using Northern Industrial Hygiene, Inc. If you have any questions or concerns please contact us.

Sincerely,

Reviewed by: Jude Cummings

Enclosure: Bulk Sample Results

NORTHERN INDUSTRIAL HYGIENE, INC.
Billings, MT • Helena, MT • Seattle, WA

215 SW 153rd Street Burien, WA 98166
OFFICE: (206) 988-1746 FAX: (206) 988-1978
NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Boiler Room*

NIH Batch Number: **16-00008**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **36**

Client Sample Number: **T1.1A** — Lab Sample Number: **16-00008.0001**
Client Sample Description: **Boiler Ribbon Gasket**
Client Sample Location: **Large Boiler**
Sample Comments: — Checked If Sample Not Analyzed ☐

**Tan fibrous brittle material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 35% Fiberglass | 65% Filler and Binder |

Client Sample Number: **T1.1B** — Lab Sample Number: **16-00008.0002**
Client Sample Description: **Boiler Ribbon Gasket**
Client Sample Location: **Large Boiler**
Sample Comments: — Checked If Sample Not Analyzed ☐

**Tan fibrous brittle material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 40% Fiberglass | 60% Filler and Binder |

Client Sample Number: **T1.1C** — Lab Sample Number: **16-00008.0003**
Client Sample Description: **Boiler Ribbon Gasket**
Client Sample Location: **Large Boiler**
Sample Comments: — Checked If Sample Not Analyzed ☐

**Tan fibrous brittle material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 40% Fiberglass | 60% Filler and Binder |

Client Sample Number: **T1.2A** — Lab Sample Number: **16-00008.0004**
Client Sample Description: **Boiler Ribbon Gasket - White**
Client Sample Location: **Small Boiler**
Sample Comments: **Materials distinguishable but inseparable** — Checked If Sample Not Analyzed ☐

**Tan fibrous compressed material with blue paint**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 80% Cellulose | 2% Paint |
| | 1% Synthetic | 17% Filler and Binder |

(Sample results continued on next page.)

**Sampled by: Kevin Oliver** 12/30/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Jude Cummings** 1/11/2016

Jude Cummings

**Reviewed 1/11/2016 by: Jude Cummings**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Boiler Room*

NIH Batch Number: **16-00008**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **36**

Client Sample Number: **T1.2B** Lab Sample Number: **16-00008.0005**
Client Sample Description: **Boiler Ribbon Gasket - White**
Client Sample Location: **Small Boiler**
Sample Comments: **Materials distinguishable but inseparable** Checked If Sample Not Analyzed ☐

**Tan fibrous compressed material with blue paint**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 85% Cellulose | 2% Paint |
| | 1% Synthetic | 12% Filler and Binder |

Client Sample Number: **T1.2C** Lab Sample Number: **16-00008.0006**
Client Sample Description: **Boiler Ribbon Gasket - White**
Client Sample Location: **Small Boiler**
Sample Comments: **Materials distinguishable but inseparable** Checked If Sample Not Analyzed ☐

**Tan fibrous compressed material with blue paint**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 85% Cellulose | 3% Paint |
| | 1% Synthetic | 11% Filler and Binder |

Client Sample Number: **T1.3A** Lab Sample Number: **16-00008.0007**
Client Sample Description: **Boiler Flange Gasket - Red**
Client Sample Location: **Small Boiler**
Sample Comments: Checked If Sample Not Analyzed ☐

**Red non-fibrous flexible material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 100% Filler and Binder |

Client Sample Number: **T1.3B** Lab Sample Number: **16-00008.0008**
Client Sample Description: **Boiler Flange Gasket - Red**
Client Sample Location: **Small Boiler**
Sample Comments: Checked If Sample Not Analyzed ☐

**Red non-fibrous flexible material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 100% Filler and Binder |

(Sample results continued on next page.)

**Sampled by: Kevin Oliver** 12/30/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Jude Cummings** 1/11/2016

Jude Cummings

**Reviewed 1/11/2016 by: Jude Cummings**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Boiler Room*

NIH Batch Number: **16-00008**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **36**

Client Sample Number: **T1.3C** — Lab Sample Number: **16-00008.0009**
Client Sample Description: **Boiler Flange Gasket - Red**
Client Sample Location: **Small Boiler**
Sample Comments: — Checked If Sample Not Analyzed ☐

**Red non-fibrous flexible material with dirt residue**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | | 3% Miscellaneous Materials |
| | | 97% Filler and Binder |

Client Sample Number: **T1.4A** — Lab Sample Number: **16-00008.0010**
Client Sample Description: **Pipe Flange Gasket - White**
Client Sample Location: **Small Boiler**
Sample Comments: — Checked If Sample Not Analyzed ☐

**Tan fibrous compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 92% Cellulose | 8% Filler and Binder |

Client Sample Number: **T1.4B** — Lab Sample Number: **16-00008.0011**
Client Sample Description: **Pipe Flange Gasket - White**
Client Sample Location: **Small Boiler**
Sample Comments: **Materials distinguishable but inseparable** — Checked If Sample Not Analyzed ☐

**Tan fibrous compressed material with silver residue**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 90% Cellulose | 2% Coating |
| | | 8% Filler and Binder |

Client Sample Number: **T1.4C** — Lab Sample Number: **16-00008.0012**
Client Sample Description: **Pipe Flange Gasket - White**
Client Sample Location: **Small Boiler**
Sample Comments: **Materials distinguishable but inseparable** — Checked If Sample Not Analyzed ☐

**Tan fibrous compressed material with silver residue**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 92% Cellulose | 1% Coating |
| | | 7% Filler and Binder |

(Sample results continued on next page.)

**Sampled by: Kevin Oliver** 12/30/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Jude Cummings** 1/11/2016

Jude Cummings

**Reviewed 1/11/2016 by: Jude Cummings**

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OFFICE: (206) 988-1746 FAX: (206) 988-1978
NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Boiler Room*

NIH Batch Number: **16-00008**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **36**

Client Sample Number: **T7.1A** Lab Sample Number: **16-00008.0013**
Client Sample Description: **Boiler Breaching**
Client Sample Location: **On Breaching**
Sample Comments: Checked If Sample Not Analyzed ☐

**White fibrous powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 15% Cellulose | 70% Filler and Binder |
| | 15% Mineral Wool and Beads | |

Client Sample Number: **T7.1B** Lab Sample Number: **16-00008.0014**
Client Sample Description: **Boiler Breaching**
Client Sample Location: **On Breaching**
Sample Comments: Checked If Sample Not Analyzed ☐

**White fibrous powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 18% Cellulose | 67% Filler and Binder |
| | 15% Mineral Wool and Beads | |

Client Sample Number: **T7.1C** Lab Sample Number: **16-00008.0015**
Client Sample Description: **Boiler Breaching**
Client Sample Location: **On Breaching**
Sample Comments: Checked If Sample Not Analyzed ☐

**White fibrous powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 18% Cellulose | 62% Filler and Binder |
| | 20% Mineral Wool and Beads | |

Client Sample Number: **T2.2A** Lab Sample Number: **16-00008.0016**
Client Sample Description: **Mudded Pipe Fittings**
Client Sample Location: **Fiberglass Lines**
Sample Comments: Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Kevin Oliver** 12/30/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Jude Cummings** 1/11/2016

Jude Cummings

**Reviewed 1/11/2016 by: Jude Cummings**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Boiler Room*

NIH Batch Number: **16-00008**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **36**

**White material with woven fibers**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 20% Cellulose | 65% Filler and Binder |
| | 15% Mineral Wool and Beads | |

Client Sample Number: **T2.2B** — Lab Sample Number: **16-00008.0017**
Client Sample Description: **Mudded Pipe Fittings**
Client Sample Location: **Fiberglass Lines**
Sample Comments:
Checked If Sample Not Analyzed ☐

**White material with woven fibers**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 22% Cellulose | 78% Filler and Binder |

Client Sample Number: **T2.2C** — Lab Sample Number: **16-00008.0018**
Client Sample Description: **Mudded Pipe Fittings**
Client Sample Location: **Fiberglass Lines**
Sample Comments:
Checked If Sample Not Analyzed ☐

**White material with woven fibers**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 22% Cellulose | 78% Filler and Binder |

Client Sample Number: **M16.1A** — Lab Sample Number: **16-00008.0019**
Client Sample Description: **Concrete**
Client Sample Location: **Boiler Room**
Sample Comments:
Checked If Sample Not Analyzed ☐

**Gray gritty material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | | 65% Aggregate |
| | | 35% Filler and Binder |

Client Sample Number: **M16.1B** — Lab Sample Number: **16-00008.0020**
Client Sample Description: **Concrete**
Client Sample Location: **Boiler Room**
Sample Comments: **Materials distinguishable but inseparable**
Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Kevin Oliver** 12/30/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Jude Cummings** 1/11/2016

Jude Cummings

**Reviewed 1/11/2016 by: Jude Cummings**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Boiler Room*

NIH Batch Number: **16-00008**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **36**

**Gray paint on gray gritty compressed material**

**Asbestos Fibrous Components:** Non-Asbestos Fibrous Components: Non-Fibrous Components:

**No Asbestos Detected**

2% Paint
70% Aggregate
28% Filler and Binder

Client Sample Number: **M16.1C** Lab Sample Number: **16-00008.0021**
Client Sample Description: **Concrete**
Client Sample Location: **Boiler Room**
Sample Comments: **Materials distinguishable but inseparable** Checked If Sample Not Analyzed ☐

**Yellow and gray paint on gray gritty compresssed material**

**Asbestos Fibrous Components:** Non-Asbestos Fibrous Components: Non-Fibrous Components:

**No Asbestos Detected**

2% Paint
70% Aggregate
28% Filler and Binder

Client Sample Number: **M17.1A** Lab Sample Number: **16-00008.0022**
Client Sample Description: **Brick/Mortar**
Client Sample Location: **Exterior Incinerator**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **Red gritty compressed material**

**Asbestos Fibrous Components:** Non-Asbestos Fibrous Components: Non-Fibrous Components:

**No Asbestos Detected**

30% Fine Grains
10% Aggregate
60% Filler and Binder

**Layer 2** **Gray gritty compressed material**

**Asbestos Fibrous Components:** Non-Asbestos Fibrous Components: Non-Fibrous Components:

**No Asbestos Detected**

70% Aggregate
30% Filler and Binder

Client Sample Number: **M17.1B** Lab Sample Number: **16-00008.0023**
Client Sample Description: **Brick/Mortar**
Client Sample Location: **Exterior Incinerator**
Sample Comments: Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Kevin Oliver** **12/30/2015**
**Received by: Regina Mirabal** **1/5/2016**
**Analyzed by: Jude Cummings** **1/11/2016**

Jude Cummings

**Reviewed 1/11/2016 by: Jude Cummings**

NORTHERN INDUSTRIAL HYGIENE, INC.
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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Boiler Room*

NIH Batch Number: **16-00008**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **36**

**Layer 1** **Red gritty compressed material**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
20% Fine Grains
10% Aggregate
70% Filler and Binder

**Layer 2** **Gray gritty compressed material**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
75% Aggregate
25% Filler and Binder

Client Sample Number: **M17.1C**
Client Sample Description: **Brick/Mortar**
Client Sample Location: **Exterior Incinerator**
Sample Comments:

Lab Sample Number: **16-00008.0024**
Checked If Sample Not Analyzed ☐

**Layer 1** **Red gritty compressed material**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
20% Fine Grains
10% Aggregate
70% Filler and Binder

**Layer 2** **Gray gritty compressed material**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
70% Aggregate
30% Filler and Binder

Client Sample Number: **M17.2A**
Client Sample Description: **Fire Brick/Mortar**
Client Sample Location: **Interior Incinerator**
Sample Comments:

Lab Sample Number: **16-00008.0025**
Checked If Sample Not Analyzed ☐

**Tan, orange and gray gritty material**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
70% Aggregate
30% Filler and Binder

(Sample results continued on next page.)

**Sampled by: Kevin Oliver** **12/30/2015**
**Received by: Regina Mirabal** **1/5/2016**
**Analyzed by: Jude Cummings** **1/11/2016**

Jude Cummings

**Reviewed 1/11/2016 by: Jude Cummings**

NORTHERN INDUSTRIAL HYGIENE, INC.
Billings, MT • Helena, MT • Seattle, WA

215 SW 153rd Street Burien, WA 98166
OFFICE: (206) 988-1746 FAX: (206) 988-1978
NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Boiler Room*

NIH Batch Number: **16-00008**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **36**

Client Sample Number: **M17.2B** Lab Sample Number: **16-00008.0026**
Client Sample Description: **Fire Brick/Mortar**
Client Sample Location: **Interior Incinerator**
Sample Comments: Checked If Sample Not Analyzed ☐

**Tan, orange and gray gritty material**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
75% Aggregate
25% Filler and Binder

Client Sample Number: **M17.2C** Lab Sample Number: **16-00008.0027**
Client Sample Description: **Fire Brick/Mortar**
Client Sample Location: **Interior Incinerator**
Sample Comments: **Materials distinguishable but inseparable** Checked If Sample Not Analyzed ☐

**Tan and orange gritty material with black soot**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
70% Aggregate
25% Filler and Binder
5% Miscellaneous Particles

Client Sample Number: **M18.1A** Lab Sample Number: **16-00008.0028**
Client Sample Description: **Concrete Block/Mortar**
Client Sample Location: **Boiler Room**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **Gray gritty compressed material**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
75% Aggregate
25% Filler and Binder

**Layer 2** **Gray gritty compressed material**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
60% Aggregate
10% Glass Fragments
30% Filler and Binder

(Sample results continued on next page.)

**Sampled by: Kevin Oliver** **12/30/2015**
**Received by: Regina Mirabal** **1/5/2016**
**Analyzed by: Jude Cummings** **1/11/2016**

Jude Cummings

**Reviewed 1/11/2016 by: Jude Cummings**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Boiler Room*

NIH Batch Number: **16-00008**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **36**

Client Sample Number: **M18.1B** — Lab Sample Number: **16-00008.0029**
Client Sample Description: **Concrete Block/Mortar**
Client Sample Location: **Boiler Room**
Sample Comments: — Checked If Sample Not Analyzed ☐

**Layer 1** **Gray gritty compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 70% Aggregate |
| | | 30% Filler and Binder |

**Layer 2** **Gray gritty compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 65% Aggregate |
| | | 10% Glass Fragments |
| | | 25% Filler and Binder |

Client Sample Number: **M18.1C** — Lab Sample Number: **16-00008.0030**
Client Sample Description: **Concrete Block/Mortar**
Client Sample Location: **Boiler Room**
Sample Comments: — Checked If Sample Not Analyzed ☐

**Layer 1** **Gray gritty compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 75% Aggregate |
| | | 25% Filler and Binder |

**Layer 2** **Gray gritty compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 65% Aggregate |
| | | 10% Glass Fragments |
| | | 25% Filler and Binder |

Client Sample Number: **T1.5A** — Lab Sample Number: **16-00008.0031**
Client Sample Description: **Flange Gasket - Red**
Client Sample Location: **Main Water Line**
Sample Comments: — Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Kevin Oliver** 12/30/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Jude Cummings** 1/11/2016

Jude Cummings

**Reviewed 1/11/2016 by: Jude Cummings**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Boiler Room*

NIH Batch Number: **16-00008**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **36**

**Red flexible non-fibrous material**

**Asbestos Fibrous Components:** **No Asbestos Detected**
Non-Asbestos Fibrous Components:
Non-Fibrous Components: 100% Filler and Binder

Client Sample Number: **T1.5B**
Client Sample Description: **Flange Gasket - Red**
Client Sample Location: **Main Water Line**
Sample Comments:
Lab Sample Number: **16-00008.0032**
Checked If Sample Not Analyzed ☐

**Red flexible non-fibrous material**

**Asbestos Fibrous Components:** **No Asbestos Detected**
Non-Asbestos Fibrous Components:
Non-Fibrous Components: 100% Filler and Binder

Client Sample Number: **T1.5C**
Client Sample Description: **Flange Gasket - Red**
Client Sample Location: **Main Water Line**
Sample Comments:
Lab Sample Number: **16-00008.0033**
Checked If Sample Not Analyzed ☐

**Red flexible non-fibrous material**

**Asbestos Fibrous Components:** **No Asbestos Detected**
Non-Asbestos Fibrous Components:
Non-Fibrous Components: 100% Filler and Binder

Client Sample Number: **T2.1A**
Client Sample Description: **Mudded Fittings - Original**
Client Sample Location: **Boiler Room**
Sample Comments:
Lab Sample Number: **16-00008.0034**
Checked If Sample Not Analyzed ☐

**White fibrous powdery material**

**Asbestos Fibrous Components:**
**12% Chrysotile Asbestos**
**8% Amosite Asbestos**
Non-Asbestos Fibrous Components:
Non-Fibrous Components: 80% Filler and Binder

Client Sample Number: **T2.1B**
Client Sample Description: **Mudded Fittings Original**
Client Sample Location: **Boiler Room**
Sample Comments: **Not Analyzed Per Client Request**
Lab Sample Number: **16-00008.0035**
Checked If Sample Not Analyzed ☑

(Sample results continued on next page.)

**Sampled by: Kevin Oliver** 12/30/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Jude Cummings** 1/11/2016

Jude Cummings

**Reviewed 1/11/2016 by: Jude Cummings**

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# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital-Boiler Room*

NIH Batch Number: **16-00008**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **36**

Client Sample Number: **T2.1C** — Lab Sample Number: **16-00008.0036**
Client Sample Description: **Mudded Fittings Original**
Client Sample Location: **Room 200**
Sample Comments: **Not Analyzed Per Client Request** — Checked If Sample Not Analyzed ☑

Client Sample Number: **T3.3A** — Lab Sample Number: **16-00008.0037**
Client Sample Description: **MAG. Insulation**
Client Sample Location: **Boiler Room, Straight Run Pipe**
Sample Comments: — Checked If Sample Not Analyzed ☐

**White fibrous powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **12% Chrysotile Asbestos** | 5% Cellulose | 75% Filler and Binder |
| **8% Amosite Asbestos** | | |

Client Sample Number: **T3.3B** — Lab Sample Number: **16-00008.0038**
Client Sample Description: **MAG. Straight Run Pipe Insulation**
Client Sample Location: **Boiler Room**
Sample Comments: **Not Analyzed Per Client Request** — Checked If Sample Not Analyzed ☑

Client Sample Number: **T3.3C** — Lab Sample Number: **16-00008.0039**
Client Sample Description: **MAG. Straight Run Pipe Insulation**
Client Sample Location: **Boiler Room**
Sample Comments: **Not Analyzed Per Client Request** — Checked If Sample Not Analyzed ☑

Client Sample Number: **T3.5A** — Lab Sample Number: **16-00008.0040**
Client Sample Description: **Duplex Insulation**
Client Sample Location: **Boiler Room**
Sample Comments: — Checked If Sample Not Analyzed ☐

**Gray, black and white fibrous corrugated material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **5% Chrysotile Asbestos** | 80% Cellulose | 12% Filler and Binder |
| | | 3% Asphalt Filler and Binder |

Client Sample Number: **T3.5B** — Lab Sample Number: **16-00008.0041**
Client Sample Description: **Duplex Insulation**
Client Sample Location: **Boiler Room**
Sample Comments: **Not Analyzed Per Client Request** — Checked If Sample Not Analyzed ☑

(Sample results continued on next page.)

**Sampled by: Kevin Oliver** 12/30/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Jude Cummings** 1/11/2016

Jude Cummings

**Reviewed 1/11/2016 by: Jude Cummings**

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Billings, MT • Helena, MT • Seattle, WA

215 SW 153rd Street Burien, WA 98166
OFFICE: (206) 988-1746 FAX: (206) 988-1978
NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

| | | | |
|---|---|---|---|
| **Northern Industrial Hygiene, Inc.** | | NIH Batch Number: | **16-00008** |
| **201 South 30th Street** | | Client Job Number: | **999-3019** |
| **Billings, MT 59101-** | | Turn Around Time: | **5 Day** |
| Project Location: | *Old Livingston Hospital-Boiler Room* | Samples Analyzed: | **36** |

| | | | |
|---|---|---|---|
| Client Sample Number: | **T3.5C** | Lab Sample Number: | **16-00008.0042** |
| Client Sample Description: | **Duplex Insulation** | | |
| Client Sample Location: | **Boiler Room** | | |
| Sample Comments: | **Not Analyzed Per Client Request** | Checked If Sample Not Analyzed | ☑ |

| | | |
|---|---|---|
| **Sampled by:** | **Kevin Oliver** | **12/30/2015** |
| **Received by:** | **Regina Mirabal** | **1/5/2016** |
| **Analyzed by:** | **Jude Cummings** | **1/11/2016** |

Jude Cummings

**Reviewed 1/11/2016 by: Jude Cummings**

# Chain of Custody

NVLAP Lab Code 200511-0

**Northern Industrial Hygiene, Inc.**
201 South 30th Street
Billings, MT 59101
Office Phone: (406) 245-7766
Cell Phone: (406) 670-5582
Email: koliver@bridgeband.com
Inspector/Contact: Kevin Oliver

| | |
|---|---|
| NIH Lab Batch ID: | 16-000008 |
| Project Name: | Old Livingston Hospital |
| Project Number: | 999-3819 |
| Date Samples Taken: | 12-30-15 |
| Type of Analysis: | PLM |

| Turnaround Time Requested | |
|---|---|
| 2 Hour: | |
| Same Day: | |
| 24 Hour: | |
| 48 Hour: | |
| 5 Day: | X |
| 10 Day: | |

For Lab Use Only
Sample(s) Size: Accepted Rejected
Non-Conformance Memo: Yes No
Package Condition: Good Damaged Severe Damage

BOILER ROOM

Page 6 of 14

| NIH LAB ID | SAMPLE # | SAMPLE DESCRIPTION | SAMPLE LOCATION |
|---|---|---|---|
| 1 | T1.1A | BOILER RIBBON GASKET | LARGE BOILER |
| 2 | 1 B | ↓ ↓ | ↓ |
| 3 | 1 C | | |
| 4 | T1.2A | BOILER RIBBON GASKET (WHITE) | SMALL BOILER |
| 5 | 1 B | ↓ ↓ | ↓ |
| 6 | 1 C | | |
| 7 | T1.3A | BOILER FLANGE GASKET (RED) | SMALL BOILER |
| 8 | 1 B | ↓ ↓ | ↓ |
| 9 | 1 C | | |
| 10 | T1.4A | PIPE FLANGE GASKET (WHITE) | SMALL BOILER |
| 11 | 1 B | ↓ ↓ | ↓ |
| 12 | 1 C | | |
| 13 | T2.1A | BOILER BREACHING | 3rd BREACHING |
| 14 | 1 B | ↓ | ↓ |
| 15 | 1 C | | |
| 16 | T2.2A | MUDDED PIPE FITTINGS | F.GLASS LINES |
| 17 | 1 B | ↓ ↓ | ↓ |
| 18 | 1 C | | |
| 19 | M6.1A | CONCRETE | BOILER ROOM |
| 20 | 1 B | ↓ | ↓ |
| 21 | 1 C | | |

**Special Instructions: Analyze Group Method - Stop at First Positive** X **Yes** ___ **No**

Number of samples shipped this page: 21
Total number of samples shipped: 274

| | | | |
|---|---|---|---|
| Relinquished By: Robert Brownell | Date: 1/4/16 | Time: 17:00 | Firm: NIH |
| Received By: [illegible] | Date: 1/5/16 | Time: 11:50 | Firm: NIH [illegible] |
| Analyzed By: [illegible] | Date: 1/11/16 | Time: 9:15 | Firm: LAB |

Revised 01/20/15 RIM

# Chain of Custody

NVLAP Lab Code 200511-0

**Northern Industrial Hygiene, Inc.**
201 South 30th Street
Billings, MT 59101
Office Phone: (406) 245-7766
Cell Phone: (406) 670-5582
Email: koliver@bridgeband.com
Inspector/Contact: Kevin Oliver

| | |
|---|---|
| NIH Lab Batch ID: | 16-000108 |
| Project Name: | Old Livingston Hospital |
| Project Number: | 999-3079 |
| Date Samples Taken: | 12/30/15 |
| Type of Analysis: | PLM |

| Turnaround Time Requested | |
|---|---|
| 2 Hour: | |
| Same Day: | |
| 24 Hour: | |
| 48 Hour: | |
| 5 Day: | 5 day |
| 10 Day: | |

For Lab Use Only
Sample(s) Size:___Accepted___Rejected
Non-Conformance Memo:___Yes___No
Package Condition:___Good___Damaged___Severe Damage

BOILER ROOM



| NIH LAB ID | SAMPLE # | SAMPLE DESCRIPTION | SAMPLE LOCATION |
|---|---|---|---|
| 22 | M17.1A | Brick/mortar | Incinerator |
| 23 | B | | exterior |
| 24 | C | | |
| 25 | M17.2A | FireBrick/Mortar | Incinerator |
| 26 | B | | interior |
| 27 | C | | |
| 28 | M18.1A | Concrete Block/Mortar | Boiler Room |
| 29 | B | | |
| 30 | C | | |
| 31 | T1.5A | Flange Gasket (Red) | Manwater Line |
| 32 | B | | |
| 33 | C | | |
| 34 | T2.1A | MUDDED Fittings ORIG | Boiler Room |
| 35 | B | | " |
| 36 | C | | Rm 200 |
| 37 | T3.3A | MAG. St. Run. | Boiler Room |
| 38 | B | Pipe insulation | |
| 39 | C | | |
| 40 | T3.5A | Duplex insulation | Boiler Room |
| 41 | B | | |
| 42 | C | | |

**Special Instructions: Analyze Group Method - Stop at First Positive** X **Yes** ___ **No**

Number of samples shipped this page: 21
Total number of samples shipped: 274

| | | | |
|---|---|---|---|
| Relinquished By: [signature] | Date: 1/4/16 | Time: 17:00 | Firm: NIH |
| Received By: [signature] | Date: 1/5/16 | Time: 11:50 | Firm: NIH BVD |
| Analyzed By: [signature] | Date: 1/11/16 | Time: 9:18 | Firm: |

Revised 01/20/15 RIM

NORTHERN INDUSTRIAL HYGIENE, INC.
Billings, MT • Helena, MT • Seattle, WA

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EMAIL: Rmelgoza@bridgeband.com
NVLAP Lab Code: 200511-0

1/6/2016

Bob Brownell
Northern Industrial Hygiene, Inc.
201 South 30th Street
Billings, MT 59101-

RE: Bulk Asbestos Fiber Analysis; Batch # 16-00009
Project Location *Old Livingston Hospital*

Dear Bob Brownell,

Thank you for choosing Northern Industrial Hygiene, Inc. as your laboratory. Enclosed you will find analytical results for the bulk samples submitted to the laboratory.

Northern Industrial Hygiene is accredited by NVLAP Lab Code: 200511-0. Accreditation by NVLAP does not indicate endorsement by NVLAP or any other govemment agency. All bulk samples are analyzed in accordance with U.S. EPA Method -600/M4-82-020, December 1982 and EPA Method 600/R-93-116, July 1993. "Method for Determination of Asbestos in Bulk Building Materials"(NESHAP, 40 CFR-Part 61) protocol.

Analysis is cross checked through our inter or intra laboratory quality assurance program for verification. The percent values reported are based on calibrated visual estimates by volume unless verification by Point Count is indicated. Test results reported relate only to the samples submitted by the customer to Northern Industrial Hygiene, Inc. Trace amounts of asbestos are below the limit of detection and asbestos fibers with diameters below approximately 0.25 micrometers are not detectable with the Polarized Light Microscopy (PLM) analytical procedure. A trace amount of asbestos is defined as one to five fibers in three slide mounts. Asbestos found in this amount will be reported as "< 1.0%" by PLM analysis.

This report is highly confidential and shall not be reproduced without your written approval and the written approval of Northern Industrial Hygiene, Inc.

Samples are archived for thirty (30) days following analysis. Please contact us if samples need to be archived longer than the standard holding time.

Thank you for using Northern Industrial Hygiene, Inc. If you have any questions or concerns please contact us.

Sincerely,

Jude Cummings

Reviewed by: Jude Cummings

Enclosure: Bulk Sample Results

NORTHERN INDUSTRIAL HYGIENE, INC.
Billings, MT • Helena, MT • Seattle, WA

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OFFICE: (206) 988-1746 FAX: (206) 988-1978
NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00009**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **21**

Client Sample Number: **M6.4A** Lab Sample Number: **16-00009.0001**
Client Sample Description: **1'x1' Ceiling Tile/White W/Heavy Fissures & Black Mastic**
Client Sample Location: **Room 194**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **White paint on off-white fibrous compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 30% Cellulose | 3% Paint |
| | 15% Mineral Wool and Beads | 52% Filler and Binder |

**Comments:** **Materials distinguishable but inseparable**

**Layer 2** **Dark brown brittle material with white residue**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 1% Mineral Fibers | 97% Filler and Binder |
| | 1% Cellulose | |
| | 1% Wollastonite | |

Client Sample Number: **M6.4B** Lab Sample Number: **16-00009.0002**
Client Sample Description: **1'x1' Ceiling Tile/White W/Heavy Fissures & Black Mastic**
Client Sample Location: **Room 194**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **White paint on off-white fibrous compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 30% Cellulose | 10% Paint |
| | 20% Mineral Wool and Beads | 40% Filler and Binder |

**Comments:** **Materials distinguishable but inseparable**

**Layer 2** **Dark brown brittle mastic with white residue**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 1% Mineral Fibers | 96% Filler and Binder |
| | 2% Cellulose | |
| | 1% Wollastonite | |

**Comments:** **Materials distinguishable but inseparable**

(Sample results continued on next page.)

**Sampled by:** **Bob Brownell** **12/30/2015**
**Received by:** **Regina Mirabal** **1/5/2016**
**Analyzed by:** **Jude Cummings** **1/6/2016**

Jude Cummings

**Reviewed 1/6/2016 by: Jude Cummings**

NORTHERN INDUSTRIAL HYGIENE, INC.
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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00009**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **21**

Client Sample Number: **M6.4C** Lab Sample Number: **16-00009.0003**
Client Sample Description: **1'x1' Ceiling Tile/White W/Heavy Fissures & Black Mastic**
Client Sample Location: **Room 194**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **White paint on off-white fibrous compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 30% Cellulose | 2% Paint |
| | 20% Mineral Wool and Beads | 48% Filler and Binder |

**Comments:** **Materials distinguishable but inseparable**

**Layer 2** **Dark brown brittle mastic with white residue**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 1% Cellulose | 97% Filler and Binder |
| | 1% Wollastonite | |
| | 1% Mineral Fibers | |

**Comments:** **Materials distinguishable but inseparable**

Client Sample Number: **M6.3A** Lab Sample Number: **16-00009.0004**
Client Sample Description: **1'x1' Ceiling Tile W/Patterned Holes & Mastic/Brown**
Client Sample Location: **Room 106**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **White paint on medium brown compressed fibers**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 90% Cellulose | 7% Paint |
| | | 3% Filler and Binder |

**Comments:** **Materials distinguishable but inseparable**

**Layer 2** **Medium brown mastic**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 100% Filler and Binder |

Client Sample Number: **M6.3B** Lab Sample Number: **16-00009.0005**
Client Sample Description: **1'x1' Ceiling Tile W/Patterned Holes & Mastic/Brown**
Client Sample Location: **Room 106**
Sample Comments: Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Bob Brownell** **12/30/2015**
**Received by: Regina Mirabal** **1/5/2016**
**Analyzed by: Jude Cummings** **1/6/2016**

Jude Cummings

**Reviewed 1/6/2016 by: Jude Cummings**

NORTHERN INDUSTRIAL HYGIENE, INC.
Billings, MT • Helena, MT • Seattle, WA

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OFFICE: (206) 988-1746 FAX: (206) 988-1978
NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00009**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **21**

**Layer 1** **White paint on medium brown compressed fibers**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 90% Cellulose | 4% Paint |
| | | 6% Filler and Binder |

**Comments:** **Materials distinguishable but inseparable**

**Layer 2** **Medium brown mastic**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 100% Filler and Binder |

**Layer 3** **White compressed powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 100% Filler and Binder |

Client Sample Number: **M6.3C** Lab Sample Number: **16-00009.0006**
Client Sample Description: **1'x1' Ceiling Tile W/Patterned Holes & Mastic/Brown**
Client Sample Location: **Room 106**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **White paint on medium brown compressed fibers**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 92% Cellulose | 5% Paint |
| | | 3% Filler and Binder |

**Comments:** **Materials distinguishable but inseparable**

**Layer 2** **Medium brown mastic**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 3% Cellulose | 97% Filler and Binder |

Client Sample Number: **F2.8A** Lab Sample Number: **16-00009.0007**
Client Sample Description: **12"x12" Floor Tile/Ivory W/Tan Marbling & Mastic**
Client Sample Location: **Room 138**
Sample Comments: Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by:** **Bob Brownell** **12/30/2015**
**Received by:** **Regina Mirabal** **1/5/2016**
**Analyzed by:** **Jude Cummings** **1/6/2016**

Jude Cummings

**Reviewed 1/6/2016 by: Jude Cummings**

NORTHERN INDUSTRIAL HYGIENE, INC.
Billings, MT • Helena, MT • Seattle, WA

215 SW 153rd Street Burien, WA 98166
OFFICE: (206) 988-1746 FAX: (206) 988-1978
NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00009**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **21**

**Layer 1** **Off-white vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 30% Aggregate |
| | | 70% Vinyl Filler and Binder |

**Layer 2** **Tan sticky material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 2% Cellulose | 96% Filler and Binder |
| | 2% Synthetic | |

Client Sample Number: **F2.8B** Lab Sample Number: **16-00009.0008**
Client Sample Description: **12"x12" Floor Tile/Ivory W/Tan Marbling & Mastic**
Client Sample Location: **Room 133 - Northwest Corner**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **Off-white streaked vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 30% Aggregate |
| | | 70% Vinyl Filler and Binder |

**Layer 2** **Tan and brown soft sticky material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 2% Cellulose | 10% Miscellaneous Materials |
| | | 88% Filler and Binder |

Client Sample Number: **F2.8C** Lab Sample Number: **16-00009.0009**
Client Sample Description: **12"x12" Floor Tile/Ivory W/Tan Marbling & Mastic**
Client Sample Location: **Room 133 - Southeast Corner**
Sample Comments: Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Bob Brownell** 12/30/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Jude Cummings** 1/6/2016

Jude Cummings

**Reviewed 1/6/2016 by: Jude Cummings**

NORTHERN INDUSTRIAL HYGIENE, INC.
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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00009**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **21**

**Layer 1** **Off-white vinyl**

| Asbestos Fibrous Components:- | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | | 30% Aggregate |
| | | 70% Vinyl Filler and Binder |

**Layer 2** **Tan and black mastics**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| 5% Chrysotile Asbestos | 1% Cellulose | 70% Asphalt Filler and Binder |
| | 1% Synthetic | 23% Filler and Binder |

Client Sample Number: **F9.1A**
Client Sample Description: **4"x2' Floor Tile/Brown & Mastic**
Client Sample Location: **Room 183- Doorway**
Sample Comments:

Lab Sample Number: **16-00009.0010**
Checked If Sample Not Analyzed ☐

**Layer 1** **Tan streaked vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | | 30% Aggregate |
| | | 70% Vinyl Filler and Binder |

**Layer 2** **Tan and black mastics**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| 4% Crocidolite Asbestos | 2% Cellulose | 85% Asphalt Filler and Binder |
| | | 9% Filler and Binder |

Client Sample Number: **F9.1B**
Client Sample Description: **4"x2' Floor Tile/Brown & Mastic**
Client Sample Location: **Room 103 - Southeast Corner**
Sample Comments:

Lab Sample Number: **16-00009.0011**
Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Bob Brownell** 12/30/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Jude Cummings** 1/6/2016

Jude Cummings

**Reviewed 1/6/2016 by: Jude Cummings**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00009**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **21**

**Layer 1** **Tan streaked vinyl**

**Asbestos Fibrous Components:**
**No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
30% Aggregate
70% Vinyl Filler and Binder

**Layer 2** **Opaque sticky material**

**Asbestos Fibrous Components:**
**No Asbestos Detected**

Non-Asbestos Fibrous Components:
1% Cellulose

Non-Fibrous Components:
99% Filler and Binder

**Layer 3** **Black asphalt**

**Asbestos Fibrous Components:**
**Not Analyzed Per Client**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:

Client Sample Number: **F9.1C**
Client Sample Description: **4"x2' Floor Tile/Brown & Mastic**
Client Sample Location: **Room 183 - Southwest Corner**
Sample Comments:

Lab Sample Number: **16-00009.0012**
Checked If Sample Not Analyzed ☐

**Layer 1** **Tan streaked vinyl**

**Asbestos Fibrous Components:**
**No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
30% Asphalt Filler and Binder
70% Vinyl Filler and Binder

**Layer 2** **Black asphalt**

**Asbestos Fibrous Components:**
**Not Analyzed Per Client**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:

Client Sample Number: **F2.9A**
Client Sample Description: **12"x12" Floor Tile/White W/Gray Marbled & Mastic**
Client Sample Location: **Room 104 - Southeast Corner**
Sample Comments:

Lab Sample Number: **16-00009.0013**
Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Bob Brownell** 12/30/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Jude Cummings** 1/6/2016

Jude Cummings

**Reviewed 1/6/2016 by: Jude Cummings**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00009**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **21**

**Layer 1** **White vinyl with gray streaks**

**Asbestos Fibrous Components:**
**No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
35% Aggregate
65% Vinyl Filler and Binder

**Layer 2** **Dark brown and tan mastics**

**Asbestos Fibrous Components:**
**No Asbestos Detected**

Non-Asbestos Fibrous Components:
1% Cellulose
1% Mineral Fibers

Non-Fibrous Components:
98% Filler and Binder

**Comments:** **Materials distinguishable but inseparable**

Client Sample Number: **F2.9B**
Client Sample Description: **12"x12" Floor Tile/White W/Gray Marbled & Mastic**
Client Sample Location: **Room 104 - Northeast Corner**
Sample Comments:

Lab Sample Number: **16-00009.0014**
Checked If Sample Not Analyzed ☐

**Layer 1** **White vinyl with gray streaks**

**Asbestos Fibrous Components:**
**No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
35% Aggregate
65% Vinyl Filler and Binder

**Layer 2** **Tan sticky material with gray gritty residue**

**Asbestos Fibrous Components:**
**No Asbestos Detected**

Non-Asbestos Fibrous Components:
1% Cellulose

Non-Fibrous Components:
22% Fine Grains
77% Filler and Binder

Client Sample Number: **F2.9C**
Client Sample Description: **12"x12" Floor Tile/White W/Gray Marbled & Mastic**
Client Sample Location: **Room 134 - Doorway**
Sample Comments:

Lab Sample Number: **16-00009.0015**
Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Bob Brownell** 12/30/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Jude Cummings** 1/6/2016

Jude Cummings

**Reviewed 1/6/2016 by: Jude Cummings**

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Billings, MT • Helena, MT • Seattle, WA

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00009**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **21**

**Layer 1** **White vinyl with gray streaks**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 35% Aggregate |
| | | 65% Vinyl Filler and Binder |

**Layer 2** **Brown and stan sticky material with gray residue**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 2% Cellulose | 30% Fine Grains |
| | 2% Synthetic | 66% Filler and Binder |

Client Sample Number: **F1.3A** Lab Sample Number: **16-00009.0016**
Client Sample Description: **Vinyl Sheet Flooring/Beige & Brown & Mastic**
Client Sample Location: **Room 104A**
Sample Comments: **Materials distinguishable but inseparable** Checked If Sample Not Analyzed ☐

**Brown streaked vinyl on off-white fibrous backing with tan residue**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 10% Cellulose | 35% Filler and Binder |
| | 3% Fiberglass | 52% Vinyl Filler and Binder |

Client Sample Number: **F1.3B** Lab Sample Number: **16-00009.0017**
Client Sample Description: **Vinyl Sheet Flooring/Beige & Brown & Mastic**
Client Sample Location: **Room 104A**
Sample Comments: Checked If Sample Not Analyzed ☐

**Brown streaked vinyl on off-white fibrous backing with tan residue**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 10% Cellulose | 35% Filler and Binder |
| | 3% Fiberglass | 52% Vinyl Filler and Binder |

**Comments:** **Materials distinguishable but inseparable**

**Layer 2** **Dark brown and tan mastics**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 5% Cellulose | 94% Filler and Binder |
| | 1% Fiberglass | |

**Comments:** **Materials distinguishable but inseparable**

(Sample results continued on next page.)

**Sampled by: Bob Brownell** **12/30/2015**
**Received by: Regina Mirabal** **1/5/2016**
**Analyzed by: Jude Cummings** **1/6/2016**

Jude Cummings

**Reviewed 1/6/2016 by: Jude Cummings**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00009**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **21**

Client Sample Number: **F1.3C** — Lab Sample Number: **16-00009.0018**
Client Sample Description: **Vinyl Sheet Flooring/Beige & Brown & Mastic**
Client Sample Location: **Room 104A**
Sample Comments: **Materials distinguishable but inseparable** — Checked If Sample Not Analyzed ☐

**Brown streaked vinyl on white fibrous backing with tan residue**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 12% Cellulose | 40% Filler and Binder |
| | 3% Fiberglass | 45% Vinyl Filler and Binder |

Client Sample Number: **M12.4A** — Lab Sample Number: **16-00009.0019**
Client Sample Description: **4" Vinyl Cove Base/Brown & Mastic/Light Brown**
Client Sample Location: **Room 104A**
Sample Comments: — Checked If Sample Not Analyzed ☐

**Layer 1 Brown vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 1% Cellulose | 99% Vinyl Filler and Binder |

**Layer 2 Tan flexible material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 100% Filler and Binder |

Client Sample Number: **M12.4B** — Lab Sample Number: **16-00009.0020**
Client Sample Description: **4" Vinyl Cove Base/Brown & Mastic/Light Brown**
Client Sample Location: **Room 203**
Sample Comments: — Checked If Sample Not Analyzed ☐

**Layer 1 Brown vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 100% Vinyl Filler and Binder |

**Layer 2 Tan mastic**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 2% Cellulose | 93% Filler and Binder |
| | 5% Synthetic | |

(Sample results continued on next page.)

**Sampled by: Bob Brownell** 12/30/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Jude Cummings** 1/6/2016

Jude Cummings

**Reviewed 1/6/2016 by: Jude Cummings**

NORTHERN INDUSTRIAL HYGIENE, INC.
Billings, MT • Helena, MT • Seattle, WA

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OFFICE: (206) 988-1746 FAX: (206) 988-1978
NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00009**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **21**

Client Sample Number: **M12.4C** Lab Sample Number: **16-00009.0021**
Client Sample Description: **4" Vinyl Cove Base/Brown & Mastic/Light Brown**
Client Sample Location: **Room 179**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **Brown vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 100% Vinyl Filler and Binder |

**Layer 2** **Tan mastic**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 100% Filler and Binder |

**Sampled by: Bob Brownell** 12/30/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Jude Cummings** 1/6/2016

Jude Cummings

**Reviewed 1/6/2016 by: Jude Cummings**

# Chain of Custody

NVLAP Lab Code 200511-0


**Northern Industrial Hygiene, Inc.**
201 South 30th Street
Billings, MT 59101
Office Phone: (406) 245-7766
Cell Phone: (406) 647-5275
Email: bbrownell@bridgeband.com
Inspector/Contact: Bob Brownell


| | |
|---|---|
| NIH Lab Batch ID: | 16-00004 |
| Project Name: | Old Livingston Hospital |
| Project Number: | 999-3019 |
| Date Samples Taken: | 12/30/15 |
| Type of Analysis: | PLM |

| Turnaround Time Requested | |
|---|---|
| 2 Hour: | |
| Same Day: | |
| 24 Hour: | |
| 48 Hour: | |
| 5 Day: | 5 day |
| 10 Day: | |

For Lab Use Only
Sample(s) Size: (Accepted) Rejected
Non-Conformance Memo: Yes (No)
Package Condition: (Good) Damaged Severe Damage



| NIH LAB ID | SAMPLE # | SAMPLE DESCRIPTION | SAMPLE LOCATION |
|---|---|---|---|
| 1 | M6.4A | 1'x1' Ceiling Tile (white w/ | Rm 194 |
| 2 | M6.4B | heavy Fissures + Mastic (Black) | Rm 194 |
| 3 | M6.4C | ↓ | Rm 194 |
| 4 | M6.3A | 1'x1' Ceiling Tile w/ Pattern | Rm 106 |
| 5 | M6.3B | Holes + Mastic (Brown) | Rm 106 |
| 6 | M6.3C | ↓ | Rm 106 |
| 7 | F2.8A | 12"x12" Floor Tile (Fuzzy w/ Tan Marbling) | Rm 133 |
| 8 | F2.8B | + Mastic ↓ | Rm 133 - NW Corner |
| 9 | F2.8C | | Rm 133 - SE Corner |
| 10 | F9.1A | 4"x2' Floor Tile (Brown) + Mastic | Rm 183 - Doorway |
| 11 | F9.1B | ↓ | Rm 103 - SE Corner |
| 12 | F9.1C | | Rm 183 - SW Corner |
| 13 | F2.9A | 12"x12" Floor Tile (White w/ Gray | Rm 104 - SE Corner |
| 14 | F2.9B | marbled) + Mastic | Rm 104 - NE Corner |
| 15 | F2.9C | ↓ | Rm 134 - Doorway |
| 16 | F1.3A | Vinyl Sheet Flooring (beige + Brown) | Rm 104A |
| 17 | F1.3B | + Mastic | Rm 104A |
| 18 | F1.3C | ↓ | Rm 104A |
| 19 | M12.4A | 4" Vinyl Cove (Brown) + Mastic | Rm 104A |
| 20 | M12.4B | (Light Brown) | Rm 203 |
| 21 | M12.4C | | Rm 179 |

**Special Instructions: Analyze Group Method - Stop at First Positive** X Yes No

Number of samples shipped this page: 21
Total number of samples shipped: 274

| | | | |
|---|---|---|---|
| Relinquished By: Robert Brownell | Date: 1/4/16 | Time: 17:00 | Firm: NIH |
| Received By: [illegible] | Date: 1/5/16 | Time: 11:50 | Firm: NIH BVL |
| Analyzed By: [illegible] | Date: 1/6/16 | Time: 09:38 | Firm: LAB |

Revised 01/20/15 RIM

NORTHERN INDUSTRIAL HYGIENE, INC.
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EMAIL: Rmelgoza@bridgeband.com
NVLAP Lab Code: 200511-0

1/6/2016

Bob Brownell
Northern Industrial Hygiene, Inc.
201 South 30th Street
Billings, MT 59101-

RE: Bulk Asbestos Fiber Analysis; Batch # 16-00010
Project Location *Old Livingston Hospital - First Floor*

Dear Bob Brownell,

Thank you for choosing Northern Industrial Hygiene, Inc. as your laboratory. Enclosed you will find analytical results for the bulk samples submitted to the laboratory.

Northern Industrial Hygiene is accredited by NVLAP Lab Code: 200511-0. Accreditation by NVLAP does not indicate endorsement by NVLAP or any other government agency. All bulk samples are analyzed in accordance with U.S. EPA Method -600/M4-82-020, December 1982 and EPA Method 600/R-93-116, July 1993. "Method for Determination of Asbestos in Bulk Building Materials"(NESHAP, 40 CFR-Part 61) protocol.

Analysis is cross checked through our inter or intra laboratory quality assurance program for verification. The percent values reported are based on calibrated visual estimates by volume unless verification by Point Count is indicated. Test results reported relate only to the samples submitted by the customer to Northern Industrial Hygiene, Inc. Trace amounts of asbestos are below the limit of detection and asbestos fibers with diameters below approximately 0.25 micrometers are not detectable with the Polarized Light Microscopy (PLM) analytical procedure. A trace amount of asbestos is defined as one to five fibers in three slide mounts. Asbestos found in this amount will be reported as "< 1.0%" by PLM analysis.

This report is highly confidential and shall not be reproduced without your written approval and the written approval of Northern Industrial Hygiene, Inc.

Samples are archived for thirty (30) days following analysis. Please contact us if samples need to be archived longer than the standard holding time.

Thank you for using Northern Industrial Hygiene, Inc. If you have any questions or concerns please contact us.

Sincerely,

Rachel Melgoza

Reviewed by: Rachel Melgoza

Enclosure: Bulk Sample Results

NORTHERN INDUSTRIAL HYGIENE, INC.
Billings, MT • Helena, MT • Seattle, WA

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OFFICE: (206) 988-1746 FAX: (206) 988-1978
NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital - First Floor*

NIH Batch Number: **16-00010**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **18**

Client Sample Number: **F2.5A** Lab Sample Number: **16-00010.0001**
Client Sample Description: **12"X12" Floor Tile - White w/Beige Specks, Yellow Mastic & Brown Leveling**
Client Sample Location: **Room 101 - North End of Room**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **White with beige streaks vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 30% Aggregate |
| | | 70% Vinyl Filler and Binder |

**Layer 2** **Yellow adhesive**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 1% Cellulose | 99% Filler and Binder |

**Layer 3** **Brown grainy compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 1% Cellulose | 68% Filler and Binder |
| | 1% Synthetic | 30% Fine Grains |

Client Sample Number: **F2.5B** Lab Sample Number: **16-00010.0002**
Client Sample Description: **12"X12" Floor Tile - White w/Beige Specks, Yellow Mastic & Brown Leveling**
Client Sample Location: **Room 101 - Sitting Area**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **White with beige streaks vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 30% Aggregate |
| | | 70% Vinyl Filler and Binder |

**Layer 2** **Yellow adhesive**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 1% Cellulose | 99% Filler and Binder |

**Layer 3** **Brown grainy compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 1% Cellulose | 68% Filler and Binder |
| | 1% Synthetic | 30% Fine Grains |

(Sample results continued on next page.)

**Sampled by: Bob Brownell** 12/30/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Rachel Melgoza** 1/6/2016

Rachel Melgoza

**Reviewed 1/6/2016 by: Rachel Melgoza**

NORTHERN INDUSTRIAL HYGIENE, INC.
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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital - First Floor*

NIH Batch Number: **16-00010**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **18**

Client Sample Number: **F2.5C** Lab Sample Number: **16-00010.0003**
Client Sample Description: **12"X12" Floor Tile - White w/Beige Specks, Yellow Mastic & Brown Leveling**
Client Sample Location: **Room 101 - adjacent to Room 110**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **White with beige streaks vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 30% Aggregate |
| | | 70% Vinyl Filler and Binder |

**Layer 2** **Yellow adhesive**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 1% Cellulose | 99% Filler and Binder |

**Layer 3** **Brown grainy compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 1% Cellulose | 68% Filler and Binder |
| | 1% Synthetic | 30% Fine Grains |

Client Sample Number: **F2.10A** Lab Sample Number: **16-00010.0004**
Client Sample Description: **12"X12" Floor Tile - Light-Blue Marbled & Mastic**
Client Sample Location: **Room 107 - Middle of Room**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **Light-gray with gray streaks**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 30% Aggregate |
| | | 70% Vinyl Filler and Binder |

**Layer 2** **Yellow and tan sticky adhesives on tan grainy material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 3% Cellulose | 77% Filler and Binder |
| | | 20% Fine Grains |

**Comments:** **Materials distinguishable but inseparable**

Client Sample Number: **F2.10B** Lab Sample Number: **16-00010.0005**
Client Sample Description: **12"X12" Floor Tile - Light-Blue Marbled & Mastic**
Client Sample Location: **Room 107 - West Doorway**
Sample Comments: Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Bob Brownell** 12/30/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Rachel Melgoza** 1/6/2016

Rachel Melgoza

**Reviewed 1/6/2016 by: Rachel Melgoza**

NORTHERN INDUSTRIAL HYGIENE, INC.
Billings, MT • Helena, MT • Seattle, WA

215 SW 153rd Street Burien, WA 98166
OFFICE: (206) 988-1746 FAX: (206) 988-1978
NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital - First Floor*

NIH Batch Number: **16-00010**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **18**

**Layer 1** **Light-gray with gray streaks**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 30% Aggregate |
| | | 70% Vinyl Filler and Binder |

**Layer 2** **Yellow and tan sticky adhesives on tan grainy material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 2% Cellulose | 78% Fine Grains |
| | | 20% Fine Grains |

**Comments:** **Materials distinguishable but inseparable**

Client Sample Number: **F2.10C** Lab Sample Number: **16-00010.0006**
Client Sample Description: **12"X12" Floor Tile - Light-Blue Marbled & Mastic**
Client Sample Location: **Room 107 - West Doorway**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **Light-gray with gray streaks**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 30% Aggregate |
| | | 70% Vinyl Filler and Binder |

**Layer 2** **Yellow and tan sticky adhesives**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 1% Cellulose | 99% Filler and Binder |

**Comments:** **Materials distinguishable but inseparable**

Client Sample Number: **F2.6A** Lab Sample Number: **16-00010.0007**
Client Sample Description: **12"X12" Floor Tile - Purple Marbled & Mastic**
Client Sample Location: **Room 107**
Sample Comments: **No mastic present** Checked If Sample Not Analyzed ☐

**Blue vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 30% Aggregate |
| | | 70% Vinyl Filler and Binder |

(Sample results continued on next page.)

**Sampled by:** **Bob Brownell** **12/30/2015**
**Received by:** **Regina Mirabal** **1/5/2016**
**Analyzed by:** **Rachel Melgoza** **1/6/2016**

Rachel Melgoza
**Reviewed 1/6/2016 by: Rachel Melgoza**

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OFFICE: (206) 988-1746 FAX: (206) 988-1978
NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital - First Floor*

NIH Batch Number: **16-00010**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **18**

Client Sample Number: **F2.6B** Lab Sample Number: **16-00010.0008**
Client Sample Description: **12"X12" Floor Tile - Purple Marbled & Mastic**
Client Sample Location: **Room 204**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **Blue vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 30% Aggregate |
| | | 70% Vinyl Filler and Binder |

**Layer 2** **Tan and black pliable adhesive with aggregate**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **2% Chrysotile Asbestos** | 5% Cellulose | 8% Aggregate |
| | | 50% Asphalt Filler and Binder |
| | | 35% Filler and Binder |

**Comments:** **Materials distinguishable but inseparable**

Client Sample Number: **F2.6C** Lab Sample Number: **16-00010.0009**
Client Sample Description: **12"X12" Floor Tile - Purple Marbled & Mastic**
Client Sample Location: **Room 101 - West End**
Sample Comments: **No mastic present** Checked If Sample Not Analyzed ☐

**Purple vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 30% Aggregate |
| | | 70% Vinyl Filler and Binder |

Client Sample Number: **F2.15A** Lab Sample Number: **16-00010.0010**
Client Sample Description: **12"X12" Floor Tile - White w/Blue Specks & Mastic**
Client Sample Location: **Room 107 - Northwest Corner**
Sample Comments: Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by:** **Bob Brownell** **12/30/2015**
**Received by:** **Regina Mirabal** **1/5/2016**
**Analyzed by:** **Rachel Melgoza** **1/6/2016**

Rachel Melgoza
**Reviewed 1/6/2016 by: Rachel Melgoza**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital - First Floor*

NIH Batch Number: **16-00010**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **18**

**Layer 1** **White with blue streaks vinyl**

**Asbestos Fibrous Components:**
**No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
30% Aggregate
70% Vinyl Filler and Binder

**Layer 2** **Yellow pliable adhesive with tan grainy material**

**Asbestos Fibrous Components:**
**No Asbestos Detected**

Non-Asbestos Fibrous Components:
2% Cellulose

Non-Fibrous Components:
75% Filler and Binder
23% Fine Grains

**Comments:** **Materials distinguishable but inseparable**

Client Sample Number: **F2.15B**
Client Sample Description: **12"X12" Floor Tile - White w/Blue Specks & Mastic**
Client Sample Location: **Room 107 - Northeast Corner**
Sample Comments:

Lab Sample Number: **16-00010.0011**
Checked If Sample Not Analyzed ☐

**Layer 1** **White with blue streaks vinyl**

**Asbestos Fibrous Components:**
**No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
30% Aggregate
70% Vinyl Filler and Binder

**Layer 2** **Yellow pliable adhesive with tan grainy material**

**Asbestos Fibrous Components:**
**No Asbestos Detected**

Non-Asbestos Fibrous Components:
2% Cellulose

Non-Fibrous Components:
75% Filler and Binder
23% Fine Grains

**Comments:** **Materials distinguishable but inseparable**

Client Sample Number: **F2.15C**
Client Sample Description: **12"X12" Floor Tile - White w/Blue Specks & Mastic**
Client Sample Location: **Room 107 - Southeast Corner**
Sample Comments:

Lab Sample Number: **16-00010.0012**
Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by:** **Bob Brownell** **12/30/2015**
**Received by:** **Regina Mirabal** **1/5/2016**
**Analyzed by:** **Rachel Melgoza** **1/6/2016**

Rachel Melgoza

**Reviewed 1/6/2016 by: Rachel Melgoza**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital - First Floor*

NIH Batch Number: **16-00010**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **18**

**Layer 1** **White with blue streaks vinyl**

**Asbestos Fibrous Components:**
**No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
30% Aggregate
70% Vinyl Filler and Binder

**Layer 2** **Yellow pliable adhesive with tan grainy material**

**Asbestos Fibrous Components:**
**No Asbestos Detected**

Non-Asbestos Fibrous Components:
3% Cellulose

Non-Fibrous Components:
77% Filler and Binder
20% Fine Grains

**Comments:** **Materials distinguishable but inseparable**

Client Sample Number: **F2.7A**
Client Sample Description: **12"X12" Floor Tile - Green Marbled & Mastic**
Client Sample Location: **Room 101 - West End**
Sample Comments:

Lab Sample Number: **16-00010.0013**
Checked If Sample Not Analyzed ☐

**Layer 1** **Light-green vinyl**

**Asbestos Fibrous Components:**
**No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
30% Aggregate
70% Vinyl Filler and Binder

**Layer 2** **Yellow sticky adhesive**

**Asbestos Fibrous Components:**
**No Asbestos Detected**

Non-Asbestos Fibrous Components:
2% Cellulose

Non-Fibrous Components:
98% Filler and Binder

Client Sample Number: **F2.7B**
Client Sample Description: **12"X12" Floor Tile - Green Marbled & Mastic**
Client Sample Location: **Room 101 - Sitting Area**
Sample Comments:

Lab Sample Number: **16-00010.0014**
Checked If Sample Not Analyzed ☐

**Layer 1** **Light-green vinyl**

**Asbestos Fibrous Components:**
**No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
30% Aggregate
70% Vinyl Filler and Binder

**Layer 2** **Yellow sticky adhesive**

**Asbestos Fibrous Components:**
**No Asbestos Detected**

Non-Asbestos Fibrous Components:
1% Cellulose

Non-Fibrous Components:
99% Filler and Binder

(Sample results continued on next page.)

**Sampled by:** **Bob Brownell** **12/30/2015**
**Received by:** **Regina Mirabal** **1/5/2016**
**Analyzed by:** **Rachel Melgoza** **1/6/2016**

Rachel Melgoza

**Reviewed 1/6/2016 by: Rachel Melgoza**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital - First Floor*

NIH Batch Number: **16-00010**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **18**

Client Sample Number: **F2.7C** Lab Sample Number: **16-00010.0015**
Client Sample Description: **12"X12" Floor Tile - Green Marbled & Mastic**
Client Sample Location: **Room 101 - North End**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **Light-green vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 30% Aggregate |
| | | 70% Vinyl Filler and Binder |

**Layer 2** **Yellow sticky adhesive**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 2% Cellulose | 98% Filler and Binder |

Client Sample Number: **M6.2A** Lab Sample Number: **16-00010.0016**
Client Sample Description: **1'X1' Ceiling Tile - White w/Heavy Fissures & Brown Mastic**
Client Sample Location: **Room 103**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **White paint on tan fibrous compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 25% Cellulose | 50% Filler and Binder |
| | 20% Mineral Wool and Beads | 5% Paint |

**Comments:** **Materials distinguishable but inseparable**

**Layer 2** **Brown brittle mastic**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 2% Cellulose | 96% Filler and Binder |
| | 2% Mineral Wool and Beads | |

Client Sample Number: **M6.2B** Lab Sample Number: **16-00010.0017**
Client Sample Description: **1'X1' Ceiling Tile - White w/Heavy Fissures & Brown Mastic**
Client Sample Location: **Room 153**
Sample Comments: Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by:** **Bob Brownell** **12/30/2015**
**Received by:** **Regina Mirabal** **1/5/2016**
**Analyzed by:** **Rachel Melgoza** **1/6/2016**

Rachel Melgoza

**Reviewed 1/6/2016 by: Rachel Melgoza**

NORTHERN INDUSTRIAL HYGIENE, INC.
Billings, MT • Helena, MT • Seattle, WA

215 SW 153rd Street Burien, WA 98166
OFFICE: (206) 988-1746 FAX: (206) 988-1978
NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital - First Floor*

NIH Batch Number: **16-00010**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **18**

**Layer 1** **White paint on tan fibrous compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 25% Cellulose | 48% Filler and Binder |
| | 20% Mineral Wool and Beads | 7% Paint |

**Comments:** **Materials distinguishable but inseparable**

**Layer 2** **Brown brittle mastic**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 2% Cellulose | 96% Filler and Binder |
| | 2% Mineral Wool and Beads | |

Client Sample Number: **M6.2C** Lab Sample Number: **16-00010.0018**
Client Sample Description: **1'X1' Ceiling Tile - White w/Heavy Fissures & Brown Mastic**
Client Sample Location: **Room 153**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **White paint on tan fibrous compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 30% Cellulose | 48% Filler and Binder |
| | 17% Mineral Wool and Beads | 5% Paint |

**Comments:** **Materials distinguishable but inseparable**

**Layer 2** **Brown brittle mastic**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 2% Cellulose | 96% Filler and Binder |
| | 2% Mineral Wool and Beads | |

**Sampled by:** **Bob Brownell** **12/30/2015**
**Received by:** **Regina Mirabal** **1/5/2016**
**Analyzed by:** **Rachel Melgoza** **1/6/2016**

Rachel Melgoza

**Reviewed 1/6/2016 by: Rachel Melgoza**

# Chain of Custody

NVLAP Lab Code 200511-0

**Northern Industrial Hygiene, Inc.**
201 South 30th Street
Billings, MT 59101
Office Phone: (406) 245-7766
Cell Phone: (406) 647-5275
Email: bbrownell@bridgeband.com
Inspector/Contact: Bob Brownell

| | |
|---|---|
| NIH Lab Batch ID: | 16-000110 |
| Project Name: | Old Livingston Hospital |
| Project Number: | 999-3019 |
| Date Samples Taken: | 12/30/15 |
| Type of Analysis: | PLM |

| Turnaround Time Requested | |
|---|---|
| 2 Hour: | |
| Same Day: | |
| 24 Hour: | |
| 48 Hour: | |
| 5 Day: | 5 day |
| 10 Day: | |

For Lab Use Only
Sample(s) Size: ✓ Accepted ___ Rejected
Non-Conformance Memo: ___ Yes ✓ No
Package Condition: ✓ Good ___ Damaged ___ Severe Damage



| NIH LAB ID | SAMPLE # | SAMPLE DESCRIPTION | SAMPLE LOCATION |
|---|---|---|---|
| 0001 | F2.5A | 12"x12" Floor Tile (White w/Beige specks) + Mastic (Yellow) + Leveling (Beig | North End of Rm 101 |
| 2 | F2.5B | " | Sitting Area of Rm 101 |
| 3 | F2.5C | " | Rm 101 Adjacent to Rm 110 |
| 4 | F2.10A | 12"x12" Floor Tile (Lt. Blue Marbled) + Mastic | Rm 107 Middle of Rm |
| 5 | F2.10B | " | Rm 107 SE Corner |
| 6 | F2.10C | " | Rm 107 West Doorway |
| 7 | F2.6A | 12"x12" Floor Tile (Purple Marbled) + Mastic | Rm 107 |
| 8 | F2.6B | " | Rm 204 |
| 9 | F2.6C | | Rm 101 - West End |
| 10 | F2.15A | 12"x12" Floor Tile (White w/Blue | Rm 107 - NW Corner |
| 11 | F2.15B | specks) + Mastic | Rm 107 - NE Corner |
| 12 | F2.15C | | Rm 107 - SE Corner |
| 13 | F2.7A | 12"x12" Floor Tile (Green Marbled) | Rm 101 - West End |
| 14 | F2.7B | + Mastic | Rm 101 - Sitting Area |
| 15 | F2.7C | | Rm 101 - North End |
| 16 | M6.2A | 1'x1' Ceiling Tile (White | Rm 103 |
| 17 | M6.2B | w/heavy Fissures + Mastic (Beig | Rm 153 |
| 18 | M6.2C | | Rm 153 |

**Special Instructions: Analyze Group Method - Stop at First Positive** X Yes ___ No

Number of samples shipped this page: 18

Total number of samples shipped:

| | | | |
|---|---|---|---|
| Relinquished By: Robert Brownell | Date: 1/4/16 | Time: 1700 | Firm: NIH |
| Received By: [illegible] | Date: 1/5/16 | Time: 11:50 | Firm: NIH Tech |
| Analyzed By: Rachel Melgoza | Date: 01/06/16 | Time: 1100 | Firm: NIH Bioscn |

Revised 01/20/15 RIM

NORTHERN INDUSTRIAL HYGIENE, INC.
Billings, MT • Helena, MT • Seattle, WA

215 SW 153rd Street Burien, WA 98166
OFFICE: (206) 988-1746 FAX: (206) 988-1978
EMAIL: Rmelgoza@bridgeband.com
NVLAP Lab Code: 200511-0

1/6/2016

Bob Brownell
Northern Industrial Hygiene, Inc.
201 South 30th Street
Billings, MT 59101-

RE: Bulk Asbestos Fiber Analysis; Batch # 16-00011
Project Location *Old Livingston Hospital*

Dear Bob Brownell,

Thank you for choosing Northern Industrial Hygiene, Inc. as your laboratory. Enclosed you will find analytical results for the bulk samples submitted to the laboratory.

Northern Industrial Hygiene is accredited by NVLAP Lab Code: 200511-0. Accreditation by NVLAP does not indicate endorsement by NVLAP or any other government agency. All bulk samples are analyzed in accordance with U.S. EPA Method -600/M4-82-020, December 1982 and EPA Method 600/R-93-116, July 1993. "Method for Determination of Asbestos in Bulk Building Materials"(NESHAP, 40 CFR-Part 61) protocol.

Analysis is cross checked through our inter or intra laboratory quality assurance program for verification. The percent values reported are based on calibrated visual estimates by volume unless verification by Point Count is indicated. Test results reported relate only to the samples submitted by the customer to Northern Industrial Hygiene, Inc. Trace amounts of asbestos are below the limit of detection and asbestos fibers with diameters below approximately 0.25 micrometers are not detectable with the Polarized Light Microscopy (PLM) analytical procedure. A trace amount of asbestos is defined as one to five fibers in three slide mounts. Asbestos found in this amount will be reported as "< 1.0%" by PLM analysis.

This report is highly confidential and shall not be reproduced without your written approval and the written approval of Northern Industrial Hygiene, Inc.

Samples are archived for thirty (30) days following analysis. Please contact us if samples need to be archived longer than the standard holding time.

Thank you for using Northern Industrial Hygiene, Inc. If you have any questions or concerns please contact us.

Sincerely,

Reviewed by: Jude Cummings

Enclosure: Bulk Sample Results

NORTHERN INDUSTRIAL HYGIENE, INC.
Billings, MT • Helena, MT • Seattle, WA

215 SW 153rd Street Burien, WA 98166
OFFICE: (206) 988-1746 FAX: (206) 988-1978
NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00011**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **13**

Client Sample Number: **M16.3A** — Lab Sample Number: **16-00011.0001**
Client Sample Description: **Concrete**
Client Sample Location: **Exterior Foundation Wall Of Addition - 1989 Addition**
Sample Comments: — Checked If Sample Not Analyzed ☐

**Layer 1** **Medium gray gritty material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 70% Aggregate |
| | | 30% Filler and Binder |

**Layer 2** **Light gray gritty compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 1% Cellulose | 70% Aggregate |
| | | 29% Filler and Binder |

Client Sample Number: **M16.3B** — Lab Sample Number: **16-00011.0002**
Client Sample Description: **Concrete**
Client Sample Location: **Exterior Foundation Wall Of Addition - 1989 Addition**
Sample Comments: — Checked If Sample Not Analyzed ☐

**Light gray gritty compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 1% Cellulose | 70% Aggregate |
| | | 29% Filler and Binder |

Client Sample Number: **M16.3C** — Lab Sample Number: **16-00011.0003**
Client Sample Description: **Concrete**
Client Sample Location: **Exterior Foundation Wall Of Addition - 1989 Addition**
Sample Comments: — Checked If Sample Not Analyzed ☐

**Medium gray gritty material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 70% Aggregate |
| | | 30% Filler and Binder |

Client Sample Number: **F8.1A** — Lab Sample Number: **16-00011.0004**
Client Sample Description: **6"x6" Ceramic Tile & Grout - Red**
Client Sample Location: **Room 100**
Sample Comments: — Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Bob Brownell** 12/31/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Jude Cummings** 1/6/2016

Jude Cummings

**Reviewed 1/6/2016 by: Jude Cummings**

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# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00011**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **13**

**Layer 1** **Red ceramic material**

**Asbestos Fibrous Components:**
**No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
30% Aggregate
20% Fine Grains
50% Filler and Binder

**Layer 2** **Gray gritty compressed material**

**Asbestos Fibrous Components:**
**No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
70% Aggregate
30% Filler and Binder

Client Sample Number: **F8.1B**
Client Sample Description: **6"x6" Ceramic Tile & Grout - Red**
Client Sample Location: **Room 100A**
Sample Comments:

Lab Sample Number: **16-00011.0005**
Checked If Sample Not Analyzed ☐

**Layer 1** **Red ceramic material**

**Asbestos Fibrous Components:**
**No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
30% Fine Grains
30% Aggregate
40% Filler and Binder

**Layer 2** **Gray gritty compressed material**

**Asbestos Fibrous Components:**
**No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
70% Aggregate
30% Filler and Binder

Client Sample Number: **F8.1C**
Client Sample Description: **6"x6" Ceramic Tile & Grout - Red**
Client Sample Location: **Room 100A**
Sample Comments:

Lab Sample Number: **16-00011.0006**
Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Bob Brownell** 12/31/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Jude Cummings** 1/6/2016

Jude Cummings

**Reviewed 1/6/2016 by: Jude Cummings**

NORTHERN INDUSTRIAL HYGIENE, INC.
Billings, MT • Helena, MT • Seattle, WA

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OFFICE: (206) 988-1746 FAX: (206) 988-1978
NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

| | | | |
|---|---|---|---|
| **Northern Industrial Hygiene, Inc.** | | NIH Batch Number: | **16-00011** |
| **201 South 30th Street** | | Client Job Number: | **999-3019** |
| **Billings, MT 59101-** | | Turn Around Time: | **5 Day** |
| Project Location: | *Old Livingston Hospital* | Samples Analyzed: | **13** |

**Layer 1** **Red ceramic material**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
30% Fine Grains
20% Aggregate
50% Filler and Binder

**Layer 2** **Gray gritty compressed material**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
70% Aggregate
30% Filler and Binder

Client Sample Number: **T12.1A** Lab Sample Number: **16-00011.0007**
Client Sample Description: **Roof Drain Bowl Insulation**
Client Sample Location: **Room 101**
Sample Comments: Checked If Sample Not Analyzed ☐

**White fibrous powdery material**

**Asbestos Fibrous Components:**
**15% Chrysotile Asbestos**
**8% Amosite Asbestos**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
77% Filler and Binder

Client Sample Number: **T12.1B** Lab Sample Number: **16-00011.0008**
Client Sample Description: **Roof Drain Bowl Insulation**
Client Sample Location: **Room 101**
Sample Comments: **Not Analyzed Per Client Request** Checked If Sample Not Analyzed ☑

Client Sample Number: **T12.1C** Lab Sample Number: **16-00011.0009**
Client Sample Description: **Roof Drain Bowl Insulation**
Client Sample Location: **Room 101**
Sample Comments: **Not Analyzed Per Client Request** Checked If Sample Not Analyzed ☑

Client Sample Number: **M8.1A** Lab Sample Number: **16-00011.0010**
Client Sample Description: **Window Caulk - Gray W/White**
Client Sample Location: **Room 149**
Sample Comments: **Small sample size** Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

| | | |
|---|---|---|
| **Sampled by:** | **Bob Brownell** | **12/31/2015** |
| **Received by:** | **Regina Mirabal** | **1/5/2016** |
| **Analyzed by:** | **Jude Cummings** | **1/6/2016** |

Jude Cummings

**Reviewed 1/6/2016 by: Jude Cummings**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

| | | | |
|---|---|---|---|
| **Northern Industrial Hygiene, Inc.** | | NIH Batch Number: | **16-00011** |
| **201 South 30th Street** | | Client Job Number: | **999-3019** |
| **Billings, MT 59101-** | | Turn Around Time: | **5 Day** |
| Project Location: | *Old Livingston Hospital* | Samples Analyzed: | **13** |

**Tan, white and black materials**

| **Asbestos Fibrous Components:** | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **8% Chrysotile Asbestos** | 5% Cellulose | 87% Filler and Binder |

| | | |
|---|---|---|
| Client Sample Number: | **M8.1B** | Lab Sample Number: **16-00011.0011** |
| Client Sample Description: | **Window Caulk - Gray W/White** | |
| Client Sample Location: | **Room 155** | |
| Sample Comments: | **Not Analyzed Per Client Request** | Checked If Sample Not Analyzed ☑ |

| | | |
|---|---|---|
| Client Sample Number: | **M8.1C** | Lab Sample Number: **16-00011.0012** |
| Client Sample Description: | **Window Caulk - Gray W/White** | |
| Client Sample Location: | **Room 146** | |
| Sample Comments: | **Not Analyzed Per Client Request** | Checked If Sample Not Analyzed ☑ |

| | | |
|---|---|---|
| Client Sample Number: | **M8.2A** | Lab Sample Number: **16-00011.0013** |
| Client Sample Description: | **Window Glazing Compound - White** | |
| Client Sample Location: | **Room 106** | |
| Sample Comments: | **Small sample size** | Checked If Sample Not Analyzed ☐ |

**White and gray chunks**

| **Asbestos Fibrous Components:** | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **4% Chrysotile Asbestos** | 1% Cellulose | 95% Filler and Binder |

| | | |
|---|---|---|
| Client Sample Number: | **M8.2B** | Lab Sample Number: **16-00011.0014** |
| Client Sample Description: | **Window Glazing Compound - White** | |
| Client Sample Location: | **Room 196** | |
| Sample Comments: | **Not Analyzed Per Client Request** | Checked If Sample Not Analyzed ☑ |

| | | |
|---|---|---|
| Client Sample Number: | **M8.2C** | Lab Sample Number: **16-00011.0015** |
| Client Sample Description: | **Window Glazing Compound - White** | |
| Client Sample Location: | **Room 201** | |
| Sample Comments: | **Not Analyzed Per Client Request** | Checked If Sample Not Analyzed ☑ |

| | | |
|---|---|---|
| Client Sample Number: | **M8.3A** | Lab Sample Number: **16-00011.0016** |
| Client Sample Description: | **Window Caulk - White** | |
| Client Sample Location: | **Room 106** | |
| Sample Comments: | **Small sample size** | Checked If Sample Not Analyzed ☐ |

(Sample results continued on next page.)

| | | |
|---|---|---|
| **Sampled by:** | **Bob Brownell** | **12/31/2015** |
| **Received by:** | **Regina Mirabal** | **1/5/2016** |
| **Analyzed by:** | **Jude Cummings** | **1/6/2016** |

Jude Cummings

**Reviewed 1/6/2016 by: Jude Cummings**

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# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00011**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **13**

**White and off-white fibrous compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **12% Chrysotile Asbestos** | | 88% Filler and Binder |

Client Sample Number: **M8.3B** — Lab Sample Number: **16-00011.0017**
Client Sample Description: **Window Caulk - White**
Client Sample Location: **Room 196**
Sample Comments: **Not Analyzed Per Client Request** — Checked If Sample Not Analyzed ☑

Client Sample Number: **M8.3C** — Lab Sample Number: **16-00011.0018**
Client Sample Description: **Window Caulk - White**
Client Sample Location: **Room 201**
Sample Comments: **Not Analyzed Per Client Request** — Checked If Sample Not Analyzed ☑

Client Sample Number: **M8.4A** — Lab Sample Number: **16-00011.0019**
Client Sample Description: **Window Glazing - Brown Vinyl**
Client Sample Location: **Room 149**
Sample Comments: **Small sample size** — Checked If Sample Not Analyzed ☐

**Gray flexible non-fibrous material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 1% Miscellaneous Particles |
| | | 99% Filler and Binder |

Client Sample Number: **M8.4B** — Lab Sample Number: **16-00011.0020**
Client Sample Description: **Window Glazing - Brown Vinyl**
Client Sample Location: **Room 155**
Sample Comments: **Small sample size** — Checked If Sample Not Analyzed ☐

**Layer 1** **Gray non-fibrous flexible material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 1% Miscellaneous Particles |
| | | 99% Filler and Binder |

Client Sample Number: **M8.4C** — Lab Sample Number: **16-00011.0021**
Client Sample Description: **Window Glazing - Brown Vinyl**
Client Sample Location: **Room 146**
Sample Comments: **Small sample size** — Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Bob Brownell** 12/31/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Jude Cummings** 1/7/2016

Jude Cummings

**Reviewed 1/6/2016 by: Jude Cummings**

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# Bulk Asbestos Analysis Report

| | | | |
|---|---|---|---|
| **Northern Industrial Hygiene, Inc.** | | NIH Batch Number: | **16-00011** |
| **201 South 30th Street** | | Client Job Number: | **999-3019** |
| **Billings, MT 59101-** | | Turn Around Time: | **5 Day** |
| Project Location: | *Old Livingston Hospital* | Samples Analyzed: | **13** |

**Gray non-fibrous flexible material**

| **Asbestos Fibrous Components:** | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 2% Miscellaneous Particles |
| | | 98% Filler and Binder |

| | | |
|---|---|---|
| **Sampled by:** | **Bob Brownell** | **12/31/2015** |
| **Received by:** | **Regina Mirabal** | **1/5/2016** |
| **Analyzed by:** | **Jude Cummings** | **1/7/2016** |

Jude Cummings

**Reviewed 1/6/2016 by: Jude Cummings**

# Chain of Custody

NVLAP Lab Code 200511-0


**Northern Industrial Hygiene, Inc.**
201 South 30th Street
Billings, MT 59101
Office Phone: (406) 245-7766
Cell Phone: (406) 647-5275
Email: bbrownell@bridgeband.com
Inspector/Contact: Bob Brownell


| | |
|---|---|
| NIH Lab Batch ID: | 16-00011 |
| Project Name: | Old Livingston Hospital |
| Project Number: | 999-3019 |
| Date Samples Taken: | 12/31/15 |
| Type of Analysis: | PLM |

| Turnaround Time Requested | |
|---|---|
| 2 Hour: | |
| Same Day: | |
| 24 Hour: | |
| 48 Hour: | |
| 5 Day: | 5 day |
| 10 Day: | |

For Lab Use Only
Sample(s) Size: Accepted ___ Rejected
Non-Conformance Memo: Yes ___ No
Package Condition: Good ___ Damaged ___ Severe Damage



| NIH LAB ID | SAMPLE # | SAMPLE DESCRIPTION | SAMPLE LOCATION |
|---|---|---|---|
| 1 | M16.3A | Concrete (1989 Addn) | Exterior Foundation Wall |
| 2 | M16.3B | | of Addn |
| 3 | M16.3C | | |
| 4 | FR.1A | Red Ceramic Tile + Grout (6"x6") | Room 100 |
| 5 | FR.1B | | Room 100A |
| 6 | FR.1C | | Room 100A |
| 7 | TI2.1A | Roof Drain Bowl Insulation | Room 101 |
| 8 | TI2.1B | | Room 101 |
| 9 | TI2.1C | | Room 101 |
| 10 | M8.1A | Window Caulk (gray w/white) | Room 149 |
| 11 | M8.1B | | Room 155 |
| 12 | M8.1C | | Room 146 |
| 13 | M8.2A | Window Glazing Compound | Room 106 |
| 14 | M8.2B | (white) | Room 196 |
| 15 | M8.2C | | Room 201 |
| 16 | M8.3A | Window Caulk (white) | Room 106 |
| 17 | M8.3B | | Room 196 |
| 18 | M8.3C | | Room 201 |
| 19 | M8.4A | Window Glazing (brn Vinyl) | Room 149 |
| 20 | M8.4B | | Room 155 |
| 21 | M8.4C | | Room 146 |

**Special Instructions: Analyze Group Method - Stop at First Positive** X Yes ___ No

Number of samples shipped this page: 21
Total number of samples shipped: 274

| | | | |
|---|---|---|---|
| Relinquished By: Robert B Brownell | Date: 1/4/16 | Time: 1700 | Firm: NIH |
| Received By: [illegible] | Date: 1/5/16 | Time: 12:30 | Firm: NIH Gr[illegible] |
| Analyzed By: [illegible] | Date: [illegible] | Time: [illegible] | Firm: LAB |

Revised 01/20/15 RIM

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OFFICE: (206) 988-1746 FAX: (206) 988-1978
EMAIL: Rmelgoza@bridgeband.com
NVLAP Lab Code: 200511-0

1/8/2016

Bob Brownell
Northern Industrial Hygiene, Inc.
201 South 30th Street
Billings, MT 59101-

RE: Bulk Asbestos Fiber Analysis; Batch # 16-00012
Project Location *Old Livingston Hospital*

Dear Bob Brownell,

Thank you for choosing Northern Industrial Hygiene, Inc. as your laboratory. Enclosed you will find analytical results for the bulk samples submitted to the laboratory.

Northern Industrial Hygiene is accredited by NVLAP Lab Code: 200511-0. Accreditation by NVLAP does not indicate endorsement by NVLAP or any other government agency. All bulk samples are analyzed in accordance with U.S. EPA Method -600/M4-82-020, December 1982 and EPA Method 600/R-93-116, July 1993. "Method for Determination of Asbestos in Bulk Building Materials"(NESHAP, 40 CFR-Part 61) protocol.

Analysis is cross checked through our inter or intra laboratory quality assurance program for verification. The percent values reported are based on calibrated visual estimates by volume unless verification by Point Count is indicated. Test results reported relate only to the samples submitted by the customer to Northern Industrial Hygiene, Inc. Trace amounts of asbestos are below the limit of detection and asbestos fibers with diameters below approximately 0.25 micrometers are not detectable with the Polarized Light Microscopy (PLM) analytical procedure. A trace amount of asbestos is defined as one to five fibers in three slide mounts. Asbestos found in this amount will be reported as "< 1.0%" by PLM analysis.

This report is highly confidential and shall not be reproduced without your written approval and the written approval of Northern Industrial Hygiene, Inc.

Samples are archived for thirty (30) days following analysis. Please contact us if samples need to be archived longer than the standard holding time.

Thank you for using Northern Industrial Hygiene, Inc. If you have any questions or concerns please contact us.

Sincerely,

Jude Cummings

Reviewed by: Jude Cummings

Enclosure: Bulk Sample Results

NORTHERN INDUSTRIAL HYGIENE, INC.
Billings, MT • Helena, MT • Seattle, WA

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OFFICE: (206) 988-1746 FAX: (206) 988-1978
NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00012**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **19**

Client Sample Number: **F3.5A** — Lab Sample Number: **16-00012.0001**
Client Sample Description: **9"x9" Floor Tile/Green & Mastic/Black**
Client Sample Location: **Room 201 - Northeast Corner**
Sample Comments: — Checked If Sample Not Analyzed ☐

**Layer 1** **Green vinyl with white streaks**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **6% Chrysotile Asbestos** | | 30% Aggregate |
| | | 64% Vinyl Filler and Binder |

**Layer 2** **Black Mastic**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **8% Chrysotile Asbestos** | 5% Cellulose | 87% Asphalt Filler and Binder |

Client Sample Number: **F3.5B** — Lab Sample Number: **16-00012.0002**
Client Sample Description: **9"x9" Floor Tile/Green & Mastic/Black**
Client Sample Location: **Room 201 - Southeast Corner**
Sample Comments: **Not Analyzed Per Client Request** — Checked If Sample Not Analyzed ☑

Client Sample Number: **F3.5C** — Lab Sample Number: **16-00012.0003**
Client Sample Description: **9"x9" Floor Tile/Green & Mastic/Black**
Client Sample Location: **Room 201 - Southeast Corner**
Sample Comments: **Not Analyzed Per Client Request** — Checked If Sample Not Analyzed ☑

Client Sample Number: **F2.13A** — Lab Sample Number: **16-00012.0004**
Client Sample Description: **12"x12" Floor Tile/White W/Green & Brn Specks & Mastic**
Client Sample Location: **Room 202**
Sample Comments: — Checked If Sample Not Analyzed ☐

**Layer 1** **White vinyl with green streaks**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 30% Aggregate |
| | | 70% Vinyl Filler and Binder |

**Layer 2** **Clear mastic with gray material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 8% Cellulose | 30% Fine Grains |
| | | 62% Filler and Binder |

(Sample results continued on next page.)

**Sampled by: Bob Brownell** 12/31/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Jude Cummings** 1/8/2016

Jude Cummings

**Reviewed 1/8/2016 by: Jude Cummings**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00012**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **19**

Client Sample Number: **F2.13B** Lab Sample Number: **16-00012.0005**
Client Sample Description: **12"x12" Floor Tile/White W/Green & Brn Specks & Mastic**
Client Sample Location: **Room 202**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **White vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 30% Aggregate |
| | | 70% Vinyl Filler and Binder |

**Layer 2** **Clear mastic with gray material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 2% Cellulose | 30% Fine Grains |
| | | 68% Filler and Binder |

**Comments:** **Materials distinguishable but inseparable**

Client Sample Number: **F2.13C** Lab Sample Number: **16-00012.0006**
Client Sample Description: **12"x12" Floor Tile/White W/Green & Brn Specks & Mastic**
Client Sample Location: **Room 202**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **White vinyl with green and brown streaks**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 30% Aggregate |
| | | 70% Vinyl Filler and Binder |

**Layer 2** **Clear mastic with gray material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 3% Cellulose | 30% Fine Grains |
| | | 67% Filler and Binder |

Client Sample Number: **F2.14A** Lab Sample Number: **16-00012.0007**
Client Sample Description: **12"x12" Floor Tile/Brown Marbled & Mastic**
Client Sample Location: **Room 202**
Sample Comments: Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Bob Brownell** **12/31/2015**
**Received by: Regina Mirabal** **1/5/2016**
**Analyzed by: Jude Cummings** **1/8/2016**

Jude Cummings

**Reviewed 1/8/2016 by: Jude Cummings**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00012**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **19**

**Layer 1** **Brown streaked vinyl**

**Asbestos Fibrous Components:**
**No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
30% Aggregate
70% Vinyl Filler and Binder

**Layer 2** **Clear mastic with gray material**

**Asbestos Fibrous Components:**
**No Asbestos Detected**

Non-Asbestos Fibrous Components:
5% Cellulose

Non-Fibrous Components:
30% Fine Grains
65% Filler and Binder

**Comments:** **Materials distinguishable but inseparable**

Client Sample Number: **F2.14B**
Client Sample Description: **12"x12" Floor Tile/Brown Marbled & Mastic**
Client Sample Location: **Room 202**
Sample Comments: **No mastic present**

Lab Sample Number: **16-00012.0008**
Checked If Sample Not Analyzed ☐

**Brown streaked vinyl**

**Asbestos Fibrous Components:**
**No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
30% Aggregate
70% Vinyl Filler and Binder

Client Sample Number: **F2.14C**
Client Sample Description: **12"x12" Floor Tile/Brown Marbled & Mastic**
Client Sample Location: **Room 202**
Sample Comments:

Lab Sample Number: **16-00012.0009**
Checked If Sample Not Analyzed ☐

**Layer 1** **Brown streaked vinyl**

**Asbestos Fibrous Components:**
**No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
30% Aggregate
70% Vinyl Filler and Binder

**Layer 2** **Opaque sticky material**

**Asbestos Fibrous Components:**
**No Asbestos Detected**

Non-Asbestos Fibrous Components:
3% Cellulose

Non-Fibrous Components:
10% Miscellaneous Materials
87% Filler and Binder

(Sample results continued on next page.)

**Sampled by: Bob Brownell** **12/31/2015**
**Received by: Regina Mirabal** **1/5/2016**
**Analyzed by: Jude Cummings** **1/8/2016**

Jude Cummings

**Reviewed 1/8/2016 by: Jude Cummings**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00012**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **19**

Client Sample Number: **M3.2A** Lab Sample Number: **16-00012.0010**
Client Sample Description: **Sheetrock & Joint Compound**
Client Sample Location: **Room 137 - Southwest Corner (Original Bldg.)**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **White compressed powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | | 100% Filler and Binder |

**Layer 2** **White papery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 98% Cellulose | 2% Filler and Binder |

**Layer 3** **Brown papery on white compressed powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 15% Cellulose<br>3% Fiberglass | 82% Filler and Binder |

Client Sample Number: **M3.2B** Lab Sample Number: **16-00012.0011**
Client Sample Description: **Sheetrock & Joint Compound**
Client Sample Location: **Room 157 - Southwest Corner (Original Bldg.)**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **White paint on white compressed powder**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | | 30% Paint<br>70% Filler and Binder |

**Comments:** **Materials distinguishable but inseparable**

**Layer 2** **White papery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 90% Cellulose | 10% Filler and Binder |

**Layer 3** **Brown papery on white compressed powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 15% Cellulose<br>2% Fiberglass | 83% Filler and Binder |

**Comments:** **Materials distinguishable but inseparable**

(Sample results continued on next page.)

**Sampled by:** **Bob Brownell** **12/31/2015**
**Received by:** **Regina Mirabal** **1/5/2016**
**Analyzed by:** **Jude Cummings** **1/8/2016**

Jude Cummings

**Reviewed 1/8/2016 by: Jude Cummings**

NORTHERN INDUSTRIAL HYGIENE, INC.
Billings, MT • Helena, MT • Seattle, WA

215 SW 153rd Street Burien, WA 98166
OFFICE: (206) 988-1746 FAX: (206) 988-1978
NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00012**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **19**

Client Sample Number: **M3.2C** Lab Sample Number: **16-00012.0012**
Client Sample Description: **Sheetrock & Joint Compound**
Client Sample Location: **Room 165 - Northeast Corner (Original Bldg.)**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1 White compressed powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 2% Cellulose | 98% Filler and Binder |

**Layer 2 White papery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 95% Cellulose | 5% Filler and Binder |

**Layer 3 Brown papery on white compressed powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 15% Cellulose<br>2% Fiberglass | 83% Filler and Binder |

Client Sample Number: **M3.4A** Lab Sample Number: **16-00012.0013**
Client Sample Description: **Sheetrock & Joint Compound**
Client Sample Location: **Room 184 - Northeast Corner (1989 Addition)**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1 Dull white compressed powder material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 1% Cellulose | 99% Filler and Binder |

**Layer 2 White papery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 98% Cellulose | 2% Filler and Binder |

**Layer 3 Bright white compressed powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 2% Cellulose | 98% Filler and Binder |

(Sample results continued on next page.)

**Sampled by: Bob Brownell** **12/31/2015**
**Received by: Regina Mirabal** **1/5/2016**
**Analyzed by: Jude Cummings** **1/8/2016**

Jude Cummings

**Reviewed 1/8/2016 by: Jude Cummings**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00012**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **19**

**Layer 4** **Brown papery on white compressed powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 12% Cellulose | 85% Filler and Binder |
| | 3% Fiberglass | |

**Comments:** **Materials distinguishable but inseparable**

Client Sample Number: **M3.4B** Lab Sample Number: **16-00012.0014**
Client Sample Description: **Sheetrock & Joint Compound**
Client Sample Location: **Room 185 - North Wall (1989 Addition)**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **Bright white compressed powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 3% Cellulose | 97% Filler and Binder |

**Layer 2** **White papery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 97% Cellulose | 3% Filler and Binder |

**Layer 3** **Brown papery on white compressed powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 12% Cellulose | 86% Filler and Binder |
| | 2% Fiberglass | |

**Comments:** **Materials distinguishable but inseparable**

Client Sample Number: **M3.4C** Lab Sample Number: **16-00012.0015**
Client Sample Description: **Sheetrock & Joint Compound**
Client Sample Location: **Room 188 - North Wall (1989 Addition)**
Sample Comments: Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Bob Brownell** **12/31/2015**
**Received by: Regina Mirabal** **1/5/2016**
**Analyzed by: Jude Cummings** **1/8/2016**

Jude Cummings

**Reviewed 1/8/2016 by: Jude Cummings**

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# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00012**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **19**

**Layer 1** **Bright white compressed powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 4% Cellulose | 96% Filler and Binder |

**Layer 2** **White papery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 98% Cellulose | 2% Filler and Binder |

**Layer 3** **Brown papery on white compressed powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 12% Cellulose | 85% Filler and Binder |
| | 3% Fiberglass | |

**Comments:** **Materials distinguishable but inseparable**

Client Sample Number: **M3.5A** Lab Sample Number: **16-00012.0016**
Client Sample Description: **Gypsum Board - Behind Plaster**
Client Sample Location: **Room 127**
Sample Comments: **Materials distinguishable but inseparable** Checked If Sample Not Analyzed ☐

**Gray papery on white compressed powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 25% Cellulose | 75% Filler and Binder |

Client Sample Number: **M3.5B** Lab Sample Number: **16-00012.0017**
Client Sample Description: **Gypsum Board - Behind Plaster**
Client Sample Location: **Room 101**
Sample Comments: **Materials distinguishable but inseparable** Checked If Sample Not Analyzed ☐

**Gray papery on white compressed powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 30% Cellulose | 70% Filler and Binder |

Client Sample Number: **M3.5C** Lab Sample Number: **16-00012.0018**
Client Sample Description: **Gypsum Board - Behind Plaster**
Client Sample Location: **Room 151**
Sample Comments: **Materials distinguishable but inseparable** Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Bob Brownell** **12/31/2015**
**Received by: Regina Mirabal** **1/5/2016**
**Analyzed by: Jude Cummings** **1/8/2016**

Jude Cummings

**Reviewed 1/8/2016 by: Jude Cummings**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00012**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **19**

**Gray papery on white compressed powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 30% Cellulose | 70% Filler and Binder |

Client Sample Number: **M19.1A**
Lab Sample Number: **16-00012.0019**
Client Sample Description: **4"x4" Ceramic Tile/Green With Mortar & Grout**
Client Sample Location: **Room 122**
Sample Comments:
Checked If Sample Not Analyzed ☐

**Layer 1** **Green on white ceramic material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 20% Fine Grains<br>80% Mineral Filler and Binder |

**Layer 2** **White gritty compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 60% Fine Grains<br>40% Filler and Binder |

**Layer 3** **Gray gritty compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 60% Fine Grains<br>40% Filler and Binder |

Client Sample Number: **M19.1B**
Lab Sample Number: **16-00012.0020**
Client Sample Description: **4"x4" Ceramic Tile/Green With Mortar & Grout**
Client Sample Location: **Room 123**
Sample Comments:
Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Bob Brownell** 12/31/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Jude Cummings** 1/8/2016

Jude Cummings

**Reviewed 1/8/2016 by: Jude Cummings**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00012**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **19**

**Layer 1** **Green on white ceramic material**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
20% Fine Grains
80% Mineral Filler and Binder

**Layer 2** **White compressed powdery material**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
50% Fine Grains
50% Filler and Binder

**Layer 3** **Gray gritty compressed material**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
60% Fine Grains
40% Filler and Binder

Client Sample Number: **M19.1C**
Client Sample Description: **4"x4" Ceramic Tile/Green With Mortar & Grout**
Client Sample Location: **Room 124**
Sample Comments:

Lab Sample Number: **16-00012.0021**

Checked If Sample Not Analyzed ☐

**Layer 1** **Green on white ceramic material**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
20% Fine Grains
80% Filler and Binder

**Layer 2** **White compressed powdery material**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
20% Fine Grains
80% Filler and Binder

**Layer 3** **Gray gritty compressed material**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
60% Fine Grains
40% Filler and Binder

**Sampled by: Bob Brownell** **12/31/2015**
**Received by: Regina Mirabal** **1/5/2016**
**Analyzed by: Jude Cummings** **1/8/2016**

Jude Cummings

**Reviewed 1/8/2016 by: Jude Cummings**

# Chain of Custody

NVLAP Lab Code 200511-0

**Northern Industrial Hygiene, Inc.**
201 South 30th Street
Billings, MT 59101
Office Phone: (406) 245-7766
Cell Phone: (406) 647-5275
Email: bbrownell@bridgeband.com
Inspector/Contact: Bob Brownell

| | |
|---|---|
| NIH Lab Batch ID: | 16-00012 |
| Project Name: | Old Livingston Hospital |
| Project Number: | 999-3019 |
| Date Samples Taken: | 12/31/15 |
| Type of Analysis: | PLM |

| Turnaround Time Requested | |
|---|---|
| 2 Hour: | |
| Same Day: | |
| 24 Hour: | |
| 48 Hour: | |
| 5 Day: | 5 Day |
| 10 Day: | |

For Lab Use Only
Sample(s) Size: Accepted ___ Rejected
Non-Conformance Memo: ___ Yes ___ No
Package Condition: Good ___ Damaged ___ Severe Damage



| NIH LAB ID | SAMPLE # | SAMPLE DESCRIPTION | SAMPLE LOCATION |
|---|---|---|---|
| 1 | F3.5A | 9"x9" Floor Tile (Green) + Mastic | Rm 201 - NE Corner |
| 2 | F3.5B | (Black) | Rm 201 - SE Corner |
| 3 | F3.5C | | Rm 201 - SE Corner |
| 4 | F2.13A | 12"x12" Floor Tile (White w/green | Rm 202 |
| 5 | F2.13B | + brn specks) + Mastic | Rm 202 |
| 6 | F2.13C | | Rm 202 |
| 7 | F2.14A | 12"x12" Floor Tile (brn Marbled) | Rm 202 |
| 8 | F2.14B | + Mastic | Rm 202 |
| 9 | F2.14C | | Rm 202 |
| 10 | M3.2A | Sheetrock + Joint Compound | RM 137 - SW Corner |
| 11 | M3.2B | (Original Bldg) | Rm 157 - SW Corner |
| 12 | M3.2C | | Rm 165 - NE Corner |
| 13 | M3.4A | Sheetrock + Joint Compound | Rm 184 - NE Corner |
| 14 | M3.4B | (1989 Addn) | Rm 185 - North Wall |
| 15 | M3.4C | | Rm 188 - North Wall |
| 16 | M3.5A | Gypsum Board (Behind Plaster) | Rm 127 |
| 17 | M3.5B | | Rm 101 |
| 18 | M3.5C | | Rm 151 |
| 19 | M9.1A | Ceramic Tile - 4"x4" (Green) | Rm 122 |
| 20 | M9.1B | w/ Mortar + Grout | Rm 123 |
| 21 | M9.1C | | Rm 124 |

**Special Instructions: Analyze Group Method - Stop at First Positive** X **Yes** ___ **No**

Number of samples shipped this page: 21
Total number of samples shipped: 274

| | | | |
|---|---|---|---|
| Relinquished By: Robert Brownell | Date: 1/4/16 | Time: 1700 | Firm: NIH |
| Received By: [illegible] | Date: 1/5/16 | Time: 12:30 | Firm: NIH BNI |
| Analyzed By: [illegible] | Date: 1.8.16 | Time: 12:45 | Firm: LAB |

Revised 01/20/15 RIM

NORTHERN INDUSTRIAL HYGIENE, INC.
Billings, MT • Helena, MT • Seattle, WA

215 SW 153rd Street Burien, WA 98166
OFFICE: (206) 988-1746 FAX: (206) 988-1978
EMAIL: Rmelgoza@bridgeband.com
NVLAP Lab Code: 200511-0

1/7/2016

Bob Brownell
Northern Industrial Hygiene, Inc.
201 South 30th Street
Billings, MT 59101-

RE: Bulk Asbestos Fiber Analysis; Batch # 16-00013
Project Location *Old Livingston Hospital*

Dear Bob Brownell,

Thank you for choosing Northern Industrial Hygiene, Inc. as your laboratory. Enclosed you will find analytical results for the bulk samples submitted to the laboratory.

Northern Industrial Hygiene is accredited by NVLAP Lab Code: 200511-0. Accreditation by NVLAP does not indicate endorsement by NVLAP or any other government agency. All bulk samples are analyzed in accordance with U.S. EPA Method -600/M4-82-020, December 1982 and EPA Method 600/R-93-116, July 1993. "Method for Determination of Asbestos in Bulk Building Materials"(NESHAP, 40 CFR-Part 61) protocol.

Analysis is cross checked through our inter or intra laboratory quality assurance program for verification. The percent values reported are based on calibrated visual estimates by volume unless verification by Point Count is indicated. Test results reported relate only to the samples submitted by the customer to Northern Industrial Hygiene, Inc. Trace amounts of asbestos are below the limit of detection and asbestos fibers with diameters below approximately 0.25 micrometers are not detectable with the Polarized Light Microscopy (PLM) analytical procedure. A trace amount of asbestos is defined as one to five fibers in three slide mounts. Asbestos found in this amount will be reported as "< 1.0%" by PLM analysis.

This report is highly confidential and shall not be reproduced without your written approval and the written approval of Northern Industrial Hygiene, Inc.

Samples are archived for thirty (30) days following analysis. Please contact us if samples need to be archived longer than the standard holding time.

Thank you for using Northern Industrial Hygiene, Inc. If you have any questions or concerns please contact us.

Sincerely,

Rachel Melgoza

Reviewed by: Rachel Melgoza

Enclosure: Bulk Sample Results

NORTHERN INDUSTRIAL HYGIENE, INC.
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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00013**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **19**

Client Sample Number: **F2.12A** — Lab Sample Number: **16-00013.0001**
Client Sample Description: **12"X12" Floor Tile - Rose Speckled & Mastic**
Client Sample Location: **Room 130 - Southwest Corner**
Sample Comments: — Checked If Sample Not Analyzed ☐

**Layer 1** **Beige vinyl with brown streaks**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **2% Chrysotile Asbestos** | | 30% Aggregate |
| | | 68% Vinyl Filler and Binder |

**Layer 2** **Yellow adhesive and black asphalt mastic**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **3% Chrysotile Asbestos** | 4% Cellulose | 30% Filler and Binder |
| | 3% Synthetic | 60% Asphalt Filler and Binder |

**Comments:** **Materials distinguishable but inseparable**

Client Sample Number: **F2.12B** — Lab Sample Number: **16-00013.0002**
Client Sample Description: **12"X12" Floor Tile - Rose Speckled & Mastic**
Client Sample Location: **Room 130 - Northeast Corner**
Sample Comments: **Not Analyzed Per Client Request** — Checked If Sample Not Analyzed ☑

Client Sample Number: **F2.12C** — Lab Sample Number: **16-00013.0003**
Client Sample Description: **12"X12" Floor Tile - Rose Speckled & Mastic**
Client Sample Location: **Room 203**
Sample Comments: **Not Analyzed Per Client Request** — Checked If Sample Not Analyzed ☑

Client Sample Number: **F5.4A** — Lab Sample Number: **16-00013.0004**
Client Sample Description: **Blue Carpet & Mastic**
Client Sample Location: **Room 190 - North End**
Sample Comments: — Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Bob Brownell** 12/31/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Rachel Melgoza** 1/7/2016

Rachel Melgoza

**Reviewed 1/7/2016 by: Rachel Melgoza**

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# Bulk Asbestos Analysis Report

| | | | |
|---|---|---|---|
| **Northern Industrial Hygiene, Inc.** | | NIH Batch Number: | **16-00013** |
| **201 South 30th Street** | | Client Job Number: | **999-3019** |
| **Billings, MT 59101-** | | Turn Around Time: | **5 Day** |
| Project Location: | *Old Livingston Hospital* | Samples Analyzed: | **19** |

**Layer 1** **Blue/brown/white/gray woven fibers**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 95% Synthetic | 5% Miscellaneous Particles |

**Layer 2** **Gray foam with yellow pliable adhesive**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | | 10% Filler and Binder |
| | | 90% Foam |

**Comments:** **Materials distinguishable but inseparable**

Client Sample Number: **F5.4B** Lab Sample Number: **16-00013.0005**
Client Sample Description: **Blue Carpet & Mastic**
Client Sample Location: **Room 160 - North End**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **Blue/brown/white/gray woven fibers**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 95% Synthetic | 5% Miscellaneous Particles |

**Layer 2** **Gray foam with yellow pliable adhesive**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | | 10% Filler and Binder |
| | | 90% Foam |

**Comments:** **Materials distinguishable but inseparable**

Client Sample Number: **F5.4C** Lab Sample Number: **16-00013.0006**
Client Sample Description: **Blue Carpet & Mastic**
Client Sample Location: **Room 162 - South End**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **Blue/brown/white/gray woven fibers**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 95% Synthetic | 5% Miscellaneous Particles |

**Layer 2** **Gray foam with clear pliable adhesive**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 2% Synthetic | 8% Filler and Binder |
| | | 90% Foam |

**Comments:** **Materials distinguishable but inseparable**

(Sample results continued on next page.)

| | | |
|---|---|---|
| **Sampled by:** | **Bob Brownell** | **12/31/2015** |
| **Received by:** | **Regina Mirabal** | **1/5/2016** |
| **Analyzed by:** | **Rachel Melgoza** | **1/7/2016** |

Rachel Melgoza

**Reviewed 1/7/2016 by: Rachel Melgoza**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00013**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **19**

Client Sample Number: **F2.11A** Lab Sample Number: **16-00013.0007**
Client Sample Description: **12"X12" Floor Tile - Off-White/TanMarbled & Mastic**
Client Sample Location: **Room 145 - Southwest Corner**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **Off-white with tan streaks vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 30% Aggregate |
| | | 70% Vinyl Filler and Binder |

**Layer 2** **Black asphalt mastic**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **3% Chrysotile Asbestos** | 3% Cellulose | 93% Asphalt Filler and Binder |
| | 1% Synthetic | |

Client Sample Number: **F2.11B** Lab Sample Number: **16-00013.0008**
Client Sample Description: **12"X12" Floor Tile - Off-White/TanMarbled & Mastic**
Client Sample Location: **Room 163 - West Wall**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **Off-white with tan streaks vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 30% Aggregate |
| | | 70% Vinyl Filler and Binder |

**Layer 2** **Mastic**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **Not Analyzed Per Client** | | |

Client Sample Number: **F2.11C** Lab Sample Number: **16-00013.0009**
Client Sample Description: **12"X12" Floor Tile - Off-White/TanMarbled & Mastic**
Client Sample Location: **Room 174 - North Wall**
Sample Comments: Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Bob Brownell** 12/31/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Rachel Melgoza** 1/7/2016

Rachel Melgoza
**Reviewed 1/7/2016 by: Rachel Melgoza**

NORTHERN INDUSTRIAL HYGIENE, INC.
Billings, MT • Helena, MT • Seattle, WA

215 SW 153rd Street Burien, WA 98166
OFFICE: (206) 988-1746 FAX: (206) 988-1978
NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00013**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **19**

**Layer 1** **Off-white with tan streaks vinyl**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
30% Aggregate
70% Vinyl Filler and Binder

**Layer 2** **Mastic**

**Asbestos Fibrous Components:** **Not Analyzed Per Client**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:

Client Sample Number: **M10.2A**
Client Sample Description: **Sink Undercoat - White**
Client Sample Location: **Room 157**
Sample Comments:

Lab Sample Number: **16-00013.0010**
Checked If Sample Not Analyzed ☐

**White fibrous lumpy material**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components: 13% Cellulose

Non-Fibrous Components: 87% Filler and Binder

Client Sample Number: **M10.2B**
Client Sample Description: **Sink Undercoat - White**
Client Sample Location: **Room 158**
Sample Comments:

Lab Sample Number: **16-00013.0011**
Checked If Sample Not Analyzed ☐

**White fibrous lumpy material**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components: 13% Cellulose

Non-Fibrous Components: 87% Filler and Binder

Client Sample Number: **M10.2C**
Client Sample Description: **Sink Undercoat - White**
Client Sample Location: **Room 195**
Sample Comments:

Lab Sample Number: **16-00013.0012**
Checked If Sample Not Analyzed ☐

**White fibrous lumpy material**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components: 13% Cellulose

Non-Fibrous Components: 87% Filler and Binder

(Sample results continued on next page.)

**Sampled by: Bob Brownell** **12/31/2015**
**Received by: Regina Mirabal** **1/5/2016**
**Analyzed by: Rachel Melgoza** **1/7/2016**

Rachel Melgoza

**Reviewed 1/7/2016 by: Rachel Melgoza**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00013**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **19**

Client Sample Number: **M10.3A** Lab Sample Number: **16-00013.0013**
Client Sample Description: **Sink Undercoat - Gray**
Client Sample Location: **Room 159**
Sample Comments: Checked If Sample Not Analyzed ☐

**Gray fibrous lumpy material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 15% Cellulose | 85% Filler and Binder |

Client Sample Number: **M10.3B** Lab Sample Number: **16-00013.0014**
Client Sample Description: **Sink Undercoat - Gray**
Client Sample Location: **Room 205**
Sample Comments: Checked If Sample Not Analyzed ☐

**Gray fibrous lumpy material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 15% Cellulose | 85% Filler and Binder |

Client Sample Number: **M10.3C** Lab Sample Number: **16-00013.0015**
Client Sample Description: **Sink Undercoat - Gray**
Client Sample Location: **Room 205**
Sample Comments: Checked If Sample Not Analyzed ☐

**Gray fibrous lumpy material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 15% Cellulose | 85% Filler and Binder |

Client Sample Number: **F1.6A** Lab Sample Number: **16-00013.0016**
Client Sample Description: **12"X12" Vinyl Sheet Flooring - White Tile Pattern & Mastic**
Client Sample Location: **Room 161 - NW Corner**
Sample Comments: **Materials distinguishable but inseparable** Checked If Sample Not Analyzed ☐

**White/tan vinyl with white fibrous backing and yellow adhesive**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 10% Cellulose | 40% Filler and Binder |
| | 5% Fiberglass | 25% Foam |
| | | 20% Vinyl Filler and Binder |

(Sample results continued on next page.)

**Sampled by: Bob Brownell** 12/31/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Rachel Melgoza** 1/7/2016

Rachel Melgoza

**Reviewed 1/7/2016 by: Rachel Melgoza**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00013**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **19**

Client Sample Number: **F1.6B** Lab Sample Number: **16-00013.0017**
Client Sample Description: **12"X12" Vinyl Sheet Flooring - White Tile Pattern & Mastic**
Client Sample Location: **Room 161 - NW Corner**
Sample Comments: **Materials distinguishable but inseparable** Checked If Sample Not Analyzed ☐

**White/tan vinyl with white fibrous backing and yellow adhesive**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 10% Cellulose | 40% Filler and Binder |
| | 5% Fiberglass | 25% Foam |
| | | 20% Vinyl Filler and Binder |

Client Sample Number: **F1.6C** Lab Sample Number: **16-00013.0018**
Client Sample Description: **12"X12" Vinyl Sheet Flooring - White Tile Pattern & Mastic**
Client Sample Location: **Room 161 - NW Corner**
Sample Comments: **Materials distinguishable but inseparable** Checked If Sample Not Analyzed ☐

**White/tan vinyl with white fibrous backing and yellow adhesive**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 10% Cellulose | 40% Filler and Binder |
| | 5% Fiberglass | 25% Foam |
| | | 20% Vinyl Filler and Binder |

Client Sample Number: **F3.4A** Lab Sample Number: **16-00013.0019**
Client Sample Description: **9"X9" Gray FloorTile & Mastic with Leveling Compound**
Client Sample Location: **Room 160**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **Clear adhesive on white coarse compressed powder**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 1% Cellulose | 98% Filler and Binder |
| | 1% Synthetic | |

**Comments:** **Materials distinguishable but inseparable**

**Layer 2** **Tan vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **5% Chrysotile Asbestos** | | 30% Aggregate |
| | | 65% Vinyl Filler and Binder |

(Sample results continued on next page.)

**Sampled by:** **Bob Brownell** **12/31/2015**
**Received by:** **Regina Mirabal** **1/5/2016**
**Analyzed by:** **Rachel Melgoza** **1/7/2016**

Rachel Melgoza

**Reviewed 1/7/2016 by: Rachel Melgoza**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00013**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **19**

**Layer 3** **Black fibrous asphalt**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **4% Chrysotile Asbestos** | 2% Cellulose | 94% Asphalt Filler and Binder |

Client Sample Number: **F3.4B**
Client Sample Description: **9"X9" Gray FloorTile & Mastic with Leveling Compound**
Client Sample Location: **Room 160**
Sample Comments:
Lab Sample Number: **16-00013.0020**
Checked If Sample Not Analyzed ☐

**Layer 1** **Clear adhesive on white coarse compressed powder**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 1% Cellulose<br>1% Synthetic | 98% Filler and Binder |

**Layer 2** **Vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **Not Analyzed Per Client** | | |

**Layer 3** **Mastic**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **Not Analyzed Per Client** | | |

Client Sample Number: **F3.4C**
Client Sample Description: **9"X9" Gray FloorTile & Mastic with Leveling Compound**
Client Sample Location: **Room 160**
Sample Comments:
Lab Sample Number: **16-00013.0021**
Checked If Sample Not Analyzed ☐

**Layer 1** **Clear adhesive on white coarse compressed powder**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 1% Cellulose<br>1% Synthetic | 98% Filler and Binder |

**Layer 2** **Vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **Not Analyzed Per Client** | | |

**Layer 3** **Mastic**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **Not Analyzed Per Client** | | |

(Sample results continued on next page.)

**Sampled by: Bob Brownell** 12/31/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Rachel Melgoza** 1/7/2016

Rachel Melgoza

**Reviewed 1/7/2016 by: Rachel Melgoza**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

| | |
|---|---|
| NIH Batch Number: | **16-00013** |
| Client Job Number: | **999-3019** |
| Turn Around Time: | **5 Day** |
| Samples Analyzed: | **19** |

| | | |
|---|---|---|
| **Sampled by:** | **Bob Brownell** | **12/31/2015** |
| **Received by:** | **Regina Mirabal** | **1/5/2016** |
| **Analyzed by:** | **Rachel Melgoza** | **1/7/2016** |

Rachel Melgoza

**Reviewed 1/7/2016 by: Rachel Melgoza**

# Chain of Custody

NVLAP Lab Code 200511-0


**Northern Industrial Hygiene, Inc.**
201 South 30th Street
Billings, MT 59101
Office Phone: (406) 245-7766
Cell Phone: (406) 647-5275
Email: bbrownell@bridgeband.com
Inspector/Contact: Bob Brownell


| | |
|---|---|
| NIH Lab Batch ID: | 16-000013 |
| Project Name: | Old Livingston Hospital |
| Project Number: | 999-3019 |
| Date Samples Taken: | 12/31/15 |
| Type of Analysis: | PLM |

| Turnaround Time Requested | |
|---|---|
| 2 Hour: | |
| Same Day: | |
| 24 Hour: | |
| 48 Hour: | |
| 5 Day: | 5-day |
| 10 Day: | |

For Lab Use Only
Sample(s) Size: ✓ Accepted ___ Rejected
Non-Conformance Memo: ___ Yes ✓ No
Package Condition: ✓ Good ___ Damaged ___ Severe Damage

Page 12 of 14

| NIH LAB ID | SAMPLE # | SAMPLE DESCRIPTION | SAMPLE LOCATION |
|---|---|---|---|
| 0001 | F2.12A | 12"x12" Floor Tile (rose, marbled) | Rm 130 - SW Corner |
| 2 | F2.12B | + Mastic | Rm 130 - NE Corner |
| 3 | F2.12C | | Rm 203 |
| 4 | F5.4A | Blue Carpet + Mastic | Rm 190 - North End |
| 5 | F5.4B | | Rm 160 - North End |
| 6 | F5.4C | | Rm 162 - South End |
| 7 | F2.11A | 12"x12" Floor Tile (off-white + Tan | Rm 145 - SW Corner |
| 8 | F2.11B | marbled) + Mastic | Rm 163 - West Wall |
| 9 | F2.11C | | Rm 174 - North Wall |
| 10 | M10.2A | Sink Undercoat (white) | Rm 157 |
| 11 | M10.2B | | Rm 158 |
| 12 | M10.2C | | Rm 195 |
| 13 | M10.3A | Sink Undercoat (grey) | Rm 159 |
| 14 | M10.3B | | Rm 205 |
| 15 | M10.3C | | Rm 205 |
| 16 | F1.6A | Vinyl Sheet Flooring - (12"x12" Tile | Rm 161 - NW Corner |
| 17 | F1.6B | Pattern, white) + Mastic | Rm 161 - NW Corner |
| 18 | F1.6C | | Rm 161 - NW Corner |
| 19 | F3.4A | 9"x9" Floor Tile (grey) + Mastic | Rm 160 |
| 20 | F3.4B | + leveling Compound | Rm 160 |
| 21 | F3.4C | | Rm 160 |

**Special Instructions: Analyze Group Method - Stop at First Positive** X Yes No
Number of samples shipped this page: 21
Total number of samples shipped: 274

| | | | |
|---|---|---|---|
| Relinquished By: Robert B Brownell | Date: 1/4/16 | Time: 1700 | Firm: NIH |
| Received By: [illegible] | Date: 1/5/16 | Time: 12:30 | Firm: NIH Billings |
| Analyzed By: Rachel Mulqueen | Date: 01/07/16 | Time: 0730 | Firm: NIH Billings |

Revised 01/20/15 RIM

NORTHERN INDUSTRIAL HYGIENE, INC.
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EMAIL: Rmelgoza@bridgeband.com
NVLAP Lab Code: 200511-0

1/7/2016

Bob Brownell
Northern Industrial Hygiene, Inc.
201 South 30th Street
Billings, MT 59101-

RE: Bulk Asbestos Fiber Analysis; Batch # 16-00014
Project Location *Old Livingston Hospital*

Dear Bob Brownell,

Thank you for choosing Northern Industrial Hygiene, Inc. as your laboratory. Enclosed you will find analytical results for the bulk samples submitted to the laboratory.

Northern Industrial Hygiene is accredited by NVLAP Lab Code: 200511-0. Accreditation by NVLAP does not indicate endorsement by NVLAP or any other government agency. All bulk samples are analyzed in accordance with U.S. EPA Method -600/M4-82-020, December 1982 and EPA Method 600/R-93-116, July 1993. "Method for Determination of Asbestos in Bulk Building Materials"(NESHAP, 40 CFR-Part 61) protocol.

Analysis is cross checked through our inter or intra laboratory quality assurance program for verification. The percent values reported are based on calibrated visual estimates by volume unless verification by Point Count is indicated. Test results reported relate only to the samples submitted by the customer to Northern Industrial Hygiene, Inc. Trace amounts of asbestos are below the limit of detection and asbestos fibers with diameters below approximately 0.25 micrometers are not detectable with the Polarized Light Microscopy (PLM) analytical procedure. A trace amount of asbestos is defined as one to five fibers in three slide mounts. Asbestos found in this amount will be reported as "< 1.0%" by PLM analysis.

This report is highly confidential and shall not be reproduced without your written approval and the written approval of Northern Industrial Hygiene, Inc.

Samples are archived for thirty (30) days following analysis. Please contact us if samples need to be archived longer than the standard holding time.

Thank you for using Northern Industrial Hygiene, Inc. If you have any questions or concerns please contact us.

Sincerely,

Jude Cummings

Reviewed by: Jude Cummings

Enclosure: Bulk Sample Results

NORTHERN INDUSTRIAL HYGIENE, INC.
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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00014**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **17**

Client Sample Number: **F3.3A** — Lab Sample Number: **16-00014.0001**
Client Sample Description: **9"x9" Floor Tile/Red & Mastic/Black**
Client Sample Location: **Room 106**
Sample Comments:
Checked If Sample Not Analyzed ☐

**Layer 1** **Red vinyl with white streaks**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **8% Chrysotile Asbestos** | | 30% Aggregate |
| | | 62% Vinyl Filler and Binder |

**Layer 2** **Black Mastic**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **5% Chrysotile Asbestos** | 3% Cellulose | 92% Asphalt Filler and Binder |

Client Sample Number: **F3.3B** — Lab Sample Number: **16-00014.0002**
Client Sample Description: **9"x9" Floor Tile/Red & Mastic/Black**
Client Sample Location: **Room 106**
Sample Comments: **Not Analyzed Per Client Request**
Checked If Sample Not Analyzed ☑

Client Sample Number: **F3.3C** — Lab Sample Number: **16-00014.0003**
Client Sample Description: **9"x9" Floor Tile/Red & Mastic/Black**
Client Sample Location: **Room 106**
Sample Comments: **Not Analyzed Per Client Request**
Checked If Sample Not Analyzed ☑

Client Sample Number: **M10.1A** — Lab Sample Number: **16-00014.0004**
Client Sample Description: **Sink Undercoat - Black**
Client Sample Location: **Room 126**
Sample Comments:
Checked If Sample Not Analyzed ☐

**Black asphalt**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **4% Chrysotile Asbestos** | 5% Cellulose | 91% Asphalt Filler and Binder |

Client Sample Number: **M10.1B** — Lab Sample Number: **16-00014.0005**
Client Sample Description: **Sink Undercoat - Black**
Client Sample Location: **Room 127**
Sample Comments: **Not Analyzed Per Client Request**
Checked If Sample Not Analyzed ☑

(Sample results continued on next page.)

**Sampled by: Bob Brownell** 12/31/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Jude Cummings** 1/7/2016

Jude Cummings

**Reviewed 1/7/2016 by: Jude Cummings**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00014**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **17**

Client Sample Number: **M10.1C**
Client Sample Description: **Sink Undercoat - Black**
Client Sample Location: **Room 111**
Sample Comments: **Not Analyzed Per Client Request**
Lab Sample Number: **16-00014.0006**
Checked If Sample Not Analyzed ☑

Client Sample Number: **F1.4A**
Client Sample Description: **Vinyl Sheet Flooring/Purple/Gray & Mastic**
Client Sample Location: **Room 109**
Sample Comments:
Lab Sample Number: **16-00014.0007**
Checked If Sample Not Analyzed ☐

**Layer 1** **Black, tan and brown vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 6% Cellulose | 94% Vinyl Filler and Binder |

**Layer 2** **Tan woven fibers with tan mastic**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 40% Cellulose | 60% Filler and Binder |

**Comments:** **Materials distinguishable but inseparable**

Client Sample Number: **F1.4B**
Client Sample Description: **Vinyl Sheet Flooring/Purple/Gray & Mastic**
Client Sample Location: **Room 109**
Sample Comments:
Lab Sample Number: **16-00014.0008**
Checked If Sample Not Analyzed ☐

**Layer 1** **Black, tan and brown vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 5% Cellulose | 95% Vinyl Filler and Binder |

**Layer 2** **Tan woven fibers with tan mastic**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 45% Cellulose | 55% Filler and Binder |

**Comments:** **Materials distinguishable but inseparable**

Client Sample Number: **F1.4C**
Client Sample Description: **Vinyl Sheet Flooring/Purple/Gray & Mastic**
Client Sample Location: **Room 109**
Sample Comments:
Lab Sample Number: **16-00014.0009**
Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Bob Brownell** 12/31/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Jude Cummings** 1/7/2016

Jude Cummings

**Reviewed 1/7/2016 by: Jude Cummings**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00014**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **17**

**Layer 1** **Black, tan and brown vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 5% Cellulose | 95% Vinyl Filler and Binder |

**Layer 2** **Tan woven fibers**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 98% Cellulose | 2% Filler and Binder |

Client Sample Number: **F5.3A** Lab Sample Number: **16-00014.0010**
Client Sample Description: **Carpet/Brown & Mastic**
Client Sample Location: **Room 137**
Sample Comments: **Materials distinguishable but inseparable** Checked If Sample Not Analyzed ☐

**Blue, tan and white carpet fibers with off-white mastic residue**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 94% Synthetic | 2% Miscellaneous Particles |
| | | 4% Filler and Binder |

Client Sample Number: **F5.3B** Lab Sample Number: **16-00014.0011**
Client Sample Description: **Carpet/Brown & Mastic**
Client Sample Location: **Room 159**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **Tan, white and gray carpet fibers on gray backing**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 75% Synthetic | 2% Miscellaneous Particles |
| | | 23% Filler and Binder |

**Layer 2** **Off-white mastic residue**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 1% Cellulose | 97% Filler and Binder |
| | 2% Synthetic | |

Client Sample Number: **F5.3C** Lab Sample Number: **16-00014.0012**
Client Sample Description: **Carpet/Brown & Mastic**
Client Sample Location: **Room 189**
Sample Comments: Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Bob Brownell** **12/31/2015**
**Received by: Regina Mirabal** **1/5/2016**
**Analyzed by: Jude Cummings** **1/7/2016**

Jude Cummings

**Reviewed 1/7/2016 by: Jude Cummings**

NORTHERN INDUSTRIAL HYGIENE, INC.
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OFFICE: (206) 988-1746 FAX: (206) 988-1978
NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00014**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **17**

**Layer 1** **Blue, white and tan linear carpet fibers on brown backing**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 75% Synthetic | 3% Miscellaneous Particles |
| | | 22% Filler and Binder |

**Layer 2** **Off-white mastic residue**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 2% Synthetic | 98% Filler and Binder |

Client Sample Number: **M12.5A** Lab Sample Number: **16-00014.0013**
Client Sample Description: **Cove Base Mastic - White**
Client Sample Location: **Room 126**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **Tan vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 100% Vinyl Filler and Binder |

**Layer 2** **Tan mastic with white powdery residue**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 1% Cellulose | 99% Filler and Binder |

Client Sample Number: **M12.5B** Lab Sample Number: **16-00014.0014**
Client Sample Description: **Cove Base Mastic - White**
Client Sample Location: **Room 110**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **Off-white vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 100% Vinyl Filler and Binder |

**Layer 2** **Off-white mastic with brown fibers**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 12% Cellulose | 88% Filler and Binder |

Client Sample Number: **M12.5C** Lab Sample Number: **16-00014.0015**
Client Sample Description: **Cove Base Mastic - White**
Client Sample Location: **Room 205**
Sample Comments: Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Bob Brownell** **12/31/2015**
**Received by: Regina Mirabal** **1/5/2016**
**Analyzed by: Jude Cummings** **1/7/2016**

Jude Cummings

**Reviewed 1/7/2016 by: Jude Cummings**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00014**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **17**

**Layer 1** **Medium brown vinyl**

**Asbestos Fibrous Components:** **No Asbestos Detected**
Non-Asbestos Fibrous Components:
Non-Fibrous Components: 100% Vinyl Filler and Binder

**Layer 2** **White mastic**

**Asbestos Fibrous Components:** **No Asbestos Detected**
Non-Asbestos Fibrous Components:
Non-Fibrous Components: 100% Filler and Binder

Client Sample Number: **M12.6A**
Client Sample Description: **Cove Base Mastic - Yellowish Brown**
Client Sample Location: **Room 116**
Sample Comments:
Lab Sample Number: **16-00014.0016**
Checked If Sample Not Analyzed ☐

**Layer 1** **Medium brown vinyl**

**Asbestos Fibrous Components:** **No Asbestos Detected**
Non-Asbestos Fibrous Components:
Non-Fibrous Components: 100% Vinyl Filler and Binder

**Layer 2** **Dark yellow mastic with fibrous residue**

**Asbestos Fibrous Components:** **No Asbestos Detected**
Non-Asbestos Fibrous Components: 20% Cellulose
Non-Fibrous Components: 80% Filler and Binder

**Comments:** **Materials distinguishable but inseparable**

Client Sample Number: **M12.6B**
Client Sample Description: **Cove Base Mastic - Yellowish Brown**
Client Sample Location: **Room 116**
Sample Comments:
Lab Sample Number: **16-00014.0017**
Checked If Sample Not Analyzed ☐

**Layer 1** **Tan vinyl**

**Asbestos Fibrous Components:** **No Asbestos Detected**
Non-Asbestos Fibrous Components:
Non-Fibrous Components: 100% Vinyl Filler and Binder

**Layer 2** **Orange mastic with fibrous residue**

**Asbestos Fibrous Components:** **No Asbestos Detected**
Non-Asbestos Fibrous Components: 15% Cellulose
Non-Fibrous Components: 85% Filler and Binder

Client Sample Number: **M12.6C**
Client Sample Description: **Cove Base Mastic - Yellowish Brown**
Client Sample Location: **Room 116**
Sample Comments:
Lab Sample Number: **16-00014.0018**
Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by:** **Bob Brownell** **12/31/2015**
**Received by:** **Regina Mirabal** **1/5/2016**
**Analyzed by:** **Jude Cummings** **1/7/2016**

Jude Cummings

**Reviewed 1/7/2016 by: Jude Cummings**

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# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00014**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **17**

**Layer 1** **Tan vinyl**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 100% Vinyl Filler and Binder |

**Layer 2** **Orange mastic with fibrous residue**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 15% Cellulose | 85% Filler and Binder |

Client Sample Number: **F2.16A** Lab Sample Number: **16-00014.0019**
Client Sample Description: **12"x12" Floor Tile/White/Black Granite & Mastic**
Client Sample Location: **Room 151 - West End**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **White vinyl with black and gray lines**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 100% Vinyl Filler and Binder |

**Layer 2** **Black Mastic**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **5% Chrysotile Asbestos** | 3% Cellulose | 92% Asphalt Filler and Binder |

Client Sample Number: **F2.16B** Lab Sample Number: **16-00014.0020**
Client Sample Description: **12"x12" Floor Tile/White/Black Granite & Mastic**
Client Sample Location: **Room 151 - Middle**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **White vinyl with black and gray lines**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 100% Vinyl Filler and Binder |

**Layer 2** **Black Mastic**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **Not Analyzed Per Client** | | |

Client Sample Number: **F2.16C** Lab Sample Number: **16-00014.0021**
Client Sample Description: **12"x12" Floor Tile/White/Black Granite & Mastic**
Client Sample Location: **Room 151 - East End**
Sample Comments: Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Bob Brownell** 12/31/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Jude Cummings** 1/7/2016

Jude Cummings

**Reviewed 1/7/2016 by: Jude Cummings**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

| | | | |
|---|---|---|---|
| **Northern Industrial Hygiene, Inc.** | | NIH Batch Number: | **16-00014** |
| **201 South 30th Street** | | Client Job Number: | **999-3019** |
| **Billings, MT 59101-** | | Turn Around Time: | **5 Day** |
| Project Location: | *Old Livingston Hospital* | Samples Analyzed: | **17** |

**Layer 1** **White vinyl with black and gray lines**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 100% Vinyl Filler and Binder |

**Layer 2** **Black asphalt**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **Not Analyzed Per Client** | | |

| | | |
|---|---|---|
| **Sampled by:** | **Bob Brownell** | **12/31/2015** |
| **Received by:** | **Regina Mirabal** | **1/5/2016** |
| **Analyzed by:** | **Jude Cummings** | **1/7/2016** |

Jude Cummings

**Reviewed 1/7/2016 by: Jude Cummings**

# Chain of Custody

NVLAP Lab Code 200511-0

**Northern Industrial Hygiene, Inc.**
201 South 30th Street
Billings, MT 59101
Office Phone: (406) 245-7766
Cell Phone: (406) 647-5275
Email: bbrownell@bridgeband.com
Inspector/Contact: Bob Brownell

| | |
|---|---|
| NIH Lab Batch ID: | 16-00014 |
| Project Name: | Old Livingston Hospital |
| Project Number: | 999-3019 |
| Date Samples Taken: | 12/31/15 |
| Type of Analysis: | PLM |

| Turnaround Time Requested | |
|---|---|
| 2 Hour: | |
| Same Day: | |
| 24 Hour: | |
| 48 Hour: | |
| 5 Day: | 5-day |
| 10 Day: | |

For Lab Use Only
Sample(s) Size: Accepted ___ Rejected
Non-Conformance Memo: ___ Yes ___ No
Package Condition: Good ___ Damaged ___ Severe Damage



| NIH LAB ID | SAMPLE # | SAMPLE DESCRIPTION | SAMPLE LOCATION |
|---|---|---|---|
| 1 | F3.3A | 9"x9" Floor Tile (Red) + | Rm 106 |
| 2 | F3.3B | Mastic (Black) | Rm 106 |
| 3 | F3.3C | | Rm 106 |
| 4 | M10.1A | Sink Undercoat (Black) | Rm 126 |
| 5 | M10.1B | | Rm 127 |
| 6 | M10.1C | | Rm 111 |
| 7 | F1.4A | Vinyl Sheet Flooring (Purple + Gray) | Rm 109 |
| 8 | F1.4B | + Mastic | Rm 109 |
| 9 | F1.4C | | Rm 109 |
| 10 | F5.3A | Carpet (Brown) + Mastic | Rm 137 |
| 11 | F5.3B | | Rm 159 |
| 12 | F5.3C | | Rm 189 |
| 13 | M12.5A | Cove Base Mastic (white) | Rm 126 |
| 14 | M12.5B | | Rm 110 |
| 15 | M12.5C | | Rm 205 |
| 16 | M12.6A | Cove Base Mastic (Yellowish Brown) | Rm 116 |
| 17 | M12.6B | | Rm 116 |
| 18 | M12.6C | | Rm 116 |
| 19 | F2.16A | 12"x12" Floor Tile (white + Black | Rm 151 - West End |
| 20 | F2.16B | granite) + Mastic | Rm 151 - Middle |
| 21 | F2.16C | | Rm 151 - East End |

**Special Instructions: Analyze Group Method - Stop at First Positive** X Yes ___ No

Number of samples shipped this page: 21

Total number of samples shipped: 274

| | | | |
|---|---|---|---|
| Relinquished By: Robert A Brownell | Date: 1/4/16 | Time: 1700 | Firm: NIH |
| Received By: [illegible] | Date: 1/5/16 | Time: 12:30 | Firm: NIH Billings |
| Analyzed By: [illegible] | Date: 1/7/16 | Time: 15:15 | Firm: [illegible] |

Revised 01/20/15 RIM

NORTHERN INDUSTRIAL HYGIENE, INC.
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215 SW 153rd Street Burien, WA 98166
OFFICE: (206) 988-1746 FAX: (206) 988-1978
EMAIL: Rmelgoza@bridgeband.com
NVLAP Lab Code: 200511-0

1/11/2016

Bob Brownell
Northern Industrial Hygiene, Inc.
201 South 30th Street
Billings, MT 59101-

RE: Bulk Asbestos Fiber Analysis; Batch # 16-00015
Project Location *Old Livingston Hospital*

Dear Bob Brownell,

Thank you for choosing Northern Industrial Hygiene, Inc. as your laboratory. Enclosed you will find analytical results for the bulk samples submitted to the laboratory.

Northern Industrial Hygiene is accredited by NVLAP Lab Code: 200511-0. Accreditation by NVLAP does not indicate endorsement by NVLAP or any other government agency. All bulk samples are analyzed in accordance with U.S. EPA Method -600/M4-82-020, December 1982 and EPA Method 600/R-93-116, July 1993. "Method for Determination of Asbestos in Bulk Building Materials"(NESHAP, 40 CFR-Part 61) protocol.

Analysis is cross checked through our inter or intra laboratory quality assurance program for verification. The percent values reported are based on calibrated visual estimates by volume unless verification by Point Count is indicated. Test results reported relate only to the samples submitted by the customer to Northern Industrial Hygiene, Inc. Trace amounts of asbestos are below the limit of detection and asbestos fibers with diameters below approximately 0.25 micrometers are not detectable with the Polarized Light Microscopy (PLM) analytical procedure. A trace amount of asbestos is defined as one to five fibers in three slide mounts. Asbestos found in this amount will be reported as "< 1.0%" by PLM analysis.

This report is highly confidential and shall not be reproduced without your written approval and the written approval of Northern Industrial Hygiene, Inc.

Samples are archived for thirty (30) days following analysis. Please contact us if samples need to be archived longer than the standard holding time.

Thank you for using Northern Industrial Hygiene, Inc. If you have any questions or concerns please contact us.

Sincerely,

Rachel Melgoza

Reviewed by: Rachel Melgoza

Enclosure: Bulk Sample Results

NORTHERN INDUSTRIAL HYGIENE, INC.
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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00015**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **19**

Client Sample Number: **M7.1A** Lab Sample Number: **16-00015.0001**
Client Sample Description: **Plaster Wall System**
Client Sample Location: **Room 101 - North End, over Expanded Metal/Gypsum Board**
Sample Comments: Checked If Sample Not Analyzed ☐

**White grainy compressed powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 2% Mineral Fibers | 75% Filler and Binder |
| | | 23% Perlite |

Client Sample Number: **M7.1B** Lab Sample Number: **16-00015.0002**
Client Sample Description: **Plaster Wall System**
Client Sample Location: **Room 101 - South End, over Expanded Metal/Gypsum Board**
Sample Comments: **Materials distinguishable but inseparable** Checked If Sample Not Analyzed ☐

**Red and yellow paint layers on white grainy compressed powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 1% Mineral Fibers | 55% Filler and Binder |
| | | 19% Paint |
| | | 25% Perlite |

Client Sample Number: **M7.1C** Lab Sample Number: **16-00015.0003**
Client Sample Description: **Plaster Wall System**
Client Sample Location: **Room 140, over Expanded Metal/Gypsum Board**
Sample Comments: Checked If Sample Not Analyzed ☐

**White grainy compressed powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 2% Mineral Fibers | 73% Filler and Binder |
| | | 25% Perlite |

Client Sample Number: **M7.1D** Lab Sample Number: **16-00015.0004**
Client Sample Description: **Plaster Wall System**
Client Sample Location: **Room 127, over Expanded Metal/Gypsum Board**
Sample Comments: Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Bob Brownell** 12/31/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Rachel Melgoza** 1/8/2016

Rachel Melgoza
**Reviewed 1/11/2016 by: Rachel Melgoza**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00015**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **19**

**White grainy compressed powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 2% Mineral Fibers | 75% Filler and Binder |
| | | 23% Perlite |

Client Sample Number: **M7.1E**
Lab Sample Number: **16-00015.0005**
Client Sample Description: **Plaster Wall System**
Client Sample Location: **Room 162 - North End, over Expanded Metal/Gypsum Board**
Sample Comments:
Checked If Sample Not Analyzed ☐

**White grainy compressed powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 2% Mineral Fibers | 73% Filler and Binder |
| | | 25% Perlite |

Client Sample Number: **M7.1F**
Lab Sample Number: **16-00015.0006**
Client Sample Description: **Plaster Wall System**
Client Sample Location: **Room 162 - South End, over Expanded Metal/Gypsum Board**
Sample Comments:
Checked If Sample Not Analyzed ☐

**White grainy compressed powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 2% Mineral Fibers | 75% Filler and Binder |
| | | 23% Perlite |

Client Sample Number: **M7.1G**
Lab Sample Number: **16-00015.0007**
Client Sample Description: **Plaster Wall System**
Client Sample Location: **Room 193 - North End, over Expanded Metal/Gypsum Board**
Sample Comments: **Materials distinguishable but inseparable**
Checked If Sample Not Analyzed ☐

**White and green paint layers on white grainy compressed powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 2% Mineral Fibers | 60% Filler and Binder |
| | | 13% Paint |
| | | 25% Perlite |

(Sample results continued on next page.)

**Sampled by: Bob Brownell** 12/31/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Rachel Melgoza** 1/8/2016

Rachel Melgoza

**Reviewed 1/11/2016 by: Rachel Melgoza**

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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00015**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **19**

Client Sample Number: **F7.1A** — Lab Sample Number: **16-00015.0008**
Client Sample Description: **1"X1" Brown Ceramic Tile & Grout**
Client Sample Location: **Room 164**
Sample Comments: — Checked If Sample Not Analyzed ☐

**Layer 1** **White and tan with black speck ceramic material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 100% Mineral Filler and Binder |

**Layer 2** **Gray gritty material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 2% Cellulose | 65% Aggregate |
| | | 33% Filler and Binder |

Client Sample Number: **F7.1B** — Lab Sample Number: **16-00015.0009**
Client Sample Description: **1"X1" Brown Ceramic Tile & Grout**
Client Sample Location: **Room 172 - Restroom**
Sample Comments: — Checked If Sample Not Analyzed ☐

**Layer 1** **White and tan with black speck ceramic material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 100% Mineral Filler and Binder |

**Layer 2** **Gray gritty material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 1% Cellulose | 69% Aggregate |
| | | 30% Filler and Binder |

Client Sample Number: **F7.1C** — Lab Sample Number: **16-00015.0010**
Client Sample Description: **1"X1" Brown Ceramic Tile & Grout**
Client Sample Location: **Room 185 - Restroom**
Sample Comments: — Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Bob Brownell** 12/31/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Rachel Melgoza** 1/8/2016

Rachel Melgoza

**Reviewed 1/11/2016 by: Rachel Melgoza**

NORTHERN INDUSTRIAL HYGIENE, INC.
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NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00015**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **19**

**Layer 1** **White and tan with black speck ceramic material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | | 100% Mineral Filler and Binder |

**Layer 2** **Gray gritty material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 2% Cellulose | 67% Aggregate |
| | | 31% Filler and Binder |

Client Sample Number: **M8.5A** Lab Sample Number: **16-00015.0011**
Client Sample Description: **4"X4" White Ceramic Tile - with Mastic & Grout**
Client Sample Location: **Room 164**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **White ceramic material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | | 100% Mineral Filler and Binder |

**Layer 2** **Light-brown adhesive**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 1% Cellulose | 99% Filler and Binder |

**Comments:** **No grout present**

Client Sample Number: **M8.5B** Lab Sample Number: **16-00015.0012**
Client Sample Description: **4"X4" White Ceramic Tile - with Mastic & Grout**
Client Sample Location: **Room 172 - Restroom**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **White ceramic material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | | 100% Mineral Filler and Binder |

**Layer 2** **Light-brown adhesive**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| No Asbestos Detected | 1% Cellulose | 99% Filler and Binder |

(Sample results continued on next page.)

**Sampled by: Bob Brownell** **12/31/2015**
**Received by: Regina Mirabal** **1/5/2016**
**Analyzed by: Rachel Melgoza** **1/11/2016**

Rachel Melgoza

**Reviewed 1/11/2016 by: Rachel Melgoza**

NORTHERN INDUSTRIAL HYGIENE, INC.
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215 SW 153rd Street Burien, WA 98166
OFFICE: (206) 988-1746 FAX: (206) 988-1978
NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00015**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **19**

Client Sample Number: **M8.5C** Lab Sample Number: **16-00015.0013**
Client Sample Description: **4"X4" White Ceramic Tile - with Mastic & Grout**
Client Sample Location: **Room 185 - Restroom**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **White ceramic material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 100% Mineral Filler and Binder |

**Layer 2** **Light-brown adhesive**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 1% Cellulose | 99% Filler and Binder |

Client Sample Number: **M17.3A** Lab Sample Number: **16-00015.0014**
Client Sample Description: **Red Clay Block & Mortar**
Client Sample Location: **Room 101**
Sample Comments: Checked If Sample Not Analyzed ☐

**Layer 1** **Red gritty/grainy compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 10% Aggregate |
| | | 60% Filler and Binder |
| | | 30% Fine Grains |

**Layer 2** **Tan and gray gritty compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 60% Aggregate |
| | | 40% Filler and Binder |

Client Sample Number: **M17.3B** Lab Sample Number: **16-00015.0015**
Client Sample Description: **Red Clay Block & Mortar**
Client Sample Location: **Room 163**
Sample Comments: Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Bob Brownell** 12/31/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Rachel Melgoza** 1/11/2016

Rachel Melgoza

**Reviewed 1/11/2016 by: Rachel Melgoza**

NORTHERN INDUSTRIAL HYGIENE, INC.
Billings, MT • Helena, MT • Seattle, WA

215 SW 153rd Street Burien, WA 98166
OFFICE: (206) 988-1746 FAX: (206) 988-1978
NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00015**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **19**

**Layer 1** **Red gritty/grainy compressed material**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
10% Aggregate
60% Filler and Binder
30% Fine Grains

**Layer 2** **Tan and gray gritty compressed material**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
60% Aggregate
40% Filler and Binder

Client Sample Number: **M17.3C**
Client Sample Description: **Red Clay Block & Mortar**
Client Sample Location: **Room 170**
Sample Comments:

Lab Sample Number: **16-00015.0016**
Checked If Sample Not Analyzed ☐

**Layer 1** **Red gritty/grainy compressed material**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
10% Aggregate
60% Filler and Binder
30% Fine Grains

**Layer 2** **Tan and gray gritty compressed material**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
60% Aggregate
40% Filler and Binder

Client Sample Number: **M17.4A**
Client Sample Description: **Light-Brown Brick & Mortar**
Client Sample Location: **Entry Way Near 192 - Exterior**
Sample Comments:

Lab Sample Number: **16-00015.0017**
Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Bob Brownell** 12/31/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Rachel Melgoza** 1/11/2016

Rachel Melgoza

**Reviewed 1/11/2016 by: Rachel Melgoza**

NORTHERN INDUSTRIAL HYGIENE, INC.
Billings, MT • Helena, MT • Seattle, WA

215 SW 153rd Street Burien, WA 98166
OFFICE: (206) 988-1746 FAX: (206) 988-1978
NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00015**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **19**

**Layer 1** **Light-brown gritty/grainy compressed material**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
15% Aggregate
60% Filler and Binder
25% Fine Grains

**Layer 2** **Tan and gray gritty compressed material**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
60% Aggregate
40% Filler and Binder

Client Sample Number: **M17.4B**
Client Sample Description: **Light-Brown Brick & Mortar**
Client Sample Location: **Room 154 - Southeast Corner - Exterior**
Sample Comments:

Lab Sample Number: **16-00015.0018**
Checked If Sample Not Analyzed ☐

**Layer 1** **Light-brown gritty/grainy compressed material**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
15% Aggregate
60% Filler and Binder
25% Fine Grains

**Layer 2** **Tan and gray gritty compressed material**

**Asbestos Fibrous Components:** **No Asbestos Detected**

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
60% Aggregate
40% Filler and Binder

Client Sample Number: **M17.4C**
Client Sample Description: **Light-Brown Brick & Mortar**
Client Sample Location: **Room 122 - Northwest Corner - Exterior**
Sample Comments:

Lab Sample Number: **16-00015.0019**
Checked If Sample Not Analyzed ☐

(Sample results continued on next page.)

**Sampled by: Bob Brownell** 12/31/2015
**Received by: Regina Mirabal** 1/5/2016
**Analyzed by: Rachel Melgoza** 1/11/2016

Rachel Melgoza

**Reviewed 1/11/2016 by: Rachel Melgoza**

NORTHERN INDUSTRIAL HYGIENE, INC.
Billings, MT • Helena, MT • Seattle, WA

215 SW 153rd Street Burien, WA 98166
OFFICE: (206) 988-1746 FAX: (206) 988-1978
NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

| | | | |
|---|---|---|---|
| **Northern Industrial Hygiene, Inc.** | | NIH Batch Number: | **16-00015** |
| **201 South 30th Street** | | Client Job Number: | **999-3019** |
| **Billings, MT 59101-** | | Turn Around Time: | **5 Day** |
| Project Location: | *Old Livingston Hospital* | Samples Analyzed: | **19** |

**Layer 1** **Light-brown gritty/grainy compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 15% Aggregate |
| | | 60% Filler and Binder |
| | | 25% Fine Grains |

**Layer 2** **Tan and gray gritty compressed material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | | 60% Aggregate |
| | | 40% Filler and Binder |

| | | |
|---|---|---|
| **Sampled by:** | **Bob Brownell** | **12/31/2015** |
| **Received by:** | **Regina Mirabal** | **1/5/2016** |
| **Analyzed by:** | **Rachel Melgoza** | **1/11/2016** |

Rachel Melgoza

**Reviewed 1/11/2016 by: Rachel Melgoza**

NVLAP Lab Code 200511-0

# Chain of Custody


**Northern Industrial Hygiene, Inc.**
201 South 30th Street
Billings, MT 59101
Office Phone: (406) 245-7766
Cell Phone: (406) 647-5275
Email: bbrownell@bridgeband.com
Inspector/Contact: Bob Brownell


| | |
|---|---|
| NIH Lab Batch ID: | 16-00015 |
| Project Name: | Old Livingston Hospital |
| Project Number: | 999-3019 |
| Date Samples Taken: | 12/31/15 |
| Type of Analysis: | PLM |

| Turnaround Time Requested | |
|---|---|
| 2 Hour: | |
| Same Day: | |
| 24 Hour: | |
| 48 Hour: | |
| 5 Day: | 5-Day |
| 10 Day: | |

For Lab Use Only
Sample(s) Size: ✓ Accepted ___ Rejected
Non-Conformance Memo: ___ Yes ✓ No
Package Condition: ✓ Good ___ Damaged ___ Severe Damage



| NIH LAB ID | SAMPLE # | SAMPLE DESCRIPTION | SAMPLE LOCATION |
|---|---|---|---|
| 001 | M7.1A | Plaster Wall System (Lower | Rm 101 - North End |
| 2 | M7.1B | Expanded Metal + Gyp Board) | Rm 101 - South End |
| 3 | M7.1C | | Rm 140 |
| 4 | M7.1D | | Rm 127 |
| 5 | M7.1E | | Rm 162 - North End |
| 6 | M7.1F | | Rm 162 - South End |
| 7 | M7.1G | | Rm 193 - North End |
| 8 | F7.1A | 1"x1" Ceramic Tile (Brown) + | Rm 164 |
| 9 | F7.1B | Grout | Rm 172 - RR |
| 10 | F7.1C | | Rm 185 - RR |
| 11 | M8.5A | 4"x4" Ceramic Tile (white) | Rm 164 |
| 12 | M8.5B | + Mastic + Grout | Rm 172 - RR |
| 13 | M8.5C | | Rm 185 - RR |
| 14 | M17.3A | Red Clay Block + Mortar | Rm 101 |
| 15 | M17.3B | | Rm 163 |
| 16 | M17.3C | | Rm 170 |
| 17 | M17.4A | Lt Brown Brick + Mortar | Entryway Near 192 |
| 18 | M17.4B | (Exterior) | Rm 154 - SE Corner |
| 19 | M17.4C | | Rm 122 - NW Corner |
| | | | |
| | | | |

Special Instructions: Analyze Group Method - Stop at First Positive ✓ Yes ___ No
Number of samples shipped this page: 19
Total number of samples shipped: 274

| | | | |
|---|---|---|---|
| Relinquished By: Robert Brownell | Date: 1/4/16 | Time: 12:00 | Firm: NIH |
| Received By: [illegible] | Date: 1/5/16 | Time: 12:30 | Firm: NIH BVR |
| Analyzed By: Rachel Milgor | Date: 01/08/16 | Time: 0730 | Firm: NIH BVR |

Revised 01/20/15 RIM

NORTHERN INDUSTRIAL HYGIENE, INC.
Billings, MT • Helena, MT • Seattle, WA

215 SW 153rd Street Burien, WA 98166
OFFICE: (206) 988-1746 FAX: (206) 988-1978
EMAIL: Rmelgoza@bridgeband.com
NVLAP Lab Code: 200511-0

2/2/2016

Bob Brownell
Northern Industrial Hygiene, Inc.
201 South 30th Street
Billings, MT 59101-

RE: Bulk Asbestos Fiber Analysis; Batch # 16-00100
Project Location *Old Livingston Hospital*

Dear Bob Brownell,

Thank you for choosing Northern Industrial Hygiene, Inc. as your laboratory. Enclosed you will find analytical results for the bulk samples submitted to the laboratory.

Northern Industrial Hygiene is accredited by NVLAP Lab Code: 200511-0. Accreditation by NVLAP does not indicate endorsement by NVLAP or any other government agency. All bulk samples are analyzed in accordance with U.S. EPA Method -600/M4-82-020, December 1982 and EPA Method 600/R-93-116, July 1993. "Method for Determination of Asbestos in Bulk Building Materials"(NESHAP, 40 CFR-Part 61) protocol.

Analysis is cross checked through our inter or intra laboratory quality assurance program for verification. The percent values reported are based on calibrated visual estimates by volume unless verification by Point Count is indicated. Test results reported relate only to the samples submitted by the customer to Northern Industrial Hygiene, Inc. Trace amounts of asbestos are below the limit of detection and asbestos fibers with diameters below approximately 0.25 micrometers are not detectable with the Polarized Light Microscopy (PLM) analytical procedure. A trace amount of asbestos is defined as one to five fibers in three slide mounts. Asbestos found in this amount will be reported as "< 1.0%" by PLM analysis.

This report is highly confidential and shall not be reproduced without your written approval and the written approval of Northern Industrial Hygiene, Inc.

Samples are archived for thirty (30) days following analysis. Please contact us if samples need to be archived longer than the standard holding time.

Thank you for using Northern Industrial Hygiene, Inc. If you have any questions or concerns please contact us.

Sincerely,

Rachel Melgoza

Reviewed by: Rachel Melgoza

Enclosure: Bulk Sample Results

NORTHERN INDUSTRIAL HYGIENE, INC.
Billings, MT • Helena, MT • Seattle, WA

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OFFICE: (206) 988-1746 FAX: (206) 988-1978
NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00100**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **6**

Client Sample Number: **D-1** Lab Sample Number: **16-00100.0001**
Client Sample Description: **Paper Debris - White**
Client Sample Location: **East Crawlspace**
Sample Comments: Checked If Sample Not Analyzed ☐

**White fibrous papery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **45% Chrysotile Asbestos** | 15% Cellulose | 40% Filler and Binder |

Client Sample Number: **D-2** Lab Sample Number: **16-00100.0002**
Client Sample Description: **Hard Fitting Debris - White**
Client Sample Location: **East Crawlspace**
Sample Comments: Checked If Sample Not Analyzed ☐

**White compressed chalky powder**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **No Asbestos Detected** | 1% Cellulose | 96% Filler and Binder |
| | 1% Synthetic | 2% Perlite |

Client Sample Number: **D-3** Lab Sample Number: **16-00100.0003**
Client Sample Description: **Paper Debris - White**
Client Sample Location: **Laundry Crawlspace**
Sample Comments: Checked If Sample Not Analyzed ☐

**White fibrous papery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **25% Chrysotile Asbestos** | 35% Cellulose | 40% Filler and Binder |

Client Sample Number: **D-4** Lab Sample Number: **16-00100.0004**
Client Sample Description: **Paper Debris - Brown**
Client Sample Location: **Laundry Crawlspace**
Sample Comments: Checked If Sample Not Analyzed ☐

**Off-white and tan fibrous papery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **3% Chrysotile Asbestos** | 92% Cellulose | 5% Filler and Binder |

(Sample results continued on next page.)

**Sampled by: Bob Brownell** 1/25/2016
**Received by: Regina Mirabal** 1/27/2016
**Analyzed by: Cherie Zeledon** 2/1/2016

Rachel Melgoza

**Reviewed 2/2/2016 by: Rachel Melgoza**

NORTHERN INDUSTRIAL HYGIENE, INC.
Billings, MT • Helena, MT • Seattle, WA

215 SW 153rd Street Burien, WA 98166
OFFICE: (206) 988-1746 FAX: (206) 988-1978
NVLAP Lab Code: 200511-0

# Bulk Asbestos Analysis Report

**Northern Industrial Hygiene, Inc.**
**201 South 30th Street**
**Billings, MT 59101-**
Project Location: *Old Livingston Hospital*

NIH Batch Number: **16-00100**
Client Job Number: **999-3019**
Turn Around Time: **5 Day**
Samples Analyzed: **6**

Client Sample Number: **D-5** Lab Sample Number: **16-00100.0005**
Client Sample Description: **Paper Debris - Brown/White**
Client Sample Location: **Dining Area Crawlspace**
Sample Comments: **Unable to determine layer order** Checked If Sample Not Analyzed ☐

**Layer 1** **White fibrous papery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **45% Chrysotile Asbestos** | 15% Cellulose | 40% Filler and Binder |

**Layer 2** **Off-white and tan fibrous papery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **2% Chrysotile Asbestos** | 92% Cellulose | 6% Filler and Binder |

Client Sample Number: **D-6** Lab Sample Number: **16-00100.0006**
Client Sample Description: **Mag. Debris**
Client Sample Location: **Dining Area Crawlspace**
Sample Comments: Checked If Sample Not Analyzed ☐

**Gray compressed grainy, gritty material with light gray compressed fibrous powdery material**

| Asbestos Fibrous Components: | Non-Asbestos Fibrous Components: | Non-Fibrous Components: |
|---|---|---|
| **5% Amosite Asbestos** | 5% Cellulose | 5% Aggregate |
| **35% Chrysotile Asbestos** | | 30% Filler and Binder |
| | | 20% Fine Grains |

**Comments:** **Materials distinguishable but inseparable**

**Sampled by: Bob Brownell** **1/25/2016**
**Received by: Regina Mirabal** **1/27/2016**
**Analyzed by: Cherie Zeledon** **2/1/2016**

Rachel Melgoza

**Reviewed 2/2/2016 by: Rachel Melgoza**

# Chain of Custody

NVLAP Lab Code 200511-0

**Northern Industrial Hygiene, Inc.**
201 South 30th Street
Billings, MT 59101
Office Phone: (406) 245-7766
Cell Phone: (406) 647-5275
Email: bbrownell@bridgeband.com
Inspector/Contact: Bob Brownell

| | |
|---|---|
| NIH Lab Batch ID: | 16-00100 |
| Project Name: | Old Livingston Hospital |
| Project Number: | 999-3019 |
| Date Samples Taken: | 1/25/16 |
| Type of Analysis: | PLM |

| Turnaround Time Requested |
|---|
| 2 Hour: |
| Same Day: |
| 24 Hour: |
| 48 Hour: |
| 5 Day: X |
| 10 Day: |

For Lab Use Only
Sample(s) Size: ✓ Accepted ___ Rejected
Non-Conformance Memo: ___ Yes ✓ No
Package Condition: ✓ Good ___ Damaged ___ Severe Damage

Page ____ of ____

| NIH LAB ID | SAMPLE # | SAMPLE DESCRIPTION | SAMPLE LOCATION |
|---|---|---|---|
| 1 | D-1 | Paper Debris (white) | East Crawlspace |
| 2 | D-2 | Hard Fitting Debris (White) | East Crawlspace |
| 3 | D-3 | Paper Debris (white) | Laundry Crawlspace |
| 4 | D-4 | Paper Debris (brown) | Laundry Crawlspace |
| 5 | D-5 | Paper Debris (brown + white) | Dining Area Crawlspace |
| 6 | D-6 | Mag. Debris | Dining Area Crawlspace |
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**Special Instructions: Analyze Group Method - Stop at First Positive** Yes (No)

Number of samples shipped this page: 6
Total number of samples shipped: 6

| | | | | | |
|---|---|---|---|---|---|
| Relinquished By: | Robert H Brownell | Date: 1/26/16 | Time: 11:00 | Firm: NIH | |
| Received By: | [illegible] | Date: 1/27/16 | Time: 10:05 | Firm: NIH Bulk | |
| Analyzed By: | Cheche Zoledon | Date: 2/1/16 | Time: 1505 | Firm: NIH Bulk Lab | |

Revised 01/20/15 RIM

# APPENDIX B

## ASBESTOS SAMPLE COLLECTION REQUIREMENTS AND MATERIAL CATEGORY DESCRIPTIONS

## SAMPLE COLLECTION REQUIREMENTS

Friable Surfacing Material

1) At least three bulk samples from each homogeneous material that is 1,000 square feet or less.
2) At least five bulk samples from each homogeneous material that is greater than 1,000 square feet but less than or equal to 5,000 square feet.
3) At least seven bulk samples from each homogeneous material that is greater than 5,000 square feet.

Thermal System Insulation

1) In a randomly distributed manner, at least three bulk samples from each homogeneous material of thermal system insulation that is not assumed to contain asbestos.
2) At least one bulk sample from each homogeneous material of patched thermal system insulation that was not assumed to be asbestos-containing material (ACBM).
3) In a manner sufficient to determine whether the material was ACBM or not ACBM, (generally three samples), bulk samples from each insulated mechanical system that was not assumed to be ACBM where cement or plaster was used on fittings such as tees, elbows, or valves.
4) Bulk samples were not collected from any homogeneous material where the inspector determined that the thermal system insulation is fiberglass, foam glass, rubber, or other non-asbestos-containing building material.

Miscellaneous Materials

1) If any other friable suspect homogeneous material was not assumed to be ACBM, three bulk samples were collected from each suspect material as established in the Administrative Rules of Montana (ARM 17.74.354), area of homogeneous friable miscellaneous material that was not assumed to be ACBM.

Non-friable suspected ACBM

1) If any non-friable suspect homogeneous ACBM was not assumed to be ACBM, three bulk samples were collected from each suspect materials as established in the Administrative Rules of Montana (ARM 17.74.354).

## AHERA AND NESHAP CATEGORIES

Following receipt of the laboratory analysis, homogeneous ACBM were identified and the quantities determined. The materials were then categorized using NESHAP criteria and a general recommended response action was determined for each ACBM.

### AHERA Categories

Category 1: Damaged or significantly damaged thermal system insulation ACM.
Category 2: Damaged friable surfacing ACM.
Category 3: Significantly damaged friable surfacing ACM.
Category 4: Damaged or significantly damaged friable miscellaneous ACM.
Category 5: ACBM with potential for damage.
Category 6: ACBM with potential for significant damage.
Category 7: Remaining friable ACBM or friable suspected ACBM.

### NESHAP Categories

Category I is non-friable asbestos-containing materials including packings, gaskets, resilient floor covering and asphalt roofing products containing more than 1 percent asbestos. This category also includes pliable asbestos-containing sealants and mastics.

Category II is non-friable ACBM, excluding Category I non-friable ACBM, containing more than one percent asbestos. This category includes Transite ® (cement asbestos) products.

Regulated Asbestos-Containing Materials (RACM) are friable materials, Category I non-friable materials that will or may be subjected to sanding, grinding, cutting, or abrading and Category II non-friable materials that have a high probability of becoming or have become crumbled, pulverized, or reduced to powder by forces expected to act on the material in the course of demolition or renovation operations.

### General Recommended Response Actions

| | |
|---|---|
| Removal: | remove noted damaged ACBM; |
| Repair: | repair noted damaged ACBM; |
| Encapsulate: | encapsulate ACBM with a penetrating or bridging encapsulate; |
| Enclosure: | enclose ACBM by construction an air tight barrier; |
| O&M: | include material in a formal operations and maintenance program and maintain ACBM in a non-friable condition. |

# APPENDIX C

## INSPECTOR ASBESTOS TRAINING CERTIFICATES

**KEVIN B OLIVER**

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).

**[redacted]A-1368**

| | |
|---|---|
| Asbestos Inspector | 01/07/2017 |
| Management Planner | 01/07/2017 |
| Project Contractor/Supervisor | 01/05/2017 |
| Project Designer | 01/06/2017 |

MT DEQ Asbestos Control Program

**LOGAN SILVEIRA**

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).

[redacted]

| | |
|---|---|
| Asbestos Inspector | 10/14/2016 |
| Project Contractor/Supervisor | 11/13/2016 |

MT DEQ Asbestos Control Program