Hazardous Materials Survey & Lead Paint Risk Assessment for the Fritz Peak Observatory Located in Rollinsville, Colorado National Oceanic & Atmospheric Administration (NOAA) Office of Oceanic and Atmospheric Research (OAR)

Prepared for:

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November 2019
EA Project No. 6323506

TABLE OF CONTENTS

APPENDICES

LIST OF TABLES

LIST OF ACRONYMS AND ABBREVIATIONS

ACM	Asbestos-Containing Material
AHERA	Asbestos Hazard Emergency Response Act
AVENV	American Veterans Environmental LLC
CDC	Centers for Disease Control and Prevention
CFL	Compact fluorescent lamp
CFR	Code of Federal Regulations
EA	EA Engineering, Science, and Technology, Inc., PBC
EPA	(U.S.) Environmental Protection Agency
FLB	Fluorescent light ballasts
HA	Homogeneous Area
HUD	Housing and Urban Development
LBP	Lead-based Paint
LCP	Lead-containing Paint
mg/L	Milligrams Per Liter
NIST	National Institute for Standards and Technology
NOAA	National Oceanic and Atmospheric Administration
NVLAP	National Voluntary Laboratory Accreditation Program
OAR	Office of Oceanic and Atmospheric Research
OSHA	Occupational Safety and Health Administration
PCBs	Polychlorinated Biphenyls
PLM	Polarized Light Microscopy
PPM	Parts Per Million
SF	Square Feet
TCLP	Toxicity Characteristic Leachate Procedure
µg/sq.ft.	Microgram per Square Foot
XRF	X-ray Fluorescence

EXECUTIVE SUMMARY

In accordance with the Statement of Work for a Hazardous Materials Survey & Lead Paint Risk Assessment for the Fritz Peak Observatory located in Rollinsville, Colorado issued by the National Oceanic & Atmospheric Administration (NOAA) Office of Oceanic and Atmospheric Research (OAR) under BPA No. ST-1330-17-BA-0075, and EA Engineering, Science, and Technology, Inc. PBC (EA) proposal number 0702347, EA was contracted by NOAA to conduct a hazardous materials survey of three buildings and perform a lead paint risk assessment for one building located at the Fritz Peak Observatory in Rollinsville, Colorado. NOAA is in the process of relinquishing ownership of the buildings. The three structures are located on a portion of an approximately 5.33-acres of land owned by NOAA that borders Colorado Highway 119, approximately 1.8 miles south of Rollinsville, Colorado. Inspection and assessment services consisted of inspection and sampling of suspect asbestos-containing materials (ACM) to determine asbestos content; inspection and testing of paint surfaces to locate, quantify, and assess risk for the presence of lead-based paint (LBP); inspecting light fixtures, ballasts, and other electrical equipment to assess the presence of polychlorinated biphenyls (PCBs) and mercury; and recording the presence of environmentally regulated substances. EA subcontractor American Veterans Environmental LLC (AVENV) inspectors Sam Rolf, Paula Bowers, and John Burnside, along with EA inspector Ben Powell conducted the inspections on 23 and 24 September 2019.

Asbestos-containing Materials Survey

Laboratory Building

AVENV identified nine homogeneous areas of suspect ACM that contained regulated levels of asbestos [greater than 1 percent, as defined by the United States Environmental Protection Agency (EPA)]. Seven of these materials were non-friable and two were friable. All were in good condition at the time of the inspection:

- CK03: Grey caulking associated with wood frame of door (3% Chrysotile)
- FDM01: Metal fire doors (assumed)
- FTM02: 9-in. x 9-in. rose, gray, and green floor tiles with black mastic (2% Chrysotile)
- FTM03: 9-in. x 9-in. brown floor tiles with black mastic (2% Chrysotile)
- OT01: Green chalkboards (assumed)
- RF01: Black and silver roof flashing (5% & 10% Chrysotile)
- RT01: Tar and gravel roofing material (5% Chrysotile)
- TS01: Skim texture-trowel pattern on drywall, painted (3% Chrysotile)
- TS02: Skim texture-heavy trowel pattern on drywall, painted (3% Chrysotile)

Cottage

AVENV identified one homogeneous area of suspect ACM that contained regulated levels of asbestos. This material was friable and in good condition at the time of the inspection:

- TS03: Heavy orange peel texture on drywall (2% Chrysotile)

Observation Platform Shed

AVENV identified two homogeneous areas of suspect ACM that are assumed to contain regulated levels of asbestos. These materials were non-friable and were in good condition at the time of the inspection:

- CB01: Cement board – transite panels (assumed)
- RSG02: Green and black asphalt composition shingle (assumed)

Lead-Based Paint Inspection

Laboratory Building

X-ray Fluorescence (XRF) results indicated the presence of one component (building element, substrate, and paint color combination) from one lead-based paint (paint surface coatings whose lead content is equal to or greater than 1.0 mg/cm^2) coating was identified. These results are presented in Table 4 (Section 3.0 – Results). An additional two-hundred and twenty-six surfaces were identified as lead containing paint (LCP), defined as paint content greater than 0.0 mg/cm^2, and less than 1.0 mg/cm^2.

Cottage

XRF results indicated the presence of one component from which four lead-based paint coatings were identified. These results are presented in Table 5 (Section 3.0 – Results). An additional twenty surfaces were identified as LCP.

Observation Platform Shed

XRF results indicated the presence of seven components from which twelve lead-based paint coatings were identified. These results are presented in Table 6 (Section 3.0 – Results). An additional twenty-five surfaces were identified as LCP.

Lead-Based Paint Risk Assessment

Cottage

Visual inspection did not indicate the presence of damaged (cracking, peeling, or chipping) and/or deteriorated (chalking) paint and XRF testing did not indicate the presence of LBP.

Each of the seven dust wipe samples were below the HUD acceptable lead-dust level. As such, dust does not present a lead hazard at this time.

Polychlorinated Biphenyls (PCBs)

Laboratory Building

Approximately one-hundred and eighteen fluorescent light ballasts are assumed to contain PCBs, as indicated by age and lack of "No PCBs" labeling. EA did not observe any transformers or other building equipment/components labelled or assumed to contain PCBs during the inspection.

Cottage

EA did not identify light ballasts or other building equipment/components labelled or assumed to contain PCBs during the inspection of the Cottage.

Observation Platform Shed

Approximately nine fluorescent light ballasts are assumed to contain PCBs, as indicated by age and lack of "No PCBs" labeling. EA did not observe any transformers or other building equipment/components labelled or assumed to contain PCBs during the inspection.

Mercury-Containing Sources and Other Environmentally Regulated Materials

Mercury is assumed to be present in the fluorescent light tubes (FLT) identified throughout the buildings.

Laboratory Building

Approximately 424 4-ft. FLTs, nine 2-ft. FLTs, four 18-in. FLTs, four 14-in. FLTs, five 12-in. circle FLTs, four 6-in circle FLTs, and six mercury ampules located in thermostats were identified in the Laboratory Building. There were also 30 smoke detectors, six "EXIT" signs, 12 ABC-type fire extinguishers, two 8-BC-type fire extinguishers, one Oasis water cooler, one Kelvinator refrigerator, five carrier condensers, two through-wall AC units, one approximately 1,000-gal. propane tank, and numerous chemicals stored in the four storage locations described in Section 3.0 Results. No leaking refrigerant was observed during the time of the inspection.

Cottage

Approximately 12 FLTs, one smoke detector, and two paint cans were identified throughout the building.

Observation Platform Shed

Approximately 18 FLTs, two smoke detectors, one ABC-type fire extinguisher, one 1-pt. Minwax wood hardener, four 1-pt. DAP wallboard joint compound, one leaking 6-cell battery, sixteen (16) 1-gal. paint cans, one 1-gal. assumed paint thinner, and two 10.1-oz. silicone sealant were identified throughout the building. Four compressed gas cylinders labeled as containing carbon dioxide (CO2), which were likely empty, located in a closet attached to the building's east exterior wall were also identified.

1.0 INTRODUCTION

In accordance with the Statement of Work for a Hazardous Materials Survey & Lead Paint Risk Assessment for the Fritz Peak Observatory (issued under BPA No. ST-1330-17-BA-0075), and EA Engineering, Science, and Technology, Inc. PBC (EA) proposal number 0702347, EA was contracted by the National Oceanic Atmospheric Administration (NOAA) Office of Oceanic and Atmospheric Research (OAR) to perform a hazardous materials survey of three buildings and a lead risk assessment for one building located at the Fritz Peak Observatory in Rollinsville, Colorado. NOAA is in the process of relinquishing ownership. The three structures are located on a portion of an approximately 5.33-acres of land owned by NOAA that borders Colorado Highway 119 approximately1.8 miles south of Rollinsville, Colorado. Inspection and assessment services consisted of inspection and sampling of suspect asbestos-containing materials (ACM) to determine asbestos content; inspection and testing of paint surfaces to locate and quantify lead-based paint (LBP); inspecting light fixtures, ballasts, and other electrical equipment to assess the presence of polychlorinated biphenyls (PCBs) and mercury; and recording the presence of environmentally regulated substances. Current Federal and State environmental regulations require that certain potentially hazardous materials that may be affected by structure alteration activities (demolition, renovation, maintenance, mechanical upgrades, etc.) be identified and removed prior to conducting these activities.

In the case of asbestos, Environmental Protection Agency (EPA) and Occupational Safety and Health Administration (OSHA) asbestos regulations (40 CFR 61 and 29 CFR 1926.1101, respectively) require that ACM be identified, and that friable ACM, and ACM that has the potential to become friable, be removed prior to conducting alteration (renovation, demolition, maintenance, facility/equipment upgrades, etc.) activities that may disturb these materials. Local EA hazardous materials subcontractor AVENV conducted the asbestos inspection in accordance with Asbestos Hazard Emergency Response Act (AHERA) inspection and sampling protocols to determine the presence of asbestos in building materials throughout the buildings.

Requirements for the identification and notification of the presence of lead-based paint (LBP) and lead-containing paint (LCP) are found in 29 CFR 1926.62. Although LBP/LCP removal is not required prior to structure or building component alteration, contractors working in areas where LBP/LCP is present must be notified of its location and must take appropriate action to minimize its disturbance and protect workers and the environment. In many cases, removal of leaded paint presents the only viable option to limiting exposure. Lead-containing waste must also be sampled to determine appropriate disposal requirements. AVENV conducted XRF sampling of painted components throughout each building to determine lead content of the paint. This inspection was performed in accordance with Chapter 7: Lead-Based Paint Inspection of the U.S. Department of Housing and Urban Development (HUD), Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing (Second Edition, August 2012).

According to the EPA, fluorescent light ballasts (FLB) manufactured prior to August 1978 have a greater than 50% chance of containing PCBs at a minimum of 50 parts per million (ppm). PCB use in light ballasts was banned after August 1978, and the EPA required that “No PCBs” labels be affixed to ballasts manufactured after August 1978 through 1998. If a ballast is manufactured after 1998, the EPA no longer requires a “No PCBs” label as proof that the ballast does not contain PCB’s. Based on these guidelines, ballasts manufactured prior to 1999 that are either unlabeled or do not bear “No PCBs” labeling should be assumed to contain PCBs at levels greater than 50 ppm [in accordance with requirements of 40 CFR 761(b)]. PCB-containing equipment whose PCB content is 50 ppm or greater is regulated for disposal purposes.

Mercury-containing light tubes and bulbs whose mercury content is 0.2 milligrams per liter (mg/L) mercury or greater are regulated for disposal in accordance with 40 CFR 261–263. Fluorescent tube manufacturers indicate that all fluorescent tubes contain some amount of mercury, as do typical high-intensity discharge (HID) bulbs. Other mercury-containing components, such as liquid mercury ampules contained in thermometers and thermostats should also be handled in accordance with 40 CFR 261-263. Packaging, transport, and disposal of the mercury-containing sources should be conducted in accordance with 40 CFR part 273 standards for universal waste management. EA's inspection included preparing an inventory of suspected mercury-containing items, including light tubes/bulbs and mercury ampules, for each building.

Other regulated hazardous materials, such as containerized hazardous substances and batteries, should be treated as universal waste and disposed of in accordance with 40 CFR 261, 266, and 279, respectively. Reclamation and/or recycling and re-use of ozone-depleting refrigerants and other chlorofluorocarbon (CFC)-containing substances should be conducted in accordance with 40 CFR Part 82, Subpart F. Disposal of any other hazardous products should be conducted in accordance with label instructions and any applicable federal and state regulations in order to prevent a release.
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2.0 METHODOLOGY

Asbestos-Containing Materials Survey

The asbestos inspection was conducted in accordance with EPA Standard 40 Code of Federal Regulations (CFR) 763 Asbestos Hazard Emergency Response Act (AHERA), Subpart E, as well as AHERA inspection and sampling protocol, and included identifying homogeneous areas of suspect ACM, determining suspect ACM friability, assessing homogeneous areas of suspect ACM, and collecting samples of suspect ACM to determine asbestos content. The asbestos inspection was an investigation performed to identify suspect ACM and included the interior and exterior of each building.

Samples of suspect ACM were submitted to Eurofins CEI for analysis by Polarized Light Microscopy (PLM) in accordance with the EPA Method for the Determination of Asbestos in Bulk Insulation Samples (EPA/600/R-93/116). Analytical procedures included positive stop methodology, whereby a sample set representing a homogeneous area of suspect ACM is analyzed until a result indicating >1% asbestos is obtained. Once such result is obtained, any additional samples in the set are not analyzed and the homogeneous area is considered to be asbestos-containing. If no results indicating >1% asbestos are obtained, the homogeneous area is considered to be non-asbestos. Eurofins CEI is certified for bulk asbestos sample analysis via PLM by the National Institute for Science and Technology (NIST) National Voluntary Laboratory Accreditation Program (NVLAP). Please refer to Appendix A for AVENV Report containing laboratory certifications.

Lead-Based Paint Inspection

AVENA conducted a lead-based paint HUD inspection of accessible painted surfaces, including those on the interior and exterior of the three buildings and other structures and appurtenances. The inspection was designed to identify building/structure elements (walls, doors and door components, structural support framework, window components, etc.) with surface coatings that contain lead. The survey consisted of testing for lead concentrations of painted surfaces utilizing a Niton Xlp-300 X-Ray Fluorescence (XRF) spectrum analyzer.

At this time, there are no federal or state regulations that specifically identify testing procedures for non-residential structures scheduled for alteration. AVENV conducted the survey and inspection in accordance with HUD and followed the XRF manufacturer's testing methodology during the survey. Prior to obtaining readings from suspect LBP surfaces, the XRF was calibrated in accordance with the manufacturer's instructions. Calibration checks were performed prior to and at the completion of the inspection.

The side of the room was determined by the address side wall of the building. Under the heading "Side" the listing would refer to the side wall of the building in the front with the sides B, C, and D designations referring to the remaining walls in a clockwise rotation.

Surfaces were identified as LBP if the result met the HUD and Colorado's State definition of lead-based paint [$\geq$1.0 mg/cm^2 (milligrams per square centimeter)]. Any XRF readings above 0.0 mg/cm^2, but less than or equal to 1.0 mg/cm^2 are identified as lead-containing paint (LCP).

Lead-Based Paint Risk Assessment

AVENV conducted a lead-based paint risk assessment in accordance with the requirements of HUD Chapter 5, *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing (Second Edition, August 2012*). The risk assessment included a visual review of paint condition, and dust sampling and analysis. Painted surfaces are described as the following;

- Intact: no peeling paint on the component; entire surface is intact.
- Fair: less than or equal to two square feet of damaged paint.
- Poor: more than two square feet of damaged paint.

Dust wipe samples were collected in accordance with HUD Chapter 5, Section IIB – Dust Sampling, and Appendix 13.1 (Wipe Sampling for Settled Lead-Contaminated Dust) of the HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing. Analysis of the wipe samples were conducted per the American Society for Testing and Materials (ASTM) Standard ES 30-94.

Polychlorinated Biphenyls (PCBs)

EA conducted an inspection to identify accessible PCB-containing equipment such as light ballasts, transformers, hydraulic fluid reservoirs, etc. Light ballasts within accessible light fixtures were inspected throughout each building. According to the EPA, fluorescent light ballasts manufactured prior to August 1978 have a greater than 50% chance of containing PCBs at 50 parts per million (ppm) or higher. PCB use in light ballasts was banned after August 1978, and the EPA required that "No PCBs" labels be affixed to ballasts manufactured after August 1978 through 1998. If a ballast is manufactured after 1998, the EPA no longer requires a "No PCBs" label as proof that the ballast does not contain PCB's. Based on these guidelines, ballasts manufactured prior to 1999 that are either unlabeled or do not bear "No PCBs" labeling should be assumed to contain PCBs at levels greater than 50 ppm [in accordance with requirements of 40 CFR 761(b)]. PCB-containing equipment whose PCB content is 50 ppm or greater is regulated for disposal purposes.

Mercury-Containing Sources and Other Environmentally Regulated Materials

EA visually inspected accessible light fixtures to determine if they contained tubes or bulbs that may contain mercury. Fluorescent tube manufacturers indicate that all fluorescent tubes contain some amount of mercury, as do typical high-intensity discharge (HID) bulbs. Mercury-containing light tubes and bulbs whose mercury content is 0.2 milligrams per liter (mg/L) mercury or greater are regulated for disposal purposes. EA also inspected thermostats and thermometers to observe for mercury components, such as liquid mercury ampules. Visual observations were also made for other mercury-containing equipment.

EA also conducted a visual inspection to identify the type and location of environmentally regulated materials. The inventory of identified materials included the type of material identified (determined by container labeling), the approximate quantity of the substance (based on container size), and the location and condition of the containers.

3.0 RESULTS

Asbestos-Containing Materials Survey

Laboratory Building

AVENV collected 61 bulk samples from 30 homogeneous areas of suspect ACM identified at the Laboratory Building. Seven of the homogeneous areas of suspect ACM contained regulated levels of asbestos. Two of the homogeneous areas are assumed to contain regulated levels of asbestos. Seven of the homogeneous areas of ACM were non-friable and in good condition at the time of the inspection, and two of the homogeneous areas of ACM were friable and in good condition at the time of the inspection.

Table 1 below contains a summary of confirmed and assumed ACM. Physical sample locations, analytical certificates of analysis, Suspect ACM Homogenous Area Summary, and chain-of-custody forms are included in the report from AVENV found in Appendix A.

TABLE 1: LABORATORY-CONFIRMED ACM AT THE OBSERVATION LABORATORY

Homogenous Area	Material Description	Material Location	Quantity	Condition	Friability	Result
CK03	Gray caulking associated with wood frame of door	Exterior of building	1 SF	Good	Non-friable	3% Chrysotile
FDM01	Fire door material	First floor	3 EA	Good	Non-friable	Assumed
FTM02	9-in. x 9-in. floor tile with black mastic, 3 colors-rose, gray, and green	Second floor	2,386 SF	Good	Non-friable	2% Chrysotile
FTM03	9-in. x 9-in. floor tile with black mastic	Second floor room 2208; kitchen	636 SF	Good	Non-friable	2% Chrysotile
OT01	Green chalkboards	First floor, second floor hall, third floor office	3 EA	Good	Non-friable	Assumed
RF01	Roof flashing black and silver	Exterior roof perimeter and on roof access hatch	1,000 SF	Good	Non-friable	5% & 10% Chrysotile
RT01	Tar and gravel roofing material	Exterior roof of building	3,586 SF	Good	Non-friable	5% Chrysotile
TS01	Skim texture-trowel pattern on drywall, painted	Second floor ceilings – room 2202 and adjoining hallway	1,050 SF	Good	Friable	3% Chrysotile
TS02	Skim texture-heavy trowel pattern on drywall, painted	Second floor ceilings – room 2101	1,000 SF	Good	Friable	3% Chrysotile

LF – Linear Feet
SF – Square Feet
EA – Each

Observation Cottage

AVENV collected 13 bulk samples from five homogeneous areas of suspect ACM identified at the Cottage. One of the homogeneous areas of suspect ACM contained regulated levels of asbestos. This homogeneous area of ACM was friable and in good condition at the time of the inspection.

Table 2 below contains a summary of confirmed ACM. Physical sample locations, analytical certificates of analysis, Suspect ACM Homogenous Area Summary, and chain-of-custody forms are included in the report from AVENV found in Appendix A

TABLE 2: LABORATORY-CONFIRMED ACM AT THE COTTAGE

Homogenous Area	Material Description	Material Location	Quantity	Condition	Friability	Result
TS03	Heavy orange peel texture on drywall	Interior walls and ceilings	1,000 SF	Good	Friable	2% Chrysotile

SF – Square Feet

Observation Platform Shed

EA collected eight bulk samples from six homogeneous areas of suspect ACM identified at the Observation Platform Shed. None of the homogeneous areas of suspect ACM contained regulated levels of asbestos. However, two homogeneous areas were assumed to contain asbestos. These materials were non-friable and in good condition at the time of the inspection.

Table 3 below contains a summary of ACM at the Observation Platform Shed. Physical sample locations, analytical certificates of analysis, Suspect ACM Homogenous Area Summary, and chain-of-custody forms are included in the report from AVENV found in Appendix A

TABLE 3: LABORATORY-CONFIRMED ACM AT OBSERVATION PLATFORM SHED

Homogenous Area	Material Description	Material Location	Quantity	Condition	Friability	Result
CB01	Cement Board - Transite Panels	Interior, behind wall mounted electric heaters	4 EA	Good	Non-friable	Assumed
RSG02	Green and Black, Asphalt Composition Shingle	Exterior, roof of storage shed	5 SF	Good	Non-friable	Assumed

EA – Each
SF – Square Feet

Lead-Based Paint Inspection

Laboratory Building

XRF results indicate the presence of one component from which one lead-based paint coating was identified. A component is defined as a unique combination of building element, substrate, and color. The concentration of the LBP associated with that surface was 1.3 mg/cm^2. A total of 226 surfaces were identified as LCP with lead concentrations ranging from 0.01 to 0.40 mg/cm^2. Appendix A contains the report from AVENV that includes the comprehensive XRF test results. Room locations referenced and physical sample locations are also provided in Appendix A. Table 4 below presents a listing of building components and associated paint coatings identified as LBP.

TABLE 4: PAINTED SURFACES IDENTIFIED AS LBP AT THE OBSERVATION LABORATORY

Room	Floor	Building Component	Substrate	Color	Side	Condition	Result (mg/cm^2)
Exterior	First	Ceiling	Wood	Grey	C	Poor	1.3

mg/cm^2 – milligram per square centimeter
Intact – No peeling paint on the component, entire surface is intact
Fair – Small amount of surface damage, although still intact.
Poor – Surface is not intact, greater than 2 square feet peeling or damaged.

Cottage

XRF results indicate the presence of one component from which four lead-based paint coatings were identified. A component is defined as a unique combination of building element, substrate, and color. The concentrations of the LBP associated with those surfaces were 3.2 mg/cm^2 to 4.5 mg/cm^2. A total of 20 surfaces were also identified as LCP with lead concentrations ranging from 0.01 to 0.70 mg/cm^2. Appendix A contains the report from AVENV that includes the comprehensive XRF test results. Room locations referenced and physical sample locations are also provided in Appendix A. Table 5 below presents a listing of building components and associated paint coatings identified as LBP.

TABLE 5: PAINTED SURFACES IDENTIFIED AS LBP AT THE COTTAGE

Room	Floor	Building Component	Substrate	Color	Side	Condition	Result (mg/cm^2)
Exterior	First	Wall	Wood	Grey	A	Intact	4.4
Exterior	First	Wall	Wood	Grey	B	Intact	3.2
Exterior	First	Wall	Wood	Grey	C	Intact	3.4
Exterior	First	Wall	Wood	Grey	D	Intact	4.5

mg/cm^2 – milligram per square centimeter
Intact – No peeling paint on the component, entire surface is intact
Fair – Small amount of surface damage, although still intact.
Poor – Surface is not intact, great than 2 square feet peeling or damaged.

Observatory Platform Shed

XRF results indicated the presence of seven components from which 12 lead-based paint coatings were identified. A component is defined as a unique combination of building element, substrate, and color. The concentrations of the LBP associated with those surfaces were 1.1 mg/cm^2 to 1.7 mg/cm^2. A total of 25 surfaces were also identified as LCP with lead concentrations ranging from 0.01 to 0.90 mg/cm^2. Appendix A contains the report from AVENV that includes the comprehensive XRF test results. Room locations referenced and physical sample locations are also provided in Appendix A. Table 6 below presents a listing of building components and associated paint coatings identified as LBP.

TABLE 6: PAINTED SURFACES IDENTIFIED AS LBP AT THE OBSERVATORY PLATFORM SHED

Room	Floor	Building Component	Substrate	Color	Side	Condition	Result (mg/cm^2)
Exterior	First	Wall	Metal	Green	D	Fair	1.7
Exterior	First	Window Sash	Metal	Green	C	Fair	1.5
Exterior	First	Door	Metal	Green	A	Fair	1.4
Exterior	First	Window Sash	Metal	Green	A	Fair	1.4
Exterior	First	Wall	Metal	Green	A	Fair	1.3
Exterior	First	Wall	Metal	Green	B	Fair	1.2
Room 01	First	Floor	Wood	Grey	D	Intact	1.5
Room 02	First	Floor	Wood	Grey	A	Intact	1.1
Shed Exterior	First	Door	Wood	Green	C	Poor	1.3
Outhouse Exterior	First	Soffit	Wood	Green	A	Poor	1.3
Outhouse Exterior	First	Wall	Wood	Green	D	Poor	1.2
Outhouse Exterior	First	Soffit	Wood	Green	D	Poor	1.4

mg/cm^2 – milligram per square centimeter
Intact – No peeling paint on the component, entire surface is intact
Fair – Small amount of surface damage, although still intact.
Poor – Surface is not intact, great than 2 square feet peeling or damaged.

Lead-Based Paint Risk Assessment

Cottage

Visual inspection did not indicate the presence of damaged (cracking, peeling, or chipping) and/or deteriorated (chalking) paint. However, LBP inspection determined four testing combinations on the exterior did contain LBP.

Seven lead dust samples were collected from interior areas of the Cottage, including a blank sample for quality control. None of the dust wipe samples were above the HUD lead dust clearance level (40 µg/sq. ft. for floors, 250 µg/sq. ft. for windowsills, and 400 µg/sq. ft. for window troughs). Dust wipe results are listed below.

- Room 01 Living room, Floor – 13 µg/sq. ft.

- Room 01 Living Room, Windowsill – 13 µg/sq. ft.
- Room 02 Bedroom, Floor – 12 µg/sq. ft.
- Room 02 Bedroom, Windowsill – <15 µg/sq. ft.
- Room 03 Bedroom, Floor – 11 µg/sq. ft.
- Room 03 Bedroom, Windowsill – <15 µg/sq. ft.
- Blank – <10 µg/sq. ft.

Analytical certificates of analysis and chain-of-custody forms are included in AVENV Report found in Appendix A.

Polychlorinated Biphenyls

Laboratory Building

Approximately 118 fluorescent light ballasts are assumed to contain PCBs, as indicated by age and lack of "No PCBs" labeling. EA did not observe any transformers or other building equipment/components labelled or assumed to contain PCBs during the inspection. Other ballasts contained in fluorescent light fixtures were labelled "No PCBs".

Cottage

EA did not identify light ballasts or other building equipment/components labelled or assumed to contain PCBs during the inspection of the Cottage.

Observation Platform Shed

Approximately nine fluorescent light ballasts are assumed to contain PCBs, as indicated by age and lack of "No PCBs" labeling. EA did not observe any transformers or other building equipment/components labelled or assumed to contain PCBs during the inspection. Other ballasts contained in fluorescent light fixtures were labelled "No PCBs".

Mercury-Containing Sources and Other Environmentally Regulated Materials

Laboratory Building

Approximately 424 4-ft. FLTs, nine 2-ft. FLTs, four 18-in. FLTs, four 14-in. FLTs, five 12-in. circle FLTs, four 6-in. circle FLTs, six mercury ampules located in a thermostats, 30 smoke detectors, six "EXIT" signs, 12 ABC-type fire extinguishers, two 8-BC-type fire extinguishers, one Oasis water cooler, one Kelvinator refrigerator, five carrier condensers, two through-wall air-conditioning units, one approximately 1,000-gal. propane tank, and four locations with the following;

- Third Floor Cleaning Closet – one 1.66-L. ammonia cleaner, one 1-gal. paint, one 1.25-qt. Liquid Plumber, one 8-oz. Loctite rust resolver, and one 21-oz. scouring powder.
- Second Floor Cabinet – three 1-qt. Windex, two 1.3-qt. Ultra Palmolive Original, one 1-pt. Lime A-way, one 2-pt. Lime A-way, two 24-floz. Simple Green, one 40-oz. window cleaner, one 2-qt. all-purpose cleaner with ammonia, one 1-qt. 409 all-purpose cleaner, one 12-fl. oz. Goo-Gone Spray Gel, one 1-qt. Quik Fill 910, one 1-gal. Quik Fill 910, one 8-oz. Energine Spot Remover, one 8-oz. Silvo Metal Polish, one 8.5-fl. oz. Kleen Logik Freezer Frost Remover, one 1-gal. pink lotion hand cleaner silk, one 1-gal. home-brew widow cleaner, two 18-oz. Mipty Dust Mop

Treatment, one 8-oz. Ortho Malathion 50 Insect Spray, one 8-oz. polyurethane polish, one 16-oz. Scott's Liquid Gold, one 1-pt. Black Flag Roach and Ant Killer, one 19-oz. Terro Ant Killer, one 15-oz Raid Wasp and Hornet Killer, two 8-oz. WD-40.

- Second Floor Kitchen – one 1-qt. Windex, one 1.3-qt. Palmolive Ultra Original, two 10-oz cans of scouring powder, and one 1-qt. Lux dishwashing liquid.
- First Floor Flame Cabinet – one 5-gal. can of ethyl alcohol-200 proof dehydrated alcohol, one 4-L jug of methyl alcohol anhydrous, one approximate 2-L ethanol, one 20-L can of methanol, one approximate 2-L isopropyl, one jug of used oil, one propane torch, one jug un-labeled substance, one 1-gal jug of thread cutting oil, one 1-gal can of multi-purpose lubricant, one 12-oz. can of fuel system antifreeze.

Cottage

Approximately 12 4-ft. FLTs, one smoke detector, and two 1-gal. cans of latex paint were identified throughout the cottage.

Observation Platform Shed

Approximately 18 4-ft. FLTs, two smoke detectors, one ABC-type fire extinguisher, one 1-pt. Minwax wood hardener, four 1-pt. DAP wallboard joint compound, one leaking 6-cell battery, 16 1-gal. paint cans, one 1-gal. assumed paint thinner, and two 10.1-oz. silicone sealant were identified throughout the building. EA also identified four compressed gas cylinders labeled as containing carbon dioxide (CO2), which are likely empty, located in a closet attached to the building's east exterior wall.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Asbestos Containing Materials Survey

Laboratory Building

Seven of the homogeneous areas of asbestos-containing materials identified at the building (presented in Table 1 in Section 3.0 Results) were observed to be non-friable and in good condition. Two homogeneous areas of asbestos-containing materials identified at the building were observed to be friable and in good condition. These materials should be removed if the building is to be demolished or if these materials are to be disturbed during building renovation activities. Proper federal and state regulations governing pre-alteration ACM removal must be followed. Removal of ACM must be conducted by properly licensed and accredited individuals working for a licensed asbestos abatement contractor.

Should any new materials be found during renovation or demolition they should be assumed to contain asbestos until sampled and proven to be non-asbestos.

Cottage

Asbestos-containing materials identified at the building (presented in Table 2 in Section 3.0 Results) were observed to be friable and in good condition. These materials should be removed if the building is to be demolished or if these materials are to be disturbed during building renovation activities. Proper federal and state regulations governing pre-alteration ACM removal must be followed. Removal of ACM must be conducted by properly licensed and accredited individuals working for a licensed asbestos abatement contractor.

Should any new materials be found during renovation or demolition they should be assumed to contain asbestos until sampled and proven to be non-asbestos.

Observation Platform Shed

Asbestos-containing materials identified at the building (presented in Table 3 in Section 3.0 Results) were observed to be non-friable and in good condition. These materials should be removed if the building is to be demolished or if these materials are to be disturbed during building renovation activities. Proper federal and state regulations governing pre-alteration ACM removal must be followed. Removal of ACM must be conducted by properly licensed and accredited individuals working for a licensed asbestos abatement contractor.

Should any new materials be found during renovation or demolition they should be assumed to contain asbestos until sampled and proven to be non-asbestos.

Lead Based Paint Inspection

Laboratory Building

LBP was identified on one building component from which one lead-based paint coating was identified, as presented in Table 4 Section 3.0 Results. A total of 226 surfaces were identified as LCP. Although LBP and LCP are not required to be removed prior to building alteration, contractors working on

LBP/LCP-coated components, and/or in areas containing LBP/LCP, should be notified of its presence and must adhere to the requirements of OSHA 29 CFR1926.62. Lead hazards can be created if the paint is turned into dust by abrasion, scraping, sanding, or if fumes produced by welding or cutting are generated.

Untested building components or structures should be considered to contain regulated levels of lead until subsequent testing shows otherwise. However, the same positive test combinations of substrate, paint color, and component at one location should be assumed to contain lead at locations not specifically sampled.

Cottage

LBP was identified on one building component from which four lead-based paint coatings were identified, as presented in Table 5 Section 3.0 Results. A total of 20 surfaces were identified as LCP. Although LBP and LCP are not required to be removed prior to building alteration, contractors working on LBP/LCP-coated components and/or in areas containing LBP/LCP should be notified of its presence and must adhere to the requirements of OSHA 29 CFR1926.62. Lead hazards can be created if the paint is turned into dust by abrasion, scraping, sanding, or if fumes produced by welding or cutting are generated.

Untested building components or structures should be considered to contain regulated levels of lead until subsequent testing shows otherwise. However, the same positive test combinations of substrate, paint color, and component at one location should be assumed to contain lead at locations not specifically sampled.

Observation Platform Shed

LBP was identified on seven building components from which twelve lead-based paint coatings were identified, as presented in Table 6 Section 3.0 Results. A total of 25 surfaces were identified as LCP. Although LBP and LCP are not required to be removed prior to building alteration, contractors working on LBP/LCP-coated components and/or in areas containing LBP/LCP should be notified of its presence and must adhere to the requirements of OSHA 29 CFR1926.62. Lead hazards can be created if the paint is turned into dust by abrasion, scraping, sanding, or if fumes produced by welding or cutting are generated.

Untested building components or structures should be considered to contain regulated levels of lead until subsequent testing shows otherwise. However, the same positive test combinations of substrate, paint color, and component at one location should be assumed to contain lead at locations not specifically sampled.

Lead Based Paint Risk Assessment

Cottage

No damaged and/or deteriorated LBP was identified at the Cottage at the time of the inspection. LCP identified was in intact condition at the time of the inspection. The paint present at the building does not present a lead hazard.

Lead content of each of the dust wipe samples collected at the Cottage were within the acceptable HUD limits for the sampled building surface. As such, dust in the building does not present a lead hazard.

Although no damaged or deteriorated LBP is present and LCP was in fair condition, contractors working on LBP/LCP-coated components and/or in areas containing LBP/LCP should be notified of its presence and must adhere to the requirements of OSHA 29 CFR 1926.62 since lead hazards can be created if the paint is turned into dust by abrasion, scraping, sanding, or if fumes produced by welding or cutting are generated.

Polychlorinated Biphenyls

Laboratory Building

EA identified 118 fluorescent light ballasts without "No PCBs" labeling. Each of these ballasts is assumed to contain PCBs. These ballasts, along with any other ballasts without a "No PCBs" label, ballasts without labels, or ballasts with illegible labels that may be identified during building alteration, should be handled and disposed as indicated in 40 CFR 761.50(b)(2)(ii) and 40 CFR 761.62(a)-(c).

Cottage

EA did not identify any light ballasts assumed to contain PCBs during the inspection of the Cottage. Any ballasts without a "No PCBs" label, ballasts without labels, or ballasts with illegible labels that may be identified during building alteration, should be handled and disposed as indicated in 40 CFR 761.50(b)(2)(ii) and 40 CFR 761.62(a)-(c).

Observation Platform Shed

EA identified nine fluorescent light ballasts without "No PCBs" labeling. Each of these ballasts is assumed to contain PCBs. These ballasts, along with any other ballasts without a "No PCBs" label, ballasts without labels, or ballasts with illegible labels that may be identified during building alteration, should be handled and disposed as indicated in 40 CFR 761.50(b)(2)(ii) and 40 CFR 761.62(a)-(c).

Mercury Containing Sources and Other Environmentally Regulated Materials

Laboratory Building

EA recommends that the approximately 424 4-ft. FLTs, nine 2-ft. FLTs, four 18-in. FLTs, four 14-in. FLTs, five 12-in. circle FLTs, four 6-in circle FLTs, six mercury ampules located in thermostats be assumed to contain mercury, and that they be removed and recycled should the building be demolished or renovation work impacts these materials. Specialized waste training and licensing is not required to relocate the mercury sources. Packaging, transport, and disposal of the mercury-containing sources should be conducted in accordance with 40 CFR part 273 standards for universal waste management provided that quantities (1g mercury per package for light tubes) for management are not exceeded. The average quantity of mercury in a 4-ft. fluorescent tube is 8 mg. Should quantities for disposal exceed these limits, EPA and Department of Transportation (DOT) requirements for packaging, labelling, and transport must be followed. Care should be taken not to break the mercury-containing items, as this could release mercury to the environment and potentially expose building occupants to mercury vapor.
EA also recommends that the 30 smoke detectors, six "EXIT" signs, 12 ABC-type fire extinguishers, two 8-BC-type fire extinguishers, one Oasis water cooler, one Kelvinator refrigerator, five carrier condensers, two through-wall AC units, one approximately 1,000-gal. propane tank, and chemicals stored in the four

storage locations described in Section 3.0 Results be removed and properly disposed of should the building be demolished or renovation work impact these materials.

If any suspect mercury-containing sources or other environmentally regulated materials are found during renovation or demolition, they should be handled by appropriately licensed contractors in accordance with prevailing regulatory requirements. Waste that contains greater than 0.2 mg/L mercury when subjected to TCLP testing is considered hazardous waste.

Cottage

EA recommends that the approximately 12 4-ft. FLTs be assumed to contain mercury, and that they be removed and disposed of if they are beyond their useful life, will be disturbed should the building be demolished, or renovation work impacts these materials. Specialized waste training and licensing is not required to relocate the mercury sources. Packaging, transport, and disposal of the mercury-containing sources should be conducted in accordance with 40 CFR part 273 standards for universal waste management provided that quantities (1g mercury per package for light tubes) for management are not exceeded. The average quantity of mercury in a 4-ft. fluorescent tube is 8 mg. Should quantities for disposal exceed these limits, EPA and Department of Transportation (DOT) requirements for packaging, labelling, and transport must be followed. Care should be taken not to break the mercury-containing items, as this could release mercury to the environment and potentially expose building occupants to mercury vapor.

EA also recommends that the one smoke detector and two paint cans be removed before demolition or renovation begins.

If any suspect mercury-containing sources or other environmentally regulated materials are found during renovation or demolition, they should be handled by appropriately licensed contractors in accordance with prevailing regulatory requirements. Waste that contains greater than 0.2 mg/L mercury when subjected to TCLP testing is considered hazardous waste.

Observation Platform Shed

EA recommends that the approximately 18 4-ft. FLTs be assumed to contain mercury, and that they be removed and disposed of if they are beyond their useful life, will be disturbed should the building be demolished, or renovation work impacts these materials. Specialized waste training and licensing is not required to relocate the mercury sources. Packaging, transport, and disposal of the mercury-containing sources should be conducted in accordance with 40 CFR part 273 standards for universal waste management provided that quantities (1g mercury per package for light tubes) for management are not exceeded. The average quantity of mercury in a 4-ft. fluorescent tube is 8 mg. Should quantities for disposal exceed these limits, EPA and Department of Transportation (DOT) requirements for packaging, labelling, and transport must be followed. Care should be taken not to break the mercury-containing items, as this could release mercury to the environment and potentially expose building occupants to mercury vapor.

EA also recommends that two smoke detectors, one ABC-type fire extinguisher, one 1-pt. Minwax wood hardener, four 1-pt. DAP wallboard joint compound, one leaking 6-cell battery, 16 1-gal. paint cans, one 1-gal. assumed paint thinner, and two 10.1-oz. silicone sealant be removed before demolition or renovation begins.

If any suspect mercury-containing sources or other environmentally regulated materials are found during renovation or demolition, they should be handled by appropriately licensed contractors in accordance with prevailing regulatory requirements. Waste that contains greater than 0.2 mg/L mercury when subjected to TCLP testing is considered hazardous waste.

5.0 DISCLAIMER

EA's findings are representative of existing, observable conditions at the time of services described above. EA does not warrant that there is no ACM, LBP/LCP, PCB, mercury, or other hazardous substances in areas not inspected as part of this scope of work, nor does EA accept any liability if such is found at some future time or could have been found if additional analyses or studies were conducted.

EA does not assume responsibility for other environmental issues that may be associated with the subject facility. In view of the rapidly changing status of environmental laws, regulations, and guidelines, EA cannot be responsible for changes in laws, regulations, or guidelines that occur after the study has been completed and which may affect the facility.

This report was prepared for the National Oceanic Atmospheric Administration by EA Engineering, Science, and Technology, Inc. PBC. Any transfer of information contained in this report can be conducted only if written consent is provided by NOAA.

APPENDIX A

AVENV ACM, LBP, AND LEAD RISK ASSESSMENT REPORT

American Veteran Environmental

ASBESTOS & LEAD-BASED PAINT

Risk Assessment Inspection Report
National Oceanic & Atmospheric Administration
Fritz Peak Observatory (NOAA)
19126 Co State Highway 119
Rollinsville, CO

Inspection Date: 9/23/19 - 9/24/19
Report Date: 10/4/19-10/8/19

Prepared for:
EA Engineering

Prepared by:
Paula S. Bowers
Asbestos Building Inspector
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CONTENTS

APPENDICES

SECTION 1
INTRODUCTION

American Veteran Environmental, LLC (AVENV) was requested by **EA Engineering** to perform an Asbestos & Lead-based Paint Risk Assessment and inspection of the Fritz Peak Observatory, 3 structures belonging to the National Oceanic & Atmospheric Administration (NOAA) and located at 19126 CO State Highway 119 in Rollinsville, CO.

The Environmental Protection Agency (EPA) and Colorado Department of Public Health and Environment (CDPHE) Air Quality Control Commission requires that suspect asbestos-containing materials (ACM) be properly sampled and analyzed prior to any renovation or demolition activities. The NESHAP (National Emission Standard for Hazardous Air Pollutants) rule requires that suspect regulated asbestos-containing building materials be identified, classified and quantified prior to renovation or demolition activities. The CDPHE is responsible for administering the U.S. EPA NESHAP program for Colorado. This asbestos inspection was conducted by Colorado State Certified Asbestos Building Inspectors Sam Rolf, Certificate #921 and Paula Bowers #11051 on September 23 and 24, 2019.

1.1. SITE DESCRIPTION

The Fritz Peak Observatory consists of three (3) government buildings: T***he Fritz Peak Laboratory; Cottage; and the Observation Platform Shed (referred to in this report as the Observatory Shed)***. All three buildings are currently unoccupied. The estimated construction date for both the Fritz Peak Laboratory and the Cottage are believed to be somewhere between 1930-1940. The construction date of the Observatory Shed is unknow but assumed to be sometime after (25 years) the Laboratory Building and Cottage.

The property is located within an undeveloped mountain area of Rollinsville, Colorado bordering Colorado State Highway 119. The Cottage is located approximately 100 feet to the northeast of the Laboratory Building and the Observatory Shed is located about a tenth of a mile above the Cottage and Laboratory Building. Access to the Observatory shed is by way of steep slopes and rocky terrain.

FRITZ PEAK LABORATORY BUILDING

It is a 3-story masonry block and concrete building with yellow brick exterior with a tar and gravel roofing system and approximately 10,758 square feet. Interior walls on all three floors are a combination of concrete, wood paneling and painted drywall. The majority of the walls on the 3rd floor consist of drywall finished with wallpaper of various patterns and colors. Ceilings throughout are painted and or textured drywall. Floors are concrete and finished with various 9x9 and 12x12 floor tiles; with an area on the third floor consisting of sheet vinyl flooring.

The mechanical room / boiler room is located on the first floor. According to information provided to AVENV, the boiler (fueled by propane) was replaced approximately 20 years ago. Heating consists of baseboard heating and all visible pipes observed throughout all floors are insulated with fiberglass.

COTTAGE

The cottage is wood frame and brick construction, approximately 760 square feet with asphalt composite roofing shingles. Interior walls and ceilings are painted and textured drywall. Flooring consists of 12x12 floor tile. Heating is generated through a baseboard electrical heating system.

OBSERVATORY SHED

This structure is a metal frame with a seamed metal roof, and approximately 425 square feet. Interior consists of 2 rooms: the main room/work room; and a bunk room. Walls are finished with painted drywall; ceilings and floors are painted wood. Heating is provided by small wall mounted electrical heaters of which each have an asbestos panel behind them. There is a small free standing, wood frame storage shed located on the front /south side of the building. The remaining roofing material of the storage shed consists of green asphalt composition shingles in poor condition. No other suspect materials were observed.

SECTION 2
ASBESTOS INSPECTION

This asbestos inspection was conducted in general accordance to the *United States EPA procedures published in 40 Code of Federal Regulations (CFR) Part 763, Subpart E – Asbestos-Containing Materials in Schools and Colorado Regulation No. 8 Part B - Asbestos.* These inspection protocols specify requirements for the inspector (Section 763.85), laboratory (Section 763.87), and number of samples to be collected during an inspection (Section 763.86).

2.1. VISUAL ASSESSMENT

Inspection activities began with a visual observation of the entire structure to identify homogenous areas of suspect asbestos containing materials (ACM). A homogenous area consists of building materials, which appear similar throughout in terms of color, texture and date of application. Building materials which were not identified as concrete, glass, wood, masonry, metal or rubber are considered suspect ACM.

A physical assessment of homogenous areas of observed suspect ACM was conducted to assess the friability and condition of the materials. The EPA defines a friable material as a material, which can be crumbled, pulverized or reduced to powder by hand pressure, when dry. Friability was assessed by physically touching suspect materials. Based on the visual assessment, and the demolition plans for the building, bulk samples of suspect ACM were collected in general conformance with Asbestos Hazard Emergency Response Act (AHERA) 40 CFR763.86 protocols and as outlined in Colorado Department of Public Health and Environment (CDPHE) Regulation No. 8 Part B- Asbestos.

Samples of homogenous suspect building materials were collected in a randomly distributed manner representative of each homogenous area throughout the building. Samples were placed in sealable containers and labeled with unique sample numbers using an indelible marker.

In some circumstances a material that seems to be homogenous may yield conflicting laboratory results, in which case a return trip to identify and verify actual homogenous sampling areas may be necessary. The EPA and Colorado Department of Public Health and Environment require that a specific number of samples be collected for each homogenous area as follows:

Thermal Systems Insulation		Surfacing Materials	
Up to 1,000 Sq. Ft.	3 Samples	Up to 1,000 Sq. Ft.	3 Samples
1,000 – 5,000 Sq. Ft.	5 Samples	1,000 – 5,000 Sq. Ft.	5 Samples
More Than 5,000 Sq. Ft.	7 Samples	More Than 5,000 Sq. Ft.	7 Samples
Miscellaneous Materials: minimum of 2 each material, inspector's discretion			

2.2 REGULATORY REVIEW

The EPA and The State of Colorado (CDPHE) regulate all materials containing **greater than 1% asbestos.** OSHA regulates materials containing any quantity of asbestos, even trace amounts. Both the EPA and CDPHE requires that an asbestos inspection be conducted by an AHERA accredited Asbestos Building Inspector certified by the State of Colorado prior to renovation or demolition regardless of the date of construction. If an accredited architect or engineer responsible for the construction of the subject building provides a written statement that asbestos containing materials were not used during construction an asbestos inspection is not required.

The EPA National Emissions Standard for Hazardous Air Pollutants (NESHAP) regulation requires that ACMs be identified prior to renovation and demolition activities. NESHAP requires that no friable ACMs be disturbed during these construction activities: *removal, encapsulation, or enclosure.* The asbestos NESHAP rule (40 CFR Part 61, Subpart M) regulates asbestos fiber emissions and asbestos waste disposal practices. It also requires the identification and classification of existing building materials prior to renovation and demolition activities. Under NESHAP, asbestos containing building materials are classified as either ***Friable; Category I non-friable; or Category II non-friable ACM***.

- **Friable asbestos-containing materials** are any material containing greater than one percent asbestos and that when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Some friable materials, such as surfacing material; plaster; drywall, etc. may be in a *non-friable* state but have the potential to become friable under mechanical means such as renovation and or demolition.

- **Category I non-friable ACM** includes gaskets, packing's, resilient floor coverings, and asphalt roofing products containing greater than one percent asbestos.

- **Category II non-friable ACM** are any materials other than Category I materials that contain greater than one percent asbestos.

TRIGGER LEVELS

Trigger levels pertains to the amount of asbestos or suspect asbestos containing material that has either been disturbed or will be disturbed through renovation or demolition activities. Trigger levels are categorized by the following two (2) building types: Single Family Residential Dwelling (SFRD) and Public or Commercial Buildings. Trigger levels are what regulates an asbestos action such as an inspection; abatement (removal, encapsulation; enclosure; repair); a spill response action; and permitting.

- **Single Family Residential Dwelling** - asbestos trigger level is 32 square feet, 50 linear feet on pipes, **or the equivalence of one 55-gallon drum**.

- **Public or Commercial Bldg**. - asbestos trigger level is 160 square feet, 260 linear feet on pipes, or **the equivalence of one 55- gallon drum.**

Regulation No. 8 Part B-Asbestos requires an asbestos inspection following the AHERA protocol be conducted prior to renovation and or demolition if the activities could disturb greater than the trigger levels of any asbestos or suspect asbestos containing material.

OSHA REGULATIONS FOR ASBESTOS

The October 11, 1994, revision to the OSHA Standard requires that suspect ACM in buildings built prior to 1981 be assumed to be asbestos or an inspection be conducted by an EPA accredited asbestos building inspector.

The Occupational Safety and Health Administration (OSHA) Asbestos Standard for the Construction Industry (29 CFR 1926.1101) regulates workplace exposure to asbestos. The OSHA standard requires that employee exposure to airborne asbestos fibers be maintained below the Permissible Exposure Limit (PEL) of 0.1 fibers per cubic centimeter (0.1f/cc). Personal air monitoring may be required if the workers are expected to be exposed to asbestos in excess concentrations of the PEL. **OSHA regulations also require adequate training for all persons handling asbestos containing materials**.

The OSHA standard classifies construction and maintenance activities which could disturb ACM, and specifies training, work practices and precautions which employers must follow when engaging in each class of regulated work. States which administer their own Federally approved state OSHA programs, may require other precautions.

EPA and CDPHE policy for the handling of joint compound that has been identified as ACM, when associated with drywall that is not asbestos, results in a mixed classification which requires an evaluation of work methods to determine if the impact will be direct or indirect to determine which classification applies. The following regulatory rationale is used to determine the final classification and when the composite result may be used, and when only the layer result can be used:

1. EPA and CDPHE allows a composite sample result (drywall and joint compound together) to be used when renovation or demolition operations will only ***indirectly*** impact the joint compound, such as removal of the entire wall system (drywall and joint compound removed together), to determine if the material is ACM.

This option does not prevent classifying the material as ACM based solely on the layered result as described below.

2. When the renovation or demolition operations will ***directly*** impact the joint compound, such as sanding or scraping the joint compound, then only the layer result for the joint compound may be used to determine if the material is ACM.

OSHA does not recognize the EPA and CDPHE composite analysis policy, and therefore asbestos containing joint compound is considered ACM regardless if the activity is direct or indirect impact and is subject to applicable OSHA asbestos regulations. Removal of the drywall and joint compound together under normal demolition methods is not considered direct impact to the joint compound and is not subject to EPA and CDPHE regulations when the composite result is less than 1% asbestos.

2.3. SUSPECT ASBESTOS-CONTAINING MATERIALS

Refer to the Homogeneous Areas table in Appendix A for a complete list of suspect materials observed during this inspection.

SUSPECT SAMPLES COLLECTED

Bulk samples were collected by AVENV and submitted under chain of custody procedures to an accredited laboratory for analysis by Polarized Light Microscopy (PLM) with dispersion staining techniques per EPA methodology (40 CFR 763, Subpart F). Microscopic visual estimation was used in obtaining the percentage of asbestos in bulk samples. *Refer to Appendix B for information pertaining to the suspect materials sampled and locations as a part of this inspection.*

2.4. ASBESTOS CONTAINING MATERIALS (ACM)

Asbestos was identified in concentrations greater than one percent (>1%) in some of the materials sampled. *Refer to Appendix A Homogeneous Materials Table for materials, quantity and locations identified as a part of this inspection.*

2.5. TRACE ASBESTOS MATERIALS

Non-Friable materials containing 1% or less asbestos also referred to as "trace asbestos" are not subject to EPA and CDPHE requirements. However, CDPHE requires ***Point Count analysis*** for materials reporting trace-1% asbestos.

POINT COUNT

Point counting is a more detailed means of analysis than standard PLM. Federal and State agencies define ACM as materials containing greater than one percent (1%) asbestos. The NESHAP regulation requires that if standard PLM analysis determines that a sample contains less than ten percent (10%) asbestos, the material must be considered asbestos containing or be point counted. Even if the sample is less than one percent (1%) by standard PLM, the material must be assumed to be ACM or point counted. If the point counting analysis is different than the PLM analysis, the point counting result takes precedence.

If standard PLM analysis determines that a material has no asbestos or that the material contains greater than 10% asbestos, point counting is not necessary. Materials containing 1% or less (trace) asbestos are subject to OSHA regulations. **None of the materials sampled were point counted.**

COMPOSITE ANALYSIS

In instances where joint compound on drywall has been sampled and analyzed and determined by PLM analysis to be asbestos containing (greater than 1%), CDPHE allows for the drywall and joint compound to undergo a second method of analysis. This is recognized as "**composite"** and is used to determine the actual asbestos percentage of the compound on the entire drywall sample. If the compound is found to be less than 1% asbestos of the drywall, then the material is not classified as an asbestos containing material and therefore can be disposed of as general construction debris.

- **Composite analysis was performed on drywall samples having trace amounts of asbestos with overall resulting asbestos concentrations identified as less than one percent (<1%).**

2.5 REGULATED ASBESTOS-CONTAINING MATERIALS

Regulated asbestos-containing materials (RACMs) containing greater than 1% asbestos are required by EPA and Colorado Department of Public Health and Environment (CDPHE) regulations to be removed prior to renovation and/or demolition activities if such activities will impact these materials. RACMs are either friable materials; or non-friable materials likely to be rendered friable during the demolition and or renovation processes. Friable ACM; Category I and Category II non-friable ACM in poor condition and which has become friable or will be subject to drilling, sanding, grinding, cutting, burning, or abrading and which could be crushed or pulverized during anticipated renovation or demolition activities are considered regulated ACM (RACM) and must be removed prior to such activities. *Refer to Appendix A. Homogeneous Materials Table for asbestos containing materials, quantity and locations identified as a part of this inspection.*

SPECIAL NOTE REGARDING ROOFING & OTHER NON-FRIABLE MATERIALS

Pursuant to the Colorado Regulation 8, Control of Hazardous Air Pollutants, Section III. Part 3 Paragraph C (1) Roofing Materials: "Tar impregnated roofing felts, asphalt tiles, asphalts and mastics that are non-friable and will remain non-friable during abatement are exempt from this regulation."

The Colorado Department of Public Health and Environment, Air Pollution Control Division, allows for these materials to remain in place for demolition. However, the demolition of the building cannot include explosives; sawing (rotary or reciprocating); grinding; abrading; blasting or intentional burning that will render the materials friable. Recycling of these materials is NOT permitted.

If the non-friable ACM is to be disposed of then it must be transported to a landfill that will accept non-friable ACM. The landfill must be contacted prior to disposal to ensure that the non-friable ACM is transported and packaged in accordance with the landfill's specific policy or regulation.
If the materials have been rendered friable, the materials must be disposed of as friable asbestos-containing waste materials pursuant to subsection III.R. (Waste Handling).

SECTION 3

CONCLUSIONS AND RECOMMENDATIONS

American Veteran Environmental, LLC makes the following conclusions and recommendations based on the asbestos inspection activities and laboratory analysis of bulk samples collected:

- Asbestos containing materials were identified in bulk samples collected in all three (3) buildings. *Refer to Appendix A Homogeneous Materials Table for materials, quantity and locations identified as a part of this inspection.*

- All friable and non-friable asbestos containing materials must be removed by a certified asbestos abatement contractor (GAC) prior to renovation if such activities will impact the materials. Refer to Appendix A for material locations.

- Composite drywall with joint compound that has been composited to contain 1% or less asbestos must also be removed by a certified asbestos abatement contractor prior to renovation if the material will be impacted.

- This report is not to be used as a bidding document for the removal of asbestos containing materials. The proper removal and handling of these materials is addressed through a separate and written *"abatement scope of work"* document. This inspection report is used solely to identify and classify asbestos containing materials (ACM) and the specific locations of ACM identified.

3.1 GENERAL COMMENTS

All ACM identified in this report is subject to the EPA National Emissions Standards for Hazardous Air Pollutants (NESHAPs) Regulations for Asbestos (40 CFR Part 61) and the CDPHE Regulation No. 8 Part B-Asbestos, "The Control of Hazardous Air Pollutants". The CDPHE is responsible for administering the

U.S. EPA NESHAP program for Colorado. ACBM is subject to OSHA Construction Industry Standard for Asbestos (29 CFR Part 1926.1101). This asbestos inspection was conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the same locale.

The information contained in this report is relevant to the date on which this inspection was performed and should not be relied upon to represent conditions at a later date. Contractors or consultants reviewing this report must draw their own conclusions regarding further investigation deemed necessary.

AVENV does not warrant the work of regulatory agencies, laboratories or other third parties supplying information which may have been used in the preparation of this report. In the event of any reuse or publication of any portion of this report, AVENV shall not be liable for any damages arising out of such reuse or publication. Any use a third party makes of this report, or any reliance on or decisions to be made on it, is the responsibility of such third party.

3.2 FINAL COMMENTS

Reasonable effort was made by AVENV to locate and sample accessible suspect building materials associated with the project as previously detailed in this report. However, for any structure, the existence of unique or concealed asbestos-containing materials is a possibility. As per the *Asbestos Hazard Emergency Response Act* (*AHERA),* a suspect material is to be considered asbestos-containing unless it is proven otherwise by appropriate inspection and sampling.

LIMITATIONS

AVENV's level of diligence and investigative procedures are intended to reduce, but not eliminate, potential uncertainty regarding the presence of ACM. The determinations made in this report should not be construed as a guarantee that all ACM present in the subject property has been identified and included. No warranty or guarantee expressed or implied, is made regarding the findings, conclusions, or recommendations contained in this report.

Should you have any questions concerning this project, please do not hesitate to contact our office at (303) 901-9835. Thank you for the opportunity to provide this service to you.

Respectfully Submitted,

Sam Rolf
Asbestos Building Inspector #921

Paula S. Bowers

Paula S. Bowers,
Asbestos Building Inspector #11051

BUILDING 1
Laboratory Building

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Appendix A

Homogeneous Materials Table

(Laboratory Building)

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APPENDIX A. HOMOGENEOUS MATERIALS TABLE NOAA Fritz Peak Observatory (Laboratory Building) 19126 Co State Highway 119 Rollinsville, CO					
HA	**Description**	**Estimated Quantity**	**Locations**	**Friable Non-Friable Category**	**Hazard Ranking & Disturbance Potential**
BBA01	4" black vinyl baseboard	N/A	3rd floor restrooms	NF Category I	N/A
BBA02	4" black vinyl baseboard yellow adhesive	N/A	2nd floor restrooms	NF Category I	N/A
BBA03	4" gray vinyl baseboard, yellow adhesive	N/A	1st floor rooms	NF Category I	N/A
BBA04	4" black vinyl baseboard with dark brown adhesive	N/A	1st floor room below stairs	NF Category I	N/A
CDW01	Composite drywall w joint compound	N/A	3rd floor walls/ceilings	NF-Misc. Category II	Good condition -5 Low
CDW02	Composite drywall w joint compound	N/A	2nd floor wall/ceilings	NF-Misc. Category II	Good condition -5 Low
CDW03	Composite drywall w joint compound	N/A	1st floor- walls/ceilings	NF-Misc. Category II	Good condition -5 Low
CDW04	Composite drywall w joint compound	N/A	1st floor addition south side	NF-Misc. Category II	N/A
CK01	Caulking associated with interior metal framed windows	N/A	1st – 3rd floors	NF Category I	N/A

Asbestos Containing Materials are Listed in Red.
Materials Containing 1% or less are Listed in Blue.

APPENDIX A. HOMOGENEOUS MATERIALS TABLE NOAA Fritz Peak Observatory (Laboratory Building) 19126 Co State Highway 119 Rollinsville, CO					
HA	**Description**	**Estimated Quantity**	**Locations**	**Friable Non-Friable Category**	**Hazard Ranking & Disturbance Potential**
CK02	Brown caulking associated with windows	N/A	Exterior windows	NF-Misc. Category I	N/A
CK03	Gray caulking associated with wood frame of door	1 SF	Exterior of building	NF-Misc. Category I	Good condition -5 Low
CK04	Brown caulking with yellow foam	N/A	Exterior hatch door south exterior of bldg. (addition)	NF-Misc. Category I	N/A
FDM01	Fire door material ASSUMED	3	Metal doors- 1st floor	NF-Misc. Category II	Good condition -5 Low
FTM01	12x12 off white floor tile w/specs Yellow mastic	N/A	3rd floor	NF-Misc. Category I	N/A
FTM02	9x9 floor tile/black mastic 3 colors-rose, gray, and green	2,386 SF	2nd floor rooms (except 2208; kitchen)	NF-Misc. Category I	Good condition -5 Low
FTM03	9x9 brown floor tile/black mastic	636 SF	2nd floor room 2208; kitchen	NF-Misc. Category I	Good condition -5 Low
FTM04	9X9 rust color floor tile with crème swirl accent	N/A	1st floor areas and Rm 1101 same tile painted black	NF-Misc. Category I	N/A
MA01	Black vinyl stair tread	N/A	Stairway from 1st to 3rd floors	NF-Misc. Category I	N/A
MA02	Wallpaper adhesive Applied to drywall	>1,000 SF	Associated with composite drywall systems, throughout building	NF-Misc. Category I	Good condition -5 Low
OT01	Green chalkboards ASSUMED	3	1st floor; 2nd floor hall; 3rd floor office	NF-Misc. Category II	Good condition -5 Low

Asbestos Containing Materials are Listed in Red.
Materials Containing 1% or less are Listed in Blue.

APPENDIX A.
HOMOGENEOUS MATERIALS TABLE
NOAA Fritz Peak Observatory (Laboratory Building)
19126 Co State Highway 119
Rollinsville, CO

HA	Description	Estimated Quantity	Locations	Friable Non-Friable Category	Hazard Ranking & Disturbance Potential
PS01	White pipe sealant on fiberglass pipe insulation	N/A	3rd floor exposed pipes	NF-Misc. Category I	N/A
PS02	White pipe sealant on fiberglass pipe insulation	N/A	2nd floor exposed pipes	NF-Misc. Category I	N/A
PS03	White pipe sealant on fiberglass pipe insulation	N/A	1st floor exposed pipes	NF-Misc. Category I	N/A
RF01	Roof flashing black/silver	1,000 SF	Exterior roof perimeter and on roof access hatch	NF-Misc. Category I	Good condition -5 Low
RT01	Tar and gravel roofing material	3,586 SF	Exterior roof of building	NF-Misc. Category I	Good condition -5 Low
SVF01	Sheet vinyl flooring tan and brown wood pattern	N/A	3rd floor	Friable- Misc.	N/A
SVW01	Sheet vinyl wall material- tan with light brown swirl pattern	N/A	wall covering in restrooms 2nd, 3rd walls of kitchen 2nd floor	Friable- Misc.	N/A
TS01	Skim texture- trowel pattern on drywall, painted	1,050 SF	2nd floor ceilings- room 2202 and adjoining hallway	Friable- Surfacing	Good condition -5 Low
TS02	Skim texture- heavy trowel pattern on drywall, painted	1,000 SF	2nd floor ceilings Room 2101	Friable- Surfacing	Good condition -5 Low
WG01	Window glaze associated with metal frame windows	N/A	Exterior windows	NF-Misc. Category II	N/A

Asbestos Containing Materials are Listed in Red.
Materials Containing 1% or less are Listed in Blue.

Friable (F): *material that be crumbled, pulverized, or reduced to powder with hand pressure when dry*
Non-Friable (NF): *material that cannot be crumbled, pulverized, or reduced to powder with hand pressure when dry*

Thermal Systems Insulation (TSI): *used to control heat transfer and or condensation on HVAC, hot and cold water or other mechanical systems etc.*

Surfacing Material (SM): *material that is sprayed or troweled onto surfaces such as fire proofing on structural members, plaster for acoustical, decorative, etc.*

Miscellaneous Material (Misc): *all other materials including taping mud, floor tile mastic, stucco, leveling compound, and hard plasters.*

Category I non-friable (NF) ACM: *resilient floor coverings, asphalt roofing products, packings, gaskets, or caulking containing greater than 1% asbestos*
Category II non-friable (NF) ACM*: any material that is not Category1 that contains greater than 1% asbestos*

Hazard Ranking:

1*= damaged or significantly damaged Thermal Systems Insulation (TSI) ACM;*
2*=damaged friable surfacing ACM;*
3*=significantly damaged friable surfacing ACM;*
4*=damaged or significantly damaged friable miscellaneous ACM;*
5*=ACBM with potential for damage;*
6*=ACBM with potential for significant damage;*
7*=any remaining friable ACBM or suspected ACBM.*

Disturbance Potential:
Low *= the material may be accessible but is not likely to be damaged under most circumstances.*

Moderate *= the material is accessible and is likely to suffer limited damage over time.*

High *= the material is friable and/or already damaged, is accessible, and there is specific reason to believe the material will receive a large amount of damage in the foreseeable future.*

Condition:
Good *= the material had no visible damage, or extremely minor damage or surface marring (i.e., a room of floor tile has only four or five with small corners broken from the tile.*

Damaged *= the material had visible damage evenly distributed over less than 10% of its surface or localized over less than 25% of its surface.*

Significantly damaged *= the material had visible damage that is evenly distributed over 10% or more of its surface or localized over 25% or more or its surface.*

Asbestos Containing Materials are Listed in Red.
Materials Containing 1% or less are Listed in Blue.

Appendix B

Summary of Bulk Samples & drawing

(Laboratory Building)

APPENDIX B. Asbestos Bulk Sample Log

Project Name:	**NOAA Fritz Peak Observatory**
Project Address:	**19126 CO State Highway 119 Rollinsville, CO**
Contact / Client:	**EA Engineering**
Inspection date & Lab COC #	**9/23/19-9/24/19 A1917520v3**

Building:	**Commercial - Laboratory Building**
Work Area:	***Interior/exterior***
Asbestos:	***YES***
Accessibility To Building Occupants?	***Unoccupied***

Sample No.	***Description of Material Sampled***	***Hazard Ranking***	***AHERA Rating***	***Asbestos Laboratory Results***	***Sample location***
BBA01-1	4" black vinyl baseboard w/yellow adhesive	N/A	N/A	None detected	3rd Fl- Restroom 3005- below center window
BBA01-2	4" black vinyl baseboard w/yellow adhesive	N/A	N/A	None detected	3rd Fl- Restroom 3005- adj window
BBA02-1	4" black vinyl baseboard w/yellow adhesive	N/A	N/A	None detected	2nd Fl- Restroom 2007, south wall
BBA02-2	4" black vinyl baseboard w/yellow adhesive	N/A	N/A	None detected	2nd Fl- Restroom 2005, south wall
BBA03-1	4" gray vinyl baseboard	N/A	N/A	None detected	1st Fl- Rm 1209 west wall
BBA03-2	4" gray vinyl baseboard	N/A	N/A	None detected	1st Fl- Rm 1204
BBA03-3	4" gray vinyl baseboard	N/A	N/A	None detected	1st Fl- Rm 1204
BBA04-1	4" black vinyl baseboard w/ dark brown adhesive	N/A	N/A	None detected	1st Fl- Rm 101 below stairs
BBA04-2	4" black vinyl baseboard w/ dark brown adhesive	N/A	N/A	None detected	1st Fl- Rm 101 below stairs
CDW01-1	Composite drywall w/joint compound	N/A	N/A	None detected	3rd Fl- Rm 3105 center of east wall
CDW01-2	Composite drywall w/joint compound	N/A	N/A	None detected	3rd Fl- Rm 3202 West corner
CDW01-3	Composite drywall w/joint compound	N/A	N/A	None detected	3rd Fl- Rm 3208 SE corner
CDW02-1	**Composite drywall w/joint compound**	**Good Low-5**	**NF Misc.**	**<1% Chrysotile**	**2nd Fl- kitchen wall west above doorway**
CDW02-2	**Composite drywall w/joint compound**	**Good Low-5**	**NF Misc.**	**<1% Chrysotile**	**2nd Fl- Rm 2208 center ceiling south corner**
CDW03-1	**Composite drywall w/joint compound**	**Good Low-5**	**NF Misc.**	**<1% Chrysotile**	**1st Fl Rm 101 SW corner wall**

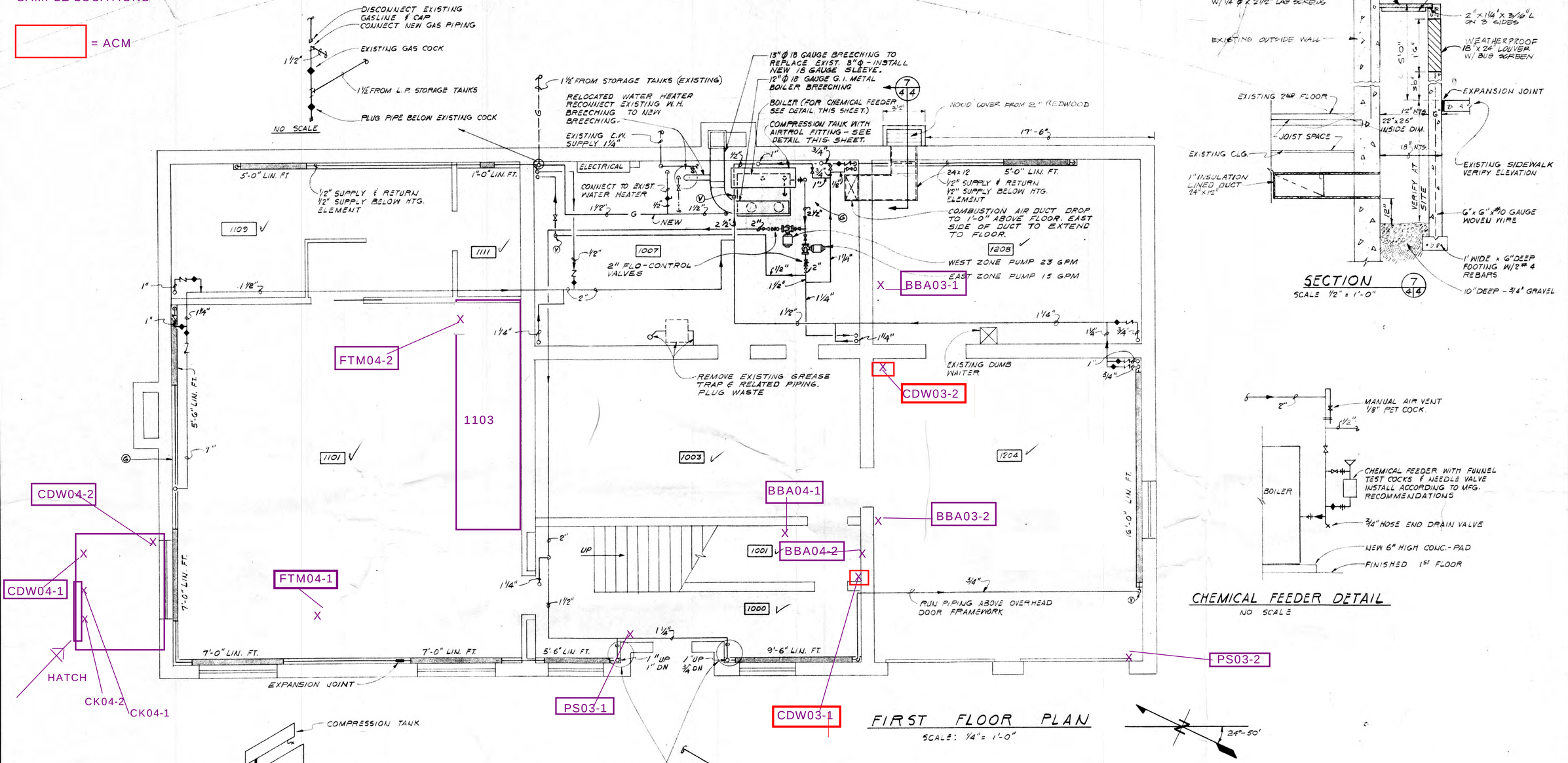
Sample No.	Description of Material Sampled	Hazard Ranking	AHERA Rating	Asbestos Laboratory Results	Sample location
CDW03-2	**Composite drywall w/joint compound**	**Good Low-5**	**NF Misc.**	**<1% Chrysotile**	**1st Fl Rm 1204 NE corner**
CDW04-1	Composite drywall w/joint compound	N/A	N/A	None detected	1st Fl- Addition off of Rm 1101 SW corner wall
CDW04-2	Composite drywall w/joint compound	N/A	N/A	None detected	1st Fl- Addition off of Rm 1101 E corner wall
CK01-1	Caulking on metal frame windows-interior	N/A	N/A	None detected	2nd Fl- Rm 2202 SE window
CK01-2	Caulking on metal frame windows-interior	N/A	N/A	None detected	2nd Fl- Rm 2201 N window
CK02-1	Brown caulking on metal windows	N/A	N/A	None detected	Exterior South window
CK02-2	Brown caulking on metal windows	N/A	N/A	None detected	Exterior North window
CK03-1	**Gray caulking around wood door**	**Good Low-5**	**NF Misc.**	**3% Chrysotile**	**Exterior storage Rm near kitchen - wood door frame**
CK03-2	**Gray caulking around wood door**	**Good Low-5**	**NF Misc.**	**3% Chrysotile**	**Exterior storage Rm near kitchen - wood door frame**
CK04-1	Brown caulking w/yellow foam	N/A	N/A	None detected	Exterior- around hatch door of addition
CK04-2	Brown caulking w/yellow foam	N/A	N/A	None detected	Exterior- around hatch door of addition
FTM01-1	12x12 off white spec floor tile w/ yellow mastic	N/A	N/A	None detected	3rd Fl- Rm 3105 East
FTM01-2	12x12 off white spec floor tile w/ yellow mastic	N/A	N/A	None detected	3rd Fl- hallway near roof access, at damage
FTM02-1	**9x9 gray accent tile black mastic**	**Good Low-5**	**NF Misc.**	**2% -Tile Chrysotile**	**2nd Fl- Rm 2001 at edge of wall**
FTM02-2	**9x9 green accent tile black mastic**	**Good Low-5**	**NF Misc.**	**2% -Tile Chrysotile**	**2nd Fl- Rm 2002 wall adjacent kitchen doorway**
FTM02-3	**9x9 rose accent tile black mastic**	**Good Low-5**	**NF Misc.**	**2% -Tile Chrysotile**	**2nd Fl- Rm 2101 NE corner**
FTM03-1	**9x9 brown floor tile black mastic**	**Good Low-5**	**NF Misc.**	**2% -Tile Chrysotile**	**2nd Fl-Rm 2208 S wall edge at damage**
FTM03-2	**9x9 brown floor tile black mastic**	**Good Low-5**	**NF Misc.**	**2% -Tile Chrysotile**	**2nd Fl- Kitchen near entry at damage**
FTM04-1	9X9 rust floor tile w/ crème swirl pattern black mastic	N/A	NF Misc.	None detected	1s Fl- Rm 1101 adjacent windows
FTM04-2	9X9 rust floor tile w/ crème swirl pattern black mastic	N/A	NF Misc.	None detected	1st Fl- Rm 1101 at doorway to 1103
MA01-1	Black vinyl stair tread	N/A	NF Misc.	None detected	3rd Fl top center stair
MA01-2	Black vinyl stair tread	N/A	NF Misc.	None detected	2nd Fl bottom stair
MA02-1	**Mastic/adhesive - Wallpaper on drywall**	**Good Low-5**	**NF Misc.**	**<1% -JC Chrysotile**	**3rd Fl Rm 3107 west wall**

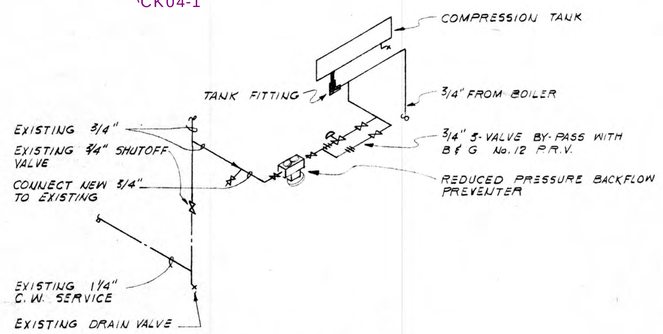
Sample No.	Description of Material Sampled	Hazard Ranking	AHERA Rating	Asbestos Laboratory Results	Sample location
MA02-2	**Mastic/adhesive - Wallpaper on drywall**	**Good Low-5**	**NF Misc.**	**<1% -JC Chrysotile**	**3rd Fl- Rm 3204 East wall**
PS01-1	White pipe sealant on fiberglass insulation	N/A	N/A	None detected	3rd Fl- Rm 3105 East side
PS01-2	White pipe sealant on fiberglass insulation	N/A	N/A	None detected	3rd Fl- Rm 3105 North side
PS02-1	White pipe sealant on fiberglass insulation	N/A	N/A	None detected	2nd Fl- Rm 2208 SE side of room
PS02-2	White pipe sealant on fiberglass insulation	N/A	N/A	None detected	2nd Fl- Rm 2001 South above windows
PS03-1	White pipe sealant on fiberglass insulation	N/A	N/A	None detected	1st Fl- Hallway at bottom stairs
PS03-2	White pipe sealant on fiberglass insulation	N/A	N/A	None detected	1st Fl- Rm 1204 corner
RF01-1	**Roof flashing black/silver**	**Good Low-5**	**NF Misc.**	**5% /10% Chrysotile**	**Exterior- 3rd Fl roof access hatch south side of building**
RF01-2	**Roof flashing black/silver**	**Good Low-5**	**NF Misc.**	**5% /10% Chrysotile**	**Exterior- 3rd Fl roof access hatch South side of building**
RT01-1	**Tar and gravel roofing material**	**Good Low-5**	**NF Misc.**	**5% Chrysotile**	**Exterior- roof North of hatch**
RT01-2	**Tar and gravel roofing material**	**Good Low-5**	**NF Misc.**	**5% Chrysotile**	**Exterior- roof South of hatch**
SVF01-1	Sheet vinyl flooring tan and brown wood pattern	N/A	N/A	None detected	3rd Fl- Rm 3111 along NE wall at damage
SVF01-2	Sheet vinyl flooring tan and brown wood pattern	N/A	N/A	None detected	3rd Fl Hall 3200 South end near stairs
SVW01-1	Sheet vinyl wall material tan w/ light brown swirl pattern	N/A	N/A	None detected	3rd Fl- Restroom 3005 SW wall at damage above pipes
SVW01-2	Sheet vinyl wall material tan w/ light brown swirl pattern	N/A	N/A	None detected	3rd Fl- Restroom 3005 SW wall at damage above pipes
TS01-1	**Trowel pattern texture on drywall**	**Good Low-5**	**Friable surfacing**	**3% Chrysotile**	**Ceiling- 2nd Fl Rm 2000 Center**
TS01-2	**Trowel pattern texture on drywall**	**Good Low-5**	**Friable surfacing**	**3% Chrysotile**	**Ceiling – 2nd Fl Rm 2202 S. edge ceiling above window**
TS01-3	**Trowel pattern texture on drywall**	**Good Low-5**	**Friable surfacing**	**3% Chrysotile**	**Ceiling – 2nd Fl Rm 2202 E. corner ceiling**
TS02-1	**Heavy trowel pattern texture on drywall**	**Good Low-5**	**Friable surfacing**	**3% Chrysotile**	**Ceiling- 2nd Fl Rm 2101 SW corner adjacent window**
TS02-2	**Heavy trowel pattern texture on drywall**	**Good Low-5**	**Friable surfacing**	**3% Chrysotile**	**Ceiling- 2nd Fl Rm 2101 W side of rm center**
TS02-3	**Heavy trowel pattern texture on drywall**	**Good Low-5**	**Friable surfacing**	**3% Chrysotile**	**Ceiling- 2nd Fl Rm 2101 NW corner adjacent window**
WG01-1	Window glaze-metal frame window	N/A	N/A	None detected	3rd Fl Restroom 3005 window
WG01-2	Window glaze-metal frame window	N/A	N/A	None detected	3rd Fl Restroom 3005 window

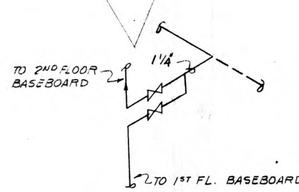
N/A = not applicable

1ST FLOOR ASBESTOS INSPECTION
SAMPLE LOCATIONS

= ACM







NATIONAL BUREAU OF STANDARDS
BOULDER, COLORADO

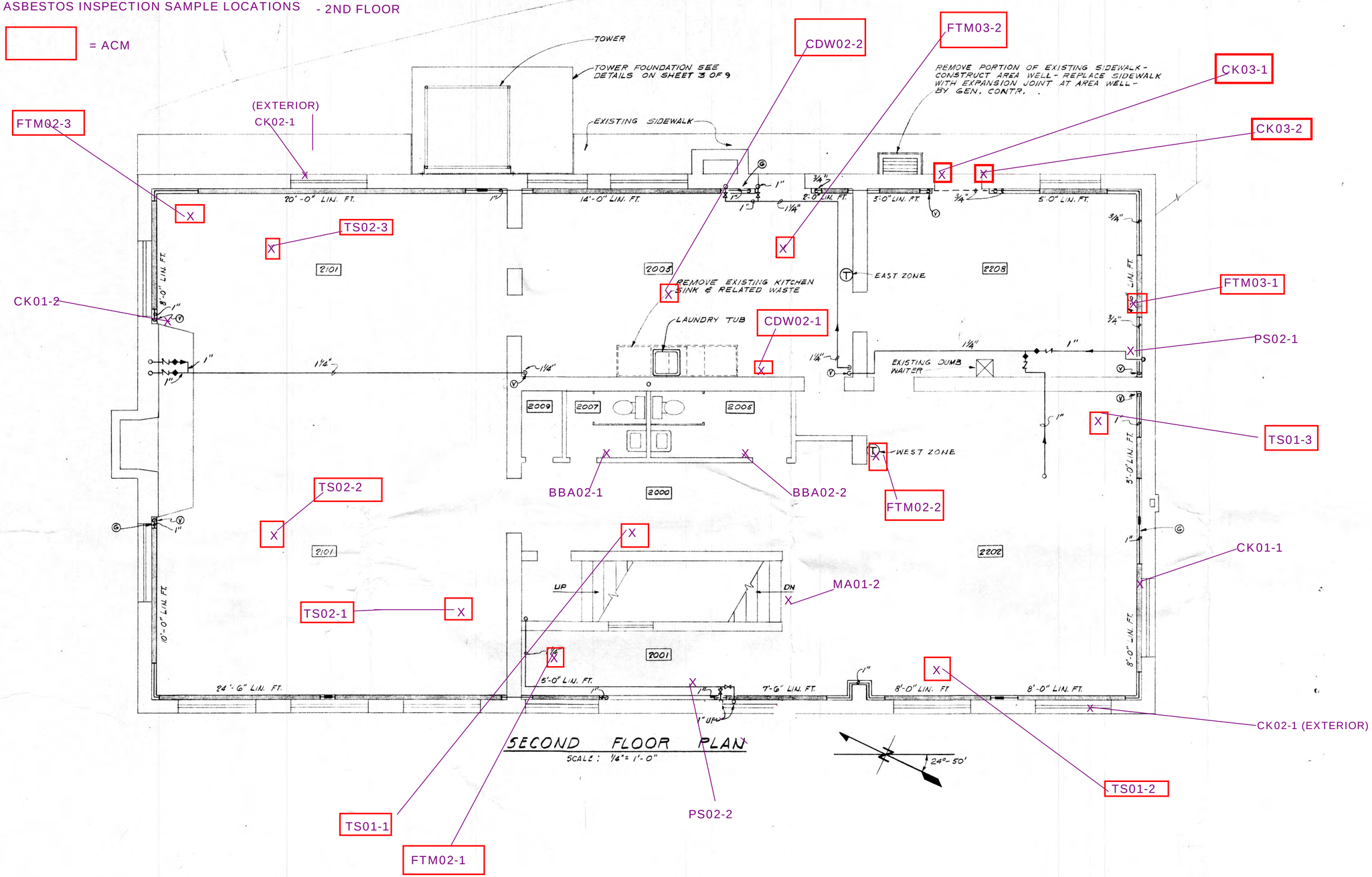
OBSERVATORY BUILDING MODIFICATION
FRITZ PEAK FIELD SITE
FIRST FLOOR MECHANICAL AND DETAILS

DESIGNED: LLB	DATE 11-14-66
DRAWN: LPF	DATE 11-16-66
CHECKED: JMCK	DATE 11-18-66
APPROVED: WJL	DATE 5 Dec 66
PROJECT 484500447	SCALE: 1/4"=1'-0"
DRAWING FP-20800	Sheet 4 of 9

REGISTERED PROFESSIONAL ENGINEERS SWANSON 1257 1852 RINK STATE OF COLORADO

ASBESTOS INSPECTION SAMPLE LOCATIONS - 2ND FLOOR

= ACM



SECOND FLOOR PLAN

SCALE : 1/4" = 1'-0"

NATIONAL BUREAU OF STANDARDS
BOULDER, COLORADO

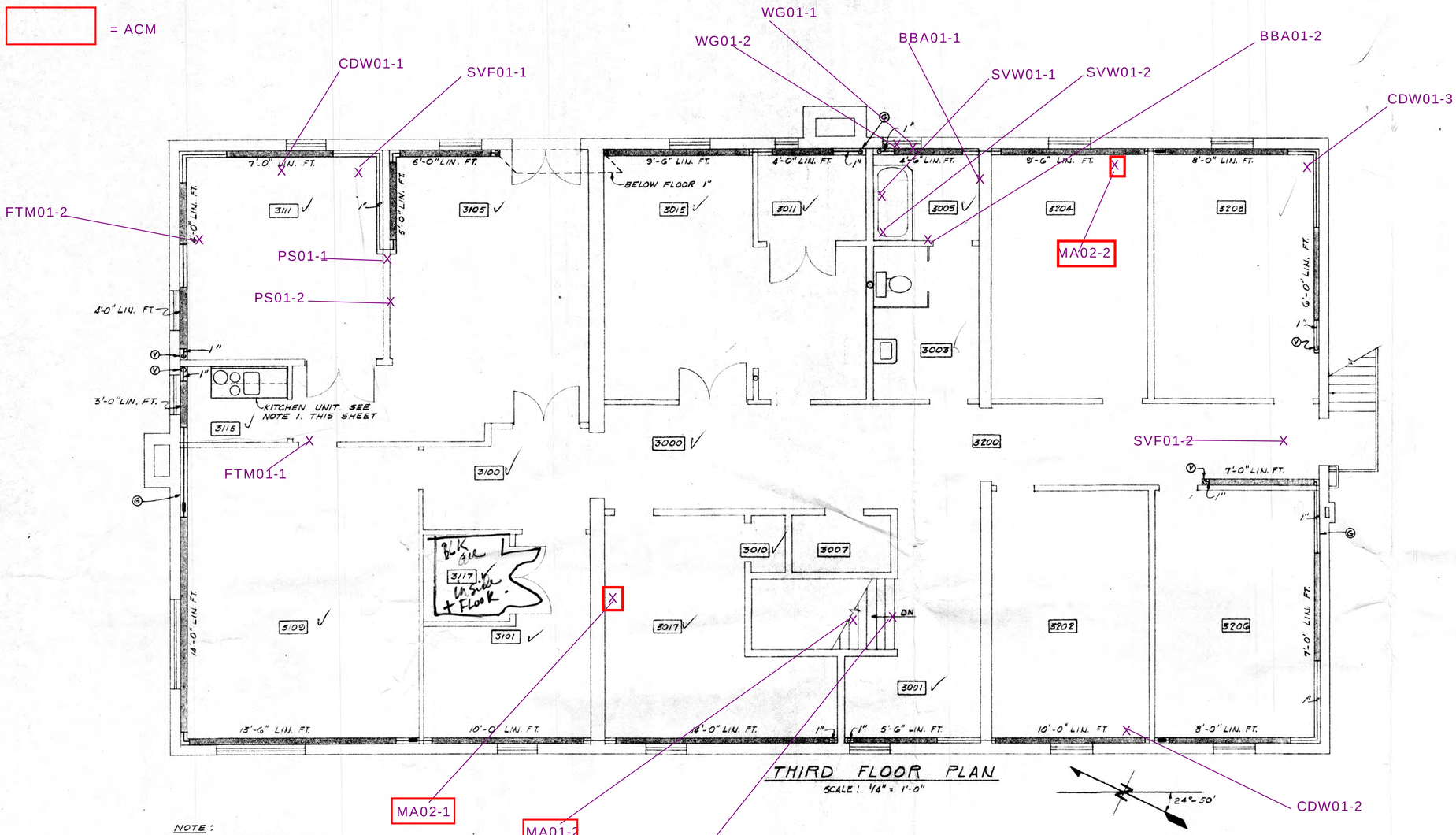
OBSERVATORY BUILDING MODIFICATION
FRITZ PEAK FIELD SITE
SECOND FLOOR MECHANICAL

DESIGNED: LLB	DATE 11-14-66
DRAWN: LPF	DATE 11-16-66
CHECKED: JMCK	DATE 11-18-66
APPROVED: WLF	DATE 5 Dec 66
PROJECT 484500447	SCALE: 1/4"=1'-0"
DRAWING FP-20800	Sheet 5 of 9

REGISTERED PROFESSIONAL ENGINEERS SWANSON 1257 1852 RINK STATE OF COLORADO

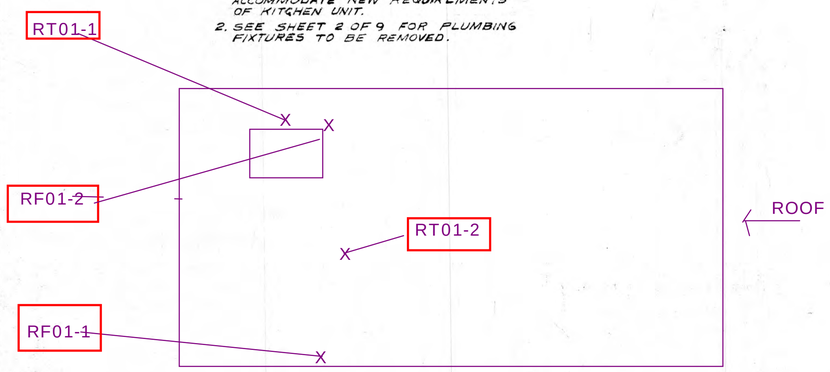
3RD FLOOR ASBESTOS INSPECTION SAMPLE LOCATIONS

= ACM



THIRD FLOOR PLAN
SCALE: 1/4" = 1'-0"

NOTE:
1. REVISE EXISTING PLUMBING TO ACCOMMODATE NEW REQUIREMENTS OF KITCHEN UNIT.
2. SEE SHEET 2 OF 9 FOR PLUMBING FIXTURES TO BE REMOVED.



NATIONAL BUREAU OF STANDARDS
BOULDER, COLORADO

OBSERVATORY BUILDING MODIFICATION
FRITZ PEAK FIELD SITE
THIRD FLOOR MECHANICAL

DESIGNED: LLB	DATE 11-14-66
DRAWN: LPF	DATE 11-16-66
CHECKED: JMCK	DATE 11-18-66
APPROVED: [illegible]	DATE DEC 66
PROJECT 484500447	SCALE: 1/4"=1'-0"
DRAWING FP-20800	Sheet 6 of 9

REGISTERED PROFESSIONAL ENGINEERS SWANSON 1257 1852 RINK STATE OF COLORADO

Appendix C

Laboratory Results

(Laboratory Building)

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October 3, 2019

American Veteran Environmental, LLC
13373 N. Harback Rd.
Bennett, CO 80102

CLIENT PROJECT: 19126 CO State Hwy 119, Rollinsville, CO (Laboratory Building)
CEI LAB CODE: A1917520

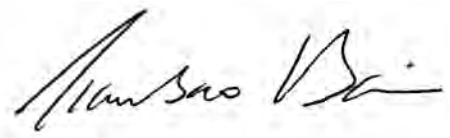
Dear Customer:

Enclosed are asbestos analysis results for PLM Bulk samples received at our laboratory on September 25, 2019. The samples were analyzed for asbestos using polarizing light microscopy (PLM) per the EPA 600 Method.

Sample results containing >1% asbestos are considered asbestos-containing materials (ACMs) per EPA regulatory requirements. The detection limit for the EPA 600 Method is <1% asbestos by weight as determined by visual estimation.

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

Kind Regards,



Tianbao Bai, Ph.D., CIH
Laboratory Director

NVLAP TESTING
NVLAP LAB CODE 101768-0

AMENDED

ASBESTOS ANALYTICAL REPORT
By: Polarized Light Microscopy

Prepared for

American Veteran Environmental, LLC

CLIENT PROJECT:	19126 CO State Hwy 119, Rollinsville, CO (Laboratory Building)
LAB CODE:	A1917520
TEST METHOD:	EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020
REPORT DATE:	09/30/19
TOTAL SAMPLES ANALYZED:	61
# SAMPLES >1% ASBESTOS:	19

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AMENDED

Asbestos Report Summary

By: POLARIZING LIGHT MICROSCOPY

PROJECT: 19126 CO State Hwy 119, Rollinsville, CO **LAB CODE:** A1917520
(Laboratory Building)

METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
BBA01-1		A239449A	Black	Baseboard	None Detected
		A239449B	Black	Baseboard Adhesive	None Detected
BBA01-2		A239450A	Black	Baseboard	None Detected
		A239450B	Black	Baseboard Adhesive	None Detected
BBA02-1		A239451A	Black	Baseboard	None Detected
		A239451B	Black	Baseboard Adhesive	None Detected
BBA02-2		A239452A	Black	Baseboard	None Detected
		A239452B	Black	Baseboard Adhesive	None Detected
BBA03-1		A239453A	Tan	Baseboard	None Detected
		A239453B	Tan	Baseboard Adhesive	None Detected
BBA03-2		A239454A	Tan	Baseboard	None Detected
		A239454B	Tan	Baseboard Adhesive	None Detected
BBA03-3		A239455A	Tan	Baseboard	None Detected
		A239455B	Tan	Baseboard Adhesive	None Detected
BBA04-1		A239456	Brown	Baseboard Adhesive	None Detected
BBA04-2		A239457	Brown	Baseboard Adhesive	None Detected
CDW01-1		A239458	White	Drywall/Joint Compound	None Detected
CDW01-2		A239459	White,Cream	Drywall/Joint Compound	Chrysotile <1%
CDW01-3		A239460	White,Cream	Drywall/Joint Compound	Chrysotile <1%
CDW02-1		A239461	White,Cream	Drywall/Joint Compound	Chrysotile <1%
CDW02-2		A239462	White,Cream	Drywall/Joint Compound	Chrysotile <1%
CDW03-1		A239463	White,Cream	Drywall/Joint Compound	Chrysotile <1%
CDW03-2		A239464	White,Cream	Drywall/Joint Compound	Chrysotile <1%
CDW04-1		A239465	White	Drywall/Joint Compound	None Detected
CDW04-2		A239466	White	Drywall/Joint Compound	None Detected
CK01-1		A239467	Brown	Caulking	None Detected
CK01-2		A239468	Brown	Caulking	None Detected
CK02-1		A239469	Gray	Caulking	None Detected
CK02-2		A239470	Gray	Caulking	None Detected
CK03-1		A239471	Gray,Tan	Caulking	Chrysotile 3%
CK03-2		A239472	Gray,Tan	Caulking	Chrysotile 3%

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AMENDED

Asbestos Report Summary

By: POLARIZING LIGHT MICROSCOPY

PROJECT: 19126 CO State Hwy 119, Rollinsville, CO **LAB CODE:** A1917520
(Laboratory Building)

METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
CK04-1		A239473	Cream,Brown	Caulking	None Detected
CK04-2		A239474	Cream,Brown	Caulking	None Detected
FTM01-1		A239475A	White w/,Brown Streaks	Floor Tile	None Detected
		A239475B	Tan	Mastic	None Detected
FTM01-2		A239476A	White w/,Brown Streaks	Floor Tile	None Detected
		A239476B	Tan	Mastic	None Detected
FTM02-1		A239477A	Gray	Floor Tile	Chrysotile 2%
		A239477B	Black	Mastic	None Detected
FTM02-2		A239478A	Green	Floor Tile	Chrysotile 2%
		A239478B	Black	Mastic	None Detected
FTM02-3		A239479A	Red	Floor Tile	Chrysotile 2%
		A239479B	Black	Mastic	None Detected
FTM03-1		A239480A	Brown	Floor Tile	Chrysotile 2%
		A239480B	Black	Mastic	None Detected
FTM03-2		A239481A	Brown	Floor Tile	Chrysotile 2%
		A239481B	Black	Mastic	None Detected
FTM04-1		A239482A	Red	Floor Tile	None Detected
		A239482B	Black	Mastic	None Detected
FTM04-2		A239483A	Red	Floor Tile	None Detected
		A239483B	Black	Mastic	None Detected
MA01-1		A239484A	Black	Flooring	None Detected
		A239484B	Black	Mastic	None Detected
MA01-2		A239485A	Black	Flooring	None Detected
		A239485B	Black	Mastic	None Detected
MA02-1		A239486	White,Cream	Drywall/Joint Compound	Chrysotile <1%
MA02-2		A239487	White,Cream	Drywall/Joint Compound	Chrysotile <1%
PS01-1		A239488	White	Sealant	None Detected
PS01-2		A239489	White	Sealant	None Detected
PS02-1		A239490	White	Sealant	None Detected
PS02-2		A239491	White	Sealant	None Detected

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Asbestos Report Summary

By: POLARIZING LIGHT MICROSCOPY

PROJECT: 19126 CO State Hwy 119, Rollinsville, CO **LAB CODE:** A1917520
(Laboratory Building)

METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
PS03-1		A239492	White	Sealant	None Detected
PS03-2		A239493	White	Sealant	None Detected
RF01-1	Layer 1	A239493.1	Silver	Roofing	Chrysotile 5%
	Layer 2	A239493.1	Black	Roofing	Chrysotile 10%
RF01-2	Layer 1	A239493.2	Silver	Roofing	Chrysotile 5%
	Layer 2	A239493.2	Black	Roofing	Chrysotile 10%
RT01-1	Layer 1	A239493.3	Silver	Roofing	Chrysotile 5%
	Layer 2	A239493.3	Black	Roofing	None Detected
RT01-2	Layer 1	A239493.4	Silver	Roofing	Chrysotile 5%
	Layer 2	A239493.4	Black	Roofing	None Detected
SVF01-1		A239494A	Tan	Sheet Vinyl Flooring	None Detected
		A239494B	Tan	Mastic	None Detected
SVF01-2		A239495A	Tan	Sheet Vinyl Flooring	None Detected
		A239495B	Tan	Mastic	None Detected
SVW01-1		A239496A	Cream	Sheet Vinyl Wall Covering	None Detected
		A239496B	Brown	Mastic	None Detected
		A239496C	White	Drywall	None Detected
SVW01-2		A239497A	Cream	Sheet Vinyl Wall Covering	None Detected
		A239497B	Brown	Mastic	None Detected
		A239497C	White	Drywall	None Detected
TS01-1	Layer 1	A239498	Cream	Texture	Chrysotile 2%
	Layer 2	A239498	White	Drywall	None Detected
TS01-2	Layer 1	A239499	Cream	Texture	Chrysotile 2%
	Layer 2	A239499	White	Drywall	None Detected
TS01-3	Layer 1	A239500	Cream	Texture	Chrysotile 2%
	Layer 2	A239500	White	Drywall	None Detected
TS02-1	Layer 1	A239501	Cream	Texture	Chrysotile 2%
	Layer 2	A239501	White	Drywall	None Detected
TS02-2	Layer 1	A239502	Cream	Texture	Chrysotile 2%
	Layer 2	A239502	White	Drywall	None Detected
TS02-3	Layer 1	A239503	Cream	Texture	Chrysotile 2%

AMENDED

Asbestos Report Summary

By: POLARIZING LIGHT MICROSCOPY

PROJECT: 19126 CO State Hwy 119, Rollinsville, CO **LAB CODE:** A1917520
(Laboratory Building)

METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
	Layer 2	A239503	White	Drywall	None Detected
WG01-1		A239504	Gray	Window Glazing	None Detected
WG01-2		A239505	Gray	Window Glazing	None Detected

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ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: American Veteran Environmental, LLC
13373 N. Harback Rd.
Bennett, CO 80102

Lab Code: A1917520
Date Received: 09-25-19
Date Analyzed: 09-30-19
Date Reported: 09-30-19

Project: 19126 CO State Hwy 119, Rollinsville, CO (Laboratory Building)

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
BBA01-1 A239449A	Baseboard	Homogeneous Black Fibrous Bound	<1%	Cellulose	100%	Vinyl	None Detected
A239449B	Baseboard Adhesive	Homogeneous Black Fibrous Bound	2%	Cellulose	60% 38%	Binder Calc Carb	None Detected
BBA01-2 A239450A	Baseboard	Homogeneous Black Fibrous Bound	<1%	Cellulose	100%	Vinyl	None Detected
A239450B	Baseboard Adhesive	Homogeneous Black Fibrous Bound	2%	Cellulose	60% 38%	Binder Calc Carb	None Detected
BBA02-1 A239451A	Baseboard	Homogeneous Black Fibrous Bound	<1%	Cellulose	100%	Vinyl	None Detected
A239451B	Baseboard Adhesive	Homogeneous Black Fibrous Bound	2%	Cellulose	60% 38%	Binder Calc Carb	None Detected
BBA02-2 A239452A	Baseboard	Homogeneous Black Fibrous Bound	<1%	Cellulose	100%	Vinyl	None Detected

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AMENDED

ASBESTOS BULK ANALYSIS

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Client: American Veteran Environmental, LLC
13373 N. Harback Rd.
Bennett, CO 80102

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Project: 19126 CO State Hwy 119, Rollinsville, CO (Laboratory Building)

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
A239452B	Baseboard Adhesive	Homogeneous Black Fibrous Bound	2%	Cellulose	60% 38%	Binder Calc Carb	None Detected
BBA03-1 A239453A	Baseboard	Homogeneous Tan Fibrous Bound	<1%	Cellulose	100%	Vinyl	None Detected
A239453B	Baseboard Adhesive	Homogeneous Tan Fibrous Bound	2%	Cellulose	60% 38%	Binder Calc Carb	None Detected
BBA03-2 A239454A	Baseboard	Homogeneous Tan Fibrous Bound	<1%	Cellulose	100%	Vinyl	None Detected
A239454B	Baseboard Adhesive	Homogeneous Tan Fibrous Bound	2%	Cellulose	60% 38%	Binder Calc Carb	None Detected
BBA03-3 A239455A	Baseboard	Homogeneous Tan Fibrous Bound	<1%	Cellulose	100%	Vinyl	None Detected
A239455B	Baseboard Adhesive	Homogeneous Tan Fibrous Bound	2%	Cellulose	60% 38%	Binder Calc Carb	None Detected

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ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: American Veteran Environmental, LLC
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Bennett, CO 80102

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Project: 19126 CO State Hwy 119, Rollinsville, CO (Laboratory Building)

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
BBA04-1 A239456	Baseboard Adhesive	Homogeneous Brown Fibrous Bound	2%	Cellulose	60% 38%	Binder Calc Carb	None Detected
BBA04-2 A239457	Baseboard Adhesive	Homogeneous Brown Fibrous Bound	2%	Cellulose	60% 38%	Binder Calc Carb	None Detected
CDW01-1 A239458	Drywall/Joint Compound	Heterogeneous White Fibrous Bound	10%	Cellulose	5% 15% 70%	Paint Calc Carb Gypsum	None Detected
CDW01-2 A239459	Drywall/Joint Compound	Heterogeneous White,Cream Fibrous Bound	10%	Cellulose	5% 15% 70%	Paint Calc Carb Gypsum	<1% Chrysotile
Lab Notes: 2% Chrysotile found in Joint Compound. Sample contains 10% Joint Compound, composite contains 0.2% Chrysotile overall.							
CDW01-3 A239460	Drywall/Joint Compound	Heterogeneous White,Cream Fibrous Bound	10%	Cellulose	5% 15% 70%	Paint Calc Carb Gypsum	<1% Chrysotile
Lab Notes: 2% Chrysotile found in Joint Compound. Sample contains 10% Joint Compound, composite contains 0.2% Chrysotile overall.							
CDW02-1 A239461	Drywall/Joint Compound	Heterogeneous White,Cream Fibrous Bound	10%	Cellulose	5% 15% 70%	Paint Calc Carb Gypsum	<1% Chrysotile
Lab Notes: 2% Chrysotile found in the 2nd layer, Cream color Joint Compound. Sample contains 10% Joint Compound, composite contains 0.2% Chrysotile overall.							

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ASBESTOS BULK ANALYSIS

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Project: 19126 CO State Hwy 119, Rollinsville, CO (Laboratory Building)

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
CDW02-2 A239462	Drywall/Joint Compound	Heterogeneous White,Cream Fibrous Bound	10%	Cellulose	5% 15% 70%	Paint Calc Carb Gypsum	<1% Chrysotile
Lab Notes: 2% Chrysotile found in Joint Compound. Sample contains 10% Joint Compound, composite contains 0.2% Chrysotile overall.							
CDW03-1 A239463	Drywall/Joint Compound	Heterogeneous White,Cream Fibrous Bound	10%	Cellulose	5% 15% 70%	Paint Calc Carb Gypsum	<1% Chrysotile
Lab Notes: 2% Chrysotile found in Joint Compound. Sample contains 10% Joint Compound, composite contains 0.2% Chrysotile overall.							
CDW03-2 A239464	Drywall/Joint Compound	Heterogeneous White,Cream Fibrous Bound	10%	Cellulose	5% 15% 70%	Paint Calc Carb Gypsum	<1% Chrysotile
Lab Notes: 2% Chrysotile found in Joint Compound. Sample contains 10% Joint Compound, composite contains 0.2% Chrysotile overall.							
CDW04-1 A239465	Drywall/Joint Compound	Heterogeneous White Fibrous Bound	10%	Cellulose	5% 15% 70%	Paint Calc Carb Gypsum	None Detected
CDW04-2 A239466	Drywall/Joint Compound	Heterogeneous White Fibrous Bound	10%	Cellulose	5% 15% 70%	Paint Calc Carb Gypsum	None Detected
CK01-1 A239467	Caulking	Homogeneous Brown Fibrous Bound	<1%	Cellulose	100%	Caulk	None Detected

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ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
CK01-2 A239468	Caulking	Homogeneous Brown Fibrous Bound	<1%	Cellulose	100%	Caulk	None Detected
CK02-1 A239469	Caulking	Homogeneous Gray Fibrous Bound	<1%	Cellulose	100%	Caulk	None Detected
CK02-2 A239470	Caulking	Homogeneous Gray Fibrous Bound	<1%	Cellulose	100%	Caulk	None Detected
CK03-1 A239471	Caulking	Heterogeneous Gray,Tan Fibrous Bound	5%	Talc	2% 90%	Paint Caulk	**3% Chrysotile**
CK03-2 A239472	Caulking	Heterogeneous Gray,Tan Fibrous Bound	5%	Talc	2% 90%	Paint Caulk	**3% Chrysotile**
CK04-1 A239473	Caulking	Heterogeneous Cream,Brown Fibrous Bound	<1%	Cellulose	100%	Caulk	None Detected
CK04-2 A239474	Caulking	Heterogeneous Cream,Brown Fibrous Bound	<1%	Cellulose	100%	Caulk	None Detected

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ASBESTOS BULK ANALYSIS

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ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
FTM01-1 A239475A	Floor Tile	Homogeneous White w/,Brown Streaks Fibrous Bound	2%	Cellulose	60% 38%	Vinyl Calc Carb	None Detected
A239475B	Mastic	Homogeneous Tan Fibrous Bound	2%	Cellulose	60% 38%	Mastic Calc Carb	None Detected
FTM01-2 A239476A	Floor Tile	Homogeneous White w/,Brown Streaks Fibrous Bound	2%	Cellulose	60% 38%	Vinyl Calc Carb	None Detected
A239476B	Mastic	Homogeneous Tan Fibrous Bound	2%	Cellulose	60% 38%	Mastic Calc Carb	None Detected
FTM02-1 A239477A	Floor Tile	Homogeneous Gray Fibrous Bound	2%	Cellulose	60% 36%	Rubber Calc Carb	**2% Chrysotile**
A239477B	Mastic	Homogeneous Black Fibrous Bound	2%	Cellulose	60% 38%	Mastic Calc Carb	None Detected
FTM02-2 A239478A	Floor Tile	Homogeneous Green Fibrous Bound	2%	Cellulose	60% 36%	Rubber Calc Carb	**2% Chrysotile**

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ASBESTOS BULK ANALYSIS

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ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
A239478B	Mastic	Homogeneous Black Fibrous Bound	2%	Cellulose	60% 38%	Mastic Calc Carb	None Detected
FTM02-3 A239479A	Floor Tile	Homogeneous Red Fibrous Bound	2%	Cellulose	60% 36%	Rubber Calc Carb	**2% Chrysotile**
A239479B	Mastic	Homogeneous Black Fibrous Bound	2%	Cellulose	60% 38%	Mastic Calc Carb	None Detected
FTM03-1 A239480A	Floor Tile	Homogeneous Brown Fibrous Bound	2%	Cellulose	60% 36%	Rubber Calc Carb	**2% Chrysotile**
A239480B	Mastic	Homogeneous Black Fibrous Bound	2%	Cellulose	60% 38%	Mastic Calc Carb	None Detected
FTM03-2 A239481A	Floor Tile	Homogeneous Brown Fibrous Bound	2%	Cellulose	60% 36%	Rubber Calc Carb	**2% Chrysotile**
A239481B	Mastic	Homogeneous Black Fibrous Bound	2%	Cellulose	60% 38%	Mastic Calc Carb	None Detected

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ASBESTOS BULK ANALYSIS

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Project: 19126 CO State Hwy 119, Rollinsville, CO (Laboratory Building)

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		 Non-Fibrous		ASBESTOS %
FTM04-1 A239482A	Floor Tile	Homogeneous Red Fibrous Bound	2%	Cellulose	60% 38%	Rubber Calc Carb	None Detected
A239482B	Mastic	Homogeneous Black Fibrous Bound	2%	Cellulose	60% 38%	Mastic Calc Carb	None Detected
FTM04-2 A239483A	Floor Tile	Homogeneous Red Fibrous Bound	2%	Cellulose	60% 38%	Rubber Calc Carb	None Detected
A239483B	Mastic	Homogeneous Black Fibrous Bound	2%	Cellulose	60% 38%	Mastic Calc Carb	None Detected
MA01-1 A239484A	Flooring	Homogeneous Black Fibrous Bound	2%	Cellulose	60% 38%	Vinyl Calc Carb	None Detected
A239484B	Mastic	Homogeneous Black Fibrous Bound	2%	Cellulose	60% 38%	Mastic Calc Carb	None Detected
MA01-2 A239485A	Flooring	Homogeneous Black Fibrous Bound	2%	Cellulose	60% 38%	Vinyl Calc Carb	None Detected

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ASBESTOS BULK ANALYSIS

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ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
A239485B	Mastic	Homogeneous Black Fibrous Bound	2%	Cellulose	60% 38%	Mastic Calc Carb	None Detected
MA02-1 A239486	Drywall/Joint Compound	Heterogeneous White,Cream Fibrous Bound	10%	Cellulose	5% 15% 70%	Paint Calc Carb Gypsum	<1% Chrysotile
Lab Notes: 2% Chrysotile found in Joint Compound. Sample contains 10% Joint Compound, composite contains 0.2% Chrysotile overall.							
MA02-2 A239487	Drywall/Joint Compound	Heterogeneous White,Cream Fibrous Bound	10%	Cellulose	5% 15% 70%	Paint Calc Carb Gypsum	<1% Chrysotile
Lab Notes: 2% Chrysotile found in Joint Compound. Sample contains 10% Joint Compound, composite contains 0.2% Chrysotile overall.							
PS01-1 A239488	Sealant	Heterogeneous White Fibrous Bound	5%	Cellulose	95%	Binder	None Detected
PS01-2 A239489	Sealant	Heterogeneous White Fibrous Bound	5%	Cellulose	95%	Binder	None Detected
PS02-1 A239490	Sealant	Heterogeneous White Fibrous Bound	5%	Cellulose	95%	Binder	None Detected

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ASBESTOS BULK ANALYSIS

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ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
PS02-2 A239491	Sealant	Heterogeneous White Fibrous Bound	5%	Cellulose	95%	Binder	None Detected
PS03-1 A239492	Sealant	Heterogeneous White Fibrous Bound	5%	Cellulose	95%	Binder	None Detected
PS03-2 A239493	Sealant	Heterogeneous White Fibrous Bound	5%	Cellulose	95%	Binder	None Detected
RF01-1 Layer 1 A239493.1	Roofing	Homogeneous Silver Fibrous Bound	2%	Cellulose	93%	Binder	**5% Chrysotile**
Layer 2 A239493.1	Roofing	Homogeneous Black Fibrous Bound	2%	Cellulose	88%	Tar	**10% Chrysotile**
RF01-2 Layer 1 A239493.2	Roofing	Homogeneous Silver Fibrous Bound	2%	Cellulose	93%	Binder	**5% Chrysotile**
Layer 2 A239493.2	Roofing	Homogeneous Black Fibrous Bound	2%	Cellulose	88%	Tar	**10% Chrysotile**

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ASBESTOS BULK ANALYSIS

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ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		 Non-Fibrous		ASBESTOS %
RT01-1 Layer 1 A239493.3	Roofing	Homogeneous Silver Fibrous Bound	2%	Cellulose	93%	Binder	**5% Chrysotile**
Layer 2 A239493.3	Roofing	Heterogeneous Black Fibrous Bound	2%	Cellulose	98%	Tar	None Detected
RT01-2 Layer 1 A239493.4	Roofing	Homogeneous Silver Fibrous Bound	2%	Cellulose	93%	Binder	**5% Chrysotile**
Layer 2 A239493.4	Roofing	Heterogeneous Black Fibrous Bound	2%	Cellulose	98%	Tar	None Detected
SVF01-1 A239494A	Sheet Vinyl Flooring	Heterogeneous Tan Fibrous Bound	25%	Cellulose	35% 25% 15%	Vinyl Binder Tar	None Detected
A239494B	Mastic	Homogeneous Tan Fibrous Bound	2%	Cellulose	60% 38%	Mastic Calc Carb	None Detected
SVF01-2 A239495A	Sheet Vinyl Flooring	Heterogeneous Tan Fibrous Bound	25%	Cellulose	35% 25% 15%	Vinyl Binder Tar	None Detected

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ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: American Veteran Environmental, LLC
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Bennett, CO 80102

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ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		 Non-Fibrous		ASBESTOS %
A239495B	Mastic	Homogeneous Tan Fibrous Bound	2%	Cellulose	60% 38%	Mastic Calc Carb	None Detected
SVW01-1 A239496A	Sheet Vinyl Wall Covering	Heterogeneous Cream Fibrous Bound	35%	Cellulose	35% 30%	Vinyl Binder	None Detected
A239496B	Mastic	Homogeneous Brown Fibrous Bound	2%	Cellulose	60% 38%	Mastic Calc Carb	None Detected
A239496C	Drywall	Heterogeneous White Fibrous Bound	10%	Cellulose	90%	Gypsum	None Detected
SVW01-2 A239497A	Sheet Vinyl Wall Covering	Heterogeneous Cream Fibrous Bound	35%	Cellulose	35% 30%	Vinyl Binder	None Detected
A239497B	Mastic	Homogeneous Brown Fibrous Bound	2%	Cellulose	60% 38%	Mastic Calc Carb	None Detected
A239497C	Drywall	Heterogeneous White Fibrous Bound	10%	Cellulose	90%	Gypsum	None Detected

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ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: American Veteran Environmental, LLC
13373 N. Harback Rd.
Bennett, CO 80102

Lab Code: A1917520
Date Received: 09-25-19
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Date Reported: 09-30-19

Project: 19126 CO State Hwy 119, Rollinsville, CO (Laboratory Building)

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
TS01-1	Texture	Heterogeneous	2%	Cellulose	66%	Calc Carb	**2% Chrysotile**
Layer 1		Cream			20%	Binder	
A239498		Fibrous			10%	Vermiculite	
		Bound					
Layer 2	Drywall	Heterogeneous	10%	Cellulose	90%	Gypsum	None Detected
A239498		White					
		Fibrous					
		Bound					
TS01-2	Texture	Heterogeneous	2%	Cellulose	66%	Calc Carb	**2% Chrysotile**
Layer 1		Cream			20%	Binder	
A239499		Fibrous			10%	Vermiculite	
		Bound					
Layer 2	Drywall	Heterogeneous	10%	Cellulose	90%	Gypsum	None Detected
A239499		White					
		Fibrous					
		Bound					
TS01-3	Texture	Heterogeneous	2%	Cellulose	66%	Calc Carb	**2% Chrysotile**
Layer 1		Cream			20%	Binder	
A239500		Fibrous			10%	Vermiculite	
		Bound					
Layer 2	Drywall	Heterogeneous	10%	Cellulose	90%	Gypsum	None Detected
A239500		White					
		Fibrous					
		Bound					
TS02-1	Texture	Heterogeneous	2%	Cellulose	66%	Calc Carb	**2% Chrysotile**
Layer 1		Cream			20%	Binder	
A239501		Fibrous			10%	Vermiculite	
		Bound					

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ASBESTOS BULK ANALYSIS

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Client: American Veteran Environmental, LLC
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Bennett, CO 80102

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ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		 Non-Fibrous		ASBESTOS %
Layer 2 A239501	Drywall	Heterogeneous White Fibrous Bound	10%	Cellulose	90%	Gypsum	None Detected
TS02-2 Layer 1 A239502	Texture	Heterogeneous Cream Fibrous Bound	2%	Cellulose	66% 20% 10%	Calc Carb Binder Vermiculite	**2% Chrysotile**
Layer 2 A239502	Drywall	Heterogeneous White Fibrous Bound	10%	Cellulose	90%	Gypsum	None Detected
TS02-3 Layer 1 A239503	Texture	Heterogeneous Cream Fibrous Bound	2%	Cellulose	66% 20% 10%	Calc Carb Binder Vermiculite	**2% Chrysotile**
Layer 2 A239503	Drywall	Heterogeneous White Fibrous Bound	10%	Cellulose	90%	Gypsum	None Detected
WG01-1 A239504	Window Glazing	Heterogeneous Gray Fibrous Bound	<1%	Cellulose	2% 98%	Paint Binder	None Detected
WG01-2 A239505	Window Glazing	Heterogeneous Gray Fibrous Bound	<1%	Cellulose	2% 98%	Paint Binder	None Detected

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LEGEND:
Non-Anth = Non-Asbestiform Anthophyllite
Non-Trem = Non-Asbestiform Tremolite
Calc Carb = Calcium Carbonate

METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

REPORTING LIMIT: <1% by visual estimation

REPORTING LIMIT FOR POINT COUNTS: 0.25% by 400 Points or 0.1% by 1,000 Points

REGULATORY LIMIT: >1% by weight

Due to the limitations of the EPA 600 method, nonfriable organically bound materials (NOBs) such as vinyl floor tiles can be difficult to analyze via polarized light microscopy (PLM). EPA recommends that all NOBs analyzed by PLM, and found not to contain asbestos, be further analyzed by Transmission Electron Microscopy (TEM). Please note that PLM analysis of dust and soil samples for asbestos is not covered under NVLAP accreditation. *Estimated measurement of uncertainty is available on request.*

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

Information provided by customer includes customer sample ID and sample description.

ANALYST: Shilpa Ladekar

APPROVED BY: Tianbao Bai, Ph.D., CIH
Laboratory Director

AMENDED due to Login Typographical Error - Incorrect Project Name Client Wishes to Change Specifications for Analysis - Other Changes to

NVLAP TESTING
NVLAP LAB CODE 101768-0

ASBESTOS CHAIN OF CUSTODY

CEI LABS

730 SE Maynard Road, Cary, NC 27511
Tel: 866-481-1412; Fax: 919-481-1442

LAB USE ONLY:
CEI Lab Code:
CEI Lab I.D. Range:

COMPANY INFORMATION	PROJECT INFORMATION
CEI CLIENT #: 28520	Job Contact: PAULA BOWERS
Company: American Veteran Environmental, LLC	Email / Tel:303-265-1710
Address: 13373 N. Harback Rd.	Project Name: 19126 Co State Hwy 119
Bennett, CO 80102	Project ID#: Rollinsville, CO
Email: srolf@avenv.com;pbowers@avenv.com	PO #: (Laboratory Bldg)
Tel:303-265-1710 Fax:	STATE SAMPLES COLLECTED IN:COLO

IF TAT IS NOT MARKED STANDARD 3 DAY TAT APPLIES.

ASBESTOS	METHOD	TURN AROUND TIME					
		4 HR	8 HR	24 HR	2 DAY	3 DAY	5 DAY
PLM BULK	EPA 600	☐	☐	☐	☐	☒	☐
PLM POINT COUNT (400)	EPA 600	☐	☐	☐	☐	☐	☐
PLM POINT COUNT (1000)	EPA 600	☐	☐	☐	☐	☐	☐
PLM GRAV w POINT COUNT	EPA 600		☐	☐	☐	☐	☐
PLM BULK	CARB 435		☐	☐	☐	☐	☐
PCM AIR	NIOSH 7400	☐	☐	☐	☐	☐	☐
TEM AIR	EPA AHERA	☐	☐	☐	☐	☐	☐
TEM AIR	NIOSH 7402	☐	☐	☐	☐	☐	☐
TEM AIR	ISO 10312	☐	☐	☐	☐	☐	☐
TEM AIR	ASTM 6281-09	☐	☐	☐	☐	☐	☐
TEM BULK	CHATFIELD		☐	☐	☐	☐	☐
TEM DUST WIPE	ASTM D6480-05	☐	☐	☐	☐	☐	☐
TEM DUST MICROVAC	ASTM D5755-09	☐	☐	☐	☐	☐	☐
TEM SOIL	ASTM D7521-13			☐	☐	☐	☐
TEM VERMICULITE	CINCINNATI METHOD			☐	☐	☐	☐
OTHER:		☐	☐	☐	☐	☐	☐

REMARKS / SPECIAL INSTRUCTIONS:

Bldg 1 of 3

☐ Accept Samples
☐ Reject Samples

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	9/24/19		

Samples will be disposed of 30 days after analysis

Page 1 of 4

ASBESTOS
SAMPLING FORM

CEI LABS

COMPANY CONTACT INFORMATION	
Company:AVENV	Job Contact:PAULA BOWERS
19126 CO State Hwy 119 (Laboratory Bldg)	
Project ID #: Rollinsville, CO	Tel:303-265-1710

SAMPLE ID#	DESCRIPTION / LOCATION	VOLUME / AREA	TEST	
BBA01-1			PLM [X]	TEM [ ]
-2			PLM [X]	TEM [ ]
BBA02-1			PLM [ ]	TEM [ ]
-2			PLM [ ]	TEM [ ]
BBA03-1			PLM [ ]	TEM [ ]
-2			PLM [ ]	TEM [ ]
-3			PLM [ ]	TEM [ ]
BBA04-1			PLM [ ]	TEM [ ]
-2			PLM [ ]	TEM [ ]
CDW01-1			PLM [ ]	TEM [ ]
-2			PLM [ ]	TEM [ ]
-3			PLM [ ]	TEM [ ]
CDW02-1			PLM [ ]	TEM [ ]
-2			PLM [ ]	TEM [ ]
CDW03-1			PLM [ ]	TEM [ ]
-2			PLM [ ]	TEM [ ]
CDW04-1			PLM [ ]	TEM [ ]
-2			PLM [ ]	TEM [ ]
CK01-1			PLM [ ]	TEM [ ]
-2			PLM [ ]	TEM [ ]
CK02-1			PLM [ ]	TEM [ ]
-2			PLM [ ]	TEM [ ]
CK03-1			PLM [ ]	TEM [ ]
-2			PLM [ ]	TEM [ ]
CK04-1			PLM [ ]	TEM [ ]
-2			PLM [ ]	TEM [ ]
FTM01-1			PLM [ ]	TEM [ ]
-2			PLM [ ]	TEM [ ]

2/4

ASBESTOS
SAMPLING FORM

CEI LABS

COMPANY CONTACT INFORMATION	
Company:AVENV	Job Contact:PAULA BOWERS
19124 Co State Hwy 119	
Project ID #: Rollinsville, CO	Tel:303-265-1710

SAMPLE ID#	DESCRIPTION/LOCATION	VOLUME/ AREA	TEST	
FTM02-1			PLM ☐	TEM ☐
1 -2			PLM ☐	TEM ☐
1 -3			PLM ☐	TEM ☐
FTM03-1			PLM ☐	TEM ☐
-2			PLM ☐	TEM ☐
FTM04-1			PLM ☐	TEM ☐
-2			PLM ☐	TEM ☐
MA01-1			PLM ☐	TEM ☐
-2			PLM ☐	TEM ☐
MA02-1			PLM ☐	TEM ☐
-2			PLM ☐	TEM ☐
PS01-1			PLM ☐	TEM ☐
-2			PLM ☐	TEM ☐
PS02-1			PLM ☐	TEM ☐
-2			PLM ☐	TEM ☐
PS03-1			PLM ☐	TEM ☐
-2			PLM ☐	TEM ☐
RF01-1			PLM ☐	TEM ☐
-2			PLM ☐	TEM ☐
RT01-1			PLM ☐	TEM ☐
-2			PLM ☐	TEM ☐
SVF01-1			PLM ☐	TEM ☐
-2			PLM ☐	TEM ☐
SVW01-1			PLM ☐	TEM ☐
-2			PLM ☐	TEM ☐
TS01-1			PLM ☐	TEM ☐
1 -2			PLM ☐	TEM ☐
1 -3			PLM ☐	TEM ☐

3/4

ASBESTOS SAMPLING FORM

CEI LABS

COMPANY CONTACT INFORMATION	
Company:AVENV	Job Contact:PAULA BOWERS
19126 Co State Hwy 119	
Project ID #: Rollinsville, CO	Tel:303-265-1710

SAMPLE ID#	DESCRIPTION / LOCATION	VOLUME/ AREA	TEST	
TS02-1			PLM x	TEM
-2			PLM x	TEM
-3			PLM	TEM
WG01-1			PLM	TEM
-2			PLM	TEM
			PLM	TEM
			PLM	TEM
			PLM	TEM
			PLM	TEM
			PLM	TEM
			PLM	TEM
			PLM	TEM
			PLM	TEM
			PLM	TEM
			PLM	TEM
			PLM	TEM
61			PLM	TEM
			PLM	TEM
			PLM	TEM
			PLM	TEM
			PLM	TEM
			PLM	TEM
			PLM	TEM
			PLM	TEM
			PLM	TEM
			PLM	TEM
			PLM	TEM
			PLM	TEM

4/4

Appendix D

Photos

Asbestos Containing Materials

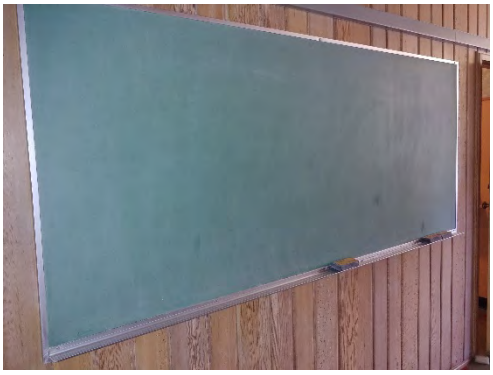
(Laboratory Building)


Composite drywall w/joint compound walls, ceilings throughout all 3 floors (CDW01, 02, 03, 04) and MA02 - walls w/wallpaper


FTM02- 9x9 floor tile rose, gray and green Throughout 2nd floor rooms (tile only)

FTM03- 9x9 floor tile brown

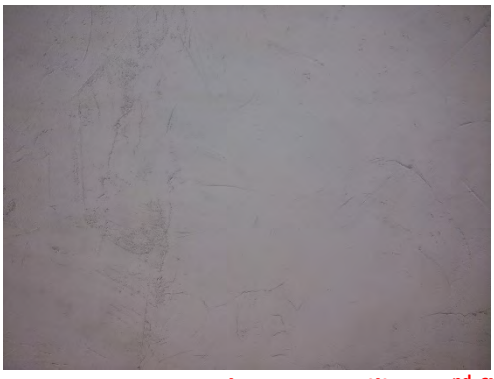
FDM01-Fire door material-ASSUME



OT01- ASSUME all Chalkboards

CK03- exterior Storage Rm, door frame

TS01- Trowel texture - ceilings 2nd fl;



TS02 Heavy Trowel texture-ceilings 2nd fl

RF01- Roof Flashing

RT01-Roofing Tar

American Veteran Environmental LLC
13373 N. Harback Rd. Bennett, CO 80102 / Denver Office: 7100 Broadway Suite 3A Denver, CO 80221
303.901.9835 / www.avenv.com

BUILDING 2
Cottage

American Veteran Environmental LLC
13373 N. Harback Rd. Bennett, CO 80102 / Denver Office: 7100 Broadway Suite 3A Denver, CO 80221
303.901.9835 / www.avenv.com

Appendix A

Homogeneous Materials Table

(Cottage)

APPENDIX A. HOMOGENEOUS MATERIALS TABLE NOAA Fritz Peak Observatory (Cottage) 19126 CO State Highway 119 Rollinsville, CO					
HA	**Description**	**Estimated Quantity**	**Locations**	**Friable Non-Friable Category**	**Hazard Ranking & Disturbance Potential**
CDW05	Composite drywall w/joint compound painted	N/A	Walls/ceilings	NF-Misc. Category II	Good Condition-Low-5
CK05	Gray caulking on metal windows	3 SF	Metal frame windows	NF-Misc. Category I	Good Condition-Low-5
FTM05	12x12 off white floor tile tan and green specs, tan mastic	N/A	Throughout interior	NF-Misc. Category I	N/A
RSG01	Asphalt composition shingle, brown spec	N/A	Exterior – roof	NF-Misc. Category I	N/A
TS03	Heavy orange peel texture on drywall	1,000 SF	Interior walls/ceilings	Friable Surfacing	Good Condition-Low-5

Friable (F): *material that be crumbled, pulverized, or reduced to powder with hand pressure when dry*
Non-Friable (NF): *material that cannot be crumbled, pulverized, or reduced to powder with hand pressure when dry*

Thermal Systems Insulation (TSI): *used to control heat transfer and or condensation on HVAC, hot and cold water or other mechanical systems etc.*

Surfacing Material (SM): *material that is sprayed or troweled onto surfaces such as fire proofing on structural members, plaster for acoustical, decorative, etc.*

Miscellaneous Material (Misc): *all other materials including taping mud, floor tile mastic, stucco, leveling compound, and hard plasters.*

Category I non-friable ACM: *resilient floor coverings, asphalt roofing products, packings, gaskets, or caulking containing greater than 1% asbestos*
Category II non-friable ACM*: any material that is not Category1 that contains greater than 1% asbestos*

Asbestos Containing Materials are Listed in Red.
Materials Containing 1% or less are Listed in Blue.

Hazard Ranking:

1*= damaged or significantly damaged Thermal Systems Insulation (TSI) ACM;*
2*=damaged friable surfacing ACM;*
3*=significantly damaged friable surfacing ACM;*
4*=damaged or significantly damaged friable miscellaneous ACM;*
5*=ACBM with potential for damage;*
6*=ACBM with potential for significant damage;*
7*=any remaining friable ACBM or suspected ACBM.*

Disturbance Potential:
Low *= the material may be accessible but is not likely to be damaged under most circumstances.*

Moderate *= the material is accessible and is likely to suffer limited damage over time.*

High *= the material is friable and/or already damaged, is accessible, and there is specific reason to believe the material will receive a large amount of damage in the foreseeable future.*

Condition:
Good *= the material had no visible damage, or extremely minor damage or surface marring (i.e., a room of floor tile has only four or five with small corners broken from the tile.*

Damaged *= the material had visible damage evenly distributed over less than 10% of its surface or localized over less than 25% of its surface.*

Significantly damaged *= the material had visible damage that is evenly distributed over 10% or more of its surface or localized over 25% or more or its surface.*

Asbestos Containing Materials are Listed in Red.
Materials Containing 1% or less are Listed in Blue.

Appendix B

Summary of Bulk Samples & drawing

(Cottage)

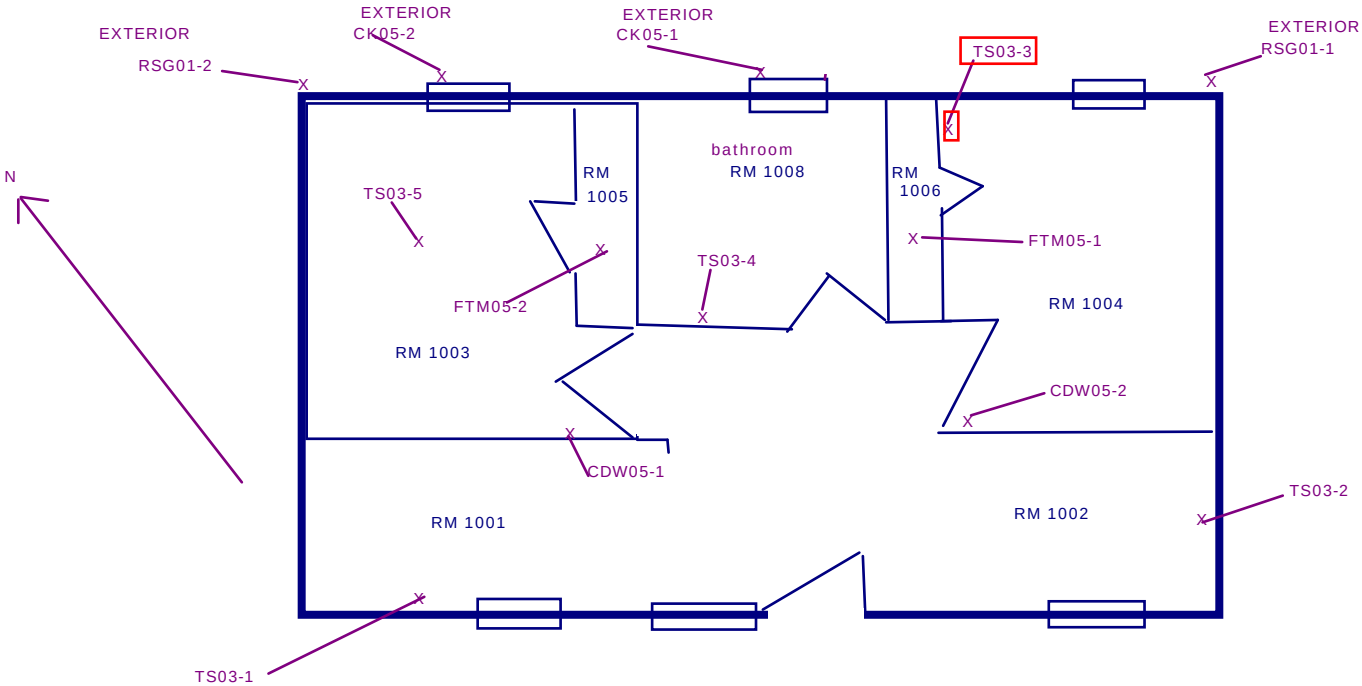
APPENDIX B. Asbestos Bulk Sample Log

Project Name:	**NOAA Fritz Peak Observatory**
Project Address:	**19126 CO State Highway 119 Rollinsville, CO**
Contact / Client:	**EA Engineering**
Inspection date & Lab COC #	**9/23/19 – 9/24/19 CEI A1917520Av2**

Building:	**SFRD- Cottage**
Work Area:	***Interior/Exterior***
Asbestos:	***Yes***
Accessibility To Building Occupants?	***Unoccupied***

Sample No.	*Description of Material Sampled*	*Hazard Ranking*	*AHERA Rating*	*Asbestos Laboratory Results*	*Sample location*
CDW05-1	**Composite drywall w/ joint compound, painted**	**Good Low-5**	**NF Misc**	**<1% Chrysotile**	**SW room east wall RM 104**
CDW05-2	**Composite drywall w/ joint compound, painted**	**Good Low-5**	**NF Misc**	**<1% Chrysotile**	**SE room east corner wall RM 103**
CK05-1	Gray caulking on metal windows	N/A	N/A	None detected	East window of E. center room RM 1008/Bathroom
CK05-2	Gray caulking on metal windows	N/A	N/A	None detected	North window of N room Rm 1003
FTM05-1	12x12 off-white floor tile w/tan and green specs	N/A	N/A	None detected	Closet SE room RM 1006
FTM05-2	12x12 off-white floor tile w/tan and green specs	N/A	N/A	None detected	Closet north room RM 1005
RSG01-1	Asphalt compositing shingle brown spec	N/A	N/A	None detected	Exterior SE corner of roof
RSG01-2	Asphalt compositing shingle brown spec	N/A	N/A	None detected	Exterior- NE corner of roof
TS03-1	Heavy orange peel texture on drywall	N/A	N/A	None detected	Living room west wall RM 1001
TS03-2	Heavy orange peel texture on drywall	N/A	N/A	None detected	Living room south wall RM 1002
TS03-3	**Heavy orange peel texture on drywall**	**Good Low-5**	**Friable Surfacing**	**2% Chrysotile**	**SE room north wall RM 1004**
TS03-4	Heavy orange peel texture on drywall	N/A	N/A	None detected	Center east room west wall
TS03-5	Heavy orange peel texture on drywall	N/A	N/A	None detected	North room ceiling

N/A = not applicable



COTTAGE ASBESTOS INSPECTION SAMPLE LOCATIONS

= ACM

Appendix C

Laboratory Results

(Cottage)

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October 3, 2019

American Veteran Environmental, LLC
13373 N. Harback Rd.
Bennett, CO 80102

CLIENT PROJECT: 19126 CO State Hwy 119, Rollinsville, CO (Cottage)
CEI LAB CODE: A1917520A

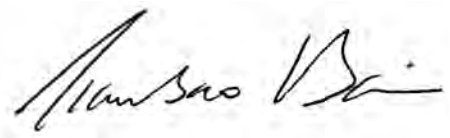
Dear Customer:

Enclosed are asbestos analysis results for PLM Bulk samples received at our laboratory on September 25, 2019. The samples were analyzed for asbestos using polarizing light microscopy (PLM) per the EPA 600 Method.

Sample results containing >1% asbestos are considered asbestos-containing materials (ACMs) per EPA regulatory requirements. The detection limit for the EPA 600 Method is <1% asbestos by weight as determined by visual estimation.

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

Kind Regards,



Tianbao Bai, Ph.D., CIH
Laboratory Director

NVLAP TESTING
NVLAP LAB CODE 101768-0

AMENDED

ASBESTOS ANALYTICAL REPORT
By: Polarized Light Microscopy

Prepared for

American Veteran Environmental, LLC

CLIENT PROJECT: 19126 CO State Hwy 119, Rollinsville, CO (Cottage)

LAB CODE: A1917520A

TEST METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

REPORT DATE: 10/01/19

TOTAL SAMPLES ANALYZED: 13

SAMPLES >1% ASBESTOS: 1

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AMENDED

Asbestos Report Summary

By: POLARIZING LIGHT MICROSCOPY

PROJECT: 19126 CO State Hwy 119, Rollinsville, CO **LAB CODE:** A1917520A
(Cottage)

METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
CDW05-1		A239506	White,Yellow	Drywall/Joint Compound	Chrysotile <1%
CDW05-2		A239507	White,Yellow	Drywall/Joint Compound	Chrysotile <1%
CK05-1		A239508	Gray	Window Caulking	None Detected
CK05-2		A239509	Gray	Window Caulking	None Detected
FTM05-1		A239510A	White w/,Green Streaks	Floor Tile	None Detected
		A239510B	Tan	Mastic	None Detected
FTM05-2		A239511A	White w/,Green Streaks	Floor Tile	None Detected
		A239511B	Tan	Mastic	None Detected
RSG01-1		A239514	Brown	Roof Shingle	None Detected
RSG01-2		A239515	Brown	Roof Shingle	None Detected
TS03-1	Layer 1	A239518	White	Texture	None Detected
	Layer 2	A239518	Green	Texture	None Detected
	Layer 3	A239518	White	Drywall	None Detected
TS03-2	Layer 1	A239519	White	Texture	None Detected
	Layer 2	A239519	Green	Texture	None Detected
	Layer 3	A239519	White	Drywall	None Detected
TS03-3	Layer 1	A239520	White	Texture	None Detected
	Layer 2	A239520	Yellow	Texture	Chrysotile 2%
	Layer 3	A239520	White	Drywall	None Detected
TS03-4	Layer 1	A239521	White	Texture	None Detected
	Layer 2	A239521	White	Drywall	None Detected
TS03-5	Layer 1	A239522	White	Texture	None Detected
	Layer 2	A239522	White	Drywall	None Detected

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AMENDED

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: American Veteran Environmental, LLC
13373 N. Harback Rd.
Bennett, CO 80102

Lab Code: A1917520A
Date Received: 09-25-19
Date Analyzed: 09-30-19
Date Reported: 10-01-19

Project: 19126 CO State Hwy 119, Rollinsville, CO (Cottage)

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
CDW05-1 A239506	Drywall/Joint Compound	Heterogeneous White,Yellow Fibrous Bound	10%	Cellulose	5% 15% 70%	Paint Calc Carb Gypsum	<1% Chrysotile
Lab Notes: 2% Chrysotile found in Joint Compound. Sample contains 10% Joint Compound, composite contains 0.2% Chrysotile overall.							
CDW05-2 A239507	Drywall/Joint Compound	Heterogeneous White,Yellow Fibrous Bound	10%	Cellulose	5% 15% 70%	Paint Calc Carb Gypsum	<1% Chrysotile
Lab Notes: 2% Chrysotile found in Joint Compound. Sample contains 10% Joint Compound, composite contains 0.2% Chrysotile overall.							
CK05-1 A239508	Window Caulking	Homogeneous Gray Fibrous Bound	<1%	Cellulose	100%	Caulk	None Detected
CK05-2 A239509	Window Caulking	Homogeneous Gray Fibrous Bound	<1%	Cellulose	100%	Caulk	None Detected
FTM05-1 A239510A	Floor Tile	Homogeneous White w/,Green Streaks Fibrous Bound	2%	Cellulose	60% 38%	Vinyl Calc Carb	None Detected
A239510B	Mastic	Homogeneous Tan Fibrous Bound	2%	Cellulose	60% 38%	Mastic Calc Carb	None Detected

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AMENDED

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: American Veteran Environmental, LLC
13373 N. Harback Rd.
Bennett, CO 80102

Lab Code: A1917520A
Date Received: 09-25-19
Date Analyzed: 09-30-19
Date Reported: 10-01-19

Project: 19126 CO State Hwy 119, Rollinsville, CO (Cottage)

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
FTM05-2 A239511A	Floor Tile	Homogeneous White w/,Green Streaks Fibrous Bound	2%	Cellulose	60% 38%	Vinyl Calc Carb	None Detected
A239511B	Mastic	Homogeneous Tan Fibrous Bound	2%	Cellulose	60% 38%	Mastic Calc Carb	None Detected
RSG01-1 A239514	Roof Shingle	Heterogeneous Brown Fibrous Bound	25%	Fiberglass	10% 60% 5%	Gravel Tar Silicates	None Detected
RSG01-2 A239515	Roof Shingle	Heterogeneous Brown Fibrous Bound	25%	Fiberglass	10% 60% 5%	Gravel Tar Silicates	None Detected
TS03-1 Layer 1 A239518	Texture	Heterogeneous White Fibrous Bound	2%	Cellulose	5% 73% 20%	Paint Calc Carb Binder	None Detected
Layer 2 A239518	Texture	Heterogeneous Green Fibrous Bound	2%	Cellulose	5% 73% 20%	Paint Calc Carb Binder	None Detected
Layer 3 A239518	Drywall	Heterogeneous White Fibrous Bound	10%	Cellulose	90%	Gypsum	None Detected

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AMENDED

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: American Veteran Environmental, LLC
13373 N. Harback Rd.
Bennett, CO 80102

Lab Code: A1917520A
Date Received: 09-25-19
Date Analyzed: 09-30-19
Date Reported: 10-01-19

Project: 19126 CO State Hwy 119, Rollinsville, CO (Cottage)

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
TS03-2	Texture	Heterogeneous	2%	Cellulose	5%	Paint	None Detected
Layer 1		White			73%	Calc Carb	
A239519		Fibrous			20%	Binder	
		Bound					
Layer 2	Texture	Heterogeneous	2%	Cellulose	5%	Paint	None Detected
A239519		Green			73%	Calc Carb	
		Fibrous			20%	Binder	
		Bound					
Layer 3	Drywall	Heterogeneous	10%	Cellulose	90%	Gypsum	None Detected
A239519		White					
		Fibrous					
		Bound					
TS03-3	Texture	Heterogeneous	2%	Cellulose	5%	Paint	None Detected
Layer 1		White			73%	Calc Carb	
A239520		Fibrous			20%	Binder	
		Bound					
Layer 2	Texture	Heterogeneous	2%	Cellulose	66%	Calc Carb	**2% Chrysotile**
A239520		Yellow			20%	Binder	
		Fibrous			10%	Vermiculite	
		Bound					
Layer 3	Drywall	Heterogeneous	10%	Cellulose	90%	Gypsum	None Detected
A239520		White					
		Fibrous					
		Bound					
TS03-4	Texture	Heterogeneous	2%	Cellulose	5%	Paint	None Detected
Layer 1		White			73%	Calc Carb	
A239521		Fibrous			20%	Binder	
		Bound					

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AMENDED

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: American Veteran Environmental, LLC
13373 N. Harback Rd.
Bennett, CO 80102

Lab Code: A1917520A
Date Received: 09-25-19
Date Analyzed: 09-30-19
Date Reported: 10-01-19

Project: 19126 CO State Hwy 119, Rollinsville, CO (Cottage)

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		NON-ASBESTOS COMPONENTS Non-Fibrous		ASBESTOS %
Layer 2 A239521	Drywall	Heterogeneous White Fibrous Bound	10%	Cellulose	90%	Gypsum	None Detected
TS03-5 Layer 1 A239522	Texture	Heterogeneous White Fibrous Bound	2%	Cellulose	5% 73% 20%	Paint Calc Carb Binder	None Detected
Layer 2 A239522	Drywall	Heterogeneous White Fibrous Bound	10%	Cellulose	90%	Gypsum	None Detected

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LEGEND: Non-Anth = Non-Asbestiform Anthophyllite
Non-Trem = Non-Asbestiform Tremolite
Calc Carb = Calcium Carbonate

METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

REPORTING LIMIT: <1% by visual estimation

REPORTING LIMIT FOR POINT COUNTS: 0.25% by 400 Points or 0.1% by 1,000 Points

REGULATORY LIMIT: >1% by weight

Due to the limitations of the EPA 600 method, nonfriable organically bound materials (NOBs) such as vinyl floor tiles can be difficult to analyze via polarized light microscopy (PLM). EPA recommends that all NOBs analyzed by PLM, and found not to contain asbestos, be further analyzed by Transmission Electron Microscopy (TEM). Please note that PLM analysis of dust and soil samples for asbestos is not covered under NVLAP accreditation. *Estimated measurement of uncertainty is available on request.*

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Information provided by customer includes customer sample ID and sample description.

ANALYST: Shilpa Ladekar

APPROVED BY: Tianbao Bai, Ph.D., CIH
Laboratory Director

AMENDED due to Client Wishes to Change Specifications for Analysis - Other Changes to Analysis Specifications

NVLAP TESTING
NVLAP LAB CODE 101768-0

ASBESTOS CHAIN OF CUSTODY

CEI LABS
730 SE Maynard Road, Cary, NC 27511
Tel: 866-481-1412; Fax: 919-481-1442

LAB USE ONLY:
CEI Lab Code:
CEI Lab I.D. Range:

COMPANY INFORMATION	PROJECT INFORMATION
CEI CLIENT #: 28520	Job Contact: PAULA BOWERS
Company: American Veteran Environmental, LLC	Email / Tel:303-265-1710
Address: 13373 N. Harback Rd.	Project Name: 19126 CO State Hwy 119
Bennett, CO 80102	Project ID#: (Cottage) Rollinsville, CO
Email: srolf@avenv.com;pbowers@avenv.com	PO #:
Tel:303-265-1710 Fax:	STATE SAMPLES COLLECTED IN:COLO

IF TAT IS NOT MARKED STANDARD 3 DAY TAT APPLIES.

ASBESTOS	METHOD	TURN AROUND TIME					
		4 HR	8 HR	24 HR	2 DAY	3 DAY	5 DAY
PLM BULK	EPA 600	☐	☐	☐	☐	☒	☐
PLM POINT COUNT (400)	EPA 600	☐	☐	☐	☐	☐	☐
PLM POINT COUNT (1000)	EPA 600	☐	☐	☐	☐	☐	☐
PLM GRAV w POINT COUNT	EPA 600		☐	☐	☐	☐	☐
PLM BULK	CARB 435		☐	☐	☐	☐	☐
PCM AIR	NIOSH 7400	☐	☐	☐	☐	☐	☐
TEM AIR	EPA AHERA	☐	☐	☐	☐	☐	☐
TEM AIR	NIOSH 7402	☐	☐	☐	☐	☐	☐
TEM AIR	ISO 10312	☐	☐	☐	☐	☐	☐
TEM AIR	ASTM 6281-09	☐	☐	☐	☐	☐	☐
TEM BULK	CHATFIELD		☐	☐	☐	☐	☐
TEM DUST WIPE	ASTM D6480-05	☐	☐	☐	☐	☐	☐
TEM DUST MICROVAC	ASTM D5755-09	☐	☐	☐	☐	☐	☐
TEM SOIL	ASTM D7521-13			☐	☐	☐	☐
TEM VERMICULITE	CINCINNATI METHOD			☐	☐	☐	☐
OTHER:		☐	☐	☐	☐	☐	☐

REMARKS / SPECIAL INSTRUCTIONS:
Building 2 of 3

☐ Accept Samples
☐ Reject Samples

Relinquished By:	Date/Time	Received By:	Date/Time
	9/24/19		

Samples will be disposed of 30 days after analysis

Page _____ of _____

ASBESTOS SAMPLING FORM

CEI LABS

COMPANY CONTACT INFORMATION	
Company:AVENV	Job Contact:PAULA BOWERS
19126 CO State Hwy 119 (Cottage)	
Project ID #: Rollinsville, CO	Tel:303-265-1710

SAMPLE ID#	DESCRIPTION / LOCATION	VOLUME/ AREA	TEST	
CDW05-1			PLM [x]	TEM [ ]
-2			PLM [x]	TEM [ ]
CK05-1			PLM [ ]	TEM [ ]
-2			PLM [ ]	TEM [ ]
FTM05-1			PLM [ ]	TEM [ ]
-2			PLM [ ]	TEM [ ]
RSG01-1			PLM [ ]	TEM [ ]
-2			PLM [ ]	TEM [ ]
TS03-1			PLM [ ]	TEM [ ]
-2			PLM [ ]	TEM [ ]
-3			PLM [ ]	TEM [ ]
-4			PLM [ ]	TEM [ ]
-5			PLM [ ]	TEM [ ]
			PLM [ ]	TEM [ ]
			PLM [ ]	TEM [ ]
			PLM [ ]	TEM [ ]
			PLM [ ]	TEM [ ]
			PLM [ ]	TEM [ ]
13			PLM [ ]	TEM [ ]
			PLM [ ]	TEM [ ]
			PLM [ ]	TEM [ ]
			PLM [ ]	TEM [ ]
			PLM [ ]	TEM [ ]
			PLM [ ]	TEM [ ]
			PLM [ ]	TEM [ ]
			PLM [ ]	TEM [ ]
			PLM [ ]	TEM [ ]
			PLM [ ]	TEM [ ]
			PLM [ ]	TEM [ ]
			PLM [ ]	TEM [ ]
			PLM [ ]	TEM [ ]
			PLM [ ]	TEM [ ]

Appendix D

Photos

Asbestos Containing Materials

(Cottage)

TS03 – Texture on walls/ceilings

BUILDING 3
Observatory Shed

American Veteran Environmental LLC
13373 N. Harback Rd. Bennett, CO 80102 / Denver Office: 7100 Broadway Suite 3A Denver, CO 80221
303.901.9835 / www.avenv.com

Appendix A

Homogeneous Materials Table

(Observatory Shed)

American Veteran Environmental LLC
13373 N. Harback Rd. Bennett, CO 80102 / Denver Office: 7100 Broadway Suite 3A Denver, CO 80221
303.901.9835 / www.avenv.com

APPENDIX A. HOMOGENEOUS MATERIALS TABLE NOAA Fritz Peak Observatory (Observatory Shed) 19126 CO State Highway 119 Rollinsville, CO					
HA	**Description**	**Estimated Quantity**	**Locations**	**Friable Non-Friable Category**	**Hazard Ranking & Disturbance Potential**
CB01	Cement board- Transite panels	4 panels	Interior – behind wall mounted electric heaters	NF-Misc. Category II	Good condition- Low-5
CDW06	Composite drywall w/joint compound painted	560 SF	Walls/ceiling of main room and bunk room	NF- Misc. Category II	Good condition- Low-5
CK06	Gray caulking/putty	N/A	Interior- Wall penetration on NW window	NF-Misc. Category I	N/A
CK07	White caulking, painted green	N/A	Exterior – window frames	NF-Misc. Category I	N/A
RSG02	Asphalt composition shingle green and black	5 SF- minimal remaining	Exterior- roof of storage shed ASSUMED	NF-Misc. Category I	Poor condition Low-5
WG02	White window glaze, interior metal frame windows	N/A	Interior- metal frame windows	NF-Misc. Category II	N/A

Friable (F): *material that be crumbled, pulverized, or reduced to powder with hand pressure when dry*
Non-Friable: *material that cannot be crumbled, pulverized, or reduced to powder with hand pressure when dry*

Thermal Systems Insulation (TSI): *used to control heat transfer and or condensation on HVAC, hot and cold water or other mechanical systems etc.*

Surfacing Material (SM): *material that is sprayed or troweled onto surfaces such as fire proofing on structural members, plaster for acoustical, decorative, etc.*

Miscellaneous Material (MISC): *all other materials including taping mud, floor tile mastic, stucco, leveling compound, and hard plasters.*

Category I non-friable (NF) ACM: *resilient floor coverings, asphalt roofing products, packings, gaskets, or caulking containing greater than 1% asbestos*
Category II non-friable (NF) ACM*: any material that is not Category1 that contains greater than 1% asbestos*

Asbestos Containing Materials are Listed in Red.
Materials Containing 1% or less are Listed in Blue.

Hazard Ranking:

1*= damaged or significantly damaged Thermal Systems Insulation (TSI) ACM;*
2*=damaged friable surfacing ACM;*
3*=significantly damaged friable surfacing ACM;*
4*=damaged or significantly damaged friable miscellaneous ACM;*
5*=ACBM with potential for damage;*
6*=ACBM with potential for significant damage;*
7*=any remaining friable ACBM or suspected ACBM.*

Disturbance Potential:
Low *= the material may be accessible but is not likely to be damaged under most circumstances.*

Moderate *= the material is accessible and is likely to suffer limited damage over time.*

High *= the material is friable and/or already damaged, is accessible, and there is specific reason to believe the material will receive a large amount of damage in the foreseeable future.*

Condition:
Good *= the material had no visible damage, or extremely minor damage or surface marring (i.e., a room of floor tile has only four or five with small corners broken from the tile.*

Damaged *= the material had visible damage evenly distributed over less than 10% of its surface or localized over less than 25% of its surface.*

Significantly damaged *= the material had visible damage that is evenly distributed over 10% or more of its surface or localized over 25% or more or its surface.*

Asbestos Containing Materials are Listed in Red.
Materials Containing 1% or less are Listed in Blue.

Appendix B

Summary of Bulk Samples & drawing

(Observatory Shed)

American Veteran Environmental LLC
13373 N. Harback Rd. Bennett, CO 80102 / Denver Office: 7100 Broadway Suite 3A Denver, CO 80221
303.901.9835 / www.avenv.com

APPENDIX B. Asbestos Bulk Sample Log

Project Name:	**NOAA Fritz Peak Observatory**
Project Address:	**19126 CO State Highway 119 Rollinsville, CO**
Contact / Client:	**EA Engineering**
Inspection date & Lab COC #	**9/23/19 – 9/24/19** **CEI A1917520B**

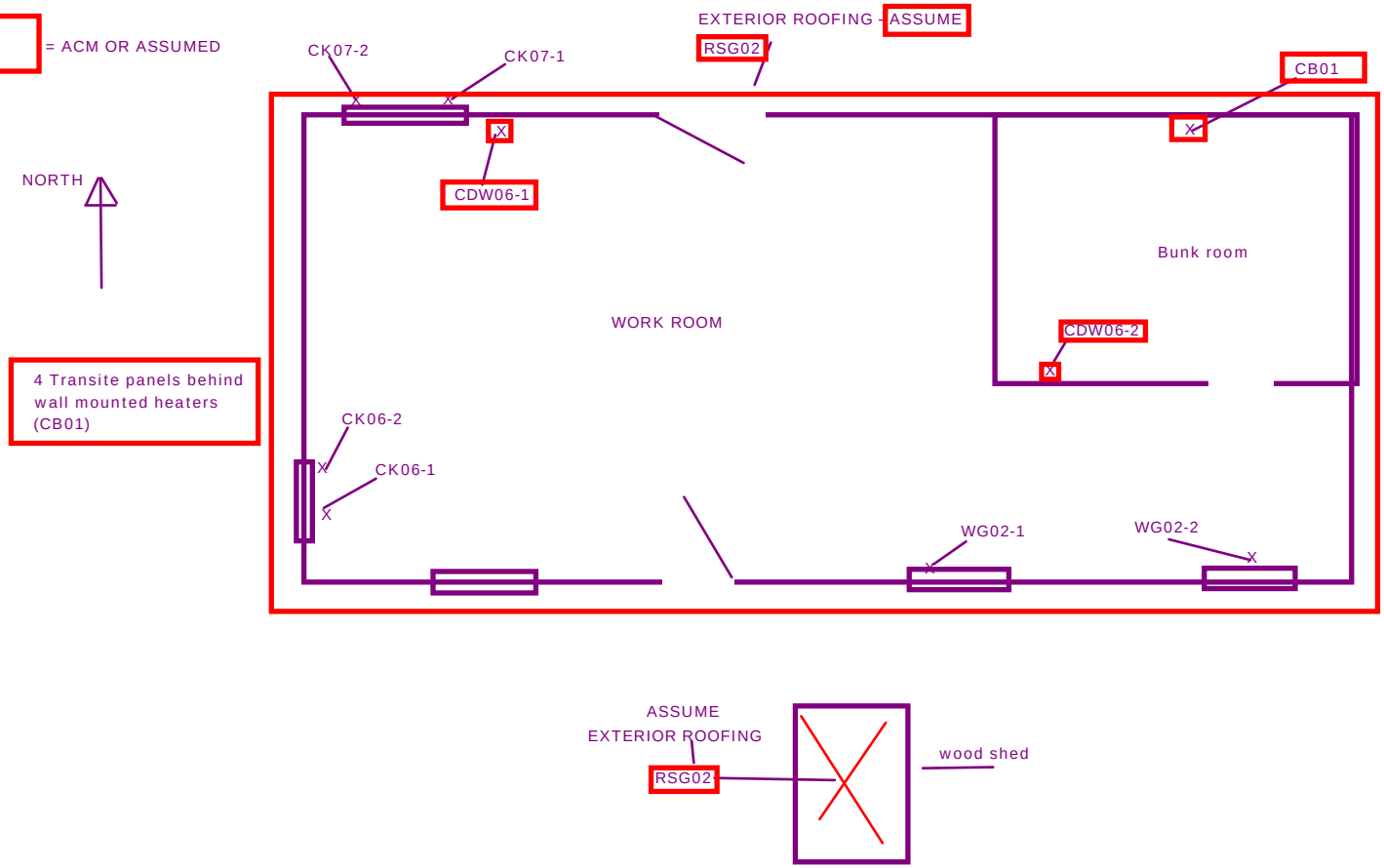
Building:	**Commercial- Observatory Shed**
Work Area:	***Interior/exterior***
Asbestos:	***Yes***
Accessibility To Building Occupants?	***Unoccupied***

Sample No.	*Description of Material Sampled*	*Hazard Ranking*	*AHERA Rating*	*Asbestos Laboratory Results*	*Sample location*
CB01	**Cement board- Transite panel**	**Good Low-5**	**NF Misc.**	**ASSUMED**	**Behind wall mounted electric heaters**
CDW06-1	**Composite drywall w/ joint compound, painted**	**Good Low-5**	**NF Misc.**	**<1% Chrysotile**	**Main room North wall at window**
CDW06-2	**Gray caulking on metal windows**	**Good Low-5**	**NF Misc.**	**<1% Chrysotile**	**Bunk room North wall**
CK06-1	Gray caulking /putty	N/A	N/A	None detected	Wall penetrations on NW window
CK06-1	Gray caulking /putty	N/A	N/A	None detected	Wall penetrations on NW window
CK07-1	White caulking w/green paint	N/A	N/A	None detected	Exterior North side window
CK07-2	White caulking w/green paint	N/A	N/A	None detected	Exterior North side window
RSG02	**Asphalt compositing shingle green and black**	**Good Low-5**	**NF Misc.**	**ASSUMED**	**Exterior roof of small storage shed**
WG02-1	Window glaze, white on metal frame windows	N/A	N/A	None detected	Interior North window
WG02-2	Window glaze, white on metal frame windows	N/A	N/A	None detected	Interior North window

N/A = not applicable

OBSERVATORY SHED ASBESTOS INSPECTION
SAMPLE LOCATIONS

= ACM OR ASSUMED



Appendix C

Laboratory Results

(Observatory Shed)

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October 3, 2019

American Veteran Environmental, LLC
13373 N. Harback Rd.
Bennett, CO 80102

CLIENT PROJECT: 19126 CO State Hwy 119, Rollinsville, CO (Observatory Shed)
CEI LAB CODE: A1917520B

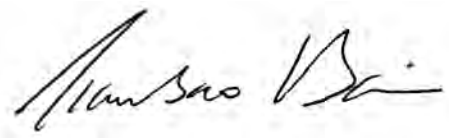
Dear Customer:

Enclosed are asbestos analysis results for PLM Bulk samples received at our laboratory on October 1, 2019. The samples were analyzed for asbestos using polarizing light microscopy (PLM) per the EPA 600 Method.

Sample results containing >1% asbestos are considered asbestos-containing materials (ACMs) per EPA regulatory requirements. The detection limit for the EPA 600 Method is <1% asbestos by weight as determined by visual estimation.

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

Kind Regards,



Tianbao Bai, Ph.D., CIH
Laboratory Director

NVLAP® TESTING
NVLAP LAB CODE 101768-0

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ASBESTOS ANALYTICAL REPORT
By: Polarized Light Microscopy

Prepared for

American Veteran Environmental, LLC

CLIENT PROJECT:	19126 CO State Hwy 119, Rollinsville, CO (Observatory Shed)
LAB CODE:	A1917520B
TEST METHOD:	EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020
REPORT DATE:	10/01/19
TOTAL SAMPLES ANALYZED:	8
# SAMPLES >1% ASBESTOS:	

Asbestos Report Summary

By: POLARIZING LIGHT MICROSCOPY

PROJECT: 19126 CO State Hwy 119, Rollinsville, CO **LAB CODE:** A1917520B
(Observatory Shed)

METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
CDW06-1		A239523	White,Cream	Drywall/Joint Compound	Chrysotile <1%
CDW06-2		A239524	White	Drywall/Joint Compound	None Detected
CK06-1		A239525	Gray	Window Caulking	None Detected
CK06-2		A239526	Gray	Window Caulking	None Detected
CK07-1		A239527	White,Cream	Window Caulking	None Detected
CK07-2		A239528	White,Cream	Window Caulking	None Detected
WG02-1		A239529	Cream	Window Glazing	None Detected
WG02-2		A239530	Cream	Window Glazing	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: American Veteran Environmental, LLC
13373 N. Harback Rd.
Bennett, CO 80102

Lab Code: A1917520B
Date Received: 10-01-19
Date Analyzed: 09-30-19
Date Reported: 10-01-19

Project: 19126 CO State Hwy 119, Rollinsville, CO (Observatory Shed)

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
CDW06-1 A239523	Drywall/Joint Compound	Heterogeneous White,Cream Fibrous Bound	10%	Cellulose	5% 15% 70%	Paint Calc Carb Gypsum	<1% Chrysotile
Lab Notes: 2% Chrysotile found in Joint Compound. Sample contains 10% Joint Compound, composite contains 0.2% Chrysotile overall.							
CDW06-2 A239524	Drywall/Joint Compound	Heterogeneous White Fibrous Bound	10%	Cellulose	5% 15% 70%	Paint Calc Carb Gypsum	None Detected
CK06-1 A239525	Window Caulking	Homogeneous Gray Fibrous Bound	<1%	Talc	100%	Caulk	None Detected
CK06-2 A239526	Window Caulking	Homogeneous Gray Fibrous Bound	<1%	Talc	100%	Caulk	None Detected
CK07-1 A239527	Window Caulking	Heterogeneous White,Cream Fibrous Bound	10%	Talc	2% 88%	Paint Caulk	None Detected
CK07-2 A239528	Window Caulking	Heterogeneous White,Cream Fibrous Bound	10%	Talc	2% 88%	Paint Caulk	None Detected
WG02-1 A239529	Window Glazing	Homogeneous Cream Fibrous Bound	3%	Talc	97%	Binder	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: American Veteran Environmental, LLC
13373 N. Harback Rd.
Bennett, CO 80102

Lab Code: A1917520B
Date Received: 10-01-19
Date Analyzed: 09-30-19
Date Reported: 10-01-19

Project: 19126 CO State Hwy 119, Rollinsville, CO (Observatory Shed)

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
WG02-2 A239530	Window Glazing	Homogeneous Cream Fibrous Bound	3%	Talc	97%	Binder	None Detected

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LEGEND: Non-Anth = Non-Asbestiform Anthophyllite
Non-Trem = Non-Asbestiform Tremolite
Calc Carb = Calcium Carbonate

METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

REPORTING LIMIT: <1% by visual estimation

REPORTING LIMIT FOR POINT COUNTS: 0.25% by 400 Points or 0.1% by 1,000 Points

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Information provided by customer includes customer sample ID and sample description.

ANALYST: Shilpa Ladekar

APPROVED BY: Tianbao Bai, Ph.D., CIH
Laboratory Director

NVLAP® TESTING
NVLAP LAB CODE 101768-0

ASBESTOS CHAIN OF CUSTODY

CEI LABS
730 SE Maynard Road, Cary, NC 27511
Tel: 866-481-1412; Fax: 919-481-1442

LAB USE ONLY:
CEI Lab Code:
CEI Lab I.D. Range:

COMPANY INFORMATION	PROJECT INFORMATION
CEI CLIENT #: 28520	Job Contact: PAULA BOWERS
Company: American Veteran Environmental, LLC	Email / Tel:303-265-1710
Address: 13373 N. Harback Rd.	Project Name: 19126 CO State Hwy 119
Bennett, CO 80102	Project ID#: Rollinsville, CO
Email: srolf@avenv.com;pbowers@avenv.com	PO #: (Observatory Shed)
Tel:303-265-1710 Fax:	STATE SAMPLES COLLECTED IN:COLO

IF TAT IS NOT MARKED STANDARD 3 DAY TAT APPLIES.

ASBESTOS	METHOD	TURN AROUND TIME					
		4 HR	8 HR	24 HR	2 DAY	3 DAY	5 DAY
PLM BULK	EPA 600	☐	☐	☐	☐	☒	☐
PLM POINT COUNT (400)	EPA 600	☐	☐	☐	☐	☐	☐
PLM POINT COUNT (1000)	EPA 600	☐	☐	☐	☐	☐	☐
PLM GRAV w POINT COUNT	EPA 600		☐	☐	☐	☐	☐
PLM BULK	CARB 435		☐	☐	☐	☐	☐
PCM AIR	NIOSH 7400	☐	☐	☐	☐	☐	☐
TEM AIR	EPA AHERA	☐	☐	☐	☐	☐	☐
TEM AIR	NIOSH 7402	☐	☐	☐	☐	☐	☐
TEM AIR	ISO 10312	☐	☐	☐	☐	☐	☐
TEM AIR	ASTM 6281-09	☐	☐	☐	☐	☐	☐
TEM BULK	CHATFIELD		☐	☐	☐	☐	☐
TEM DUST WIPE	ASTM D6480-05	☐	☐	☐	☐	☐	☐
TEM DUST MICROVAC	ASTM D5755-09	☐	☐	☐	☐	☐	☐
TEM SOIL	ASTM D7521-13			☐	☐	☐	☐
TEM VERMICULITE	CINCINNATI METHOD			☐	☐	☐	☐
OTHER:		☐	☐	☐	☐	☐	☐

REMARKS / SPECIAL INSTRUCTIONS:
Bldg 3 of 3

☐ Accept Samples
☐ Reject Samples

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	9/24/19		

Samples will be disposed of 30 days after analysis

Page _____ of _____

ASBESTOS SAMPLING FORM

CEI LABS

COMPANY CONTACT INFORMATION	
Company:AVENV	Job Contact:PAULA BOWERS
A 19126 CO State Hwy 119 (Observatory Shed)	
Project ID #: Rollinsville, CO	Tel:303-265-1710

SAMPLE ID#	DESCRIPTION / LOCATION	VOLUME/ AREA	TEST	
CDW06-1			PLM ☒	TEM ☐
-2			PLM ☒	TEM ☐
CK06-1			PLM ☑	TEM ☐
-2			PLM ☑	TEM ☐
CK07-1			PLM ☑	TEM ☐
-2			PLM ☑	TEM ☐
WG01-1			PLM ☑	TEM ☐
-2			PLM ☑	TEM ☐
			PLM ☐	TEM ☐
			PLM ☐	TEM ☐
			PLM ☐	TEM ☐
			PLM ☐	TEM ☐
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			PLM ☐	TEM ☐
			PLM ☐	TEM ☐
			PLM ☐	TEM ☐
			PLM ☐	TEM ☐

8

Appendix D

Photos

Asbestos Containing Materials

(Observatory Shed)


CB01- cement board behind wall mounted heaters

CDW06- composite drywall w/joint compound- walls

RSG02-asphalt roofing shingles on wood storage shed

SECTION 4
Lead-Based Paint & Risk Assessment

LEAD-BASED PAINT RISK ASSESSMENT REPORT

For

American Veteran Environmental, LLC

Owner:
National Oceanic and Atmosphere Administration
Cottage located at:
19126 Highway 119
Rollinsville, CO 80494

Prepared By:
Burnside Enterprises, LLC
4030 Zurich Drive
Colorado Springs, CO 80920
(719) 596-4656

Colorado firm license LEF 11738

Lead-Based Paint Evaluation Date:

September 23, 2019

Report Date:

September 28, 2019

Inspector/Risk Assessor: John Burnside (CO Risk Assessor: 11876)

Risk Assessment Background Information

Burnside Enterprises, LLC, have completed a lead-based paint risk assessment at the Cottage located at 19126 Highway 119, Rollinsville, CO 80494 which was performed on September 23, 2019. The dwelling interior consists of drywall with the exterior consisting of brick with wood trim. The structure is approximately 700 square feet and was built in approximately 1950.

This risk assessment was conducted following the U.S. Department of Housing and Urban Development (HUD) *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing,* including 2012 revisions. The standard for lead-based paint, as per HUD/EPA and the State of Colorado standard for XRF measurement of $\geq$ 1.0 mg/cm^2 as being classified as positive for lead-based paint was followed. The standards for lead dust and soil hazard levels are as follows:

Dust

Floors	$\geq$ 40 µg/ft²
Window Sills	$\geq$ 250 µg/ft²
Window Troughs	$\geq$ 400 µg/ft²
Exterior Concrete	$\geq$ 800 µg/ft²

Soil

Play Area	$\geq$ 400 ppm
Driplines, Yards	$\geq$ 1,200 ppm

Risk Assessment Report Summary

A lead-based paint risk assessment was performed at Cottage located at 19126 Highway 119, Rollinsville, CO 80494, by Burnside Enterprises, LLC, (Colorado Firm Certification 11738), 4030 Zurich Drive, Colorado Springs, CO 80920. John Burnside, a Certified Risk Assessor (Colorado Certification No. 11876), conducted the risk assessment.

Results

The risk assessment of this dwelling revealed no lead-based paint hazards (as defined in the *Guidelines For the Evaluation and Control of Lead-Based Paint Hazards in Housing*, June 1995, issued by the U. S. Department of Housing and Urban Development (HUD) pursuant to Title X of the Housing and Community Development Act of 1992) exist.

Paint sampling of all painted surfaces was performed using a NITON XLp-300A portable X-ray fluorescent analyzer (XRF) to inspect all deteriorated paint surfaces at the Cottage located at 19126 Highway 119, Rollinsville, CO 80494. Current EPA and HUD guidance for paint to be less than 1.0 mg/cm² for XRF testing and 0.5% lead by weight or less than 5,000 PPM (parts per million) for Atomic Absorption Spectroscopy (AAS). Using these criteria, none of the paint surfaces listed above exceeded this limit and had deterioration. All painted surfaces were inspected for lead-based paint utilizing an XRF analyzer. All surfaces should be monitored by the owner of the dwelling to monitor the paint condition to help prevent deterioration of possible lead-based paint surfaces.

Recommendations

There are several different measures that can be implemented to help reduce the possibility of lead-based paint hazards at the dwelling. These can be divided into two (2) primary categories: Interim Controls and Abatement.

The HUD definition of abatement can be described as a set of measures which makes the lead-based paint surface inaccessible to dwelling occupants for a minimum of twenty (20) years. Please note that this does not mean that the lead-based paint has to be completely removed; it can be controlled by enclosure or encapsulation systems which provide a dust tight enclosure or encapsulation with twenty (20) year minimum duration.

Interim Controls would be all tasks which have up to a twenty (20) year duration. Interim controls are considered more of a temporary fix but with periodic monitoring and reevaluation of the lead-based paint surface, interim controls can help to reduce the possibility of lead-based paint hazards quite effectively. Interim controls can include such items as painting, cleaning, owner/occupant education of lead-based paint hazards, installation of sod or other ground cover, etc.

Based upon the fact that no lead hazards found at the dwelling, **no recommended interim control options are required to be implemented at the dwelling.**

A copy of this summary must be provided to new lessees (tenants) and purchasers of this property under Federal law (24 CFR part 35 and 40 CFR part 745) before they become obligated under a lease or sales contract. The complete report must also be provided to new purchasers and it must be made available to new tenants. Landlords (lessors) and sellers are also required to distribute an educational pamphlet approved by the U. S. Environmental Protection Agency and include standard warning language in their leases or sales contracts to ensure that parents have the information they need to protect their children from lead-based paint hazards.

This report is submitted by Burnside Enterprises, LLC and includes a visual survey and X-Ray Fluorescence (XRF) analysis of the readily accessible painted and stained components in the surveyed area. The intent of this report is to identify if lead-based paint is present in the surveyed area, and if so, what components are affected. The presence or absence of lead-based paint or lead-based paint hazards applies only to the tested or assessed surfaces on the date of the field visit and it should be understood that conditions noted within this report were accurate at the time of the inspection and in no way reflect the conditions at the property after the date of the inspection.

Burnside Enterprises, LLC, makes no warranty, guarantee, or representation, expressed or implied, with respect to the effectiveness of any construction methods or activities regarding the containment and/or removal of lead-based paint. Our liability (Burnside Enterprises, LLC) is limited to the component surfaces that we are authorized to test using equipment, methods and procedures as set forth in the current acceptable industry guidelines, Housing and Urban Development (HUD) Guidelines Chapter 7 (revised 2012) and Colorado regulation No. 19. Burnside Enterprises, LLC assumes no responsibility for any injury to individuals or property, or for any financial loss, sustained as a result of the incorrect use or application of this report.

This report must be considered solely as a resource document representing a consensus of opinion. It is intended that this document serve as a guideline for owners or others in development of plans and activities that may be required in dealing with lead-based paint surfaces that may exist on the property. It is not the purpose or burden of this document to provide all embracing answers to every problem of lead paint. Users bear all risks associated with reliance on these results and shall have the sole responsibility to evaluate the information contained herein and to form their own independent judgments on the use of this information as may be appropriate to specific circumstances or actions.

The report also does not include evaluation of water, materials not visible (behind wall, ceiling, or floor surfaces), or adjacent property for the presence of lead hazards. Any other environmental hazards that may be found at this property are outside the scope of this report.

The paint inspection report is for the exclusive private use of NOAA and American Veteran Environmental, LLC and the professional services of Burnside Enterprises, LLC. and undertaken for and performed in the interest of NOAA and American Veteran Environmental, LLC. No contractual obligation is assumed for the benefit of any other person or company involved with this dwelling. This report is confidential and is not to be copied or disseminated to any other party without the expressed written consent of Burnside Enterprises, LLC. Use of or reliance upon the report by other parties or for other transactions is strictly prohibited.

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The information that follows in this report are the testing results and inspector certification that comprise the basis of this report.

Information Page

Colorado Certified Firm	
Name:	Burnside Enterprises, LLC
Address:	4030 Zurich Drive, Colorado Springs, CO 80920
Phone:	(719) 596-4656
Firm Certificate #	11738

Colorado Certified Lead Inspector/Risk Assessor	
Name:	John Burnside
Address:	4030 Zurich Drive, Colorado Springs, CO 80920
Phone:	(719) 596-4656
Certificate #	11876

XRF Data	
XRF Manufacturer	NITON Corporation
XRF Model number	XLp-300A
XRF Serial number	94979
Locations Tested	See any included XRF data results
QA/QC Procedures	HUD and the manufacturer's recommended calibration checks were performed

NLLAP Lab – For Laboratory Samples	
Name:	EMSL Analytical, Inc.
Address:	2001 East 52nd St, Indianapolis, IN 46205
Phone:	317-803-2997
Accreditation #	157245
Dust & Soil Method:	EPA SW846,7420 – implementing a microwave-assisted digestion process

Resident Questionnaire

Children/Children's Habits

1. (a) Do you have any children that live in your home? Yes _____ No __X___
   (b) If yes, how many? Ages?
   (c) Record blood levels, if known
   (d) IF NO CHILDREN, SKIP TO Question 5

1. Locate the rooms/areas where each child sleeps, eats, and plays:

Name of Child	Location of Bedroom	Location of All Rooms Where Child Sleeps	Primary Location Where Child Plays Indoors	Primary Location Where Child Plays Outdoors

3. Where are toys stored/kept?
4. Is there any visible evidence of chewed or peeling paint on the woodwork, furniture, or toys? Yes/No

Family Use Patterns

5. Which entrances are used most frequently? Side A
6. Which windows are opened most frequently? All
7. Do you use window air conditioners? If yes, where? No
   (Condensation often causes paint deterioration)
8. (a) Do any household members engage in gardening? No
   (b) Record the location of any vegetable garden.
   (c) Are you planning any landscaping activities that will remove grass or ground covering? No
9. (a) How often is the household cleaned? Infrequently
   (b) What cleaning methods do you use?
10. (a) Did you recently complete any building renovations? No
    (b) If yes, where?
    (c) Was building debris stored in the yard? No If yes, where?
11. Are you planning any building renovations? Where? No
12. (a) Do any household members work in a lead-related industry? No
    (b) If yes, where are dirty clothes placed and cleaned?

Building Condition Form

Condition	Yes	No
Roof missing parts of surfaces (tiles, boards, shakes, etc.)		X
Roof has holes or large cracks		X
Gutters or downspouts broken		X
Chimney masonry cracked, bricks loose or missing, obviously out of plumb		X
Exterior or interior walls have obvious large cracks or holes, requiring more than routine pointing (if masonry) or painting		X
Exterior siding has missing boards or shingles		X
Water stains on interior walls or ceilings		X
Plaster walls or ceilings deteriorated		X
Two or more windows or doors broken, missing, or boarded up		X
Porch or steps have major elements broken, missing, or boarded up		X
Foundation has major cracks, missing material, structure leans, or visibly unsound		X
* Total Number	0	11

* If the "Yes" column has two or more checks, the dwelling is usually considered to be in poor condition for the purposes of a risk assessment. However, specific conditions and extenuating circumstances should be considered before determining the final condition of the dwelling and the appropriateness of a lead hazard screen.

Notes:

Paint Conditions on Selected Surfaces

(Single-Family, Owner-Occupied)

Building Component	Location Notes	Paint condition (intact, fair, poor, or not present) to be completed by Risk Assessor	Deterioration due to friction or impact?	Deterioration due to moisture?	Location of painted component with visible bite marks
Building siding		Intact			
Exterior trim-soffits		Intact			
Exterior windows (trim)		Intact			
Exterior doors - threshold		Intact			
Interior doors - jamb		Intact			
Ceilings		Intact			
Walls		Intact			
Interior windows		Intact			
Interior floors		Intact			
Interior trim		Intact			
Bathroom cabinets		Intact			

If the overall condition of a component is similar throughout a dwelling, that condition should be recorded. If a component in a couple of locations is in poor condition, but the overall condition is good or fair, the specific sites of the badly deteriorated paint should be noted. The specific locations of any component with bite marks should be recorded.

Field Sampling Form for Dust
(Single-Surface Sampling)

Name of Risk Assessor John Burnside Lab. ID# 157245
Name of property owner : American Veteran Environmental, LLC
Property address : Cottage located at 19126 Highway 119, Rollinsville, CO 80494
Dwelling selection protocol X All dwellings ___Targeted ___Worst case ___Random

Target dwelling criteria (check all that apply)

_____ Code violations
_____ Judged to be in poor condition
_____ Presence of two or more children between ages of 6 months and 6 years
_____ Serves as day-care facility
_____ Recently prepared for re-occupancy

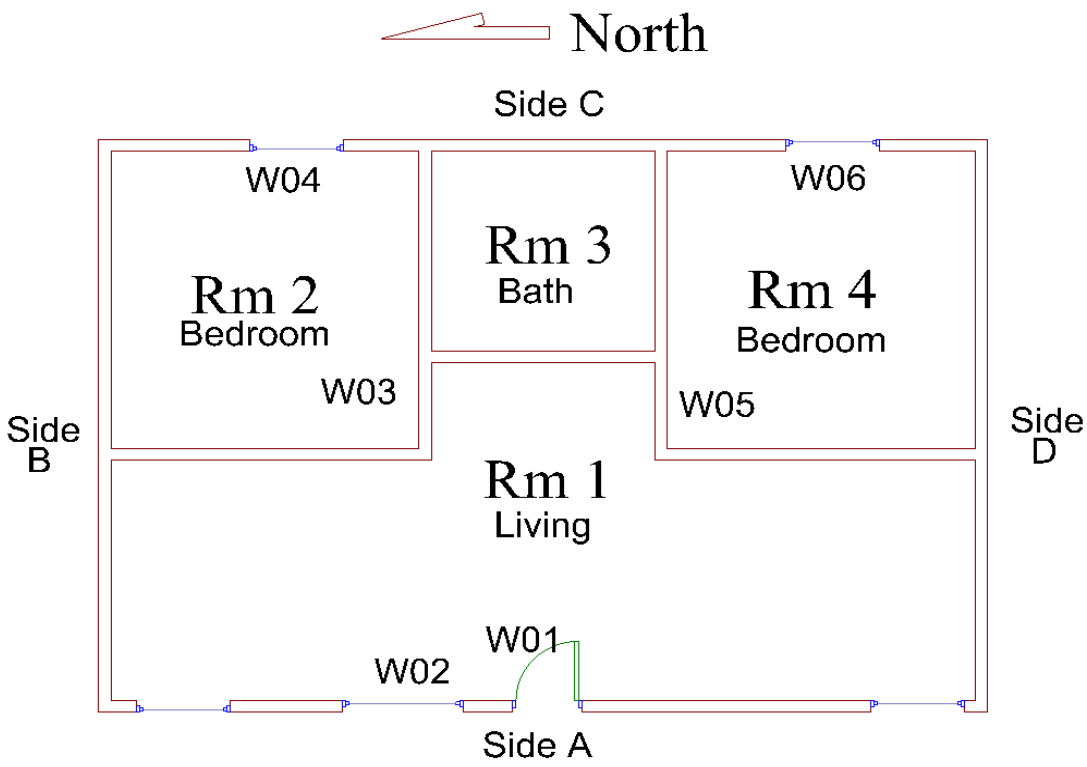
Sample number	Room (record name of room used by the owner or resident)	Surface type	Is surface smooth and cleanable?	Dimensions* of sample area (inches × inches)	Area (ft^2)	Result of lab analysis ($\mu g/ft^2$)
W01	Rm 01 Living	Floor	Yes	12” x 12”	1.0	13
W02	Rm 01 Living	Sill	Yes	3-1/8” x 52”	1.13	13
W03	Rm 02 Bedroom	Floor	Yes	12” x 12”	1.0	12
W04	Rm 02 Bedroom	Sill	Yes	3-1/8” x 30-3/8”	0.66	<15
W05	Rm 03 Bedroom	Floor	Yes	12” x 12”	1.0	11
W06	Rm 03 Bedroom	Sill	Yes	3-1/8” x 30-1/2”	0.66	<15
W07	Blank	Floor	Yes	12” x 12”	1.0	<10

- Measure to the nearest 1/8 inch.

HUD standards: 40 $\mu g/ft^2$ (floor), 250 $\mu g/ft^2$ (int. window sill), 400 $\mu g/ft^2$ (window trough), exterior concrete 800 $\mu g/ft^2$

Total number of samples on this page____7_____
Page ___1____ of ___1_____
Date of sample collection: September 23, 2019 Date shipped to lab: September 24, 2019

Property Drawing



Cottage located at
19126 Hwy 119, Rollinsville

Not To Scale

XRF Readings

Note: Under the heading “Side” listed in the following data table, the listing “A” would refer to the address side wall of the dwelling with the B, C, and D designations referring to the remaining walls in a clockwise rotation.

No	Site	Room	Side	Structure	Feature	Substrate	Color	Condition	Results	PbC	Units
1		Calibrate							Positive	1	mg/cm^2
2		Calibrate							Positive	1	mg/cm^2
3		Calibrate							Positive	1	mg/cm^2
4	Cottage	Exterior	A	Porch	Ceiling	Wood	Grey	Intact	Negative	0.02	mg/cm^2
5	Cottage	Exterior	A	Wall	Fascia	Wood	Grey	Intact	Negative	0	mg/cm^2
6	Cottage	Exterior	A	Wall	Soffit	Wood	Grey	Intact	Positive	4.4	mg/cm^2
7	Cottage	Exterior	A	Window	Lintel	Metal	Grey	Intact	Negative	0.3	mg/cm^2
8	Cottage	Exterior	A	Stair	Handrail	Metal	Grey	Intact	Negative	0	mg/cm^2
9	Cottage	Exterior	A	Door	Casing	Wood	Stained	Intact	Negative	0	mg/cm^2
10	Cottage	Exterior	A	Door	Jamb	Wood	Stained	Intact	Negative	0	mg/cm^2
11	Cottage	Exterior	A	Door		Wood	Stained	Intact	Negative	0	mg/cm^2
12	Cottage	Exterior	B	Wall	Fascia	Wood	Grey	Intact	Negative	0	mg/cm^2
13	Cottage	Exterior	B	Wall	Soffit	Wood	Grey	Intact	Positive	3.2	mg/cm^2
14	Cottage	Exterior	C	Wall	Fascia	Wood	Grey	Intact	Negative	0	mg/cm^2
15	Cottage	Exterior	C	Wall	Soffit	Wood	Grey	Intact	Positive	3.4	mg/cm^2
16	Cottage	Exterior	C	Window	Lintel	Metal	Grey	Intact	Negative	0.22	mg/cm^2
17	Cottage	Exterior	D	Wall	Fascia	Wood	Grey	Intact	Negative	0	mg/cm^2
18	Cottage	Exterior	D	Wall	Soffit	Wood	Grey	Intact	Positive	4.5	mg/cm^2
19	Cottage	Rm. 01	A	Ceiling		Drywall	White	Intact	Negative	0	mg/cm^2
20	Cottage	Rm. 01	A	Wall		Drywall	White	Intact	Negative	0	mg/cm^2
21	Cottage	Rm. 01	B	Wall		Drywall	White	Intact	Negative	0	mg/cm^2
22	Cottage	Rm. 01	C	Wall		Drywall	White	Intact	Negative	0	mg/cm^2
23	Cottage	Rm. 01	D	Wall		Drywall	White	Intact	Negative	0	mg/cm^2
24	Cottage	Rm. 01	D	Wall	Baseboard	Wood	Stained	Intact	Negative	0	mg/cm^2
25	Cottage	Rm. 01	A	Window	Casing	Wood	Stained	Intact	Negative	0	mg/cm^2
26	Cottage	Rm. 01	A	Door	Casing	Wood	Stained	Intact	Negative	0	mg/cm^2
27	Cottage	Rm. 01	A	Door		Wood	Stained	Intact	Negative	0	mg/cm^2
28	Cottage	Rm. 01	C	Wall	Access Panel	Wood	Stained	Intact	Negative	0	mg/cm^2
29	Cottage	Rm. 02	A	Ceiling	Access Panel	Wood	Stained	Intact	Negative	0.01	mg/cm^2
30	Cottage	Rm. 02	A	Ceiling		Drywall	White	Intact	Negative	0	mg/cm^2
31	Cottage	Rm. 02	A	Wall		Drywall	White	Intact	Negative	0.7	mg/cm^2
32	Cottage	Rm. 02	B	Wall		Drywall	White	Intact	Negative	0.6	mg/cm^2
33	Cottage	Rm. 02	C	Wall		Drywall	White	Intact	Negative	0.7	mg/cm^2
34	Cottage	Rm. 02	D	Wall		Drywall	White	Intact	Negative	0.7	mg/cm^2
35	Cottage	Rm. 02	D	Wall	Baseboard	Wood	Stained	Intact	Negative	0	mg/cm^2
36	Cottage	Rm. 02	D	Door	Jamb	Wood	Stained	Intact	Negative	0	mg/cm^2
37	Cottage	Rm. 02	D	Door		Wood	Stained	Intact	Negative	0.01	mg/cm^2

No	Site	Room	Side	Structure	Feature	Substrate	Color	Condition	Results	PbC	Units
38	Cottage	Rm. 02	C	Window	Casing	Wood	Stained	Intact	Negative	0	mg/cm^2
39	Cottage	Rm. 02	D	Closet	Jamb	Wood	Stained	Intact	Negative	0	mg/cm^2
40	Cottage	Rm. 02	D	Closet	Access Panel	Wood	Stained	Intact	Negative	0.01	mg/cm^2
41	Cottage	Rm. 02	D	Closet	Wall	Drywall	White	Intact	Negative	0.4	mg/cm^2
42	Cottage	Rm. 03	A	Ceiling		Drywall	White	Intact	Negative	0	mg/cm^2
43	Cottage	Rm. 03	A	Wall		Drywall	White	Intact	Negative	0	mg/cm^2
44	Cottage	Rm. 03	B	Wall		Drywall	White	Intact	Negative	0	mg/cm^2
45	Cottage	Rm. 03	C	Wall		Drywall	White	Intact	Negative	0	mg/cm^2
46	Cottage	Rm. 03	D	Wall		Drywall	White	Intact	Negative	0	mg/cm^2
47	Cottage	Rm. 03	D	Wall	Baseboard	Wood	Stained	Intact	Negative	0	mg/cm^2
48	Cottage	Rm. 03	A	Door	Jamb	Wood	Stained	Intact	Negative	0	mg/cm^2
49	Cottage	Rm. 03	A	Door		Wood	Stained	Intact	Negative	0.02	mg/cm^2
50	Cottage	Rm. 03	B	Cabinet	Door	Wood	Stained	Intact	Negative	0	mg/cm^2
51	Cottage	Rm. 03	B	Cabinet	Frame	Wood	Stained	Intact	Negative	0	mg/cm^2
52	Cottage	Rm. 04	A	Ceiling		Drywall	White	Intact	Negative	0	mg/cm^2
53	Cottage	Rm. 04	A	Wall		Drywall	White	Intact	Negative	0.3	mg/cm^2
54	Cottage	Rm. 04	B	Wall		Drywall	White	Intact	Negative	0.6	mg/cm^2
55	Cottage	Rm. 04	C	Wall		Drywall	White	Intact	Negative	0.6	mg/cm^2
56	Cottage	Rm. 04	D	Wall		Drywall	White	Intact	Negative	0.6	mg/cm^2
57	Cottage	Rm. 04	D	Wall	Baseboard	Wood	Stained	Intact	Negative	0	mg/cm^2
58	Cottage	Rm. 04	C	Window	Casing	Wood	Stained	Intact	Negative	0	mg/cm^2
59	Cottage	Rm. 04	B	Door	Jamb	Wood	Stained	Intact	Negative	0.04	mg/cm^2
60	Cottage	Rm. 04	B	Door		Wood	Stained	Intact	Negative	0.01	mg/cm^2
61	Cottage	Rm. 04	B	Closet	Jamb	Wood	Stained	Intact	Negative	0.02	mg/cm^2
62	Cottage	Rm. 04	B	Closet	Wall	Drywall	White	Intact	Negative	0.22	mg/cm^2
63		Calibrate							Positive	1	mg/cm^2
64		Calibrate							Positive	1	mg/cm^2
65		Calibrate							Positive	1	mg/cm^2

Lead-Based Paint Inspection Report

For

American Veteran Environmental, LLC

For the Building Located at:
Fritz Peak Observatory
19126 Highway 119
Rollinsville, CO 80494

Performed By

John C. Burnside
Certified Lead-Based Paint Inspector/Risk Assessor
Colorado Certification 11876

Burnside Enterprises, LLC
4030 Zurich Drive
Colorado Springs, CO 80920
(719)-596-4656

Colorado Firm License LEF #11738

September 23, 2019

Inspection Background Information

Burnside Enterprises, LLC has completed a lead-based paint inspection at Fritz Peak Observatory, 19126 Highway 119, Rollinsville, CO 80494, which was performed on September 23, 2019. The building is a three-story structure constructed of brick and interior consists of drywall. The structure was constructed in approximately 1940. A metal observatory platform shack (OPS) is also located on the property.

John Burnside, a Colorado certified inspector/risk assessor (Certification No. 11876) performed the inspection.

This inspection was conducted following the U.S. Department of Housing and Urban Development (HUD) *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing,* 2012 revisions. The standard for lead-based paint, as per HUD/EPA and the State of Colorado standard for XRF measurement of ≥ 1.0 mg/cm^2 as being classified as positive for lead-based paint was followed. All requirements for the NITON XRF contained in the Performance Characteristics Sheet for the NITON XLp-300 were followed.

The painted surfaces in the rooms are identified as components, which can generally be defined as architectural features of the building. Components consist of walls, ceilings, floors, doors, door jambs, window sashes, windowsills, stair treads, etc. These are the visible parts of the building. Painted and/or stained components are tested. Each component may be represented many times in a single room. For example, there are generally baseboards on all walls in a room. It is not necessary to test each of these baseboards in the room as long as they appear to have the same paint history. Components covered with vinyl and/or metal siding are not inspected (as these surfaces below these components are not visible or accessible for this inspection. This does leave the possibility that lead-based painted components could be located beneath these coverings). All components within a room are tested a minimum of once with the exception of walls for which all four wall sides within a room will be tested. The A side would refer to the address side wall of the building with the B, C, and D designations referring to the remaining walls and/or components in a clockwise rotation.

Testing was performed using a NITON XLp-300 X-Ray Fluorescence Spectrometer (XRF), serial number 94979.

Executive Summary

A surface by surface investigation for lead-based paint was performed at Fritz Peak Observatory, 19126 Highway 119, Rollinsville, CO 80494, on September 23, 2019 by John Burnside of Burnside Enterprises, LLC (Colorado Certification 11738), 4030 Zurich Drive, Colorado Springs, CO 80920. Testing was performed using a NITON XLp-300 X-Ray Fluorescence Spectrometer (XRF), serial number 94979. The inspection indicated that based upon the current HUD guideline levels, **the following areas were found to contain lead-based paint above or equal to 1.0 mg/cm²:**

No	Site	Room	Side	Structure	Feature	Substrate	Color	Condition	Results	PbC	Units
393	Lab Bldg	Exterior	C	Porch	Ceiling	Wood	Grey	Poor	Positive	1.3	mg/cm²
409	OPS	Exterior	A	Wall		Metal	Green	Fair	Positive	1.3	mg/cm²
410	OPS	Exterior	A	Door		Metal	Green	Fair	Positive	1.4	mg/cm²
411	OPS	Exterior	A	Window	Sash	Metal	Green	Fair	Positive	1.4	mg/cm²
412	OPS	Exterior	B	Wall		Metal	Green	Fair	Positive	1.2	mg/cm²
414	OPS	Exterior	C	Window	Sash	Metal	Green	Fair	Positive	1.5	mg/cm²
416	OPS	Exterior	D	Wall		Metal	Green	Fair	Positive	1.7	mg/cm²
457	OPS	Outhouse Ext	A	Wall	Soffit	Wood	Green	Poor	Positive	1.3	mg/cm²
463	OPS	Outhouse Ext	D	Wall		Wood	Green	Poor	Positive	1.2	mg/cm²
464	OPS	Outhouse Ext	D	Wall	Soffit	Wood	Green	Poor	Positive	1.4	mg/cm²
430	OPS	Rm. 01	D	Floor		Wood	Grey	Intact	Positive	1.5	mg/cm²
434	OPS	Rm. 02	A	Floor		Wood	Grey	Intact	Positive	1.1	mg/cm²
448	OPS	Shed Ext	C	Door		Wood	Green	Poor	Positive	1.3	mg/cm²

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This report is submitted by Burnside Enterprises, LLC and includes a visual survey and X-Ray Fluorescence (XRF) analysis of the readily accessible painted and stained components in the surveyed area. The intent of this report is to identify if lead-based paint is present in the surveyed area, and if so, what components are affected. The presence or absence of lead-based paint or lead-based paint hazards applies only to the tested or assessed surfaces on the date of the field visit and it should be understood that conditions noted within this report were accurate at the time of the inspection and in no way reflect the conditions at the property after the date of the inspection.

Burnside Enterprises, LLC, makes no warranty, guarantee, or representation, expressed or implied, with respect to the effectiveness of any construction methods or activities regarding the containment and/or removal of lead-based paint. Our liability (Burnside Enterprises, LLC) is limited to the component surfaces that we are authorized to test using equipment, methods and procedures as set forth in the current acceptable industry guidelines, Housing and Urban Development (HUD) Guidelines Chapter 7 (revised 2012) and Colorado regulation No. 19. Burnside Enterprises, LLC assumes no responsibility for any injury to individuals or property, or for any financial loss, sustained as a result of the incorrect use or application of this report.

This report must be considered solely as a resource document representing a consensus of opinion. It is intended that this document serve as a guideline for owners or others in development of plans and activities that may be required in dealing with lead-based paint surfaces that may exist on the property. It is not the purpose or burden of this document to provide all embracing answers to every problem of lead paint. Users bear all risks associated with reliance on these results and shall have the sole responsibility to evaluate the information contained herein and to form their own independent judgments on the use of this information as may be appropriate to specific circumstances or actions.

The report also does not include evaluation of water, materials not visible (behind wall, ceiling, or floor surfaces), or adjacent property for the presence of lead hazards. Any other environmental hazards that may be found at this property are outside the scope of this report.

The paint inspection report is for the exclusive private use of American Veteran Environmental, LLC and the professional services of Burnside Enterprises, LLC and undertaken for and performed in the interest of American Veteran Environmental, LLC. No contractual obligation is assumed for the benefit of any other person or company involved with this building. Use of or reliance upon the report by other parties or for other transactions is strictly prohibited unless required by law (i.e. tenant disclosure, real estate transaction).

A copy of this summary must be provided to new lessees (tenants) and purchasers of this property under Federal law (24 CFR part 35 and 40 CFR part 745) before they become obligated under a lease or sales contract. The complete report must also be provided to new purchasers and it must be made available to new tenants. Landlords (lessors) and sellers are also required to distribute an educational pamphlet approved by the U. S. Environmental Protection Agency and include standard warning language in their

leases or sales contracts to ensure that parents have the information they need to protect their children from lead-based paint hazards.

The information that follows in this report are the testing results and inspector certification that comprise the basis of this report.

Date: September 23, 2019

John Burnside
Burnside Enterprises, LLC - CO Inspector/Risk Assessor No. 11876

Information Page

Colorado Certified Firm	
Name:	Burnside Enterprises, LLC
Address:	4030 Zurich Drive, Colorado Springs, CO 80920
Phone:	(719) 596-4656
Firm Certificate #	11738

Colorado Certified Lead Inspector/Risk Assessor	
Name:	John Burnside
Address:	4030 Zurich Drive, Colorado Springs, CO 80920
Phone:	(719) 596-4656
Certificate #	11876

XRF Data	
XRF Manufacturer	NITON Corporation
XRF Model number	XLp-300A
XRF Serial number	94979
Locations Tested	See any included XRF data results
QA/QC Procedures	HUD and the manufacturer's recommended calibration checks were performed

NLLAP Lab – For Laboratory Samples	
Name:	EMSL Analytical, Inc.
Address:	2001 East 52nd St, Indianapolis, IN 46205
Phone:	317-803-2997
Accreditation #	157245
Dust & Soil Method:	EPA SW846,7420 – implementing a microwave-assisted digestion process

XRF READINGS

Note: Under the heading “Side” listed in the following data table, the listing “A” would refer to the address side wall of the building with the B, C, and D designations referring to the remaining walls in a clockwise rotation.

No	Site	Room	Side	Structure	Feature	Substrate	Color	Condition	Results	PbC	Units
1		Calibrate							Positive	1	mg/cm²
2		Calibrate							Positive	1	mg/cm²
3		Calibrate							Positive	1	mg/cm²
4	Lab Bldg	1000	A	Ceiling		Drywall	White	Intact	Negative	0.01	mg/cm²
5	Lab Bldg	1000	A	Wall		Wood	Stained	Intact	Negative	0.02	mg/cm²
6	Lab Bldg	1000	B	Wall		Wood	Stained	Intact	Negative	0	mg/cm²
7	Lab Bldg	1000	C	Wall		Wood	Stained	Intact	Negative	0	mg/cm²
8	Lab Bldg	1000	D	Wall		Wood	Stained	Intact	Negative	0.01	mg/cm²
9	Lab Bldg	1000	D	Wall	Baseboard	Wood	Stained	Intact	Negative	0.01	mg/cm²
10	Lab Bldg	1000	A	Window	Casing	Wood	Stained	Intact	Negative	0.01	mg/cm²
11	Lab Bldg	1000	A	Door	Casing	Wood	White	Intact	Negative	0	mg/cm²
12	Lab Bldg	1000	A	Door		Metal	Brown	Intact	Negative	0.02	mg/cm²
13	Lab Bldg	1000	C	Stair	Handrail	Metal	Black	Fair	Negative	0.06	mg/cm²
14	Lab Bldg	1000	A	Cabinet	Frame	Wood	White	Intact	Negative	0	mg/cm²
15	Lab Bldg	1001	A	Ceiling		Drywall	White	Intact	Negative	0.1	mg/cm²
16	Lab Bldg	1001	A	Wall		Drywall	White	Intact	Negative	0.06	mg/cm²
17	Lab Bldg	1001	B	Wall		Drywall	White	Intact	Negative	0.13	mg/cm²
18	Lab Bldg	1001	C	Wall		Drywall	White	Intact	Negative	0.09	mg/cm²
19	Lab Bldg	1001	D	Wall		Drywall	White	Intact	Negative	0.17	mg/cm²
20	Lab Bldg	1001	A	Wall	Corner Board	Wood	Grey	Intact	Negative	0.09	mg/cm²
21	Lab Bldg	1001	A	Door	Jamb	Wood	Stained	Intact	Negative	0.01	mg/cm²
22	Lab Bldg	1001	A	Door		Wood	Stained	Intact	Negative	0	mg/cm²
23	Lab Bldg	1001	C	Cased Doorway	Jamb	Wood	Grey	Intact	Negative	0.06	mg/cm²
24	Lab Bldg	1001	A	Floor		Concrete	Grey	Fair	Negative	0.01	mg/cm²
25	Lab Bldg	1003	A	Floor		Concrete	Grey	Fair	Negative	0	mg/cm²
26	Lab Bldg	1003	A	Ceiling		Drywall	White	Intact	Negative	0	mg/cm²
27	Lab Bldg	1003	A	Wall		Drywall	White	Intact	Negative	0	mg/cm²
28	Lab Bldg	1003	B	Wall		Drywall	White	Intact	Negative	0	mg/cm²
29	Lab Bldg	1003	C	Wall		Drywall	White	Intact	Negative	0	mg/cm²
30	Lab Bldg	1003	D	Wall		Drywall	White	Intact	Negative	0	mg/cm²
31	Lab Bldg	1003	D	Door	Casing	Wood	Grey	Intact	Negative	0.1	mg/cm²
32	Lab Bldg	1003	D	Door		Wood	Stained	Intact	Negative	0.01	mg/cm²
33	Lab Bldg	1007	A	Ceiling		Drywall	White	Intact	Negative	0	mg/cm²
34	Lab Bldg	1007	A	Wall		Drywall	White	Intact	Negative	0	mg/cm²
35	Lab Bldg	1007	B	Wall		Drywall	White	Intact	Negative	0	mg/cm²
36	Lab Bldg	1007	C	Wall		Drywall	White	Intact	Negative	0	mg/cm²

No	Site	Room	Side	Structure	Feature	Substrate	Color	Condition	Results	PbC	Units
37	Lab Bldg	1007	D	Wall		Drywall	White	Intact	Negative	0	mg/cm²
38	Lab Bldg	1007	A	Floor		Concrete	Grey	Fair	Negative	0	mg/cm²
39	Lab Bldg	1007	A	Door	Jamb	Wood	Grey	Intact	Negative	0.25	mg/cm²
40	Lab Bldg	1007	A	Door		Wood	Grey	Intact	Negative	0.01	mg/cm²
41	Lab Bldg	1101	A	Ceiling		Drywall	Off-White	Intact	Negative	0	mg/cm²
42	Lab Bldg	1101	A	Wall		Wood	Stained	Intact	Negative	0.04	mg/cm²
43	Lab Bldg	1101	B	Wall		Wood	Stained	Intact	Negative	0.01	mg/cm²
44	Lab Bldg	1101	C	Wall		Wood	Stained	Intact	Negative	0	mg/cm²
45	Lab Bldg	1101	D	Wall		Wood	White	Intact	Negative	0	mg/cm²
46	Lab Bldg	1101	B	Wall	Shelf	Wood	Yellow	Intact	Negative	0.02	mg/cm²
47	Lab Bldg	1101	B	Wall	Baseboard	Wood	Stained	Intact	Negative	0.04	mg/cm²
48	Lab Bldg	1101	A	Window	Casing	Wood	Stained	Intact	Negative	0	mg/cm²
49	Lab Bldg	1101	D	Door	Jamb	Wood	Stained	Intact	Negative	0	mg/cm²
50	Lab Bldg	1101	D	Door		Wood	Stained	Intact	Negative	0	mg/cm²
51	Lab Bldg	1101	D	Wall	Access Panel	Wood	Stained	Intact	Negative	0	mg/cm²
52	Lab Bldg	1101	D	Door		Wood	Yellow	Intact	Negative	0	mg/cm²
53	Lab Bldg	1101	A	Wall	Radiator	Metal	Brown	Intact	Negative	0	mg/cm²
54	Lab Bldg	1105	A	Ceiling		Drywall	White	Intact	Negative	0	mg/cm²
55	Lab Bldg	1105	A	Wall		Wood	White	Intact	Negative	0.02	mg/cm²
56	Lab Bldg	1105	B	Wall		Wood	White	Intact	Negative	0.03	mg/cm²
57	Lab Bldg	1105	C	Wall		Wood	White	Intact	Negative	0.11	mg/cm²
58	Lab Bldg	1105	D	Wall		Wood	White	Intact	Negative	0.02	mg/cm²
59	Lab Bldg	1105	D	Wall	Crown Mldg	Wood	White	Intact	Negative	0.02	mg/cm²
60	Lab Bldg	1105	D	Wall	Baseboard	Wood	White	Intact	Negative	0.03	mg/cm²
61	Lab Bldg	1105	A	Door	Casing	Wood	Black	Intact	Negative	0	mg/cm²
62	Lab Bldg	1105	A	Door	Casing	Wood	White	Intact	Negative	0.1	mg/cm²
63	Lab Bldg	1105	A	Door		Wood	Black	Intact	Negative	0.01	mg/cm²
64	Lab Bldg	1105	C	Wall	Radiator	Metal	Black	Intact	Negative	0	mg/cm²
65	Lab Bldg	1107	A	Ceiling		Drywall	Black	Intact	Negative	0.01	mg/cm²
66	Lab Bldg	1107	A	Wall		Wood	Black	Intact	Negative	0.02	mg/cm²
67	Lab Bldg	1107	B	Wall		Wood	Black	Intact	Negative	0.02	mg/cm²
68	Lab Bldg	1107	C	Wall		Wood	Black	Intact	Negative	0.01	mg/cm²
69	Lab Bldg	1107	D	Wall		Wood	Black	Intact	Negative	0.03	mg/cm²
70	Lab Bldg	1107	D	Wall	Crown Mldg	Wood	Black	Intact	Negative	0.13	mg/cm²
71	Lab Bldg	1107	D	Wall	Baseboard	Wood	Black	Intact	Negative	0.07	mg/cm²
72	Lab Bldg	1107	C	Wall	Radiator	Metal	Black	Intact	Negative	0.01	mg/cm²
73	Lab Bldg	1107	B	Cased Doorway	Jamb	Wood	Black	Intact	Negative	0.02	mg/cm²
74	Lab Bldg	1107	A	Beam		Metal	Black	Intact	Negative	0	mg/cm²
75	Lab Bldg	1204	A	Ceiling		Drywall	White	Intact	Negative	0.15	mg/cm²
76	Lab Bldg	1204	A	Wall		Drywall	White	Intact	Negative	0	mg/cm²
77	Lab Bldg	1204	B	Wall		Drywall	White	Intact	Negative	0.08	mg/cm²
78	Lab Bldg	1204	C	Wall		Drywall	White	Intact	Negative	0.13	mg/cm²
79	Lab Bldg	1204	D	Wall		Drywall	White	Intact	Negative	0.04	mg/cm²
80	Lab Bldg	1204	D	Wall	Radiator	Metal	Brown	Intact	Negative	0	mg/cm²

No	Site	Room	Side	Structure	Feature	Substrate	Color	Condition	Results	PbC	Units
81	Lab Bldg	1204	D	Floor		Concrete	Grey	Fair	Negative	0	mg/cm²
82	Lab Bldg	1204	D	Window	Casing	Wood	Grey	Intact	Negative	0	mg/cm²
83	Lab Bldg	1204	A	Door	Jamb	Metal	Brown	Intact	Negative	0	mg/cm²
84	Lab Bldg	1204	A	Door		Metal	Brown	Intact	Negative	0	mg/cm²
85	Lab Bldg	1204	B	Door	Casing	Wood	Grey	Intact	Negative	0.07	mg/cm²
86	Lab Bldg	1204	B	Door		Wood	Stained	Intact	Negative	0.01	mg/cm²
87	Lab Bldg	1208	A	Ceiling		Drywall	White	Intact	Negative	0	mg/cm²
88	Lab Bldg	1208	A	Wall		Drywall	White	Intact	Negative	0	mg/cm²
89	Lab Bldg	1208	B	Wall		Drywall	White	Intact	Negative	0.01	mg/cm²
90	Lab Bldg	1208	C	Wall		Drywall	White	Intact	Negative	0	mg/cm²
91	Lab Bldg	1208	D	Wall		Drywall	White	Intact	Negative	0	mg/cm²
92	Lab Bldg	1208	A	Floor		Concrete	Grey	Fair	Negative	0.01	mg/cm²
93	Lab Bldg	1208	A	Door	Jamb	Wood	Brown	Intact	Negative	0.04	mg/cm²
94	Lab Bldg	1208	A	Door		Wood	Stained	Intact	Negative	0	mg/cm²
95	Lab Bldg	2000	A	Ceiling		Drywall	White	Intact	Negative	-0.3	mg/cm²
96	Lab Bldg	2000	A	Wall	Crown Mldg	Wood	Stained	Intact	Negative	0.01	mg/cm²
97	Lab Bldg	2000	A	Wall		Wood	Stained	Intact	Negative	0	mg/cm²
98	Lab Bldg	2000	B	Wall		Wood	Stained	Intact	Negative	0.01	mg/cm²
99	Lab Bldg	2000	C	Wall		Wood	Stained	Intact	Negative	0.01	mg/cm²
100	Lab Bldg	2000	C	Wall	Baseboard	Wood	Stained	Intact	Negative	0.01	mg/cm²
101	Lab Bldg	2000	C	Door	Casing	Wood	Stained	Intact	Negative	0.03	mg/cm²
102	Lab Bldg	2000	C	Door		Wood	Stained	Intact	Negative	0.01	mg/cm²
103	Lab Bldg	2001	A	Ceiling		Drywall	White	Intact	Negative	-0.38	mg/cm²
104	Lab Bldg	2001	A	Wall	Crown Mldg	Wood	Stained	Intact	Negative	0.03	mg/cm²
105	Lab Bldg	2001	A	Wall		Wood	Stained	Intact	Negative	0.01	mg/cm²
106	Lab Bldg	2001	B	Wall		Wood	Stained	Intact	Negative	0	mg/cm²
107	Lab Bldg	2001	C	Wall		Wood	Stained	Intact	Negative	0.06	mg/cm²
108	Lab Bldg	2001	A	Window	Casing	Wood	Stained	Intact	Negative	0	mg/cm²
109	Lab Bldg	2001	A	Wall	Radiator	Metal	Brown	Intact	Negative	0	mg/cm²
110	Lab Bldg	2005	A	Ceiling		Drywall	Wallpaper	Intact	Negative	0.02	mg/cm²
111	Lab Bldg	2005	A	Wall		Drywall	Wallpaper	Intact	Negative	0.03	mg/cm²
112	Lab Bldg	2005	B	Wall		Drywall	Wallpaper	Intact	Negative	0.22	mg/cm²
113	Lab Bldg	2005	C	Wall		Drywall	Wallpaper	Intact	Negative	0.24	mg/cm²
114	Lab Bldg	2005	D	Wall		Drywall	Wallpaper	Intact	Negative	0.3	mg/cm²
115	Lab Bldg	2005	D	Wall	Shelf	Wood	Off-White	Fair	Negative	0	mg/cm²
116	Lab Bldg	2005	A	Door	Shelf	Wood	Stained	Intact	Negative	0	mg/cm²
117	Lab Bldg	2005	A	Door		Wood	Stained	Intact	Negative	0.01	mg/cm²
118	Lab Bldg	2005	C	Toilet Partition	Wall	Wood	Stained	Intact	Negative	0	mg/cm²
119	Lab Bldg	2005	C	Toilet Partition	Door	Wood	Stained	Intact	Negative	0	mg/cm²
120	Lab Bldg	2005	A	Ceiling		Drywall	White	Intact	Negative	0	mg/cm²
121	Lab Bldg	2005	A	Wall		Drywall	White	Intact	Negative	0.08	mg/cm²
122	Lab Bldg	2005	B	Wall		Drywall	White	Intact	Negative	0.13	mg/cm²
123	Lab Bldg	2005	C	Wall		Drywall	White	Intact	Negative	0.03	mg/cm²
124	Lab Bldg	2005	D	Wall		Drywall	White	Intact	Negative	0.03	mg/cm²

No	Site	Room	Side	Structure	Feature	Substrate	Color	Condition	Results	PbC	Units
125	Lab Bldg	2005	A	Door	Jamb	Wood	Stained	Intact	Negative	0.02	mg/cm²
126	Lab Bldg	2005	A	Door		Wood	Stained	Intact	Negative	0.01	mg/cm²
127	Lab Bldg	2005	C	Window	Casing	Wood	Stained	Intact	Negative	0.01	mg/cm²
128	Lab Bldg	2005	C	Door	Casing	Wood	White	Intact	Negative	0	mg/cm²
129	Lab Bldg	2005	C	Door		Metal	White	Intact	Negative	0	mg/cm²
130	Lab Bldg	2005	C	Wall	Radiator	Metal	Brown	Intact	Negative	0	mg/cm²
131	Lab Bldg	2005	C	Wall	Radiator	Metal	Brown	Intact	Negative	0	mg/cm²
132	Lab Bldg	2007	A	Ceiling		Drywall	Wallpaper	Intact	Negative	0.03	mg/cm²
133	Lab Bldg	2007	A	Wall		Drywall	Off-White	Intact	Negative	0.14	mg/cm²
134	Lab Bldg	2007	B	Wall		Drywall	Off-White	Intact	Negative	0.4	mg/cm²
135	Lab Bldg	2007	C	Wall		Drywall	Off-White	Intact	Negative	0.3	mg/cm²
136	Lab Bldg	2007	D	Wall		Drywall	Off-White	Intact	Negative	0.18	mg/cm²
137	Lab Bldg	2007	A	Door	Jamb	Wood	Stained	Intact	Negative	0	mg/cm²
138	Lab Bldg	2007	A	Door		Wood	Stained	Intact	Negative	0.02	mg/cm²
139	Lab Bldg	2007	D	Toilet Partition	Wall	Wood	Stained	Intact	Negative	0	mg/cm²
140	Lab Bldg	2007	D	Toilet Partition	Door	Wood	Stained	Intact	Negative	0	mg/cm²
141	Lab Bldg	2007	A	Ceiling		Drywall	Wallpaper	Intact	Negative	0.05	mg/cm²
142	Lab Bldg	2007	A	Wall		Drywall	Wallpaper	Intact	Negative	0.03	mg/cm²
143	Lab Bldg	2007	B	Wall		Drywall	Wallpaper	Intact	Negative	0.28	mg/cm²
144	Lab Bldg	2007	C	Wall		Drywall	Wallpaper	Intact	Negative	0.03	mg/cm²
145	Lab Bldg	2007	D	Wall		Drywall	Wallpaper	Intact	Negative	0.04	mg/cm²
146	Lab Bldg	2007	A	Door	Jamb	Wood	Stained	Intact	Negative	0.01	mg/cm²
147	Lab Bldg	2007	A	Door		Wood	Stained	Intact	Negative	0.01	mg/cm²
148	Lab Bldg	2101	A	Ceiling		Drywall	White	Intact	Negative	0.01	mg/cm²
149	Lab Bldg	2101	A	Wall		Wood	Stained	Intact	Negative	0.01	mg/cm²
150	Lab Bldg	2101	B	Wall		Wood	Stained	Intact	Negative	0.03	mg/cm²
151	Lab Bldg	2101	C	Wall		Wood	Stained	Intact	Negative	0	mg/cm²
152	Lab Bldg	2101	D	Wall		Wood	Stained	Intact	Negative	0.02	mg/cm²
153	Lab Bldg	2101	D	Wall	Crown Mldg	Wood	Stained	Intact	Negative	0.01	mg/cm²
154	Lab Bldg	2101	D	Door	Casing	Wood	Stained	Intact	Negative	0	mg/cm²
155	Lab Bldg	2101	D	Door		Wood	Stained	Intact	Negative	0	mg/cm²
156	Lab Bldg	2101	B	Window	Casing	Wood	Stained	Intact	Negative	0.08	mg/cm²
157	Lab Bldg	2202	A	Ceiling		Drywall	White	Intact	Negative	-0.24	mg/cm²
158	Lab Bldg	2202	A	Wall		Wood	Stained	Intact	Negative	0.01	mg/cm²
159	Lab Bldg	2202	B	Wall		Wood	Stained	Intact	Negative	0.02	mg/cm²
160	Lab Bldg	2202	C	Wall		Wood	Stained	Intact	Negative	0	mg/cm²
161	Lab Bldg	2202	D	Wall		Wood	Stained	Intact	Negative	0.02	mg/cm²
162	Lab Bldg	2202	D	Wall	Radiator	Metal	Brown	Intact	Negative	0	mg/cm²
163	Lab Bldg	2202	D	Window	Casing	Wood	Stained	Intact	Negative	0.02	mg/cm²
164	Lab Bldg	2202	C	Door	Jamb	Wood	Stained	Intact	Negative	0.02	mg/cm²
165	Lab Bldg	2202	C	Door		Wood	Stained	Intact	Negative	0	mg/cm²
166	Lab Bldg	2208	A	Ceiling		Drywall	White	Intact	Negative	0.22	mg/cm²
167	Lab Bldg	2208	A	Wall		Drywall	White	Intact	Negative	0.11	mg/cm²
168	Lab Bldg	2208	B	Wall		Drywall	White	Intact	Negative	0.26	mg/cm²

No	Site	Room	Side	Structure	Feature	Substrate	Color	Condition	Results	PbC	Units
169	Lab Bldg	2208	C	Wall		Drywall	White	Intact	Negative	0.28	mg/cm²
170	Lab Bldg	2208	D	Wall		Drywall	White	Intact	Negative	0.21	mg/cm²
171	Lab Bldg	2208	C	Door	Casing	Wood	Stained	Intact	Negative	0	mg/cm²
172	Lab Bldg	2208	C	Door		Wood	Stained	Intact	Negative	0.01	mg/cm²
173	Lab Bldg	2208	C	Window	Casing	Wood	Stained	Intact	Negative	0.01	mg/cm²
174	Lab Bldg	3000	A	Wall	Crown Mldg	Wood	Stained	Intact	Negative	0.02	mg/cm²
175	Lab Bldg	3000	A	Ceiling		Drywall	White	Intact	Negative	0	mg/cm²
176	Lab Bldg	3000	A	Wall		Drywall	Wallpaper	Intact	Negative	0	mg/cm²
177	Lab Bldg	3000	B	Wall		Drywall	White	Intact	Negative	0	mg/cm²
178	Lab Bldg	3000	C	Wall		Drywall	Wallpaper	Intact	Negative	0.01	mg/cm²
179	Lab Bldg	3000	D	Wall		Drywall	Wallpaper	Intact	Negative	0.01	mg/cm²
180	Lab Bldg	3000	A	Wall	Baseboard	Wood	Stained	Intact	Negative	0.01	mg/cm²
181	Lab Bldg	3000	A	Door	Casing	Wood	Stained	Intact	Negative	0.06	mg/cm²
182	Lab Bldg	3000	A	Door		Wood	Stained	Intact	Negative	0.01	mg/cm²
183	Lab Bldg	3000	C	Door	Jamb	Metal	White	Intact	Negative	0.14	mg/cm²
184	Lab Bldg	3000	C	Door		Metal	White	Intact	Negative	0.05	mg/cm²
185	Lab Bldg	3001	A	Wall	Crown Mldg	Wood	Stained	Intact	Negative	0.03	mg/cm²
186	Lab Bldg	3001	A	Ceiling		Drywall	White	Intact	Negative	0	mg/cm²
187	Lab Bldg	3001	A	Wall		Drywall	Wallpaper	Intact	Negative	0	mg/cm²
188	Lab Bldg	3001	B	Wall		Drywall	Wallpaper	Intact	Negative	0	mg/cm²
189	Lab Bldg	3001	C	Wall		Drywall	Wallpaper	Intact	Negative	0.02	mg/cm²
190	Lab Bldg	3001	D	Wall		Drywall	Wallpaper	Intact	Negative	0	mg/cm²
191	Lab Bldg	3001	D	Wall	Baseboard	Wood	Stained	Intact	Negative	0.01	mg/cm²
192	Lab Bldg	3001	A	Window	Casing	Wood	Stained	Intact	Negative	0	mg/cm²
193	Lab Bldg	3001	A	Wall	Radiator	Metal	Brown	Intact	Negative	0	mg/cm²
194	Lab Bldg	3001	C	Stair	Handrail	Wood	Stained	Intact	Negative	0.01	mg/cm²
195	Lab Bldg	3003	A	Wall	Crown Mldg	Wood	Stained	Intact	Negative	0.02	mg/cm²
196	Lab Bldg	3003	A	Ceiling		Drywall	Wallpaper	Intact	Negative	0.08	mg/cm²
197	Lab Bldg	3003	A	Wall		Drywall	Wallpaper	Intact	Negative	0.08	mg/cm²
198	Lab Bldg	3003	B	Wall		Drywall	Wallpaper	Intact	Negative	0.05	mg/cm²
199	Lab Bldg	3003	C	Wall		Drywall	Wallpaper	Intact	Negative	0.04	mg/cm²
200	Lab Bldg	3003	D	Wall		Drywall	Wallpaper	Intact	Negative	0.03	mg/cm²
201	Lab Bldg	3003	A	Door	Jamb	Wood	Stained	Intact	Negative	0.01	mg/cm²
202	Lab Bldg	3003	A	Door		Wood	Stained	Intact	Negative	0.03	mg/cm²
203	Lab Bldg	3003	B	Toilet Partition	Wall	Wood	Stained	Intact	Negative	0	mg/cm²
204	Lab Bldg	3005	A	Wall	Crown Mldg	Wood	Stained	Intact	Negative	0.04	mg/cm²
205	Lab Bldg	3005	A	Ceiling		Drywall	Wallpaper	Intact	Negative	0.03	mg/cm²
206	Lab Bldg	3005	A	Wall		Drywall	Wallpaper	Intact	Negative	0.04	mg/cm²
207	Lab Bldg	3005	B	Wall		Drywall	Wallpaper	Intact	Negative	0.24	mg/cm²
208	Lab Bldg	3005	C	Wall		Drywall	Wallpaper	Intact	Negative	0.03	mg/cm²
209	Lab Bldg	3005	D	Wall		Drywall	Wallpaper	Intact	Negative	0.19	mg/cm²
210	Lab Bldg	3005	A	Door	Jamb	Wood	Stained	Intact	Negative	0.01	mg/cm²
211	Lab Bldg	3005	A	Door		Wood	Stained	Intact	Negative	0.01	mg/cm²
212	Lab Bldg	3005	C	Window	Casing	Wood	Stained	Intact	Negative	0	mg/cm²

No	Site	Room	Side	Structure	Feature	Substrate	Color	Condition	Results	PbC	Units
213	Lab Bldg	3005	C	Window	Frame	Metal	Grey	Intact	Negative	0.15	mg/cm²
214	Lab Bldg	3005	C	Wall	Radiator	Metal	Brown	Intact	Negative	0	mg/cm²
215	Lab Bldg	3007	A	Ceiling		Drywall	White	Intact	Negative	0	mg/cm²
216	Lab Bldg	3007	A	Wall		Wood	Stained	Intact	Negative	0.01	mg/cm²
217	Lab Bldg	3007	B	Wall		Wood	Stained	Intact	Negative	0.02	mg/cm²
218	Lab Bldg	3007	C	Wall		Wood	Stained	Intact	Negative	0.02	mg/cm²
219	Lab Bldg	3007	D	Wall		Wood	Stained	Intact	Negative	0.02	mg/cm²
220	Lab Bldg	3007	D	Wall	Shelf	Wood	Stained	Intact	Negative	0	mg/cm²
221	Lab Bldg	3007	C	Wall	Baseboard	Wood	Stained	Intact	Negative	0.03	mg/cm²
222	Lab Bldg	3007	C	Door	Jamb	Wood	Stained	Intact	Negative	0	mg/cm²
223	Lab Bldg	3007	C	Door		Wood	Stained	Intact	Negative	0.02	mg/cm²
224	Lab Bldg	3010	A	Ceiling		Drywall	White	Intact	Negative	0	mg/cm²
225	Lab Bldg	3010	A	Wall		Wood	Stained	Intact	Negative	0.01	mg/cm²
226	Lab Bldg	3010	B	Wall		Wood	Stained	Intact	Negative	0.01	mg/cm²
227	Lab Bldg	3010	C	Wall		Wood	Stained	Intact	Negative	0.02	mg/cm²
228	Lab Bldg	3010	D	Wall		Wood	Stained	Intact	Negative	0.01	mg/cm²
229	Lab Bldg	3010	D	Wall	Baseboard	Wood	Stained	Intact	Negative	0.03	mg/cm²
230	Lab Bldg	3010	B	Door	Jamb	Wood	Stained	Intact	Negative	0.01	mg/cm²
231	Lab Bldg	3010	B	Door		Wood	Stained	Intact	Negative	0	mg/cm²
232	Lab Bldg	3011	A	Ceiling		Drywall	White	Intact	Negative	0.12	mg/cm²
233	Lab Bldg	3011	A	Wall		Drywall	White	Intact	Negative	0.17	mg/cm²
234	Lab Bldg	3011	B	Wall		Drywall	White	Intact	Negative	0.29	mg/cm²
235	Lab Bldg	3011	C	Wall		Drywall	White	Intact	Negative	0.25	mg/cm²
236	Lab Bldg	3011	D	Wall		Drywall	White	Intact	Negative	0.2	mg/cm²
237	Lab Bldg	3011	D	Wall	Shelf	Wood	Stained	Intact	Negative	0	mg/cm²
238	Lab Bldg	3011	D	Wall	Crown Mldg	Wood	White	Intact	Negative	0.03	mg/cm²
239	Lab Bldg	3011	C	Window	Casing	Wood	White	Intact	Negative	0.02	mg/cm²
240	Lab Bldg	3011	C	Wall	Radiator	Metal	White	Intact	Negative	0	mg/cm²
241	Lab Bldg	3011	A	Door	Jamb	Metal	White	Intact	Negative	0	mg/cm²
242	Lab Bldg	3011	A	Door		Metal	White	Intact	Negative	0	mg/cm²
243	Lab Bldg	3015	A	Wall	Crown Mldg	Wood	Stained	Intact	Negative	0	mg/cm²
244	Lab Bldg	3015	A	Ceiling		Drywall	White	Intact	Negative	0	mg/cm²
245	Lab Bldg	3015	A	Wall		Drywall	White	Intact	Negative	0.17	mg/cm²
246	Lab Bldg	3015	A	Wall		Drywall	Wallpaper	Intact	Negative	0.01	mg/cm²
247	Lab Bldg	3015	B	Wall		Drywall	Wallpaper	Intact	Negative	0.01	mg/cm²
248	Lab Bldg	3015	C	Wall		Drywall	Wallpaper	Intact	Negative	0.02	mg/cm²
249	Lab Bldg	3015	D	Wall		Drywall	Wallpaper	Intact	Negative	0.01	mg/cm²
250	Lab Bldg	3015	A	Wall	Baseboard	Wood	Stained	Intact	Negative	0.01	mg/cm²
251	Lab Bldg	3015	C	Window	Casing	Wood	Stained	Intact	Negative	0.01	mg/cm²
252	Lab Bldg	3015	C	Wall	Radiator	Metal	Brown	Intact	Negative	0.01	mg/cm²
253	Lab Bldg	3015	A	Door	Casing	Metal	White	Intact	Negative	0.09	mg/cm²
254	Lab Bldg	3015	A	Door		Metal	White	Intact	Negative	0.13	mg/cm²
255	Lab Bldg	3100	A	Ceiling		Drywall	White	Intact	Negative	0	mg/cm²
256	Lab Bldg	3100	A	Wall		Drywall	White	Intact	Negative	0	mg/cm²

No	Site	Room	Side	Structure	Feature	Substrate	Color	Condition	Results	PbC	Units
257	Lab Bldg	3100	B	Wall		Drywall	White	Intact	Negative	0	mg/cm²
258	Lab Bldg	3100	C	Wall		Drywall	White	Intact	Negative	0	mg/cm²
259	Lab Bldg	3100	D	Wall		Drywall	White	Intact	Negative	0.01	mg/cm²
260	Lab Bldg	3100	C	Wall	Baseboard	Wood	White	Intact	Negative	0	mg/cm²
261	Lab Bldg	3100	C	Door	Jamb	Metal	White	Intact	Negative	0.09	mg/cm²
262	Lab Bldg	3100	C	Door		Metal	White	Intact	Negative	0.1	mg/cm²
263	Lab Bldg	3100	B	Door	Jamb	Wood	Stained	Intact	Negative	0.01	mg/cm²
264	Lab Bldg	3100	B	Door		Wood	Stained	Intact	Negative	0.01	mg/cm²
265	Lab Bldg	3100	B	Wall	Ladder	Wood	Stained	Fair	Negative	0	mg/cm²
266	Lab Bldg	3101	A	Ceiling		Drywall	White	Intact	Negative	0	mg/cm²
267	Lab Bldg	3101	A	Wall		Drywall	White	Intact	Negative	0	mg/cm²
268	Lab Bldg	3101	B	Wall		Drywall	White	Intact	Negative	0	mg/cm²
269	Lab Bldg	3101	C	Wall		Drywall	White	Intact	Negative	0	mg/cm²
270	Lab Bldg	3101	D	Wall		Drywall	White	Intact	Negative	0	mg/cm²
271	Lab Bldg	3101	D	Wall	Crown Mldg	Wood	White	Intact	Negative	0.02	mg/cm²
272	Lab Bldg	3101	D	Wall	Baseboard	Wood	Stained	Intact	Negative	0.05	mg/cm²
273	Lab Bldg	3101	A	Window	Casing	Wood	Stained	Intact	Negative	0	mg/cm²
274	Lab Bldg	3101	A	Wall	Radiator	Metal	Brown	Intact	Negative	0	mg/cm²
275	Lab Bldg	3101	B	Bookcase	Shelf	Wood	Stained	Intact	Negative	0	mg/cm²
276	Lab Bldg	3101	C	Door	Jamb	Wood	Stained	Intact	Negative	0	mg/cm²
277	Lab Bldg	3101	C	Door		Wood	Stained	Intact	Negative	0.01	mg/cm²
278	Lab Bldg	3101	B	Door	Jamb	Metal	White	Intact	Negative	0.03	mg/cm²
279	Lab Bldg	3101	B	Door		Metal	White	Intact	Negative	0.12	mg/cm²
280	Lab Bldg	3107	A	Ceiling		Drywall	White	Intact	Negative	0	mg/cm²
281	Lab Bldg	3107	A	Wall		Drywall	Wallpaper	Intact	Negative	0.02	mg/cm²
282	Lab Bldg	3107	B	Wall		Drywall	Wallpaper	Intact	Negative	0.01	mg/cm²
283	Lab Bldg	3107	C	Wall		Drywall	Wallpaper	Intact	Negative	0.01	mg/cm²
284	Lab Bldg	3107	D	Wall		Drywall	Wallpaper	Intact	Negative	0.01	mg/cm²
285	Lab Bldg	3107	D	Wall	Baseboard	Wood	Stained	Intact	Negative	0.02	mg/cm²
286	Lab Bldg	3107	A	Window	Casing	Wood	Stained	Intact	Negative	0	mg/cm²
287	Lab Bldg	3107	A	Wall	Radiator	Metal	Brown	Intact	Negative	0	mg/cm²
288	Lab Bldg	3107	C	Door	Casing	Wood	Stained	Intact	Negative	0.01	mg/cm²
289	Lab Bldg	3107	C	Door		Wood	Stained	Intact	Negative	0.02	mg/cm²
290	Lab Bldg	3109	A	Ceiling		Drywall	White	Intact	Negative	0	mg/cm²
291	Lab Bldg	3109	A	Wall		Drywall	White	Intact	Negative	0	mg/cm²
292	Lab Bldg	3109	B	Wall		Drywall	White	Intact	Negative	0	mg/cm²
293	Lab Bldg	3109	C	Wall		Drywall	White	Intact	Negative	0.07	mg/cm²
294	Lab Bldg	3109	D	Wall		Drywall	White	Intact	Negative	0.01	mg/cm²
295	Lab Bldg	3109	D	Wall	Crown Mldg	Wood	White	Intact	Negative	0.01	mg/cm²
296	Lab Bldg	3109	D	Wall	Baseboard	Wood	Stained	Intact	Negative	0.04	mg/cm²
297	Lab Bldg	3109	D	Door	Jamb	Wood	Stained	Intact	Negative	0.01	mg/cm²
298	Lab Bldg	3109	D	Door		Wood	Stained	Intact	Negative	0.01	mg/cm²
299	Lab Bldg	3109	B	Window	Casing	Wood	Stained	Intact	Negative	0	mg/cm²
300	Lab Bldg	3109	B	Wall	Radiator	Metal	Brown	Intact	Negative	0	mg/cm²

No	Site	Room	Side	Structure	Feature	Substrate	Color	Condition	Results	PbC	Units
301	Lab Bldg	3111	A	Ceiling		Drywall	White	Intact	Negative	0	mg/cm²
302	Lab Bldg	3111	A	Wall		Drywall	White	Intact	Negative	0.19	mg/cm²
303	Lab Bldg	3111	B	Wall		Drywall	White	Intact	Negative	0	mg/cm²
304	Lab Bldg	3111	C	Wall		Drywall	White	Intact	Negative	0	mg/cm²
305	Lab Bldg	3111	D	Wall		Drywall	White	Intact	Negative	0.05	mg/cm²
306	Lab Bldg	3111	D	Wall	Baseboard	Wood	Stained	Intact	Negative	0.01	mg/cm²
307	Lab Bldg	3111	C	Door	Casing	Metal	White	Intact	Negative	0.07	mg/cm²
308	Lab Bldg	3111	C	Door		Metal	White	Intact	Negative	0.07	mg/cm²
309	Lab Bldg	3111	C	Window	Casing	Wood	Stained	Intact	Negative	0	mg/cm²
310	Lab Bldg	3117	A	Ceiling		Drywall	White	Intact	Negative	0	mg/cm²
311	Lab Bldg	3117	A	Wall	Crown Mldg	Wood	White	Intact	Negative	0.01	mg/cm²
312	Lab Bldg	3117	A	Wall		Drywall	White	Intact	Negative	0	mg/cm²
313	Lab Bldg	3117	B	Wall		Drywall	White	Intact	Negative	0.01	mg/cm²
314	Lab Bldg	3117	C	Wall		Drywall	White	Intact	Negative	0.02	mg/cm²
315	Lab Bldg	3117	D	Wall		Drywall	White	Intact	Negative	0	mg/cm²
316	Lab Bldg	3117	D	Wall	Baseboard	Wood	White	Intact	Negative	0.01	mg/cm²
317	Lab Bldg	3117	D	Door	Jamb	Metal	White	Intact	Negative	0	mg/cm²
318	Lab Bldg	3117	D	Door		Metal	White	Intact	Negative	0	mg/cm²
319	Lab Bldg	3200	A	Ceiling		Drywall	White	Intact	Negative	0	mg/cm²
320	Lab Bldg	3200	A	Wall		Drywall	Wallpaper	Intact	Negative	0	mg/cm²
321	Lab Bldg	3200	B	Wall		Drywall	Wallpaper	Intact	Negative	0.02	mg/cm²
322	Lab Bldg	3200	C	Wall		Drywall	Wallpaper	Intact	Negative	0	mg/cm²
323	Lab Bldg	3200	D	Wall		Drywall	Wallpaper	Intact	Negative	0	mg/cm²
324	Lab Bldg	3200	D	Wall	Baseboard	Wood	Stained	Intact	Negative	0.01	mg/cm²
325	Lab Bldg	3200	D	Door	Casing	Wood	White	Intact	Negative	0	mg/cm²
326	Lab Bldg	3200	D	Door		Metal	White	Intact	Negative	0	mg/cm²
327	Lab Bldg	3200	A	Wall	Radiator	Metal	Brown	Intact	Negative	0	mg/cm²
328	Lab Bldg	3200	A	Door	Casing	Wood	Stained	Intact	Negative	0.01	mg/cm²
329	Lab Bldg	3200	A	Door		Wood	Stained	Intact	Negative	0	mg/cm²
330	Lab Bldg	3202	A	Ceiling		Drywall	White	Intact	Negative	0	mg/cm²
331	Lab Bldg	3202	A	Wall		Drywall	White	Intact	Negative	0.03	mg/cm²
332	Lab Bldg	3202	B	Wall		Drywall	White	Intact	Negative	0	mg/cm²
333	Lab Bldg	3202	C	Wall		Drywall	White	Intact	Negative	0	mg/cm²
334	Lab Bldg	3202	D	Wall		Drywall	White	Intact	Negative	0	mg/cm²
335	Lab Bldg	3202	D	Wall	Baseboard	Wood	Stained	Intact	Negative	0.04	mg/cm²
336	Lab Bldg	3202	C	Door	Jamb	Wood	Stained	Intact	Negative	0.02	mg/cm²
337	Lab Bldg	3202	C	Door		Wood	Stained	Intact	Negative	0	mg/cm²
338	Lab Bldg	3202	A	Window	Casing	Wood	Stained	Intact	Negative	0	mg/cm²
339	Lab Bldg	3202	A	Wall	Radiator	Metal	Brown	Intact	Negative	0.03	mg/cm²
340	Lab Bldg	3204	A	Ceiling		Drywall	White	Intact	Negative	0.01	mg/cm²
341	Lab Bldg	3204	A	Wall		Drywall	Wallpaper	Intact	Negative	0	mg/cm²
342	Lab Bldg	3204	B	Wall		Drywall	Wallpaper	Intact	Negative	0.02	mg/cm²
343	Lab Bldg	3204	C	Wall		Drywall	Wallpaper	Intact	Negative	0.01	mg/cm²
344	Lab Bldg	3204	D	Wall		Drywall	Wallpaper	Intact	Negative	0	mg/cm²

No	Site	Room	Side	Structure	Feature	Substrate	Color	Condition	Results	PbC	Units
345	Lab Bldg	3204	D	Wall	Baseboard	Wood	Stained	Intact	Negative	0	mg/cm²
346	Lab Bldg	3204	C	Wall	Radiator	Metal	Brown	Intact	Negative	0	mg/cm²
347	Lab Bldg	3204	C	Window	Casing	Wood	Stained	Intact	Negative	0	mg/cm²
348	Lab Bldg	3204	A	Door	Jamb	Wood	Stained	Intact	Negative	0.01	mg/cm²
349	Lab Bldg	3204	A	Door		Wood	Stained	Intact	Negative	0	mg/cm²
350	Lab Bldg	3206	A	Ceiling		Drywall	White	Intact	Negative	0	mg/cm²
351	Lab Bldg	3206	A	Wall		Drywall	Wallpaper	Intact	Negative	0.01	mg/cm²
352	Lab Bldg	3206	B	Wall		Drywall	Wallpaper	Intact	Negative	0.02	mg/cm²
353	Lab Bldg	3206	C	Wall		Drywall	Wallpaper	Intact	Negative	0.01	mg/cm²
354	Lab Bldg	3206	D	Wall		Drywall	Wallpaper	Intact	Negative	0	mg/cm²
355	Lab Bldg	3206	D	Wall	Radiator	Metal	Brown	Intact	Negative	0	mg/cm²
356	Lab Bldg	3206	A	Window	Casing	Wood	Stained	Intact	Negative	0.03	mg/cm²
357	Lab Bldg	3206	C	Door	Jamb	Wood	Stained	Intact	Negative	0.03	mg/cm²
358	Lab Bldg	3206	C	Door		Wood	Stained	Intact	Negative	0	mg/cm²
359	Lab Bldg	3208	C	Wall	Radiator	Metal	Brown	Intact	Negative	0.01	mg/cm²
360	Lab Bldg	3208	A	Ceiling		Drywall	White	Fair	Negative	0.01	mg/cm²
361	Lab Bldg	3208	A	Wall		Drywall	White	Intact	Negative	0.01	mg/cm²
362	Lab Bldg	3208	B	Wall		Drywall	White	Intact	Negative	0.02	mg/cm²
363	Lab Bldg	3208	C	Wall		Drywall	White	Intact	Negative	0.01	mg/cm²
364	Lab Bldg	3208	D	Wall		Drywall	White	Intact	Negative	0.01	mg/cm²
365	Lab Bldg	3208	B	Wall	Baseboard	Wood	Stained	Intact	Negative	0.05	mg/cm²
366	Lab Bldg	3208	C	Window	Casing	Wood	Stained	Intact	Negative	0	mg/cm²
367	Lab Bldg	3208	A	Door	Jamb	Wood	Stained	Intact	Negative	0	mg/cm²
368	Lab Bldg	3208	A	Door		Wood	Stained	Intact	Negative	0.01	mg/cm²
369	Lab Bldg	1101A	A	Ceiling		Drywall	White	Intact	Negative	0	mg/cm²
370	Lab Bldg	1101A	A	Wall		Drywall	White	Intact	Negative	0	mg/cm²
371	Lab Bldg	1101A	B	Wall		Drywall	White	Intact	Negative	0	mg/cm²
372	Lab Bldg	1101A	C	Wall		Drywall	White	Intact	Negative	0	mg/cm²
373	Lab Bldg	1101A	D	Door		Wood	Stained	Intact	Negative	0	mg/cm²
374	Lab Bldg	1101A	D	Door	Jamb	Metal	Brown	Intact	Negative	0	mg/cm²
375	Lab Bldg	1101A	A	Door	Jamb	Metal	Brown	Intact	Negative	0.01	mg/cm²
376	Lab Bldg	1101A	A	Door		Metal	Brown	Intact	Negative	0.01	mg/cm²
377	Lab Bldg	1101A	A	Ceiling	Door	Metal	Brown	Intact	Negative	0	mg/cm²
378	Lab Bldg	1107B	A	Ceiling		Drywall	Black	Intact	Negative	0	mg/cm²
379	Lab Bldg	1107B	A	Wall		Wood	Black	Intact	Negative	0	mg/cm²
380	Lab Bldg	1107B	B	Wall		Wood	Black	Intact	Negative	0	mg/cm²
381	Lab Bldg	1107B	C	Wall		Wood	Black	Intact	Negative	0	mg/cm²
382	Lab Bldg	1107B	D	Wall		Wood	Black	Intact	Negative	0	mg/cm²
383	Lab Bldg	1107B	D	Beam		Metal	Black	Intact	Negative	0	mg/cm²
384	Lab Bldg	1107B	B	Door	Jamb	Wood	Black	Intact	Negative	0	mg/cm²
385	Lab Bldg	1107B	B	Door		Wood	Black	Intact	Negative	0	mg/cm²
386	Lab Bldg	Ext addition	A	Door	Casing	Metal	Brown	Intact	Negative	0	mg/cm²
387	Lab Bldg	Ext addition	A	Door		Metal	Brown	Intact	Negative	0	mg/cm²
388	Lab Bldg	Exterior	C	Hoist	Door	Metal	Off-White	Poor	Negative	0	mg/cm²

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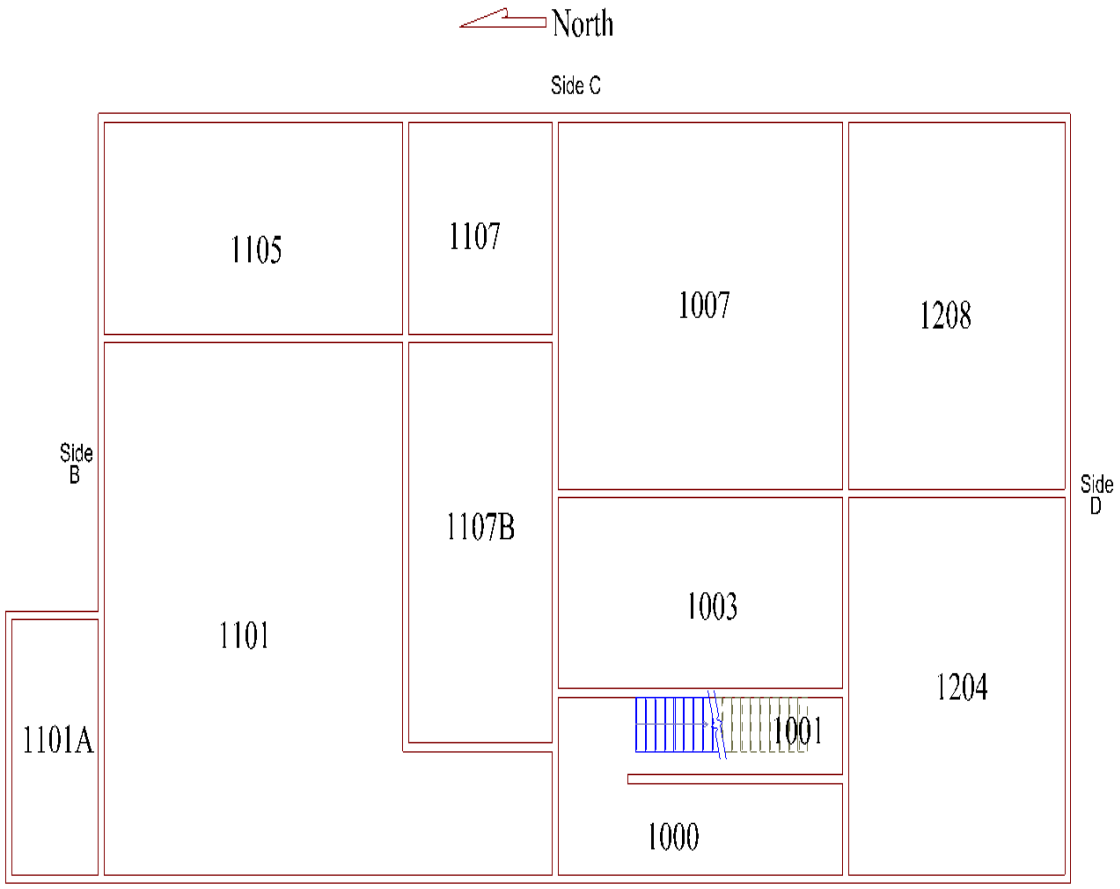
389	Lab Bldg	Exterior	C	Hoist	Frame	Metal	Off-White	Poor	Negative	0	mg/cm²
390	Lab Bldg	Exterior	C	Door	Jamb	Metal	White	Intact	Negative	0.01	mg/cm²
391	Lab Bldg	Exterior	C	Door		Metal	White	Intact	Negative	0	mg/cm²
392	Lab Bldg	Exterior	C	Door	Casing	Wood	White	Intact	Negative	0	mg/cm²
393	Lab Bldg	Exterior	C	Porch	Ceiling	Wood	Grey	Poor	Positive	1.3	mg/cm²
394	Lab Bldg	Exterior	D	Stair	Stringer	Metal	Grey	Fair	Negative	0.2	mg/cm²
395	Lab Bldg	Exterior	D	Stair	Handrail	Metal	Grey	Fair	Negative	0.05	mg/cm²
396	Lab Bldg	Exterior	D	Door	Casing	Wood	White	Poor	Negative	0	mg/cm²
397	Lab Bldg	Exterior	D	Door	Jamb	Wood	White	Intact	Negative	0	mg/cm²
398	Lab Bldg	Exterior	D	Door	Jamb	Metal	White	Intact	Negative	0	mg/cm²
399	Lab Bldg	Exterior	D	Door		Metal	White	Intact	Negative	0	mg/cm²
400	Lab Bldg	Exterior	A	Door	Casing	Metal	Grey	Fair	Negative	0.01	mg/cm²
401	Lab Bldg	Exterior	A	Door		Metal	Grey	Poor	Negative	0	mg/cm²
402	Lab Bldg	Exterior	A	Door		Metal	Brown	Intact	Negative	0	mg/cm²
403	Lab Bldg	Exterior	A	Door		Metal	Brown	Intact	Negative	0.08	mg/cm²
404	Lab Bldg	Exterior	A	Door	Casing	Wood	Brown	Intact	Negative	0	mg/cm²
405	Lab Bldg	Roof	C	Hoist	Door	Metal	Off-White	Fair	Negative	0	mg/cm²
406	Lab Bldg	Roof	C	Hoist	Frame	Metal	Off-White	Fair	Negative	0	mg/cm²
407	Lab Bldg	Roof	B	Penthouse	Wall	Metal	White	Poor	Negative	0.05	mg/cm²
408	Lab Bldg	Roof	B	Penthouse	Door	Metal	White	Poor	Negative	0.05	mg/cm²
409	OPS	Exterior	A	Wall		Metal	Green	Fair	Positive	1.3	mg/cm²
410	OPS	Exterior	A	Door		Metal	Green	Fair	Positive	1.4	mg/cm²
411	OPS	Exterior	A	Window	Sash	Metal	Green	Fair	Positive	1.4	mg/cm²
412	OPS	Exterior	B	Wall		Metal	Green	Fair	Positive	1.2	mg/cm²
413	OPS	Exterior	C	Wall		Metal	Green	Fair	Negative	0.7	mg/cm²
414	OPS	Exterior	C	Window	Sash	Metal	Green	Fair	Positive	1.5	mg/cm²
415	OPS	Exterior	C	Door		Metal	Green	Fair	Negative	0.6	mg/cm²
416	OPS	Exterior	D	Wall		Metal	Green	Fair	Positive	1.7	mg/cm²
417	OPS	Rm. 01	A	Ceiling		Metal	Green	Intact	Negative	0.04	mg/cm²
418	OPS	Rm. 01	A	Wall		Drywall	Green	Intact	Negative	0	mg/cm²
419	OPS	Rm. 01	A	Window	Casing	Wood	Green	Intact	Negative	0	mg/cm²
420	OPS	Rm. 01	A	Window	Sash	Metal	Green	Fair	Negative	0.04	mg/cm²
421	OPS	Rm. 01	A	Door		Metal	Green	Fair	Negative	0.08	mg/cm²
422	OPS	Rm. 01	A	Door	Jamb	Metal	Green	Intact	Negative	0.02	mg/cm²
423	OPS	Rm. 01	B	Wall		Drywall	Green	Intact	Negative	0.01	mg/cm²
424	OPS	Rm. 01	C	Wall		Drywall	Green	Intact	Negative	0	mg/cm²
425	OPS	Rm. 01	C	Window	Shutter	Wood	Green	Intact	Negative	0.24	mg/cm²
426	OPS	Rm. 01	C	Door	Casing	Wood	Green	Intact	Negative	0	mg/cm²
427	OPS	Rm. 01	C	Door		Metal	Green	Intact	Negative	0.05	mg/cm²
428	OPS	Rm. 01	D	Wall		Drywall	Green	Intact	Negative	0	mg/cm²
429	OPS	Rm. 01	D	Wall	Baseboard	Wood	Green	Intact	Negative	0	mg/cm²
430	OPS	Rm. 01	D	Floor		Wood	Grey	Intact	Positive	1.5	mg/cm²
431	OPS	Rm. 02	A	Ceiling		Metal	Green	Intact	Negative	0.03	mg/cm²
432	OPS	Rm. 02	A	Wall		Drywall	Green	Intact	Negative	0	mg/cm²

No	Site	Room	Side	Structure	Feature	Substrate	Color	Condition	Results	PbC	Units
433	OPS	Rm. 02	A	Wall	Baseboard	Wood	Green	Intact	Negative	0	mg/cm²
434	OPS	Rm. 02	A	Floor		Wood	Grey	Intact	Positive	1.1	mg/cm²
435	OPS	Rm. 02	A	Door	Casing	Wood	Green	Intact	Negative	0	mg/cm²
436	OPS	Rm. 02	A	Door		Wood	Green	Intact	Negative	0	mg/cm²
437	OPS	Rm. 02	A	Door	Jamb	Wood	Stained	Intact	Negative	0	mg/cm²
438	OPS	Rm. 02	B	Wall		Drywall	Green	Intact	Negative	0	mg/cm²
439	OPS	Rm. 02	C	Wall		Drywall	Green	Intact	Negative	0	mg/cm²
440	OPS	Rm. 02	C	Window	Casing	Wood	Green	Intact	Negative	0	mg/cm²
441	OPS	Rm. 02	C	Window	Shutter	Wood	Green	Intact	Negative	0	mg/cm²
442	OPS	Rm. 02	C	Window	Sash	Metal	Green	Intact	Negative	0.05	mg/cm²
443	OPS	Rm. 02	D	Wall		Drywall	Green	Intact	Negative	0	mg/cm²
444	OPS	Shed Ext	A	Wall		Wood	Green	Poor	Negative	0.7	mg/cm²
445	OPS	Shed Ext	B	Wall		Wood	Green	Poor	Negative	0.7	mg/cm²
446	OPS	Shed Ext	C	Wall		Wood	Green	Poor	Negative	0.5	mg/cm²
447	OPS	Shed Ext	C	Door	Casing	Wood	Green	Poor	Negative	0.8	mg/cm²
448	OPS	Shed Ext	C	Door		Wood	Green	Poor	Positive	1.3	mg/cm²
449	OPS	Shed Ext	D	Wall		Wood	Green	Poor	Negative	0.9	mg/cm²
450	OPS	Shed Int	A	Ceiling		Wood	Silver	Poor	Negative	0	mg/cm²
451	OPS	Shed Int	A	Wall		Wood	Silver	Poor	Negative	0	mg/cm²
452	OPS	Shed Int	B	Wall		Wood	Silver	Poor	Negative	0	mg/cm²
453	OPS	Shed Int	C	Wall		Wood	Silver	Poor	Negative	0.03	mg/cm²
454	OPS	Shed Int	C	Door	Jamb	Wood	Silver	Poor	Negative	0	mg/cm²
455	OPS	Shed Int	C	Door		Wood	Silver	Poor	Negative	0	mg/cm²
456	OPS	Shed Int	D	Wall		Wood	Silver	Poor	Negative	0.01	mg/cm²
457	OPS	Outhouse Ext	A	Wall	Soffit	Wood	Green	Poor	Positive	1.3	mg/cm²
458	OPS	Outhouse Ext	A	Wall		Wood	Green	Poor	Negative	0.7	mg/cm²
459	OPS	Outhouse Ext	B	Wall	Soffit	Wood	Green	Poor	Negative	0.3	mg/cm²
460	OPS	Outhouse Ext	B	Wall		Wood	Green	Poor	Negative	0.6	mg/cm²
461	OPS	Outhouse Ext	C	Wall	Soffit	Wood	Green	Poor	Negative	0.6	mg/cm²
462	OPS	Outhouse Ext	C	Wall		Wood	Green	Poor	Negative	0.8	mg/cm²
463	OPS	Outhouse Ext	D	Wall		Wood	Green	Poor	Positive	1.2	mg/cm²
464	OPS	Outhouse Ext	D	Wall	Soffit	Wood	Green	Poor	Positive	1.4	mg/cm²
465	OPS	Outhouse Int	A	Ceiling		Wood	Green	Poor	Negative	0	mg/cm²
466	OPS	Outhouse Int	A	Wall		Wood	Green	Poor	Negative	0	mg/cm²
467	OPS	Outhouse Int	B	Wall		Wood	Green	Poor	Negative	0.03	mg/cm²
468	OPS	Outhouse Int	C	Wall		Wood	Green	Poor	Negative	0.02	mg/cm²
469	OPS	Outhouse Int	D	Wall		Wood	Green	Poor	Negative	0	mg/cm²
470	OPS	Outhouse Int	D	Door	Jamb	Wood	Green	Poor	Negative	0	mg/cm²
471	OPS	Outhouse Int	D	Door		Wood	Green	Poor	Negative	0	mg/cm²
472		Calibrate							Positive	1	mg/cm²
473		Calibrate							Positive	1	mg/cm²
474		Calibrate							Positive	1	mg/cm²

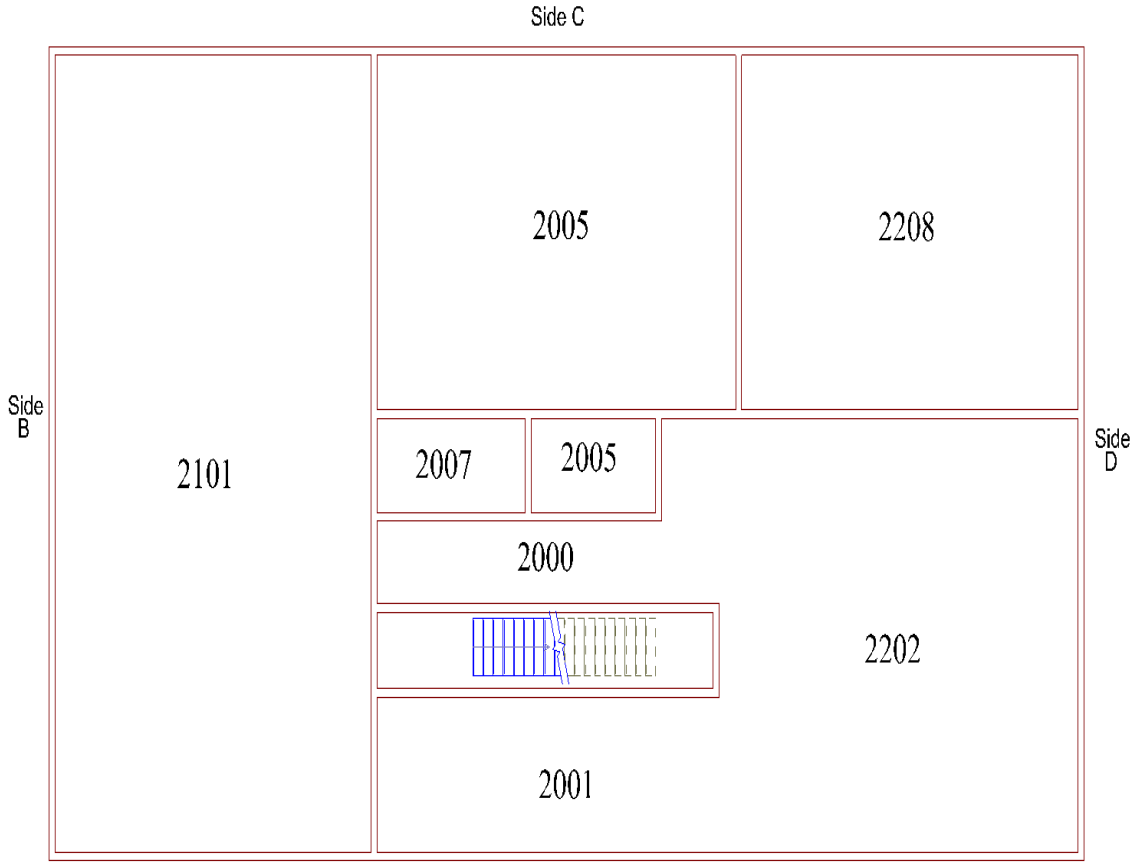


First Level

Side A

19126 Hwy 119, Rollinsville

Not To Scale

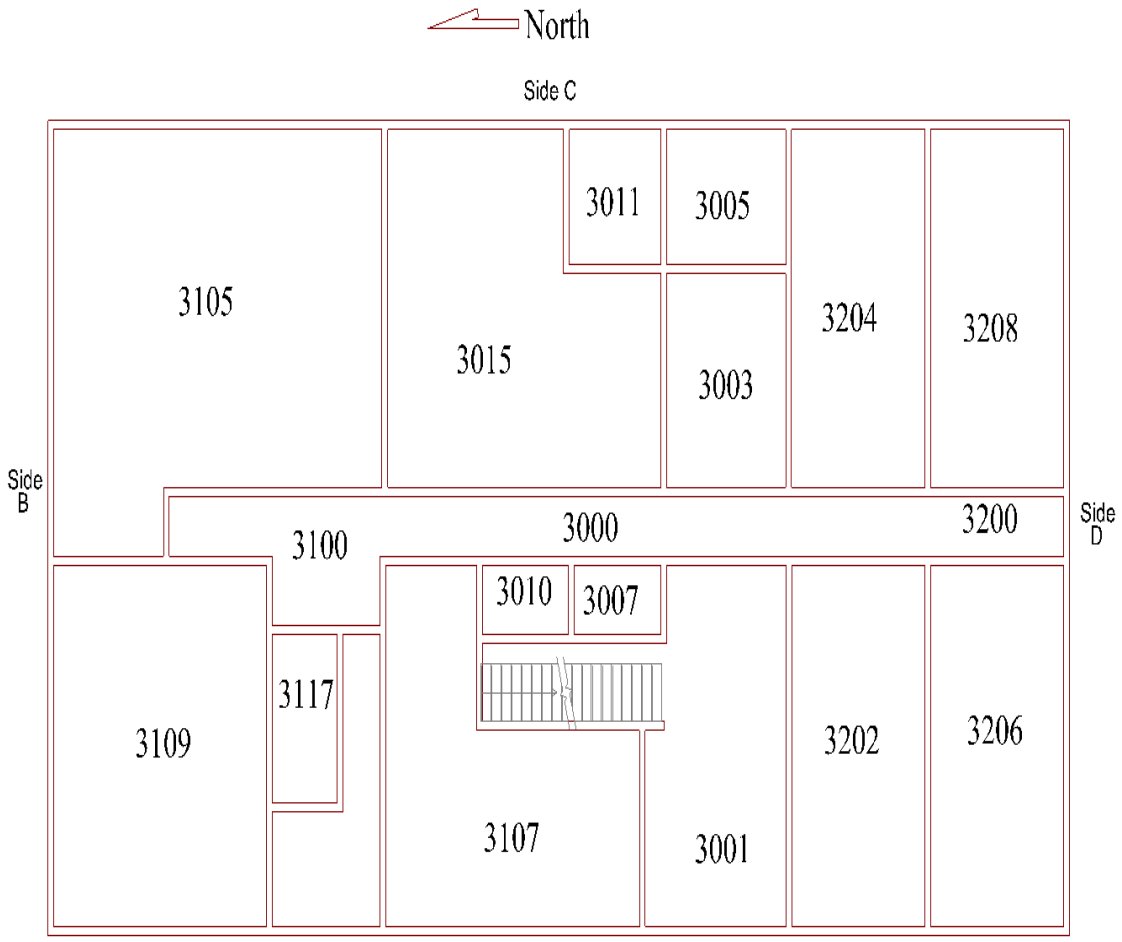


Second Level

Side A

19126 Hwy 119, Rollinsville

Not To Scale

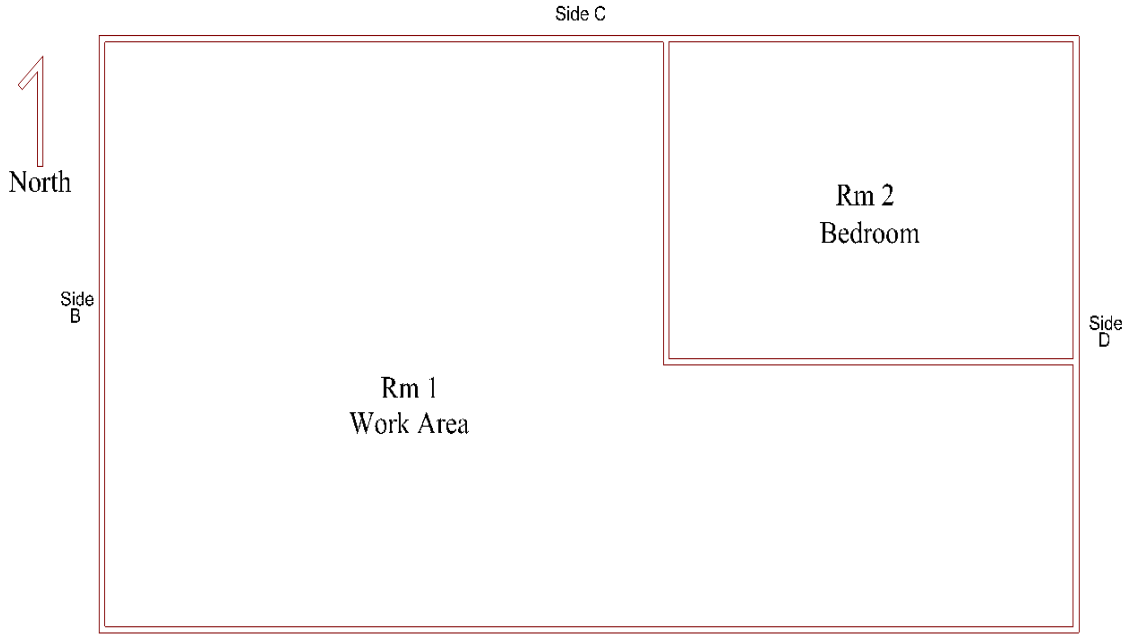


Third Level

Side A

19126 Hwy 119, Rollinsville

Not To Scale



Outlook Platform Shed

Side A

19126 Hwy 119, Rollinsville

Not To Scale

LABORATORY RESULTS

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856) 303-2500 / (856) 786-5974
http://www.EMSL.com cinnaminsonleadlab@emsl.com

EMSL Order: 201910235
CustomerID: BURN34
CustomerPO:
ProjectID:

Attn: **John Burnside**
Burnside Enterprises
4030 Zurich Dr.
Colorado Springs, CO 80920

Phone: (719) 596-4656
Fax: (719) 596-4656
Received: 09/25/19 10:20 AM
Collected: 9/23/2019

Project: **NOAA**

Test Report: Lead in Dust by Flame AAS (SW 846 3050B/7000B)*

Client Sample Description	Lab ID	Collected	Analyzed	Area Sampled	Lead Concentration
W01	*201910235-0001*	9/23/2019	9/25/2019	1 ft²	13 µg/ft²
	Site: Rm 1 Living - Floor				
W02	*201910235-0002*	9/23/2019	9/25/2019	1.13 ft²	13 µg/ft²
	Site: Rm 1 Living - Sill				
W03	*201910235-0003*	9/23/2019	9/25/2019	1 ft²	12 µg/ft²
	Site: Rm 2 Bedroom - Floor				
W04	*201910235-0004*	9/23/2019	9/25/2019	0.66 ft²	<15 µg/ft²
	Site: Rm 2 Bedroom - Sill				
W05	*201910235-0005*	9/23/2019	9/25/2019	1 ft²	11 µg/ft²
	Site: Rm 4 Bedroom - Floor				
W06	*201910235-0006*	9/23/2019	9/25/2019	0.66 ft²	<15 µg/ft²
	Site: Rm 4 Bedroom - Sill				
W07	*201910235-0007*	9/23/2019	9/25/2019	1 ft²	<10 µg/ft²
	Site: Rm 5 Hall - Floor				

Phillip Worby, Lead Laboratory Manager
or other approved signatory

*Analysis following Lead in Dust by EMSL SOP/ Determination of Environmental Lead by FLAA. Reporting limit is 10 µg/wipe. ug/wipe =µg/ft² x area sampled in ft². Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities (such as volume sampled) or analytical method limitations. Samples received in good condition unless otherwise noted. The lab is not responsible for data reported in µg/ft² which is dependent on the area provided by non-lab personnel. The test results contained within this report meet the requirements of NELAC unless otherwise noted. "<" (less than) results signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. The QC data associated with the sample results included in this report meet the recovery and precision requirements unless specifically indicated otherwise. Definitions of modifications are available upon request.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NELAP Certifications: NJ 03036, NY 10872, PA 68-00367, AIHA-LAP, LLC ELLAP 100194, A2LA 2845.01

Initial report from 09/26/2019 12:23:25