

**Asbestos Abatement Work Plan for
Civic Apartments Bathroom
Replacement (2020)
Units 9-12
Casper College
Casper, Wyoming**

FEI Project Number: AS20047
April 3, 2020





**ASBESTOS ABATEMENT WORK PLAN
CASPER COLLEGE
CIVIC APARTMENTS BATHROOM REPLACEMENT
UNITS 9-12
CASPER, WYOMING**

April 3, 2020

Prepared for: **Eric Rulofson, Facilities Operations Director
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FEI Project Number: AS20047

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ASBESTOS ABATEMENT WORK PLAN CASPER COLLEGE CIVIC APARTMENTS BATHROOM REPLACEMENT, UNITS 9-12 CASPER, WYOMING

1 INTRODUCTION

Foothills Environmental Inc. (FEI) is using information from an asbestos inspection conducted by Foothills in March of 2020 at the “Civic Apartments” in Unit 9 located at Casper College (CC) in Casper, Wyoming. The purpose of the inspection was to confirm locations and quantities of asbestos-containing materials (ACM) in the apartment that may be impacted as part of bathroom replacement activities planned for the building in Spring/Summer of 2020. Bathroom demolition will be performed by the abatement contractor and replacement will be performed by a general contractor or college personnel. The intent of this project is removal of ACM walls and ceilings to studs (joint compound is ACM) and associated fixtures including exhaust fans, light fixtures, switches and outlets, tub, curtain rod and tub enclosure (leaving plumbing), and cove base and associated mastics. Floors are newer and will remain.

Work Area

Work area includes bathrooms in Units 9-12. See Figure 1, Asbestos and Fixtures to be Removed.

2 SCOPE OF WORK

Work specified herein shall be the removal and disposal of walls to studs, flooring and mastics, cove base and mastics, exhaust fans, electrical switches and outlets, and tub, rod and enclosure. Light fixtures will be removed and saved for reuse. Flooring will remain. Work will be completed at the Site by competent persons trained, knowledgeable, and qualified in the techniques of asbestos abatement and minor demolition. The replacement of walls, flooring, fixtures and plumbing will be completed by either the CC staff or a general contractor. The abatement contractor (Contractor) hired to complete abatement must comply with all applicable federal, state, and local laws and regulations, and be capable of performing the work specified in this Work Plan. In addition, the Contractor is responsible to obtain any necessary permits, make all notifications to Wyoming Department of Environmental Quality prior to beginning work and update notifications as required.

2.1 Asbestos and Non-Asbestos Materials for Removal

The following table lists locations, materials, percentage, and type of asbestos, as well as the approximate quantities of asbestos to be removed. Drawings of material locations and work areas are located in Attachment 1 and Photographs of materials are in Attachment 2.

TABLE 1
ACM Materials to be removed from Civic Apartments by Contractor

Material Description	Material Location	Material Type	Friability	Asbestos Content	Approximate Quantity
CDW01 – Composite Drywall and Joint Compound	Bathroom Ceilings and walls in Units 9-12 (assume there may be non-ACM insulation for disposal above ceilings)	Miscellaneous	Non Friable	3% Chrysotile in joint compound (composite analysis 0.57 - 0.66%)	Unit 9-11 – 5’x7’ Unit 12 – 5’x9’ Units have approx.. 8’ high ceilings
CMU Block with texture	Bathroom back wall	Non-ACM	NA	Non Detect	35-45 sf in each bathroom (one wall)

NA=not applicable for this project

Refer to drawings in Attachment 1 for locations and types of materials.

TABLE 2
Fixtures to be removed from Civic Apartments by Contractor

Description	Location	Notes
Sink and base	Bathroom	Remove and dispose, leave plumbing to valves
Toilet		Remove and dispose, leave plumbing at valve
Vanity (if present)		Remove and dispose
Bathtub, enclosure and rod		Remove and dispose, coordinate water shutoff and cap with CC
Light fixtures		Remove and save for reuse, cap electrical
Exhaust fans		Remove and dispose, cap electrical
Switches and outlets		Remove and dispose, cap electrical

Notes:

1. The quantities identified herein are APPROXIMATE. The Contractor is responsible for verifying actual material quantities and site conditions. The Contractor must obtain any demolition permits, provide ACM removal notices and seek approval for any variances that are required to perform the work.
2. Work includes the demolition, removal and disposal of identified ACM and non-ACM.
3. Electrical and water services will be provided by the owner.
4. The Contractor is responsible for providing any lifts for access to ACM for removal. Lift operators must be trained in proper use of the type of lift being used. All personnel utilizing the lift for ACM removal must be trained and tied off at all times with appropriate harnessing and fall protection devices.
5. Scaffolding, if required, will require inspection and sign-off by an OSHA Competent Scaffolding person before initial use and prior to each shift.
6. The Contractor is responsible for moving any furniture, shrubs, objects, fixtures, and any objects left in the work area to access ACM for removal.
7. The Contractor is responsible for verifying that electrical lines are identified and are Locked Out and Tagged Out (LOTO) if needed before work is completed around the lines. Coordinate this with General Contractor or CC Safety Officer.
8. The Contractor is responsible for demolition to access ACM where scheduled for removal where necessary.
9. Every effort was made to identify ACM materials; however, other ACM materials may be present beneath or otherwise hidden. If discovered, bring new suspect materials to the attention of the Owner or Owner Representative prior to disturbance of those materials.

2.2 General Work Procedures

ABATEMENT CONTRACTOR

General Procedures

- Each work area may be monitored utilizing phase contrast microscopy (PCM) as the analytical technique. All air monitoring will be conducted according to the NIOSH 7400 Method.
- Restrooms may only be used in areas where contractor is currently working. If no restrooms are available, contractor must provide temporary restrooms.
- Staging area for equipment and personnel will be at the closest entrance to each work area. A small truck for waste load-out may be parked at each entrance during load out of demolition debris and ACM only. Schedule such activities with CC. Security for any equipment and/or trucks left onsite is the responsibility of the contractor. Owner will not be responsible for theft or vandalism of contractor's equipment left onsite.
- Hours of work will be scheduled with CC.
- **The quantities identified herein are approximate. The contractor is responsible for verifying material quantities and site conditions. Any discrepancies or omissions must be brought to the attention of CC prior to acceptance of project. By accepting a**

contract, contractor agrees with all conditions for completing the work including general work areas, quantities, schedules and procedures.

- **Project hours** for each work area are listed below:

Hours will be 7:00 AM to 5:00 PM, Monday-Friday unless otherwise coordinated with CC.

Wall Removal

Joint compound in walls and ceilings contains 3% Chrysotile (1.04% composite). The following procedures must be followed at a minimum, but all work is to be performed according to WDEQ Air Quality Standards and Regulations, Chapter 3 General Emission Standards, Section 8, 3-9 through 3-47, Occupational Safety and Health Administration (OSHA), Environmental Protection Agency (EPA), Department of Transportation and all other applicable laws and regulations:

Apartments are expected to be vacant during removal.

- **Securing Work Area**
 - Access to the work area should be restricted, such as by asbestos barrier tape around the perimeter of the work area. If barrier tape is used to denote a work area, it should be placed 5 to 10 feet (1.5 to 3 meters) outside of any polyethylene protection used in the work area. Install barrier tape by taping or tying it to fixed objects. Do not block access to any emergency exits, and when asbestos fibers might be released, post OSHA required "danger" signs at all entrances to the work area. For such projects, it might be desirable to have a visual barrier installed several feet in front of warning signs to avoid having warning signs readily visible to occupants. A "keep out of construction area" sign should be posted on visual barriers. A visual barrier would be arranged so that a person who goes past the visual barrier will then see required warning signs.
- **General Abatement Sequence**
 - The Contractor shall conduct abatement activities in accordance with the following mandatory sequence:
 - 1) Install critical barriers
 - 2) Establish negative pressure

Note: The removal of non-ACM building materials and components may only take place after negative air pressure is established in the containment work areas.

 - 3) Construct the decontamination area
 - 4) Pre-clean surfaces
 - 5) Cover fixed objects
 - 6) Construct the containment (full containment if chemicals are used on mastic)
 - 7) Conduct abatement

- 8) Conduct final visual inspection
 - 9) Conduct final clearance air monitoring
 - 10) Conduct the tear-down
- **Respirators and Performing Fit Checks**
 - Workers are required to wear respirators. Contractor is required to have a respiratory protection program. Wearers should inspect their respirators before each use of the respirator. Fit checks should be performed in accordance with the Respiratory Protection Program by each worker each time they don a respirator. Both positive and negative pressure fit checks should be performed.
 - **Protective Clothing**
 - Protective clothing for workers shall consist of disposable coveralls, gloves and boots. Coveralls should have hoods and booties attached. They should provide complete coverage of the body with the exception of hands and face.
 - Eye, hearing, and head protection should also be used where needed. Rubber slip-resistant boots or other non-slip footwear is to be worn for all activities. Steel-toed boots should be used in areas where foot hazards exist. Do not use coveralls with loose foot coverings for activities that involve climbing ladders or working on scaffolding.
 - Protective clothing shall be removed as follows:
 - HEPA vacuum all parts of protective clothing while standing at perimeter of drop cloth. Leaving respirator in place, remove protective clothing and fold inside out as it is removed. Place clothing, if contaminated, into a disposal bag and label as ACM waste.
 - **Decontamination Unit**
 - Remote decontamination/changing room is required in close proximity or adjacent to work area. If full containment is used a fully functioning 3-chamber decontamination unit is required.
 - **Air Monitoring**
 - Air monitoring conducted by Contractor during abatement activities shall consist of OSHA personal monitoring.
 - All air monitor pumps shall be pre and post calibrated to a primary standard. Flow rates, times and areas/personnel sampled shall be recorded.
 - Sample results shall be posted prior to beginning the next shift after each day of monitoring.
 - **Pre-cleaning Work Areas and Wet Wiping**
 - Pre-cleaning of work areas shall be performed prior to the start of abatement work activities to remove accumulated debris and dust that could be disturbed during abatement work. Pre-cleaning shall include picking up dust and debris with a HEPA filtered vacuum, as well as wet wiping non-porous surfaces.
 - **Polyethylene Drop Cloth**
 - Preparation of work areas for removal activities shall involve the demarcation of the work area, restricting access to the work area and the use of a polyethylene drop cloth. A single layer of polyethylene shall be spread on the floor of the work area and taped or weighted in place. If floor is a soft material, such as carpet, use caution to prevent tearing of polyethylene under equipment. The drop cloth should cover an area large enough to catch falling debris. If

work is to be performed at an elevated level, the drop cloth should be placed on the work platform, or extended at ground level beyond the immediate work location to catch any debris that might be generated.

- **Containment and Removal Procedures**
 - Set up critical barriers as required on all openings.
 - Set up enclosure using 6 mil polyethelene sheeting.
 - Spray amended water on the materials to be removed to keep dust inside the enclosure to a minimum.
 - Remove wetted wall and flooring materials using hand methods, scraper or directly into HEPA vacuum using hose nozzle. Place pieces in bag without dropping.
 - Using nylon brush, scrub pads, disposable towels and amended water, scrub and wipe down the removal area.
 - All load-out and disposal procedures shall be in accordance with applicable federal, state, and local regulations.
 - Seal removal area using an appropriate lockdown encapsulant.
 - Wash down inside of enclosure with amended water and wipe as necessary to remove all debris and residue.
 - Summon FEI for visual inspection of containment.
 - Upon successful visual inspectionsby FEI, remove all objects from containment in preparation for clearance monitoring.

Clearance and Disposal

- **Visual Inspection and Clearance Air Monitoring (containments)**
 - FEI shall conduct a visual inspection prior to the removal of the containment from each work area.
 - FEI shall verify that there is no debris or residue in the containment or on the polyethylene sheeting drop cloth(s). If visible residue, dust or debris remains, it must be cleaned up using wet wiping and/or HEPA vacuuming before the visual inspection can continue.
 - Containment will be removed after passage of final visual inspection and air monitoring results are below 0.01 f/cc by PCM analysis (at least one sample per containment and at least five to complete the project).
- **Waste Transportation, Storage and Disposal**
 - Asbestos-containing waste material from the removal activities should be adequately wet in accordance with NESHAP requirements (40 CFR 61.150).
 - All waste should be labeled as required by federal, state and local regulations. Federal regulations requiring labeling of waste include OSHA regulations 29 CFR 1910.1200, 1910.1001 and 1926.1101, EPA's NESHAP regulation 40 CFR 61.150, and the Department of Transportation's Hazardous Materials Regulations 49 CFR 171 and 180.
 - Dispose of waste following procedures required by landfill. Provide waste manifests to CC.

2.3 Inspections by Owner/Owners Representative

1. When required by Owner/Owners Representative (CC/FEI), the Contractor shall take down or uncover portions of the finished work. If the work thus exposed is satisfactory to CC/FEI, the cost of exposing and restoring the same shall be at the expense of CC/FEI, but, if in opinion of CC/FEI, work is unsatisfactory, all cost and expenses of exposing, removing, re-testing, replacing and restoring shall be borne by the Contractor.
2. Any omission or failure on the part of CC/FEI to disapprove or reject any inferior or defective work or material shall not be construed to be an acceptance of any such work or materials. The Contractor shall remove at its own expense any defective work or material rejected by CC/FEI and shall rebuild or replace the same without extra charge to CC/FEI. All retesting of an area shall be at the Contractor's expense.
3. All inspections shall take place during normal working hours. If inspections occur past normal working hours, the Contractor shall bear the costs incurred by CC/FEI as result of the additional labor of CC/FEI.
4. Where the CC/FEI has an on-site representative, the Contractor shall give the CC/FEI advance notice of an impending inspection. Where the CC/FEI does not have an on-site representative, then a 24-hour advance notice of impending inspection is required.
5. If the inspection detects items to be corrected the area will be termed "failed" and will need to have corrective action taken by the Contractor.
6. The Contractor must allow for a two (2) hour notice period before the re-inspection of the failed area may begin (this may be waived by CC/FEI). Items of work requiring inspection sign-off by CC/FEI are:
 - a. Pre-Abatement (Area Preparation/Containment) Inspection. Removal of asbestos and necessary demolition shall not take place until CC/FEI has inspected area preparation work and given approval.
 - b. Final Visual Inspection - The area shall not be encapsulated or locked down until CC/FEI has inspected and given approval of the final cleaning and area decontamination. The containment must be completely dry, during the inspection with no water droplets, remains or saturation on polyethylene sheeting or other surfaces in the containment.
7. A punch list of items to be corrected resulting from the "failed" inspection, will be prepared jointly by the Contractor and CC/FEI prior to final acceptance of the project by the CC/FEI. Inspections shall in no way be construed as final or partial acceptance by CC/FEI. Any failure or omission of the CC/FEI to notify the Contractor of defective work shall not excuse Contractor for liability for such defective work.

8. It will be necessary that the Contractor successfully confine fiber release to the designated work area and within the enclosure. FEI's obligations are solely to Owner. In meeting such obligations CC/FEI may increase the burdens and expense of the Contractor, his Sub-Contractors or employees, or the surety of them. Nothing in the performance of CC/FEI services in connection with this project implies the undertaking for the benefit of, or which may be enforced by, the Contractor, his Sub-Contractors, or employees, or the surety of any of them. It is not the function of CC/FEI to specify all of the means by which the Contractor will attain the intended results, nor to state all of the environmental conditions that must be present for the safety of workers who are employed to produce the intended results, or for the safety of others during construction. The Contractor shall establish means and environmental conditions that meet applicable laws and regulations.
9. The Contractor is required to complete demolition and remove all specified Trace Materials and ACM. Any ACM, debris or contaminated materials, missed, not accessed or abated thoroughly, and later discovered by the CC/FEI, will be corrected by the Contractor at no cost to the CC/FEI.
10. The CC/FEI will provide final visual inspection for all work areas and work Area Clearance sampling for each Phase (enclosure). Samples exceeding 0.01 f/cc will be deemed to have failed, and must be recleaned and retested (to avoid scheduling and cost implications associated with TEM analysis). Contractor may, on the approval of the CC/FEI, have TEM clearance samples run following failed PCM clearances if it will not interfere with the project schedule. All costs associated with TEM analysis will be the sole responsibility of the contractor.

2.4 Air Monitoring

Outside Work Area: If any air sample taken outside of the Work Area boundary exceeds 0.01 fibers per cubic centimeter of air (f/cc), immediately and automatically stop all work except corrective action. FEI will attempt to determine the source of the high reading and so notify the Contractor.

1. Area Monitoring
 - a. Air monitoring may be conducted outside the work area during work activities and samples shall not be collected in an aggressive manner.
 - b. Where PCM is used as the method of analysis the standard is 0.01 (f/cc) which is equivalent to 10,000 fibers per cubic meter of air (f/m³). The NIOSH 7400 Method shall be used to analyze samples. The number of samples to be taken shall be determined by the air monitoring specialist. Where TEM is used as the method of analysis, the standard is 70 structures/millimeter² (s/mm²). TEM analysis, if required, shall be conducted pursuant to the protocol in 40 C.F.R. Part 763, Appendix A to Subpart E (EPA 1995).

- c. All air monitoring collected for Area and Clearance purposes shall be performed by the Owner's representative who is independent of the abatement contractor to avoid possible conflict of interest.
2. In the event that airborne fiber levels outside a Work Area exceed 0.01 f/cc when analyzed by PCM, the Contractor shall identify an appropriate corrective action prior to continuation of removal. If the high reading was the result of a failure of Work Area isolation measures initiate the following additional actions:
- a. Immediately erect new critical barriers to isolate the affected area from the balance of the building. Erect Critical Barriers at the next existing structural isolation of the involved space (e.g. wall, ceiling, floor).
 - b. Decontaminate the affected area.
 - c. Require that respiratory protection be worn in affected area until area is cleared for re-occupancy.
 - d. Leave Critical Barriers in place until completion of work and insure that the operation of the pressure differential system in the Work Area results in a flow of air from the balance of the building into the affected area.
 - e. If the exit from the clean room of the personnel decontamination unit enters the affected area, establish a decontamination facility consisting of a Shower Room and Changing at entry point to affected area.
 - f. After Certification of Visual Inspection in the Work Area remove critical barriers separating the work area from the affected area. Final air samples will be taken within the entire area.
3. In the event that areas beyond the work area become contaminated with asbestos, asbestos-containing dust/debris, and/or visible emissions from the work area, the Contractor shall be responsible for all costs associated with cleaning and subsequent testing (visual inspection, air sampling and bulk analysis) of these areas.
4. If the high reading was the result of other causes initiate corrective action as required by the applicable regulations at the direction of CC/FEI.

Effect on Contract Sum: Complete corrective work with no change in the Contract Sum if high airborne fiber counts were caused by Contractor's activities. The Contract Sum and schedule will be adjusted for additional work caused by high airborne fiber counts beyond the Contractor's control. Contractor is responsible for all costs associated with TEM verification where PCM samples exceed 0.01 f/cc, and any subsequent cleaning and additional sampling costs regardless of TEM sample results.

2.5 Material Demolition

The work includes removal of ACM and non-ACM materials in work areas. Removal and disposal is required dependent on the type of material and required regulations. All appropriate regulations are required to be followed and all permits, notices and variances are required to be obtained by contractor.

3 SCHEDULE

The project is scheduled to begin May 18, 2020 and abatement is to be completed by June 5, 2020. Any costs incurred by the owner's representative to be on site after the time indicated to complete the project will be the responsibility of the Contractor. Costs include but are not limited to travel, lodging, analytical fees, per Diem and professional fees. Schedule details are listed below:

Work Schedule Window

Abatement Start Date – May 18, 2020 (Coordinate with CC Project Mgr.)

Abatement Completion – by June 5, 2020

4 SUBMITTALS

The following sections detail the required submittals for the project.

4.1 Plan of Action

Prepare a brief plan of the procedures proposed for use in complying with the requirements of this work plan and all applicable regulations. Include in the plan the general locations and layouts of decontamination areas, the sequencing of asbestos work (containments and work areas), methods to be used to assure the safety of building occupants and visitors to the site, disposal plan including staging and waste loadout procedures, and location of approved disposal site. The Contractor is solely responsible for construction means, methods, techniques and sequences, and procedures with respect to complying with applicable regulations.

4.2 Technical Submittals

The contractor shall submit all technical documentation as specified in this section using the list and schedule provided in Table 2 below.

TABLE 2

<u>Pre-start Submittals</u> (Minimum five days prior)	<u>Daily Submittals</u>	<u>Contract Closeout</u> (Two weeks after)
<ul style="list-style-type: none"> • Respiratory Protection Program • Hazard Communication Program • Medical Response Program • Automotive Insurance Certification • Insurance Certificate • Workers Compensation Insurance • Accident Reports • Performance and Payment Bonds (If required) • List of Personnel Used • Personnel Certifications • Project Design (Plan of Action) • Project Sequencing and Schedule • Disposal Facility Information • WDEQ Notice (10 days prior to start of work) 	<ul style="list-style-type: none"> • Daily Field Logs • Daily Entry/Exit Sign-in Sheets • Visitor Documentation Forms • Event Condition Report • 24-hour Manometer Chart • Air Monitoring Results • Photographs 	<ul style="list-style-type: none"> • Disposal Manifests • Owner's Final Inspection • Change Orders • Final Punchlist Document

5 PROJECT COORDINATION

The intent of this project is to remove non-friable ACM walls and ceilings (joint compound), cove base and associated mastic, and bathroom fixtures prior to planned bathroom replacement in four (4) units of Civic Apartments at Casper College. The Contractor shall execute the work under this Contract with minimal disturbance to facility activities outside the work area. A schedule shall be coordinated with CC to minimize effects of abatement operations and possible interruptions of power or water. Coordination shall include informal meetings with CC and onsite representatives such as the following:

- **Inspect** areas in which work will be performed, prior to commencement of work. Prepare a listing of damage to structure, surfaces, and equipment or of surrounding areas, which could be misconstrued as damage resulting from the work. Contractor may photograph or videotape existing conditions as necessary to document conditions. Submit to the general contractor and CC for record purposes prior to starting work.
- **Informal Pre-construction Conference** to be convened by the Contractor prior to start of any work. The conference will be scheduled before start of construction, at a time convenient to CC, but no later than the day of the start of the project. Meet at the project site or convene a telephone conference, or as otherwise directed. Authorized representatives of the general contractor and/or CC will be in attendance. An authorized representative of the Contractor and its project supervisor and other concerned parties shall attend the conference. All participants

at the conference shall be familiar with the Project and authorized to conclude matters relating to the Work. Contractor will document the meeting and distribute meeting minutes no later than three days after the meeting.

- **Project Closeout-** Before requesting final inspection for certification of final acceptance and final payment, a project punchlist must be completed and accepted by the general contractor and/or CC. The punchlist shall state that each item has been completed or otherwise resolved for acceptance and shall be endorsed and dated by the general contractor and/or CC.

6 INSURANCE

The Contractor shall procure and maintain insurance as indicated by CC contract documents. Insurance shall include Comprehensive General Public Liability and Property Damage Insurance, Worker's Compensation Insurance and Comprehensive Automobile Liability and Property Damage Insurance as hereinafter specified, at his own expense, during the life of this contract. This insurance shall include a provision preventing cancellation within a specified number of days and shall state whether the coverage is "claims made" or "occurrence made". The Contractor shall obtain "occurrence or claims made" insurance as specified in the contract documents. A completed Certificate of Insurance shall be filed with the owner within ten (10) days after the date of the Notice of Award, said Certificate to specifically state the inclusion of the coverage and provisions set forth in the contract documents.

7 QUALIFICATIONS AND LIMITATIONS

FEI completed this investigation and work plan in a manner consistent with current professional practices. The assessment was limited to sampling locations and analyses described in the report provided by the client. No other sampling or analyses were conducted during this investigation. Only readily accessible spaces were inspected; therefore, it is possible that ACM may exist in areas that were inaccessible. It is possible that additional reports or investigations could alter the conclusions of this assessment.

Procedures are prepared for use by the contractor, but do not limit the contractor from performing its work according to any regulations not included in this document.

This report is intended for use only by the client or its designees. Any future use of this report by anyone other than the above-referenced client will require authorization by FEI.



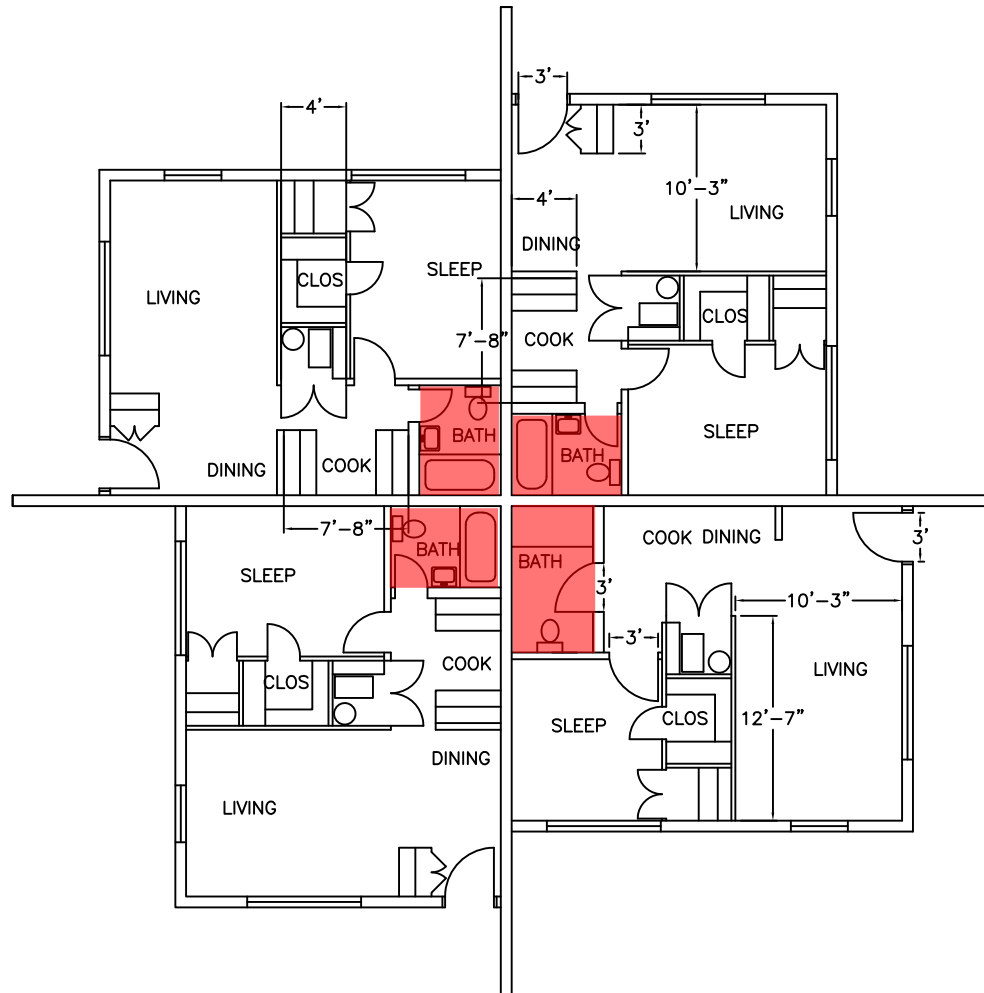
**Foothills
Environmental, Inc.**

Industrial Hygiene, Safety & Environmental Services

ATTACHMENT 1

DRAWINGS

ACM REMOVAL AND DEMOLITION DRAWING
(2020 BATHROOM REPLACEMENT)



1. Remove and dispose of ACM walls and ceilings to studs.
2. Remove and clean light fixture for reuse.
3. Remove and dispose of tub, enclosure and rod (leave plumbing).
4. Floor to remain.
5. Remove and dispose of sink, mirror and cabinet.
6. Remove and dispose of outlets and switches.
7. Remove and dispose of toilet.
8. Remove and dispose of cove base mastic with walls.
9. Scrape non-ACM texture off CMU block.

CIVIC APARTMENTS

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



**Foothills
Environmental, Inc.**

Industrial Hygiene, Safety & Environmental Services

ATTACHMENT 2

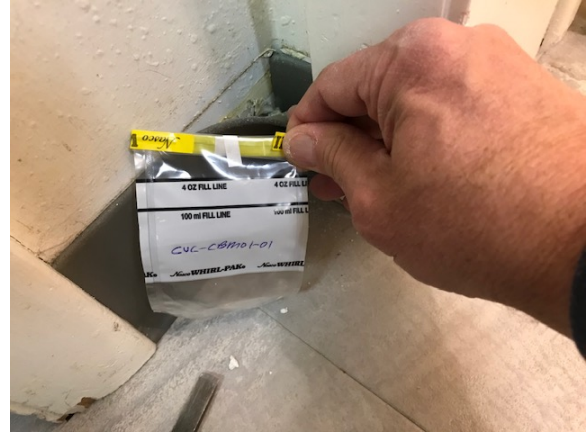
PHOTOGRAPHS



CIVIC APARTMENTS PHOTOGRAPHS
FEI PROJECT #AS20047



Sample: CVC-CDW01-02
Results: 1.04% Chrysotile IN Joint compound by Point Count Analysis



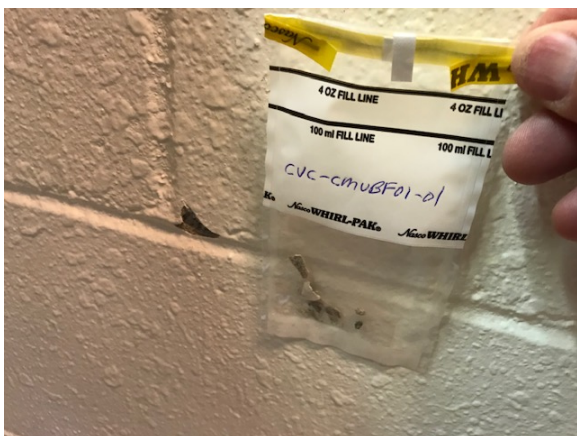
Sample: CVC-CBM01-01
Results: None detected in Cove Base Mastic, 3% Chrysotile in Joint Compound



View of bathroom from kitchen



View of mirror and switch/outlet in bathroom



Sample: CVC-CMUBF01-01
Results: Non Detect

**CIVIC APARTMENTS PHOTOGRAPHS
FEI PROJECT #AS20047**



View of light fixture and shower in bathroom



View of sink and base in bathroom



**Foothills
Environmental, Inc.**

Industrial Hygiene, Safety & Environmental Services

ATTACHMENT 3

INSPECTION DATA





April 03, 2020

Subcontractor Number:
Laboratory Report: RES 459605-1R
Project #/P.O. #: AS20047
Project Description: Casper COLLEGE, CIVIC APTS

Dan Benecke
Foothills Environmental, Inc. (Lakewood)
11099 W. 8th Avenue
Lakewood CO 80215

Dear Dan,

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

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

RES 459605-1R is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Reservoirs Environmental, Inc. will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Reservoirs Environmental, Inc. Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,



by Emily Giddens

Jeanne Spencer
President

RESERVOIRS ENVIRONMENTAL INC.

NVLAP Lab Code 101896-0

TABLE: PLM BULK ANALYSIS, PERCENTAGE COMPOSITION BY VOLUME

RES Job Number: **RES 459605-1R**
 Client: **Foothills Environmental, Inc. (Lakewood)**
 Client Project Number / P.O.: **AS20047**
 Client Project Description: **Casper COLLEGE, CIVIC APTS**
 Date Samples Received: **March 25, 2020**
 Method: **EPA 600/R-93/116 - Short Report, Bulk**
 Turnaround: **Priority**
 Date Samples Analyzed: **March 26, 2020**

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

Client Sample Number	L A Y E R	Physical Description	Sub Part (%)	Asbestos Content		Non Asbestos Fibrous Components (%)	Non-Fibrous Components (%)
				Mineral	Visual Estimate (%)		
CVC-TEX01-01	A	White foamy texture	100		ND	0	100
CVC-TEX01-02	A	White foamy texture	100		ND	0	100
CVC-TEX01-03	A	White foamy texture	100		ND	0	100
CVC-TEX02-01	A	White texture w/ white paint	15		ND	0	100
	B	Green/multi-colored paint	20		ND	0	100
	C	White compound	25	Chrysotile	3	0	97
	D	Tan/off white drywall	40		ND	80	20
CVC-TEX02-02	A	White texture w/ white paint	30		ND	0	100
	B	Tan drywall paper w/ white/off white paint	70		ND	60	40
CVC-TEX02-03	A	White texture w/ white paint	100		ND	0	100
CVC-TEX02-04	A	Tan drywall paper w/ white/multi-colored paint	45		ND	60	40
	B	White texture w/ white paint	55		ND	0	100
CVC-TEX02-05	A	White texture w/ white paint	100		ND	0	100

TEM Analysis recommended for organically bound material (i.e. floor tile) if PLM results are <1%.
 Only compound, tape and wallboard layers are used in the calculation of a composite result.

RESERVOIRS ENVIRONMENTAL INC.

NVLAP Lab Code 101896-0

TABLE: PLM BULK ANALYSIS, PERCENTAGE COMPOSITION BY VOLUME

RES Job Number: **RES 459605-1R**
 Client: **Foothills Environmental, Inc. (Lakewood)**
 Client Project Number / P.O.: **AS20047**
 Client Project Description: **Casper COLLEGE, CIVIC APTS**
 Date Samples Received: **March 25, 2020**
 Method: **EPA 600/R-93/116 - Short Report, Bulk**
 Turnaround: **Priority**
 Date Samples Analyzed: **March 26, 2020**

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

Client Sample Number	L A Y E R	Physical Description	Sub Part (%)	Asbestos Content		Non Asbestos Fibrous Components (%)	Non-Fibrous Components (%)
				Mineral	Visual Estimate (%)		
CVC-CMUBF01-01	A	White texture w/ white paint	30		ND	0	100
	B	Gray cinder block w/ off white/multi-colored paint	70		ND	0	100
CVC-CMUBF01-02	A	White texture w/ white paint	35		ND	0	100
	B	Gray cinder block w/ off white/multi-colored paint	65		ND	0	100
CVC-CMUBF01-03	A	White texture w/ white paint	25		ND	0	100
	B	Gray cinder block w/ off white/multi-colored paint	75		ND	0	100
CVC-CDW01-01	A	White/multi-colored paint	8		ND	0	100
	B	White tape	10		ND	95	5
	C	White compound	12	Chrysotile	3	0	97
	D	White joint compound	20	Chrysotile	3	0	97
	E	Off white/tan drywall	50		ND	12	88
				Composite	1.04		

TEM Analysis recommended for organically bound material (i.e. floor tile) if PLM results are <1%.
 Only compound, tape and wallboard layers are used in the calculation of a composite result.

RESERVOIRS ENVIRONMENTAL INC.

NVLAP Lab Code 101896-0

TABLE: PLM BULK ANALYSIS, PERCENTAGE COMPOSITION BY VOLUME

RES Job Number: **RES 459605-1R**
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 Client Project Description: **Casper COLLEGE, CIVIC APTS**
 Date Samples Received: **March 25, 2020**
 Method: **EPA 600/R-93/116 - Short Report, Bulk**
 Turnaround: **Priority**
 Date Samples Analyzed: **March 26, 2020**

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

Client Sample Number	LAYER	Physical Description	Sub Part (%)	Asbestos Content		Non Asbestos Fibrous Components (%)	Non-Fibrous Components (%)
				Mineral	Visual Estimate (%)		
CVC-CDW01-02	A	White tape	5		ND	95	5
	B	White/multi-colored paint	6		ND	0	100
	C	White joint compound	9	Chrysotile	3	0	97
	D	White compound	10	Chrysotile	3	0	97
	E	Off white/tan drywall	70		ND	15	85
CVC-CBM01-01				Composite	0.61		
	A	White compound	10	Chrysotile	3	0	97
CVC-CBM01-02	B	Tan adhesive w/ white paint	90		ND	0	100
	A	White compound	10	Chrysotile	4	0	96
	B	Off white/multi-colored paint	20		ND	0	100
	C	Tan adhesive	70		ND	0	100

TEM Analysis recommended for organically bound material (i.e. floor tile) if PLM results are <1%.
 Only compound, tape and wallboard layers are used in the calculation of a composite result.



Emily R. Giddens

Analyst / Data QA



RES Job #: 459605

SUBMITTED BY	INVOICE TO	CONTACT INFORMATION	SERIES
Company: FOOTHILLS ENVIRONMENTAL, INC. (LAKEWO ...	Company: FOOTHILLS ENVIRONMENTAL, INC. (LAKEWO ...	Contact: DAN BENECKE	-1 PLM PRIORITY
Address: 11099 W. 8TH AVENUE	Address: 11099 W. 8TH AVENUE	Phone: (720) 471-2642	
LAKEWOOD, CO 80215	LAKEWOOD, CO 80215	Fax:	
Project Number and/or P.O. #: AS20047		Cell:	
Project Description/Location: CASPER COLLEGE, CIVIC APTS		Final Data Deliverable Email Address: DAN@FOOTHILLSUSA.COM (+ 2 ADDNL. CONTACTS)	

ASBESTOS LABORATORY HOURS: Weekdays: 7am - 7pm & Sat. 8am - 5pm		REQUESTED ANALYSIS				VALID MATRIX CODES				LAB NOTES
PLM / PCM / TEM	DTL RUSH PRIORITY STANDARD	PLM - Short Report, Long Report, CARB 435 TEM - AHERA, (+/- or Quantified), Microwave (+/- or Quantified), Wipe (+/- or Quantified), NIOSH 7402, Yamate Level II, ISO 10312, ISO 13794, Chanfield, Waste Water, Drinking Water, Bulk +/- PCM - 7400A, 7400B, OSHA DUST - Total, Respirable METALS - Analyte(s) Lead Only (7082, 7420, Waste Water, Foodware), Multi Metal (7303, 8020A, 200.8, Waste Water, Foodware), pH (Liquid, Non-Liquid), TCLP, RCRA 8 Scan, Welding Fume Scan, Full Metals Scan ORGANICS - Methamphetamine, TSS Campylobacter, Bacillus, Salmonella (Culturable, 1-2), Listeria, E.coli O157:H7, E.coli(Califorms - Plated, S. aureus, Yeast & Mold, Aerobic Plate Count, Coliforms/E.coli (State Water, Drinking Water, Non-Drinking Water, +/-, Quantification), Lactic Acid, Viable Microbial Count (wo/ID, w/ID), Enterococcus (+/- or Quantification) MEDICAL - Bioburden, LAL MOLD - Spore Trap, Bulk Mold, Particulate Identification	Air = A	Bulk = B	LAB NOTES Air = A Bulk = B Dust = D Food = F Paint = P Soil = S Surface = SU Swab = SW Tape = T Wipe = W Drinking Water = DW Waste Water = WW **ASTM E1792 approved wipe media only**					
CHEMISTRY LABORATORY HOURS: Weekdays: 8am - 5pm			Sample Volume (L) / Area	Length(or Aliquots) x Width(or Area per Aliquot)			Matrix Code	# of Containers	Date Collected mm/dd/yy	Time Collected hr:mm
Dust	RUSH PRIORITY STANDARD									
Metals	RUSH PRIORITY STANDARD *PRIOR NOTICE REQUIRED FOR SAME DAY TAT									
Organics*	SAME DAY RUSH PRIORITY STANDARD									
MICROBIOLOGY LABORATORY HOURS: Weekdays: 8am - 5pm										
Viable Analysis**	PRIORITY STANDARD **TAT DEPENDENT ON SPEED OF MICROBIAL GROWTH									
Medical Device Analysis	RUSH STANDARD									
Mold Analysis	RUSH PRIORITY STANDARD									
Turnaround times establish a laboratory priority, subject to laboratory volume and are not guaranteed. Additional fees apply for afterhours, weekends and holidays.										
Special Instructions:										
Client Sample ID Number	(Sample ID's must be unique)	ASBESTOS	CHEMISTRY	MICROBIOLOGY					Laboratory Analysis Instructions	
1 CVC-TEX01-01		X								PC
2 CVC-TEX01-02		X								PC
3 CVC-TEX01-03		X								PC
4 CVC-TEX02-01		X								PC
5 CVC-TEX02-02		X								PC
6 CVC-TEX02-03		X								PC
7 CVC-TEX02-04		X								PC
8 CVC-TEX02-05		X								PC
9 CVC-CMUBF01-01		X								PC
10 CVC-CMUBF01-02		X								PC
11 CVC-CMUBF01-03		X								PC
12 CVC-CDW01-01		X								PC
13 CVC-CDW01-02		X								PC

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

Relinquished By:	DAN BENECKE	Date/Time: 03/25/2020 16:58:07	Sample Condition: ACCEPTABLE - INTACT
Received By:	HANNA MARTI	Date/Time: 03/25/2020 16:59:23	Carrier: HAND



Res Job#: 459605

Submitted By: FOOTHILLS ENVIRONMENTAL, INC. (LAKEWOOD)

Client Sample ID Number <small>(Sample ID's must be unique)</small>	REQUESTED ANALYSIS						VALID MATRIX CODES					LAB NOTES	
	ASBESTOS	CHEMISTRY	MICROBIOLOGY				Air = A	Bulk = B	Dust = D	Food = F	Paint = P		Soil = S
14 CVC-CBM01-01	X						Surface = SU <td>Swab = SW <td>Tape = T <td>Wipe = W <td colspan="2">Drinking Water = DW Waste Water = WW</td> <td rowspan="2">Laboratory Analysis Instructions</td> </td></td></td>	Swab = SW <td>Tape = T <td>Wipe = W <td colspan="2">Drinking Water = DW Waste Water = WW</td> <td rowspan="2">Laboratory Analysis Instructions</td> </td></td>	Tape = T <td>Wipe = W <td colspan="2">Drinking Water = DW Waste Water = WW</td> <td rowspan="2">Laboratory Analysis Instructions</td> </td>	Wipe = W <td colspan="2">Drinking Water = DW Waste Water = WW</td> <td rowspan="2">Laboratory Analysis Instructions</td>	Drinking Water = DW Waste Water = WW		Laboratory Analysis Instructions
15 CVC-CBM01-02	X						**ASTM E1792 approved wipe media only**					PC	
							Sample Volume (L) / Area						PC
							Length (or Aliquots) x Width (or Area) per Aliquid						PC
							Matrix Code						
							# of Containers						
							Date Collected mm/dd/yy						
							Time Collected hh:mm						

Certificate of Completion

Presented To:

Dan Benecke

has successfully completed 4 hours of training required under section 206 of the Toxic Substance Control Act (TSCA), Title II.

“BUILDING INSPECTOR REFRESHER”

Course Date: November 14, 2019

Examination Date: N/A

Certificate No.: BIR 1171

Hours Completed ~ 4

Expiration Date: *November 14, 2020*



**ASBESTOS TRAINING
&
SAFETY CONSULTING**

Authorized Signature— Training Provider

2170 W Yale Ave. Englewood, CO 80110

(720) 441-5049