

Asbestos Survey

Ute Highway Water Treatment Plant
Boulder County, Colorado

January 5, 2012

Terracon Project No. 22117704



Prepared for:
City of Longmont
Longmont, Colorado

Prepared by:
Terracon Consultants, Inc.
Fort Collins, Colorado

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Terracon

January 5, 2012

City of Longmont
Public Works & Natural Resources
385 Kimbark Street
Longmont, Colorado 80501

Attn: Mr. Larry Wyeno
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E: larry.wyeno@ci.longmont.co.us

Re: Asbestos Survey
Ute Highway Water Treatment Plant
4651 & 4652 Ute Highway
Boulder County, Colorado
Terracon Project No. 22117704

Dear Mr. Wyeno:

The purpose of this report is to present the results of an asbestos survey performed on September 12 and 13, 2011 at the above referenced building in Boulder County, Colorado. This survey was conducted in general accordance with our proposal dated August 4, 2011. We understand that this survey was requested due to the planned demolition or renovation of the structures.

Friable and non-friable asbestos-containing materials were identified. Please refer to the attached report for details.

Terracon appreciates the opportunity to provide this service to City of Longmont. If you have any questions regarding this report, or if you need assistance with project oversight and sampling during demolition or renovation of this building, please contact Mr. Harris at (970) 484-0359.

Sincerely,
Terracon Consultants, Inc.


Dana L. Harris
Department Manager, Environmental Services


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Principal

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**ASBESTOS SURVEY REPORT
UTE WATER TREATMENT PLANT
LYONS, COLORADO**
Terracon Project No. 22117704
January 5, 2012

1.0 INTRODUCTION

Terracon conducted an asbestos survey of the Ute Water Treatment Plant building located at 4651-4652 Ute Highway in Boulder County, Colorado. The survey was conducted on September 12 and 13, 2011 by a Colorado-certified asbestos building inspector in general accordance with Terracon's proposal dated August 4, 2011. Interior and exterior building components were surveyed and homogeneous areas of suspect asbestos-containing materials (ACM) were visually identified and documented. Although reasonable effort was made to survey accessible suspect materials, additional suspect but un-sampled materials could be located in walls, in voids or in other concealed areas. Suspect ACM samples were collected in general accordance with the sampling protocols outlined in EPA regulation 40 CFR 763 (Asbestos Hazard Emergency Response Act, AHERA). Samples were delivered to an accredited laboratory for analysis by polarized light microscopy.

1.1 Project Objective

We understand this asbestos survey was requested due to the planned demolition or renovation of the buildings. EPA regulation 40 CFR 61, Subpart M, National Emission Standards for Hazardous Air Pollutants (NESHAP), prohibits the release of asbestos fibers to the atmosphere during renovation or demolition activities. The asbestos NESHAP requires that potentially regulated asbestos-containing building materials be identified, classified and quantified prior to planned disturbances or demolition activities.

2.0 BUILDING DESCRIPTION

The water treatment plant includes two developed areas on the north and south sides of Ute Highway, referred to as the North Plant (4652 Ute Highway) and South Plant (4651 Ute Highway). The structures described below were included in the asbestos survey. The buildings are no longer occupied or provided with utility service. Except for apparent propane-fired space heaters in process areas and baseboard heat registers, the heat source for the buildings, if any, was unclear; however, Terracon did not observe insulated heating-water piping in readily accessible areas.

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**North Plant – Filtration Building Complex**

The north plant main building complex comprises several connected structures, including the two-story filtration building (east end of complex); settling basin, and chemical mix building (west end of complex). Two separate annex buildings are present, including a sodium hypochlorite storage building (Bleach Building) and an alum storage building (Alum Building). The structures were reportedly constructed in 1967, although information obtained after the survey indicates the annex buildings may have been constructed in the 1980s.

The filtration building has a footprint of approximately 4,000 square feet and has one level completely above grade and a walk-out basement/ground floor. The building is of masonry and stone construction with a flat roof. The upper level of the building is divided into a filtration/settling room finished with concrete settling basins, concrete floors and ceilings and masonry and concrete walls; two laboratories finished with sheet vinyl, 9-inch by 9-inch floor tiles, bare concrete flooring, plastic paneling on sheetrock walls, drop ceilings with 2-foot by 4-foot ceiling tiles, and lab countertops consisting of both laminate and solid material; an office area finished with carpeting over sheet vinyl and concrete, wood paneling and sheetrock walls, and drop ceilings with 2-foot by 4-foot ceiling tiles; a bathroom/locker room finished with sheet vinyl flooring, ceramic tiles on sheetrock walls, and sheetrock ceilings; and a hallway and mezzanine area finished with sheet vinyl flooring on concrete, sheetrock and ceramic tile walls, and drop ceilings with 2-foot by 4-foot ceiling tiles. The lower level is divided into the main stair landing which is finished with concrete flooring, metal staircase with terrazzo finish, sheetrock walls, and drop ceilings with 2-foot by 4-foot ceiling tiles; several storage and process rooms with concrete flooring, masonry and concrete walls, and concrete ceilings; and an electrical room finished with concrete flooring, masonry walls, and 1-foot by 1-foot glued-on ceiling tiles.

The chemical mix building is of masonry and stone construction and is finished with concrete floors, masonry walls and concrete ceilings.

The Bleach Building is located on the northwest side of the main complex. The Bleach Building is of masonry block construction, was used for sodium hypochlorite storage and is finished with concrete floors and sheetrock walls and ceilings. The Bleach Building is connected to the filtration building via duct work and process piping.

The Alum Building is a two-story brick and masonry building with concrete floors and fiberglass-insulated masonry walls and ceilings. The Alum building is located on the northeast side of the main complex.

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**North Plant - Sludge Belt Press Building**

This building is a two-level metal structure finished with concrete floors, plastic and metal walls, and metal ceilings. The structure has newer windows with rubber insulation. Information obtained after the field work indicates the building was constructed in the 1990s.

North Plant - Maintenance Building

This is a single-story metal structure divided into maintenance and storage areas finished with concrete floors, fiberglass-insulated metal walls and ceilings; and office areas finished with 12-inch by 12-inch vinyl floor tiles on concrete, sheetrock walls, and drop ceilings with 2-foot by 4-foot ceiling tiles. The structure has newer windows with rubber insulation. Information obtained after the field work indicates the building was constructed in the 1990s.

South Plant – Filtration Building

The building is a three-level structure originally constructed in 1934 (as indicated by a plaque at the main entrance). A building addition is located on the north side of the structure; the age of the addition was unknown at the time of the survey, but information obtained since that time indicates the addition dates to the early 1970s. The building has a basement and footprint of approximately 3,100 square feet. The original building is of masonry construction with flat tar and membrane roofing. The addition is of masonry construction with an exterior stucco finish.

The basement is divided into several process and control areas and is finished with concrete flooring, masonry walls, and concrete ceilings. The basement contains various process piping, some of which appear to have made deposits on the walls which have an appearance similar to suspect asbestos but upon closer examination appear to be mineral deposits. The basement contains an access to a confined space tunnel that contains various process piping. Terracon did not access the tunnel due to safety concerns associated with the confined space; however, the observed portions of piping in the tunnel was not insulated. The opposite end of the tunnel is accessible via a manhole in the facility sidewalk, and the observed portions of piping in the manhole also were not insulated.

The main level of the original building is a sedimentation room finished with 12-inch by 12-inch floor tile (entry hall), concrete settling basins, concrete floors, masonry walls, and sheetrock ceilings with acoustical texture. The acoustical texture was also present on steel beams in the sedimentation room. The sedimentation room has a bathroom finished with 12-inch by 12-inch vinyl floor tiles, ceramic tile on sheetrock walls, and drop ceilings with 2-foot by 4-foot ceiling tiles. The second floor of the original building is an office area, meeting room and employee lounge. The office foyer is finished with 12-inch by 12-inch floor tile, plaster on lathe walls, and

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stapled 1-foot by 1-foot wood fiber ceiling tiles. The meeting room is finished with carpet over sheet vinyl flooring, plaster on lath walls, and stapled 1-foot by 1-foot wood fiber ceiling tiles. The south office is finished with sheet vinyl flooring, plaster on lathe walls, and drop ceilings with 2-foot by 4-foot ceiling tiles. The office hallway is finished with wood flooring, sheetrock walls, and drop ceilings with 2-foot by 4-foot ceiling tiles. The office bathroom is finished with ceramic tile flooring, ceramic tiles on plaster walls, and drop ceilings with 2-foot by 4-foot ceiling tiles. The lunch room is finished with 12-inch by 12-inch floor tiles and wood floors, plaster and sheetrock walls, and drop ceilings with 2-foot by 4-foot ceiling tiles. The stair landings are finished with 12-inch by 12-inch floor tiles, sheetrock walls, and sheetrock, plaster, and concrete ceilings. The original building portion does not have a third floor.

The first floor addition is divided into an entry hallway finished with 12-inch by 12-inch floor tile, masonry walls, and concrete ceilings; a closet finished with concrete floors, sheetrock and masonry walls, and concrete ceiling; and a laboratory finished with 12-inch by 12-inch floor tile, sheetrock and masonry walls, drop ceilings with 2-foot by 4-foot ceiling tiles, and lab countertops consisting of both laminate and solid material. The second and third floor additions are process rooms finished with concrete floors, concrete, masonry, and sheetrock walls, and concrete ceilings.

South Plant – Northwest Building (Original Chemical Mixing Plant)

The Northwest Building (also known as the Original Chemical Mixing Plant) is an approximately 200 square-foot 2-story masonry building constructed in 1934. The lower level is finished with a concrete floor, masonry and concrete walls, and wood ceilings. The upper level is finished with 12-inch by 12-inch floor tiles and sheetrock walls and ceilings.

South Plant – Alum Storage Building

The Alum Storage Building is an approximately 300 square-foot single-story brick, concrete, and wood building reported constructed in the 1970s (although it appears visually to be the same age as the original 1934 buildings). This building has concrete floors, masonry and sheetrock walls, and sheetrock and concrete ceilings.

South Plant – Lower Northwest Building (Intake Pipe Shed)

The Lower Northwest Building (also known as the Intake Pipe Shed) is an approximately 200 square-foot single-story masonry building apparently constructed in 1934. The interior is finished with concrete floors, masonry and concrete walls, and wood ceiling.

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**South Plant – Pump House**

The Pump House is an approximately 800 square-foot single-story plus basement masonry building reportedly constructed in the 1970s (although it appears visually to be the same age as the original 1934 buildings). The main level and basement are finished with concrete floors, masonry walls, and concrete ceilings.

South Plant – Clearwell Building

The Clearwell Building is an approximately 1,200 square-foot single-story masonry building reportedly constructed in the 1970s (although it visually appears to be the same age as the original 1934 buildings). The interior is divided into a storage room finished with concrete floors, foam insulation over masonry walls, and wood over metal ceilings; and the clearwell room, which has a concrete floor, a raised wooden platform with laminate flooring, masonry walls, and wood over metal ceilings.

South Plant – Metal Storage Building

The Metal Storage Building is an approximately 1,800 square-foot two-story metal structure built in 2004. The interior is divided into a southeast office finished with 12-inch by 12-inch floor tile, sheetrock walls with orange peel texture, and drop ceilings with 2-foot by 4-foot ceiling tiles; a northeast office finished with 12-inch by 12-inch floor tile, sheetrock walls with orange peel texture, and wood and metal ceilings, and a two-level storage area finished with concrete floors, wood paneling and fiberglass-insulated metal walls, and fiberglass-insulated metal ceilings.

Process Vessels

The facility has a number of settling basins that appeared to be constructed of concrete. There is one soda ash silo that is constructed of metal and has foam-insulation on the interior walls. Many of the buildings have integral process basins and equipment, as well as complex piping layouts. In general, piping observed was either not insulated or insulated with non-suspect materials such as foam or fiberglass. Gaskets were assessed in numerous locations. In general, many of the existing gaskets appear to be newer and of rubber construction, with either a blue or reddish-brown appearance; these rubber-type gaskets were not considered suspect ACM. Older gaskets of a more brittle construction were observed in fewer locations. Due to the number of gaskets at the facility, it was not possible to assess every gasket for suspect asbestos content. Based on Terracon's observations, it is estimated that up to 20% of the gaskets in the facility may be of the older, brittle type construction that would be assumed to contain asbestos unless test results proved otherwise.

3.0 FIELD ACTIVITIES

The survey was conducted by Mr. Dana Harris, a Colorado-certified asbestos building inspector. The survey was conducted in general accordance with the sample collection protocols established in EPA regulation 40 CFR 763, the Asbestos Hazard Emergency Response Act (AHERA). A summary of survey activities is provided below.

3.1 Visual Assessment

Our survey activities began with visual observation of the interior and exterior of the buildings to identify homogeneous areas of suspect ACM. A homogeneous area consists of building materials that appear similar throughout in terms of color, texture and date of application. Interior assessment was conducted throughout visually accessible areas of the building.

As per the client's request, the roof of the building was visually observed, but in order to protect the integrity of the materials, samples were not collected. Roofing is currently assumed to contain asbestos.

3.2 Physical Assessment

A physical assessment of each homogeneous area of suspect ACM was conducted to assess the friability and condition of the materials. A friable material is defined by the EPA 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.

3.3 Sample Collection

Based on results of the visual observation, bulk samples of suspect ACM were collected in general accordance with AHERA sampling protocols. Random samples of suspect materials were collected in each homogeneous area. Sample team members collected bulk samples using wet methods as applicable to reduce the potential for fiber release. Samples were placed in sealable containers and labeled with unique sample numbers using an indelible marker.

Terracon collected 198 bulk samples from 66 homogeneous areas of suspect ACM. A summary of suspect ACM samples collected during the survey is included as Appendix A.

3.4 Sample Analysis

Bulk samples were submitted under chain of custody to Aerobiology Laboratory Associates, Incorporated of Denver, Colorado for analysis by polarized light microscopy with dispersion staining techniques per EPA Method 600/R-93/116. The percentage of asbestos, where applicable, was determined by microscopical visual estimation. Aerobiology Laboratory Associates is accredited under the National Voluntary Laboratory Accreditation Program (NVLAP Accreditation No. 200860-0).

4.0 REGULATORY OVERVIEW

The asbestos NESHPA (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 demolition or renovation activity. Under NESHPA, asbestos-containing building materials are classified as either friable, Category I non-friable or Category II non-friable ACM. Friable materials are those that, when dry, may be crumbled, pulverized or reduced to powder by hand pressure. Category I non-friable ACM includes packings, gaskets, resilient floor coverings and asphalt roofing products containing more than 1% asbestos. Category II non-friable ACM are any materials other than Category I materials that contain more than 1% asbestos.

Friable ACM, Category I and Category II non-friable ACM which is in poor condition and has become friable or which will be subjected to drilling, sanding, grinding, cutting or abrading and which could be crushed or pulverized during anticipated renovation or demolition activities are considered regulated ACM (RACM).

In the State of Colorado, asbestos activities are regulated by the Colorado Department of Public Health and Environment (CDPHE) under the Regulation No. 8, Control of Hazardous Air Pollutants, Colorado Air Quality Control Division, Section III, Part 6. Regulation No. 8 requires that any asbestos-related activity conducted in a public or commercial building be performed by personnel licensed by the CDPHE. RACM must be removed prior to renovation or demolition activities which will disturb the materials. If the amount of RACM exceeds 260 linear feet (lf) of pipe insulation, more than 160 square feet (ft²) on other building components, or will generate more than one 55-gallon drum of waste, the owner or operator must provide the CDPHE with written notification of planned removal activities at least 10 working days prior to the commencement of asbestos abatement activities. Removal of RACM must be conducted by a State of Colorado-licensed asbestos abatement contractor. Third-party clearance inspections and air monitoring must be conducted by a Colorado-licensed Air Monitoring Specialist following the

abatement activities. Asbestos abatement of friable materials for projects greater than 1,000 lf of pipe insulation or more than 3,000 ft² on other building components must be performed in accordance with a Project Design prepared by a Colorado-licensed Project Designer. Management Plans developed for the in-place management of asbestos-containing materials must be developed by a Colorado-licensed Management Planner.

The OSHA Asbestos standard for construction (29 CFR 1926.1101) regulates workplace exposure to asbestos. The OSHA standard requires that employee exposure to airborne asbestos fibers be maintained below 0.1 asbestos fibers per cubic centimeter of air (0.1 f/cc). The OSHA standard classifies construction and maintenance activities which could disturb ACM, and specifies 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 additional precautions.

5.0 FINDINGS AND RECOMMENDATIONS

Laboratory results are summarized in Appendix A. Laboratory analysis confirmed the presence of friable and non-friable asbestos-containing materials. In addition, several materials containing less than 1% asbestos were identified, and several materials were assumed to be ACM. A summary of the classification, condition and approximate quantity of confirmed ACM are presented in Appendix B. Laboratory analytical reports are included in Appendix C.

The following materials were confirmed as ACM by laboratory analysis:

- North Plant Filtration Building - Beige 9" x 9" floor tile in the laboratories: contained 8% chrysotile asbestos and are considered Category II nonfriable ACM.
- North Plant Filtration Building – lab countertops contained 8% Chrysotile and are considered Category II nonfriable ACM.
- North Plant Filtration Building – tar roofing contained 10% Chrysotile and is considered Category I nonfriable ACM.
- South Plant Filtration Building – mastic associated with floor tiles on the first floor contained 3-5% chrysotile asbestos and is considered Category I nonfriable ACM.
- South Plant Filtration Building – Friable acoustic texture located on ceilings and beams in the filtration room contained 3% asbestos and is considered friable ACM.
- South Plant Filtration Building – Door and window frame caulking on the original building doors and windows contained 10-15% asbestos and is considered Category II nonfriable ACM.

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- South Plant Filtration Building – residual tar sealant on concrete penetrations in the basement contained 6-10% Chrysotile asbestos and is considered Category I nonfriable ACM.
- South Plant Filtration Building – lab countertops contained 10% Chrysotile and are considered Category II nonfriable ACM.
- South Plant Filtration Building – tar flashing/sealant on older sections of the roof contained 3-5% Chrysotile asbestos and are considered Category I nonfriable ACM.
- South Plant Clearwell Building – tar roofing and silver roofing paint contained 3% asbestos. The silver roofing paint is friable ACM.
- South Plant Pump House – tar roofing contained 10-45% Chrysotile asbestos and is considered Category I nonfriable ACM, although current damage to this material (likely caused by age, weathering, etc.) may require a re-assessment of its condition and NESHAP category prior to demolition.
- South Plant Northwest Building (Original Chemical Mix Plant) – tar roofing and silver roofing paint contained 40% asbestos. The silver roofing paint is friable ACM.
- South Plant Alum Building – Door and window frame caulking (currently nonfriable) on doors and windows contained 10% asbestos and is considered Category II nonfriable ACM.
- Gaskets – older, brittle gaskets contained 35% Chrysotile and are considered Category II nonfriable ACM. Based on observations of gaskets in various locations throughout the plant, it is estimated that 20% of the gaskets at the facility may be of similar composition to the type confirmed as ACM by laboratory analysis.

The following materials were reported to contain less than 1% asbestos based on laboratory analysis:

- South Plant Filtration Building – plaster in 2nd floor office areas: the skim coat of the plaster system contained less than 1% asbestos, as confirmed by point count analyses. This material is considered non-ACM for the purposes of NESHAP and CDPHE. OSHA regulations still apply.
- North Plant Maintenance Building – 12-inch floor tile and associated mastic: both materials contained trace asbestos. Point-count re-analysis of the mastic confirmed that the mastic contains less than 1% asbestos, therefore this material is considered non-ACM for the purposes of NESHAP and CDPHE. The laboratory was unable to complete the point-count re-analysis of the floor tile samples due to interference by the vinyl matrix of the floor tile. As long as the floor tile remains nonfriable, it would continue to be considered non-ACM for the purposes of NESHAP and CDPHE; however, if the floor tile were to be rendered friable, it would need to be verified by point counting or an equivalent analytical

method (such as semi-quantitative TEM or PLM with gravimetric reduction) to contain less than 1% asbestos. OSHA regulations continue to apply to both the floor tile and mastic.

- South Plant North-West Building (Original Chemical Mixing Plant) – 12-inch floor tile contained trace asbestos. The laboratory was unable to complete the point-count re-analysis of the floor tile samples due to interference by the vinyl matrix of the floor tile. As long as the floor tile remains nonfriable, it would continue to be considered non-ACM for the purposes of NESHAP and CDPHE; however, if the floor tile were to be rendered friable, it would need to be verified by point counting or an equivalent analytical method (such as semi-quantitative TEM or PLM with gravimetric reduction) to contain less than 1% asbestos. OSHA regulations continue to apply to both the floor tile and mastic.
- South Plant – Lower North Building (Intake Pipe Shed) – door frame caulking contained less than 1% asbestos, as confirmed by point count analyses. This material is considered non-ACM for the purposes of NESHAP and CDPHE. OSHA regulations still apply.
- North Plant Filtration Building – drywall mud throughout the building: contained 2% chrysotile asbestos. Based on reported layer percentages, the calculated composite asbestos content for the drywall system (not including texture, which has been sampled and reported as a separate homogeneous area) is less than 1%, and therefore the drywall would not have to be treated as ACM for demolition purposes. OSHA regulations would still apply.
- South Plant Filtration Building – Drywall mud throughout the original building and the building addition contained 2-3% chrysotile asbestos. Based on reported layer percentages, the calculated composite asbestos content for the drywall systems (not including textures, which have been sampled and reported as separate homogeneous areas) are less than 1%, and therefore the drywall would not have to be treated as ACM for demolition purposes. OSHA regulations would still apply.

ACM that is currently friable or would become friable during renovation or demolition must be removed in accordance with Colorado regulations prior to the disturbing renovation or demolition activity. Based on the estimated quantity of RACM at the facility, an asbestos abatement permit would be required. A Colorado-certified abatement contractor would be required to perform the abatement work, a project design and project manager would be required, and final clearances would need to be performed by a Colorado-certified Air Monitoring Specialist that is independent of the abatement contractor.

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If the plant infrastructure is to be disassembled as part of a renovation or demolition, care should be taken to manage, remove, and dispose of gaskets in accordance with federal and state regulations.

OSHA regulations must be followed for renovation or demolition work on materials containing any asbestos. An asbestos Operations & Maintenance (O&M) plan is recommended if asbestos materials are to remain in place, it may be warranted to prepare.

Terracon would be happy to provide a proposal to assist with management of asbestos in place (O&M Plan) or in advance of a planned renovation or demolition (project management, project design, and clearance services).

6.0 GENERAL COMMENTS

This asbestos survey 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 results, findings, conclusions and recommendations expressed in this report are based on conditions observed during our survey of the building. The information contained in this report is relevant to the date on which this survey was performed, and should not be relied upon to represent conditions at a later date. This report has been prepared on behalf of and exclusively for use by City of Longmont for specific application to their project as discussed. This report is not a bidding document. Contractors or consultants reviewing this report must draw their own conclusions regarding further investigation or remediation deemed necessary. Terracon 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. No warranty, express or implied is made.

APPENDIX A

ASBESTOS SURVEY SAMPLE SUMMARY
Ute Water Treatment Plant
4651-4652 Ute Highway, Lyons, Colorado

NORTH PLANT – FILTRATION BUILDING				
HOMOGENEOUS AREA	SAMPLE NO.	DESCRIPTION	SAMPLE LOCATION	LAB RESULTS
1	1-MISC-1	Block fill (lab reported as two layers, but only one layer observed in field)	Lower – NE chlorine room	NAD
1	1-MISC-2	Block fill (lab reported as two layers, but only one layer observed in field)	Lower – N-C loading	NAD
1	1-MISC-3	Block fill (lab reported as two layers, but only one layer observed in field)	Lower – south	NAD
2	2-MISC-4	1' x 1' ceiling tile / glue dots	Lower - electrical room	NAD / NAD
2	2-MISC-5	1' x 1' ceiling tile / glue dots	Lower - electrical room	NAD / NAD
2	2-MISC-6	1' x 1' ceiling tile / glue dots	Lower - electrical room	NAD / NAD
3	3-DWJC-7	Drywall / joint compound	Lower – stairs	NAD / NAD
3	3-DWJC-8	Drywall / joint compound	Upper - hallway	NAD / NAD
3	3-DWJC-9	Drywall / joint compound	Upper – hallway	NAD / 2% Chrysotile
4	4-SAT-10	2' x 4' ceiling tile, white, dots	Upper – hallway	NAD
4	4-SAT-11	2' x 4' ceiling tile, white, dots	Upper – N-C lab	NAD
4	4-SAT-12	2' x 4' ceiling tile, white, dots	Upper – N E lab	NAD
5	5-VSF-13	Linoleum, tan pebble	Upper – hallway	NAD
5	5-VSF-14	Linoleum, tan pebble	Upper – locker room	NAD
5	5-VSF-15	Linoleum, tan pebble	Upper – locker room	NAD
6	6-VSF-16	Linoleum, brown pebble	Upper – N-C lab	NAD
6	6-VSF-17	Linoleum, brown pebble	Upper – N E lab	NAD
6	6-VSF-18	Linoleum, brown pebble	Upper – N-C lab	NAD
7	7-FTMS-19	9" x 9" floor tile, beige / black mastic	Upper – N E lab	8% Chrysotile / NAD
7	7-FTMS-20	9" x 9" floor tile, beige / black mastic	Upper – N E lab	8% Chrysotile / NAD
7	7-FTMS-21	9" x 9" floor tile, beige / black mastic	Upper – N E lab	8% Chrysotile / NAD
8	8-SAT-22	2' x 4' ceiling tile, white, fissures and dots	Upper – west office	NAD
8	8-SAT-23	2' x 4' ceiling tile, white, fissures and dots	Upper – west office	NAD
8	8-SAT-24	2' x 4' ceiling tile, white, fissures and dots	Upper – east office	NAD
9	9-MISC-25	Window/door frame caulking	East side window	NAD
9	9-MISC-26	Window/door frame caulking	Main door	NAD
9	9-MISC-27	Window/door frame caulking	South side window	NAD

NAD = No asbestos detected above PLM detection limit of 1%

APPENDIX A

ASBESTOS SURVEY SAMPLE SUMMARY
Ute Water Treatment Plant
4651-4652 Ute Highway, Lyons, Colorado

NORTH PLANT – FILTRATION BUILDING				
HOMOGENEOUS AREA	SAMPLE NO.	DESCRIPTION	SAMPLE LOCATION	LAB RESULTS
10	10-MISC-28	Window pane caulking	South side window – E	NAD
10	10-MISC-29	Window pane caulking	South side window – C	NAD
10	10-MISC-30	Window pane caulking	South side window – W	NAD
11	11-MISC-31	Lab counter top	Lab A – north	8% Chrysotile
11	11-MISC-32	Lab counter top	Lab A – central	8% Chrysotile
11	11-MISC-33	Lab counter top	Lab A – south	8% Chrysotile
12	12-CORE-34	Roof core – membrane and tar flashing	Roof - North	NAD
12	12-CORE-35	Roof core – membrane and tar flashing	Roof – Central	NAD
12	12-CORE-36	Roof core – membrane and tar flashing	Roof - South	NAD
13	13-RTAR-37	Foam / Roof tar	Chemical mix area roof – north	NAD / 10% Chrysotile
13	13-RTAR-38	Foam / Roof tar	Chemical mix area roof – central	NAD / 10% Chrysotile
13	13-RTAR-39	Foam / Roof tar	Chemical mix area roof – south	NAD / 10% Chrysotile

NORTH PLANT – BLEACH BUILDING				
HOMOGENEOUS AREA	SAMPLE NO.	DESCRIPTION	SAMPLE LOCATION	LAB RESULTS
1	1-DWJC-1	Drywall / joint compound	Ceiling – east	NAD / NAD
1	1-DWJC-2	Drywall / joint compound (listed by lab as “white paint”)	Ceiling – central	NAD / NAD
1	1-DWJC-3	Drywall / joint compound	Ceiling - west	NAD / NAD

NORTH PLANT – ALUM BUILDING				
HOMOGENEOUS AREA	SAMPLE NO.	DESCRIPTION	SAMPLE LOCATION	LAB RESULTS
1	1-RTAR-1	Roof tar	Roof – east	NAD
1	1-RTAR-2	Roof tar	Roof – west	NAD
1	1-RATR-3	Roof tar	Roof - west	NAD

NAD = No asbestos detected above PLM detection limit of 1%

APPENDIX A

ASBESTOS SURVEY SAMPLE SUMMARY
Ute Water Treatment Plant
4651-4652 Ute Highway, Lyons, Colorado

NORTH PLANT – MAINTENANCE BUILDING				
HOMOGENEOUS AREA	SAMPLE NO.	DESCRIPTION	SAMPLE LOCATION	LAB RESULTS
1	1-DWJC-1	Drywall	Northeast office	NAD
1	1-DWJC-2	Drywall / mud (reported by lab as "white texture")	Southeast office	NAD / NAD
1	1-DWJC-3	Drywall	Hallway	NAD
2	2-FTMS-4	12" x 12" Floor tile, beige / mastic	Northeast office	NAD / < 0.25% Chrysotile (Point Count)
2	2-FTMS-5	12" x 12" Floor tile, beige / mastic	Southeast office	Trace Chrysotile / NAD (lab unable to point count)
2	2-FTMS-6	12" x 12" Floor tile, beige / mastic	Bathroom	Trace Chrysotile / NAD (lab unable to point count)
3	3-SAT-7	2' x 4' ceiling tile, white, fissures and dots	Northeast office	NAD
3	3-SAT-8	2' x 4' ceiling tile, white, fissures and dots	Southeast office	NAD
3	3-SAT-9	2' x 4' ceiling tile, white, fissures and dots	Southeast office	NAD

NAD = No asbestos detected above PLM detection limit of 1%

APPENDIX A

ASBESTOS SURVEY SAMPLE SUMMARY
Ute Water Treatment Plant
4651-4652 Ute Highway, Lyons, Colorado

SOUTH PLANT – FILTRATION BUILDING				
HOMOGENEOUS AREA	SAMPLE NO.	DESCRIPTION	SAMPLE LOCATION	LAB RESULTS
1	1-FTMS-1	12" x 12" Floor tile, tan / mastic	North addition hallway	NAD / NAD
1	1-FTMS-2	12" x 12" Floor tile, tan / mastic	North addition hallway	NAD / 4% Chrysotile
1	1-FTMS-3	12" x 12" Floor tile, tan / mastic	North addition hallway	NAD / 5% Chrysotile
2	2-MISC-4	Block fill (lab reported as two layers, but only one layer observed in field)	North addition hallway	NAD
2	2-MISC-5	Block fill (lab reported as two layers, but only one layer observed in field)	North addition hallway	NAD
2	2-MISC-6	Block fill (lab reported as two layers, but only one layer observed in field)	North addition hallway	NAD
3	3-FTMS-7	12" x 12" Floor tile, darker tan / mastic <i>(lab reported as four layers, but only one two layers observed in field)</i>	North addition lab hallway	NAD / 3% Chrysotile
3	3-FTMS-8	12" x 12" Floor tile, darker tan / mastic	North addition lab	NAD / 4% Chrysotile
3	3-FTMS-9	12" x 12" Floor tile, darker tan / mastic	North addition lab	NAD / 3% Chrysotile
4	4-DWJC-10	Drywall	North addition lab	NAD
4	4-DWJC-11	Drywall / tape/ joint compound	North addition lab hallway	NAD / NAD/ NAD
4	4-DWJC-12	Drywall / tape / joint compound <i>(lab reported as five layers, but only three layers observed in field)</i>	North addition main hallway - lab hallway	NAD / NAD / 2% Chrysotile
5	5-SAT-13	2' x 4' ceiling tile, white, fissures	North addition lab	NAD
5	5-SAT-14	2' x 4' ceiling tile, white, fissures	North addition lab	NAD
5	5-SAT-15	2' x 4' ceiling tile, white, fissures	North addition lab	NAD
6	6-SAT-16	2' x 4' ceiling tile, white, dots	North addition lab	NAD
6	6-SAT-17	2' x 4' ceiling tile, white, dots	North addition lab	NAD
6	6-SAT-18	2' x 4' ceiling tile, white, dots	North addition lab	NAD
7	7-MISC-19	Lab countertop	North addition lab	NAD
7	7-MISC-69	Lab countertop	North addition lab	NAD
7	7-MISC-70	Lab countertop	North addition lab	10% Chrysotile
8	8-CBA-20	Cove base / adhesive	North addition lab hallway	NAD / NAD
8	8-CBA-21	Cove base / adhesive	North addition lab hallway	NAD / NAD
8	8-CBA-22	Cove base / adhesive	North addition lab hallway	NAD / NAD

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ASBESTOS SURVEY SAMPLE SUMMARY
Ute Water Treatment Plant
4651-4652 Ute Highway, Lyons, Colorado

SOUTH PLANT – FILTRATION BUILDING				
HOMOGENEOUS AREA	SAMPLE NO.	DESCRIPTION	SAMPLE LOCATION	LAB RESULTS
9	9-CBA-23	Cove base adhesive / drywall / joint compound (drywall and joint compound are homogeneous area 10)	Stairs between addition and filtration room	NAD/ 2%/ NAD (last two layers are homog. area. # 10)
9	9-CBA-24	Cove base / adhesive	Stairs between addition and filtration room	NAD / NAD
9	9-CBA-25	Cove base / adhesive	Stairs – 2 nd floor	NAD / NAD
10	10-DWJC-26	Drywall	Filtration room ceiling	NAD
10	10-DWJC-27	Drywall / tape / joint compound / "white texture" (not observed in field)	Filtration room north wall	NAD / NAD / 3% Chrysotile / trace
10	10-DWJC-28	Drywall / joint compound	Stairs – 2nd floor	NAD / NAD
11	11-MISC-29	Block fill (reported by lab as brick and paint but only block fill observed in field)	Filtration room northeast wall	NAD
11	11-MISC-30	Block fill (reported by lab as brick and paint but only block fill observed in field)	Filtration room northwest wall	NAD
11	11-MISC-31	Block fill (reported by lab as brick and paint but only block fill observed in field)	Stairs between addition and filtration room	NAD
12	12-TXT-32	Acoustic texture (reported by lab as three layers but only one layer observed in field)	Filtration room center	3% Chrysotile
12	12-TXT-33	Acoustic texture (only one layer observed in field)	Filtration room southwest	3% Chrysotile
12	12-TXT-34	Acoustic texture	Filtration room southeast	3% Chrysotile
12	12-TXT-35	Acoustic texture (reported by lab as two layers but only one layer observed in field)	Filtration room northeast	3% Chrysotile
12	12-TXT-36	Acoustic texture	Filtration room SW beam	3% Chrysotile
13	13-MISC-37	Door/window frame caulking (reported by lab as three layers but only one layer observed in field)	Original – east window	10% Chrysotile
13	13-MISC-38	Door/window frame caulking (reported by lab as two layers but only one layer observed in field)	Original – south window	15% Chrysotile
13	13-MISC-39	Door/window frame caulking	Original – west window	NAD

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ASBESTOS SURVEY SAMPLE SUMMARY
Ute Water Treatment Plant
4651-4652 Ute Highway, Lyons, Colorado

SOUTH PLANT – FILTRATION BUILDING				
HOMOGENEOUS AREA	SAMPLE NO.	DESCRIPTION	SAMPLE LOCATION	LAB RESULTS
14	14-MISC-40	Stair panel adhesive	Stairs – 1 st floor	NAD
14	14-MISC-41	Stair panel adhesive	Stairs – 2 nd floor	NAD
14	14-MISC-42	Stair panel adhesive	Stairs – 2 nd floor to 3 rd floor	NAD
15	15-FTMS-43	12" x 12" Floor tile, blue-gray / yellow mastic (Installed over homogeneous area 15)	2 nd floor office entry	NAD / NAD
15	15-FTMS-44	12" x 12" Floor tile, blue-gray / yellow mastic (Installed over homogeneous area 15)	2 nd floor office – hall	NAD / NAD
15	15-FTMS-45	12" x 12" Floor tile, blue-gray / yellow mastic (Installed over homogeneous area 15)	2 nd floor office breakroom	NAD / NAD
16	16-VSF-46	Linoleum, red square brick	2 nd floor office - southwest	NAD
16	16-VSF-47	Linoleum, red square brick / yellow mastic	2 nd floor office hall/foyer, under homogenous area 15	NAD / NAD
16	16-VSF-48	Linoleum, red square brick / yellow mastic	2 nd floor office entry, under homogenous area 15	NAD / NAD
17	17-TXT-49	Exterior stucco / foam / backing	North addition - east	NAD/ NAD / NAD
17	17-TXT-50	Exterior stucco / foam / backing	North addition – east	NAD/ NAD / NAD
17	17-TXT-51	Exterior stucco / foam / backing	North addition – east	NAD/ NAD / NAD
17	17-TXT-52	Exterior stucco / foam / backing	North addition – west	NAD/ NAD / NAD
17	17-TXT-53	Exterior stucco / foam / backing	North addition – west	NAD/ NAD / NAD
17	17-TXT-54	Exterior stucco / foam / backing	North addition – west	NAD/ NAD / NAD
17	17-TXT-55	Exterior stucco / foam / backing	North addition – west	NAD/ NAD / NAD
18	18-MISC-56	Window/door frame caulking	North addition – east	NAD
18	18-MISC-57	Window/door frame caulking	North addition – east	NAD
18	18-MISC-58	Window/door frame caulking	North addition – east	NAD

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ASBESTOS SURVEY SAMPLE SUMMARY
Ute Water Treatment Plant
4651-4652 Ute Highway, Lyons, Colorado

SOUTH PLANT – FILTRATION BUILDING				
HOMOGENEOUS AREA	SAMPLE NO.	DESCRIPTION	SAMPLE LOCATION	LAB RESULTS
19	19-MISC-71	Residual tar on concrete	Basement – west corridor/room, penetrations in concrete wall over doorways	10% Chrysotile
19	19-MISC-72	Residual tar on concrete	Basement – west corridor/room, penetrations in concrete wall over doorways	6% Chrysotile
19	19-MISC-73	Residual tar on concrete	Basement – west corridor/room, penetrations in concrete wall over doorways	8% Chrysotile
20	20-MISC-59	Window pane caulking	Filtration room east	NAD
20	20-MISC-60	Window pane caulking	Filtration room west	NAD
20	20-MISC-61	Window pane caulking	Filtration room south	NAD
21	21-P-62	Plaster base coat / skim coat	2 nd floor office entry	NAD / <0.25% Chrysotile (Point Count)
21	21-P-63	Plaster base coat / skim coat (reported by lab as “drywall” and “texture”)	2 nd floor office fireplace	NAD / NAD
21	21-P-64	Plaster base coat / skim coat (lab reported as three layers, but only two layers observed in field)	2 nd floor office south-central	NAD / <0.25% Chrysotile (Point Count)
21	21-P-65	Plaster base coat / skim coat (lab reported as three layers, but only two layers observed in field)	2 nd floor office kitchen	NAD / <0.25% Chrysotile (Point Count)
21	21-P-66	Plaster base coat / skim coat (lab reported as three layers, but only two layers observed in field)	2 nd floor office southwest	NAD / <0.25% Chrysotile (Point Count)
21	21-P-67	Plaster base coat	2 nd floor office entry	NAD
21	21-P-68	Plaster base coat / skim coat (lab reported as three layers, but only two layers observed in field)	2 nd floor office hall	NAD / <0.25% Chrysotile (Point Count)
22	22-RFLS-74	Tar flashing/sealant	Original – 2 nd level west	3% Chrysotile
22	22-RFLS-75	Tar flashing/sealant	Original – 2 nd level east	5% Chrysotile
22	22-RFLS-76	Tar flashing/sealant	Original – 3 rd level west	NAD

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ASBESTOS SURVEY SAMPLE SUMMARY
Ute Water Treatment Plant
4651-4652 Ute Highway, Lyons, Colorado

SOUTH PLANT – FILTRATION BUILDING				
HOMOGENEOUS AREA	SAMPLE NO.	DESCRIPTION	SAMPLE LOCATION	LAB RESULTS
23	23-RFLS-77	Tar flashing/sealant	Addition – 4 th level north	NAD
23	23-RFLS-78	Tar flashing/sealant	Addition – 4 th level south	NAD
23	23-RFLS-79	Tar flashing/sealant	Addition – 4 th level west	NAD

SOUTH PLANT – CLEARWELL BUILDING				
HOMOGENEOUS AREA	SAMPLE NO.	DESCRIPTION	SAMPLE LOCATION	LAB RESULTS
1	1-RTAR-1	Tar roof sheet with silver paint	Roof - east	3% Chrysotile
1	1-RTAR-2	Tar roof sheet with silver paint	Roof – west	NAD
1	1-RTAR-3	Tar roof sheet with silver paint	Roof – north	NAD
2	2-MISC-4	Foam with Silver Paint	Roof - east	NAD
2	2-MISC-5	Foam with Silver Paint	Roof – west	NAD
2	2-MISC-6	Foam with Silver Paint	Roof – north	NAD

SOUTH PLANT – PUMP HOUSE				
HOMOGENEOUS AREA	SAMPLE NO.	DESCRIPTION	SAMPLE LOCATION	LAB RESULTS
1	1-RTAR-1	Roof tar / foam / tar	Roof - east	45% Chrysotile / NAD / 10% Chrysotile
1	1-RTAR-2	Roof tar / foam	Roof – south	10% Chrysotile / NAD
1	1-RTAR-3	Foam	Roof – north	NAD

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ASBESTOS SURVEY SAMPLE SUMMARY
Ute Water Treatment Plant
4651-4652 Ute Highway, Lyons, Colorado

SOUTH PLANT – NORTH-WEST BUILDING (ORIGINAL CHEMICAL MIXING PLANT)				
HOMOGENEOUS AREA	SAMPLE NO.	DESCRIPTION	SAMPLE LOCATION	LAB RESULTS
1	1-FTMS-1	12" x 12" Floor tile, beige / mastic	Upper level	Trace Chrysotile / NAD (lab unable to point count)
1	1-FTMS-2	12" x 12" Floor tile, beige / mastic	Upper level	Trace Chrysotile / NAD (lab unable to point count)
1	1-FTMS-3	12" x 12" Floor tile, beige / mastic	Upper level	Trace Chrysotile / NAD (lab unable to point count)
2	2-DWJC-4	Drywall / joint compound	Upper level	NAD / NAD
2	2-DWJC-5	Drywall / tape / joint compound (lab reported as four layers, but only three layers observed in field)	Upper level	NAD / NAD / NAD
2	2-DWJC-6	Drywall / tape / joint compound (lab reported as four layers, but only three layers observed in field)	Upper level	NAD / NAD / NAD
3	3-RTAR-7	Roof tar with silver paint	Roof – north	40% Chrysotile
3	3-RTAR-8	Roof tar with silver paint	Roof – central	40% Chrysotile
3	3-RTAR-9	Roof tar with silver paint	Roof – south	40% Chrysotile

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ASBESTOS SURVEY SAMPLE SUMMARY
Ute Water Treatment Plant
4651-4652 Ute Highway, Lyons, Colorado

SOUTH PLANT – ALUM BUILDING

HOMOGENEOUS AREA	SAMPLE NO.	DESCRIPTION	SAMPLE LOCATION	LAB RESULTS
1	1-DWJC-1	Drywall / mud	South side	NAD / NAD
1	1-DWJC-2	Drywall / tape / mud	South side	NAD / NAD / NAD
1	1-DWJC-3	Drywall / mud	South side	NAD / NAD
2	2-MISC-4	Door/window frame caulking	Entry door	10% Chrysotile
2	2-MISC-5	Door/window frame caulking	Entry door	10% Chrysotile
2	2-MISC-6	Door/window frame caulking	South window	10% Chrysotile
3	3-MISC-7	Window pane caulking	Northwest window	NAD
3	3-MISC-8	Window pane caulking	Southwest window	NAD
3	3-MISC-9	Window pane caulking	East window	NAD
4	4-RSHG-10	Roof shingle / tar paper	South roof – east	NAD / NAD
4	4-RSHG-11	Roof shingle / tar paper	South roof – central	NAD / NAD
4	4-RSHG-12	Roof shingle / tar paper	South roof – west	NAD / NAD
5	5-RTAR-13	Tar roof sheeting with silver paint	North roof - south	NAD
5	5-RTAR-14	Tar roof sheeting with silver paint	North roof – central	NAD
5	5-RTAR-15	Tar roof sheeting with silver paint	North roof – north	NAD
6	6-RTAR-16	Residual roof tar	North roof - south	NAD
6	6-RTAR-17	Residual roof tar	North roof – central	NAD
6	6-RTAR-18	Residual roof tar	North roof – north	NAD
7	7-MISC-19	Foam / silver paint	North roof - south	NAD / NAD
7	7-MISC-20	Foam / silver paint	North roof – central	NAD / NAD
7	7-MISC-21	Foam / silver paint	North roof – north	NAD / NAD

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ASBESTOS SURVEY SAMPLE SUMMARY
Ute Water Treatment Plant
4651-4652 Ute Highway, Lyons, Colorado

SOUTH PLANT – LOWER NORTH BUILDING (INTAKE PIPE SHED)

HOMOGENEOUS AREA	SAMPLE NO.	DESCRIPTION	SAMPLE LOCATION	LAB RESULTS
1	1-MISC-1	Door frame caulking	Entry door	0.25% <i>Chrysotile (Point Count)</i>
1	1-MISC-2	Door frame caulking	Entry door	<0.25% <i>Chrysotile (Point Count)</i>
1	1-MISC-3	Door frame caulking	Entry door	0.25% <i>Chrysotile (Point Count)</i>
2	2-RTAR-4	Roof tar sheeting / tar	Roof – east	NAD / NAD
2	2-RTAR-5	Roof tar sheeting	Roof – central	NAD
2	2-RTAR-6	Roof tar sheeting / tar	Roof – west	NAD / NAD

SOUTH PLANT – METAL STORAGE BUILDING

HOMOGENEOUS AREA	SAMPLE NO.	DESCRIPTION	SAMPLE LOCATION	LAB RESULTS
1	1-FTMS-1	12" x 12" Floor tile, gray / mastic	North office	NAD / NAD
1	1-FTMS-2	12" x 12" Floor tile, gray / mastic	North office	NAD / NAD
1	1-FTMS-3	12" x 12" Floor tile, gray / mastic	North office	NAD / NAD
2	2-DWJC-4	Drywall / mud	North office	NAD / NAD
2	2-DWJC-5	Drywall / mud	Southwest office	NAD / NAD
2	2-DWJC-6	Drywall / mud	Warehouse	NAD / NAD
3	3-TXT-7	Orange peel texture	North office	NAD
3	3-TXT-8	Orange peel texture	North office	NAD
3	3-TXT-9	Orange peel texture	Southwest office	NAD
4	4-SAT-10	2' x 4' ceiling tile, white, fissures & dots	North office	NAD
4	4-SAT-11	2' x 4' ceiling tile, white, fissures & dots	North office	NAD
4	4-SAT-12	2' x 4' ceiling tile, white, fissures & dots	North office	NAD
5	5-FTMS-13	12" x 12" Floor tile, beige / mastic	Southwest office	NAD
5	5-FTMS-14	12" x 12" Floor tile, beige / mastic	Southwest office	NAD
5	5-FTMS-15	12" x 12" Floor tile, beige / mastic	Southwest office	NAD

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ASBESTOS SURVEY SAMPLE SUMMARY
Ute Water Treatment Plant
4651-4652 Ute Highway, Lyons, Colorado

GASKETS			
SAMPLE NO.	DESCRIPTION	SAMPLE LOCATION	LAB RESULTS
Gasket-01	Gasket – blue exterior, brittle, black interior	North Plant Filtration, clearwell	NAD
Gasket-02	Gasket – blue and brown, brittle	North Plant Filtration, “house”	35% Chrysotile
Gasket-03	Gasket – gray, brown, pliable	North Plant – west, unlabeled 4" line	NAD
Gasket-04	Gasket – gray, brown, brittle	North Plant – west, unlabeled 4" line	NAD
Gasket-05	Gasket – red, pliable	South Plant – filtration room piping	NAD

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APPENDIX B

CONFIRMED ASBESTOS
Ute Water Treatment Plant
4651-4652 Ute Highway, Lyons, Colorado

NORTH PLANT – FILTRATION BUILDING						
SAMPLE NO.	DESCRIPTION	MATERIAL LOCATION	PERCENT/TYPE ASBESTOS	NESHAP CLASSIFICATION	CONDITION	ESTIMATED QUANTITY
3-DWJC-9	Drywall / mud	Throughout	Mud - 2% Chrysotile (composite result calculated at 0.16%)	Non-ACM (based on composite)	Good Condition	> 2,000 ft ²
7-FTMS-19, 7-FTMS-20, 7-FTMS-21	9" x 9" floor tile, beige / mastic	Labs	Floor tile: 8% Chrysotile Mastic: NAD	Category II Nonfriable	Damaged	300 ft ²
13-RTAR-37, 13-RTAR-38, 13-RTAR-39	Foam / Roof tar	Chemical mix area roof	Tar: 10% Chrysotile	Category I Nonfriable	Damaged	750 ft ²
11-MISC-31, 11-MISC-32, 11-MISC-33	Lab Countertops	Labs	8% Chrysotile	Category II Nonfriable	Good Condition	100 ft ²

ft² = square feet

NAD = No Asbestos Detected

Category I: packings, gaskets, resilient floor covering, and asphalt roofing products

Category II: any other nonfriable ACM

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CONFIRMED ASBESTOS
Ute Water Treatment Plant
4651-4652 Ute Highway, Lyons, Colorado

SOUTH PLANT – FILTRATION BUILDING						
SAMPLE NO.	DESCRIPTION	MATERIAL LOCATION	PERCENT/TYPE ASBESTOS	NESHAP CLASSIFICATION	CONDITION	ESTIMATED QUANTITY
1-FTMS-1, 1-FTMS-2, 1-FTMS-3	12" x 12" Floor tile, tan / mastic	North addition hallway and laboratory, stair landing north of filtration room	Floor tile - NAD Mastic – 4-5% Chrysotile	Category Nonfriable I	Good Condition	250 ft ²
3-FTMS-7, 3-FTMS-8, 3-FTMS-9	12" x 12" Floor tile, darker tan / mastic	North addition hallway and laboratory	Floor tile - NAD Mastic – 3-4% Chrysotile	Category Nonfriable I	Good Condition	25 ft ²
4-DWJC-12	Drywall / mud	Throughout north addition	Mud - 2% Chrysotile (composite calculated 0.16%) as	Non-ACM (based on composite)	Good Condition	> 500 ft ²
10-DWJC-27	Drywall / mud	Throughout original building	Mud - 3% Chrysotile (composite calculated 0.09%) as	Non-ACM (based on composite)	Good Condition	> 3,200 ft ²
12-TXT-32, 12-TXT-33, 12-TXT-34, 12-TXT-35, 12-TXT-36	Acoustic texture	Filtration room	3% Chrysotile	Friable RACM	Damaged	3,000 ft ²

ft² = square feet

NAD = No Asbestos Detected

Category I: packings, gaskets, resilient floor covering, and asphalt roofing products

Category II: any other nonfriable ACM

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CONFIRMED ASBESTOS
Ute Water Treatment Plant
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SOUTH PLANT – FILTRATION BUILDING						
SAMPLE NO.	DESCRIPTION	MATERIAL LOCATION	PERCENT/TYPE ASBESTOS	NESHAP CLASSIFICATION	CONDITION	ESTIMATED QUANTITY
13-MISC-37, 13-MISC-38	Door/window frame caulking	Original building doors and windows	10 - 15% Chrysotile	Category II Nonfriable	Good condition	300 ft ²
N/A	Tar flashing/sealant	Older roof	3 - 5% Chrysotile	Category I Nonfriable	Damaged	2,500 ft ²
21-P-62, 21-P-64, 21-P-65, 21-P-66, 21-P-68	Plaster skim coat	2 nd Floor Office and break area	< 1% Chrysotile (Confirmed by point count)	Non-ACM	Good condition	4,000 ft ²
19-MISC-71, 19-MISC-72, 19-MISC-73	Tar on concrete	Basement	6-10% Chrysotile	Category I Nonfriable	Good Condition	25 ft ²
7-MISC-70	Lab Countertops	Labs	10% Chrysotile	Category II Nonfriable	Good Condition	25 ft ²

ft² = square feet

NAD = No Asbestos Detected

Category I: packings, gaskets, resilient floor covering, and asphalt roofing products

Category II: any other nonfriable ACM

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CONFIRMED ASBESTOS
Ute Water Treatment Plant
4651-4652 Ute Highway, Lyons, Colorado

SOUTH PLANT – CLEARWELL BUILDING						
SAMPLE NO.	DESCRIPTION	MATERIAL LOCATION	PERCENT/TYPE ASBESTOS	NESHAP CLASSIFICATION	CONDITION	ESTIMATED QUANTITY
1-RTAR-1	Tar roof sheet with silver paint	Roof	3% Chrysotile	Friable (silver roof paint)	Damaged	1,200 ft ²

SOUTH PLANT – PUMP HOUSE						
SAMPLE NO.	DESCRIPTION	MATERIAL LOCATION	PERCENT/TYPE ASBESTOS	NESHAP CLASSIFICATION	CONDITION	ESTIMATED QUANTITY
1-RTAR-1, 1-RTAR-2	Roof tar	Roof	10- 45% Chrysotile	Category I Nonfriable	Damaged	800 ft ²

SOUTH PLANT – NORTH-WEST BUILDING (ORIGINAL CHEMICAL MIXING PLANT)						
SAMPLE NO.	DESCRIPTION	MATERIAL LOCATION	PERCENT/TYPE ASBESTOS	NESHAP CLASSIFICATION	CONDITION	ESTIMATED QUANTITY
1-FTMS-1, 1-FTMS-2, 1-FTMS-3	12" x 12" Floor tile, beige / mastic	Upper level	Tile: < 1% Chrysotile (lab unable to point count) Mastic: NAD	Non-ACM (as long as material remains nonfriable throughout demolition)	Good condition	200 ft ²
3-RTAR-7, 3-RTAR-8, 3-RTAR-9	Roof tar with silver paint	Roof	40% Chrysotile	Friable (silver roof paint)	Damaged	200 ft ²

ft² = square feet

NAD = No Asbestos Detected

Category I: packings, gaskets, resilient floor covering, and asphalt roofing products

Category II: any other nonfriable ACM

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CONFIRMED ASBESTOS
Ute Water Treatment Plant
4651-4652 Ute Highway, Lyons, Colorado

SOUTH PLANT – ALUM BUILDING						
SAMPLE NO.	DESCRIPTION	MATERIAL LOCATION	PERCENT/TYPE ASBESTOS	NESHAP CLASSIFICATION	CONDITION	ESTIMATED QUANTITY
2-MISC-4, 2-MISC-5, 2-MISC-6	Door/window frame caulking	Doors and windows	10% Chrysotile	Category II Nonfriable	Good Condition	25 ft ²

SOUTH PLANT – LOWER NORTH BUILDING (INTAKE PIPE SHED)						
SAMPLE NO.	DESCRIPTION	MATERIAL LOCATION	PERCENT/TYPE ASBESTOS	NESHAP CLASSIFICATION	CONDITION	ESTIMATED QUANTITY
1-MISC-1, 1-MISC-2, 1-MISC-3	Door frame caulking	Entry door	< 1% Chrysotile (Confirmed by point count)	Non-ACM	Good condition	10 ft ²

GASKETS – ALL LOCATIONS						
SAMPLE NO.	DESCRIPTION	MATERIAL LOCATION	PERCENT/TYPE ASBESTOS	NESHAP CLASSIFICATION	CONDITION	ESTIMATED QUANTITY
Gasket-02	Blue-brown gasket	Pipes – throughout	35% Chrysotile	Category II Nonfriable	Damaged	20% of all gaskets

ft² = square feet

NAD = No Asbestos Detected

Category I: packings, gaskets, resilient floor covering, and asphalt roofing products

Category II: any other nonfriable ACM

APPENDIX C

ASBESTOS LABORATORY ANALYTICAL REPORTS

Certificate of Analysis

Client Name: Terracon Consultants, Inc
 Street address: 301 N. Howes
 City, State ZIP: Fort Collins, CO 80521
 Attn: Dana Harris
 Client Project Name: #22117704 / Ute WTP, Lyons, Colorado, North Plant, Main/Filteration Building



NVLAP Lab Code 200860-0

Date Collected: 09/12/11
 Date Received: 09/15/11
 Date Analyzed: 09/15/11
 Date Reported: 09/22/11
 Project ID: 11010844
 Job ID:

Test Requested: **3002, Asbestos in Bulk Samples**
 Method: Polarized Light Microscopy / Dispersion Staining (PLM), Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993.

Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
1-MISC-1	11010844-1A	Gray Granular Plaster	N	15%	ND			100	Q
	11010844-1B	White Compound w/Multicolored Paint	N	85%	ND			100	C
1-MISC-2	11010844-2A	Gray Granular Plaster	N	10%	ND			100	Q
	11010844-2B	White Compound w/Multicolored Paint	N	90%	ND			100	C
1-MISC-3	11010844-3A	White Compound w/Multicolored Paint	N	10%	ND			100	C
	11010844-3B	Gray Granular Plaster	N	90%	ND			100	Q
2-MISC-4	11010844-4A	Brown Adhesive	N	25%	ND			100	B
	11010844-4B	Yellow Fibrous Material	N	75%	ND		98	2	
2-MISC-5	11010844-5A	Brown Adhesive	N	20%	ND			100	B
	11010844-5B	Yellow Fibrous Material	N	80%	ND		98	2	

Richard Wegrzyn
Laboratory Analyst

Paul Knappe
Asbestos Laboratory Supervisor

A = Amosite
 AC = Actinolite
 AN = Anthophyllite
 CHRY = Chrysotile
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 TR = Tremolite
 Trace = Less Than 1%
 ND = None Detected

Q = Quartz
 C = Carbonates
 G = Gypsum
 M = Mica
 T = Tar
 NTR = Non-Asbestiform TR
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 Method: Polarized Light Microscopy / Dispersion Staining (PLM), Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993.

Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
2-MISC-6	11010844-6A	Brown Adhesive	N	15%	ND			100	B
	11010844-6B	Yellow Fibrous Material	N	85%	ND		98	2	
3-DWJC-7	11010844-7A	White Compound w/White Paint	N	10%	ND			100	C
	11010844-7B	Tan/White Drywall	N	90%	ND		10	90	G
3-DWJC-8	11010844-8A	White Compound	N	8%	ND			100	C
	11010844-8B	Tan/White Drywall	N	92%	ND		10	90	G
3-DWJC-9	11010844-9A	White Compound	N	8%	CHRY	2		98	C
	11010844-9B	Tan/White Drywall	N	92%	ND		10	90	G
4-SAT-10	11010844-10	White/Gray Ceiling Tile	N	100%	ND		60	40	
4-SAT-11	11010844-11	White/Light Gray Ceiling Tile	N	100%	ND		60	40	

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Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
4-SAT-12	11010844-12	White/Light Gray Ceiling Tile	N	100%	ND		60	40	
5-VSF-13	11010844-13	White/Gray Sheet Vinyl w/White Fibrous Backing & Clear Adhesive	N	100%	ND		20	80	C
5-VSF-14	11010844-14	White/Gray Sheet Vinyl w/White Fibrous Backing & Clear Adhesive	N	100%	ND		20	80	C
5-VSF-15	11010844-15	White/Gray Sheet Vinyl w/White Fibrous Backing	N	100%	ND		20	80	C
6-VSF-16	11010844-16	White/Tan Sheet Vinyl w/White Fibrous Backing & Cream Adhesive	N	100%	ND		20	80	C
6-VSF-17	11010844-17	White/Tan Sheet Vinyl w/White Fibrous Backing	N	100%	ND		20	80	C
6-VSF-18	11010844-18	White/Tan Sheet Vinyl w/White Fibrous Backing & Multicolored Adhesive	N	100%	ND		20	80	C
7-FTMS-19	11010844-19A	Black Mastic	N	2%	ND		Trace	100	B, T
	11010844-19B	White Floor Tile	N	98%	CHRY	8		92	C
7-FTMS-20	11010844-20A	Black Mastic	N	3%	ND		Trace	100	B, T

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Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
7-FTMS-20	11010844-20B	White Floor Tile	N	97%	CHRY	8		92	C
7-FTMS-21	11010844-21A	Black Mastic	N	1%	ND		Trace	100	T
	11010844-21B	White Floor Tile	N	99%	CHRY	8		92	C
8-SAT-22	11010844-22	White/Tan Ceiling Tile	N	100%	ND		60	40	
8-SAT-23	11010844-23	White/Tan Ceiling Tile	N	100%	ND		60	40	
8-SAT-24	11010844-24	White/Tan Ceiling Tile	N	100%	ND		60	40	
9-MISC-25	11010844-25	Light Gray Resinous Material	N	100%	ND			100	C, B
9-MISC-26	11010844-26	Light Gray Resinous Material	N	100%	ND			100	C, B
9-MISC-27	11010844-27	Light Gray Resinous Material	N	100%	ND			100	B, C
10-MISC-28	11010844-28	White Compound w/White Paint	N	100%	ND			100	C, B

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Certificate of Analysis

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Client Name: Terracon Consultants, Inc
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City, State ZIP: Fort Collins, CO 80521
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NVLAP Lab Code 200860-0

Date Collected: 09/12/11
Date Received: 09/15/11
Date Analyzed: 09/15/11
Date Reported: 09/22/11
Project ID: 11010844
Job ID:

Test Requested: 3002, Asbestos in Bulk Samples

Method: Polarized Light Microscopy / Dispersion Staining (PLM), Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993

Ruth Wegzyn

Richard Wegrzyn
Laboratory Analyst

Paul F. Knoppe

Paul Knappe
Asbestos Laboratory Supervisor

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 CHRY = Chrysotile
 CR = Crocidolite
 TR = Tremolite
 Trace = Less Than 1%
 ND = None Detected

Q = Quartz	P = Perlite
C = Carbonates	B = Binder
G = Gypsum	D = Diatoms
M = Mica	
T = Tar	
NTR = Non-Asbestiform TR	
NAC = Non-Asbestiform AC	

Certificate of Analysis

Terracon Consultants, Inc

301 N. Howes
Fort Collins, CO 80521

Dana Harris

Client Project Name: #22117704 / Ute WTP, Lyons, Colorado. North Plant, Main/Filteration Building



NVLAP Lab Code 200860-0

Date Collected: 09/12/11
Date Received: 09/15/11
Date Analyzed: 09/15/11
Date Reported: 09/22/11
Project ID: 11010844
Job ID:

General Notes

- ◆ ND indicates no asbestos was detected; the method detection limit is 1 %.
- ◆ Trace or "<1" indicates asbestos was identified in the sample, but the concentration is less than 1%.
- ◆ All regulated asbestos minerals (i.e. chrysotile, amosite, crocidolite, anthophyllite, tremolite, and actinolite) were sought in every layer of each sample, but only those asbestos minerals detected are listed. Amosite is the common name for the asbestosiform variety of the minerals cummingtonite and grunerite. Crocidolite is the common name used for the asbestosiform variety of the mineral riebeckite.
- ◆ Tile, vinyl, foam, plastic, and fine powder samples may contain asbestos fibers of such small diameter (< 0.25 microns in diameter) that these fibers cannot be detected by PLM. For such samples, more sensitive analytical methods (e.g. TEM, SEM, and XRD) are recommended if greater certainty about asbestos content is required. Semi-quantitative bulk TEM floor tile analysis is accepted under NESHP regulations.
- ◆ These results are submitted pursuant to Aerobiology Laboratory Associates, Inc.'s current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which the results are used or interpreted.
- ◆ Unless notified in writing to return the samples covered by this report, Aerobiology Laboratory Associates, Inc. will store the samples for a minimum period of thirty (30) days before discarding. A shipping and handling charge will be assessed for the return of any samples.
- ◆ Aerobiology does not guarantee the results of tape lifts, microvac, wipe, and/or debris samples. Accurate analysis cannot be performed due to particle size, media used, and/or amount of material given. Analysis of these materials should be performed by a TEM. ***A result of ND does not indicate that the sample area does not contain asbestos. It means the analyst could not identify asbestos in the specific sample for the reasons listed above.***

Notes Required by NVLAP

- ◆ This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.
- ◆ This test report relates only to the items tested or calibrated.
- ◆ This report is not valid unless it bears the name of a NVLAP-approved signatory.
- ◆ Any reproduction of this document must include the entire document in order for the report to be valid.

Company:	Terracon Consultants, Inc.			Collected By:	Dana Harris		Date:	9/12-13/11
Attn:	Dana Harris			Relinquished By:	<i>Dana</i>		Date:	9/14/11
Address:	301 N. Howes			Received By:	<i>Dana Harris</i>		Date:	9/14/11 AM
Address:	Fort Collins, CO 80521			Sampler Type	Andersen	Cassette	Other	
Phone/Fax:	970-484-0359			PO#/Job#/Project Name: # 22117704 / Ute WTP, Lyons, Colorado.				
Email:	dlharris2@terracon.com			North Plant, Main/Filtration Building				
Routine	<input checked="" type="checkbox"/> 24 Hour	Same Day	4 Hour	2 Hour	Notes/CC Info:			

Sample No.	Test Code	Sample Location	Total Volume/Area
1	3002	See attached for Sample Log.	
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			

1054	Direct, Non-viable Spore Trap	1015	Culture - WATER Legionella
1051	Direct, Qualitative- Swab/Tape	1017	Culture - SWAB Legionella
1050	Direct, Qualitative- Bulk	1010	WATER - Potable - E. coli/fecal coliforms
1005	AIR Culture - Bacteria Count w/ ID's	1012	SWAB - E. coli/fecal coliforms
1030	AIR Culture - Fungal Count w/ ID's	1028	Sewage Screen (E. coli/Enterococcus/fecal coliforms)
1006	SWAB Culture - Bacteria Count w/ ID's	2056	Heterotrophic Plate Count
1031	SWAB Culture - Fungal Count w/ ID's	1026	Non-biological Particle ID (Microbiology)
1008	BULK Culture - Bacteria Count w/ ID's	3001	ASBESTOS - Point count
1033	BULK Culture - Fungal Count w/ ID's	3002	ASBESTOS - PLM Analysis
1035	BULK Culture - Stachy. & Fungal Cnt w/ ID's & Direct	3003	ASBESTOS - Particle characterization

43760 Trade Center Place, Suite 100, Dulles, VA 20166 - (877) 648-9150 Fax (703) 648-3919 - email: lab@aerobiology.net

4501 Circle 75 Parkway, Ste A1190, Atlanta GA 30339 - (866) 620-9313 Fax (770) 947-2938 - email: ATL@aerobiology.net

13949 W. Colfax Ave, Suite 205, Lakewood, CO 80401 - (866) 620-9348 Fax (303) 232-3746 - email: denver@aerobiology.net

11010844

2/2

NORTH PLANT - MAIN/FILTRATION BUILDING

HOMOGENEOUS AREA	SAMPLE NO.	DESCRIPTION	SAMPLE LOCATION	LAB RESULTS
1 1	1-MISC-1	Block fill	Lower - NE chlorine room	
1 2	1-MISC-2	Block fill	Lower - N-C loading	
1 3	1-MISC-3	Block fill	Lower - south	
2 4	2-MISC-4	1' x 1' ceiling tile / glue dots	Lower - electrical room	
2 5	2-MISC-5	1' x 1' ceiling tile / glue dots	Lower - electrical room	
2 6	2-MISC-6	1' x 1' ceiling tile / glue dots	Lower - electrical room	
3 7	3-DWJC-7	Drywall / tape / mud	Lower - stairs	
3 8	3-DWJC-8	Drywall / tape / mud	Upper - hallway	
3 9	3-DWJC-9	Drywall / tape / mud	Upper - hallway	
4 10	4-SAT-10	2' x 4' ceiling tile, white, dots	Upper - hallway	
4 11	4-SAT-11	2' x 4' ceiling tile, white, dots	Upper - N-C lab	
4 12	4-SAT-12	2' x 4' ceiling tile, white, dots	Upper - N E lab	
5 13	5-VSF-13	Linoleum, tan pebble	Upper - hallway	
5 14	5-VSF-14	Linoleum, tan pebble	Upper - locker room	
5 15	5-VSF-15	Linoleum, tan pebble	Upper - locker room	
6 16	6-VSF-16	Linoleum, brown pebble	Upper - N-C lab	
6 17	6-VSF-17	Linoleum, brown pebble	Upper - N E lab	
6 18	6-VSF-18	Linoleum, brown pebble	Upper - N-C lab	
7 19	7-FTMS-19	9" x 9" floor tile, beige / mastic	Upper - N E lab	
7 20	7-FTMS-20	9" x 9" floor tile, beige / mastic	Upper - N E lab	
7 21	7-FTMS-21	9" x 9" floor tile, beige / mastic	Upper - N E lab	
8 22	8-SAT-22	2' x 4' ceiling tile, white, fissures and dots	Upper - west office	
8 23	8-SAT-23	2' x 4' ceiling tile, white, fissures and dots	Upper - west office	
8 24	8-SAT-24	2' x 4' ceiling tile, white, fissures and dots	Upper - east office	
9 25	9-MISC-25	Window/door frame caulking	East side window	
9 26	9-MISC-26	Window/door frame caulking	Main door	
9 27	9-MISC-27	Window/door frame caulking	South side window	
10 28	10-MISC-28	Window pane caulking	South side window - E	
10 29	10-MISC-29	Window pane caulking	South side window - C	
10 30	10-MISC-30	Window pane caulking	South side window - W	



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City, State ZIP: Fort Collins, CO 80521
Attn: Dana Harris
Client Project Name: # 22117704 / Ute Treatment Plant, North Plant Filtration Bldg.



Date Collected: 11/08/11
Date Received: 11/11/11
Date Analyzed: 11/11/11
Date Reported: 11/16/11
Project ID: 11013744
Job ID:

Test Requested: **3002, Asbestos in Bulk Samples**

Method: Polarized Light Microscopy / Dispersion Staining (PLM), Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993.

Sample Identification		Physical Description of Sample/Layer	Homogeneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
11-MISC-31	11013743-1	Black Fibrous Resinous Material	N	100%	CHRY	8		92	B
11-MISC-32	11013743-2	Black Fibrous Resinous Material	N	100%	CHRY	8		92	B
11-MISC-33	11013743-3	Black Fibrous Resinous Material	N	100%	CHRY	8		92	B
12-CORE-34	11013743-4A	Black Resinous Material	N	50%	ND			100	B
	11013743-4B	Yellow Foam	N	50%	ND			100	
12-CORE-35	11013743-5A	Black Resinous Material	N	50%	ND			100	B, C
	11013743-5B	Yellow Foam	N	50%	ND			100	
12-CORE-36	11013743-6A	White Fibrous Material	N	15%	ND		95	5	
	11013743-6B	Black Resinous Material	N	85%	ND			100	B
13-RTAR-37	11013743-7A	Yellow Foam w/White Resinous Material	N	35%	ND			100	

Richard Wegrzyn
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Paul Knappe
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TR = Tremolite
Trace = Less Than 1%
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NVLAP Lab Code 200860-0

Test Requested: 3002, Asbestos in Bulk Samples

Method: Polarized Light Microscopy / Dispersion Staining (PLM), Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993.

Date Collected: 11/08/11
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Ruth Wegryn

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Terracon Consultants, Inc

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Dana Harris

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 Date Reported: 11/16/11
 Project ID: 11013744
 Job ID:

General Notes

- ◆ **ND** indicates no asbestos was detected; the method detection limit is 1 %.
- ◆ **Trace** or "**<1**" indicates asbestos was identified in the sample, but the concentration is less than 1%.
- ◆ All regulated asbestos minerals (i.e. chrysotile, amosite, crocidolite, anthophyllite, tremolite, and actinolite) were sought in every layer of each sample, but only those asbestos minerals detected are listed. Amosite is the common name for the asbestiform variety of the minerals cummingtonite and grunerite. Crocidolite is the common name used for the asbestiform variety of the mineral riebeckite.
- ◆ Tile, vinyl, foam, plastic, and fine powder samples may contain asbestos fibers of such small diameter (< 0.25 microns in diameter) that these fibers cannot be detected by PLM. For such samples, more sensitive analytical methods (e.g. TEM, SEM, and XRD) are recommended if greater certainty about asbestos content is required. Semi-quantitative bulk TEM floor tile analysis is accepted under NESHAP regulations.
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APPENDIX A

ASBESTOS SURVEY SAMPLE SUMMARY
Ute Water Treatment Plant
4651-4652 Ute Highway, Lyons, Colorado

NORTH PLANT – FILTRATION BUILDING

HOMOGENEOUS AREA	SAMPLE NO.	DESCRIPTION	SAMPLE LOCATION	LAB RESULTS
11	11-MISC-31	Lab counter top	Lab A – north	
11	11-MISC-32	Lab counter top	Lab A – central	
11	11-MISC-33	Lab counter top	Lab A – south	
12	12-CORE-34	Roof core – membrane and tar flashing	Roof - North	
12	12-CORE-35	Roof core – membrane and tar flashing	Roof – Central	
12	12-CORE-36	Roof core – membrane and tar flashing	Roof - South	
13	13-RTAR-37	Roof tar / foam	Chemical mix area roof – north	
13	13-RTAR-38	Roof tar / foam	Chemical mix area roof – central	
13	13-RTAR-39	Roof tar / foam	Chemical mix area roof – south	

NAD = No asbestos detected above PLM detection limit of 1%

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 City, State ZIP: Fort Collins, CO 80521
 Attn: Dana Harris
 Client Project Name: # 22117704 / Ute Treatment Plant, North Plant Bleach Bldg.



NVLAP Lab Code 200860-0

Date Collected: 11/08/11
 Date Received: 11/11/11
 Date Analyzed: 11/15/11
 Date Reported: 11/17/11
 Project ID: 11013804
 Job ID:

Test Requested: **3002, Asbestos in Bulk Samples**
 Method: Polarized Light Microscopy / Dispersion Staining (PLM), Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993.

Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
1-DWJC-1	11013804-1A	White Compound w/White Paint	N	10%	ND			100	C
	11013804-1B	Tan/White Drywall	N	90%	ND		10	90	G
1-DWJC-2	11013804-2A	Tan/White Drywall w/White Paint	N	100%	ND		10	90	G
1-DWJC-3	11013804-3A	Multicolored Paint w/White Compound	N	4%	ND			100	C
	11013804-3B	Tan/White Drywall	N	96%	ND		10	90	G



Richard Wegrzyn
Laboratory Analyst



Paul Knappe
Asbestos Laboratory Supervisor

A = Amosite
 AC = Actinolite
 AN = Anthophyllite
 CHRY = Chrysotile
 CR = Crocidolite
 TR = Tremolite
 Trace = Less Than 1%
 ND = None Detected

Q = Quartz
 C = Carbonates
 G = Gypsum
 M = Mica
 T = Tar
 NTR = Non-Asbestiform TR
 NAC = Non-Asbestiform AC

Certificate of Analysis

Terracon Consultants, Inc

301 N. Howes
Fort Collins, CO 80521

Dana Harris

Client Project Name: # 22117704 / Ute Treatment Plant, North Plant Bleach Bldg.



Date Collected: 11/08/11
Date Received: 11/11/11
Date Analyzed: 11/15/11
Date Reported: 11/17/11
Project ID: 11013804
Job ID:

General Notes

- ◆ ND indicates no asbestos was detected; the method detection limit is 1 %.
- ◆ Trace or "<1" indicates asbestos was identified in the sample, but the concentration is less than 1%.
- ◆ All regulated asbestos minerals (i.e. chrysotile, amosite, crocidolite, anthophyllite, tremolite, and actinolite) were sought in every layer of each sample, but only those asbestos minerals detected are listed. Amosite is the common name for the asbestosiform variety of the minerals cummingtonite and grunerite. Crocidolite is the common name used for the asbestosiform variety of the mineral riebeckite.
- ◆ Tile, vinyl, foam, plastic, and fine powder samples may contain asbestos fibers of such small diameter (< 0.25 microns in diameter) that these fibers cannot be detected by PLM. For such samples, more sensitive analytical methods (e.g. TEM, SEM, and XRD) are recommended if greater certainty about asbestos content is required. Semi-quantitative bulk TEM floor tile analysis is accepted under NESHP regulations.
- ◆ These results are submitted pursuant to Aerobiology Laboratory Associates, Inc.'s current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which the results are used or interpreted.
- ◆ Unless notified in writing to return the samples covered by this report, Aerobiology Laboratory Associates, Inc. will store the samples for a minimum period of thirty (30) days before discarding. A shipping and handling charge will be assessed for the return of any samples.
- ◆ Aerobiology does not guarantee the results of tape lifts, microvac, wipe, and/or debris samples. Accurate analysis cannot be performed due to particle size, media used, and/or amount of material given. Analysis of these materials should be performed by a TEM. ***A result of ND does not indicate that the sample area does not contain asbestos. It means the analyst could not identify asbestos in the specific sample for the reasons listed above.***

Notes Required by NVLAP

- ◆ This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.
- ◆ This test report relates only to the items tested or calibrated.
- ◆ This report is not valid unless it bears the name of a NVLAP-approved signatory.
- ◆ Any reproduction of this document must include the entire document in order for the report to be valid.

Company:	Terracon Consultants, Inc.			Collected By:	Dana Harris			Date:	11/8/11
Attn:	Dana Harris			Relinquished By:	<i>Dana</i>			Date:	11/10/11
Address:	301 N. Howes			Received By:	<i>Dana</i>			Date:	11/11/11
Address:	Fort Collins, CO 80521			Sampler Type	Andersen	Cassette	Other		
Phone/Fax:	970-484-0359			SAS	AeroTrap				
Email:	dlharris2@terracon.com			PO#/Job#/Project Name: # 22117704 / Ute Treatment Plant, North Plant Bleach Bldg.					
(Routine)	24 Hour	Same Day	4 Hour	2 Hour	Notes/CC Info:				

	Sample No.	Test Code	Sample Location			Total Volume/Area
1		3002	See Attached Sample Log			
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						

1054	Direct, Non-viable Spore Trap	1015	Culture - WATER Legionella
1051	Direct, Qualitative- Swab/Tape	1017	Culture - SWAB Legionella
1050	Direct, Qualitative- Bulk	1010	WATER - Potable - E. coli/fecal coliforms
1005	AIR Culture - Bacteria Count w/ ID's	1012	SWAB - E. coli/fecal coliforms
1030	AIR Culture - Fungal Count w/ ID's	1028	Sewage Screen (E. coli/Enterococcus/fecal coliforms)
1006	SWAB Culture - Bacteria Count w/ ID's	2056	Heterotrophic Plate Count
1031	SWAB Culture - Fungal Count w/ ID's	1026	Non-biological Particle ID (Microbiology)
1008	BULK Culture - Bacteria Count w/ ID's	3001	ASBESTOS - Point count
1033	BULK Culture - Fungal Count w/ ID's	3002	ASBESTOS - PLM Analysis
1035	BULK Culture - Stachy. & Fungal Cnt w/ ID's & Direct	3003	ASBESTOS - Particle characterization

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13949 W. Colfax Ave, Suite 205, Lakewood, CO 80401 - (866) 620-9348 Fax (303) 232-3746 - email: denver@aerobiology.net

APPENDIX A

ASBESTOS SURVEY SAMPLE SUMMARY
Ute Water Treatment Plant
4651-4652 Ute Highway, Lyons, Colorado

NORTH PLANT – BLEACH BUILDING

HOMOGENEOUS AREA	SAMPLE NO.	DESCRIPTION	SAMPLE LOCATION	LAB RESULTS
1 D	1-DWJC-1	Drywall / joint compound	Ceiling – east	
1	1-DWJC-2	Drywall / joint compound	Ceiling – central	
1	1-DWJC-3	Drywall / joint compound	Ceiling - west	



Certificate of Analysis

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Client Name **Terracon Consultants, Inc**
Street address **301 N. Howes**
City, State ZIP **Fort Collins, CO 80521**
Attn: **Dana Harris**
Client Project Name: **# 22117704 / Ute Treatment Plant, North Plant Alum Bldg.**

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NVLAP Lab Code 200860-0

Date Collected: 11/08/11
Date Received: 11/11/11
Date Analyzed: 11/14/11
Date Reported: 11/17/11
Project ID: 11013783
Job ID:

Test Requested: 3002, Asbestos in Bulk Samples

3002, Asbestos in Bulk Samples

Methods

Polarized Light Microscopy / Dispersion Staining (PLM), Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993.

Ruth Wegzyn

Richard Wegrzyn
Laboratory Analyst

Paul F. Knoppe

Paul Knappe Asbestos Laboratory Supervisor

A = Amosite
AC = Actinolite
AN = Anthophyllite
CHRY=Chrysotile
CR = Crocidolite
TR = Tremolite
Trace=Less Than 1%
ND=None Detected

Q = Quartz P =
 C = Carbonates B =
 G = Gypsum D =
 M = Mica
 T = Tar
 TR = Non-Asbestiform TR
 AC = Non-Asbestiform AC



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Terracon Consultants, Inc

301 N. Howes
Fort Collins, CO 80521
Dana Harris

Client Project Name: # 22117704 / Ute Treatment Plant, North Plant Alum Bldg.



NVLAP Lab Code 200860-0

Date Collected: 11/08/11
Date Received: 11/11/11
Date Analyzed: 11/14/11
Date Reported: 11/17/11
Project ID: 11013783
Job ID:

General Notes

- ◆ **ND** indicates no asbestos was detected; the method detection limit is 1 %.
- ◆ **Trace** or "<1" indicates asbestos was identified in the sample, but the concentration is less than 1%.
- ◆ All regulated asbestos minerals (i.e. chrysotile, amosite, crocidolite, anthophyllite, tremolite, and actinolite) were sought in every layer of each sample, but only those asbestos minerals detected are listed. Amosite is the common name for the asbestiform variety of the minerals cummingtonite and grunerite. Crocidolite is the common name used for the asbestiform variety of the mineral riebeckite.
- ◆ Tile, vinyl, foam, plastic, and fine powder samples may contain asbestos fibers of such small diameter (< 0.25 microns in diameter) that these fibers cannot be detected by PLM. For such samples, more sensitive analytical methods (e.g. TEM, SEM, and XRD) are recommended if greater certainty about asbestos content is required. Semi-quantitative bulk TEM floor tile analysis is accepted under NESHAP regulations.
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- ◆ Aerobiology does not guarantee the results of tape lifts, microvacs, wipe, and/or debris samples. Accurate analysis cannot be performed due to particle size, media used, and/or amount of material given. Analysis of these materials should be preformed by a TEM. *A result of ND does not indicate that the sample area does not contain asbestos. It means the analyst could not identify asbestos in the specific sample for the reasons listed above.*

Notes Required by NVLAP

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- ◆ Any reproduction of this document must include the entire document in order for the report to be valid.


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 NVLAP Lab Code 200860-0 (CO)
 NVLAP Lab Code 200829-0 (VA)

Company:	Terracon Consultants, Inc.			Collected By:	Dana Harris		Date:	11/8/11
Attn:	Dana Harris			Relinquished By:	<i>DH</i>		Date:	11/10/11
Address:	301 N. Howes			Received By:	<i>DH</i>		Date:	11/11/11
Address:	Fort Collins, CO 80521			Sampler Type	Andersen	Cassette	Other	
Phone/Fax:	970-484-0359			SAS	AeroTrap			
Email:	dlharris2@terracon.com			PO#/Job#/Project Name: # 22117704 / Ute Treatment Plant, North Plant Alum Bldg.				
(Routine)	24 Hour	Same Day	4 Hour	2 Hour	Notes/CC Info:			

Sample No.	Test Code	Sample Location	Total Volume/Area
1	3002	See Attached Sample Log	
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			

1054	Direct, Non-viable Spore Trap	1015	Culture - WATER Legionella
1051	Direct, Qualitative- Swab/Tape	1017	Culture - SWAB Legionella
1050	Direct, Qualitative- Bulk	1010	WATER - Potable - E. coli/fecal coliforms
1005	AIR Culture - Bacteria Count w/ ID's	1012	SWAB - E. coli/fecal coliforms
1030	AIR Culture - Fungal Count w/ ID's	1028	Sewage Screen (E. coli/Enterococcus/fecal coliforms)
1006	SWAB Culture - Bacteria Count w/ ID's	2056	Heterotrophic Plate Count
1031	SWAB Culture - Fungal Count w/ ID's	1026	Non-biological Particle ID (Microbiology)
1008	BULK Culture - Bacteria Count w/ ID's	3001	ASBESTOS - Point count
1033	BULK Culture - Fungal Count w/ ID's	3002	ASBESTOS - PLM Analysis
1035	BULK Culture - Stachy. & Fungal Cnt w/ ID's & Direct	3003	ASBESTOS - Particle characterization

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11015783

2/2

APPENDIX A

ASBESTOS SURVEY SAMPLE SUMMARY
Ute Water Treatment Plant
4651-4652 Ute Highway, Lyons, Colorado

NORTH PLANT – ALUM BUILDING

HOMOGENEOUS AREA	SAMPLE NO.	DESCRIPTION	SAMPLE LOCATION	LAB RESULTS
1	1-RTAR-1	Roof tar	Roof – east	
1	1-RTAR-2	Roof tar	Roof – west	
1	1-RATR-3	Roof tar	Roof - west	

NAD = No asbestos detected above PLM detection limit of 1%

Certificate of Analysis

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Client Name **Terracon Consultants, Inc**
Street address **301 N. Howes**
City, State ZIP **Fort Collins, CO 80521**
Attn: **Dana Harris**
Client Project Name: **#22117704 / Ute WTP, Lyons Colorado. North Plant, Maintenance Building**



NVLAP Lab Code 200860-0

Date Collected: 09/12/11
Date Received: 09/15/11
Date Analyzed: 09/19/11
Date Reported: 09/22/11
Project ID: 11010880
Job ID:

Test Requested: **3002, Asbestos in Bulk Samples**
Method: Polarized Light Microscopy / Dispersion Staining (PLM), Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993.

Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
1-DWJC-1	11010880-1	Tan/White Drywall w/White Paint	N	100%	ND		10	90	G
1-DWJC-2	11010880-2A	White Texture w/Pale Gray Paint	N	6%	ND			100	C
	11010880-2B	Tan/White Drywall	N	94%	ND		10	90	G
1-DWJC-3	11010880-3	Tan/White Drywall w/White Paint	N	100%	ND		10	90	G
2-FTMS-4	11010880-4A	Yellow/Cream Adhesive	N	2%	CHRY	Trace		100	B
	11010880-4B	White/Gray Floor Tile	N	98%	ND			100	C
2-FTMS-5	11010880-5A	Yellow/Cream Adhesive	N	2%	ND			100	B
	11010880-5B	White/Gray Floor Tile	N	98%	CHRY	Trace		100	C
2-FTMS-6	11010880-6A	Yellow/Cream Adhesive	N	2%	ND			100	B
	11010880-6B	White/Gray Floor Tile	N	98%	CHRY	Trace		100	C



Richard Wegrzyn
Laboratory Analyst



Paul Knappe
Asbestos Laboratory Supervisor

A = Amosite
AC = Actinolite
AN = Anthophyllite
CHRY = Chrysotile
CR = Crocidolite
TR = Tremolite
Trace = Less Than 1%
ND = None Detected

Q = Quartz
C = Carbonates
G = Gypsum
M = Mica
T = Tar
NTR = Non-Asbestiform TR
NAC = Non-Asbestiform AC

Certificate of Analysis

Client Name: Terracon Consultants, Inc
 Street address: 301 N. Howes
 City, State ZIP: Fort Collins, CO 80521
 Attn: Dana Harris
 Client Project Name: #22117704 / Ute WTP, Lyons Colorado, North Plant, Maintenance Building



NVLAP Lab Code 200860-0

Date Collected: 09/12/11
 Date Received: 09/15/11
 Date Analyzed: 09/19/11
 Date Reported: 09/22/11
 Project ID: 11010880
 Job ID:

Test Requested: **3002, Asbestos in Bulk Samples**
 Method: Polarized Light Microscopy / Dispersion Staining (PLM), Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993.

Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
3-SAT-7	11010880-7	White/Tan Ceiling Tile	N	100%	ND		60	40	
3-SAT-8	11010880-8	White/Tan Ceiling Tile	N	100%	ND		60	40	
3-SAT-9	11010880-9	White/Tan Ceiling Tile	N	100%	ND		60	40	

Richard Wegrzyn
Laboratory Analyst

Paul Knappe
Asbestos Laboratory Supervisor

A = Amosite
 AC = Actinolite
 AN = Anthophyllite
 CHRYS = Chrysotile
 CR = Crocidolite
 TR = Tremolite
 Trace = Less Than 1%
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 M = Mica
 T = Tar
 NTR = Non-Asbestiform TR
 NAC = Non-Asbestiform AC

Certificate of Analysis

Terracon Consultants, Inc

301 N. Howes
Fort Collins, CO 80521

Dana Harris

Client Project Name: #22117704 / Ute WTP, Lyons Colorado. North Plant, Maintenance Building



NVLAP Lab Code 200860-0

Date Collected: 09/12/11
Date Received: 09/15/11
Date Analyzed: 09/19/11
Date Reported: 09/22/11
Project ID: 11010880
Job ID:

General Notes

- ◆ ND indicates no asbestos was detected; the method detection limit is 1 %.
- ◆ Trace or "<1" indicates asbestos was identified in the sample, but the concentration is less than 1%.
- ◆ All regulated asbestos minerals (i.e. chrysotile, amosite, crocidolite, anthophyllite, tremolite, and actinolite) were sought in every layer of each sample, but only those asbestos minerals detected are listed. Amosite is the common name for the asbestosiform variety of the minerals cummingtonite and grunerite. Crocidolite is the common name used for the asbestosiform variety of the mineral riebeckite.
- ◆ Tile, vinyl, foam, plastic, and fine powder samples may contain asbestos fibers of such small diameter (< 0.25 microns in diameter) that these fibers cannot be detected by PLM. For such samples, more sensitive analytical methods (e.g. TEM, SEM, and XRD) are recommended if greater certainty about asbestos content is required. Semi-quantitative bulk TEM floor tile analysis is accepted under NESHP regulations.
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Certificate of Analysis

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Client Name: Terracon Consultants, Inc
Street address: 301 N. Howes
City, State ZIP: Fort Collins, CO 80521
Attn: Dana Harris
Client Project Name: #22117704 / Ute WTP, Lyons Colorado. North Plant, Maintenance Building

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NVLAP Lab Code 200860-0

Date Collected: 09/12/11
Date Received: 09/15/11
Date Analyzed: 11/11/11
Date Reported: 11/15/11
Project ID: 11010880
Job ID: POINT COUNT

3001, Asbestos Point Count in Bulk Samples (400/1000)

Method: Polarized Light Microscopy / Dispersion Staining (PLM), Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993.

Ruth Wegryn

Richard Wegrzyn
Laboratory Analyst

Paul F. Knoppe

Paul Knappe
Asbestos Laboratory Supervisor

A = Amosite
AC = Actinolite
AN = Anthophyllite
CHRY = Chrysotile
CR = Crocidolite
TR = Tremolite
ND = None Detected



Certificate of Analysis

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Terracon Consultants, Inc

301 N. Howes
Fort Collins, CO 80521
Dana Harris

Client Project Name: [#22117704 / Ute WTP, Lyons Colorado. North Plant, Maintenance Building](#)



NVLAP Lab Code 200860-0

Date Collected: 09/12/11
Date Received: 09/15/11
Date Analyzed: 11/11/11
Date Reported: 11/15/11
Project ID: 11010880
Job ID:

General Notes

- ◆ **Negative** indicates no asbestos was detected; the method detection limit is 1%.
- ◆ **Trace** or "<1" indicates asbestos was identified in the sample, but the concentration is less than the method detection limit of 1%.
- ◆ All regulated asbestos minerals (i.e. chrysotile, amosite, crocidolite, anthophyllite, tremolite, and actinolite) were sought in every layer of each sample, but only those asbestos minerals detected are listed. Amosite is the common name for the asbestosiform variety of the minerals cummingtonite and grunerite. Crocidolite is the common name used for the asbestosiform variety of the mineral riebeckite.
- ◆ Tile, vinyl, foam, plastic, and fine powder samples may contain asbestos fibers of such small diameter (< 0.25 microns in diameter) that these fibers cannot be detected by PLM. For such samples, more sensitive analytical methods (e.g. TEM, SEM, and XRD) are recommended if greater certainty about asbestos content is required. Semi-quantitative bulk TEM floor tile analysis is accepted under NESHAP regulations.
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NVLAP Lab Code 200860-0 (CO)
NVLAP Lab Code 200829-0 (VA)

Page 1 of 2

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Company:	Terracon Consultants, Inc.			Collected By: <u>Dana Harris</u>	Date: 9/12-13/11
Attn:	Dana Harris			Relinquished By: <u>Dana</u>	Date: 9/14/11
Address:	301 N. Howes			Received By: <u>Dana</u> 10:30 AM	Date: 9/15/11
Address:	Fort Collins, CO 80521			Sampler Type: Andersen Cassette AeroTrap	Other
Phone/Fax:	970-484-0359			PO#/Job#/Project Name: # 22117704 / Ute WTP, Lyons, Colorado. North Plant, Maintenance Building	
Email:	dlharris2@terracon.com			Notes/CC Info:	
Routine	24 Hour	Same Day	4 Hour	2 Hour	

Sample No.	Test Code	Sample Location	Total Volume/Area
1	3002	See attached for Sample Log.	
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			

1054	Direct, Non-viable Spore Trap	1015	Culture - WATER Legionella
1051	Direct, Qualitative- Swab/Tape	1017	Culture - SWAB Legionella
1050	Direct, Qualitative- Bulk	1010	WATER - Potable - E. coli/fecal coliforms
1005	AIR Culture - Bacteria Count w/ ID's	1012	SWAB - E. coli/fecal coliforms
1030	AIR Culture - Fungal Count w/ ID's	1028	Sewage Screen (E. coli/Enterococcus/fecal coliforms)
1006	SWAB Culture - Bacteria Count w/ ID's	2056	Heterotrophic Plate Count
1031	SWAB Culture - Fungal Count w/ ID's	1026	Non-biological Particle ID (Microbiology)
1008	BULK Culture - Bacteria Count w/ ID's	3001	ASBESTOS - Point count
1033	BULK Culture - Fungal Count w/ ID's	3002	ASBESTOS - PLM Analysis
1035	BULK Culture - Stachy. & Fungal Cnt w/ ID's & Direct	3003	ASBESTOS - Particle characterization

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13949 W. Colfax Ave, Suite 205, Lakewood, CO 80401 - (866) 620-9348 Fax (303) 232-3746 - email: denver@aerobiology.net

2/2

NORTH PLANT - MAINTENANCE BUILDING

HOMOGENEOUS AREA	SAMPLE NO.	DESCRIPTION	SAMPLE LOCATION	LAB RESULTS
1	1-DWJC-1	Drywall / tape / mud	Northeast office	
1	1-DWJC-2	Drywall / tape / mud	Southeast office	
1	1-DWJC-3 S	Drywall / tape / mud	Hallway	
2	2-FTMS-4	12" x 12" Floor tile, beige / mastic	Northeast office	
2	2-FTMS-5	12" x 12" Floor tile, beige / mastic	Southeast office	
2	2-FTMS-6	12" x 12" Floor tile, beige / mastic	Bathroom	
3	3-SAT-7	2' x 4' ceiling tile, white, fissures and dots	Northeast office	
3	3-SAT-8	2' x 4' ceiling tile, white, fissures and dots	Southeast office	
3	3-SAT-9	2' x 4' ceiling tile, white, fissures and dots	Southeast office	

Certificate of Analysis

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NVLAP Lab Code 200860-0

Date Collected: 09/12/11
 Date Received: 09/15/11
 Date Analyzed: 09/22/11
 Date Reported: 09/22/11
 Project ID: 11010843
 Job ID:

Test Requested: **3002, Asbestos in Bulk Samples**
 Method: Polarized Light Microscopy / Dispersion Staining (PLM), Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993.

Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
1-FTMS-1	11010843-1A	White Mastic	N	7%	ND			100	B
	11010843-1B	White Tile	N	93%	ND			100	
1-FTMS-2	11010843-2A	Black Mastic	N	5%	CHRY	4		96	B
	11010843-2B	White Tile	N	95%	ND			100	
1-FTMS-3	11010843-3A	Black Mastic	N	3%	CHRY	5		95	B
	11010843-3B	White Tile	N	97%	ND			100	
2-MISC-4	11010843-4A	Blue/White Block Filler	N	8%	ND			100	
	11010843-4B	Gray Cinder Block	N	92%	ND			100	Q
2-MISC-5	11010843-5A	Gray Cinder Block	N	30%	ND			100	Q
	11010843-5B	Blue/White Block Filler	N	70%	ND			100	



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Laboratory Analyst



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Asbestos Laboratory Supervisor

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Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
2-MISC-6	11010843-6A	Gray Cinder Block	N	20%	ND			100	Q
	11010843-6B	White Block Filler	N	80%	ND			100	
3-FTMS-7	11010843-7A	Black Mastic	N	2%	CHRY	3		97	B
	11010843-7B	White Mastic	N	3%	ND			100	B
	11010843-7C	Tan Tile	N	40%	ND		2	98	
	11010843-7D	Gray Granular Plaster	N	55%	ND			100	Q
3-FTMS-8	11010843-8A	Yellow/Black Mastic	N	7%	CHRY	4		96	B
	11010843-8B	Tan Tile	N	93%	ND		2	98	
3-FTMS-9	11010843-9A	Black Mastic	N	4%	CHRY	3		97	B
	11010843-9B	White Tile	N	96%	ND			100	

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 Job ID:

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 Method: Polarized Light Microscopy / Dispersion Staining (PLM), Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993.

Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
4-DWJC-10	11010843-10	White/Tan Drywall w/White & Blue Paint	N	100%	ND		15	85	G
4-DWJC-11	11010843-11A	Yellow Fibrous Woven Material	N	3%	ND		98	2	
	11010843-11B	White Texture w/Blue Paint	N	7%	ND			100	C
	11010843-11C	White/Tan Drywall	N	90%	ND		15	85	G
4-DWJC-12	11010843-12A	White Paint	N	2%	ND			100	
	11010843-12B	White Tape	N	4%	ND		98	2	
	11010843-12C	White Texture	N	20%	CHRY	2		98	C
	11010843-12D	White Joint Compound	N	26%	CHRY	2		98	C
	11010843-12E	White/Tan Drywall	N	48%	ND		15	85	G
5-SAT-13	11010843-13	White/Tan Ceiling Tile	N	100%	ND		70	30	P

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Job ID:

Test Requested: **3002, Asbestos in Bulk Samples**
Method: Polarized Light Microscopy / Dispersion Staining (PLM), Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993.

Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
5-SAT-14	11010843-14	White/Tan Ceiling Tile	N	100%	ND		70	30	
5-SAT-15	11010843-15	White/Tan Ceiling Tile	N	100%	ND		70	30	P
6-SAT-16	11010843-16	White/Tan Drywall	N	100%	ND		70	30	P
6-SAT-17	11010843-17	White/Tan Ceiling Tile	N	100%	ND		70	30	P
6-SAT-18	11010843-18	White/Tan Ceiling Tile	N	100%	ND		70	30	P
7-MISC-19	11010843-19	Black Countertop	N	100%	ND			100	
8-CBA-20	11010843-20A	Brown Mastic	N	3%	ND			100	B
	11010843-20B	Brown Cove Base	N	97%	ND			100	
8-CBA-21	11010843-21A	Brown Mastic	N	3%	ND			100	B
	11010843-21B	Brown Cove Base	N	97%	ND			100	

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Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
8-CBA-22	11010843-22A	Brown Mastic	N	5%	ND			100	B
	11010843-22B	Brown Cove Base	N	95%	ND			100	
9-CBA-23	11010843-23A	White/Brown Drywall	N	10%	ND		50	50	G
	11010843-23B	Brown Mastic	N	40%	ND			100	B
	11010843-23C	White Compound w/Tan Paint	N	50%	CHRY	2		98	C
9-CBA-24	11010843-24A	Multicolored Paint	N	10%	ND			100	
	11010843-24B	Brown Mastic	N	90%	ND			100	B
9-CBA-25	11010843-25A	Brown/Yellow Mastic	N	1%	ND			100	B
	11010843-25B	Brown Cove Base	N	99%	ND			100	
10-DWJC-26	11010843-26	White/Tan Drywall w/White Paint	N	100%	ND		15	85	G

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Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
10-DWJC-27	11010843-27A	White Plaster	N	3%	CHRY	3		97	C
	11010843-27B	White Texture	N	3%	CHRY	Trace		100	G
	11010843-27C	White Paint	N	4%	ND			100	
	11010843-27D	White/Tan Drywall	N	90%	ND		15	85	G
10-DWJC-28	11010843-28A	White Texture w/White Paint	N	2%	ND			100	C
	11010843-28B	White/Tan Drywall	N	98%	ND		15	85	G
11-MISC-29	11010843-29A	Red Brick	N	20%	ND			100	Q
	11010843-29B	Multicolored Paint	N	80%	ND			100	
11-MISC-30	11010843-30A	Multicolored Paint	N	25%	ND			100	
	11010843-30B	Red Brick	N	75%	ND			100	Q

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Test Requested: **3002, Asbestos in Bulk Samples**
 Method: Polarized Light Microscopy / Dispersion Staining (PLM), Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993.

Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
11-MISC-31	11010843-31A	Multicolored Paint	N	15%	ND			100	
	11010843-31B	Red Brick	N	85%	ND			100	Q
12-TXT-32	11010843-32A	Brown Fibrous Material w/White Paint	N	5%	ND		30	70	
	11010843-32B	White Compound	N	40%	CHRY	3		97	C
	11010843-32C	White Micaceous Texture w/White Paint	N	55%	CHRY	3		97	M, C
12-TXT-33	11010843-33A	White Compound	N	20%	ND			100	C
	11010843-33B	White Micaceous Texture w/White Paint	N	80%	ND			100	G, M
12-TXT-34	11010843-34	White Micaceous Texture w/White Paint	N	100%	CHRY	3	Trace	97	C, M
12-TXT-35	11010843-35A	White Compound	N	10%	CHRY	3		97	C
	11010843-35B	White Micaceous Texture w/White Paint	N	90%	CHRY	3	Trace	97	C, M



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Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
12-TXT-36	11010843-36	White Micaceous Texture w/White & Silver Paint	N	100%	CHRY	3	Trace	97	C, M
13-MISC-37	11010843-37A	Brown Granular Plaster	N	5%	ND			100	Q
	11010843-37B	White Caulk w/White Paint	N	20%	CHRY	Trace		100	C
	11010843-37C	White Caulk	N	75%	CHRY	10		90	C
13-MISC-38	11010843-38A	White Caulk w/Tan Paint	N	20%	ND		5	95	C
	11010843-38B	Gray Caulk w/Tan Paint	N	80%	CHRY	15		85	C
13-MISC-39	11010843-39	White Caulk	N	100%	ND		5	95	C
14-MISC-40	11010843-40	Yellow Mastic	N	100%	ND			100	B
14-MISC-41	11010843-41	Brown Mastic	N	100%	ND			100	B
14-MISC-42	11010843-42	Brown Mastic	N	100%	ND			100	

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Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
15-FTMS-43	11010843-43A	Yellow Mastic	N	2%	ND			100	B
	11010843-43B	Gray Tile	N	98%	ND			100	
15-FTMS-44	11010843-44A	Yellow Mastic	N	3%	ND			100	B
	11010843-44B	Gray Tile	N	97%	ND			100	
15-FTMS-45	11010843-45A	Yellow Mastic	N	1%	ND			100	B
	11010843-45B	Gray Tile	N	99%	ND			100	
16-VSF-48	11010843-46	Brown Sheet Vinyl w/White Fibrous Backing & Yellow Mastic	N	100%	ND		25	75	B
16-VSF-47	11010843-47A	Yellow Mastic	N	2%	ND			100	B
	11010843-47B	Brown Sheet Vinyl w/White Fibrous Backing & Yellow Mastic	N	98%	ND		25	75	B
16-VSF-48	11010843-48A	Yellow Mastic	N	2%	ND			100	B



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Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
16-VSF-48	11010843-48B	Brown Sheet Vinyl w/White Fibrous Backing & Yellow Mastic	N	98%	ND		25	75	B
17-TXT-49	11010843-49A	White Foam	N	5%	ND			100	
	11010843-49B	White Fibrous Woven Material	N	5%	ND		98	2	
	11010843-49C	Red/Gray Stucco	N	90%	ND			100	Q
17-TXT-50	11010843-50A	White Fibrous Woven Material	N	5%	ND		98	2	
	11010843-50B	Red/Gray Stucco	N	15%	ND			100	Q
	11010843-50C	White Foam	N	80%	ND			100	
17-TXT-51	11010843-51A	White Fibrous Woven Material	N	5%	ND		98	2	
	11010843-51B	White Foam	N	10%	ND			100	
	11010843-51C	Red/Gray Stucco	N	85%	ND			100	Q

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Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
17-TXT-52	11010843-52A	White Fibrous Woven Material	N	10%	ND		98	2	
	11010843-52B	White Foam	N	30%	ND			100	
	11010843-52C	Red/Gray Stucco	N	60%	ND			100	Q
17-TXT-53	11010843-53A	White Foam	N	10%	ND			100	
	11010843-53B	White Fibrous Woven Material	N	15%	ND		98	2	
	11010843-53C	Red/Gray Stucco	N	75%	ND			100	Q
17-TXT-54	11010843-54A	White Foam	N	5%	ND			100	
	11010843-54B	White Fibrous Woven Material	N	5%	ND		98	2	
	11010843-54C	Red/Gray Stucco	N	90%	ND			100	Q
17-TXT-55	11010843-55A	White Fibrous Woven Material	N	20%	ND		98	2	

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Client Name: Terracon Consultants, Inc
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 City, State ZIP: Fort Collins, CO 80521
 Attn: Dana Harris
 Client Project Name: #22117704 / Ute WTP, Lyons, Colorado. South Plant, Main/Filtration Building



NVLAP Lab Code 200860-0

Date Collected: 09/12/11
 Date Received: 09/15/11
 Date Analyzed: 09/22/11
 Date Reported: 09/22/11
 Project ID: 11010843
 Job ID:

Test Requested: **3002, Asbestos in Bulk Samples**
 Method: Polarized Light Microscopy / Dispersion Staining (PLM), Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993.

Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
17-TXT-55	11010843-55B	White Foam	N	30%	ND			100	
	11010843-55C	Red/Gray Stucco	N	50%	ND			100	Q
18-MISC-56	11010843-56	Gray Resinous	N	100%	ND		Trace	100	B
18-MISC-57	11010843-57A	Red/Gray Stucco	N	25%	ND			100	Q
	11010843-57B	Gray Resinous	N	75%	ND		1	99	B
18-MISC-58	11010843-58	Gray Resinous	N	100%	ND		Trace	100	B
20-MISC-59	11010843-59	White Caulk w/Multicolored Paint	N	100%	ND			100	C
20-MISC-60	11010843-60	Gray Caulk w/Multicolored Paint	N	100%	ND			100	C
20-MISC-61	11010843-61	White/Gray Caulk w/Multicolored Paint	N	100%	ND			100	C
21-P-62	11010843-62A	White Plaster w/White Paint	N	10%	ND			100	C

Paul Knappe
Laboratory Analyst

Paul Knappe
Asbestos Laboratory Supervisor

A = Amosite
 AC = Actinolite
 AN = Anthophyllite
 CHRY = Chrysotile
 CR = Crocidolite
 TR = Tremolite
 Trace = Less Than 1%
 ND = None Detected

Q = Quartz
 C = Carbonates
 G = Gypsum
 M = Mica
 T = Tar
 NTR = Non-Asbestiform TR
 NAC = Non-Asbestiform AC

Certificate of Analysis

Client Name: Terracon Consultants, Inc
 Street address: 301 N. Howes
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NVLAP Lab Code 200860-0

Date Collected: 09/12/11
 Date Received: 09/15/11
 Date Analyzed: 09/22/11
 Date Reported: 09/22/11
 Project ID: 11010843
 Job ID:

Test Requested: **3002, Asbestos in Bulk Samples**
 Method: Polarized Light Microscopy / Dispersion Staining (PLM), Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993.

Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
21-P-62	11010843-62B	White Granular Plaster	N	20%	CHRY	Trace	Trace	100	Q
	11010843-62C	White Plaster w/White Paint	N	70%	ND			100	C
21-P-63	11010843-63A	White Texture w/White Paint	N	5%	ND			100	C
	11010843-63B	White/Tan Drywall	N	95%	ND		15	85	G
21-P-64	11010843-64A	White Texture w/White Paint	N	10%	ND			100	C
	11010843-64B	White Texture w/White Paint	N	40%	ND			100	C
	11010843-64C	White Granular Plaster	N	50%	CHRY	Trace	Trace	100	Q
21-P-65	11010843-65A	White Plaster w/White Paint	N	10%	ND			100	C
	11010843-65B	White Plaster w/White Paint	N	20%	ND			100	C
	11010843-65C	White Granular Plaster	N	70%	CHRY	Trace	Trace	100	Q

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NVLAP Lab Code 200860-0

Date Collected: 09/12/11
 Date Received: 09/15/11
 Date Analyzed: 09/22/11
 Date Reported: 09/22/11
 Project ID: 11010843
 Job ID:

Test Requested: **3002, Asbestos in Bulk Samples**
 Method: Polarized Light Microscopy / Dispersion Staining (PLM), Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993.

Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
21-P-66	11010843-66A	White Plaster w/White Paint	N	10%	ND			100	C
	11010843-66B	White Plaster w/Multicolored Paint	N	20%	ND			100	C
	11010843-66C	White Granular Plaster	N	70%	CHRY	Trace	Trace	100	Q
21-P-67	11010843-67	White/Tan Drywall w/White Paint	N	100%	ND		15	85	G
21-P-68	11010843-68A	White Plaster w/White Paint	N	10%	ND			100	C
	11010843-68B	White Plaster w/White Paint	N	45%	ND			100	C
	11010843-68C	White Granular Plaster	N	45%	CHRY	Trace	Trace	100	Q

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Paul Knappe
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Certificate of Analysis

Terracon Consultants, Inc

301 N. Howes
Fort Collins, CO 80521
Dana Harris

Client Project Name: #22117704 / Ute WTP, Lyons, Colorado. South Plant, Main/Filtration Building



NVLAP Lab Code 200860-0

Date Collected: 09/12/11
Date Received: 09/15/11
Date Analyzed: 09/22/11
Date Reported: 09/22/11
Project ID: 11010843
Job ID:

General Notes

- ◆ ND indicates no asbestos was detected; the method detection limit is 1 %.
- ◆ Trace or "<1" indicates asbestos was identified in the sample, but the concentration is less than 1%.
- ◆ All regulated asbestos minerals (i.e. chrysotile, amosite, crocidolite, anthophyllite, tremolite, and actinolite) were sought in every layer of each sample, but only those asbestos minerals detected are listed. Amosite is the common name for the asbestosiform variety of the minerals cummingtonite and grunerite. Crocidolite is the common name used for the asbestosiform variety of the mineral riebeckite.
- ◆ Tile, vinyl, foam, plastic, and fine powder samples may contain asbestos fibers of such small diameter (< 0.25 microns in diameter) that these fibers cannot be detected by PLM. For such samples, more sensitive analytical methods (e.g. TEM, SEM, and XRD) are recommended if greater certainty about asbestos content is required. Semi-quantitative bulk TEM floor tile analysis is accepted under NESHAP regulations.
- ◆ These results are submitted pursuant to Aerobiology Laboratory Associates, Inc.'s current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which the results are used or interpreted.
- ◆ Unless notified in writing to return the samples covered by this report, Aerobiology Laboratory Associates, Inc. will store the samples for a minimum period of thirty (30) days before discarding. A shipping and handling charge will be assessed for the return of any samples.
- ◆ Aerobiology does not guarantee the results of tape lifts, microvac, wipe, and/or debris samples. Accurate analysis cannot be performed due to particle size, media used, and/or amount of material given. Analysis of these materials should be performed by a TEM. ***A result of ND does not indicate that the sample area does not contain asbestos. It means the analyst could not identify asbestos in the specific sample for the reasons listed above.***

Notes Required by NVLAP

- ◆ This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.
- ◆ This test report relates only to the items tested or calibrated.
- ◆ This report is not valid unless it bears the name of a NVLAP-approved signatory.
- ◆ Any reproduction of this document must include the entire document in order for the report to be valid.

Certificate of Analysis

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 City, State ZIP: Fort Collins, CO 80521
 Attn: Dana Harris
 Client Project Name: #22117704 / Ute WTP, Lyons, Colorado. South Plant, Main/Filtration Building



NVLAP Lab Code 200860-0

Date Collected: 09/12/11
 Date Received: 09/15/11
 Date Analyzed: 11/11/11
 Date Reported: 11/14/11
 Project ID: 11010843
 Job ID: POINT COUNT

Test Requested: 3001, Asbestos Point Count in Bulk Samples (400/1000)
 Method: Polarized Light Microscopy / Dispersion Staining (PLM), Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993.

Sample Identification		Physical Description of Sample/Layer	Asbestos Detected	Asbestos Percentage	Point Count Method (400/1000)
Client	Lab Sample Number				
21-D-62	11010843-62B	White Granular Plaster	CHRY	<0.25%	400
21-P-64	11010843-64C	White Granular Plaster	CHRY	<0.25%	400
21-P-65	11010843-65C	White Granular Plaster	CHRY	<0.25%	400
21-P-66	11010843-66C	White Granular Plaster	CHRY	<0.25%	400
21-P-68	11010843-68C	White Granular Plaster	CHRY	<0.25%	400

Richard Wegrzyn
Laboratory Analyst

Paul Knappe
Asbestos Laboratory Supervisor

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 CHRY = Chrysotile
 CR = Crocidolite
 TR = Tremolite
 ND = None Detected



Certificate of Analysis

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Lakewood, CO 80401
303.232.3746
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Terracon Consultants, Inc

301 N. Howes
Fort Collins, CO 80521
Dana Harris

Client Project Name: #22117704 / Ute WTP, Lyons, Colorado. South Plant, Main/Filtration Building



NVLAP Lab Code 200860-0

Date Collected: 09/12/11
Date Received: 09/15/11
Date Analyzed: 11/11/11
Date Reported: 11/14/11
Project ID: 11010843
Job ID:

General Notes

- ◆ **Negative** indicates no asbestos was detected; the method detection limit is 1%.
- ◆ **Trace** or "**<1**" indicates asbestos was identified in the sample, but the concentration is less than the method detection limit of 1%.
- ◆ All regulated asbestos minerals (i.e. chrysotile, amosite, crocidolite, anthophyllite, tremolite, and actinolite) were sought in every layer of each sample, but only those asbestos minerals detected are listed. Amosite is the common name for the asbestosiform variety of the minerals cummingtonite and grunerite. Crocidolite is the common name used for the asbestosiform variety of the mineral riebeckite.
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 11010843
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 Page 1 of 3
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 NVLAP Lab Code 200860-0 (CO)
 NVLAP Lab Code 200829-0 (VA)

Company:	Terracon Consultants, Inc.			Collected By:	Dana Harris			Date:	9/12-13/11
Attn:	Dana Harris			Relinquished By:	<i>Dan</i>			Date:	9/14/11
Address:	301 N. Howes			Received By:	<i>J. Hernandez</i>			Date:	9/15/11 11AM
Address:	Fort Collins, CO 80521			Sampler Type	Andersen	Cassette	AeroTrap	Other	
Phone/Fax:	970-484-0359			PO#/Job#/Project Name: # 22117704 / Ute WTP, Lyons, Colorado. South Plant, Main/Filtration Building					
Email:	dlharris2@terracon.com			Notes/CC Info:					
Routine	<input checked="" type="checkbox"/> 24 Hour	<input type="checkbox"/> Same Day	<input type="checkbox"/> 4 Hour	<input type="checkbox"/> 2 Hour					

	Sample No.	Test Code	Sample Location				Total Volume/Area
1		3002	See attached for Sample Log.				
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							

1054	Direct, Non-viable Spore Trap	1015	Culture - WATER Legionella
1051	Direct, Qualitative- Swab/Tape	1017	Culture - SWAB Legionella
1050	Direct, Qualitative- Bulk	1010	WATER - Potable - E. coli/fecal coliforms
1005	AIR Culture - Bacteria Count w/ ID's	1012	SWAB - E. coli/fecal coliforms
1030	AIR Culture - Fungal Count w/ ID's	1028	Sewage Screen (E. coli/Enterococcus/fecal coliforms)
1006	SWAB Culture - Bacteria Count w/ ID's	2056	Heterotrophic Plate Count
1031	SWAB Culture - Fungal Count w/ ID's	1026	Non-biological Particle ID (Microbiology)
1008	BULK Culture - Bacteria Count w/ ID's	3001	ASBESTOS - Point count
1033	BULK Culture - Fungal Count w/ ID's	3002	ASBESTOS - PLM Analysis
1035	BULK Culture - Stachy. & Fungal Cnt w/ ID's & Direct	3003	ASBESTOS - Particle characterization

43760 Trade Center Place, Suite 100, Dulles, VA 20166 - (877) 648-9150 Fax (703) 648-3919 - email: lab@aerobiology.net

4501 Circle 75 Parkway, Ste A1190, Atlanta GA 30339 - (866) 620-9313 Fax (770) 947-2938 - email: ATL@aerobiology.net

13949 W. Colfax Ave, Suite 205, Lakewood, CO 80401 - (866) 620-9348 Fax (303) 232-3746 - email: denver@aerobiology.net

SOUTH PLANT – MAIN/FILTRATION BUILDING

HOMOGENEOUS AREA	SAMPLE NO.	DESCRIPTION	SAMPLE LOCATION	LAB RESULTS
1	1-FTMS-1	12" x 12" Floor tile, tan / mastic	North addition hallway	
1	1-FTMS-2	12" x 12" Floor tile, tan / mastic	North addition hallway	
1	1-FTMS-3	12" x 12" Floor tile, tan / mastic	North addition hallway	
2	2-MISC-4	Block fill	North addition hallway	
2	2-MISC-5	Block fill	North addition hallway	
2	2-MISC-6	Block fill	North addition hallway	
3	3-FTMS-7	12" x 12" Floor tile, darker tan / mastic	North addition lab hallway	
3	3-FTMS-8	12" x 12" Floor tile, darker tan / mastic	North addition lab	
3	3-FTMS-9	12" x 12" Floor tile, darker tan / mastic	North addition lab	
4	4-DWJC-10	Drywall / tape / mud	North addition lab	
4	4-DWJC-11	Drywall / tape / mud	North addition lab hallway	
4	4-DWJC-12	Drywall / tape / mud	North addition main hallway - lab hallway	
5	5-SAT-13	2' x 4' ceiling tile, white, fissures	North addition lab	
5	5-SAT-14	2' x 4' ceiling tile, white, fissures	North addition lab	
5	5-SAT-15	2' x 4' ceiling tile, white, fissures	North addition lab	
6	6-SAT-16	2' x 4' ceiling tile, white, dots	North addition lab	
6	6-SAT-17	2' x 4' ceiling tile, white, dots	North addition lab	
6	6-SAT-18	2' x 4' ceiling tile, white, dots	North addition lab	
7	7-MISC-19	Lab countertop	North addition lab	
8	8-CBA-20	Cove base / adhesive	North addition lab hallway	
8	8-CBA-21	Cove base / adhesive	North addition lab hallway	
8	8-CBA-22	Cove base / adhesive	North addition hallway	
9	9-CBA-23	Cove base / adhesive	Stairs between addition and filtration room	
9	9-CBA-24	Cove base / adhesive	Stairs between addition and filtration room	
9	9-CBA-25	Cove base / adhesive	Stairs – 2 nd floor	
10	10-DWJC-26	Drywall / tape / mud	Filtration room ceiling	
10	10-DWJC-27	Drywall / tape / mud	Filtration room north wall	
10	10-DWJC-28	Drywall / tape / mud	Stairs – 2 nd floor	
11	11-MISC-29	Block fill	Filtration room northeast wall	
11	11-MISC-30	Block fill	Filtration room northwest wall	
11	11-MISC-31	Block fill	Stairs between addition and filtration room	
12	12-TXT-32	Acoustic texture	Filtration room center	
12	12-TXT-33	Acoustic texture	Filtration room southwest	
12	12-TXT-34	Acoustic texture	Filtration room southeast	
12	12-TXT-35	Acoustic texture	Filtration room northeast	

SOUTH PLANT – MAIN/FILTRATION BUILDING

HOMOGENEOUS AREA	SAMPLE NO.	DESCRIPTION	SAMPLE LOCATION	LAB RESULTS
12	12-TXT-36	Acoustic texture	Filtration room SW beam	
13	13-MISC-37	Door/window frame caulking	Original – east window	
13	13-MISC-38	Door/window frame caulking	Original – south window	
13	13-MISC-39	Door/window frame caulking	Original – west window	
14	14-MISC-40	Stair panel adhesive	Stairs – 1 st floor	
14	14-MISC-41	Stair panel adhesive	Stairs – 2 nd floor	
14	14-MISC-42	Stair panel adhesive	Stairs – 2 nd floor to 3 rd floor	
15	15-FTMS-43	12" x 12" Floor tile, blue-gray / mastic	2 nd floor office entry	
15	15-FTMS-44	12" x 12" Floor tile, blue-gray / mastic	2 nd floor office – hall	
15	15-FTMS-45	12" x 12" Floor tile, blue-gray / mastic	2 nd floor office breakroom	
16	16-VSF-46	Linoleum, red square brick	2 nd floor office - southwest	
16	16-VSF-47	Linoleum, red square brick	2 nd floor office hall, under HA 15	
16	16-VSF-48	Linoleum, red square brick	2 nd floor office entry, under HA 15	
17	17-TXT-49	Exterior stucco	North addition - east	
17	17-TXT-50	Exterior stucco	North addition – east	
17	17-TXT-51	Exterior stucco	North addition – east	
17	17-TXT-52	Exterior stucco	North addition – west	
17	17-TXT-53	Exterior stucco	North addition – west	
17	17-TXT-54	Exterior stucco	North addition – west	
17	17-TXT-55	Exterior stucco	North addition – west	
18	18-MISC-56	Window/door frame caulking	North addition – east	
18	18-MISC-57	Window/door frame caulking	North addition – east	
18	18-MISC-58	Window/door frame caulking	North addition – east	
20	20-MISC-59	Window pane caulking	Filtration room east	
20	20-MISC-60	Window pane caulking	Filtration room west	
20	20-MISC-61	Window pane caulking	Filtration room south	
21	21-P-62	Plaster base coat / skim coat	2 nd floor office entry	
21	21-P-63	Plaster base coat / skim coat	2 nd floor office fireplace	
21	21-P-64	Plaster base coat / skim coat	2 nd floor office south-central	
21	21-P-65	Plaster base coat / skim coat	2 nd floor office kitchen	
21	21-P-66	Plaster base coat / skim coat	2 nd floor office southwest	
21	21-P-67	Plaster base coat / skim coat	2 nd floor office entry	
21	21-P-68	Plaster base coat / skim coat	2 nd floor office hall	

Certificate of Analysis

Client Name **Terracon Consultants, Inc**
 Street address **301 N. Howes**
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 Attn: **Dana Harris**
 Client Project Name: **# 22117704 / Ute Treatment Plant, South Plant Filtration Building**



NVLAP Lab Code 200860-0

Date Collected: 11/08/11
 Date Received: 11/11/11
 Date Analyzed: 11/14/11
 Date Reported: 11/17/11
 Project ID: 11013784
 Job ID:

Test Requested: **3002, Asbestos in Bulk Samples**
 Method: Polarized Light Microscopy / Dispersion Staining (PLM), Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993.

Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
7-MISC-69	11013784-1	Black Slate Countertop	N	100%	ND			100	
7-MISC-70	11013784-2	Black Fibrous Resinous Countertop	N	100%	CHRY	10	Trace	90	C
19-MISC-71	11013784-3A	Black Fibrous Tar	N	10%	CHRY	10	Trace	90	T
	11013784-3B	Black Tar	N	90%	CHRY	6	Trace	94	T
19-MISC-72	11013784-4	Black Fibrous Tar w/Silver Paint	N	100%	CHRY	6	2	92	
19-MISC-73	11013784-5	Black Fibrous Tar	N	100%	CHRY	8	2	90	T
22-RFLS-74	11013784-6	Black Tar	N	100%	CHRY	3	Trace	97	T
22-RFLS-75	11013784-7	Black Tar	N	100%	CHRY	5	Trace	95	T
22-RFLS-76	11013784-8	Black Resinous Tar	N	100%	ND			100	T
22-RFLS-77	11013784-9	Black Fibrous Resinous Tar	N	100%	ND		10	90	T, C



Richard Wegrzyn
Laboratory Analyst



Paul Knappe
Asbestos Laboratory Supervisor

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 Trace = Less Than 1%
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NVLAP Lab Code 200860-

Date Collected: 11/08/11
Date Received: 11/11/11
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Ruth Wegzyn

Richard Wegrzyn
Laboratory Analyst

Paul F. Knoppe

Paul Knappe
Asbestos Laboratory Supervisor

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Dana Harris

Client Project Name: # 22117704 / Ute Treatment Plant, South Plant Filtration Building



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Date Collected: 11/08/11
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Date Analyzed: 11/14/11
Date Reported: 11/17/11
Project ID: 11013784
Job ID:

General Notes

- ◆ ND indicates no asbestos was detected; the method detection limit is 1 %.
- ◆ Trace or "<1" indicates asbestos was identified in the sample, but the concentration is less than 1%.
- ◆ All regulated asbestos minerals (i.e. chrysotile, amosite, crocidolite, anthophyllite, tremolite, and actinolite) were sought in every layer of each sample, but only those asbestos minerals detected are listed. Amosite is the common name for the asbestosiform variety of the minerals cummingtonite and grunerite. Crocidolite is the common name used for the asbestosiform variety of the mineral riebeckite.
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- ◆ This test report relates only to the items tested or calibrated.
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- ◆ Any reproduction of this document must include the entire document in order for the report to be valid.


11013784

Page 1 of 2
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NVLAP Lab Code 200860-0 (CO)
NVLAP Lab Code 200829-0 (VA)

Company:	Terracon Consultants, Inc.			Collected By:	Dana Harris			Date:	11/8/11
Attn:	Dana Harris			Relinquished By:	<i>Dana Harris</i>			Date:	11/10/11
Address:	301 N. Howes			Received By:	<i>Dana Harris</i>			Date:	11/11/11
Address:	Fort Collins, CO 80521			Sampler Type	Andersen	Cassette	Other		
Phone/Fax:	970-484-0359			SAS	AeroTrap				
Email:	dlharris2@terracon.com			PO#/Job#/Project Name: # 22117704 / Ute Treatment Plant, South Plant Filtration Bldg.					
Routine	24 Hour	Same Day	4 Hour	2 Hour	Notes/CC Info:				

1	Sample No.	Test Code	Sample Location			Total Volume/Area
2		3002	See Attached Sample Log			
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						

1054	Direct, Non-viable Spore Trap	1015	Culture - WATER Legionella
1051	Direct, Qualitative- Swab/Tape	1017	Culture - SWAB Legionella
1050	Direct, Qualitative- Bulk	1010	WATER - Potable - E. coli/fecal coliforms
1005	AIR Culture - Bacteria Count w/ ID's	1012	SWAB - E. coli/fecal coliforms
1030	AIR Culture - Fungal Count w/ ID's	1028	Sewage Screen (E. coli/Enterococcus/fecal coliforms)
1006	SWAB Culture - Bacteria Count w/ ID's	2056	Heterotrophic Plate Count
1031	SWAB Culture - Fungal Count w/ ID's	1026	Non-biological Particle ID (Microbiology)
1008	BULK Culture - Bacteria Count w/ ID's	3001	ASBESTOS - Point count
1033	BULK Culture - Fungal Count w/ ID's	3002	ASBESTOS - PLM Analysis
1035	BULK Culture - Stachy. & Fungal Cnt w/ ID's & Direct	3003	ASBESTOS - Particle characterization

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13949 W. Colfax Ave, Suite 205, Lakewood, CO 80401 - (866) 620-9348 Fax (303) 232-3746 - email: denver@aerobiology.net

1101>784

2/2

APPENDIX A

ASBESTOS SURVEY SAMPLE SUMMARY
Ute Water Treatment Plant
4651-4652 Ute Highway, Lyons, Colorado

SOUTH PLANT – FILTRATION BUILDING

HOMOGENEOUS AREA	SAMPLE NO.	DESCRIPTION	SAMPLE LOCATION	LAB RESULTS
7	7-MISC-69	Lab countertop	North addition lab	
7	7-MISC-70	Lab countertop	North addition lab	
19	19-MISC-71	Residual tar on concrete	Basement – west corridor/room, penetrations in concrete wall over doorways	
19	19-MISC-72	Residual tar on concrete	Basement – west corridor/room, penetrations in concrete wall over doorways	
19	19-MISC-73	Residual tar on concrete	Basement – west corridor/room, penetrations in concrete wall over doorways	
22	22-RFLS-74	Tar flashing/sealant	Original – 2 nd level west	
22	22-RFLS-75	Tar flashing/sealant	Original – 2 nd level east	
22	22-RFLS-76	Tar flashing/sealant	Original – 3 rd level west	
23	23-RFLS-77	Tar flashing/sealant	Addition – 4 th level north	
23	23-RFLS-78	Tar flashing/sealant	Addition – 4 th level south	
23	23-RFLS-79	Tar flashing/sealant	Addition – 4 th level west	

Certificate of Analysis

Client Name: Terracon Consultants, Inc
 Street address: 301 N. Howes
 City, State ZIP: Fort Collins, CO 80521
 Attn: Dana Harris
 Client Project Name: # 22117704 / Ute Treatment Plant, South Plant Clearwell Bldg.



NVLAP Lab Code 200860-0

Date Collected: 11/08/11
 Date Received: 11/11/11
 Date Analyzed: 11/16/11
 Date Reported: 11/16/11
 Project ID: 11013810
 Job ID:

Test Requested: **3002, Asbestos in Bulk Samples**
 Method: Polarized Light Microscopy / Dispersion Staining (PLM), Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993.

Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
1-RTAR-1	11013810-1	Black Fibrous Tar w/Silver Paint	N	100%	CHRY	3	17	80	T, C
1-RTAR-2	11013810-2	Black Fibrous Tar w/Silver Paint	N	100%	ND		15	85	T, C
1-RTAR-3	11013810-3	Black Fibrous Tar w/Silver Paint	N	100%	ND		15	85	T, C
2-MISC-4	11013810-4A	Black Fibrous Tar	N	50%	ND		10	90	T
	11013810-4B	Yellow Foam w/Silver Paint & Black Tar	N	50%	ND		Trace	100	T
2-MISC-5	11013810-5	Yellow Foam w/Silver Paint & Black Tar	N	100%	ND		Trace	100	
2-MISC-6	11013810-6	Yellow Foam w/Silver Paint & Black Tar	N	100%	ND		Trace	100	

Richard Wegrzyn
Laboratory Analyst

Paul Knappe
Asbestos Laboratory Supervisor

A = Amosite
 AC = Actinolite
 AN = Anthophyllite
 CHRY = Chrysotile
 CR = Crocidolite
 TR = Tremolite
 Trace = Less Than 1%
 ND = None Detected

Q = Quartz
 C = Carbonates
 G = Gypsum
 M = Mica
 T = Tar
 NTR = Non-Asbestiform TR
 NAC = Non-Asbestiform AC

Certificate of Analysis

Terracon Consultants, Inc

301 N. Howes
Fort Collins, CO 80521

Dana Harris

Client Project Name: # 22117704 / Ute Treatment Plant, South Plant Clearwell Bldg.



NVLAP Lab Code 200860-0

Date Collected:	11/08/11
Date Received:	11/11/11
Date Analyzed:	11/16/11
Date Reported:	11/16/11
Project ID:	11013810
Job ID:	

General Notes

- ◆ ND indicates no asbestos was detected; the method detection limit is 1 %.
- ◆ Trace or "<1" indicates asbestos was identified in the sample, but the concentration is less than 1%.
- ◆ All regulated asbestos minerals (i.e. chrysotile, amosite, crocidolite, anthophyllite, tremolite, and actinolite) were sought in every layer of each sample, but only those asbestos minerals detected are listed. Amosite is the common name for the asbestosiform variety of the minerals cummingtonite and grunerite. Crocidolite is the common name used for the asbestosiform variety of the mineral riebeckite.
- ◆ Tile, vinyl, foam, plastic, and fine powder samples may contain asbestos fibers of such small diameter (< 0.25 microns in diameter) that these fibers cannot be detected by PLM. For such samples, more sensitive analytical methods (e.g. TEM, SEM, and XRD) are recommended if greater certainty about asbestos content is required. Semi-quantitative bulk TEM floor tile analysis is accepted under NESHAP regulations.
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- ◆ Any reproduction of this document must include the entire document in order for the report to be valid.

Company:	Terracon Consultants, Inc.			Collected By:	Dana Harris			Date:	11/8/11
Attn:	Dana Harris			Relinquished By:				Date:	11/10/11
Address:	301 N. Howes			Received By:				Date:	11/11/11
Address:	Fort Collins, CO 80521			Sampler Type	Andersen	Cassette		Other	
Phone/Fax:	970-484-0359			PO#/Job#/Project Name:		# 22117704 / Ute Treatment Plant, South Plant Clearwell Bldg.			
Email:	dlharris2@terracon.com			Notes/CC Info:					
Routine	24 Hour	Same Day	4 Hour	2 Hour					

Sample No.	Test Code	Sample Location	Total Volume/Area
1	3002	See Attached Sample Log	
2			
3			
4			
5			
6			
7			
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10			
11			
12			
13			
14			

1054	Direct, Non-viable Spore Trap	1015	Culture - WATER Legionella
1051	Direct, Qualitative- Swab/Tape	1017	Culture - SWAB Legionella
1050	Direct, Qualitative- Bulk	1010	WATER - Potable - E. coli/fecal coliforms
1005	AIR Culture - Bacteria Count w/ ID's	1012	SWAB - E. coli/fecal coliforms
1030	AIR Culture - Fungal Count w/ ID's	1028	Sewage Screen (E. coli/Enterococcus/fecal coliforms)
1006	SWAB Culture - Bacteria Count w/ ID's	2056	Heterotrophic Plate Count
1031	SWAB Culture - Fungal Count w/ ID's	1026	Non-biological Particle ID (Microbiology)
1008	BULK Culture - Bacteria Count w/ ID's	3001	ASBESTOS - Point count
1033	BULK Culture - Fungal Count w/ ID's	3002	ASBESTOS - PLM Analysis
1035	BULK Culture - Stachy. & Fungal Cnt w/ ID's & Direct	3003	ASBESTOS - Particle characterization

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13949 W. Colfax Ave, Suite 205, Lakewood, CO 80401 - (866) 620-9348 Fax (303) 232-3746 - email: denver@aerobiology.net

APPENDIX A

ASBESTOS SURVEY SAMPLE SUMMARY
Ute Water Treatment Plant
4651-4652 Ute Highway, Lyons, Colorado

SOUTH PLANT – CLEARWELL BUILDING

HOMOGENEOUS AREA	SAMPLE NO.	DESCRIPTION	SAMPLE LOCATION	LAB RESULTS
1	1-RTAR-1	Tar roof sheet	Roof - east	
1	1-RTAR-2	Tar roof sheet	Roof – west	
1	1-RTAR-3	Tar roof sheet	Roof – north	
2	2-MISC-4	Foam / Silver Paint	Roof - east	
2	2-MISC-5	Foam / Silver Paint	Roof – west	
2	2-MISC-6	Foam / Silver Paint	Roof – north	

NAD = No asbestos detected above PLM detection limit of 1%

Certificate of Analysis

Client Name: Terracon Consultants, Inc
 Street address: 301 N. Howes
 City, State ZIP: Fort Collins, CO 80521
 Attn: Dana Harris
 Client Project Name: # 22117704 / Ute Treatment Plant, South Plant Pump House



NVLAP Lab Code 200860-0

Date Collected: 11/08/11
 Date Received: 11/11/11
 Date Analyzed: 11/14/11
 Date Reported: 11/17/11
 Project ID: 11013787
 Job ID:

Test Requested: **3002, Asbestos in Bulk Samples**

Method: Polarized Light Microscopy / Dispersion Staining (PLM), Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993.

Sample Identification		Physical Description of Sample/Layer	Homogeneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
1-RTAR-1	11013787-1A	Black Fibrous Tar	N	20%	CHRY	45		55	T
	11013787-1B	Yellow Foam	N	35%	ND			100	
	11013787-1C	Black Tar	N	45%	CHRY	10		90	T
1-RTAR-2	11013787-2A	Black Tar	N	1%	CHRY	10		90	T
	11013787-2B	Black Cinder	N	20%	ND			100	
	11013787-2C	Yellow/Gray Foam	N	79%	ND			100	
1-RTAR-3	11013787-3	Gray Foam	N	100%	ND			100	



Paul Knappe
Laboratory Analyst



Paul Knappe
Asbestos Laboratory Supervisor

A = Amosite
 AC = Actinolite
 AN = Anthophyllite
 CHRY = Chrysotile
 CR = Crocidolite
 TR = Tremolite
 Trace = Less Than 1%
 ND = None Detected

Q = Quartz
 C = Carbonates
 G = Gypsum
 M = Mica
 T = Tar
 NTR = Non-Asbestiform TR
 NAC = Non-Asbestiform AC



Certificate of Analysis

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Suite 205
Lakewood, CO 80401
303.232.3746
www.aerobiology.net

Terracon Consultants, Inc

301 N. Howes
Fort Collins, CO 80521

Dana Harris

Client Project Name: # 22117704 / Ute Treatment Plant, South Plant Pump House



NVLAP Lab Code 200860-0

Date Collected: 11/08/11
Date Received: 11/11/11
Date Analyzed: 11/14/11
Date Reported: 11/17/11
Project ID: 11013787
Job ID:

General Notes

- ◆ **ND** indicates no asbestos was detected; the method detection limit is 1 %.
- ◆ **Trace** or "**<1**" indicates asbestos was identified in the sample, but the concentration is less than 1%.
- ◆ All regulated asbestos minerals (i.e. chrysotile, amosite, crocidolite, anthophyllite, tremolite, and actinolite) were sought in every layer of each sample, but only those asbestos minerals detected are listed. Amosite is the common name for the asbestiform variety of the minerals cummingtonite and grunerite. Crocidolite is the common name used for the asbestiform variety of the mineral riebeckite.
- ◆ Tile, vinyl, foam, plastic, and fine powder samples may contain asbestos fibers of such small diameter (< 0.25 microns in diameter) that these fibers cannot be detected by PLM. For such samples, more sensitive analytical methods (e.g. TEM, SEM, and XRD) are recommended if greater certainty about asbestos content is required. Semi-quantitative bulk TEM floor tile analysis is accepted under NESHAP regulations.
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Company:	Terracon Consultants, Inc.			Collected By:	Dana Harris			Date:	11/8/11
Attn:	Dana Harris			Relinquished By:				Date:	11/10/11
Address:	301 N. Howes			Received By:	<i>Dana Harris</i>			Date:	11/11/11
Address:	Fort Collins, CO 80521			Sampler Type	Andersen	Cassette	Other		
Phone/Fax:	970-484-0359			PO#/Job#/Project Name:					
Email:	dlharris2@terracon.com			# 22117704 / Ute Treatment Plant, South Plant Pump House					
Routine	24 Hour	Same Day	4 Hour	2 Hour	Notes/CC Info:				

Sample No.	Test Code	Sample Location	Total Volume/Area
1	3002	See Attached Sample Log	
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			

1054	Direct, Non-viable Spore Trap	1015	Culture - WATER Legionella
1051	Direct, Qualitative- Swab/Tape	1017	Culture - SWAB Legionella
1050	Direct, Qualitative- Bulk	1010	WATER - Potable - E. coli/fecal coliforms
1005	AIR Culture - Bacteria Count w/ ID's	1012	SWAB - E. coli/fecal coliforms
1030	AIR Culture - Fungal Count w/ ID's	1028	Sewage Screen (E. coli/Enterococcus/fecal coliforms)
1006	SWAB Culture - Bacteria Count w/ ID's	2056	Heterotrophic Plate Count
1031	SWAB Culture - Fungal Count w/ ID's	1026	Non-biological Particle ID (Microbiology)
1008	BULK Culture - Bacteria Count w/ ID's	3001	ASBESTOS - Point count
1033	BULK Culture - Fungal Count w/ ID's	3002	ASBESTOS - PLM Analysis
1035	BULK Culture - Stachy. & Fungal Cnt w/ ID's & Direct	3003	ASBESTOS - Particle characterization

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13949 W. Colfax Ave, Suite 205, Lakewood, CO 80401 - (866) 620-9348 Fax (303) 232-3746 - email: denver@aerobiology.net

Certificate of Analysis

Client Name: Terracon Consultants, Inc
 Street address: 301 N. Howes
 City, State ZIP: Fort Collins, CO 80521
 Attn: Dana Harris
 Client Project Name: #22117704 / Ute WTP, Lyons, Colorado. South Plant, North-West Building



NVLAP Lab Code 200860-0

Date Collected: 09/12/11
 Date Received: 09/15/11
 Date Analyzed: 09/21/11
 Date Reported: 09/22/11
 Project ID: 11010882
 Job ID:

Test Requested: **3002, Asbestos in Bulk Samples**
 Method: Polarized Light Microscopy / Dispersion Staining (PLM), Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993.

Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
1-FTMS-1	11010882-1A	Tan Adhesive	N	1%	ND			100	B
	11010882-1B	White/Gray Floor Tile	N	99%	CHRY	Trace		100	C
1-FTMS-2	11010882-2A	Tan Adhesive	N	1%	ND			100	B
	11010882-2B	White/Gray Floor Tile	N	99%	CHRY	Trace		100	C
1-FTMS-3	11010882-3A	Tan Adhesive	N	1%	ND			100	B
	11010882-3B	White/Gray Floor Tile	N	99%	CHRY	Trace		100	C
2-DWJC-4	11010882-4A	White Compound w/Blue Paint	N	6%	ND			100	C
	11010882-4B	Tan/White Drywall	N	94%	ND		10	90	G
2-DWJC-5	11010882-5A	White Texture w/Blue Paint	N	5%	ND			100	C
	11010882-5B	White Tape	N	5%	ND		95	5	

Richard Wegrzyn
Laboratory Analyst

Paul Knappe
Asbestos Laboratory Supervisor

A = Amosite
 AC = Actinolite
 AN = Anthophyllite
 CHRY = Chrysotile
 CR = Crocidolite
 TR = Tremolite
 Trace = Less Than 1%
 ND = None Detected

Q = Quartz
 C = Carbonates
 G = Gypsum
 M = Mica
 T = Tar
 NTR = Non-Asbestiform TR
 NAC = Non-Asbestiform AC

Certificate of Analysis

Client Name: Terracon Consultants, Inc
 Street address: 301 N. Howes
 City, State ZIP: Fort Collins, CO 80521
 Attn: Dana Harris
 Client Project Name: #22117704 / Ute WTP, Lyons, Colorado. South Plant, North-West Building



NVLAP Lab Code 200860-0

Date Collected: 09/12/11
 Date Received: 09/15/11
 Date Analyzed: 09/21/11
 Date Reported: 09/22/11
 Project ID: 11010882
 Job ID:

Test Requested: **3002, Asbestos in Bulk Samples**
 Method: Polarized Light Microscopy / Dispersion Staining (PLM), Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993.

Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
2-DWJC-5	11010882-5C	White Joint Compound	N	5%	ND			100	C
	11010882-5D	Tan/White Drywall	N	85%	ND		10	90	G
2-DWJC-6	11010882-6A	White Tape	N	5%	ND		95	5	
	11010882-6B	White Joint Compound	N	5%	ND			100	C
	11010882-6C	White Texture w/Blue Paint	N	10%	ND			100	C
	11010882-6D	Tan/White Drywall	N	80%	ND		10	90	G



Richard Wegrzyn
Laboratory Analyst



Paul Knappe
Asbestos Laboratory Supervisor

A = Amosite
 AC = Actinolite
 AN = Anthophyllite
 CHRY = Chrysotile
 CR = Crocidolite
 TR = Tremolite
 Trace = Less Than 1%
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Q = Quartz
 C = Carbonates
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 M = Mica
 T = Tar
 NTR = Non-Asbestiform TR
 NAC = Non-Asbestiform AC

Certificate of Analysis

Terracon Consultants, Inc

301 N. Howes
Fort Collins, CO 80521

Dana Harris

Client Project Name: #22117704 / Ute WTP, Lyons, Colorado. South Plant, North-West Building



NVLAP Lab Code 200860-0

Date Collected: 09/12/11
Date Received: 09/15/11
Date Analyzed: 09/21/11
Date Reported: 09/22/11
Project ID: 11010882
Job ID:

General Notes

- ◆ ND indicates no asbestos was detected; the method detection limit is 1 %.
- ◆ Trace or "<1" indicates asbestos was identified in the sample, but the concentration is less than 1%.
- ◆ All regulated asbestos minerals (i.e. chrysotile, amosite, crocidolite, anthophyllite, tremolite, and actinolite) were sought in every layer of each sample, but only those asbestos minerals detected are listed. Amosite is the common name for the asbestosiform variety of the minerals cummingtonite and grunerite. Crocidolite is the common name used for the asbestosiform variety of the mineral riebeckite.
- ◆ Tile, vinyl, foam, plastic, and fine powder samples may contain asbestos fibers of such small diameter (< 0.25 microns in diameter) that these fibers cannot be detected by PLM. For such samples, more sensitive analytical methods (e.g. TEM, SEM, and XRD) are recommended if greater certainty about asbestos content is required. Semi-quantitative bulk TEM floor tile analysis is accepted under NESHAP regulations.
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- ◆ Any reproduction of this document must include the entire document in order for the report to be valid.

Company:	Terracon Consultants, Inc.			Collected By:	Dana Harris			Date:	9/12-13/11
Attn:	Dana Harris			Relinquished By:	<i>Dana</i>			Date:	9/14/11
Address:	301 N. Howes			Received By:	<i>Dana</i> 10:30 AM			Date:	9/15/11
Address:	Fort Collins, CO 80521			Sampler Type	Andersen	Cassette	Other		
Phone/Fax:	970-484-0359			PO#/Job#/Project Name: # 22117704 / Ute WTP, Lyons, Colorado.					
Email:	dlharris2@terracon.com			South Plant, North-West Building					
Routine	24 Hour	Same Day	4 Hour	2 Hour	Notes/CC Info:				

Sample No.	Test Code	Sample Location	Total Volume/Area
1	3002	See attached for Sample Log.	
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			

1054	Direct, Non-viable Spore Trap	1015	Culture - WATER Legionella
1051	Direct, Qualitative- Swab/Tape	1017	Culture - SWAB Legionella
1050	Direct, Qualitative- Bulk	1010	WATER - Potable - E. coli/fecal coliforms
1005	AIR Culture - Bacteria Count w/ ID's	1012	SWAB - E. coli/fecal coliforms
1030	AIR Culture - Fungal Count w/ ID's	1028	Sewage Screen (E. coli/Enterococcus/fecal coliforms)
1006	SWAB Culture - Bacteria Count w/ ID's	2056	Heterotrophic Plate Count
1031	SWAB Culture - Fungal Count w/ ID's	1026	Non-biological Particle ID (Microbiology)
1008	BULK Culture - Bacteria Count w/ ID's	3001	ASBESTOS - Point count
1033	BULK Culture - Fungal Count w/ ID's	3002	ASBESTOS - PLM Analysis
1035	BULK Culture - Stachy. & Fungal Cnt w/ ID's & Direct	3003	ASBESTOS - Particle characterization

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13949 W. Colfax Ave, Suite 205, Lakewood, CO 80401 - (866) 620-9348 Fax (303) 232-3746 - email: denver@aerobiology.net

2/2

SOUTH PLANT – NORTH-WEST BUILDING

HOMOGENEOUS AREA	SAMPLE NO.	DESCRIPTION	SAMPLE LOCATION	LAB RESULTS
1	1-FTMS-1	12" x 12" Floor tile, beige / mastic	Upper level	
1	1-FTMS-2	12" x 12" Floor tile, beige / mastic	Upper level	
1	1-FTMS-3	12" x 12" Floor tile, beige / mastic	Upper level	
2	2-DWJC-4	Drywall / tape / mud	Upper level	
2	2-DWJC-5	Drywall / tape / mud	Upper level	
2	2-DWJC-6	Drywall / tape / mud	Upper level	

DM

Certificate of Analysis

Client Name: Terracon Consultants, Inc
 Street address: 301 N. Howes
 City, State ZIP: Fort Collins, CO 80521
 Attn: Dana Harris
 Client Project Name: # 22117704 / Ute Treatment Plant, S. Plant North-West Bldg.



NVLAP Lab Code 200860-0

Date Collected: 11/08/11
 Date Received: 11/11/11
 Date Analyzed: 11/12/11
 Date Reported: 11/16/11
 Project ID: 11013788
 Job ID:

Test Requested: **3002, Asbestos in Bulk Samples**
 Method: Polarized Light Microscopy / Dispersion Staining (PLM), Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993.

Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
3-RTAR-7	11013788-1	Black Tar w/Brown Fibrous Material & Silver Paint	N	100%	CHRY	40	Trace	60	T
3-RTAR-8	11013788-2	Black Tar w/Brown Fibrous Material & Silver Paint	N	100%	CHRY	40	Trace	60	T
3-RTAR-9	11013788-3	Black Tar w/Brown Fibrous Material & Silver Paint	N	100%	CHRY	40	Trace	60	T



Richard Wegrzyn
Laboratory Analyst



Paul Knappe
Asbestos Laboratory Supervisor

A = Amosite
 AC = Actinolite
 AN = Anthophyllite
 CHRY = Chrysotile
 CR = Crocidolite
 TR = Tremolite
 Trace = Less Than 1%
 ND = None Detected

Q = Quartz
 C = Carbonates
 G = Gypsum
 M = Mica
 T = Tar
 NTR = Non-Asbestiform TR
 NAC = Non-Asbestiform AC

Certificate of Analysis

Terracon Consultants, Inc

301 N. Howes
Fort Collins, CO 80521
Dana Harris

Client Project Name: # 22117704 / Ute Treatment Plant, S. Plant North-West Bldg.



NVLAP Lab Code 200860-0

Date Collected: 11/08/11
Date Received: 11/11/11
Date Analyzed: 11/12/11
Date Reported: 11/16/11
Project ID: 11013788
Job ID:

General Notes

- ◆ ND indicates no asbestos was detected; the method detection limit is 1 %.
- ◆ Trace or "<1" indicates asbestos was identified in the sample, but the concentration is less than 1%.
- ◆ All regulated asbestos minerals (i.e. chrysotile, amosite, crocidolite, anthophyllite, tremolite, and actinolite) were sought in every layer of each sample, but only those asbestos minerals detected are listed. Amosite is the common name for the asbestosiform variety of the minerals cummingtonite and grunerite. Crocidolite is the common name used for the asbestosiform variety of the mineral riebeckite.
- ◆ Tile, vinyl, foam, plastic, and fine powder samples may contain asbestos fibers of such small diameter (< 0.25 microns in diameter) that these fibers cannot be detected by PLM. For such samples, more sensitive analytical methods (e.g. TEM, SEM, and XRD) are recommended if greater certainty about asbestos content is required. Semi-quantitative bulk TEM floor tile analysis is accepted under NESHAP regulations.
- ◆ These results are submitted pursuant to Aerobiology Laboratory Associates, Inc.'s current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which the results are used or interpreted.
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11013788
NVLAP

 NVLAP Lab Code 200860-0 (CO)
 NVLAP Lab Code 200829-0 (VA)

 Page 1 of 2
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Company:	Terracon Consultants, Inc.			Collected By:	Dana Harris		Date:	11/8/11
Attn:	Dana Harris			Relinquished By:	<i>DH</i>		Date:	11/10/11
Address:	301 N. Howes			Received By:	<i>DH</i>		Date:	11/11/11
Address:	Fort Collins, CO 80521			Sampler Type	Andersen	Cassette	Other	AeroTrap
Phone/Fax:	970-484-0359			PO#/Job#/Project Name: # 22117704 / Ute Treatment Plant, S. Plant North-West Bldg.				
Email:	dlharris2@terracon.com			Notes/CC Info:				
Routine	24 Hour	Same Day	4 Hour	2 Hour				

	Sample No.	Test Code	Sample Location			Total Volume/Area
1		3002	See Attached Sample Log			
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						

1054	Direct, Non-viable Spore Trap	1015	Culture - WATER Legionella
1051	Direct, Qualitative- Swab/Tape	1017	Culture - SWAB Legionella
1050	Direct, Qualitative- Bulk	1010	WATER - Potable - E. coli/fecal coliforms
1005	AIR Culture - Bacteria Count w/ ID's	1012	SWAB - E. coli/fecal coliforms
1030	AIR Culture - Fungal Count w/ ID's	1028	Sewage Screen (E. coli/Enterococcus/fecal coliforms)
1006	SWAB Culture - Bacteria Count w/ ID's	2056	Heterotrophic Plate Count
1031	SWAB Culture - Fungal Count w/ ID's	1026	Non-biological Particle ID (Microbiology)
1008	BULK Culture - Bacteria Count w/ ID's	3001	ASBESTOS - Point count
1033	BULK Culture - Fungal Count w/ ID's	3002	ASBESTOS - PLM Analysis
1035	BULK Culture - Stachy. & Fungal Cnt w/ ID's & Direct	3003	ASBESTOS - Particle characterization

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APPENDIX A

11013788

ASBESTOS SURVEY SAMPLE SUMMARY
Ute Water Treatment Plant
4651-4652 Ute Highway, Lyons, Colorado

SOUTH PLANT – NORTH-WEST BUILDING (ORIGINAL CHEMICAL MIXING PLANT)

HOMOGENEOUS AREA	SAMPLE NO.	DESCRIPTION	SAMPLE LOCATION	LAB RESULTS
3	3-RTAR-7 D	Roof tar / silver paint	Roof – north	
3	3-RTAR-8	Roof tar / silver paint	Roof – central	
3	3-RTAR-9	Roof tar / silver paint	Roof – south	

Certificate of Analysis

Client Name: Terracon Consultants, Inc
 Street address: 301 N. Howes
 City, State ZIP: Fort Collins, CO 80521
 Attn: Dana Harris
 Client Project Name: #22117704 / Ute WTP, Lyons, Colorado. South Plant, Alum Building



NVLAP Lab Code 200860-0

Date Collected: 09/12/11
 Date Received: 09/15/11
 Date Analyzed: 09/19/11
 Date Reported: 09/22/11
 Project ID: 11010881
 Job ID:

Test Requested: **3002, Asbestos in Bulk Samples**
 Method: Polarized Light Microscopy / Dispersion Staining (PLM), Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993.

Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
1-DWJC-1	11010881-1A	White Paint w/White Texture	N	5%	ND			100	C
	11010881-1B	Green/Tan Drywall	N	95%	ND		10	90	G
1-DWJC-2	11010881-2A	White Tape	N	5%	ND		95	5	
	11010881-2B	White Joint Compound	N	5%	ND			100	C
	11010881-2C	White Texture w/White Paint	N	5%	ND			100	C
	11010881-2D	Green/Tan Drywall	N	85%	ND		10	90	G
1-DWJC-3	11010881-3A	White Paint w/White Texture	N	4%	ND			100	C
	11010881-3B	Green/Tan Drywall	N	96%	ND		10	90	G
2-MISC-4	11010881-4	White Fibrous Caulk w/Multicolored Paint	N	100%	CHRY	10	Trace	90	C
2-MISC-5	11010881-5	White Fibrous Caulk w/Multicolored Paint	N	100%	CHRY	10	Trace	90	C

Richard Wegrzyn
Laboratory Analyst

Paul Knappe
Asbestos Laboratory Supervisor

A = Amosite
 AC = Actinolite
 AN = Anthophyllite
 CHRY = Chrysotile
 CR = Crocidolite
 TR = Tremolite
 Trace = Less Than 1%
 ND = None Detected

Q = Quartz
 C = Carbonates
 G = Gypsum
 M = Mica
 T = Tar
 NTR = Non-Asbestiform TR
 NAC = Non-Asbestiform AC

Certificate of Analysis

Client Name: Terracon Consultants, Inc
 Street address: 301 N. Howes
 City, State ZIP: Fort Collins, CO 80521
 Attn: Dana Harris
 Client Project Name: #22117704 / Ute WTP, Lyons, Colorado. South Plant, Alum Building



NVLAP Lab Code 200860-0

Date Collected: 09/12/11
 Date Received: 09/15/11
 Date Analyzed: 09/19/11
 Date Reported: 09/22/11
 Project ID: 11010881
 Job ID:

Test Requested: **3002, Asbestos in Bulk Samples**
 Method: Polarized Light Microscopy / Dispersion Staining (PLM), Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993.

Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
2-MISC-6	11010881-6	White Fibrous Caulk w/Multicolored Paint	N	100%	CHRY	10	Trace	90	C
3-MISC-7	11010881-7	White/Stained Caulk w/Multicolored Paint	N	100%	ND		Trace	100	C
3-MISC-8	11010881-8	White Caulk w/Multicolored Paint	N	100%	ND		Trace	100	C
3-MISC-9	11010881-9	White Caulk w/Multicolored Paint	N	100%	ND		Trace	100	C



Richard Wegrzyn
Laboratory Analyst



Paul Knappe
Asbestos Laboratory Supervisor

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Certificate of Analysis

Terracon Consultants, Inc

301 N. Howes
Fort Collins, CO 80521

Dana Harris

Client Project Name: #22117704 / Ute WTP, Lyons, Colorado. South Plant, Alum Building



NVLAP Lab Code 200860-0

Date Collected: 09/12/11
Date Received: 09/15/11
Date Analyzed: 09/19/11
Date Reported: 09/22/11
Project ID: 11010881
Job ID:

General Notes

- ◆ ND indicates no asbestos was detected; the method detection limit is 1 %.
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- ◆ All regulated asbestos minerals (i.e. chrysotile, amosite, crocidolite, anthophyllite, tremolite, and actinolite) were sought in every layer of each sample, but only those asbestos minerals detected are listed. Amosite is the common name for the asbestosiform variety of the minerals cummingtonite and grunerite. Crocidolite is the common name used for the asbestosiform variety of the mineral riebeckite.
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11010881

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NVLAP Lab Code 200860-0 (CO)
NVLAP Lab Code 200829-0 (VA)

Company:	Terracon Consultants, Inc.			Collected By: <i>Dana Harris</i>	Date: 9/12-13/11
Attn:	Dana Harris			Relinquished By: <i>Dana</i>	Date: 9/14/11
Address:	301 N. Howes			Received By: <i>Dana</i> 10:30 AM	Date: 9/15/11
Address:	Fort Collins, CO 80521			Sampler Type <input checked="" type="checkbox"/> Andersen <input type="checkbox"/> SAS Cassette <input type="checkbox"/> AeroTrap	Other <input type="checkbox"/>
Phone/Fax:	970-484-0359			PO#Job#/Project Name: # 22117704 / Ute WTP, Lyons, Colorado. South Plant, Alum Building	
Email:	dlharris2@terracon.com				
Routine	<input checked="" type="checkbox"/> 24 Hour	Same Day	4 Hour	2 Hour	Notes/CC Info:

	Sample No.	Test Code	Sample Location	Total Volume/Area
1		3002	See attached for Sample Log.	
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				

1054	Direct, Non-viable Spore Trap	1015	Culture - WATER Legionella
1051	Direct, Qualitative- Swab/Tape	1017	Culture - SWAB Legionella
1050	Direct, Qualitative- Bulk	1010	WATER - Potable - E. coli/fecal coliforms
1005	AIR Culture - Bacteria Count w/ ID's	1012	SWAB - E. coli/fecal coliforms
1030	AIR Culture - Fungal Count w/ ID's	1028	Sewage Screen (E. coli/Enterococcus/fecal coliforms)
1006	SWAB Culture - Bacteria Count w/ ID's	2056	Heterotrophic Plate Count
1031	SWAB Culture - Fungal Count w/ ID's	1026	Non-biological Particle ID (Microbiology)
1008	BULK Culture - Bacteria Count w/ ID's	3001	ASBESTOS - Point count
1033	BULK Culture - Fungal Count w/ ID's	3002	ASBESTOS - PLM Analysis
1035	BULK Culture - Stachy. & Fungal Cnt w/ ID's & Direct	3003	ASBESTOS - Particle characterization

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13949 W. Colfax Ave, Suite 205, Lakewood, CO 80401 - (866) 620-9348 Fax (303) 232-3746 - email: denver@aerobiology.net

2/2

SOUTH PLANT – ALUM BUILDING

HOMOGENEOUS AREA	SAMPLE NO.	DESCRIPTION	SAMPLE LOCATION	LAB RESULTS
1	1-DWJC-1	Drywall / tape / mud	South side	
1	1-DWJC-2	Drywall / tape / mud	South side	
1	1-DWJC-3	Drywall / tape / mud	South side	
2	2-MISC-4	Door/window frame caulking	Entry door	
2	2-MISC-5	Door/window frame caulking	Entry door	
2	2-MISC-6	Door/window frame caulking	South window	
3	3-MISC-7	Window pane caulking	Northwest window	
3	3-MISC-8	Window pane caulking	Southwest window	
3	3-MISC-9	Window pane caulking	East window	

Certificate of Analysis

Client Name: Terracon Consultants, Inc
 Street address: 301 N. Howes
 City, State ZIP: Fort Collins, CO 80521
 Attn: Dana Harris
 Client Project Name: # 22117704 / Ute Treatment Plant, South Plant Alum Bldg.



NVLAP Lab Code 200860-0

Date Collected: 11/08/11
 Date Received: 11/11/11
 Date Analyzed: 11/14/11
 Date Reported: 11/16/11
 Project ID: 11013754
 Job ID:

Test Requested: **3002, Asbestos in Bulk Samples**
 Method: Polarized Light Microscopy / Dispersion Staining (PLM), Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993.

Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
4-RSHG-10	11013754-1A	Black Tar Paper	N	50%	ND		60	40	T
	11013754-1B	Tan/Brown Shingle	N	50%	ND		25	75	T, C, Q
4-RSHG-11	11013754-2A	Black Tar Paper	N	50%	ND		60	40	T
	11013754-2B	Tan/Brown Shingle	N	50%	ND		25	75	T, C, Q
4-RSHG-12	11013754-3A	Black Tar Paper	N	50%	ND		60	40	T
	11013754-3B	Tan/Brown Shingle	N	50%	ND		25	75	T, C, Q
5-RTAR-13	11013754-4	Black Tar w/White Fibrous Woven Material & Silver Paint	N	100%	ND		20	80	T, C
5-RTAR-14	11013754-5	Black Tar w/White Fibrous Woven Material & Silver Paint	N	100%	ND		20	80	T
5-RTAR-15	11013754-6	Black Tar w/White Fibrous Woven Material & Silver Paint	N	100%	ND		20	80	T
6-RTAT-16	11013754-7	Black Fibrous Tar	N	100%	ND		25	75	T



Richard Wegrzyn
Laboratory Analyst



Paul Knappe
Asbestos Laboratory Supervisor

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 AN = Anthophyllite
 CHRY = Chrysotile
 CR = Crocidolite
 TR = Tremolite
 Trace = Less Than 1%
 ND = None Detected

Q = Quartz
 C = Carbonates
 G = Gypsum
 M = Mica
 T = Tar
 NTR = Non-Asbestiform TR
 NAC = Non-Asbestiform AC

Certificate of Analysis

Client Name: Terracon Consultants, Inc
 Street address: 301 N. Howes
 City, State ZIP: Fort Collins, CO 80521
 Attn: Dana Harris
 Client Project Name: # 22117704 / Ute Treatment Plant, South Plant Alum Bldg.



NVLAP Lab Code 200860-0

Date Collected: 11/08/11
 Date Received: 11/11/11
 Date Analyzed: 11/14/11
 Date Reported: 11/16/11
 Project ID: 11013754
 Job ID:

Test Requested: **3002, Asbestos in Bulk Samples**
 Method: Polarized Light Microscopy / Dispersion Staining (PLM), Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993.

Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
6-RTAR-17	11013754-8	Black Fibrous Tar	N	100%	ND		25	75	T
6-RTAR-18	11013754-9	Black Fibrous Tar	N	100%	ND		25	75	
7-MISC-19	11013754-10A	Silver Paint w/White Resinous Material & Black Tar	N	4%	ND			100	T
	11013754-10B	Yellow Foam	N	96%	ND			100	
7-MISC-20	11013754-11A	White Resinous Material w/Silver Paint & Black Tar	N	4%	ND			100	C
	11013754-11B	Yellow Foam	N	96%	ND			100	
7-MISC-21	11013754-12A	White Resinous Material w/Silver Paint & Black Tar	N	4%	ND			100	C
	11013754-12B	Yellow Foam	N	96%	ND			100	



Richard Wegrzyn
Laboratory Analyst



Paul Knappe
Asbestos Laboratory Supervisor

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Certificate of Analysis

Terracon Consultants, Inc

301 N. Howes
Fort Collins, CO 80521
Dana Harris

Client Project Name: # 22117704 / Ute Treatment Plant, South Plant Alum Bldg.



NVLAP Lab Code 200860-0

Date Collected: 11/08/11
Date Received: 11/11/11
Date Analyzed: 11/14/11
Date Reported: 11/16/11
Project ID: 11013754
Job ID:

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Company:	Terracon Consultants, Inc.				Collected By:	Dana Harris		Date:	11/8/11
Attn:	Dana Harris				Relinquished By:	<i>Dana Harris</i>		Date:	11/10/11
Address:	301 N. Howes				Received By:	<i>Dana Harris</i>		Date:	11/11/11
Address:	Fort Collins, CO 80521				Sampler Type	Andersen SAS	Cassette AeroTrap	Other	
Phone/Fax:	970-484-0359				PO#/Job#/Project Name: # 22117704 / Ute Treatment Plant, South Plant Alum Bldg.				
Email:	dlharris2@terracon.com				Notes/CC Info:				
Routine	24 Hour	Same Day	4 Hour	2 Hour					

Sample No.	Test Code	Sample Location	Total Volume/Area
1	3002	See Attached Sample Log	
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			

1054	Direct, Non-viable Spore Trap	1015	Culture - WATER Legionella
1051	Direct, Qualitative- Swab/Tape	1017	Culture - SWAB Legionella
1050	Direct, Qualitative- Bulk	1010	WATER - Potable - E. coli/fecal coliforms
1005	AIR Culture - Bacteria Count w/ ID's	1012	SWAB - E. coli/fecal coliforms
1030	AIR Culture - Fungal Count w/ ID's	1028	Sewage Screen (E. coli/Enterococcus/fecal coliforms)
1006	SWAB Culture - Bacteria Count w/ ID's	2056	Heterotrophic Plate Count
1031	SWAB Culture - Fungal Count w/ ID's	1026	Non-biological Particle ID (Microbiology)
1008	BULK Culture - Bacteria Count w/ ID's	3001	ASBESTOS - Point count
1033	BULK Culture - Fungal Count w/ ID's	3002	ASBESTOS - PLM Analysis
1035	BULK Culture - Stachy. & Fungal Cnt w/ ID's & Direct	3003	ASBESTOS - Particle characterization

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13949 W. Colfax Ave, Suite 205, Lakewood, CO 80401 - (866) 620-9348 Fax (303) 232-3746 - email: denver@aerobiology.net

APPENDIX A

ASBESTOS SURVEY SAMPLE SUMMARY
Ute Water Treatment Plant
4651-4652 Ute Highway, Lyons, Colorado

SOUTH PLANT – ALUM BUILDING

HOMOGENEOUS AREA	SAMPLE NO.	DESCRIPTION	SAMPLE LOCATION	LAB RESULTS
4	4-RSHG-10 <i>i</i>	Roof shingle / tar paper	South roof – east	
4	4-RSHG-11 <i>z</i>	Roof shingle / tar paper	South roof – central	
4	4-RSHG-12 <i>3</i>	Roof shingle / tar paper	South roof – west	
5	5-RTAR-13 <i>4</i>	Tar roof sheeting / silver paint	North roof - south	
5	5-RTAR-14 <i>5</i>	Tar roof sheeting / silver paint	North roof – central	
5	5-RTAR-15 <i>6</i>	Tar roof sheeting / silver paint	North roof – north	
6	6-RTAR-16 <i>7</i>	Residual roof tar	North roof - south	
6	6-RTAR-17 <i>8</i>	Residual roof tar	North roof – central	
6	6-RTAR-18 <i>9</i>	Residual roof tar	North roof – north	
7	7-MISC-19 <i>10</i>	Foam / silver paint	North roof - south	
7	7-MISC-20 <i>11</i>	Foam / silver paint	North roof – central	
7	7-MISC-21 <i>12</i>	Foam / silver paint	North roof – north	



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Certificate of Analysis

Client Name: Terracon Consultants, Inc
Street address: 301 N. Howes
City, State ZIP: Fort Collins, CO 80521
Attn: Dana Harris
Client Project Name: #22117704 / Ute WTP, Lyons, Colorado, South Plant, Lower-North Building



NVLAP Lab Code 200860-0

Date Collected: 09/12/11
Date Received: 09/15/11
Date Analyzed: 09/17/11
Date Reported: 09/21/11
Project ID: 11010833
Job ID:

Test Requested: **3002, Asbestos in Bulk Samples**
Method: Polarized Light Microscopy / Dispersion Staining (PLM), Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993.

Sample Identification		Physical Description of Sample/Layer	Homogeneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
1-MISC-1	11010883-1	Gray Caulk w/Multicolored Paint	N	100%	CHRY	Trace		100	C, B
1-MISC-2	11010883-2	Gray Caulk w/Multicolored Paint	N	100%	CHRY	Trace		100	C, B
1-MISC-3	11010883-3	Gray Caulk w/Multicolored Paint	N	100%	CHRY	Trace		100	C, B

Richard Wegrzyn
Laboratory Analyst

Paul Knappe
Asbestos Laboratory Supervisor

A = Amosite
AC = Actinolite
AN = Anthophyllite
CHRY = Chrysotile
CR = Crocidolite
TR = Tremolite
Trace = Less Than 1%
ND = None Detected

Q = Quartz
C = Carbonates
G = Gypsum
M = Mica
T = Tar
NTR = Non-Asbestiform TR
NAC = Non-Asbestiform AC

Certificate of Analysis

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Terracon Consultants, Inc

301 N. Howes
Fort Collins, CO 80521
Dana Harris

Client Project Name: #22117704 / Ute WTP, Lyons, Colorado. South Plant, Lower-North Building



NVLAP Lab Code 200860-0

Date Collected:	09/12/11
Date Received:	09/15/11
Date Analyzed:	09/17/11
Date Reported:	09/21/11
Project ID:	11010833
Job ID:	

General Notes

- ◆ **ND** indicates no asbestos was detected; the method detection limit is 1 %.
- ◆ **Trace** or "<1" indicates asbestos was identified in the sample, but the concentration is less than 1%.
- ◆ All regulated asbestos minerals (i.e. chrysotile, amosite, crocidolite, anthophyllite, tremolite, and actinolite) were sought in every layer of each sample, but only those asbestos minerals detected are listed. Amosite is the common name for the asbestiform variety of the minerals cummingtonite and grunerite. Crocidolite is the common name used for the asbestiform variety of the mineral riebeckite.
- ◆ Tile, vinyl, foam, plastic, and fine powder samples may contain asbestos fibers of such small diameter (< 0.25 microns in diameter) that these fibers cannot be detected by PLM. For such samples, more sensitive analytical methods (e.g. TEM, SEM, and XRD) are recommended if greater certainty about asbestos content is required. Semi-quantitative bulk TEM floor tile analysis is accepted under NESHAP regulations.
- ◆ These results are submitted pursuant to Aerobiology Laboratory Associates, Inc.'s current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which the results are used or interpreted.
- ◆ Unless notified in writing to return the samples covered by this report, Aerobiology Laboratory Associates, Inc. will store the samples for a minimum period of thirty (30) days before discarding. A shipping and handling charge will be assessed for the return of any samples.
- ◆ Aerobiology does not guarantee the results of tape lifts, microvac, wipe, and/or debris samples. Accurate analysis cannot be performed due to particle size, media used, and/or amount of material given. Analysis of these materials should be preformed by a TEM. *A result of ND does not indicate that the sample area does not contain asbestos. It means the analyst could not identify asbestos in the specific sample for the reasons listed above.*

Notes Required by NVLAP

- ◆ This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.
- ◆ This test report relates only to the items tested or calibrated.
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Certificate of Analysis

Client Name: Terracon Consultants, Inc
Street address: 301 N. Howes
City, State ZIP: Fort Collins, CO 80521
Attn: Dana Harris
Client Project Name: #22117704 / Ute WTP, Lyons, Colorado. South Plant, Lower-North Building



NVLAP Lab Code 200860-0

Date Collected: 09/12/11
Date Received: 09/15/11
Date Analyzed: 11/11/11
Date Reported: 11/15/11
Project ID: 11010883
Job ID: POINT COUNT

Test Requested: **3001, Asbestos Point Count in Bulk Samples (400/1000)**

Method: Polarized Light Microscopy / Dispersion Staining (PLM), Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993.

Sample Identification		Physical Description of Sample/Layer	Asbestos Detected	Asbestos Percentage	Point Count Method (400/1000)
Client	Lab Sample Number				
1-MISC-1	11010883-1	Gray Caulk w/Multicolored Paint	CHRY	0.25%	400
1-MISC-2	11010883-2	Gray Caulk w/Multicolored Paint	CHRY	<0.25%	400
1-MISC-3	11011883-3	Gray Caulk w/Multicolored Paint	CHRY	0.25%	400

Richard Wegrzyn
Laboratory Analyst

Paul Knappe
Asbestos Laboratory Supervisor

A = Amosite
AC = Actinolite
AN = Anthophyllite
CHRY=Chrysotile
CR = Crocidolite
TR = Tremolite
ND=None Detected



Certificate of Analysis

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Terracon Consultants, Inc

301 N. Howes
Fort Collins, CO 80521
Dana Harris

Client Project Name: #22117704 / Ute WTP, Lyons, Colorado. South Plant, Lower-North Building



NVLAP Lab Code 200860-0

Date Collected: 09/12/11
Date Received: 09/15/11
Date Analyzed: 11/11/11
Date Reported: 11/15/11
Project ID: 11010883
Job ID:

General Notes

- ◆ **Negative** indicates no asbestos was detected; the method detection limit is 1%.
- ◆ **Trace** or "<1" indicates asbestos was identified in the sample, but the concentration is less than the method detection limit of 1%.
- ◆ All regulated asbestos minerals (i.e. chrysotile, amosite, crocidolite, anthophyllite, tremolite, and actinolite) were sought in every layer of each sample, but only those asbestos minerals detected are listed. Amosite is the common name for the asbestiform variety of the minerals cummingtonite and grunerite. Crocidolite is the common name used for the asbestiform variety of the mineral riebeckite.
- ◆ Tile, vinyl, foam, plastic, and fine powder samples may contain asbestos fibers of such small diameter (< 0.25 microns in diameter) that these fibers cannot be detected by PLM. For such samples, more sensitive analytical methods (e.g. TEM, SEM, and XRD) are recommended if greater certainty about asbestos content is required. Semi-quantitative bulk TEM floor tile analysis is accepted under NESHAP regulations.
- ◆ These results are submitted pursuant to Aerobiology Laboratory Associates, Inc.'s current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which the results are used or interpreted.
- ◆ Unless notified in writing to return the samples covered by this report, Aerobiology Laboratory Associates, Inc. will store the samples for a minimum period of thirty (30) days before discarding. A shipping and handling charge will be assessed for the return of any samples.

Notes Required by NVLAP

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11010883

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NVLAP Lab Code 200860-0 (CO)

NVLAP Lab Code 200829-0 (VA)

Company:	Terracon Consultants, Inc.			Collected By:	Dana Harris			Date:	9/12-13/11
Attn:	Dana Harris			Relinquished By:	<i>Dana</i>			Date:	9/14/11
Address:	301 N. Howes			Received By:	<i>Dana</i> 10:30 AM			Date:	9/15/11
Address:	Fort Collins, CO 80521			Sampler Type	Andersen	Cassette	Other		
Phone/Fax:	970-484-0359				SAS	AeroTrap			
Email:	dlharris2@terracon.com			PO#/Job#/Project Name:	# 22117704 / Ute WTP, Lyons, Colorado. South Plant, Lower-North Building				
Routine	<input checked="" type="checkbox"/> 24 Hour	Same Day	4 Hour	2 Hour	Notes/CC Info:				

Sample No.	Test Code	Sample Location	Total Volume/Area
1	3002	See attached for Sample Log.	
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			

1054	Direct, Non-viable Spore Trap	1015	Culture - WATER Legionella
1051	Direct, Qualitative- Swab/Tape	1017	Culture - SWAB Legionella
1050	Direct, Qualitative- Bulk	1010	WATER - Potable - E. coli/fecal coliforms
1005	AIR Culture - Bacteria Count w/ ID's	1012	SWAB - E. coli/fecal coliforms
1030	AIR Culture - Fungal Count w/ ID's	1028	Sewage Screen (E. coli/Enterococcus/fecal coliforms)
1006	SWAB Culture - Bacteria Count w/ ID's	2056	Heterotrophic Plate Count
1031	SWAB Culture - Fungal Count w/ ID's	1026	Non-biological Particle ID (Microbiology)
1008	BULK Culture - Bacteria Count w/ ID's	3001	ASBESTOS - Point count
1033	BULK Culture - Fungal Count w/ ID's	3002	ASBESTOS - PLM Analysis
1035	BULK Culture - Stachy. & Fungal Cnt w/ ID's & Direct	3003	ASBESTOS - Particle characterization

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13949 W. Colfax Ave, Suite 205, Lakewood, CO 80401 - (866) 620-9348 Fax (303) 232-3746 - email: denver@aerobiology.net

SOUTH PLANT - LOWER NORTH BUILDING

HOMOGENEOUS AREA	SAMPLE NO.	DESCRIPTION	SAMPLE LOCATION	LAB RESULTS
1	1-MISC-1	Door frame caulking	Entry door	
1	1-MISC-2	Door frame caulking	Entry door	
1	1-MISC-3	Door frame caulking	Entry door	



Certificate of Analysis

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Lakewood, CO 80401
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Client Name: Terracon Consultants, Inc
Street address: 301 N. Howes
City, State ZIP: Fort Collins, CO 80521
Attn: Dana Harris
Client Project Name: # 22117704 / Ute Treatment Plant, S. Plant Lower North Bldg.



Date Collected: 11/08/11
Date Received: 11/11/11
Date Analyzed: 11/15/11
Date Reported: 11/17/11
Project ID: 11013786
Job ID:

Test Requested: **3002, Asbestos in Bulk Samples**

Method: Polarized Light Microscopy / Dispersion Staining (PLM), Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993.

Sample Identification		Physical Description of Sample/Layer	Homogeneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
2-RTAR-4	11013786-1A	Black Roofing w/White Fibrous Material	N	30%	ND		10	90	T
	11013786-1B	Black Tar	N	70%	ND			100	T
2-RTAR-5	11013786-2	Black Tar	N	100%	ND			100	T, G
2-RTAR-6	11013786-3A	Black Roofing w/White Fibrous Material	N	40%	ND		10	90	T
	11013786-3B	Black Tar	N	60%	ND			100	T

Richard Wegrzyn
Laboratory Analyst

Paul Knappe
Asbestos Laboratory Supervisor

A = Amosite
AC = Actinolite
AN = Anthophyllite
CHRY = Chrysotile
CR = Crocidolite
TR = Tremolite
Trace = Less Than 1%
ND = None Detected

Q = Quartz
C = Carbonates
G = Gypsum
M = Mica
T = Tar
NTR = Non-Asbestiform TR
NAC = Non-Asbestiform AC

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Terracon Consultants, Inc

301 N. Howes
 Fort Collins, CO 80521

Dana Harris

Client Project Name: # 22117704 / Ute Treatment Plant, S. Plant Lower North Bldg.



NVLAP Lab Code 200860-0

Date Collected: 11/08/11
 Date Received: 11/11/11
 Date Analyzed: 11/15/11
 Date Reported: 11/17/11
 Project ID: 11013786
 Job ID:

General Notes

- ◆ **ND** indicates no asbestos was detected; the method detection limit is 1 %.
- ◆ **Trace** or "**<1**" indicates asbestos was identified in the sample, but the concentration is less than 1%.
- ◆ All regulated asbestos minerals (i.e. chrysotile, amosite, crocidolite, anthophyllite, tremolite, and actinolite) were sought in every layer of each sample, but only those asbestos minerals detected are listed. Amosite is the common name for the asbestiform variety of the minerals cummingtonite and grunerite. Crocidolite is the common name used for the asbestiform variety of the mineral riebeckite.
- ◆ Tile, vinyl, foam, plastic, and fine powder samples may contain asbestos fibers of such small diameter (< 0.25 microns in diameter) that these fibers cannot be detected by PLM. For such samples, more sensitive analytical methods (e.g. TEM, SEM, and XRD) are recommended if greater certainty about asbestos content is required. Semi-quantitative bulk TEM floor tile analysis is accepted under NESHAP regulations.
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- ◆ Aerobiology does not guarantee the results of tape lifts, microvacs, wipe, and/or debris samples. Accurate analysis cannot be performed due to particle size, media used, and/or amount of material given. Analysis of these materials should be performed by a TEM. ***A result of ND does not indicate that the sample area does not contain asbestos. It means the analyst could not identify asbestos in the specific sample for the reasons listed above.***

Notes Required by NVLAP

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Company:	Terracon Consultants, Inc.			Collected By:	Dana Harris			Date:	11/8/11
Attn:	Dana Harris			Relinquished By:	<i>Dana Harris</i>			Date:	11/10/11
Address:	301 N. Howes			Received By:	<i>Dana Harris</i>			Date:	11/11/11
Address:	Fort Collins, CO 80521			Sampler Type	Andersen	Cassette	AeroTrap	Other	
Phone/Fax:	970-484-0359			PO#/Job#/Project Name: # 22117704 / Ute Treatment Plant, S. Plant Lower North Bldg.					
Email:	dlharris2@terracon.com			Notes/CC Info:					
Routine	24 Hour	Same Day	4 Hour	2 Hour					

Sample No.	Test Code	Sample Location	Total Volume/Area
1	3002	See Attached Sample Log	
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			

1054	Direct, Non-viable Spore Trap	1015	Culture - WATER Legionella
1051	Direct, Qualitative- Swab/Tape	1017	Culture - SWAB Legionella
1050	Direct, Qualitative- Bulk	1010	WATER - Potable - E. coli/fecal coliforms
1005	AIR Culture - Bacteria Count w/ ID's	1012	SWAB - E. coli/fecal coliforms
1030	AIR Culture - Fungal Count w/ ID's	1028	Sewage Screen (E. coli/Enterococcus/fecal coliforms)
1006	SWAB Culture - Bacteria Count w/ ID's	2056	Heterotrophic Plate Count
1031	SWAB Culture - Fungal Count w/ ID's	1026	Non-biological Particle ID (Microbiology)
1008	BULK Culture - Bacteria Count w/ ID's	3001	ASBESTOS - Point count
1033	BULK Culture - Fungal Count w/ ID's	3002	ASBESTOS - PLM Analysis
1035	BULK Culture - Stachy. & Fungal Cnt w/ ID's & Direct	3003	ASBESTOS - Particle characterization

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13949 W. Colfax Ave, Suite 205, Lakewood, CO 80401 - (866) 620-9348 Fax (303) 232-3746 - email: denver@aerobiology.net

11013786

APPENDIX A

ASBESTOS SURVEY SAMPLE SUMMARY
Ute Water Treatment Plant
4651-4652 Ute Highway, Lyons, Colorado

SOUTH PLANT – LOWER NORTH BUILDING (INTAKE PIPE SHED)

HOMOGENEOUS AREA	SAMPLE NO.	DESCRIPTION	SAMPLE LOCATION	LAB RESULTS
2	2-RTAR-4	Roof tar sheeting / tar	Roof – east	
2	2-RTAR-5	Roof tar sheeting / tar	Roof – central	
2	2-RTAR-6	Roof tar sheeting / tar	Roof – west	

Certificate of Analysis

Client Name: Terracon Consultants, Inc
 Street address: 301 N. Howes
 City, State ZIP: Fort Collins, CO 80521
 Attn: Dana Harris
 Client Project Name: #22117704 / Ute WTP, Lyons, Colorado. South Plant, Metal Storage Building



NVLAP Lab Code 200860-0

Date Collected: 09/12/11
 Date Received: 09/15/11
 Date Analyzed: 09/22/11
 Date Reported: 09/22/11
 Project ID: 11010884
 Job ID:

Test Requested: **3002, Asbestos in Bulk Samples**
 Method: Polarized Light Microscopy / Dispersion Staining (PLM), Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993.

Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
1-FTMS-1	11010884-1A	Tan Adhesive	N	2%	ND			100	B
	11010884-1B	Light Gray Floor Tile	N	98%	ND			100	C
1-FTMS-2	11010884-2A	Tan Adhesive	N	2%	ND			100	B
	11010884-2B	Light Gray Floor Tile	N	98%	ND			100	C
1-FTMS-3	11010884-3A	Tan Adhesive	N	2%	ND			100	B
	11010884-3B	Light Gray Floor Tile	N	98%	ND			100	C
2-DWJC-4	11010884-4A	White Texture	N	1%	ND			100	C
	11010884-4B	Tan/White Drywall	N	99%	ND		10	90	G
2-DWJC-5	11010884-5A	White Compound	N	3%	ND			100	C
	11010884-5B	Tan/Red/White Drywall	N	97%	ND		10	90	G

Richard Wegrzyn
Laboratory Analyst

Paul Knappe
Asbestos Laboratory Supervisor

A = Amosite
 AC = Actinolite
 AN = Anthophyllite
 CHRY = Chrysotile
 CR = Crocidolite
 TR = Tremolite
 Trace = Less Than 1%
 ND = None Detected

Q = Quartz
 C = Carbonates
 G = Gypsum
 M = Mica
 T = Tar
 NTR = Non-Asbestiform TR
 NAC = Non-Asbestiform AC

Certificate of Analysis

Client Name: Terracon Consultants, Inc
 Street address: 301 N. Howes
 City, State ZIP: Fort Collins, CO 80521
 Attn: Dana Harris
 Client Project Name: #22117704 / Ute WTP, Lyons, Colorado. South Plant, Metal Storage Building



NVLAP Lab Code 200860-0

Date Collected: 09/12/11
 Date Received: 09/15/11
 Date Analyzed: 09/22/11
 Date Reported: 09/22/11
 Project ID: 11010884
 Job ID:

Test Requested: **3002, Asbestos in Bulk Samples**
 Method: Polarized Light Microscopy / Dispersion Staining (PLM), Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993.

Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
2-DWJC-6	11010884-6A	White Paint w/White Texture	N	10%	ND			100	C
	11010884-6B	Tan/White Drywall	N	90%	ND		10	90	G
3-TXT-7	11010884-7A	White Texture w/White Paint	N	50%	ND			100	C
	11010884-7B	Tan/White Drywall	N	50%	ND		85	15	G
3-TXT-8	11010884-8A	Tan Paper	N	50%	ND		95	5	
	11010884-8B	White Paint w/White Texture	N	50%	ND			100	C
3-TXT-9	11010884-9A	Tan Paper	N	50%	ND		95	5	
	11010884-9B	White Paint w/White Texture	N	50%	ND			100	C
4-SAT-10	11010884-10	White/Cream Ceiling Tile	N	100%	ND		60	40	
4-SAT-11	11010884-11	White/Cream Ceiling Tile	N	100%	ND		60	40	

Richard Wegrzyn
Laboratory Analyst

Paul Knappe
Asbestos Laboratory Supervisor

A = Amosite
 AC = Actinolite
 AN = Anthophyllite
 CHRY = Chrysotile
 CR = Crocidolite
 TR = Tremolite
 Trace = Less Than 1%
 ND = None Detected

Q = Quartz
 C = Carbonates
 G = Gypsum
 M = Mica
 T = Tar
 NTR = Non-Asbestiform TR
 NAC = Non-Asbestiform AC

Certificate of Analysis

Client Name: Terracon Consultants, Inc
 Street address: 301 N. Howes
 City, State ZIP: Fort Collins, CO 80521
 Attn: Dana Harris
 Client Project Name: #22117704 / Ute WTP, Lyons, Colorado. South Plant, Metal Storage Building



NVLAP Lab Code 200860-0

Date Collected: 09/12/11
 Date Received: 09/15/11
 Date Analyzed: 09/22/11
 Date Reported: 09/22/11
 Project ID: 11010884
 Job ID:

Test Requested: **3002, Asbestos in Bulk Samples**
 Method: Polarized Light Microscopy / Dispersion Staining (PLM), Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993.

Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
4-SAT-12	11010884-12	White/Cream Ceiling Tile	N	100%	ND		60	40	
5-FTMS-13	11010884-13A	Tan Mastic	N	1%	ND			100	B
	11010884-13B	White Floor Tile	N	99%	ND			100	C
5-FTMS-14	11010884-14A	Tan Mastic	N	1%	ND			100	B
	11010884-14B	White Floor Tile	N	99%	ND			100	C
5-FTMS-15	11010884-15A	Tan Mastic	N	2%	ND			100	B
	11010884-15B	White Floor Tile	N	98%	ND			100	C



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Laboratory Analyst



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Asbestos Laboratory Supervisor

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Certificate of Analysis

Terracon Consultants, Inc

301 N. Howes
Fort Collins, CO 80521
Dana Harris

Client Project Name: #22117704 / Ute WTP, Lyons, Colorado. South Plant, Metal Storage Building



NVLAP Lab Code 200860-0

Date Collected: 09/12/11
Date Received: 09/15/11
Date Analyzed: 09/22/11
Date Reported: 09/22/11
Project ID: 11010884
Job ID:

General Notes

- ◆ ND indicates no asbestos was detected; the method detection limit is 1 %.
- ◆ Trace or "<1" indicates asbestos was identified in the sample, but the concentration is less than 1%.
- ◆ All regulated asbestos minerals (i.e. chrysotile, amosite, crocidolite, anthophyllite, tremolite, and actinolite) were sought in every layer of each sample, but only those asbestos minerals detected are listed. Amosite is the common name for the asbestosiform variety of the minerals cummingtonite and grunerite. Crocidolite is the common name used for the asbestosiform variety of the mineral riebeckite.
- ◆ Tile, vinyl, foam, plastic, and fine powder samples may contain asbestos fibers of such small diameter (< 0.25 microns in diameter) that these fibers cannot be detected by PLM. For such samples, more sensitive analytical methods (e.g. TEM, SEM, and XRD) are recommended if greater certainty about asbestos content is required. Semi-quantitative bulk TEM floor tile analysis is accepted under NESHAP regulations.
- ◆ These results are submitted pursuant to Aerobiology Laboratory Associates, Inc.'s current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which the results are used or interpreted.
- ◆ Unless notified in writing to return the samples covered by this report, Aerobiology Laboratory Associates, Inc. will store the samples for a minimum period of thirty (30) days before discarding. A shipping and handling charge will be assessed for the return of any samples.
- ◆ Aerobiology does not guarantee the results of tape lifts, microvac, wipe, and/or debris samples. Accurate analysis cannot be performed due to particle size, media used, and/or amount of material given. Analysis of these materials should be performed by a TEM. ***A result of ND does not indicate that the sample area does not contain asbestos. It means the analyst could not identify asbestos in the specific sample for the reasons listed above.***

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- ◆ This test report relates only to the items tested or calibrated.
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- ◆ Any reproduction of this document must include the entire document in order for the report to be valid.


 11010884
NVLAP

 Page 1 of 2
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Company:	Terracon Consultants, Inc.			Collected By:	Dana Harris			Date:	9/12-13/11
Attn:	Dana Harris			Relinquished By:	<i>Dana</i>			Date:	9/14/11
Address:	301 N. Howes			Received By:	<i>Dana</i>			Date:	9/15/11 10:30 AM
Address:	Fort Collins, CO 80521			Sampler Type	Andersen	Cassette	Other		PM
Phone/Fax:	970-484-0359			PO#/Job#/Project Name: # 22117704 / Ute WTP, Lyons, Colorado.					
Email:	dlharris2@terracon.com			South Plant, Metal Storage Building					
Routine	24 Hour	Same Day	4 Hour	2 Hour	Notes/CC Info:				

Sample No.	Test Code	Sample Location	Total Volume/Area
1	3002	See attached for Sample Log.	
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			

1054	Direct, Non-viable Spore Trap	1015	Culture - WATER Legionella
1051	Direct, Qualitative- Swab/Tape	1017	Culture - SWAB Legionella
1050	Direct, Qualitative- Bulk	1010	WATER - Potable - E. coli/fecal coliforms
1005	AIR Culture - Bacteria Count w/ ID's	1012	SWAB - E. coli/fecal coliforms
1030	AIR Culture - Fungal Count w/ ID's	1028	Sewage Screen (E. coli/Enterococcus/fecal coliforms)
1006	SWAB Culture - Bacteria Count w/ ID's	2056	Heterotrophic Plate Count
1031	SWAB Culture - Fungal Count w/ ID's	1026	Non-biological Particle ID (Microbiology)
1008	BULK Culture - Bacteria Count w/ ID's	3001	ASBESTOS - Point count
1033	BULK Culture - Fungal Count w/ ID's	3002	ASBESTOS - PLM Analysis
1035	BULK Culture - Stachy. & Fungal Cnt w/ ID's & Direct	3003	ASBESTOS - Particle characterization

43760 Trade Center Place, Suite 100, Dulles, VA 20166 - (877) 648-9150 Fax (703) 648-3919 - email: lab@aerobiology.net

4501 Circle 75 Parkway, Ste A1190, Atlanta GA 30339 - (866) 620-9313 Fax (770) 947-2938 - email: ATL@aerobiology.net

13949 W. Colfax Ave, Suite 205, Lakewood, CO 80401 - (866) 620-9348 Fax (303) 232-3746 - email: denver@aerobiology.net

2/2

SOUTH PLANT – METAL STORAGE BUILDING

HOMOGENEOUS AREA	SAMPLE NO.	DESCRIPTION	SAMPLE LOCATION	LAB RESULTS
1	1-FTMS-1	12" x 12" Floor tile, gray / mastic	North office	
1	1-FTMS-2	12" x 12" Floor tile, gray / mastic	North office	
1	1-FTMS-3	12" x 12" Floor tile, gray / mastic	North office	
2	2-DWJC-4	Drywall / tape / mud	North office	
2	2-DWJC-5	Drywall / tape / mud	Southwest office	
2	2-DWJC-6 S	Drywall / tape / mud	Warehouse	
3	3-TXT-7	Orange peel texture	North office	
3	3-TXT-8	Orange peel texture	North office	
3	3-TXT-9	Orange peel texture	Southwest office	
4	4-SAT-10	2' x 4' ceiling tile, white, fissures & dots	North office	
4	4-SAT-11	2' x 4' ceiling tile, white, fissures & dots	North office	
4	4-SAT-12	2' x 4' ceiling tile, white, fissures & dots	North office	
5	5-FTMS-13	12" x 12" Floor tile, beige / mastic	Southwest office	
5	5-FTMS-14 D	12" x 12" Floor tile, beige / mastic	Southwest office	
5	5-FTMS-15	12" x 12" Floor tile, beige / mastic	Southwest office	

DP

Certificate of Analysis

Client Name: Terracon Consultants, Inc
 Street address: 301 N. Howes
 City, State ZIP: Fort Collins, CO 80521
 Attn: Dana Harris
 Client Project Name: # 22117704 / Ute Treatment Plant, Gaskets



NVLAP Lab Code 200860-0

Date Collected: 11/08/11
 Date Received: 11/11/11
 Date Analyzed: 11/14/11
 Date Reported: 11/16/11
 Project ID: 11013785
 Job ID:

Test Requested: **3002, Asbestos in Bulk Samples**
 Method: Polarized Light Microscopy / Dispersion Staining (PLM), Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993.

Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Client	Lab Sample Number								
GASKET-01	11013785-1	Black Gasket w/Blue Paint	N	100%	ND		7	93	C
GASKET-02	11013785-2A	Black Gasket w/Blue Paint	N	20%	CHRY	35	5	60	B
	11013785-2B	Orange Resinous Material	N	80%	ND			100	B
GASKET-03	11013785-3	Orange Resinous Material w/Multicolored Paint	N	100%	ND			100	B
GASKET-04	11013785-4	Orange Resinous Material w/Multicolored Paint	N	100%	ND			100	B
GASKET-05	11013785-5	Orange Resinous Material	N	100%	ND			100	B

Richard Wegrzyn
Laboratory Analyst

Paul Knappe
Asbestos Laboratory Supervisor

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 TR = Tremolite
 Trace = Less Than 1%
 ND = None Detected

Q = Quartz
 C = Carbonates
 G = Gypsum
 M = Mica
 T = Tar
 NTR = Non-Asbestiform TR
 NAC = Non-Asbestiform AC

Certificate of Analysis

Terracon Consultants, Inc

301 N. Howes
Fort Collins, CO 80521

Dana Harris

Client Project Name: # 22117704 / Ute Treatment Plant, Gaskets



NVLAP Lab Code 200860-0

Date Collected: 11/08/11
Date Received: 11/11/11
Date Analyzed: 11/14/11
Date Reported: 11/16/11
Project ID: 11013785
Job ID:

General Notes

- ◆ ND indicates no asbestos was detected; the method detection limit is 1 %.
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- ◆ Any reproduction of this document must include the entire document in order for the report to be valid.

Company:	Terracon Consultants, Inc.			Collected By:	Dana Harris			Date:	11/8/11
Attn:	Dana Harris			Relinquished By:	<i>Dana Harris</i>			Date:	11/10/11
Address:	301 N. Howes			Received By:	<i>Dana Harris</i>			Date:	11/11/11
Address:	Fort Collins, CO 80521			Sampler Type	Andersen	Cassette	Other		
Phone/Fax:	970-484-0359			PO#/Job#/Project Name:		# 22117704 / Ute Treatment Plant, Gaskets			
Email:	dlharris2@terracon.com			Notes/CC Info:					
Routine	24 Hour	Same Day	4 Hour	2 Hour					

Sample No.	Test Code	Sample Location	Total Volume/Area
1	3002	See Attached Sample Log	
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			

1054	Direct, Non-viable Spore Trap	1015	Culture - WATER Legionella
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2/2

No 3785

GASKETS

SAMPLE NO.	DESCRIPTION	SAMPLE LOCATION	LAB RESULTS
Gasket-01	Gasket – blue exterior, brittle, black interior	North Plant Filtration, clearwell	
Gasket-02	Gasket – blue and brown, brittle	North Plant Filtration, "house"	
Gasket-03	Gasket – gray, brown, pliable	North Plant – west, unlabeled 4" line	
Gasket-04	Gasket – gray, brown, brittle	North Plant – west, unlabeled 4" line	
Gasket-05	Gasket – red, pliable	South Plant – filtration room piping	

NAD = No asbestos detected above PLM detection limit of 1%

APPENDIX D

CERTIFICATIONS

STATE OF COLORADO

ASBESTOS CERTIFICATION*

Colorado Department of Public Health

and Environment

Air Pollution Control Division

This certifies that

Dana Harris

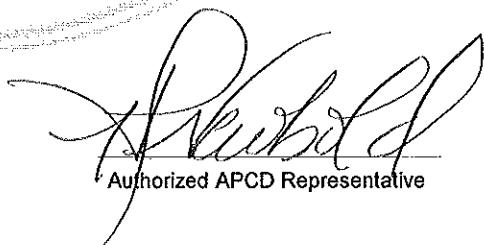
Certification No: 10152

has met the requirements of 25-7-507, C.R.S. and Air Quality Control Commission Regulation No. 8, Part B, and is hereby certified by the state of Colorado in the following discipline:

Building Inspector*

Issued: 6/27/2011

Expires on: 6/27/2012



Signature of Dana Harris, Authorized APCD Representative

** This certificate is valid only with the possession of a current Division-approved training course certification in the discipline specified above.*

SEAL

Windy Ridge Enterprises L.L.C.

Safety & Industrial Hygiene
Education & Services

This is to certify that

Dana Harris

Has successfully completed a Refresher Training Course Under Section 206
of the Toxic Substance Act (TSCA) Title II and Fulfills the Requirement of
Colorado AQCC Regulation No. 8

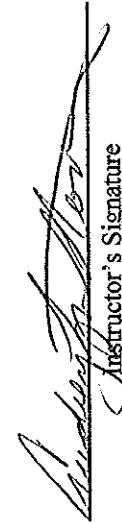
In:

Building Inspector

Course Instructor: Denise C. DeKrey
Audrey-Lyn Stockton

Course Date: 5/10/2011

Certification Expiration Date: 5/10/2012
Certificate #: BIRC-05102011- 3


Dana Harris
Instructor's Signature


WRF
WINDY RIDGE ENTERPRISES, LLC

10318 Miner's Lake Road
Fort Collins, CO 80524
Phone: 970-568-3916