

# Grind and Leach Building Demolition Report

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Surety Offset Requested: Unburdened \$ 351,549                      Burdened \$ 607,301

This report summarizes the Mill Facility Removal demolition of the Grind and Leach Building. This demolition activity commenced in April 2011 and was completed by mid June 2011 and was completed in accordance with all applicable legal and regulatory requirements. The project goals of safe work and using the ALARA philosophy to minimize dose to workers and the public were achieved.

1. History – This section of the milling facility was constructed in the late 1970’s as part of the milling facility that commenced operation in 1979. The 1979 milling facility was constructed to the West of the original 1957 milling facility.
2. Pre-demolition activities – A certified Asbestos Building Inspector inspected/performed sampling in the facilities described above, provided instructions for removal and disposition of asbestos materials and provided the documentation required to apply for demolition permits from the Colorado Department of Public Health and Environment Air Pollution Control Division. One Colorado demolition permit was received and used to obtain a Fremont County demolition permit from the Fremont County Building Department.

## Grind and Leach Building

<b>Colorado Demolition Permit #</b>	11FR0241D
<b>Fremont County Demolition Permit #</b>	D11-006

All soil transport activities were conducted under the Airs 71 sitewide air permit.

Run-in/run-off berms were constructed prior to the commencement of demolition activities. Process lines were emptied at circuit shutdown and during a prior hazard reduction process. Oil was drained and collected from all gearboxes and devices.

Utilities were disconnected prior to demolition activities. The utility disconnect verification signoff sheet with an attached diagram of the area to be signed off was completed prior to starting demolition.

3. Demolition work controls were included in the Grind and Leach Building Work Plan. Radiation, Industrial Safety and project specific training on the Grind and Leach Building Demolition Work Plan was conducted on 4-8-11 for all contractor employees and Cotter

personnel involved with the demolition. Ongoing training was provided for new individuals entering the project.

4. Demolition Activities – The equipment and structures were removed utilizing track mounted excavators equipped with shears, buckets, grappling thumbs and rock breakers to demolish, size and then load the demolition materials into trucks for transport to the disposal area. Wheel mounted loaders and backhoes were also used to load trucks. Water spray was used to control dust. Fire water and mill water systems as well as a water truck with a remote control operated water cannon were utilized for demolition area dust control. Water trucks with spray bars and/or the water cannon were used for dust control on transport areas and laydown areas. The demolition materials were placed in the Primary Impoundment and the material was covered with random soil fill. Large pipes or vessels were crushed or filled with soil, sand or cement to minimize void spaces prior to placement.

The total constructed volume of the materials removed from this area was 37,656 ft<sup>3</sup>. Soils were removed to a nominal level of 60 uR for ALARA purposes.

5. ALARA – Demolition activities were reported on and discussed during daily meetings attended by the RSO and/or the ARSO and The Health and Safety Supervisor. Environmental and occupational monitoring results are evaluated during the monthly ALARA review meeting. Environmental Monitoring at the perimeter site boundaries is part of the routine monitoring program. Since the Old Mill Electric Shop demolition in April 2009 and initiation of interim closure of the Secondary Impoundment in the Third Quarter of 2009 through the 2011 demolition of the Rubber Shop/Sulfation, Demonstration Plant/Boiler Building, Grind & Leach, Zirc Product/Secondary Crusher and Fine Ore Bins, environmental air particulate data as judged by weekly dust loading, weekly gross alpha and quarterly composite for individual uranium series radionuclides have demonstrated compliance with standards and results within historical limits for the past 30 years of record. Typical results are that most radionuclides are less than 10% of the standard. For radon, additional measuring stations were added for the Secondary Impoundment project in 3<sup>rd</sup> quarter 2009 and all monitoring stations have been in compliance with the standards. This monitoring information and detailed evaluation is presented in the semiannual effluent report as well as the annual report. The occupational and environmental sampling summary for the Grind and Leach demolition project is shown in the following Table - Occupational Results.

## Occupational and Environmental Sampling Results

<p><b>GENERAL AIR SAMPLES BY DEMOLITION PROJECT</b> Grind and Leach Area</p>	<p><b>1st sample</b> 04/11/11</p>	<p><b>Last Sample</b> 06/13/11</p>	<p><b>Number of samples</b> 32</p>
<p><b>BREATHING ZONE SAMPLES BY DEMOLITION PROJECT</b> Grind and Leach Area</p>	<p><b>1st sample</b> 03/31/11</p>	<p><b>Last Sample</b> 06/25/11</p>	<p><b>Number of samples</b> 119</p>
<p><b>GENERAL AIR SAMPLES BY DEMOLITION PROJECT</b> Grind and Leach Area</p>	<p><b>MAX % DAC sample</b> .4</p>	<p><b>AVG % DAC for project</b> 0.1</p>	
<p><b>BREATHING ZONE SAMPLES BY DEMOLITION PROJECT</b> Grind and Leach Area</p>	<p><b>MAX DAC HR sample</b> 4.4</p>	<p><b>AVG DAC HRS for project</b> 0.3</p>	

6. The AIRS 71 permit, the demolition permits, environmental monitoring data, personnel exposure data, dust condition reports and the constructed materials volume calculations associated with this report will be archived in the decommissioning records area with a copy of this report.

Page 5 is a pre-demolition view with page 6 showing a post-demolition view of the Grind and Leach Building.

**PRE-DEMOLITION**



## POST DEMOLITION

