Solvent Extraction Building Demolition Report

Surety Offset Requested: Unburdened $ 317,096 Burdened $ 547,783

This report summarizes the Mill Facility Removal demolition of the Solvent Extraction Building. This demolition activity commenced in mid-October 2011 and was completed by mid-December 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. A Colorado demolition permit was received and used to obtain a Fremont County demolition permit from the Fremont County Building Department.

	Solvent Extraction Building
Colorado Demolition Permit #	11SU1529D
Fremont County Demolition Permit #	D11-024

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. The use of a DustBoss DB-60 mist generator for dust control enhanced dust control and minimized water usage on this demolition project. Process lines were emptied at circuit shutdown and during a prior hazard reduction process. Oil was drained and collected from all gearboxes and devices. Used organic solution was treated with 1,114,000 pounds of Ultra-Sorb (a granular diatomaceous earth). The resulting solid material was sampled and then tested to confirm the absence of free liquid. The solidified organic material was placed in the Primary Impoundment at an elevation above the impounded solution where it will not be subject to saturation by impoundment fluids.

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 Solvent Extraction Building Work Plan. Radiation, Industrial Safety and project specific training on the Solvent Extraction Building Demolition Work Plan was conducted on 10-21-11 for all contractor employees and Cotter personnel involved with the demolition. Ongoing training was provided for new individuals entering the project.

4. Demolition Activities – 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. A 25,000 cfm mist generator (DustBoss DB-60) was the primary source of demolition dust control after training/transition during the first two weeks of this project. Mill water as well as a water truck with a remote control operated water cannon were also available as needed for 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 24,205 ft^3. ALARA soils removal to a nominal level of 60 uR will be completed at a later date.

   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, Fine Ore Bins, Solvent Extraction Building and Product Building: 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 are 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 3rd 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 Solvent Extraction Building demolition project is shown in the following Table - Occupational and Environmental Sampling Results.

.

Occupational and Environmental Sampling Results

GENERAL AIR SAMPLES BY DEMOLITION PROJECT	1st sample	Last Sample	Number of samples
Solvent Extraction Area	05/02/11	12/14/11	79

BREATHING ZONE SAMPLES BY DEMOLITION PROJECT	1st sample	Last Sample	Number of samples
Solvent Extraction Area	05/03/11	12/15/11	78

GENERAL AIR SAMPLES BY DEMOLITION PROJECT	MAX % DAC sample	AVG % DAC for project
Solvent Extraction Area	16.3	0.7

BREATHING ZONE SAMPLES BY DEMOLITION PROJECT	MAX DAC HR sample	AVG DAC HRS for project
Solvent Extraction Area	2.1	0.3

5. 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 Solvent Extraction Building.

PRE-DEMOLITION

POST DEMOLITION