United States Environmental Protection Agency
Region IX
POLLUTION REPORT

Date: Thursday, October 30, 2008
From: Tom Dunkelman

Subject: Fluids Management III Demob
Yerington Anaconda Mine
102 Burch Dr., Yerington, NV
Latitude: 38.9988000
Longitude: -119.1911000

POLREP No.:	7	**Site #:**	09GURV08
Reporting Period:	10/20/2008 - 10/30/2008	**D.O. #:**	022-9036
Start Date:	9/8/2008	**Response Authority:**	CERCLA
Mob Date:	9/8/2008	**Response Type:**	Time-Critical
Demob Date:	10/30/2008	**NPL Status:**	Non NPL
Completion Date:		**Incident Category:**	Removal Action
CERCLIS ID #:		**Contract #**	EP-W-07-022
RCRIS ID #:			

Site Description

The Yerington Mine Site is located approximately two miles west of Yerington, directly off of Highway 95, at 103 Burch Drive, Yerington, Lyon County, Nevada, and includes portions of Township 13N, Range 25E, Sections 4, 5, 8, 9, 16, 17, 20, and 21 (Mount Diablo Baseline and Meridian) on the Mason Valley and Yerington USGS 7.5 minute quadrangles. The geographic coordinates are 38E 59' 53.06" North latitude and 119E 11' 57.46" West longitude. The Site occupies 3,468.50 acres of disturbed land in a rural area, bordered to the north by open fields of alfalfa and residential acreage, and to the east by Highway 95, which separates the Site from the city of Yerington. Approximately fifty percent of the Site is privately owned land, and the rest is land within the jurisdiction, custody and control of the United State Bureau of Land Management ("BLM").

The Site began operation in or about 1918, originally known as the Empire Nevada Mine. In 1953, Anaconda Minerals Company ("Anaconda") acquired and began operating the Site. In or about 1977, Atlantic Richfield Company ("Atlantic Richfield") acquired Anaconda and assumed its operations at the Site. In June 1978, Atlantic Richfield terminated operations at the Site. In or about 1982, Atlantic Richfield sold its interests in the private lands within the Site to Don Tibbals, a local resident, who subsequently sold his interests with the exception of the Weed Heights community to Arimetco, Inc. ("Arimetco"), the current owner. Arimetco operated a copper recovery operation from existing ore heaps within the Site from 1989 to November 1999. Arimetco has terminated operations at the Site and is currently managed under the protection of the United States Bankruptcy Court in Tucson, Arizona.

EPA conducted an initial removal action at the Site, from February to May 2006. This work focused on removal of PCB containing transformers and fugitive dust suppression including construction of an 80-acre soil cap and application of a soil sealant to other areas of the site believed to be contributing dust.

From August to November 2006, EPA condcuted a second removal action which addressed fluids management problems associated with the Arimetco Heap Leach System. This system includes ten ponds, all of which are in varying stages of disrepair. As part of this removal action, EPA conducted repairs and improvements to the Slot Pond #2, constructed an interceptor trench along the Megapond and constructed a four-acre Evaporation Pond.

In August and November 2007, EPA ERS conducted two additional removal assessments at the Site. One assessment focused on evaluating radiological contamination of the "Process Area" of the Site. The second removal assessment performed in August 2007 consisted of sub-surface sampling and analysis beneath the Arimetco heap leach ponds.

From October to November 2007, EPA conducted a removal action to address fluids management issues associated with the Bathtub Pond. This removal action included removal of sediments and liner from the pond, backfilling and grading the pond and construction of an interceptor trench along the shoulder of the

pond.

Current Activities
10/20/08-10/30/08. EPA-1; ERRS-11.

During this period ERRS completed watering, mixing and covering of the bioremediation cells. ERRS also completed repairs and upgrades to the heap leach perimeter ditches at the Slot Heap and VLT Heap. ERRS also completed repairs and modifications to the piping system that tranports fluid between the various heap leach ponds. Bird scare cannons were also put in place to keep migratory wildfowl from landing in the heap leach ponds. OSC Dunkelman and the ERRS contractor demobed from the site on 10/30/08.

Planned Removal Actions
EPA has completed all planned removal activities. A summary is provided below:

South Slot Pond. Contaminated sediment from the pond was removed and placed on the top of the Slot Heap. The liner was removed and placed in an onsite construction debris landfill. The pond was compacted but not backfilled.

Plant Feed Pond. Contaminated sediment from the pond was removed and placed on the top of the Slot Heap. The liner was removed and placed in an onsite construction debris landfill. The pond was backfilled and compacted.

Phase I/II Pond. Contaminated sediment from the pond was removed and placed on the top of the Slot Heap. The liner was removed and placed in an onsite construction debris landfill. The pond was relined using a layer of GCL fabric and a layer of 80 mil HDPE liner. A surface drain was constructed that links this pond to the adjacent Phase I/II perimeter ditch. Piping was also connected so that fluid from this pond can be pumped to the EPA Evaporation Pond.

New Raffinate Pond. Kerosene contaminated sediment was removed and placed in the biormediation cell. The liner was removed and placed in an onsite construction debris landfill. Previous sampling had indicated that significant contamination did not exist beneath this pond. The pond was backfilled and compacted.

Old Raffinate Pond. Kerosene contaminated sediment was removed and placed in the bioremediation cell. The liner was removed and placed in an onsite construction debris landfill. Kerosene contaminated soils beneath the pond were excavated to an approximate depth of 16 feet below the pond bottom. START collected confirmation samples from the bottom and side-walls. These samples indicated that remaining soils had less than 1,000 ppm kerosene. This data will be presented in a START report.

Raffinate Vaults. Two concrete, subsurface vaults were identified just west of the old raffinate pond. Fluid and sediment from these vaults were taken to the bioremediation cell. Soil beneath these vaults was excavated to a depth of six to eleven feet. START collected confirmation samples. It is likely that kerosene contaminated soil in excess of 1000 ppm remains beneath these vaults. This data will be presented in a START report. Piping leading to these vaults was sealed with concrete. The concrete vaults were removed and placed in an onsite construction debris landfill.

Bioremediation Cells. Two cells were constructed on top of the Slot Heap. A total volume of 9880 cubic yards of kerosene contaminated soil and sediment from the New Raffinate Pond, Old Raffinate Pond and Raffinate Vaults was placed in the two cells. The dimensions of the cells are (east pad 138 ft x 338 ft, west pad 163 ft x 360 ft) with an approximate thickness of two feet. The following amendments were mixed in with the contaminated soi: 46 tons of hay. 250 tons of dairy manure, 1 ton diammonium phosphate, 1 ton ammonium nitrate, 360,000 gallons of water. Sampling indicated that representative kerosene contamination in the soil prior to addition of ammendments was on the order of 4,000-6,000 ppm. The two cells were covered with HDPE liners.
EPA will return in the spring to sample these cells, and add water and amendments as necessary.

Mega Pond. Contaminated sediment from the pond was removed and placed on the top of the Phase III South Heap. The liner was removed and placed in an onsite construction debris landfill. The pond was partially backfilled using material from the adjacent berm, graded and compacted.

VLT Pond. The liner in this pond had been gradually sliding into the pond due to poor anchoring of the liner perimeter. Additional liner was welded along the perimter of the existing liner and reanchored. Several small holes in the exisiting liner were patched. A pump that is used to evacuate this

pond, was removed from the pond and placed in the adjacent sediment pond.

Perimeter Ditches. Repairs and upgrades were made to perimeter ditches surrounding the Slot Heap and VLT heap. Tears in the liners were patched. 18 inch perforated pipe was placed in the ditch, drain rock was placed around the pipe, filter fabric was placed over the drain rock, and a layer of heap leach material was pulled down over the filter fabric and any exposed liner. These upgrades were completed for all areas of the Slot Heap and VLT Heap perimeter ditches that still accumulated draindown fluid. Similar upgrades were also completed for a portion of the Phase I/II perimter ditch. Repairs (patches) were made to the Phase III/4X Heap perimeter ditch liner. However, due to time and cost restraints, we were unable to complete upgrades to the Phase III and Phase III/4X perimeter ditches.

Migratory bird hazing. Propane scare cannons were placed at the Slot Pond, EPA Evaporation Pond and VLT pond. Each unit consists of a propane cannon, timer, marine deep cycle 12 volt batter, solar powered battery charger, propane tank and protective cover. It is anticipated that these cannons will only be operated during the fall and spring migratory seasons. EPA is negotiating an agreement with ARCO, whereby ARCO would agree to operate these cannons.

Next Steps

EPA will return to the site in Spring 2009 to sample the bioremediation cells. It will likely be necessary to water and turn the material in these cells at least once in order for contaminant levels to be reduced to acceptable levels.

Key Issues

All planned removal activities were completed at the site. Upgrades to the perimeter ditches at the Phase III South Heap and the Phase III/4X Heap were not completed due to time and financial constraints. Kerosene congtaminated soil likely remains beneath the area of the Raffinate vaults. EPA is negotiating an agreement with ARCO, under which ARCO would operate and maintain the heap leach fluids management system.

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