

United States Environmental Protection Agency
Region IV
POLLUTION REPORT

Date: Wednesday, August 27, 2008
From: Leo Francendese

Subject: Cap Progress/Topsoil Being Laid
Barite Hill Nevada Goldfields
McCormick, SC
Latitude: 33.8711000
Longitude: -82.2972000

POLREP No.:	14	Site #:	A4NZ
Reporting Period:	8/3/08 - 8/27/08	D.O. #:	
Start Date:	10/15/2007	Response Authority:	CERCLA
Mob Date:	10/15/2007	Response Type:	Time-Critical
Demob Date:		NPL Status:	Non NPL
Completion Date:		Incident Category:	Removal Action
CERCLIS ID #:		Contract #	
RCRIS ID #:			

Site Description

The Barite Hill/Nevada Goldfields site is located approximately 3 miles south of McCormick, South Carolina between US 378 and US 221 on the northern side of Road 30 in McCormick County, South Carolina. The mine site is relatively remote; there are no buildings, homes, or commercial buildings within 0.5 miles of the boundary. The site actively mined gold from 1991 to 1995. From 1995 until Nevada Goldfields filed for Chapter 7 Bankruptcy in 1999, the reclamation of the site was being addressed by Nevada Goldfields. On July 7, 1999 Nevada Goldfields handed the facility's keys to SCDHEC and abandoned the site.

The site is located along a topographic high ridge area forming the headwaters of an unnamed tributary to Hawes Creek. The topography of the area consists of rolling hills with ridgelines at an elevation of about 500 feet. Within the site, the ridgeline comprising the site has a high point of about 510 feet and an average elevation of approximately 480 feet.

The permitted mine site totals 795.2 acres. Of this total, 659.7 acres are designated as buffer area (areas not disturbed beyond the pre-mine natural state); therefore the maximum disturbance area is 135.5 acres.

The facility used a cyanide solution in a heap leach process to extract gold from ore. There are 7 processing ponds and 1 sediment pond onsite. Three large, multi-acre waste rock piles exist in varying condition. Each waste rock pile has the potential for producing acid. Storm water run on and runoff are not controlled at the site. The Main Pit ("Acid Pit") from the mining operations remains. The 10 acre Acid Pit contains approximately 60,000,000 gallons of water with an average pH of 2 ~ 2.2 and a high dissolved metal content. Seeps from the Acid Pit containing acidic water with high dissolved metal content are being released to the northern unnamed tributaries of Hawes Creek which borders the pit at a rate of approximately 5 gpm.

As per a referral by the State of South Carolina, the EPA Region 4 Removal Program conducted a Removal Site Evaluation (RSE) according to the National Contingency Plan (NCP). During the RSE of March 2007, the OSC conducted an emergency response whose scope included the demolition of a furnace building and onsite neutralization of over 2000 lbs of varying strength acids and bases. As of 9/19/07, the Agency has approved an Action Memorandum to conduct a removal action. The removal action commenced on 10/15/07 and includes a Bureau of Reclamation designed cap for the 250,000 CYS of acid producing waste rock adjacent to the Acid Pit, Acid Pit neutralization and cyanide deactivation in one of the onsite process ponds.

The project is expected to take about 12 to 16 months to complete and is projected to cost approximately 4,000,000 dollars. Details concerning this action can be found in both the documents section and Pollution Reports (POLREPS) which are updated on a periodic basis.

Current Activities

Cap Construction Progress (North and South)

- 100 percent cap saprolite layer graded
- 100 percent grading of cap clay layer
- 15 percent cap rip rap zones placed
- 100 percent cap toe construction
- 100 percent cap liner laid

- 50 percent cap topsoil blending/placement
- 0 percent cap seeding
- 40 percent irrigation system
- 75 percent watershed drainage completed
- 40 percent spillway constructed

- ORP continues to demonstrate negative conditions conducive to SRB activity as metal sulfide capture continues. Daily measurements can be found via <http://www.isi-data.com/Default.aspx> login jharrington password jharrington

- Please refer to the attached webpage link for the complete SCDHEC 61-68 Water Classifications and Standards. http://www.epa.gov/waterscience/standards/wqslibrary/sc/sc_4_wqs.pdf

Planned Removal Actions

- Well pump has been installed for the first irrigation well. Second irrigation well pump installation is pending.
 - Mineral Springs seep is improving in quality. See detailed report in the following link:
<http://www.epaosc.net/sites/%5C2768%5Cfiles%5Ccreekreport8-5-08%5B2%5D%5B1%5D.pdf>
 - The OSC coordinated with Wallace Wood who is the County Extension Agent for Clemson University Extension Service of the South Carolina University System and Frank Love from the USDA Natural Resource Conservation Service in order to obtain the appropriate seed blend and mix ratio for the vegetative cover. See the following link for seed blend and ratio:
<https://www.epaosc.net/sites/%5C2768%5Cfiles%5Crecommended%20clemson%20university%20extension%20service%20seed%20blend.pdf>
- In addition OSC has coordinated with Clemson University for topsoil quality review. See the following link for results:
<https://www.epaosc.net/sites/%5C2768%5Cfiles%5Cstandardreport.pdf>
- SCDHEC POC visited the site on August 27, 2008 and was briefed by the OSC. SCDHEC still in concurrence with current strategy and execution.

Next Steps

- Coordination with the Remedial Program continues for post removal cap monitoring. RPM has selected the designer. The intent is to create a long term monitoring system that measures various parameters for both the Barite Hill Pit Lake and the engineered cap for the North and South Waste Rock areas.

response.epa.gov/baritehillnevadagoldfieldsremoval