

**United States Environmental Protection Agency
Region IV
POLLUTION REPORT**

Date: Saturday, July 12, 2008

From: Leo Francendese

Subject: Cap Progresses/Toe Construction/Water Quality Improves
Barite Hill Nevada Goldfields
McCormick, SC
Latitude: 33.8711000
Longitude: -82.2972000

POLREP No.:	12	Site #:	A4NZ
Reporting Period:	6-12-08 thru 7-18-08	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)

- 90 percent cap saprolite layer graded
- 90 percent grading of cap clay layer
- 75 percent cap toe construction
- 0 percent cap liner laid

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

- The Former Acid Pit Lake water quality continues to improve as documented by the referenced table found in the documents section. <https://www.epaossc.net/sites/2768/files/barite%20hill%20june%202008%20comparative%20table%20for%20the%20pit%20lake.pdf>. In addition 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

- In addition, 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

Planned Removal Actions

- 40 ml HDPE textured liner will be laid during the week of July 28th according to the BOR recommended design.
- Georgia Pacific continues to provide organic base for the topsoil blend. Beginning the week of July 21st, the organic base will be shredded and mixed with onsite saprolite to create the recommended sandy loam topsoil.
- SCDHEC has recommended a blend of fescue and rye for the expected late September seeding with potential for a springtime inoculated clover seeding event.
- Subcontractor has been selected for the installation of the irrigation well pump.

Next Steps

- Region 4 Office of Regional Counsel, HQ Attorneys that are experts on Good Samaritan orders from OECA's Office of Site Remediation Enforcement and SCDHEC continue to pursue negotiations for an arrangement to provide post removal site controls with a publically held private mining/reclamation firm.
- Coordination with the Remedial Program continues for post removal cap monitoring.

response.epa.gov/baritehillnevadagoldfieldsremoval