

United States Environmental Protection Agency
Region IV
POLLUTION REPORT

Date: Sunday, November 11, 2007

From: Leo Francendese

Subject: Removal Initiation ... First 30 days

Barite Hill Nevada Goldfields

McCormick, SC

Latitude: 33.8711000

Longitude: -82.2972000

POLREP No.:	4	Site #:	A4NZ
Reporting Period:	10/15/07 - 11/10/07	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

LABOR AND EQUIPMENT MOBILIZATION

- 4 laborers/equipment operators
- 1 field clerk
- 1 response manager
- 1 front loader, 2 trackhoes, 1 hydraulic ram, 1 dozer

SITE SETUP ACTIVITIES

- Command Post trailer established.
- Temporary power provided via generator. Waiting power-line generated power.
- Security fencing around trailer established.
- Primary road access to site secured.
- CIC and SCDHEC reps conducted community updates on 11/8/07 distributing Fact Sheet #4. Waiting updated project signage.
- Health and Safety Plan initiated.

CONSTRUCTION ACTIVITIES

- Consolidated lime stockpile.
- Consolidated site piping and abandoned equipment.
- Salvaged abandoned engineering records.
- Relocated abandoned trailer to equipment pile. Waiting disposal.
- Created truck access road to borrow pit.
- Created truck access road to spillway.
- Established acid pit and borrow pit working perimeter access walking paths.
- Rough cut of 20 foot wide spillway in progress. BOR conducted preliminary spillway construction investigation during week of 11/6 thru 11/9.
- Demolition of exposed ridges within the Acid Pit waste rock piles using the trackhoe-mounted hydraulic ram in progress. BOR conducted preliminary investigation to evaluate conceptual design for the cap during week of 11/6 thru 11/9.
- Located and coordinated local source (Georgia Pacific Wood Products) for donated topsoil and organic amendments. EPA currently working on transport vendors.

INVESTIGATION/EVALUATION ACTIVITIES IN SUPPORT OF BOR DESIGN

- BOR Work Plan for Reclamation Design submitted and approved.(re: documents section of this webpage)
- Conducted Acid Pit waste rock pH paste-tests.
- Conducted bench scale pH titration tests with accompanying metals analysis for the Acid Pit waters using several different lime sources.
- Attended SCDHEC sponsored lime vendor presentation meeting on 10/12/07. Selection process for lime source and applied execution in progress.
- Mapping the Acid Pit floor with ROVER technology in progress.
- Land survey (2 ft contours) of drainage area surrounding the Acid Pit in progress.

Next Steps

OSC and BOR design lead to attend presentation on select best available science capping technologies in Augusta on November 14th. Presentation is organized by the State with representation from Ridgeway Mine and Clemson University as the presenters.

Key Issues

High levels of hydrogen sulfide gas requiring SCBA were detected on the air monitoring equipment during an investigative effort in early October. These levels followed a significant rain event and subsequent warm, sunny morning. While similar conditions have not been detected since, health and safety protocols continue air monitoring.

response.epa.gov/baritehillnevadagoldfieldsremoval