U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Ore Knob Mine Site - Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV

Subject: **POLREP #23**
Progress Report
Ore Knob Mine Site
A4ND
Ore Knob, NC
Latitude: 36.4086670 Longitude: -81.3238890

To: Terrence Byrd, EPA

From: Terrence Byrd, On-Scene Coordinator
Date: 6/29/2011
Reporting Period:

1. Introduction

1.1 Background

Site Number:	A4ND	**Contract Number:**	
D.O. Number:		**Action Memo Date:**	11/3/2008
Response Authority:	CERCLA	**Response Type:**	Time-Critical
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	NPL	**Operable Unit:**	
Mobilization Date:	10/20/2008	**Start Date:**	10/20/2008
Demob Date:		**Completion Date:**	
CERCLIS ID:	NCN000409895	**RCRIS ID:**	
ERNS No.:		**State Notification:**	
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category

Time-Critical Removal

1.1.2 Site Description

The Site contains areas affected by mining, including three principal areas that were directly affected by mining along with other areas, primarily downstream, where hazardous substances have come to be located. The three principal areas include the 1950s Mine and Mill Area, the 19th Century Operations Area and a Main Tailings Impoundment. The Action memo recommends response actions to address threats from the main tailings impoundment.

The 1950's Mine and Mill Area comprises 15 acres and is located northwest of the intersection of Ore Knob Road and Little Peak Creek Road, just north of Highway 88. This area contains derelict ore bins, concrete mill foundations, a transformer building, other ruins, a small sawmill currently in operation, two acres with about 10,000 cubic yards of tailings - now mostly covered with stumps, and a two acre former pond where process water was stored. Little Peak Creek starts just upstream of the former pond, flows through the former pond, and discharges into Peak Creek 2.5 miles downstream.

The 19th Century Operations Area and the Main Tailings Impoundment are located across Little Peak Creek Road, at the end of Ore Knob Mine Road. The 19th Century Operations Area includes a series of barren and nearly barren stretches of land (totaling about 5 acres) near the top of Ore Knob that contain waste rock dumps from at least 11 mine shafts as well as locations where ore was roasted to drive off sulfur and smelted to recover copper.

1.1.2.1 Location

Ore Knob, Ashe County, North Carolina

1.1.2.2 Description of Threat

The site is impacted by Acid Mine Drainage (AMD), causing several creeks and rivers to become sterile.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

See Site Stability Analysis and Tailings Dam Inspection Report for removal assessment information.

2. Current Activities

2.1 Operations Section

2.1.2 Response Actions To Date

1. Diversion Channel

See Pol/Sitrep #17 for diversion channel description.

The diversion channel has been constructed and is functioning properly. However, during a recent site tour during a heavy rainstorm, OSC Byrd noticed a large amount of sediment entering the diversion channel at its starting point. The sediment is believed to originate from the area of the two mine addits located southeast of the main tailings impoundment.

2. Site Ponds

See Pol/Sitrep #17 for Site Ponds description.

Pond 2 is being neutralized and capped with two feet of topsoil. The inlet pipe that originates in pond 2 has been unclogged and flushed. A new 10-foot section of horizontal pipe and 20-foot riser has been installed. The pipe and riser are encased by a gravel/sand filter drain throughout the water table. The pipe is made of perforated, high density, polyethylene. The other three ponds are all filled and re-vegetated.

3. Tailings Dam

See Pol/Sitrep #17 for Tailings Dam description.

3A. Sediment Pond
The 4 acre-foot sediment pond is periodically cleaned to maintain the maximum amount of freeboard. The sediment pond embankment was reconstructed to remove trees and widened to provide additional stability.

3B. Starter Dam
The Starter Dam has been completely constructed. The face was re-graded to an approximately 3.5:1 slope and the bottom most portion was excavated to the water table. It was then filled with filter sand covered with a water-permeable liner. Next, the sections were covered with small rock, backfilled, and seeded.

3C. Shear Key
The Shear Key has been completely constructed and is functioning as planned.

3D. Main Tailings Impoundment
The dam face of the Main Tailings Impoundment has been totally re-sloped. The filter drain is functioning as expected and the slope has been revegetated to prevent erosion.

4. 1950's Mine and Mill Site

The tailings removal activity at the 1950's Mine and Mill Site into the area of Pond 2 at the Main Tailings Impoundment is complete. Approximately 50,000CY of tailings was re-located in order to lessen the amount of acid mine drainage flowing into Little Peak Creek.

Other/Miscellaneous

EPA enlisted the cooperation of National Committee for the New River, a local advocacy, restoration and land protection group, for ideas on how to most effectively minimize sediment runoff into the diversion channels using native trees and shrubs. They graciously contacted Foggy Mountain Nurseries, who then donated trees and a variety of grasses to construct test plots around the Site. The test plots include: Poplar, Oak, Hemlock, Silky Dogwood and Silky Willow trees as well as white clover, Kentucky-31 and tall fescue groundcover.

Constant precipitation has greatly hampered Site activities, increasing site costs and extending the project schedule.

Recycling
In an effort to reduce the carbon footprint of the Ore Knob Mine Site, all paper and plastics are being recycled and no construction waste is being generated on-site. All soils, rock and water is recycled for use onsite -eliminating transportation and disposal costs.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

PRPs have been identified and enforcement activities are underway.

2.1.4 Progress Metrics to date (approximate)

Product Stream	*Quantity (CY)*
Soil	**150,000**

Tailings	**200,000**
Rock	**30,000**

2.2 Planning Section

2.2.1 Anticipated Activities

EPA is expected to conclude major removal activities at the Site within 3-6 weeks.

2.2.1.1 Planned Response Activities

In an effore to reduce sedinment entering and potentially cloggoing the diversion channel, a settling basin will be constructed in the area surrounding the mine addits.

2.2.1.2 Next Steps

EPA will begin introduction of native plants to facilitate vegetative growth and assist with erosion control.

2.2.2 Issues

2.3 Logistics Section

No information available at this time.

2.4 Finance Section

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
ERRS - Cleanup Contractor	$6,200,000.00	$6,000,000.00	$200,000.00	3.23%
IAGs	$250,000.00	$230,000.00	$20,000.00	8.00%
USCG	$120,000.00	$119,000.00	$1,000.00	0.83%
RST/START	$275,000.00	$250,000.00	$25,000.00	9.09%
Intramural Costs				
Total Site Costs	$6,845,000.00	$6,599,000.00	$246,000.00	3.59%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

2.5 Other Command Staff

No information available at this time.

3. Participating Entities

No information available at this time.

4. Personnel On Site

No information available at this time.

5. Definition of Terms

No information available at this time.

6. Additional sources of information

No information available at this time.

7. Situational Reference Materials

No information available at this time.

POLREP #23 Last Updated 6/29/2011