

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



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV

Subject: POLREP #24
Final Polrep
Ore Knob Mine Site
A4ND
Ore Knob, NC
Latitude: 36.4086670 Longitude: -81.3238890

To:
From: Terrence Byrd, On-Scene Coordinator
Date: 2/11/2013
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:	8/15/2011	Completion Date:	10/24/2011
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. Monitoring stations were constructed along the entire length to accommodate various types of instruments

2. Site Ponds

See Pol/Sitrep #17 for Site Ponds description.

All of the Site Ponds have been neutralized, filled and capped with a minimum of 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. Due to constant water level fluctuations, an impermeable liner was not placed on any of the ponds.

3. Tailings Dam

See Pol/Sitrep #17 for Tailings Dam description.

3A. Sediment Pond

The 4 acre-foot sediment pond is working as designed. The sediment pond embankment was reconstructed to remove trees and widened to provide additional stability. Tailings in the sediment pond will increase over time due to settling. Because of this, it will need to be monitored and cleaned on an intermittent basis.

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 ground cover.

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)

<i>Product Stream</i>	<i>Quantity (CY)</i>
Soil	150,000
Tailings	200,000

Rock	30,000

2.2 Planning Section

2.2.1 Anticipated Activities

No future activities are anticipated for ERRB at this Site.

2.2.1.1 Planned Response Activities

NONE

2.2.1.2 Next Steps

NONE

2.2.2 Issues

2.3 Logistics Section

No information available at this time.

2.4 Finance Section

No information available at this time.

2.5 Other Command Staff

2.5.1 Safety Officer

2.6 Liaison Officer

2.7 Information Officer

2.7.1 Public Information Officer

2.7.2 Community Involvement Coordinator

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.