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

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV

Subject: **POLREP #22**
Progress Report
Ore Knob Mine Site
A4ND
Ore Knob, NC
Latitude: 36.4086670 Longitude: -81.3238890

To:
From: Terrence Byrd, On-Scene Coordinator
Date: 5/11/2011
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

2.1.1 Narrative

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. A pipe and valve system may be constructed to allow waterflow to be diverted into the adjacent sediment pond to facitilate pH adjustments above the outlet to Ore Knob Branch.

A 1000 ft. fence has been placed along each side of the diversion channel at it deepest points as a safety measure. Warning signs have been placed along this area discouraging trespassing.

2. Site Ponds

See Pol/Sitrep #17 for Site Ponds description.

Pond 2 is still being filled with tailings now being removed from the tailings dam at the 1950 Mine and Mill Site. The area is being contoured to allow water to drain to the rear (south) of the tailings impoundment. 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 sediment pond is periodically cleaned to maintain the maximum amount of freeboard.

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

ERRS contractors began removing tailings from the 1950's Mine and Mill Site to the area of Pond 2 at the Main Tailings Impoundment. Approximately 50,000CY of tailings will be relocated in order to lessen the amount of acid mine drainage flowing into Litle Peak Creek.

Other/Miscellaneous

A public meeting was held in November to update residents of ongoing and upcoming activities at Ore Knob. Representatives from ERRB and Remedial Branches along with NCDENR and NC Dept. of Public Health were present to answer questions from the public and the press.

EPA's remedial program has conducted well sampling events at homes around the Ore Knob Mine Site. Sampling results show that most of the homes were not affected by high levels of manganese in groundwater. Most residents had previously installed either a filtration system or water softener on their drinking water wells well before any sampling was performed by EPA. Sampling concluded that these systems, when installed and maintained properly, have reduced levels of contaminants below EPA drinking water Maximum Contaminant Levels (MCLs). Residents that were placed on drinking water until sampling results were received have been notified of the results. Residents that have drinking water that are below MCLs will have EPA-provided drinking water discontinued.

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—thus 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	**141780**
Tailings	**110,000**
Rock	**30330**

2.2 Planning Section

2.2.1 Anticipated Activities

2.2.1.1 Planned Response Activities

Excavation of tailings at 1950s Mine and Mill Site will continue. Crew will continue to make minor enhancements to areas of the main Tailings Impoundment.

2.2.1.2 Next Steps

2.2.2 Issues

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, thus eliminating transportation and disposal costs.

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

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.