

**ROBA/YORK MINES
ROBA/YORK MINES INITIATION OF CERCLA INVESTIGATION
MEMORANDUM**

I. PURPOSE

The purpose of this Memorandum is to document, pursuant to the Guidelines of the National Oil and Hazardous Substance Contingency Plan (NCP), 40 CFR 300, et seq., the decision to initiate a CERCLA investigation, and such further CERCLA actions as may be subsequently determined appropriate, as authorized by Section 104 (42 USC 9604) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA; 42 USC 9601 et seq.), and Executive Order 12580, 52 Federal Register 2923-26 (January 23, 1987).

A release, or threat of a release, of hazardous substances, pollutants or contaminants that potentially pose a threat to public health or welfare or the environment, has occurred or may occur at the Roba/York project site (the Site) on and/or from lands under the jurisdiction, custody, or control of the USDA Forest Service, Malheur National Forest (National Forest System or NFS lands).

II. SITE CONDITIONS AND BACKGROUND

A. Site Location and Historical Activities

The Roba and York mines have been combined into one project because of being located within approximately one-mile of each other, being located in the same watershed, and other similar characteristics. The project will be known as Roba/York and it is anticipated the USDA Forest Service will be able to save dollars for the public during this removal action by combining both sites.

1. Roba Mine

The Roba Mine is located in the southwest 1/4 of the southwest 1/4 of Section 6, Township 16 South, Range 29 East. The Site is in Grant County and located approximately 17 air miles southwest of John Day, Oregon. The Site encompasses an area of 2.9 acres and is located at an elevation of 5,260 feet. The Site is moderately vegetated with large pines, brush, and grasses.

- 1947 - Site discovered by Lawrence Roba.
- 1951 - Four flasks of mercury produced from development rock.
- 1952 Three flasks produced.
- 1953 - One flask produced. DMEA development loan was obtained and expired in February 1955. Shaft extended to 125 feet with drifts at 25, 60, and 120 feet respectively.
- 1953 to present - No work done.
- Ore was treated in a 30" by 8-foot rotary retort. It is thought that possibly 12 flasks were produced from this Site.

2. York Mine

The York Mine is located in the northeast 1/4 of the southwest 1/4 of Section 7, Township 16 South, Range 29 East. The Site is in Grant County and located approximately 23 miles southwest of John Day, Oregon. The Site encompasses an area of 5.5 acres and is located at an elevation of 5,640 feet. The Site is moderately vegetated with large pines, brush, and grasses. Several structures are present.

Homer York and Cecil Rannelis discovered the Site in 1940. Reffett obtained an interest in recent years. About 2,000 pounds of ore from the shaft was treated at the Roba retort during the early 1950's, and about 21 pounds of mercury were recovered. The property is developed by a shaft about 25 feet deep and several nearby dozer trenches and small pits. The Forest Service has filled in the shaft.

B. Site Characteristics

There are no climatic records for the project Site. The nearest town, Seneca, receives 13.2 inches of precipitation and 57.8 inches of snowfall annually, with approximately 70% of precipitation occurring between November and May. The project site is higher in elevation, so more snowfall would be anticipated. The climate is characterized by cold winters with heavy snows and hot, dry summers.

The project Site is situated within the Blue Mountain physiographic province in northeast Oregon. Mountains, ice-sculptured mountain peaks, deep canyons, and broad valleys to the east and wide uplifted plateaus to the west typify the province. The province is a cluster of smaller ranges of various origins and relief. The project site is near the continental suture with accreted clusters of land masses of Permian, Triassic, and Jurassic age rocks along late Mesozoic shoreline, which once laid across Washington and Idaho.

1. Roba

The country rocks are graywackes and shales of Upper Triassic age. Bedding planes commonly strike a few degrees east of north. The rocks are cut by small faults and shear zones of diverse trend, although the majority lies within a few degrees of paralleling the bedding planes.

Cinnabar occurs both as disseminations in narrow gouge-filled fractures and as thin films along the fractures and bedding planes. Several small cinnabar occurrences are aligned in a north-south direction for nearly 1000 feet, which suggests that they may lie along a north-south fault or shear zone.

2. York

The country rocks are Triassic graywackes, in which quartz is the predominate mineral but kaolinized feldspar is also present. The rocks are cut by fractures of diverse trend. Clay seams and lenses of brecciated and highly altered sandstone about a foot wide are

common. Some fractures are filled with calcite. Present exposures do not indicate that the cinnabar mineralization is localized along any particular fault or shear zone. Cinnabar occurs in thin films on fracture surfaces over a rather wide area.

Little is known about the hydrogeology of the project Site. It appears that a thin veneer of soil is present over bedrock in the area. Soil probably thickens in the draws and bases of the canyons. Water was reported at 35 feet below the ground surface in the shaft at Roba. Soggy ground conditions down slope from the York Site would suggest the presence of groundwater in the colluvial sediment over the bedrock during wetter months of the year. The relationship of intermittent groundwater with deeper aquifers in the bedrock cannot be determined.

There is no direct connection with the Roba mine to any surface water sources. There is an intermittent creek to the north of the York mine. However, this intermittent creek is 1/4 of a mile down slope from the site. The next closest water source is 1.5 miles further down slope from the York mine.

1. Roba

Total volumes of waste and burnt tailings piles are unknown at this time. The waste pile had readings for mercury as high as 5,500 mg/kg and the acceptable PRG is 610 mg/kg. The mercury concentrations in the burnt tailings pile were as high as 886 mg/kg but arsenic was recorded as high as 94.5 mg/kg and the PRG for arsenic is 2.7 mg/kg. High readings up to 3,600 mg/kg were recorded around the old foundation at the Site.

2. York

Total volume of contaminated material is unknown at this time. The highest concentration of mercury was recorded at 7,300 mg/kg and was associated with the fan housing and frame of the old rotary retort. Arsenic was recorded up to 11.1 mg/kg. However, arsenic typically averages between 5 to 18 mg/kg in Oregon

C. Release or Threatened Release into the Environment of a Hazardous Substance, Pollutant, or Contaminant

A PA has been completed and high levels of both mercury and arsenic have been identified at the project Site. A PRP search is being conducted to determine if there are any viable parties to be held accountable for any cleanup action. The Forest Service is preparing to develop an EE/CA for the project Site. If the current project Site conditions persist, there is the potential for adverse chronic and acute health effects on human and wildlife entering the area.

D. Actions Taken on the Site

Recent actions taken at the Site include:

1. PA with chemical analysis was completed by CES May 2000.

III. PROPOSED ACTIONS AND ESTIMATED COSTS

The proposed action for the Site is to initiate CERCLA. In compliance with the NCP, an Engineering Evaluation/Cost Analysis (EE/CA) will be prepared as well as collection of additional data to better define Site conditions. The EE/CA will review all sampling results, records of chemical usage, reasonable alternatives, ARARS, risk-based analysis of alternatives, cost of each alternative and will be used to select a preferred alternative based on these data.

The anticipated costs for the various aspect of the project are uncertain at this time as some data is missing. However, an estimate would be:

1. EE/CA - \$80,000
2. Implementation of a preferred alternative - \$175,000 to \$250,000

IV. ADMINISTRATIVE RECORD AND COMMUNITY RELATIONS

Pursuant to 40 CFR 300.415(m), I designate Dennis Boles of the Fremont National Forest, Lakeview Ranger District, as the On-Scene Coordinator and the Wilbert Tay for the Malheur National Forest as Spokesperson for the project.

A community Relations Plan will be developed for this project. The Administrative Record for any response action selected will be compiled and made available during regular business hours at the office of the Malheur National Forest, John Day, Oregon. A Notice of Availability of the Administrative Record will be published in local newspapers.

V. DECISION

By this Memorandum, I am initiating CERCLA at the Roba/York as appropriate.

By copy of this Memorandum, we are formally notifying the State of Oregon and EPA Region X of our finding of the appropriateness of CERCLA at the Site.

/s/ Richard W. Sowa
Linda Goodman
Regional Forester
Pacific Northwest Region

Cc
Oregon DEQ
EPA

