

State of Oregon
Department of Environmental Quality

Memorandum

Date: June 2, 2003

To: Dick Pedersen, Administrator, Land Quality Division

From: David Anderson, Eastern Region Orphan Site Project Manager

Through: Brett McKnight, Eastern Region Cleanup Program Manager
Alan Kiphut, Headquarters Cleanup Program Manager *AK*

Subject: Request for Orphan Site Designation – Opalite Mine
ECSI No. 2491

The purpose of this memorandum is to request official designation of the Opalite Mine site as an Orphan Site, as defined in Oregon Revised Statute (ORS) 465.381. The purpose of the designation is to make the Orphan Site Account available for funding the investigation, stabilization, and cleanup of the site. The Orphan Site Account may be used for “. . . [e]xpenses of the department related to facilities or activities . . . where the department determines the responsible party is unknown or is unwilling or unable to undertake all required removal or remedial action” ORS 465.381. As described in this memorandum, it is DEQ’s determination that the currently identified responsible parties are unable to undertake required cleanup actions.

The Opalite Mine is an inactive mercury mine located on a patented mining claim surrounded by public land administered by the Bureau of Land Management (BLM). It is located in southern Malheur County, approximately 15 miles northwest of McDermitt, Nevada. The site is approximately 342 acres in size, and consists of a mine pit, shaft, adits, several small exploratory prospect excavations, several waste rock piles, remains of processing facilities, and two large piles of processed ore. Mine Creek flows in a southerly direction along the south side of the site. Access to the site is unrestricted.

The Opalite deposit was discovered by William Bretz in 1924. In April 1925, F.W. Bradley formed the Mercury Mining Syndicate and developed the Opalite Mine. Processing facilities were constructed in 1926. The Opalite Mine produced a total of 12,367 flasks of mercury (a flask is equivalent to 76 pounds) between 1927 and 1961, with the vast majority of the production occurring before 1943. The Bradley Mining Company also owned and operated the Bretz Mercury Mine (ECSI #2493), located approximately 6 miles east of Opalite. Most of the ore produced at Bretz was processed at Opalite.

In June 2000, the site was visited by DEQ staff. Two large burned ore piles were observed on either side of the processing facilities. A sample collected from one of the burned ore piles contained 21.8 mg/kg total mercury. DEQ’s 2001 Level II Ecological screening level value

(SLV) for mercury is 0.1 mg/kg. A soil sample collected from an adit contained 478 mg/kg total mercury. One stream sediment sample was collected in Mine Creek about 0.75 miles downstream of the site. Water was flowing in the stream and small fish (species not determined) were observed. The total mercury concentration in the sediment sample was 110 mg/kg.

In June 2002, a Site Investigation was conducted by EPA, and sampling indicated moderate total mercury levels at the site: a maximum of 792 mg/kg total mercury in the mine pit, and less than 100 mg/kg total mercury in burned ore. The burned ore is high in arsenic, at over 1,000 mg/kg. Mercury levels in stream sediment were much lower than the previous DEQ sample: a maximum of 4.3 mg/kg total mercury in Mine Creek.

The Bradley Mining Company of San Francisco, California currently owns the site. The Bradley Mining Company is the responsible party for at least two CERCLA-caliber mercury mines in California and is unlikely to be able to pay for any investigation or cleanup of the Opalite Mine. DEQ is currently working with EPA Region IX on Bradley's financial and insurance information so that DEQ can determine Bradley's ability to pay. The preliminary determination indicates that the Opalite owners are unable to pay. DEQ is also participating in an Abandoned Mine Lands (AML) workgroup with EPA, USFS, BLM, and DOGAMI, in order to find funding sources for this type of work. Given the proximity of the Bretz mine located on BLM property, DEQ has proposed joint funding with BLM of any work required at the Opalite mine.

Based on the presence of sensitive Lahontan Cutthroat Trout habitat and the fact that the site ranks as a high priority site (based on a SAPS score of 82 out of a possible 110), DEQ has determined that additional investigation and possible interim removal action measures (IRAMs) need to be completed to ensure protection of human health and the environment. Because the identified PRP appears to have no ability to undertake remedial actions, DEQ recommends using funds from the Orphan Site Account to conduct the activities necessary to investigate, clean up, and otherwise address the threats at the Opalite Mine site.

With the approval of Orphan designation for this site, the Business Office will begin using the Orphan Site Account to pay for Account-eligible activities. Please sign below to approve this request for designation of the Opalite Mine project as an Orphan Site, and to authorize use of the Orphan Site Account.



Dick Pedersen, Administrator
Land Quality Division

6/11/03

Date