

NPL Site Narrative for Leviathan Mine

LEVIATHAN MINE

Markleeville, California

Conditions at Proposal (October 22, 1999): The Leviathan Mine site is an inactive sulfur mine located on the eastern slope of the Sierra Nevada in Alpine County, California. The mine began operations in 1863 for the extraction of copper sulfate for processing silver ore in the Comstock mining region of Nevada. Mining operations ceased in 1872 due to the high sulfur and low copper content of the ore. In 1954, the Anaconda Company transformed the underground workings into an open pit mine to extract the sulfur ore. Approximately 22 million tons of overburden and waste rock were removed to get to the ore and placed into and along the channels of Leviathan and Aspen Creeks. In 1962, the Anaconda Company sold the mine to Alpine Mining Enterprises. The mine has not operated since 1962.

Infiltration of precipitation into and through the open pit and overburden piles creates acid mine drainage that discharges directly into Leviathan Creek. Contact with waste piles directly deposited into the creek has also contaminated Leviathan Creek. The low pH and high metals content of the acid mine drainage have eliminated aquatic life in Leviathan and Bryant Creeks downstream of the mine. The release of acid mine drainage from the site has resulted in fish kills in Leviathan and Bryant Creeks and the East Fork Carson River, which is 10 miles downstream of the site. The creeks and river downstream from the mine are historical habitat for the Lahontan cutthroat trout (*Onchorhynchus clarki henshawi*), a federally listed endangered species, and cutthroat trout still inhabit the East Fork Carson River.

In 1983, the California Regional Water Quality Control Board approved a Pollution Abatement Project to reduce surface water infiltration, collect and evaporate acid mine drainage, and isolate Leviathan Creek from the overburden piles. To reduce access difficulties for the Pollution Abatement Project, the State of California acquired title to the site in 1984 and placed it under the jurisdiction of the State Water Resources Control Board. Due to space limitations at the site, the evaporation ponds constructed as part of the Pollution Abatement Project have insufficient capacity to hold all of the mine drainage and the ponds overflow during spring runoff.

In May 1997, the Washoe Tribe of Nevada and California petitioned EPA to investigate ongoing concerns about the Leviathan Mine site and the management of wastes generated at the site. In the fall of 1997, the EPA Emergency Response Office attempted to install an active treatment system to reduce the volume of liquids contained in the ponds and thereby provide sufficient capacity to prevent overflows during the spring of 1998. Due to equipment and weather problems, the system was not successful. During 1998, the EPA's Region 9 Superfund Program negotiated an Administrative Order on Consent and oversaw efforts by ARCO (successor to Anaconda Company) to prevent pond overflow. This effort was also unsuccessful. During 1999, the Regional Board used State funding to treat 4 million gallons of contaminated water in the ponds. State and Federal monitoring shows that Leviathan and Bryant Creeks continue to be devastated by acid drainage of Leviathan Mine from sources other than the pond overflow.

Status (May 2000): EPA is considering various alternatives for this site.

For more information about the hazardous substances identified in this narrative summary, including general information regarding the effects of exposure to these substances on human health, please see

the Agency for Toxic Substances and Disease Registry (ATSDR) ToxFAQs. ATSDR ToxFAQs can be found on the Internet at [ATSDR - ToxFAQs](http://www.atsdr.cdc.gov/toxfaqs/index.asp) (<http://www.atsdr.cdc.gov/toxfaqs/index.asp>) or by telephone at 1-888-42-ATSDR or 1-888-422-8737.