

**Testimony of
Daniel Meer
Assistant Superfund Division Director, Region 9
U.S. Environmental Protection Agency**

**Before the
Subcommittee on Energy and Mineral Resources
Committee on Natural Resources
United States House of Representatives**

November 23, 2009

Mr. Chairman and Members of the Subcommittee, I am Daniel Meer, Assistant Superfund Division Director for the U.S. Environmental Protection Agency's ("EPA") Region 9 serving Arizona, California, Hawaii, Nevada, the Pacific Islands subject to U.S. law, and approximately 146 Tribal Nations. Thank you for the opportunity to testify about EPA Region 9 activities to address the environmental legacy from abandoned mercury mine activities in California. I will also provide a few examples of abandoned California mercury mine sites that EPA Region 9 has addressed or is in the process of addressing.

The historical mining legacy is a daunting problem in the West. According to the State of California, there are estimates of between 550 and 2000 abandoned mercury mines in California alone, which includes very small mines and extensive, fully developed mines. Mercury was widely used to extract gold and silver, and thus many other abandoned California mines have mercury contamination issues. Many of these sites contain contaminants such as mercury or arsenic that pose a threat to human health or the environment and require federal or state attention. EPA, the State, and other federal agencies, including the Department of Interior and Forest Service, who are also here today, have been addressing the sites that pose immediate risk first using their respective authorities.

The Superfund Program was established under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), which Congress passed in December 1980 to respond to citizen concerns over Love Canal and other toxic waste sites. Through the Superfund Program, the EPA and its partners address abandoned, accidentally spilled, illegally dumped or intentionally released hazardous substances that pose current or future threats to human health and the environment.

BACKGROUND

According to the California Department of Conservation, Abandoned Mines Unit, the State currently has 47,000 abandoned mines, of which 11% pose a moderate potential for environmental harm and 266 mines are listed as having documented environmental harm. Mercury mines make up only a subset of these environmentally hazardous sites. EPA's strategy for addressing environmental hazards at abandoned mines is to identify the universe of mine sites and evaluate them for cleanup action, and when necessary, use Superfund authorities to immediately address the most imminent threats. Under EPA's "Enforcement First" Policy, we look for the parties responsible for contamination and negotiate with them to perform and pay for the clean up in order to save the taxpayers from paying. EPA Region 9 has assessed 77 abandoned mines and 18 abandoned mercury mines in California. Six of these abandoned mines have been placed on the Superfund National Priorities List (NPL) and of those, two - Sulphur Bank and Buena Vista/Klau Mine - are mercury mines. In other cases, EPA has responded to imminent threats to human health and/or the environment using our Superfund Removal Program. In California, EPA Region 9 has conducted removals at 15 abandoned mines, including 7 mercury mines. These include the Altoona Mine, Abbott/ Turkey Run Mine,

Buena Vista/Klau Mine, Gambonini Mine, Mt. Diablo Mine, Rinconada Mine and Sulphur Bank Mine.

EPA and its Federal and state partners are continuing to investigate and clean up abandoned mercury mines. EPA Region 9 and the State of California have developed abandoned mine coordination groups which are tasked to specifically focus on issues posed by abandoned mines. EPA is also drafting financial assurance regulations for the hardrock mining industry which will help prevent taxpayer-funded cleanups. EPA plans to propose a rule for financial assurance regulations in the spring of 2011. In addition, both California and EPA have developed Good Samaritan administrative tools to encourage cleanup of abandoned mines. EPA's Good Samaritan tool is a model Administrative Order on Consent under CERCLA, or Superfund. Additionally, two American Recovery and Reinvestment Act projects in EPA Region 9 are located at mine sites.

EPA MINE CLEANUP ACTIVITIES

Altoona Mine - This site was prioritized for cleanup after the United States Geological Survey (USGS) identified it as the primary source contributor to the mercury contamination found downstream in Trinity Lake. Concentrations of mercury were found in Trinity Lake and in its fish at levels of concern. In October 2005, the California Office of Environmental Health Hazard Assessment issued a fish consumption advisory for Trinity Lake and the East Fork of the Trinity River. EPA, in coordination with the US Forest Service, developed a remedy for the mine. EPA and the Forest Service have spent \$7 million to clean up the site and monitoring and maintenance is ongoing.

Abbott/ Turkey Run Mine – This site became an EPA priority in 2007 after discussions with the California Water Quality Control Board indicated that the site was one of the largest mercury contamination contributors to the Cache Creek watershed and that this watershed had the highest proportion of mercury discharges (60%) to the Delta. The State requested EPA’s assistance in identifying a responsible party and helping provide oversight of the cleanup. This is a good example of how EPA is partnering with the State.

Gambonini Mine - This mine was prioritized in 1999 after it was realized that drainage from the mine ended up in Tomales Bay near Pt. Reyes, an area with extensive sensitive wildlife and fish habitat. It was the major mercury contamination input into the Bay and cleaning up this one source resulted in a large benefit to the environment. An additional removal action was conducted in 2004.

Sulphur Bank Mine - EPA has completed a number of removal actions at this site that have: 1) stopped the erosion of mine waste into Clear Lake; 2) stopped contaminated surface water runoff into Clear Lake; 3) diverted clean surface water around the mine to prevent flooding the open pit mine lake spilling contaminated water into Clear Lake; 4) sealed old abandoned geothermal wells; 5) removed all mine waste from the residential area of the Elem Indian Colony; and 6) removed mine waste from a residential area to the south of the mine property.

EPA has allocated American Recovery and Reinvestment Act funding to initiate a removal action to address contaminated mine wastes that were used in the 1970s to construct the primary access road to the Elem Indian Colony. EPA has completed extensive studies, developed cleanup alternatives, and is working with Lake County and the State of California to select a cleanup plan to stop contaminated groundwater discharges from the mine to Clear Lake. We will also address the cleanup of over 3,000,000 cubic yards of mine waste that were left in

several large piles on the mine property. In addition, EPA is continuing to study the complex science and impact of mercury in the Clear Lake environment and food web, and we are evaluating potential cleanup plans to address mercury contaminated sediments.

Cache Creek Watershed - This watershed includes the Abbott/Turkey Run mine discussed above - The Department of Toxic Substances Control (DTSC) initiated an Abandoned Mine Site Discovery Project to investigate sources of contamination in this watershed using funding from a Cooperative Agreement between DTSC and the EPA. DTSC is identifying mines within Cache Creek Watershed that are not currently being addressed by regulatory agencies, and have known or potential threats to public health, the environment, or water quality. USEPA will then evaluate the results and determine if further federal involvement is need. This effort should be complete by June 2010.

New Idria Mine - This mine is a source of mercury contamination of sediments and of acid mine drainage in Silver and Panoche Creeks, with levels of methylmercury detected in surface water at concentrations significantly above background levels up to 4.5 miles from the site. EPA is currently planning assessments by both the Superfund Removal Program and the Site Assessment Program to further evaluate the eligibility of the site for quick action and/or inclusion on the NPL. This assessment work started on November 12, 2009, and is expected to be completed within a year.

EPA Region 9 remains firmly committed to protecting public health and the environment by addressing the environmental effects of abandoned mines. We will continue to work closely with our other Federal, state, tribal, and local partners on this important matter. I hope this information is helpful to the Subcommittee and I welcome any questions you might have.