

# NPL Site Narrative for East Helena Site

## EAST HELENA SITE East Helena, Montana

**Conditions at listing (September 1983):** The East Helena Site (proposed for listing as the East Helena Smelter) covers 8.4 square miles near East Helena, Montana. A primary lead and zinc smelter now owned by ASARCO has operated on the site since about 1888. The smelter has emitted particulates containing metals (including lead, cadmium, and arsenic) into the air throughout its history. Recent data obtained by EPA and the State indicate that the upper soil on the site contains at least 1,000 parts per million (ppm) of lead. The EPA Lead Smelter Study Task Force has recommended that values of 1,000 ppm or greater warrant further investigation. There are concerns that the soil can be reentrained into the air as inhalable particulates, can be directly ingested (especially by young children), and can contaminate surface water and ground water. Analyses in 1975 indicated that children in East Helena had elevated levels of lead in their blood.

Several activities are underway at the site: (1) EPA has signed a Cooperative Agreement with the Montana office of the U.S. Geological Survey (USGS) to develop a plan to investigate ground water flows and possible metal contamination in the study area; (2) the U.S. Centers for Disease Control (CDC) and EPA have awarded money to the State for a health screening study of East Helena children in July-August 1983; and (3) EPA is preparing a contract to have Montana State University develop a plan to gather soils and vegetation data, which will better define the extent and nature of the area's soil contamination and its effects on the environment.

**Status (June 1984):** USGS has completed a preliminary survey involving sampling of area domestic wells. No wells sampled were above drinking standards for the target metals -- arsenic, cadmium, and lead. The screening study by the State and CDC found only one East Helena child with a mean blood lead level over the level at which CDC recommends treatment. East Helena children do have levels higher than those of the control group in the study. Nearly 2,000 environmental samples, plus hair and stool samples, remain to be analyzed. Results are expected in late summer of 1984.

A work plan to guide the remedial investigation/feasibility study has been completed and was released to the public on June 1, 1984. This plan includes: (1) surface water investigations; (2) ground water investigations; (3) soil studies to better determine the extent of metals contamination and their mobility; and (4) crop and livestock sampling. ASARCO has agreed to participate by undertaking studies of ground water and surface water.

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.