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Cleanup Enforcement in Action: Addressing Community Needs in East Helena, Montana

The Value of Environmental Enforcement

At the East Helena Superfund site in East Helena, Montana, EPA's environmental enforcement mechanisms and resources have played a vital role in protecting public health, achieving environmental restoration, and supporting reuse of these highly contaminated properties. EPA used its enforcement first policy to achieve long-term community benefits for East Helena.

EPA's environmental enforcement program worked to ensure liable parties implemented response actions and corrective measures at the East Helena site. EPA enforcement staff proactively and creatively secured funding for cleanup through a nationwide settlement with a potentially responsible party (PRP), the American Smelting and Refining Company (ASARCO), lessening the burden on taxpayers. The extensive and complicated cleanup of over 1,500 properties has been instrumental for the health of area residents, for local livelihoods, and for the protection and revitalization of the environment.

Today, hundreds of properties in East Helena remain in use where EPA has overseen cleanup. Remedial efforts at the site are ongoing. EPA continues to work with the community to incorporate future land use priorities into its cleanup decisions.

Environmental Enforcement Benefits the Community

Environmental and public health impacts affect people most significantly where they live. EPA works to provide strong, effective enforcement support to all communities. As the Agency implements environmental and public health improvements across the country, EPA is looking for new ways to assist communities in environmentally overburdened, underserved, and economically distressed areas where the needs are greatest.

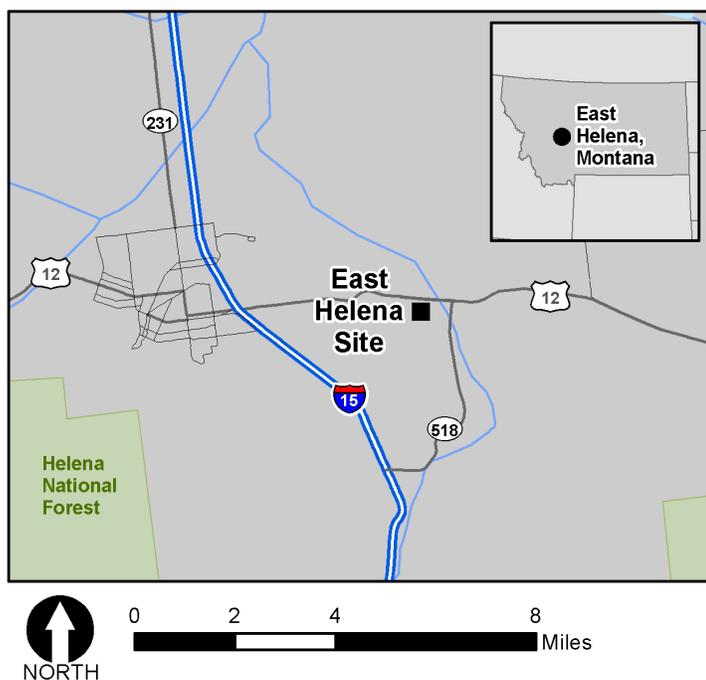
Collaborative and Proactive Partnership Between EPA and Local Government Contributes to Lead and Arsenic Cleanup Activity

EPA worked with the City and a stakeholder group to identify potential future uses for undeveloped lands. The Lead Education and Assistance Program (LEAP)'s local health professionals have led efforts to educate the community and advise EPA and the PRP on how to protect the children of East Helena from lead poisoning. The program developed into one of the most effective education and abatement programs in the United States.



During decades of collaborative efforts, EPA and its partners have kept residents safe and supported opportunities for reuse in the East Helena community.

The site's location in East Helena, Montana.



Sources: Esri, DeLorme, AND, Tele Atlas, First American, UNEP-WCMC and USGS.

What are the Health Effects of Lead in Children?

Lead can affect almost every organ and system in the human body. Children six years old and younger are most susceptible to the effects of lead.

Even low levels of lead in the blood of children can result in:

- Behavior and learning problems
- Lower IQ and hyperactivity
- Slowed growth
- Hearing problems
- Anemia

In rare cases, ingestion of lead can cause seizures, coma and even death.

Site and Community Overview

The site consists of the 140-acre former lead smelter facility and about 2,000 acres surrounding the smelter in East Helena, Montana. These 2,000 acres include the City of East Helena, residential subdivisions, rural

homes and farms, and undeveloped land. ASARCO began lead and zinc smelting operations in 1888 and continued for over 100 years. Those operations released lead, arsenic, copper, zinc, cadmium and other heavy metals into the air, soil, surface water, and groundwater across the Helena Valley. ASARCO shut down the smelter in 2001.

In 1927, the Anaconda Company built a plant next to the ASARCO smelter to recover zinc from the smelter's waste slag. ASARCO bought the plant in 1972 and operated it until its closure in 1982. ASARCO owned the smelter facility grounds and much of the undeveloped land around East Helena. In 1955, the American Chemet Corporation began producing zinc-based paint pigments at a facility next to the smelter property. Chemet still operates a manufacturing plant that produces copper and zinc products such as copper-based powders, copper and zinc oxides, and metal fungicides.

As the engine of the local economy, the smelter helped define the area's cultural heritage; the community grew up around the smelter. The State of Montana began conducting site investigations as early as 1969. Since then, federal and state cleanup efforts have addressed and continue to address the widespread contamination of soils, surface water, and groundwater throughout the facility, East Helena, and Lewis and Clark County.

Project History

1969 – 1990s Defining Site Areas, Moving Forward with Superfund and Resource Conservation and Recovery Act (RCRA) Actions

Investigations by EPA and the state found high metal levels in air, soil, surface water and dust in and around East Helena. In 1975, the Montana Department of Health and Environmental Sciences (MDHES) and the National Centers for Disease Control and Prevention conducted the first blood-lead studies of residents in the area and found some area children had high blood-lead levels.

ASARCO, the PRP, installed air pollution control equipment to reduce lead emissions. Studies by the Lewis and Clark County Health Department found that the number of children with elevated blood-lead levels had declined. Thus in 1984, EPA listed the site on the National Priorities List (NPL) which meant it was authorized to receive long-term remedial response actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund.

EPA enforcement staff negotiated a CERCLA administrative order on consent requiring ASARCO to complete a cleanup investigation, also known as a remedial investigation. The remedial investigation found that inorganic contaminants from on-site process ponds and fluids had contaminated soils, plants, livestock, surface water, sediment, and groundwater. Because of the expansive and varied impacts, EPA divided the site into five areas, or operable units (OUs), for cleanup. EPA developed a cleanup plan for these focus areas with different and overlapping timeframes:

- OU1 – Process ponds and fluids
- OU2 – Site-wide groundwater
- OU3 – Surface soils, surface water, vegetation, livestock, fish and wildlife, and air
- OU4 – Slag pile
- OU5 – Ore storage area

EPA enforcement played a critical role throughout the various response actions, negotiating several CERCLA administrative orders on consent and consent decrees so that the investigations and response actions could move forward. In turn, these documents required extensive coordination with multiple parties, including the state and ASARCO. The sections below describe enforcement efforts.

The remedial investigation of OUs 2-5 found that contamination was greatest near the smelter, including Prickly Pear Creek. These exposure risks – combined with elevated blood-lead levels in children – prompted a swift response. EPA and ASARCO signed an administrative order on consent to quickly address lead- and arsenic-contaminated soil in residential areas. Using this administrative order on consent as a roadmap for soil removal actions, ASARCO removed contaminated soil at 1,576 residential properties.

In 1998, EPA enforcement identified violations of RCRA and the Clean Water Act (CWA) at the ASARCO operating facility. Because the ASARCO facility was still operating, RCRA became responsible for all OUs except OU2, including the process ponds, slag pile and ore storage areas on the smelter property. EPA coordinated with the U.S. Department of Justice on a RCRA consent decree; it transferred the remaining cleanup of OU1, OU3, OU4 and OU5 and addressing of site-wide groundwater contamination from the CERCLA program to the RCRA program. The 1998 RCRA consent decree required ASARCO to resolve the major remaining environmental compliance issues.



Residential cleanup in progress.

Administrative Order on Consent

A voluntary and enforceable agreement under CERCLA or RCRA, signed by EPA and private parties, where the private parties agree to perform and/or pay for some or all of the site cleanup costs.

Consent Decree

Judicial agreement between EPA and the PRPs fully or partially settling a claim under CERCLA. This agreement may settle litigation or may be presented concurrently with the complaint (achieved through negotiations). The agreement may be for response work, cost recovery, or both.

CERCLA

Congress passed CERCLA, commonly known as Superfund, in 1980. EPA's Superfund program is responsible for cleaning up some of the nation's most contaminated land and responding to environmental emergencies, oil spills, and natural disasters. CERCLA establishes a comprehensive liability scheme to require certain categories of parties to conduct or pay for cleanup of these lands. These parties include owners, operators, generators, transporters, and others involved in the disposal of hazardous substances as defined by CERCLA. CERCLA's liability scheme ensures that wherever possible, PRPs, rather than taxpayers, clean up the contamination they caused (often referred to as the "polluter pays principle"). The polluter pays principle, combined with enforcement first, allows EPA to implement CERCLA to achieve long term health and environmental benefits for communities.

RCRA

Congress enacted RCRA in 1976. RCRA, an amendment to the Solid Waste Disposal Act, was designed to address the huge volumes of municipal and industrial waste generated by operating facilities. This includes hazardous waste generated and disposed of by owners and operators who contaminate land, water, and air. Under RCRA, owners and operators are liable for the cleanup of the contamination. RCRA protects human health and the environment in two ways:

1. Prevention - Preventing future environmental problems from being caused by waste.
2. Corrective Action - Cleaning up current environmental problems caused by the mismanagement of waste. RCRA Corrective Action usually takes place at facilities that treat, store, or dispose of hazardous waste and can be required through a RCRA order or permit. Corrective action can also take place while a facility continues operation and it may be required through a RCRA permit, voluntary agreement, order, or administrative or judicial action.

Highlighting Proactive Partnerships: EPA and Local Government

At East Helena, a strong federal and local government partnership has contributed to the project's success. EPA and East Helena officials, as well as Lewis and Clark County representatives, meet regularly to discuss the site. These partners proactively provide site status updates and weigh in on decisions to move cleanup efforts forward. Programs such as LEAP (see box below) have been effective because of coordination on multiple levels, such as joint efforts by the local school superintendent and EPA site staff.

LEAP

The Lead Education and Assistance Program (LEAP) helps residents living near the site prevent health risks associated with exposure to lead. LEAP is an EPA-funded and county-run program. The program offers blood-lead screening for children and other services to reduce long-term reduction of exposures to lead. To learn more, visit: <https://www.lccountymt.gov/health/environmental-services/lead-education.html>

Late 1990s – 2016 Cleaning up Operable Unit 2

Coordination among site stakeholders and the dedicated work of EPA's technical and enforcement teams resulted in agreements and consent decrees that established cleanup actions and responsibilities across most of the site.

EPA's site attorney and project manager worked together on developing and drafting the OU2 remedy. It established final soil cleanup levels for residential areas as well as cleanup levels for several other types of land uses. It also established guidelines for potential future development activities. Cleanup activities addressed a residential yard, 23 unpaved road aprons, and seven flood-channel sections.

The OU2 remedy also required the continuation of the Lead Education and Assistance Program (LEAP), administered by Lewis and Clark County's Health Department, to help ensure the protection of public health. LEAP was established in 1996 under a modification of the 1991 administrative order on consent. In 1995, EPA and

ASARCO agreed to establish and fund LEAP. Since that time, the program's local health professionals have led efforts to educate the community and advise EPA and ASARCO on how to protect the children of East Helena from lead. The program developed into one of the most effective education and abatement programs in the United States. Blood-lead level screening, education and guidance about rescreening is continuously available through LEAP. The program also implements institutional controls to reduce long-term exposure risks, oversees soil handling activities, and works with response contractors to make sure children are not living at or routinely visiting properties with known contamination. LEAP plans to host future screening events to verify that blood-lead levels continue to decrease.

Pursuing Settlement Solutions

When ASARCO filed for Chapter 11 bankruptcy, EPA's Office of Site Remediation Enforcement participated in a collaborative effort to address the company's sites across the nation, including four former facilities in Montana. A bankruptcy court approved the consent decree and settlement agreement regarding the Montana sites. The settlement agreement provided for transfer of the former ASARCO properties to a custodial trust, to be administered by a custodial trustee. The Montana Environmental Trust Group (METG), as Custodial Trustee for the Montana Environmental Custodial Trust, assumed ownership of former ASARCO properties and responsibility for cleanup, including the East Helena site. The ASARCO bankruptcy settlement provided Superfund and RCRA with funding for the site's cleanup and long-term stewardship, and established a viable ownership entity that manages and maintains former facility properties and works with the community to identify reuse opportunities for undeveloped ASARCO-owned land.

ASARCO completed most of the cleanup components of the OU1 remedy prior to the 1998 RCRA consent decree. To fulfill the remaining requirements of the consent decree, METG is performing additional investigations, implementing interim measures, and undertaking long-term corrective action at remaining source areas on the former smelter property. In addition, METG is sampling groundwater emanating from the property to meet RCRA investigation, reporting, and cleanup requirements.



A remediated residential yard in OU2.

EPA's National Bankruptcy Practice

EPA works diligently to ensure that all appropriate claims are brought before the bankruptcy courts with respect to debtors who are liable for contamination at sites of federal interest. EPA's bankruptcy practice reflects the Agency's commitment to pursue all sources of funds to ensure that responsible parties, and not taxpayers, pay for cleanup of hazardous waste.

Montana Environmental Trust Group Involvement

The Montana Environmental Trust Group (METG) is a grantor trust with government entities as its sole beneficiaries created by the bankruptcy court settlement agreement to clean up, restore and revitalize four hazardous waste sites once owned by ASARCO in Montana. METG is responsible for the management and stewardship of the lands acquired in East Helena from the ASARCO settlement. For more information about METG, visit: <http://www.mtenvironmentaltrust.org>

Finalizing Remaining Cleanup

EPA's regional enforcement staff signed a CERCLA consent decree with Chemet, the company that operates a facility next to the smelter property, to perform cleanup activities to address lead and arsenic contamination on its property. The agreement required Chemet to characterize the contaminants and clean up the area to meet OU2 cleanup goals.

Under RCRA, EPA currently oversees METG's cleanup of the former smelting site, restoring the Prickly Pear Creek stream channel and covering the consolidated contaminated soils and materials to protect groundwater.

Planning for the Future

RCRA corrective action for remaining contaminant sources is ongoing; when complete, the former smelter facility will be restored for potential future uses. Surrounding land uses include agricultural and open space areas as well as residential, recreational and commercial uses. Thanks to the comprehensive cleanup efforts pursuant to EPA enforcement settlements with the PRP and custodial trust, cleaned-up properties – both undeveloped and agricultural – will be available to support much-needed development. Community priorities include new subdivisions, commercial districts, rail-ready industrial parks, and recreation- and heritage-based uses.

Enforcement Makes a Difference

EPA's environmental enforcement program has helped make a difference in thousands of communities impacted by hazardous waste contamination. At sites such as the East Helena site, the program ensures safe and timely cleanups and pursues viable liable parties for the performance and funding of those efforts. In East Helena, Montana, EPA enforcement made the PRPs accountable for contamination and required them to fund the site's cleanup through a nationwide settlement with ASARCO, and worked with site stakeholders to identify potential future uses for undeveloped portions of the former smelter facility. EPA enforcement will continue to work with community members, local organizations, remaining PRPs, the custodial trust and other oversight agencies to keep the public informed and ensure the cleanup's long-term protectiveness.

Integrating Cleanup and Reuse

EPA worked with the City and a stakeholder group representing Lewis and Clark County and regional partners to identify potential future uses for undeveloped former ASARCO-owned land and portions of the smelter facility.

The process identified several potential future uses to help inform remedial and development activities:

1. Prickly Pear Creek restoration and greenway improvement, including restoration of riparian corridors and adding trails and trailhead parking.
2. A rail-accessible industrial park at the East Fields.
3. Mixed-use commercial development in open space areas north of Route 12.
4. Cultural heritage tourism options that integrate signage, exhibits, trails and future development areas celebrating East Helena's smelting and labor history.

Site stakeholders have been working to make these plans a reality. In 2015, restoration and realignment work began on Prickly Pear Creek.



Aerial photograph of ASARCO property, East Helena, as of March 2016, is visible top right, near the ASARCO waste slag pile (black area on right).

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