

The Montana Environmental Trust Group, LLC (METG), Trustee of the Montana Environmental Custodial Trust, was established as part of the ASARCO bankruptcy settlement and is responsible for remediating and facilitating safe reuse of the former ASARCO Smelter and surrounding East Helena lands under the oversight of the U.S. Environmental Protection Agency (EPA) and for the benefit of the United States and the State of Montana. For more information about the East Helena Project, contact Cindy Brooks, Managing Principal of METG, at 617-448-9762 or cb@g-etg.com, or visit the METG website at www.mtenvironmentaltrust.org.

The Environmental Challenge

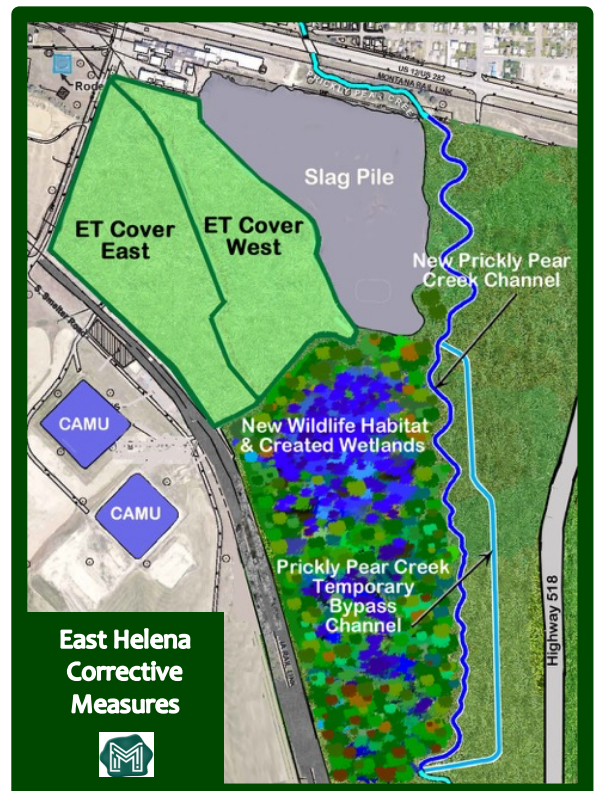
More than a century of lead smelting left a 16-million-ton pile of slag—a black, volcanic-like rock that contains impurities extracted from smelting ores to make lead bullion. The majority of East Helena blast furnace slag was processed (or “fumed”) through a zinc fuming facility where marketable zinc was extracted before molten slag was poured onto the slag pile. Fumed slag is largely chemically inert, relative to unfumed slag, because most of the metals have been removed. However, after the zinc plant was shut down in 1982, approximately 2 million tons of “unfumed” slag was placed on the top (upper lift) of the East Helena slag pile. The upper lift of unfumed slag is a significant source of contamination loading to groundwater due to precipitation percolating through the cracks and crevices in the slag pile mobilizing metals to the groundwater and contributing to the arsenic and selenium plumes migrating off-site. In fact, the upper lift represents an estimated 75% of the source of selenium loading from the slag pile to groundwater.

Former ASARCO Smelter



The Cleanup Solution

Between 2015 and 2019, METG implemented three interim corrective measures to address contamination in soil, surface water and groundwater at the East Helena Site: (1) the South Plant Hydraulic Control (including Prickly Pear Creek Realignment) Project, (2) the evapotranspirative (ET) cover system, and (3) removal of the most highly contaminated soils that were an ongoing source of contaminant loading to groundwater. In 2020, the EPA approved the interim measures as part of the final East Helena corrective measure, along with an additional measure—grading and capping (with a vegetated cover) the slag pile—to reduce leaching of contaminants (primarily arsenic and selenium) to groundwater when it rains or snow melts.



The Recycling Opportunity

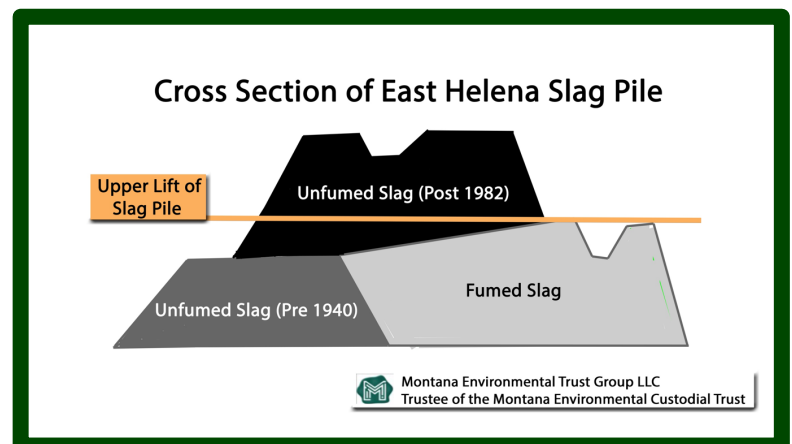
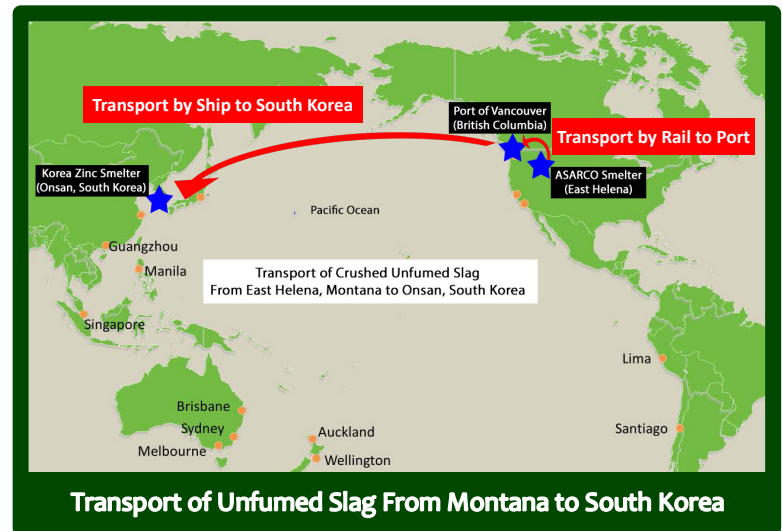
For the last 10 years, METG has been working with a local manufacturer that recovers modest quantities of fumed slag to use as aggregate for manufacturing cement. Last year, METG began working with an international metals trading company, Metallica, interested in extracting zinc and other valuable metals from the unfumed slag. Metallica's plan entails crushing unfumed slag into small enough pieces that it can be loaded onto rail cars, shipping the crushed unfumed slag by rail to the Port of Vancouver in British Columbia, loading the material onto ships and transporting the slag to the Korea Zinc smelter in South Korea, where valuable metals will be extracted from the slag and the remaining "fumed" slag will be used in manufacturing cement.

Progress To Date

Metallica has made significant progress, including: installation of the crushing and screening plant on the upper lift of the slag pile; removing and recycling the two million-gallon tanks in order to use the area to stockpile crushed slag; installation of conveyors to transport crushed slag to a rail loading area where Montana Rail Link has constructed a new rail siding. Metallica has begun crushing slag and expects to begin transporting slag from East Helena to British Columbia in October. Metallica plans to remove all 2,000,000 tons of unfumed slag—the entire upper lift—in less than five years. Once the unfumed slag has been removed, METG will regrade and cap the significantly smaller slag pile.

Benefits of Unfumed Slag Removal Project

Removal of the upper lift of unfumed slag will eliminate the largest source of selenium loading to groundwater and reduce the cost of regrading and capping the slag pile by 30%. Proceeds from the sale of unfumed slag to Metallica will be used to help pay for the cleanup the East Helena site (or other former ASARCO sites) in Montana. Finally, removal of the upper lift will reduce the height of the entire East Helena slag pile by 50%.



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