

Site Update Manila Lode



Operational Period

July 12-17, 2021

Current Situation

Manila Lode is a former mine/mill operation just outside the town of Montezuma, Colorado that ran from the 1870s into the 1910s during the Colorado Silver Boom. Although the mineral processing stopped operation well over a hundred years ago, the remnants of the operation still impact the area today.

At the site today, two large contiguous waste rock and mine tailing piles exist and present heavy metal contamination threats to hikers/recreationists, the Upper Snake River and the residence built adjacent to the site. In a site soil sampling event in 2018, Trout Unlimited reported presence of aluminum, arsenic, cadmium, copper, iron, lead, manganese and zinc. Lead concentrations in the pile range from 2,000 to 20,000 mg/kg. A subsequent Trout Unlimited water sampling event in 2019 found that much of the heavy metal contamination was reaching the Upper Snake River adjacent to the site.

Exposure routes to heavy metal contamination from the pile include a county greenspace trail traversing the site, a residence adjacent to the pile, and year-round rainwater run off/snow melt draining through the pile and to the Snake River via a wetland.

In April and May of 2021, an EPA removal team conducted a site assessment and made observations consistent with the Trout Unlimited findings and deemed the site to be in need of a removal action due to the threat to both the Upper Snake and the nearby residents.

In July of 2021 an EPA removal team was dispatched to the site to conduct removal action that will include rerouting the storm water and regrading, capping and revegetating the waste pile to eliminate heavy metal exposure routes.

Site Description

Manila Lode is located several miles south east and upstream of Keystone, Colorado along the Snake River. The mine and milling system is no longer in operation and two large contiguous waste rock and tailing piles now sit in it's place. A residence is adjacent to the piles, a greenspace trail traverses the piles, and storm water drains through the piles to the Snake River via a wetland across from Montezuma Road.

Site Objectives

- Safety of the public and response personnel is top priority.
- Maintain site security to prevent public exposure.
- Minimize or, if possible, eliminate threats to human health and/or the environment posed by metal laden rock and contaminated storm water.
- Temporarily reroute storm water drainage around the waste pile to allow for waste piles to be reworked and a permanent drainage path to be constructed without the inflow of water.
- Rework and regrade the waste piles to eliminate void spaces within the piles and to eliminate the steep slopes currently present. This will minimize water infiltration through the piles as well as mitigate erosion.
- Construct a permanent lined drainage channel to take water from the Toledo Tunnel across the waste site to the wetland area without allowing direct contact with waste materials.
- Install an evapo-transpiration cover over the waste piles and establish proper vegetation to promote stabilization and mitigate direct contact with the metal laden rock.
- Provide institutional controls, such as deed restriction or an environmental covenant.
- Provide timely and accurate communication of response information to the public, on-site media, and affected stakeholders.

Safety Message

EPA will adhere to all CDC and local recommendations pertaining to COVID-19 during the site work.

EPA will adhere to all construction and hazardous substance safety best management practices.

Operational Period Objectives

To begin the removal phase of this project several key objectives were identified for the first week, including:

- Orient staff and crew to site layout and establish safety protocols for the removal process.
- Mobilize heavy equipment, construction materials, and the EPA Mobile Command Trailer.
- Construct temporary water diversion system to move the discharge from the Toledo Tunnel around the waste piles.
- Construct an access road to allow access to the top of the waste piles.
- Begin re-grading the upper portions of the waste piles.

Current Activities

The EPA Team (ERRS crew, START Contractor, and EPA personnel) mobilized to the Site on July 12, 2021. Orientation was completed on July 13th. Heavy equipment mobilization was also completed on July 13th, including:

- 2 Excavators

- 1 Bulldozer
- 1 Front End Loader
- 1 Vibratory Roller/ Compactor
- 1 500- Gallon Water Tank/Pump Unit
- EPA Mobile Command Trailer

On July 16, 2021 both the access road across the site and the water diversion system was completed around the upper portion of the waste piles and the EPA Removal Team began work on re-grading the upper portion of the waste pile.

Planned Activities

For the next Operational Period, the removal team will be continuing with the follow activities:

- Complete the re-grading of the upper waste pile.
- Collect and segregate large boulders/rocks from waste piles for use in pile stabilization.

EPA will distribute the next Site Update on July 23, 2021.

For additional information please visit the **Manila Lode EPA Response Page** at https://response.epa.gov/site/site_profile.aspx?site_id=15048