



Argonaut Mine

U.S. Environmental Protection Agency • Region 9 • San Francisco, CA • August 2020

Cleanup Plan for a Portion of the Argonaut Mine Superfund Site Available for Public Comment

Summary

EPA has evaluated long-term options for cleaning up the Argonaut Mine site since it was added to the Superfund program in 2015. While doing that evaluation, EPA decided short-term work was needed to protect the community from contamination (pollution) from the site. This fact sheet describes options to complete this short-term work. The options, and EPA's recommended option, are included in report called an Engineering Evaluation/Cost Analysis (EE/CA). This fact sheet is a summary of the research and options in the EE/CA. EPA wants to hear your opinion on these options! Comments from the community will be accepted from August 10 to September 9, 2020.

Site History

The Argonaut Mine site is a hard rock gold mine that operated from the 1850s to 1942. The Argonaut Mining Company processed and disposed of mine materials on northwest side of present-day Jackson, California. Years of mining left portions of the site's soil with high levels of arsenic, lead, mercury and other metals known to cause health issues.

From 2013 to 2016, EPA took several actions to prevent people from being exposed to the mine waste at the site while a long-term cleanup plan was being developed. These actions included:

- removing soil from several residential yards and a vacant lot near the corner of Argonaut Lane and Pioneer Street;
- removing and replacing soil near the playing field lunch area at Jackson Junior High School; and
- covering an exposed slope with concrete to prevent dirt from leaving the area.

Separately, in 2018, the California Department of Toxic Substances Control reinforced the arch dam on Sutter Street.

Clean-up Options for the Southern Portion of the Site

EPA can do short-term cleanups (called "removal" actions) to address parts of the site when the conditions are typically simpler, more urgent and less-costly than addressing the entire site. These removal actions are usually separate from the work EPA is doing to find a long-term cleanup plan.

For the Argonaut site, EPA evaluated three short-term cleanup options:

1. leave the waste in place and/or take no action (Cost: \$0);
2. consolidate mine waste and contaminated soil on top of an existing mine tailings (mine waste) pile and put a "cap" (cover) over it with clean soil (Cost: \$10 million); or

Public Availability Session

On August 10th, EPA will give a brief presentation on the cleanup options described in this fact sheet (including EPA's recommended option), answer questions and receive comments during the Jackson City Council meeting.

To participate and receive notice for the meeting, please see the meeting agenda on the city's website or contact EPA's Community Involvement Coordinator for the site, Gavin Pauley (*contact information on back cover*).



The Headframe Area shown in the **Figure 1** (on Page 2) and described in the *Additional Announcements* section.

3. remove all waste and send it to a licensed disposal facility 200 miles south of the site (Cost: \$70.7 million).

Option 1: Leave the Waste in Place and/or No Action

The Superfund law requires EPA to consider a “leave (hazardous) waste in place” (take no action) option for every site. The option establishes a baseline or reference point to compare the other clean-up options. EPA studied Option 1 and found it would not protect human health and the environment. Option 1 also creates an unacceptable risk if someone were to come into contact with contaminated soil and water.

Option 2: Consolidate the Mine Waste and Contaminated Soil and Cap (Cover) – Recommended

EPA recommends Option 2. The option includes removing contaminated soil and mine waste from three areas near Argonaut Lane between Westview Drive and Pioneer Street. The three areas are (see map):

- the “Tailings 4” area;
- portions of the field west of Argonaut Lane; and
- the mining process area on the map.

EPA will put the contaminated soil and mine waste on the “Tailings 3” area, which is between Argonaut Lane and Sutter Street (See Figure 1). The contaminated soil and mine waste would then be covered with an engineered cap (or cover) to prevent the soil and waste from moving off site. It will also prevent the community to come into contact with it.

EPA will remove soil at different depths depending on how contaminated the soil is. EPA will mostly remove two feet of soil, and in some areas, EPA will remove as much as 25 feet. There will be further investigation and cleanup actions required.

Throughout the digging and removal process, EPA will take all steps necessary to ensure public safety. This includes reducing dust and rerouting auto and pedestrian traffic.

How EPA Would Cap (Cover) and Contain Contamination in Option 2

There are two options to cap the contaminated soil and mine waste:

(1) A High Density Polyethylene (HDPE) (high-grade plastic) liner on top of a soil layers, including a two-foot layer of clay that prevents water filtering through (See Figure 2).

(2) An evapotranspiration cover system that uses a soil layer to store the precipitation (so it does not affect the contamination) and slowly releases it through evaporation and plant use (See Figure 2).

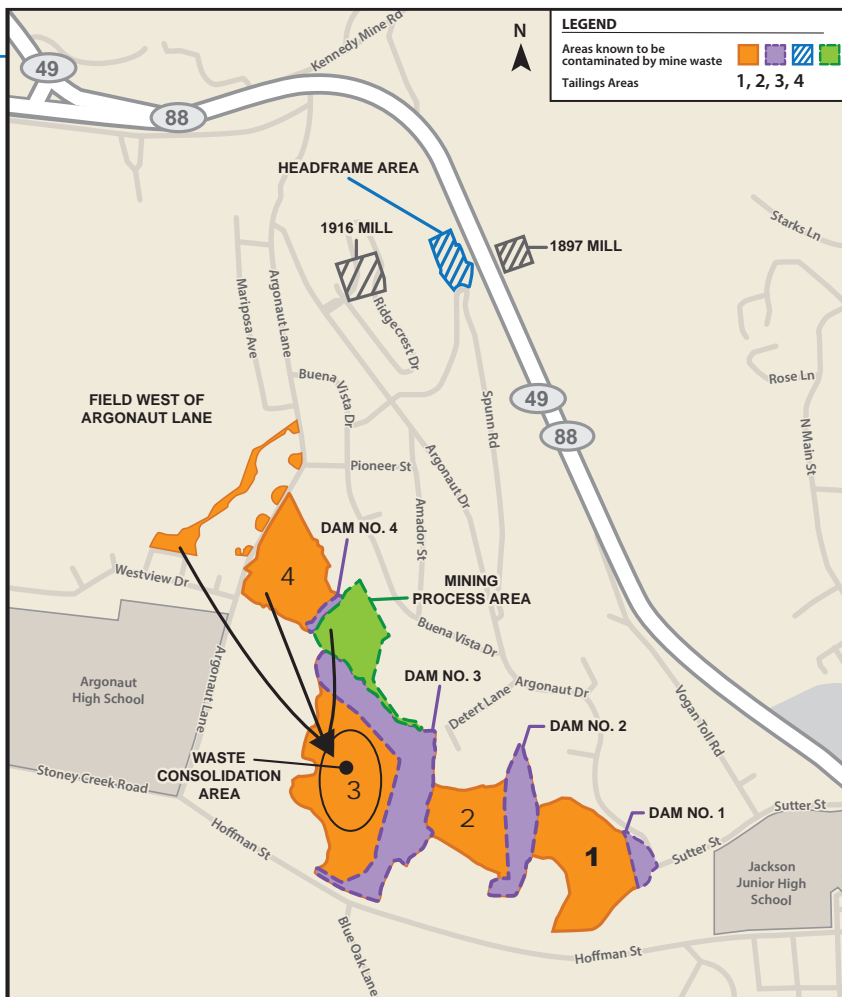


Figure 1: Argonaut Site Map

Both options include planting grass to prevent water and wind erosion, and to blend in with the surrounding countryside.

EPA prefers a soil cover option and requests input from the public and state regulatory agencies on these two options.

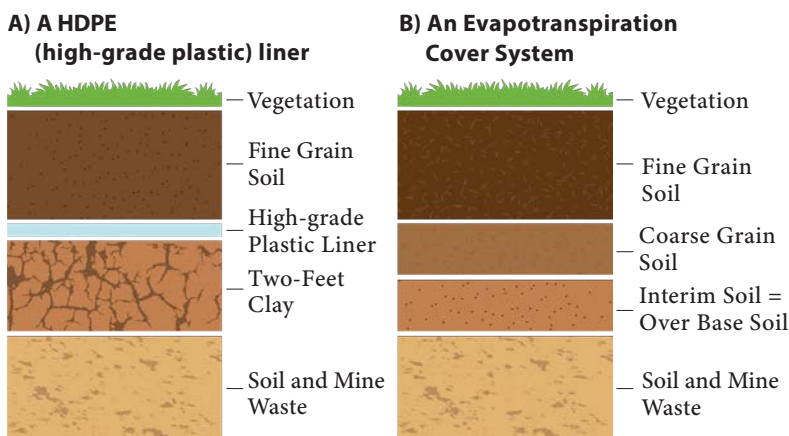


Figure 2: Capping options for cleanup Option 2: A) HDPE (high-grade plastic) Liner and B) Evapotranspiration System

Option 3: Remove Waste and Send to a Licensed Hazardous Waste Disposal Facility

The option removes all waste and sends it to a licensed disposal facility 200 miles south of the site. This option is too costly and is just as protective to the community/the environment as Option 2.

How Will EPA Select an Option?

EPA used three criteria (effectiveness, implementability and cost) to select the cleanup that best meets the needs of the project and protects human health:

Effectiveness includes how well the option:

- protects human health and the environment;
- meets federal and state environmental requirements;
- performs in the long- and short-term; and
- reduces contamination.

Implementability includes how easy it would be to build the cleanup option. To figure that out, EPA will look at:

- technical concerns;
- the availability of materials (such as effective soil/clay) to build the option; and
- whether the state regulators and community accept the option.

Cost includes how EPA can meet the criterion above while being cost efficient.

There may be further investigation and cleanup work needed to be done.

EPA will accept public comments on the cleanup options above.

- The cleanup is scheduled to start sometime during the dry season from May to October 2021.
- Final dates have not been selected and will depend on public comments and funding.

Another fact sheet will be made available before the cleanup is started. This fact sheet will provide more details on specific activities, locations and timing.

How do I learn more about these options?

An “Administrative Record”—which includes key site documents and information used to develop the cleanup options—is available for public review.

- The Administrative Record can be found in paper copy at the site’s “Information Repository.” Information repositories are created to store important project information in a centralized public location to provide easy access for community members.
- The site’s Information Repository is at:
 - Jackson Main Library**
530 Sutter Street - Jackson, CA 95642
**Please call to confirm hours/availability*
 - EPA Records Center**
75 Hawthorne Street - San Francisco, CA 94105
**Please call to confirm hours/availability*
- The Administrative Record is also found on EPA’s website: www.epa.gov/superfund/argonautmine

Is My Drinking Water Safe?

Yes! Drinking water in the City of Jackson is provided by the Jackson Water Resources Department. The city purchases treated water from the Amador Water Agency (AWA). All water purchased from AWA comes directly from the Mokelumne River. This drinking water meets federal and state standards for safe drinking water.

EPA’s cleanup work will prevent contamination from the Argonaut mine site from spreading into clean surface water and groundwater. EPA monitors the groundwater in the area to ensure water quality.



Additional Announcements

People should not enter the former Argonaut Mine property.

- It is not safe to come into contact with mine waste.
- Please follow posted warnings and talk with your children about staying away from these areas.
- If you see people near the site, notify Jackson Police Department (209) 223 – 1771 or Amador County Sheriff’s Office at (209) 223 – 6500, and the Community Involvement Coordinator for the site (415) 535 – 3725.

EPA will continue to install and upgrade fencing and signage to prevent community members from coming into contact with harmful site material.

EPA will do an additional cleanup project in the Fall 2020 for three to four weeks.

- In June 2020, EPA installed a temporary fence to restrict access to a contaminated area near the Argonaut Mine Headframe area (See Figure 1) at the north end of Spunn Road.
- Here, EPA will remove soil contaminated with arsenic and lead in the area of some of the historic buildings.
- EPA will dispose the material outside of Jackson and cover the Headframe area with clean soil.

* This work is unrelated to the cleanup options described above and should take no more than three weeks.

EPA Wants to Hear from You!

EPA values the community input throughout the Superfund process. As part of the process, EPA is preparing a Community Involvement Plan (CIP). The plan outlines EPA’s outreach and involvement efforts to the community during the site cleanup. To develop the CIP, EPA wants to interview residents about:

- your Superfund site-related communication needs;
- concerns and expectations about the cleanup; and
- how you prefer to receive information from EPA.

To participate in a virtual community interview, please reach out to Gavin Pauley (*contact information on back cover*).



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Public Input

EPA will accept comments from community members from August 10 through September 9, 2020. The community is encouraged to provide comments on the full EE/CA report, including the clean-up options described above. To comment, either visit the site website (www.epa.gov/superfund/argonautmine) or contact the site's Community Involvement Coordinator or Remedial Project Manager.

Community Involvement Coordinator:

Gavin Pauley

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Remedial Project Manager:

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*The toll-free number above will be forwarded to an internal answering system.

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