

Bonita Peak Mining District Interim Sludge Management Q&As

June 2018



Background:

Since October 2015, EPA has treated discharge from the Gold King Mine at the Interim Water Treatment Plant (IWTP) at Gladstone, Colo. The treatment process has generated a large volume of treatment solids, or sludge. EPA is establishing a new interim sludge management location at the Kittimac Tailings source area, approximately 6.5 miles northeast of Silverton, Colo., along County Road 2. EPA will mix the non-hazardous sludge from the IWTP with mine tailings located at the Kittimac source area. This will reduce the high water content of the sludge and allow it to be more efficiently managed. A secondary benefit will be that the excess buffering capacity of the sludge will immobilize heavy metals found in the tailings, making them less likely to leach into surface water and groundwater.



Interim Water Treatment Plant

Why is sludge being transported to the interim sludge management location?

This action is necessary to make room at the Gladstone IWTP for sludge that will be generated as part of ongoing water treatment at the facility. It will also bind up metals in the Kittimac tailings, thereby reducing the ability for these tailings to leach metals into the environment.

What is the volume of sludge that will be transported to the interim sludge management location?

The transfer of IWTP sludge to the interim sludge treatment location will be conducted in two phases: 1) an initial pilot study in June 2018; and 2) the bulk of the remaining work in early fall 2018. During the pilot study phase, EPA will transport approximately 2,000 cubic yards of sludge to the interim sludge management location and mix it with approximately 2,000 to 3,000 cubic yards of Kittimac tailings. In mid-September through October, EPA will haul the remaining 12,000 cubic yards of IWTP sludge to the interim sludge management location and mix it with 15,000 to 17,000 cubic yards of Kittimac tailings.

Have other alternatives been considered for managing the sludge at the Interim Water Treatment Plant?

Alternatives to the proposed activity that have been considered, including transportation of the sludge to the Bondad landfill south of Durango, would result in greater impacts to local traffic congestion,

tourism, and road maintenance in San Juan County. Due to the non-liquid nature of the sludge, it is not possible to pump or pipe the sludge to an off-site location.

How is EPA evaluating the effectiveness of managing sludge at the interim sludge management location?

EPA is using laboratory testing of the sludge and the sludge/tailings mixture to make sure this sludge management approach provides the maximum reduction in the release of metals from the existing tailings at the Kittimac source area. EPA will be conducting ongoing monitoring of surface water, groundwater and the sludge/tailings mixture itself to evaluate the effectiveness of this sludge management approach.

How will EPA ensure that placing sludge at the interim sludge management location does not affect surface water or groundwater?

The sludge contains oxides of heavy metals, such as lead, zinc, cadmium, manganese, and copper; lime, which neutralizes the acidic mine drainage and stabilizes metals; and polymers that are used to bind the particles together. EPA will be adding lime to the sludge prior to transport to firm up the sludge and to raise its alkalinity. Mixing the high alkaline sludge with the tailings will result in a cementitious reaction that will act to bind up metals in the Kittimac tailings. Because the material will be less permeable, it will be less likely to leach metals into surface water or groundwater. EPA will be placing the sludge in areas away from surface water and above groundwater. EPA will be monitoring surface water and groundwater near the interim sludge management location to ensure no negative environmental impacts occur.

How will the interim sludge management location be configured?

EPA plans to construct a berm out of the solidified sludge/tailings mixture along the private property boundary adjacent to County Road 2. The remaining sludge/tailings mixture will be stockpiled at the interim sludge management location for future transport to a permanent repository location once one has been identified and prepared.

How will the sludge be transported from the Interim Water Treatment Plant to the interim sludge management location?

Sludge will be transported by truck south from IWTP at Gladstone along County Road 110 bypass to the intersection with County Road 2. It will then be transported north along County Road 2 to the Kittimac site where it will be deposited, mixed, and bermed or stockpiled for future disposal.

How will EPA minimize impacts of this action to the local community during sludge transfer?

EPA is identifying ways to decrease any negative impacts to local residents, including reducing the speed of trucks near homes to minimize noise and using dust suppressants on all haul roads. Signs will be posted and flaggers will be stationed at appropriate locations to alert other drivers.

How will EPA minimize impacts of this action to tourism in San Juan County?

EPA plans to conduct a pilot test of this transfer process for one week in mid-June. At the request of local officials, EPA will resume transportation of sludge to the interim sludge management location after the summer tourist season (early fall) for a duration of about five weeks.

What is EPA's plan for avoiding hazards associated with transporting sludge to the interim sludge management location?

EPA will be transporting the sludge by truck. If small amounts of this material spills from the truck, it is not expected to contaminate surrounding soils to any significant degree. However, EPA will strive to limit releases of sludge from the truck. Small spills will, however, be immediately removed. Due to the elevated pH, the sludge can be irritating to the skin, so any skin exposures should be cleaned quickly with soap and water.

How will EPA protect any historic features at the source area?

A survey of cultural resources at the source area has been conducted. EPA plans to avoid areas in which historic/cultural resources have been identified, so there will be no adverse impact.

How much capacity does the interim sludge management location source area have?

The interim sludge management location at the Kittimac will be able to accommodate most, if not all, of the sludge currently stored at the IWTP site.

How will EPA ensure that roads used for transferring sludge will be returned to their original condition?

EPA is working with the county to document current road conditions. EPA plans to contract with the county to maintain the roads while sludge is being transferred and to repair any damage to the roads after the sludge transfer is completed.

How can I get more information about this activity?

Contact Kerry Guy, EPA on-scene coordinator, at 303-312- 7288 or guy.kerry@epa.gov



In May 2017, Administrator Scott Pruitt established a task force to restore EPA's Superfund program to its rightful place at the center of the Agency's core mission to protect health and the environment.



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