

Talking Points for Commenting on the Draft Supplemental EIS for the Rock Creek mine

Wastewater Discharge to the Clark Fork River:

When the underground mine is excavated, it will intercept groundwater resulting in the mine cavity filling with water. This water will be contaminated with metals that have been liberated from the rock during mining. This is the source of most of the water that will ultimately be discharged to the Clark Fork River.

The discharge will be perpetual requiring the long-term monitoring and maintenance of treatment facilities.

The amount of wastewater that will need to be treated and discharged to the Clark Fork River cannot be accurately predicted due to the large uncertainty in calculating how much ground water will flow into the underground mine. More water could be encountered if the mine intercepts saturated zones in the highly fractured rock.

After filtration to remove some of the metals, mine water would be treated using a biologic treatment system designed to remove nitrates and phosphorus. A backup system utilizing Reverse Osmosis (RO) would be available if the biological system fails, but the RO system has a limited capacity and would be unable to treat all the wastewater. As a result, there would be times when the mine would discharge untreated wastewater to the Clark Fork River.

Tell the Forest Service:

- To disclose the amount of water that could be discharged untreated to the Clark Fork River.
- Eliminate the perpetual discharge or require a bond to cover the perpetual treatment of wastewater.

Geochemistry:

The DSEIS states that the likelihood for acid generation is low, but is underestimating the true potential by ignoring certain minerals that are known to generate acid.

The geochemical sampling plan is inadequate and little new testing has been conducted since 2001.

The DSEIS is relying on limited geochemical data from the nearby Troy mine in lieu of conducting more tests, but Rock Creek is likely to have a greater potential for acid generation because it is a larger ore body with greater acid-generating material.

Water containing high levels of metals such as copper, zinc, selenium, and cadmium could leach into area springs and streams.

Tell the Forest Service:

- Before approving this mine, require more geochemical testing rather than relying on the Troy Mine to make predictions about the potential for acid mine drainage and metals leaching.

Subsidence:

Land subsidence is a serious concern because mining will take place in the proximity of lakes in the Cabinet Mountains Wilderness, and its occurrence could lead to their drainage.

Subsidence has occurred on several occasions in similar geology at the nearby Troy mine, leading to the mine's eventual closure.

The DSEIS underestimates the potential for subsidence at Rock Creek by relying on a report from the Troy mine that did not predict repeated episodes of subsidence.

Tell the Forest Service:

- To demonstrate that subsidence will not occur at a scale that would damage overlying wilderness lands and lakes.

The Tailings Impoundment:

Tailing would be deposited as a wet paste in an impoundment located next to the Clark Fork River. The impoundment would contain 100 million tons at the completion of mining, covering approximately 300 acres and rising to a height of 300 feet.

Most modern underground mines place a majority of the "paste" tailings back into the mine cavity. This option has been removed from consideration due to the cost to the company. Placing the tails underground would greatly reduce the amount stored on the surface, thereby reducing seepage of metals to ground water and the risk of an impoundment failure.

The method of tailings dam construction chosen for this sizeable impoundment located next to the river is unsafe. The upstream-type dam construction, which has been chosen, is susceptible to failure. This same design was used at the Samarco Dam in Brazil that recently failed. Further risks are inherent due to the clay layer beneath the area where the impoundment is proposed. This same type of clay layer led to slippage of the Mt. Polley Dam.

The seismic safety calculations for the proposed dam structure are inadequate. Montana law requires use of the 10,000-year event for use in seismic safety calculations for tailings dams, yet a seismic safety analysis using the 2,500-year earthquake has been accepted as adequate.

The location of the impoundment next to the river, the refusal to back fill, and unsafe dam construction make this wholly unacceptable.

Tell the Forest Service:

- Require the company backfill the mine tailings into the mine cavity.
- Insist that a downstream-type dam construction be used.
- Move the impoundment away from the Clark Fork River and Rock Creek.
- Use the appropriate seismic safety analysis.

Tailings Seepage:

Contaminated seepage from tailings will enter groundwater below the tailings impoundment. Pump back wells will capture some, but not all of this water.

The DSEIS admits that there is no accurate estimate of how much water from the tailings would actually drain into the underlying groundwater.

In 2006, a Montana state court revoked the permit to discharge ground water contaminated with arsenic from the tailings impoundment because arsenic is a carcinogen.

Now, the Draft SEIS states that a clay layer beneath the tailings area will adsorb the metals in the contaminated water, including arsenic, cadmium, antimony, aluminum, silver, copper and lead, but there is no evidence is presented that this layer actually has the capacity to adsorb a significant amount of metals.

In addition, the SDEIS states that the clay layer would be removed to prevent tailings impoundment failure that can be caused when impoundments are built on top of clay.

Tell the Forest Service:

- The calculations used to support the hypothetical adsorption of metals by a clay layer should be provided.

Effects on Streams:

Many of the streams and lakes in the wilderness rely on groundwater recharge.

The largest effect of the proposed project on hydrology would be the potential for lowering stream flows by the diversion of groundwater by the mine.

The most pronounced impacts would be to the high elevation portions of headwater streams in the wilderness. The DSEIS fails to disclose impacts on these headwaters streams, including East Fork Bull River, Copper Gulch, and the East and West Fork Rock Creek.

The mine plan calls for allowing the underground mine void to drain freely at closure resulting in a perpetual discharge of water to the Clark Fork River, and virtually ensuring that water needed to recharge wilderness streams and lakes will be continuously diverted.

Impacts to Mountain Lakes:

The DSEIS claims that Cliff Lake will not be affected by the predicted regional dewatering that the mine will cause. The DSEIS also dismisses dewatering impacts to St. Paul Lake, stating that it will be difficult to determine how much the lake's water fluctuation is due to natural variation. In doing so, the contribution of groundwater, especially to Cliff Lake, is being ignored.

The modeling conducted to predict impacts to Cliff Lake fails to consider the diversion of water from springs and seeps that naturally charge wilderness lakes.

Not enough information is actually presented to be able to predict the extent of dewatering on wilderness lakes.

Tell the Forest Service:

- The DSEIS should be withdrawn until sufficient data to predict impacts on the wilderness streams and lakes has been collected.

Impacts to Bull Trout:

Bull trout will be impacted by the introduction of sediment to Rock Creek during construction, the dewatering of streams critical to spawning and rearing, and the risk of metals contamination.

The most important streams in the Lower Clark Fork Bull Trout Recovery Area are the very ones that will be impacted by dewatering, including the East Fork of Bull River and the East Fork of Rock Creek. These same streams also will be dewatered by the Montanore mine.

Tell the Forest Service:

- The SDEIS should include a cumulative effects analysis of the impacts to bull trout from both the Rock Creek and Montanore mines due to dewatering of bull trout streams.
- The company should be required to do a valid assessment of the sources of road sediment and mitigate for sediment delivery to Rock Creek before they start generating more sediment.

Impacts to Grizzly Bears:

The Cabinet-Yaak Ecosystem grizzly bear population is one of four remaining populations of the listed species, and is essential to long-term survival and recovery of grizzly bears throughout a significant portion of its range in the United States.

The population is estimated at 30 to 40 bears, putting it at “high risk for extinction.” The Cabinet Mountains section, where the Rock Creek Mine would be located, supports a population of 15 or fewer grizzlies based on the most recent reliable estimate.

The mine would destroy more than 400 acres of habitat and could disturb more than 11,000 acres of habitat, but would only require mitigation for 2,450 acres.

The mine would increase human-caused mortality risks to bears, especially from poaching.

Tell the Forest Service:

- The DSEIS should account for the cumulative impacts of the Rock Creek and Montanore mines on the small grizzly bear population in the Cabinets.