



Standard Mine Technical Advisory Group

July 17, 2010

Ms. Patricia Courtney
Community Involvement Coordinator
EPA Region 8 – 8 OC
1595 Wynkoop St.
Denver, Colorado 80202

Subject: SMTAG Comments on the Proposed Plan

Dear Ms. Courtney,

This letter conveys the SMTAG's review of the Proposed Plan for the Standard Mine Site, Gunnison County, Colorado. The following review is outlined by page number and section as shown in the Proposed Plan. Through our review we found only the items listed below as issues for further explanation, correction, or improvement.

General Comments:

The EPA summarizes the Human Health Risk Assessment by stating that children engaged in all-terrain vehicle (ATV) riding at the site were at risk from manganese inhalation before any cleanup activities, and that cleanup activities completed at the site have resulted in no human health risk. In the past, the SMTAG has expressed concerns about the limited data used to determine the main source of the human health risk – the inhalation of dust generated by ATVs. The EPA defended the use of these data as sufficient. Despite this unresolved disagreement, we concur with the EPA's human health risk assessment at this point because of the highly conservative nature of the risk assessment.

The EPA summarizes the ecological risks as (1) Elk Creek water toxic to aquatic organisms, (2) Elk Creek sediment, and to a lesser extent, Coal Creek sediment toxic to aquatic organisms, and (3) Standard Mine site sediments toxic to plants and soil invertebrates. The EPA states that it is these risks that are dictating further site cleanup. We concur with this assessment.

The SMTAG anticipates that Phase 1 alternatives alone may not meet the RAOs and therefore Phase 2 may eventually be required to achieve the RAOs. We believe the alternatives selected are technically feasible.

Specific Comments:

p. 3 - Downstream Surface Water and Sediment. The *Proposed Plan* states "It is difficult to segregate naturally high metal concentrations that are expected to occur in this highly mineralized area from mining impacts because Elk Creek forms within the Standard Mine site. Even the most upstream sample location in Elk Creek contains elevated concentrations of the site contaminants."

All of the water quality data presented by the EPA have clearly shown that metal concentrations are much higher in Elk Creek downstream of the main Standard Mine discharge (Level 1) than above this discharge; therefore, we can "segregate", or distinguish, the mining impacts caused by the Standard Mine at least at Level 1 where the bulk of the loading to Elk Creek occurs. Unless the EPA can document the loading only from mining related sources upstream of Level 1 then all mineralization in this area should be considered mine related and addressed through Alternative 11.

p. 4 - Downstream Surface Water and Sediment. The EPA states that "There is a small amount of sediment in Elk Creek."

The term "small" is a relative term and could minimize public's impression of the impacts from contaminated sediments at this site, which are considerable and still lead to toxicity downstream of the site.

It should be noted that some of the alternatives will reduce or eliminate the addition of metals to the Elk Creek and Coal Creek sediments, but none of the alternatives addresses the existing contaminated sediment in Elk Creek and Coal Creek. We can expect that the contaminated sediments in the creeks will continue to be a source of metal contamination for a long period of time. Source areas for sediments (i.e. waste rock and tailings) have been minimized and therefore the introduction of contaminated sediments are likely to be less problematic in the future than water quality impairments if natural flushing disperses the contaminated sediments currently found in the stream. How long this process will take is unknown and therefore should not be minimized.

The RAOs address reductions of "sediment loading" in Elk Creek and Coal Creek – does this mean reduction of metal addition to the sediments from contaminated water, or reduction of metal loading from the sediments to the water?

p. 5 = Surface Water RAOs. The EPA specifies remedial action objectives (RAOs) of reducing metal concentrations in the waters and sediments of Elk and Coal Creek "to the extent practicable". Previous discussions between SMTAG and the EPA addressed a specific point of compliance for water quality standards in Elk Creek based on the reach determined to be habitable for trout.

We would like further clarification about the omission of the point of compliance in the surface water RAOs and in the ROD.

The surface water RAOs also address metal concentrations in Coal Creek at the Town of Crested Butte's drinking water intake, that the metal concentrations at the intake "attributable to the contamination from Elk Creek" do not exceed drinking water quality standards. Additionally, the EPA has not collected sufficient data to accurately attribute the source of the metals at the drinking water intake to the various upstream sources (Coal Creek upstream of Elk Creek, Elk Creek, and numerous tributaries, particularly those draining the iron fen and gossan). The monitoring plans for the preferred alternatives (p. 10 and beyond) do not including any sampling in Coal Creek. Please elaborate on how water quality in Elk Creek will be used to determine achievement of the surface water RAOs without sample sites in Coal Creek. Without samples in Coal Creek it would be difficult to

attribute metals loading to other sources within the watershed if exceedances are found at the Town's diversion.

p. 5, Alternative 1 No Action and Alternative 2 Institutional Controls. The SMTAG strongly opposes Alternative 1 since it will not lead to the achievement of the RAOs. The SMTAG is supportive of institutional controls at the site in conjunction with additional alternatives. For these first two alternatives, the EPA should state specifically the ways in which these first two alternatives are insufficient in terms of effectiveness. The ineffectiveness of these alternatives may be considered obvious to the EPA and readers familiar with the site, but specific statements of how these alternatives would not lead to achievement of the RAOs would be useful to readers not familiar with the site. Some of these factors are presented on p. 7 at the end of the section "Overall Protection of Human Health and the Environment"; presentation of these factors with the alternatives would establish the comparisons of the alternatives more clearly.

The EPA identified Institutional Controls as one of the preferred alternatives (p. 10, Phase 1 – Source Control) for source control. Institutional controls might include fencing and signs. Because the Elk Creek watershed hosts a trail that leads to the Standard Mine site, we request that EPA consider institutional controls that would enhance recreation in the Elk Creek watershed and not limit recreation. For example, we would suggest institutional controls (signage) that (1) allow hikers, mountain bikers, and ATV riders to pass through or around the site to connect to other trails in the vicinity, (2) explain the mining history of the site, and (3) explain the need for remediation at the site. If the human health risk of the site is already sufficiently low, such access should be possible. This kind of access would improve the public's understanding of the need for such cleanups and limit site disturbances. Typical institutional controls (fences, warning signs) would result in a missed opportunity for enhanced public understanding.

Page 5 – Alternative 3 – The SMTAG supports the use of passive water treatment in the phased approach outlined in the *Proposed Plan*.

Page 6 – Alternative 4 – The SMTAG opposes alternative 4 due to administrative hurdles and possible future uncertainties of the operators which could affect the long-term operation of this facility.

Page 6 – Alternative 5 – The SMTAG opposes scenarios in which untreated "water could be released to Elk Creek during spring runoff when the impacts would be lower than during other months". The periodic release of metal-contaminated water from the mine is undesirable at any time because release of metal-contaminated water will continue to load the sediments with metals, and release in the spring may increase exposure of aquatic organisms at a critical time in the development.

Page 6 – The SMTAG opposes Alternative 5A, an impermeable bulkhead. The SMTAG supports option 5B, a flow through bulkhead. The selection of an impermeable bulkhead would require the EPA to accept some level of risk associated with the future flow-path of the mine pool. In the best case scenario, the future flow path would return to pre-mining fault dominated flow paths. In the worst case, future flow paths would result in resurfacing of stored water in an area which would put the Town of Crested Butte's drinking water supply and other uses for Elk and Coal Creeks at risk.

Page 6 – Alternative 7 – The SMTAG supports the use of Alternative 7 in the phased approach outlined in the *Proposed Plan*.

Page 6 – Alternatives 8, 9, 10 – The SMTAG supports the EPA's preferred alternatives as detailed on page 10 and 11. Currently, the preferred alternative omits the use of alternatives 8, 9 and 10 from

consideration in Phase 1. However, the SMTAG requests the EPA consider the use of alternatives 8, 9 or 10 should the water quality monitoring conducted after the implementation of Alternative 7 indicate the passive water treatment system (Alternative 3, Phase 2) would be insufficient to achieve water quality standards at the point of compliance. If modeling for Phase 2 indicates existing water quality standards would not be achieved the SMTAG requests that all alternatives, including 8, 9 & 10 be reconsidered. We expect the current phasing to be viewed as a sequential process and should the RAOs not be met through Phase 1 and 2 we would expect the EPA to enter a new phase where all alternatives are reconsidered.

Page 9 – Alternative 11 – The SMTAG strongly supports the implementation of Alternative 11. Any efforts to improve water quality upstream of Level 1 will expand the assimilative capacity of Elk Creek considering the expectation of mineralized discharges from the passive water treatment system.

Page 11 – Pilot Passive Treatment System - The language “a determination is made regarding whether Phase 2 is necessary” is vague. During the drafting of the Record of Decision (ROD) the SMTAG request specific language indicating what criteria triggers Phase 2. These triggers should include a specific point of compliance, timelines, numeric water quality standards, and achievement of these standards year-round. Additionally, all references to “WQS” should reflect the EPA’s intention to achieve current water quality standards.

Should you have any questions please contact me.

Sincerely,
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