

**EPA Comments on the
Draft Engineering Evaluation/Cost Analysis, Red Devil Mine, AK**

General Comments:

1. The discussion of the implementability of each alternative should include a short statement as to whether the alternative can be implemented with one field season or not. This issue is addressed during in the comparative analysis but should also be discussed during Chapter 4, Early Action Alternatives.

Response: For this EE/CA, it has been assumed that each action alternative can be implemented in a single construction season. The text has been appropriately modified.

2. The subsection of the evaluation of the alternatives based on the alternative's ability to reduce the toxicity, mobility, or volume of the contaminated material through treatment, overlooks the "through treatment" part of the evaluation. None of the alternatives involve treatment. The evaluation should acknowledge this. Language such as following should be added to the text, "This alternative would not reduce the toxicity, mobility, or volume of the contaminants through treatment; however, it would prevent the spread of contaminants from the site since the stockpiled material will be covered."

Response: "Through treatment" has been added to the text as appropriate and a distinction that a reduction in mobility will be achieved albeit that treatment is not the reason.

3. While the risk assessment is thorough, there should be a concise statement at the conclusion of the human health assessment clearly stating that the site poses an unacceptable risk. For example "from the soil and sediment "X" number of samples were collected. The mean (or UCL) value for the main contaminants of concern, As, Sb, and Hg, were A, B, and C, respectively. These concentrations are greater than the risk based screening concentrations for As, Sb, and Hg which are R, S, and T, respectively, for soil and/or sediment. Thus action is warranted to address this media long the Red Devil Creek." The same approach can be used for the eco-risk discussion if applicable.

Response: The EE/CA was significantly revised and now includes a new section "Basis for Early Action" in Chapter 2. New text in this section states that site media pose unacceptable risks. However, as discussed during comment resolution, human and ecological risks are not driving the scope of the removal action; the driver for the scope of the removal is tied to elimination or reduction of metals transport from the site into the Kuskokwim River.

4. This reviewer understands that excavations in the Red Devil Creek may not remove all the contamination present since there is a need to retain a gradient to the creek so that it will flow naturally. Given that contaminated material may remain in the stream bed, was any consideration given to lining the stream bed with concrete cloth to prevent migration of that material? If not, why not?

Response: While the first two alternatives will provide the described migration barrier, for Alternative 4, a barrier was not considered because it would impede future site work associated with the implementation of the final remedial action remedy. Furthermore, the downstream sediment trap included in Alternative 4 serves the same function as a concrete liner without complicating the final remedial action.

5. There needs to be more specific discussion of the ARARs that apply to each alternative in the EE/CA. This discussion should also state what ARARs won't be met and why it is not practicable to meet them.

Response: The ARARs table in Appendix B was revised to address this comment.

6. As stated above, the Evaluation of Alternatives Section needs to have a more robust discussion of ARARs. In particular, from the analysis of each action alternative, it seems clear that CWA 404(b)(1) guidelines and impacts to the aquatic environment from the removal action are not being considered since the EE/CA does not describe such impacts resulting from each alternative. None of the alternatives discuss potential compensatory mitigation from the permanent and/or temporary loss the dewatering and dredging would cause. For example, Alternatives 2 and 3 remove the substrate necessary for recolonization of benthic invertebrates as well as any other impacts that installing a concrete lining or culvert would have on aquatic species residing in the stream bed. Deferring compensatory mitigation until implementation of the complete remedy is an option, but the amount of mitigation should be calculated based on the final design and implementation phase. If implementation is deferred, be aware more mitigation can be required the longer the period of loss exists.

Response: Compliance with action- and location-specific ARARs was added to the table in Appendix B. The proposed alternative for early action will not impact wetlands, either through removal of wetlands or disposal of "dredged or fill material" into wetlands. Therefore, CWA 404(b)(1) does not directly apply to the early action; however it will be evaluated as part of the FS for the final remedy.

Specific Comments:

1. P. 3-1, Section 3.1, 1st parag., 2nd sentence. It is recommended that the sentence be rewritten to read; "The early actions . . . the ongoing transport of contaminated material that is sloughing from the banks of Red Devil Creek and then migrating to the Kuskokwim River." The purpose of the recommended language is to focus on the contaminated material regardless of whether it is sediment or soil.

Response: The change was made.

2. P. 3-2, Section 3.2, 1st parag. The first full sentence should be rewritten to read; “The primary RAO selected for the site is to minimize the migration of tailings from the source into the Kuskokwim River.

Response: The change was made.

3. P. 3-2, Section 3.2.1, 2nd parag., 1st sentence. There is some confusion regarding the discussion of risk-based cleanup levels in this sentence and the text in Section 2.5.1.5 which seems to state RBCL were used to develop RAOs for the EE/CA.

Response: The majority of the risk section has been deleted, which should provide the requested clarity.

4. P. 4-3, Section 4.1.2, 1st parag. The discussion of the liner/cover preventing the migration of contaminant is not clear whether the migration refers to the dissolved phase, solid phase or both. This comment applies to Alternatives 3 and 4 as well. The text should be revised to clarify this.

Response: the text was revised to state that both the solid and dissolved phase contamination is addressed.

5. P. 4-3, Section 4.1.2, 3rd parag. Toward the end of this paragraph it is stated that the stream will be pumped around the construction zones while earthwork is being performed. It should be stated how the water will be conveyed back to the creek or river. Will it be in a culvert, a pipe, allowed to flow overland, or what?

Response: The water will be rerouted back into the creek. The text was appropriately modified.

6. P. 4-4, Section 4.1.3, 1st parag. If known, the amount of material to be excavated to install the culvert should be stated. Will the excavated material be stockpiled on site or returned to the excavation?

Response: Excavated material will be used as backfill to raise low areas as needed. Excess material will be stockpiled. The text was appropriately modified.

7. P. 4-6, Section 4.1.4, 1st parag. The rationale for only partially excavating the tailings pile to a depth of six to seven feet should be provided.

Response: Additional information was added to the text.

8. P. 4-7, Section 4.1.4, 1st full parag. Some additional details describing how the sediment trap will work should be included in this paragraph. It is not clear if the fines that are transported in the creek water pass through the settling pond and then on to the Kuskokwim River. The text states that coarser material will settle out but doesn't discuss the fate of the fine material.

Since this alternative has the potential to leave contaminated material in the newly excavated creek bed, the fate of the fine material needs to be discussed.

Response: Some fines will pass through the sediment trap. The text has been modified.

9. P. 6-5, Section 6.2.1, 1st parag. The text states that Alternatives 2 and 3 would have to be removed in order to implement the final site remedy. To this reviewer, the text implies that a final remedy has been selected. But, of course, this is not the case. The text should be revised to indicate these alternatives are less compatible with any future final action.

Response: The text has been modified accordingly.

10. P. 6-5, Section 6.2.2, 1st parag. It is not clear why one would need a permit for a CERCLA action. It is recommended that “to obtain necessary permits and” be deleted from the text.

Response: Agreed, the text has been deleted.

Appendix B, ARARs and TBCs

11. Similar to the comments on the Feasibility Study there needs to be a more detailed analysis of the ARARs. A table indicating which ARARs apply to which alternative should be included. In addition, there should be more discussion of how ARARs will be addressed. It is recommended that in this appendix or in the evaluation of alternatives, the EE/CA have a table with one axis being the specific ARARs and the other axis be the alternatives being developed with some brief text describing how the alternative would address the ARAR. See EPA’s comments on the draft feasibility study for more specific details on this issue and the recommended tables.

Response: The ARARs table has been modified to provide additional detail associated with the analysis.

12. In general, it is best if citations to federal or state statutes or regulations are more specific to the portion of the regulation that contains the environmental standard, criteria, or requirement so that it is clear what the requirement, standard, or criteria to be met is.

Response: The ARARs table has been modified to provide additional detail associated with the analysis.

13. Most of the guidance documents and other reference materials listed in Table B-1 are related to how to assess risk or how to select a remedy. They are not ARARs and most do not meet the definition of a TBC either, because they likely don’t provide any guidance on how to implement one or more alternatives, thus, the references should be deleted from the table. TBCs generally are only non-promulgated guidance that provides information or some

other method that helps implement the remedy that is selected. The only exception may be if one is using literature-based screening levels for cleanup standards.

Response: Agreed, Table B-1 has been modified to address the comment.

Chemical-specific, Federal

15. RCRA hazardous waste definition (first ARAR listed) – the contaminated soils/tailings that fail TCLP if managed beyond the Area of Contamination versus taken off-site as BLM states, require compliance with relevant RCRA requirements. Thus, it is a characteristic waste if the material is managed outside of the AOC, i.e. material is excavated and moved outside of and then moved back into, the AOC.

Response: The majority of chemical –specific ARARs were removed from the table.

15. Why is the Safe Drinking Water Act not cited as a federal, chemical-specific ARAR for groundwater and surface water cleanup standards when both resources are a potential drinking water source?

Response: This is a removal action and groundwater and surface cleanup standards are not applicable for the actions being developed.

16. If more stringent than state water quality standards, federal recommended ambient water quality criteria issued under Section 304(a) of the CWA are relevant and appropriate to addressing releases to surface waters (see Section 121(d)(2)(A)). These regulations should be compared to determine this.

Response: This analysis will be completed as part of the FS.

Chemical-specific, State

17. If more stringent than federal SDWA, Alaska Drinking Water Standards are likely relevant and appropriate requirements, not TBCs.

Response: See Response to Comment 15.

18. It is not clear how Alaska Regulations 18 AAC 74 are TBCs for this action. More discussion is required.

Response: See Response to Comment 15.

Location-specific, Federal

19. The Magnuson-Stevens Fishing Conservation Act requires consultation with NMFS if Essential Fish Habitat may be adversely affected by a response action. If Red Devil Creek is Essential Fish Habitat covered by the Act, it may be an ARAR.

Response: The MSFC Act will be added to the list of ARARs in the final EE/CA.

20. Federal Land Policy and Management Act is primarily a land use law, and, as described in the chart, sounds procedural. ARARs are “substantive environmental standards, criteria, or requirements.” What requirement in this act is considered ARAR for this removal action? While reasonably likely future land use is considered in determining the level of cleanup in the remedy decision-making process, that doesn’t make the local land use ordinance an ARAR.

Response: FLPMA was removed from the list of ARARs.

21. The General Mining Law of 1872 is not ARAR and should be removed from the ARAR list. See above for how land use is considered in the remedy decision-making process.

Response: This law was removed from the list of ARARs.

22. Red Devil Creek is waters of the US, correct? Is it an “anadromous water body” under Alaska Department of Fish and Game Anadromous Fish Act? If so, why is this law not applicable to the removal action?

Response: This act was added to the list of ARARs.

Action-specific, Federal

23. CWA – NPDES. More than one acre will be disturbed by the removal action excavation, correct? If so, the substantive requirements of the construction stormwater general permit likely will be applicable as well as any more stringent control requirements determined necessary for protection of human health and the environment.

Response: The early action construction contract will include provisions for compliance with construction stormwater controls.

24. Related to the previous comment, it is not clear if BLM has looked at the substantive requirements of the Construction Stormwater General Permit and whether their intended BMPs for the excavation of the tailings and the stockpiling of the tailings comply with all requirements of that general permit. The reviewer expects that BLM should be able to comply with all substantive requirements of that ARAR. If that is not the case, an explanation should be provided.

Response: See response to comment 23.

25. CWA – Section 404 – EPA disagrees with the description of how and why Section 404 and particular the 404(b)(1) guidelines, are ARARs. There is no requirement to consult with the Corps (although you may choose to use their expertise). Below is the description of the substantive environmental requirements of Section 404 for CERCLA response actions:

“Regulates discharge of dredged or fill material into navigable waters of the US, including wetlands. Requires that if there is no practicable alternative to impacting navigable waters of the US, then the impact must be minimized and unavoidable loss must be compensated for through mitigation on-site or off-site.”

Response: The language above was integrated into the ARAR table.

26. CWA – Water Quality Standards should also cite Section 304(a) of the statute. See EPA’s comment regarding National Recommended Water Quality Criteria published under Section 304(a) if more stringent than promulgated state WQS.

Response: Section 304(a) will be cited in the final EE/CA.

27. Many of the RCRA ARAR conclusions that are based on whether the material is taken off-site are not accurate. If hazardous waste is taken beyond the Area of Contamination such waste must comply with RCRA, i.e. the site and the AOC are not necessarily the same. If characteristic waste is managed and disposed of on-site but outside of the AOC, treatment and disposal requirements in RCRA likely will be applicable ARARs. Even if some regulations may not be applicable, they may be relevant and appropriate.

Response: BLM acknowledges the AOC definition and intends to comply with the intent of CERCLA in handling waste materials at the site.

28. Surface Mining Control and Reclamation Act is not an ARAR and should be removed from the chart.

Response: The SMCRA was removed from the table..

29. NEPA is never an ARAR. CERCLA alternatives analysis and public participation requirements are the functional equivalent to NEPA.

Response: NEPA was removed from the table.

30. What specifically in the Alaska Oil and Other Hazardous Substances Pollution Control law is the ARAR? The description implies it is all procedure and process. If there are no substantive requirements this law should be removed from the table.

Response: This law is included because it establishes procedures to address a release of hazardous substances that could occur during a cleanup action.

31. It is understood that the cleanup levels, to the extent they are driven by ARARs, may not be met. Are there other action or location-specific ARARs that BLM anticipates not meeting and why?

Response: BLM believes all action- and location-specific ARARs can be met during and following the early action.

Editorial Comments:

1. The text contains many references to “remedial action” and “remedial goals” in describing what this EE/CA is supporting. It is suggested to replace these phrases with “removal action” and “removal goals”.

Response: The text was modified accordingly.

2. When discussing BMPs for sediment control the word is “bales” not “bails”.

Response: The change was made.

3. P. 5-6, Section 5.2, last sentence. An extraneous space and a period were added between the words “a” and “relatively”.

Response: The text was appropriately modified.