

Alaska Department of Environmental Conservation
Comments on the Draft RDM Work Plan Feb 16, 2015.

Commenter: (ADEC - Wu)

Comments Developed:

Cmt. No.	Pg. & Line	Section	Comment/Recommendation
1.	General		<p>Was a reviewed of the benthic survey report performed in the Kuskokwim area to assess if <i>Hyalella Azteca</i> is a site specific representative of indigenous benthic organisms at the Kuskokwim River? Maybe it could be more appropriate to use a site specific organism if there is a standard test for the organism.</p> <p>BLM Response: The BLM identified amphipods (families Gammaridae and Crangonyctidae) during their benthic survey work in Kuskokwim River tributaries, which indicates that amphipods are present in the middle Kuskokwim River ecosystem. <i>Hyalella azteca</i> is in the family Gammaridae. Hence, we posit that <i>Hyalella</i> is a suitable test species for the Red Devil Mine site.</p>
2.	General		<p>Bioaccumulation testing maybe warranted as predicting concentration of contaminants to upper level tropic levels was overly conservative in the RI and a control study may help the assessment. Generation of quantitative estimates of steady-state tissue residues can assist in predicting concentration to higher level topic levels for the site in particular the fish.</p> <p>BLM Response: Based on the additional comments provided by the EPA on May 13, 2015 and agreement reached during the May 28, 2015 comment resolution call, the BLM will not collect samples for bioaccumulation testing. Instead, selected sediment samples will be analyzed directly for methylmercury content to provide information on the potential for bioaccumulation of mercury for sediment. Please see BLM's response to additional comments provided by the EPA on May 13, 2015 regarding evaluation of potential bioaccumulation of mercury for Kuskokwim River sediment (Use of 28 Day Hyalella Toxicity Test vs a 42 Day Test, Mercury Bioaccumulation Toxicity Test).</p>
3.	General		<p>Some thought into determining what faction is bioavailable within the sediment could also assist in the RI assessment if the end goal is to determine a more site specific cleanup values for the sediment. (e.g. AVS-SEM testing).</p> <p>BLM Response: Please see BLM's response to General Comment #2 above.</p>

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4.	General		<p>QA QC is lacking and sampling requirements (e.g. sediment amount require) for the proposed toxicity testing.</p> <p>BLM Response: Please see BLM’s response to Anne Marie Palmieri Comment #5.</p>
5.	Table 2-4		<p>There are only 2 proposed samples for the reference location. It is recommended that enough samples are taken to perform a statistical comparison between reference, control, and area of concern samples.</p> <p>BLM Response: USEPA (2000) specifies that sediment toxicity tests be run in replicate in the lab. One can make statistical comparisons between site and reference samples if only one reference and one site sample are available. This is done by using the data for the individual replicates in each test following the statistical procedures described in USEPA (2000, Section 16). Each sediment sample collected downstream from the Red Devil Creek delta will be compared to each reference sample separately to determine if sediment toxicity downstream from the delta is elevated. A laboratory control sediment sample also will be included in the study and the lab will be instructed to also compare the site samples to the laboratory control sediment.</p> <p>Reference USEPA.2000. <i>Methods for Measuring the Toxicity and Bioaccumulation of Sediment-associated Contaminants with Freshwater Invertebrates, Second Edition</i>. USEPA Office of Research and Development, Duluth, Minnesota and Office of Water, Washington, D.C. EPA 600/R-99/064.</p>