Panel Scientific and Technical Review

(Note: Review comments will be anonymous, but public.)

Proposal number: 2001-F211 **Short Proposal Title: Keswick Reservoir Sediments Feasibility Study (Phase 1 and 2)**

1a) Are the objectives and hypotheses clearly stated?

Summary of Reviewers comments:
With the exception of 1 reviewer who was satisfied with the clarity, reviewers consistently indicated that the technical objectives were not clearly stated.

Panel Summary:
Hypotheses are clearly stated, but the objective is not necessarily testing the stated hypotheses, but the feasibility of four proposed remediation actions.

1b1) Does the conceptual model clearly explain the underlying basis for the proposed work?

Summary of Reviewers comments:
Reviews indicate that the environmental risk of scour (resuspension) of the sludge in the Spring Creek arm of the Keswick Reservoir is an atypical occurrence. This is not indicated in the conceptual model (p. 3 and 4 and Figure 2). Other reviewers were satisfied with the model describing the problem at this site.

Panel Summary:
The conceptual model presented is of the site and the reason for concern regarding metals contamination. The model does not address the stated hypotheses or any of the four alternative remediation plans.

1b2) Is the approach well designed and appropriate for meeting the objectives of the project?

Summary of Reviewers comments:
One reviewer indicated that the objective of the proposal is misplaced; the study should actually examine alternatives that mitigate scouring (mobilization) of sludge. Other reviews commented on the lack of detail in the scientific approach. In the absence of a selected remediation strategy, this is not surprising. One reviewer was comfortable with the fact that the approach involved a feasibility of potential remediation strategies.

Panel Summary:
This is a feasibility study of a remediation proposal, and is not structured around a technical approach. The chance of a natural resuspension event is extremely unlikely. There is no evidence cited that effluent from Iron Mountain Mine is impacting water quality in the Delta. Even the deliberate drawdown of the reservoir and resulting resuspension did not cause exceedance of water quality standards down gradient of the reservoir.

1c1) Has the applicant justified the selection of research, pilot or demonstration project, or a full-scale implementation project?

Summary of Reviewers comments:
One reviewer commented that the only pilot study proposed is for turbidity control for solids dewatering. Another reviewer expressed difficulty in categorizing the proposal in any of the three groups. Another reviewer was satisfied that the project involves a feasibility study to evaluate future remediation designs.

Panel Summary:
The proposal is primarily a feasibility study, and cannot be appropriate placed in any of the three CALFED categories.

1c2) Is the project likely to generate information that can be used to inform future decision making?

Summary of Reviewers comments:
One reviewer was optimistic that removal of the risk of sediment scour into the Sacramento River would provide increased flexibility of CVP Shasta operations. Given that one of four remediation actions would be selected as part of the proposal, the other reviewer was less certain of the usefulness of the information to be generated. Another reviewer felt that the feasibility study would provide useful information to select an appropriate remediation alternative.

Panel Summary:
Would be helpful in CERCLA-related decisions related to this specific site, but the likelihood that CALFED and other decision makers concerned with water quality in the Bay-Delta would benefit from this study is slim.

2a) Are the monitoring and information assessment plans adequate to assess the outcome of the project?

Summary of Reviewers comments:
Reviewers indicated that the monitoring and information assessment plans were either misdirected, sparse or unclear.

Panel Summary:
The plans are mentioned (Table 1) but the proposal is vague on how those plans would be structured.

2b) Are data collection, data management, data analysis, and reporting plans well described, scientifically sound and adequate to meet the proposed objectives?

Summary of Reviewers comments:
One reviewer was satisfied with the description provided, while the other reviewers commented on the lack of detail presented in these plans.

Panel Summary:
Description of data collection, management, analyses and publication are necessarily vague, because the selection of the remediation alternative is part of the proposed study.

3) Is the proposed work likely to be technically feasible?

Summary of Reviewers comments:
Reviewers felt that the alternatives were technically feasible, but one reviewer suggested that a reduced scope or effort may be sufficient to design an appropriate remediation strategy.

Panel Summary:
Although any of the four alternative plans are feasible, it is not clear from the proposal what criteria will be used to select the optimal alternative.

4) Is the proposed project team qualified to efficiently and effectively implement the proposed project?

Summary of Reviewers comments:
Reviewers were unanimous in their confidence that the key personnel associated are well qualified to examine the feasibility and design an effective remediation plan.

Panel Summary:
Key personnel are well qualified to coordinate the proposed tasks, but the expertise of the team is unfortunately not reflected in the proposal submitted.

5)Other comments

The reviewer ratings differ. One reviewer was not concerned that the remediation strategy had not yet been selected.

The proposal is misleading since many of the problems raised (e.g. fish kills, resuspension caused by drawdown during the 1980's) are historical and have not been observed in recent years.

CALFED should consider the possibility that if funds are provided for the proposed work, CALFED could potentially be brought into the litigation currently surrounding the Keswick Reservoir CERCLA site.

Overall Evaluation
PANEL SUMMARY COMMENTS

Because this is a feasibility study, the technical approach is not well defined. There is very little science associated with this proposal, most of the focus is administrative. This work is not well linked to CALFED Ecosystem Restoration Goals because of the absence of a clear threat of this site to Bay/Delta and upper Sacramento River water quality. Since Iron Mountain Mine is a Superfund site, CALFED funding of this proposal may violate the prohibition noted in the PSP of funding existing agency mandates. In terms of CALFED proposal requirements, this proposal may be premature until tasks 1 to 4 are completed.

Summary Rating

Excellent
Very Good
Good
Fair
Poor

Your Rating: POOR