

13 Oct 88

MEMORANDUM

SUBJECT: Iron Mountain Mine - Removal Action Status Report

FROM: Christopher C. Weden, OSC
Emergency Response Section (T-4-9)

TO: Terry Brubaker, Chief
Emergency Response Section (T-4-9)

An action memorandum to provide treatment of the acid mine drainage at IMM's Richmond Portal was approved 31 August 1988. The total project ceiling was estimated at \$805,000 and \$250,000 was subsequently obligated with a delivery order to the Emergency Response Cleanup Services (ERCS) contractor, Riedel Environmental Services (RES).

On 07 September 1988, I conducted an on-site job walk with the ERCS Response Manager, Jeff Lucas, to review the location. The goal of this removal action is to reduce cadmium and zinc concentrations in the acid mine drainage by at least 95%. This can easily be accomplished by raising the pH to approximately 8.5 and precipitating the metals. In years past, there has been an adequate supply of dilution water from the Shasta-Trinity Project to protect the beneficial uses of the Upper Sacramento River. Due to the serious drought conditions this year, however, that option does not exist.

On 08 September 1988, I met with ERCS, TAT member Steve Wolfe, and Phil Campagna of ERT to develop logistics for the response action and review treatment options. At this point we were debating whether to build a treatment system ourselves directly through ERCS or have ERCS subcontract with a company to provide a package treatment plant.

On 09 September 1988, the planning meeting was continued at the California Department of Fish and Game (DFG) office in Redding, CA. Also present were Harry Rectenwald (DFG), Dennis Heiman (RWQCB) and Remedial Contractors CH2M Hill and Stimpel-Weibelhaus. Presently, the Remedial Contractors are removing tailings piles from various locations on the site to fill borrow pits for the capping operation. The cap is the first segment of the remedial action and is intended to reduce the amount of infiltration into the mountain and consequently reduce the volume of acid mine drainage.

One key issue discussed at this meeting was on-site disposal of the precipitate. Heiman and Rectenwald noted that this operation may be subject to the California Toxic Pits Act if the precipitate exceeded the TTLC's and STLC's for the metals we would be removing. They also added that this was a special case

and that we could obtain a variance on the basis that the treatment plant is a temporary emergency measure in support of the overall Remedial Action and that the overall effect on the environment was beneficial.

The ideal location for the precipitate disposal was determined to be at tailing pile site #4, which is very close to the Richmond Portal. Stimpel-Weibelhaus was queried as to their availability to do some additional earthwork to prepare the area for our use and indicated a willingness to do so.

Subsequent to these meetings we refined the scope of work and I directed ERCS to solicit bids from subcontractors and prepare cost estimates for direct construction. This was accomplished during the week of 12 September. Concurrently, ERT conducted a treatability study of the acid mine drainage to determine optimum treatment reagents and dosing rates, taking into consideration the amount of sludge generated and the cost and availability of materials.

When I prepared the action memorandum, it was my understanding that DFG, with SWRCB funds, would take over the operation and maintenance of the treatment system once we got it up and running. Since then, DFG has advised us that SWRCB has approved \$30,000 for increasing the Slickrock copper cementation plant capacity and efficiency (to reduce the copper concentrations in the acid mine drainage) and has also put \$320,000 into a trust fund for further site operations. I have discussed the use of these funds with Rectenwald and we have developed several options for the use of these funds:

1. The State could pay a portion of the ERCS subcontracting costs either directly or indirectly by reimbursing Superfund.
2. Assist with the sludge disposal by using State trucks and drivers to move it to the on-site disposal area and/or capping the sludge disposal area when treatment is completed.
3. Providing road maintenance and snow removal.

Rectenwald will ask DFG and RWQCB management to discuss these options with EPA. I favor the latter two options and will begin development of operational and cost specifications. Assistance from our management would be appreciated.

On 19 September 1988 we remobilized and during that week began "setup". A mobile command post, power source, piping to the portal, surge and water supply tanks were delivered and installed.

On 22-23 September 1988, ERT returned to review their treatability study and the treatment options that had been prepared by RES. Four acceptable bids for package plants were received and the cost of direct construction was in the same range. At this point, I decided to go with a subcontracted package plant, using performance-based contract specs; this will put the burden of meeting the treatment requirements on the sub-

contractor. The low bidder was Balboa Pacific out of Santa Fe Springs. This option will allow more flexibility should treatment needs change, and will reduce the amount of time required for the plant to reach operational status.

On 29 September 1988, I conducted a job-walk with ERCS and Balboa Pacific to discuss logistics. We also reviewed a draft subcontract, particularly the performance standards and various stipulations. A tentative agreement was reached. Our Contracting Officer in PCMD was thoroughly briefed on the competitive bid process and assured that all of the ERCS Subcontracting terms would be met. He has since given his approval to RES to issue the subcontract and it is currently being finalized.

ERCS and I will be returning to the site on 12 October 1988 to complete final setup activities for the arrival of Balboa Pacific's mobile treatment unit on 14 October 1988. Immediately following their arrival, we will commence "smoketest" activities to insure on-line treatment by 01 November 1988, well before the seasonal increase in acid mine drainage flows. TAT will be tasked to coordinate with the RPM, Rick Sugarek and the RWQCB in developing and implementing a downstream monitoring plan to show the benefits of this action, the tailings removal and the open pit mine capping project.

Currently, it appears that this project can be completed within the currently approved ceiling. The most economical subcontract terms were obtained by allowing the cost to be tied to the volumes treated. If these volumes increase greatly beyond historical levels of flow, or if state funds are diverted to other needed projects, a ceiling increase could be needed.