

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
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16 May 2005

Mr. F. Andrew Piszkin
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Base Realignment and Closure
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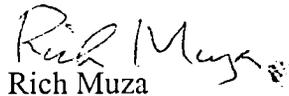
RE: Draft Feasibility Study Addendum (FSA), Operable Unit 2B, Installation Restoration Program (IRP) Site 2 Ground Water
Former Marine Corps Air Station (MCAS) El Toro, California

Dear Mr. Piszkin:

The EPA has reviewed the subject document as per your request of 28 March 2005. The FSA covers evaluation of potential remedies for ground-water contamination at IRP Site 2. We have found the FSA to be in need of additional conceptual-level information in order to fully evaluate and compare the remedial action alternatives that have been developed. We offer the attached comments.

If you should have any questions, please feel free to contact me at 415-972-3349.

Sincerely,



Rich Muza
Remedial Project Manager
Federal Facility and Site Cleanup Branch

cc Content Arnold, NFECSW SDIEGO
Gordon Brown, NFECSW SDIEGO
Frank Cheng, DTSC
John Broderick, RWQCB
Bob Woodings, RAB Co-Chair
Marcia Rudolph, RAB Subcommittee Chair

received
5/23/05

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Comments on the Draft Feasibility Study Addendum (FSA), Operable Unit 2B, Installation
Restoration Program (IRP) Site 24 Ground Water

1. Section 2.5, Page 2-35 – “The average linear velocity in the plume area is calculated at 16.7 feet per year.” For which hydrogeologic unit (ie., alluvium or bedrock) is this calculation determined? There are no references as to how the permeability and effective porosity used in this calculation were determined. It is recommended that additional background information be provided in this section.
2. Section 2.6, Page 2-35 – “...the following potential receptors were chosen to assess risk: 1) elementary-/high school-aged children (older child of 9 to 16 years) playing unsupervised in the natural resource conservation area designated at Site 2 and the surrounding area, 2) off-site hypothetical residents living at the boundary of Site 2, and 3) utility maintenance workers repairing or replacing utility lines at the boundary of the landfill.” As this FSA focuses only on contaminated ground water at IRP Site 2, it does not seem appropriate to include bullets 1 and 3 above for this assessment. As a matter of fact, in the following discussion of risk, only bullet 2 is evaluated. It is recommended that this discrepancy be addressed.
3. Section 3.2.2, Page 3-1 – Perchlorate has been detected in ground water at IRP Site 2 at levels up to approximately 20 ppb. However, perchlorate is not mentioned here as a potential constituent of concern for the site. It is recommended that the discussion address the detections of perchlorate and how this occurrence will be handled in light of the recent findings of investigations at IRP Site 1.
4. Section 3.2.4, Page 3-2 & Appendix B, Pages B1-3 & B1-4 – The remedial action objectives provided in the text here are not inclusive of those provided in the potential ARARs evaluation of Appendix B. It is recommended that this discrepancy be addressed.
5. Sections 3.4 & 3.5 & Table 3-1 – Were there any technologies and process options identified and screened but ruled out for future consideration? It is not apparent in the text and/or table here as to whether any technologies and process options were considered in the screening process detailed in Section 3.4 but excluded from future consideration. Section 3.5 and Table 3-1 only present technologies and process options that were retained for detailed analysis. It is recommended that this discrepancy be addressed.
6. Table 3-1 – The discussion under “Ex-Situ Treatment, Natural Precipitation” is confusing. This process option is presented here as an ex-situ treatment process; however, the discussions under the various criterion all look to be focusing on in-situ natural precipitation. It is recommended that this discussion be edited accordingly.
7. Section 4, General – The description of the various remedial action alternatives that are developed and evaluated are rather general, making it difficult for one to fully assess and compare the alternatives versus one another as attempted in Section 5. It is recommended

that a conceptual figure be provided for Alternatives 3 (all options), 4, 5, and 6 to provide an idea of the estimated level of effort anticipated to implement these alternatives at Site 2. Such a conceptual figure would also assist in evaluating the cost estimates provided later in the FSA. Another aspect of the various alternatives not provided here is detailed in comment 8 below. In general it is recommended that additional conceptual-level information be provided for the various alternatives in order to support the detailed analysis performed in Section 5.

8. Section 4.2, General – As stated in the text and per EPA guidance, in evaluating a remedial alternative that includes monitored natural attenuation (MNA) as a process option, the assessment should include a determination as to whether MNA can achieve site-specific remedial objectives “within a time frame that is reasonable compared to other methods”. No projections of time to achieve remedial objectives are provided here under the description of MNA and institutional controls nor are estimates given for any of the other remedial action alternatives developed and described in Section 4. In the detailed analysis of the alternatives provided in Section 5, some generalized remarks are made in regard to the time to achieve remedial objectives for the different alternatives under evaluation. In order to assess the potential for MNA as a process option within an alternative, a projection of the time frames for the various alternatives to achieve remedial objectives would be needed. It is recommended that this deficiency be addressed in the FSA.
9. Section 4.2, Pages 4-1 & 4-2 – “However, TCE and PCE daughter products such as cis-1,2-dichloroethane (cis-1,2-DCE)...” One of the organic compounds here is misspelled and should be corrected to “cis-1,2-dichloroethene”.
10. Section 4.6, Page 4-5 – This alternative is titled “ground-water containment with institutional controls”. Under containment, the goal is to impede the continued downgradient movement of a plume to potential receptors. Restoration alternatives would be operated with the intent of attaining the established cleanup goals at some future time. Within the text here it is mentioned that “it will require a long time for ground-water containment to achieve established cleanup goals.” It is recommended that this wording as well as the title of the proposed alternative be modified if the goal of this remedy is ground-water restoration as suggested in the text.
11. Section 5.1.8 & Table 5-2 – The State acceptance criterion is typically not evaluated until after the State agencies have reviewed the draft FS document. In this case an attempt is made to assess “the likelihood of state acceptance of the alternatives”. This evaluation as presented in the draft FSA is premature and should be edited as appropriate upon receiving State comments on this document.
12. Section 5.1.9 & Table 5-2 – The community acceptance criterion is typically not evaluated until after the public review process. This evaluation as presented in the draft FSA is premature and should be edited as appropriate upon receiving public comments on this document.

13. Table 5-1, Table 5-2, & Appendix C – Little detail is provided in Appendix C for the development of cost estimates for the various remedial action alternatives under evaluation. A quick look of the costs provided in the tables of Section 5 leads to confusion. For example, it is difficult to envision that the operation and maintenance of an extraction and treatment system that would be anticipated to be in place for a number of years (ie., Alternative 5) would cost but \$400k more than MNA with institutional controls (ie., Alternative 2). This example becomes even more surprising when one reviews the costs breakdown in Appendix C and sees that the estimated ground-water monitoring costs for these two alternatives which make up a significant percentage of each alternatives' total costs are but \$10K apart. It is recommended that further detail be provided in Appendix C as to the development of cost estimates for the remedial action alternatives under evaluation.