



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
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SFD 8-3

July 18, 2005

Thomas Macchiarella
BRAC Operations, Code 06CA.TM
Department of the Navy, Southwest Division
Naval Facilities Engineering Command
1230 Columbia Street, Suite 1100
San Diego, CA 92101

**RE: Draft Final Feasibility Study Report for Operable Unit 1, Sites 6, 7, 8 and 16,
Alameda Point**

Dear Mr. Macchiarella:

EPA has reviewed the Draft Final Feasibility Study Report for Operable Unit 1, IR Sites 6, 7, 8 and 16 and the accompanying Response to Comments (RTCs). We have concluded that, given that further data will be collected during the RD/RA stage of the cleanup, the document contains a sufficient evaluation of remedial alternatives, covering an adequate range of proposed cleanup goals, to go final. However, we disagree with portions of the document and would not be able to concur in a Proposed Plan or ROD that contains some of the RAOs set forth in the FS for the inhalation pathway, or that selects some of the remedial alternatives in the FS.

Our primary concern lies with the evaluation of risk, cleanup goals and remedial alternatives at Site 6. Groundwater beneath Site 6 qualifies as a Class II aquifer, although it is unlikely to be used as a drinking water source. EPA believes that any remedy for Class II groundwater that does not result in groundwater concentrations being remediated to MCLs needs to include institutional controls to protect against the consumption of groundwater and that the ICs also need to prohibit residential use of the property. We continue to believe that MCLs should be included as ARARs for the Class II groundwater, although we may be willing to agree to disagree in a ROD if adequate groundwater cleanup takes place. We believe an active remedy is necessary for Site 6 to address the threat posed through the inhalation pathway and will provide the Navy with EPA calculated risk values for exposure via inhalation to support our assertion. We have some concern with the Navy's conclusion that there are no COCs for groundwater at Site 8, and appreciate that there will be additional sampling of the groundwater, especially below the oil water separators (response to EPA comment 50). In the interest of moving forward with the OU 1 remediation, we are willing to let this FS go final as to Site 8, with the understanding that this additional sampling will be performed, and that if it is subsequently determined that some remedial action will be necessary to address the Site 8 groundwater, the same remedial alternatives and comparative analysis of alternatives for groundwater performed in the FS for the other sites within this OU will also apply to the Site 8 groundwater. We also have some

reservations about the extent and duration of institutional controls that will be applied to Site 16, but since MCLs are being used as cleanup goals for this portion of the groundwater, and we expect that an active remedy will be selected, EPA is willing to wait until the ROD to work out the details of the ICs.

With respect to the RTC, the intent of some of the EPA comments has been misunderstood, and many revisions promised in the RTC in fact have not been incorporated into the text. Given the effort, time and money it would take to issue change pages and sections to correct these mistakes, we are, as noted above, willing for this document to go final as is. However, we attach to this letter, to be maintained in the administrative record with the FS, a short list documenting the areas where the changes have not been made. These are not formal comments and we are not expecting a response.

We appreciate and support the Navy's efforts to move expeditiously toward the Proposed Plan stage and look forward to working together to select reasonable, protective remedies for the sites in Operable Unit 1.

Sincerely,



Anna-Marie Cook
Remedial Project Manager

enclosure

cc: Glenna Clark, SWDiv
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**EPA Review of Incorporation of RTCs into
OU 1 Draft Final FS, Alameda Point**

1. **Specific Comment 4:** The RTC states that the Executive Summary was revised to state that the most conservative of either federal or State of California MCLs were used as cleanup goals for drinking water; however, the Executive Summary was not revised to make this statement.
2. **Specific Comment 17:** The text of Section 3.1.2 was not revised as stated in the response to include the statement that the Regulatory Agencies believe that risk is underestimated at each site.
3. **Specific Comment 18:** This comment was addressed in part; however, Section 3.1.2 was not revised to indicate that arsenic is present above background in groundwater at Site 7 as requested. The FS was revised to state that "arsenic in groundwater is largely not detected at concentrations that are consistent with the MCL for arsenic of 10 micrograms per liter."
4. **Specific Comment 24:** The FS was revised to confirm that the detection limit for bis(2-chloroethyl)ether exceeds the preliminary remediation goal (PRG). Given that this is the case, the EPA requested that an explanation be provided as to why this contaminant would not be a concern. However, no explanation is provided.
5. **Specific Comment 29:** The text of the fourth paragraph in Section 3.2.3.1 was not revised to reflect the response to state that soil samples will be collected around and beneath the oil water separators (OWSs).
6. **Specific Comment 41:** The RTC asserts that the text is correct and that the total residential RME cancer risk for surface soil is 8E-05; however, the section in question does not refer specifically to 'surface soil', but to cancer risk from Site 7 soil. In addition, the second half of the subject sentence refers to the noncancer HI for *subsurface* soil. The total residential cancer risk for subsurface soil at Site 7 is 2E-4, which exceeds the risk management range. Furthermore, cadmium is listed as a risk driver for Site 7 soil on Page 3-22. Cadmium was listed in the Table *Risk Management Decisions for Risk Drivers at Site 7* in the previous version of the FS with a HI of 2. This value was subsequently deleted from the draft Final FS. The risk from cadmium has been handled inconsistently in both the previous version and draft Final FS Reports. Based on the information presented in the FS, eliminating Site 7 soil from consideration does not appear to be justified.
7. **Specific Comment 50:** The text of Section 3.4.3.2 was not revised as stated in the response to state that groundwater samples will be collected beneath the OWS at Site 8.

8. **Specific Comment 51:** The recommendation for monitoring groundwater for chlordane was not included in Section 8.1.1.2 or in any of the Alternatives for Site 16, so it is likely that this recommendation will be overlooked.
9. **Specific Comment 56:** The text of the bullets for Sites 7, 8, and 16 of Section 4.0 was not revised as stated in the response to state that soil samples will be collected beneath and adjacent to the OWSs; only the bullet for Site 6 was revised.
10. **Specific Comment 57:** The text of Section 5.1.1 was not revised to specify that soil samples will be collected beneath and adjacent to OWS-040A and OWS-040B; however the text still states that only the soil adjacent to these OWSs will be characterized. In addition, the text of section 5.0 was not revised as stated in the response.
11. **Specific Comment 62:** The comment was apparently misunderstood; text was modified to reflect the statement in the response, but oxygen releasing compounds were not retained. The intent of the comment was to suggest that oxygen releasing compounds be considered as an alternative to treat vinyl chloride.
12. **Specific Comment 64:** The RTC does not address EPA's request. EPA requested that the FS be revised to include a reasonable timeframe for monitoring to confirm that MCLs have been attained under groundwater alternatives that include treatment to unrestricted reuse criteria. The FS had included 30 years of monitoring for alternatives where MCLs are expected to be achieved in 3 to 5 years of active treatment. Instead of providing a rationale for the monitoring timeframe, the reference to the duration of monitoring was deleted. However, 30 years of monitoring are still included in the cost estimate. Also, there is a symbol that obscures a portion of this response.
13. **Specific Comment 65:** The original comment was apparently misunderstood and the response is incorrect. Simple groundwater monitoring is used to confirm decreases in contamination and usually involves a limited suite of analytes. Monitored natural attenuation (MNA) is a remedy that requires certain conditions (e.g., the source of contamination must no longer exist, presence of suitable microorganisms for biodegradation), a comprehensive understanding of site geochemistry, and a much greater suite of analytes to monitor changes in site geochemistry. The comment requested that the text of the second paragraph of Section 5.2.3 be revised to state that groundwater monitoring (not MNA) is a required component of any groundwater remedy.
14. **Specific Comment 66:** The original comment was misunderstood and the response is not appropriate. Human health is not protected by identifying the nature and extent of contamination. Institutional controls can protect human health. The first sentence of Section 5.4.2.1 should state, "Alternative 2 protects human health by preventing further contact with contamination present in soil through institutional controls."

15. **Specific Comment 68:** The EPA requested that the FS be revised to clarify that excavation and offsite disposal would not reduce the toxicity, mobility or volume through treatment unless treatment is conducted at the off-site facility. The FS was not changed as requested. A sentence was added which states that "If treatment at an off-site facility occurred, this treatment would further reduce the mobility and/or toxicity of chemicals in removed soils." This statement is not accurate. Excavation and offsite disposal of contaminated soil would not reduce the toxicity, mobility or volume through treatment.
16. **Specific Comment 69:** The FS was revised to state that ICs prohibit excavation and therefore will reduce the mobility of contaminated soil at the site. This is not the intent of this evaluation criterion. ICs do not include treatment and therefore cannot reduce the mobility of contaminated soil through treatment.
17. **Specific Comment 74:** The text of Section 5.7.1.1 was not changed as indicated in the response because it still only discusses specific elements of Alternative 2 and not how Alternatives 3 and 4 protect human health and the environment.
18. **Specific Comment 82:** The text of Section 6.1.1 was not revised as the response indicates.
19. **Specific Comment 96:** The original comment was apparently misunderstood and the response is incorrect. Simple groundwater monitoring is used to confirm decreases in contamination and usually involves a limited suite of analytes. Monitored natural attenuation (MNA) is a remedy that requires certain conditions (e.g., the source of contamination must no longer exist, presence of suitable microorganisms for biodegradation), a comprehensive understanding of site geochemistry, and a much greater suite of analytes to monitor changes in site geochemistry. The comment requested that the text of the second paragraph of Section 8.2.3 be revised to state that groundwater monitoring (not MNA) will be used to confirm the decrease in residual contamination. In addition, the response states that "the text was revised to indicate that groundwater monitoring is not considered a stand-alone remedy for Site 16," but the text of Section 8.2.3 refers to MNA, not groundwater monitoring.
20. **Specific Comment 98:** The response is incorrect because recent groundwater monitoring data do not indicate that there are more oxidizing groundwater conditions; the oxidation reduction potential in 2004 fluctuated widely; some values were negative; others were positive. The significance of these changes is unclear; it is possible that the field instrument was not working or was calibrated incorrectly. In addition, the dissolved oxygen readings also likely reflect instrument error since some measurements were significantly outside the expected range of values for this parameter. Since it cannot be guaranteed that oxidizing conditions will exist in the future, it cannot be assumed that MNA will be effective in reducing vinyl chloride. Therefore, it is uncertain whether

Alternative 2 would be effective in meeting chemical-specific applicable or relevant and appropriate requirements (ARARs) through MNA because it is possible that tetrachloroethene (PCE) and trichloroethene (TCE) will eventually degrade to vinyl chloride and stall at that state.

21. **Specific Comment 101:** The text was modified to describe soils not groundwater at Site 16 and the first sentence of Section 8.7.2 should state that Alternative 1 would not meet ARARs for groundwater at Site 16.
22. **Specific Comment 102:** The text of Section 8.7.3 was not modified as promised in the response to state that Alternative 2 requires a prohibition on residential use of the property.
23. **Specific Comment 103:** The response is incorrect; according to Attachment C1 to Appendix C, the time for remediation of the Site 16 plumes is not 37 years but ranges from 63 to more than 64 years. Active remediation is recommended to reduce this time.
24. **Specific Comment 105:** The RTC states that Section 3.2 of Appendix A was revised to clarify the meaning; however, it appears that the first full sentence on Page A-5 is still incomplete. The subject is missing from the sentence beginning "The pre-1994 (withdrawn from IRIS) of 0.011....".
25. **Specific Comment 111:** The costs in Table C-2D were revised to include land use controls (LUCs) for only 4 years, as requested; however, the cost estimate also includes vapor removal for the duration of the alternative (34 years), but under the unrestricted reuse scenario, vapor removal is assumed to occur only during active remediation (4 years). The cost estimate should include operation and maintenance costs only during the time period that they will actually be implemented.
26. **Specific Comment 112:** The costs in Table C-2E were revised to include LUCs for only 5 years, as requested; however, the cost estimate also includes vapor removal for the duration of the alternative (35 years), but under the unrestricted reuse scenario, vapor removal is assumed to occur only during active remediation (5 years). The cost estimate should include operation and maintenance costs only during the time period that they will actually be implemented.
27. **Specific Comment 114:** The RTC states that the total under LUCs was revised and the present value costs were recalculated, but this change was not made.

Additional Inconsistencies

- 28. Section 5.6.1.4, Reduction of Toxicity, Mobility or Volume Through Treatment, Page 5-32:** The text states that Alternative 1 “would eventually meet the RAOs due to natural degradation processes,” but since this is the no action alternative, there is no associated treatment or monitoring, so it would not be possible to verify whether degradation occurs. Further, metals do not degrade.

- 29. Section 8.3.2.2, Alternative 2 - Plume Boundary Delineation, MNA, and LUCs, Page 8-18, and Section 8.7.8, Comparative Analysis Summary, Page 8-40:** It is unclear why the text in these section indicate that monitoring and LUCs would only be required for 30 years when the model results in Attachment C1 of Appendix C indicate that it will take more than 64 years for Alternative 2 to reach the remediation goals set for Site 16.