



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
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HUNTERS POINT  
SSIC NO.5090.3

April 15, 1996

Mr. David Song  
Department of the Navy  
Engineering Field Activity, West  
900 Commodore Drive, Code 18242  
San Bruno, CA 94066

RE: Draft Engineering Evaluation/Cost Analysis Site IR-1/21:  
Industrial Landfill Groundwater Plume

Dear Mr. Song:

EPA has reviewed the above referenced document prepared by PRC Environmental Management, Inc. and submitted on March 13, 1996, and has the following comments:

**General Comments:**

- (1) A major factor in the request for revision of the draft Parcel E IR-1/21 EE/CA was the mutual decision reached between the regulatory agencies and the Navy to screen detected concentrations against the most stringent screening criteria for surface water quality. For this reason, it was agreed that the Bay and Estuary Plan Objectives were to be used **in conjunction** with Ambient Water Quality Criteria, and Regional Water Quality Control Board Basin Plan Objectives and the most stringent criteria of the three used as the screening level. Breaking the screening process into a Tier 1 and Tier 2 approach seems to defy this reasoning and statements made to justify the tiered approach are completely inadequate. [Statements on pages 32 and 33 are as follows: "The Navy wants to proceed with a removal action and incorporate regulatory requests into the decision process; therefore, has agreed to integrate bay and estuary plan objectives and eliminated the dilution/migration factor" and the subsequent statement "Therefore, the Navy believes it may not be appropriate to use bay and estuary objectives to trigger groundwater removal actions at HPA". These two sentences are basically stating that to placate

the regulatory agencies, bay and estuary numbers will be looked at as a screening criteria, but then put aside, and not used to drive any decisions regarding the groundwater removal actions.] Please come to an agreement with the Regional Water Quality Control Board as to the appropriate screening levels and subsequent decision making and then fully explain this agreement in the EE/CA. Without this background information and a clearly explained approach to deciding which contaminants pose an environmental threat, the document cannot be properly evaluated.

- (2) This removal action focuses on controlling PCBs into the Bay from IR-1/21. HPALs for groundwater are currently being calculated, and so it is difficult to determine whether concentrations of inorganics detected in monitoring well samples for this site exceed those for background conditions. Since it has been acknowledged that an evaluation of ambient conditions is beyond the scope of this EE/CA, such statements as "the spatial distribution of many metals was not characteristic of point-source-related contamination" in Section 2.7.1 and "unless strong evidence indicates inorganic compounds are Navy-related" in Section 3.1 should be deleted. Please be aware that although inorganics contamination is considered beyond the scope of this removal action, any inorganics contamination from IR-1/21 and any necessary remedial action will have to be addressed at a later date.
- (3) The screening criteria upon which removal action decisions for this site were based (Bay and Estuary plan objectives, RWQCB basin plan objectives and Ambient Water Quality Criteria) are not provided in the document, making it very difficult to verify the conclusions drawn. Table 6, giving Tier 2 screening levels, is confusing and needs more background information and better explanation in the footnotes (see comment (1) above). Table 9, comparing maximum detected concentrations against sewer discharge requirements, is provided for the reader yet does not answer the basic questions of whether the POTW has agreed to accept discharge from the facility generated by this removal action or whether the facility will be able to meet the indirect discharger permits requirements without treatment. Please give thought to providing information that will support recommendations and conclusions in the text.
- (4) Quality control on this document should check for consistency between data presented, and provide explanations for inconsistencies. For instance, the maximum concentrations stated in Table 7 differ in some cases from the maximum concentrations given in Table 9.

- (5) The EE/CA should not use the acronym "RA" in reference to "removal action". In CERCLA, RA refers to "remedial action", which is a final action and is not covered by an EE/CA.
- (6) The references to ARARs in the text and in Table 8 are so general that they are not very useful. The potential requirements need to be described more specifically and discussed with specific reference to the proposed actions.
- (7) The monitoring wells with PCBs above screening levels range from 50 to 130 feet from the shoreline. It is not clear whether additional investigation is planned to evaluate the concentrations of PCBs closer to the shoreline. It is also unclear how the placement of the sheet piling in relationship to the shoreline will be determined.
- (8) Groundwater extraction without containment was not considered as an option. The cost of groundwater extraction alone should be calculated for purposes of comparison. Conversely, another option that was not considered was containment without groundwater extraction. In general, the development of alternatives needs more technical justification. The basis for the assumed well spacing and extraction rates and for the length of the containment wall, including the reasons for not making the wall a complete circular containment structure, should be provided.

**Specific Comments:**

1. **Page ES-2, third paragraph:** It is stated that there is a regulatory preference for discharge to the sewer system over the drain system. This statement is misleading and the reason given is incorrect. Storm drain discharge to the Bay is prohibited, not by preference but by regulation, and sewer discharge has been chosen by the Navy as the most reasonable alternative.
2. **Section 1, page 1, first paragraph:** Update to reflect that Parcels B and C groundwater plume removal actions are no longer being pursued.
3. **Section 1, page 1, third paragraph:** The statement "The groundwater contains relatively low concentrations of organic compounds..." does not support the need for a removal action at Site IR-1/21. It should be explained here that the levels are such that they pose a threat to the Bay and aquatic life.

4. **Section 1, page 1, third paragraph:** "Hazardous substances" should be specified as those under CERCLA.
5. **Section 1.1, page 3, second paragraph:** The report states that "additional confirmation samples will be collected at areas where isolated detections are above screening criteria...". Please discuss how and when this sampling will be done and the impact on this removal action if these isolated detections are confirmed.
6. **Section 2.4.3, page 14:** Please provide hydrogeologic characteristics such as permeability and storativity of these aquifers and discuss aquifer tests that have been performed. This information is necessary both to evaluate the proposed alternatives and for the design.
7. **Section 2.7.1, page 19:** It is confusing to have concentration data (i.e. Aroclor, Arsenic and Lead) referenced to a monitoring well location, but then presented in mg/kg. Were these samples taken from initial soil borings that were later developed into monitoring wells? Please clarify.
8. **Table 1 and 2, pages 21-24:** These tables would be more useful if they included the location of the maximum detection. As currently presented, it is impossible to assess whether contamination is contiguous or sporadic.
9. **Section 2.8.3, page 32, second paragraph:** It is not necessary to include information on possible screening scenarios that were considered but not adopted, i.e. the dilution factor criteria. If the Navy feels compelled to include this information, then an explanation that goes further than "the regulatory agencies recommended a more conservative approach" needs to be offered.
10. **Section 2.8.3, page 38, last paragraph:** Appears that the majority of wells (12) has hits of PCB contaminants. Why the discrepancy between the text and the figure? This paragraph also states that PAH and PCB detections are limited to the southeast corner, whereas Figure 5 shows PAH detections scattered over the site.
11. Please include a debris zone on Figure 5.
12. **Section 2.8.3, page 39, third paragraph:** Justification for no further consideration of nickel and copper is inadequate. Until background groundwater concentrations for these metal can be established for this site, dismissing the significance of these levels is premature.

13. **Table 6 and Table 7:** Check Tier 1 units and/or concentrations between these two tables. In Table 7, zinc is listed as having a Tier 1 limit of 58mg/l which is the equivalent of 58,000µg/l, an apparent error in units. In addition to making sure all units within tables are correct, please make them consistent between columns for ease of comparison.
14. **Section 2.8.3, page 39 and Table 7, first footnote:** What is the basis and justification for discounting contamination that appears in only one sample or in multiple samples but only one well.
15. **Section 3.3.2.2 page 44-45, Table 8:** The federal ARARs should include ARARs from the US Fish and Wildlife Coordination Act 16 which prohibits water pollution with any substance deleterious to fish, plant life or bird life and requires consultation with the US Fish and Wildlife Service and appropriate state agencies. Also, revise the wetland requirement to include minimizing the "destruction, loss and" degradation of wetlands.
16. **Table 8:** Since PCBs are present, TSCA should also be referenced. The wetlands citation should be to 40 CFR Part 6, Appendix A and Executive Order 11990. The remainder of the citation should be deleted. Coastal Zone Management Act cite as Section 307(c) of 16 U.S.C. §§ 1451 et seq. should also include the cite to the California Public Resources Code §§ 30,000 et seq. which is the State Coastal Management Plan. The approved coastal zone management program for San Francisco Bay includes the McAteer-Petris Act and the San Francisco Bay Conservation and Development Commission. The goals of the Bay Plan are to reduce bay fill and disposal of dredged materials in the Bay and to maintain the water quality and ecological integrity of the Bay. The Navy should coordinate with BCDC to make its consistency determination. AQMD Rules need a specific citation.
17. **Section 4.1.1.1, page 47, second paragraph:** Discuss the effects of salinity on the performance of bentonite and any potential effect on permeability of the slurry wall.
18. **Section 4.1.1.3, second paragraph:** States "Pile driving requires a relatively uniform, loose soil profile free of boulders and large refuse or debris for ease of construction..." Having described the landfill as consisting in part of debris and boulders, will pile driving activities be a reasonable choice?

19. **Section 4.1.3, page 52, second paragraph:** This paragraph retains discharge to the sanitary sewer as a treatment option. Although contaminant concentrations may be acceptable, there is no discussion on whether this approach will be allowable by the POTW. This section should include a discussion of the likelihood of the POTW accepting contaminated water from the site, with attention given to accepting brackish or saline water.
20. **Section 4.1.4.1, page 53:** This section eliminates the reaction walls based on trenching costs. These costs are not likely to be cost prohibitive since the depth of the trench is only about 20 feet. In addition, slurry walls in Section 4.1.1.1 were not eliminated for cost reasons, so it appears inconsistent to dismiss reaction walls. The frequency of replacement over three years would not be expected to be significant; please explain how much repeated trenching is needed, why it is needed and why this makes the option cost prohibitive.
21. **Section 5.2.1, page 59:** Please discuss any modeling or calculations that have been performed to determine the adequacy of the proposed wall, including such factors as direction of groundwater flow at the ends of the wall. To what radial extent are the suction pumps capable of drawing water?
22. **Section 5.2.1:** How will the screens used for the well points be prevented from clogging with the fines typical of artificial fill geology?
23. **Section 5.2.2, page 60, second paragraph:** The sentence that begins "The only action-specific ARAR for Alternative 2 .." should be changed from singular to plural. The reference is to both air and hazardous waste management requirements and both requirements need to be more specifically identified.
24. **Section 5.2.3, page 63:** This section should include a discussion of the permits needed for discharge to the POTW and the likelihood of POTW acceptance of the waste stream into their facility.
25. **Section 5.2.4, page 63:** The costs for removal of the sheet piling should also be included unless the sheet piling is to be left in place.
26. **Section 5.3.1, page 64:** Describe what is to be done with the trench spoils. Disposal of this soil could be costly.

27. **Figure 7:** The figure of the approximate containment wall location was very helpful in understanding the preferred alternative. Could the approximate locations of the well points also be included on this figure?

If you have any questions or comments, please call me at (415) 744-2389.

Sincerely,

*Anna-Marie Cook*

Anna-Marie Cook  
Remedial Project Manager

cc: Sheryl Lauth, EPA  
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