



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105-3901

February 3, 1995

Mr. Stephen Chao  
Naval Facilities Engineering Command  
Engineering Field Activity, West  
900 Commodore Way, Bldg. 101  
San Bruno, CA. 94066-2402

Re: *Revised Draft Final Operable Unit 1 Feasibility Study*, dated December 20, 1994

Dear Mr. Chao,

The U.S. Environmental Protection Agency (EPA) has received the subject document and response to comments. Some problems still exist and these are reflected in the attached comments, but EPA does not consider these issues a deterrent to finalizing the document. As stated in the Federal Facility Agreement, §9.9, if the regulatory agencies have any comments on a draft final document, then we are in informal dispute until such time that these comments are resolved. The comments were discussed with Tom Peters of PRC, Inc. yesterday. The indication is that they should not present any disputable issues. Contingent upon satisfactory response to the enclosed comments, the document can be finalized. If new pages or sections need to be printed to satisfy the comments for a final document, it would be best to distribute only those change pages necessary and not a whole new document. This should be done within thirty days of receiving our comments. If you have any questions, please call me at 415-744-2383.

Sincerely,

A handwritten signature in cursive script that reads "Michael D. Gill".

Michael D. Gill  
Remedial Project Manager  
Federal Facilities Cleanup Office

Attachment

cc: C. Joseph Chou (DTSC)  
Michael Bessette (RWQCB)  
Ken Eichstaedt (URS)  
Sandy Olliges (NASA)  
Peter Strauss (MHB)  
Mike Young (PRC) (Fax)

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## COMMENTS

*Revised Draft Final Operable Unit 1 Feasibility Study*, dated December 20, 1994

### GENERAL COMMENTS

1. EPA appreciates that ecological considerations were taken into account at this operable unit and that additional quarters of groundwater sampling were taken. The delay in finalizing this FS was worth it. In general, EPA agrees with the proposed Alternative 2 comprised of a native soil cap, an Operation and Maintenance (O&M) Plan, ongoing groundwater monitoring, and a contingency plan. Based on EPA guidance for *Conducting Remedial Investigations / Feasibility Studies for CERCLA Municipal Landfill Sites* (February 1991), the remedial action objectives for a landfill where a significant percentage of hazardous substances is in fill below the watertable, and where lowering the water table is not practicable are:

- Prevent direct contact;
- Minimize erosion;
- Minimize infiltration; and,
- Control landfill gas emissions.

Preventing direct contact with the soil is achieved by Alternative 2 because it places a 3 foot native soil cap over the landfills. Erosion is minimized using the soil cap provided that there is an ongoing O & M plan that is implemented. Infiltration will not be significantly reduced by implementing a multi-layer cap; however, because of the low average yearly rainfall (on average 13 inches per year), infiltration does not appear to be a significant issue in the cap selection. Landfill gas emissions will be controlled using a passive venting system for Site 1.

2. The Navy should consider starting corrective action at Site 1 before contaminant levels are detected outside the landfill boundary. Two recommendations are provided. The first recommendation is to install sumps in the existing leachate wells and pump these highest contaminant levels to portable (Baker) tanks before installing the soil cap. This action would address elevated water levels within the landfill early and reduce the positive pressure gradient from the landfill to the surrounding water bodies. The second recommendation is that after cap implementation, for 6 to 12 months, the Navy should monitor head changes to observe any differences. Head increase can be used as a criteria for triggering corrective action at Site 1. A significant head increase in the landfill indicates a strong pressure gradient that could potentially drive leachate beyond the landfill boundaries. The weight of 3 feet of soil (cap) could cause pore spaces to be filled and potentially accelerate the movement of contaminants.
3. The statement on page 24, first full paragraph, that the "Chemical analyses of surface water samples and groundwater samples from the wells surrounding the landfill do not indicate significant or consistent chemical releases..." should be rewritten to be less subjective. Data tabulated in the attached table show that leachate appears to be migrating beyond the landfill boundaries, particularly in the vicinity of Site 1 wells W1-2, W1-5, W1-8, and W1-12. It is recommended that a similar table to that attached be included in Section 1.3.2 and

discussed. A comparison of the landfill perimeter groundwater concentrations should be made to EPA's National Ambient Water Quality Criteria or the RWQCB Basin Plan levels.

## **SPECIFIC COMMENTS**

4. Section 1.3.2, page 27, para 2. The approximate depth of the stream meander channel should be provided and shown in Cross Section C-C' in Figure 7.
5. Section 1.3.2, page 28, para 2. The designations for the two monitoring points should be provided along with their locations on a figure.
6. Section 1.3.3.5, page 40, para 1. It is implied that because the detection of TPH did not match the fuel standards they do not indicate the presence of petroleum related compounds. The laboratory analytical test method 8015 uses gas chromatography which is unlikely to confuse naturally occurring indigenous organic compounds with man-made petroleum compounds. The more likely reason why the detected TPH compounds did not match the fuel standards is because of degradation. This section should be revised to state this.
7. Figure 23, page 61. Both burn pits located on Figure 16 should also be placed on Figure 23.
8. Section 1.3.7.3, page 78, para 1. The statement that "Only a few organic compounds..." should be revised to list specific compounds. As indicated on the attached table, there are 10 organic compounds that have been detected. The first sentence of the second paragraph should be revised to reflect this.
9. Section 1.3.7.3, page 78, para 5. Please indicate which analytical model was used to estimate leachate migration from Site 1.
10. Section 1.4.3.2, page 102, para 2. Please indicate which references were used to conclude that water quality criteria for cobalt are not developed.
11. Section 1.5, TBCs. On a few occasions you refer to a TBC. Be aware that when you make a statement that a provision is a TBC, it becomes an enforceable standard which must be complied with. The NCP makes clear that the selection of TBCs as performance standards is discretionary, not mandatory. Moreover, the selection of a TBC as a requirement to be met as part of the remedy must be justified (and defended) on a case-specific basis. The administrative record must clearly document why a TBC has been chosen.
12. Section 1.5.1, Table 9. The following table does not represent the entire Table 9 as found in the FS. Comments are provided only where needed.

COMMENTS TO TABLE 9

<p>40 CFR 258.50-258.59 RCRA Subtitle D</p>	<p>Not an ARAR if you can cite with specificity state regulations that are stricter than 40 CFR 258.50-59. Please state which state regulations are more strict. Note: The NCP considers federally authorized state programs to be Federal ARARs.</p>	<p>The rationale for selecting State regulations over federal regulations is incomplete. CERCLA requires remedies to comply with state requirements that are more stringent than federal requirements. State requirements are more stringent than federal requirements if the state program has federal authorization and the state requirements are "at least" as stringent. In this instance, the state's RCRA program is federally authorized, thus making it more stringent than the federal requirements.</p>
<p>40 CFR Part 143</p>	<p>Is not an ARAR but not for the reason cited.</p>	<p>Secondary drinking water regulations consist primarily of secondary maximum contaminant levels (SMCLs) for specific contaminants or for water characteristics that may affect the aesthetic qualities of drinking water (i.e., color, odor, and taste). SMCLs are nonenforceable limits intended as guidelines for use by states in regulating water supplies.</p>
<p>23 CCR 2510-2601</p>	<p>To be Determined</p>	<p>Please make reference to Appendix J, where the State provisions that apply are identified with specificity.</p>
<p>Basin Plan</p>	<p>Not an ARAR</p>	<p>The Basin Plan is an enabling statute which lays out the Board's authorities. It is not an environmental law that sets out environmental standards. Please clarify that this was included at RWQCB's request.</p>
<p>Resolution 92-49</p>		<p>92-49 has been promulgated.</p>

13. Section 1.5.1, page 115, para 1. This paragraph is very confusing. Are you saying the Basin Plan numerical standards were compared with EPA's water quality standards pursuant to CWA §303 and that you applied the more stringent standard? Also, why are you considering the Basin Plan a TBC?
14. Section 1.5.1, page 115, Landfill Gas paragraph 1, sentence 5. Which federal and state regulations are you referring to? Be specific.
15. Section 1.5.3, page 122, para 2. Paragraph is confusing. Does Table 12 identify only the capping and post closure monitoring activity ARARs? You cannot circumvent an ARAR (i.e. closure requirements) simply because you have requirements of an ARAR, closure activities, incorporated in an FFA schedule. Please reword this section to clarify this point.
16. Section 1.5.3, Tables 11, 12. The following tables do not represent the entire Table 11, 12 as found in the FS. Comments are provided only where needed.

Table 11 and 12

California Fish and Game Code		Not an ARAR because it is not stricter than the federal counterpart.
Regulations cited for Capping, Landfill Closure, Post Closure, Groundwater Monitoring, Methane Gas Emission Monitoring, and Waste Management.		The statutes and regulations cited as ARARs are very general. Please make reference to Appendix J, where state citations are more specific and state counterparts to the particular section or sections of the federal statute or regulations are presented. It is important that ARARs are clearly identified because all provisions which have been determined to be ARARs must be complied with or waived.
40 CFR Part 403 (POTW)		POTW's are considered off-site for ARAR purposes. Off-site discharges must comply with the universe of laws.
California Water Code Division 7, Section 13000 (Porter-Cologne Water Quality Control Act)		The statement that the Basin Plan is an ARAR is not correct. While portions of the Basin plan may be ARARs (e.g., duly promulgated numeric water quality objectives, Resolution 68-16), the Basin Plan as a whole is not. The specific portions of the Basin Plan proposed to be ARARs should be identified. Please clarify that this was included at RWQCB's request.

Water Quality Control Plan, San Francisco Bay Region 2		The specific portions of the plan proposed as ARARs should be identified. Also, provide a citation.
Resolution 92-49		Has been promulgated.
Title 23 CCR Division 3, Chapter 15		Only specific portions of Chapter 15 are ARARs. Identify with a reference to Appendix J.
40 CFR 52 (Air Emissions)		What specific provisions of 40 CFR 52, 60 and 61 are ARARs? If these are not to be determined until the ROD, say so.
40 CFR 230-233 and 320-330		Only substantive requirements of a permit need to be complied with. Many of the provisions cited relate to administrative requirements of a permit. Identify with specificity. If these are not to be determined until the ROD, say so.

17. Section 1.5.3, page 136, para 2. You state: "The table states that the federal and state nonhazardous solid waste regulations are "more appropriate" for capping..." . The rationale for selecting State over federal ARARs is incomplete.
18. Section 4.2.3, page 165, last para. Reference to Subchapter 15 is incorrect and should be revised to read Chapter 15.
19. Table 16, page 173 and Table 17, page 175. It is recommended that revision to these tables be considered after remedial action starts to include quarterly sampling of VOCs in all wells for up to one year. Once the caps are installed, head increases could potentially occur and in turn cause offsite leachate migration. See comment 2.
20. Section 5.2.2.2, page 191, para 2. The results of the Corps of Engineers wetlands delineation need to be presented in the final FS. These results could affect the contingency strategy which involves digging the groundwater collection trench at the northern end of Site 1. If the area is considered a wetland by the COE, this will certainly be an issue during remedial action. It would probably trigger Executive Order 11990 (Protection of Wetlands).
21. Section 6.2, page 204, para 1. Statements such as "...leachate is not migrating ..." should be removed. Indications are that leachate is migrating but not at elevated concentrations.
22. Section 7.0, page 210, para 1. The first sentence should be revised to read, "Landfill capping combined with an ongoing monitoring and maintenance program, and backed with a contingency plan is protective of the ..."

## **EDITORIAL COMMENTS**

23. Please submit documents on doubled-sided copies whenever possible.
24. Table 2, page 38. At the bottom of this table, a note says that qualifiers are defined in Appendix C. This is incorrect. Please include qualifiers in Appendix C.
25. Fig 24, 25, 26 (p. 82, 83, 84) - These figures appear mislabelled. Should they have a title above the graph showing "Site 2" vs. "Site 1"?
26. Section 1.4.1.3, page 94. In the estimated HI value for a residential child at Site 2, the average HI value is greater than the RME value. This appears counterintuitive. Is this incorrect?
27. Table 9, p.113. Should this citation be Resolution 92-42 or 92-49?
28. Table 13, p. 147. Should the title read "Reuse" vs. "Refuse"?
29. Section 4.2.4, page 174, para 1. The second sentence is unclear and should be rewritten to read "...gas monitoring wells..."

Comparison of Leachate and Perimeter Wells for Site I Landfill  
 OU-1 FS MOFFETT FEDERAL AIRFIELD

CONTAMINANT	W1-3	W1-12	W1-13	W1-2	W1-9	W1-8	W1-5	W1-10	W1-16	W1-11	W1-17
Acetone		11			480	10	19				
Benzene	5	0.5			5	0.2					
Benzoic Acid					11000	6					
Bis(2-Ethylhexyl)Phthalate		4	31	24			4				
Carbon Disulfide						6					
Di-N-Butylphthalate										13	11
Di-N-Octylphthalate		23 (2)								48 (2)	
Phenol					61		33				
Toluene	200	0.9	2	2							
TPH Diesel	9700		5300		12000			6600		7600	
TPH Gasoline	480	16	220	50	680					1000	
TPH Motor Oil		620		1500			640				
TPH Other(Heavy)	1400			850					420		230
TPH Other(Light)	800 (3)			17		14	5	270			110 (3)
TPH Total (1)	6360	636	5520	2417	12680	14	645	6870	420	8800	230
Xylene	38	3									

Leachate Wells



Perimeter Wells



All concentrations in ug/L, sample dates from 9/15/88 to 5/31/94

1. TPH Total is the summation of diesel, gasoline, motor oil, TPH Other (Heavy), and TPH Other (Light)
2. Corresponds with W1-12
3. Corresponds with W1-17