



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street
San Francisco, CA 94105-3901

January 8, 1996

Mr. Richard Powell
Department of the Navy
Western Division
Naval Facilities Engineering Command
900 Commodore Drive
San Bruno, CA 94066-2402

Subject: The Draft Engineering Evaluation/Cost Analysis for
Exploratory Excavation sites and the Tank Farm IR-6

Dear Mr. Powell:

Enclosed please find the Environmental Protection Agency's (EPA's) comments regarding the draft Engineering Evaluation/Cost Analysis (EE/CA) removal documentation for the Exploratory Excavation sites and the Tank Farm IR-6. We are not providing specific comments on the public summary included with the Exploratory Excavation EE/CA because we are in agreement with the comments provided previously by DTSC. However, please incorporate any revisions to the public summary deemed necessary based on the comments provided on the EE/CA.

If you have any questions regarding these comments, please call me at (415) 744-2387.

Sincerely,

A handwritten signature in cursive script that reads "Sheryl Lauth".

Sheryl Lauth
Remedial Project Manager

cc: Mr. Cyrus Shabahari, DTSC
Mr. Rich Hiatt, RWQCB
Mr. Michael McClelland, Navy
Mr. Jim Sickles, PRC

ATTACHMENT A
THE ENVIRONMENTAL PROTECTION AGENCY COMMENTS ON THE
DRAFT ENGINEERING EVALUATION/COST ANALYSIS
REMOVAL ACTION DOCUMENTATION
FOR EXPLORATORY EXCAVATION SITES
HUNTERS POINT ANNEX

GENERAL COMMENTS

1. The purpose of the removal action needs to be clarified. Specifically, we contend that the purpose of the removal is to remove contaminants in the soil that pose a threat to human health and the environment rather than just mitigate the spread of hazardous substances (i.e. contaminant levels are above risk criteria). The Navy should also explain that this action is being proposed based on the fact that the areas of contamination are relatively localized and easily removed. Finally, as the Navy anticipates that the action taken at these excavation sites will be a final action, the EE/CA should provide adequate documentation that activities performed at the site are sufficient to meet completion requirements.
2. There must be an identification of state ARARs in this EE/CA. We can not evaluate alternatives without determining compliance with state ARARs. Identification of ARARs in the Action Memo is too late. By that time, the alternatives comparison is assumed to be completed and an alternative selected. In addition, as the removal action is anticipated to be a final action, identification of and compliance with all ARARs is essential. We understand that the State has not identified ARARs at this point, however, the Navy did preliminarily identify potential State ARARs in the IR-6 EE/CA. Further, the Navy has conducted several non-time critical removal actions at other Navy Bases where ARARs have been identified and could be used as a basis for identification in this document. We are particularly concerned with the backfilling of the excavation with treated soil and how that will comply with State ARARs.
3. An error was made in calculating the cost of the recommended removal action for Alternative #4: On-Site Stabilization. The calculation found in Appendix B (Table B-4) omits the Mobilization/Demobilization Activities estimate of \$33,900. With contingency/project administration markup, the total cost of On-Site Stabilization is \$475,057, not \$430,309. Alternative #3: Off-Site Recycling is the estimated lowest cost at \$441,000.

Lowest cost is a factor in choosing On-Site Stabilization. Will the increased cost estimate for Alternative #4, change the recommended removal action? Please explain.

4. Several proposed exploratory excavations have not been sampled to date. An assessment was performed from visual observations. Is it possible that the contaminants may be petroleum hydrocarbons, which are not part of the scope of this removal action? The contingency for the detection of only petroleum based hydrocarbons should be discussed. Several of the other exploratory excavations primarily have petroleum contaminants.

At sites where there are heavy metal and SVOC contamination in the shallow soils and only-petroleum based contaminants in the deeper soils, it is not clear why the recommendation is made to excavate most or all of the deeper petroleum contaminated soil. Please explain.

5. The HPA History described in Section 2.0 does not include any substantial information before 1939 or about more recent tenants of the property. Location specific information such as past tenants and site uses would provide a better background for understanding potential contamination at the exploratory excavations.
6. Only cursory discussions of the development of screening levels such Hunters Point Ambient Levels (HPAL) and EPA preliminary remediation goals (PRGs) were included in the report. Although a Table for HPALs was located in the report, no tabulation of the EPA Region 9 PRGs was presented in the text. A more thorough discussion of screening levels including PRG levels would be beneficial and a table presenting all the screening criteria should be included.
7. The document initially stated that residential screening levels would be used for Parcel B and industrial levels for Parcel C, D, and E. Later it is stated that residential screening levels would be used for all parcels due to the City and County of San Francisco planning information. Please be consistent. Discuss the difference between the residential and industrial screening levels, including the selection criteria for each. A comparison table would have been appropriate.
8. Appendix A and Table 1 summarize estimated volumes of material exceeding screening levels. However in the disposal cost estimates, there is a breakdown between non-hazardous and hazardous wastes. A more thorough discussion and breakdown of quantities of non-hazardous and hazardous wastes would be appropriate; this should be done for each exploratory excavation.

Specific Comments

1. **Executive Summary, p. ES-2, final paragraph.** As discussed in the general comments, On-Site Stabilization is not the lowest cost.
2. **Section 1.1, first sentence.** It is not clear whether disposal includes only surface soil. It would appear that the sentence should read surface and "shallow" soil instead. Some of the exploratory excavations are 7 feet deep.
3. **Figure 2 through 5, pages 7 through 10.** The shading in legend for exploratory excavations should be consistent with the figure.
4. **Table 1, p. 12.** Site EE-17 is located in Parcel D, not Parcel E.
5. **Section 2.3.1.** The EPA guidance document for EE/CAS states that temperature is part of the climate section. Please include the average seasonal temperatures for HPA. The report states the prevailing wind direction is west to east. If this is true, it is not clear why airborne dust and volatile emissions be transported off-shore to the **east-southeast?**
6. **Section 2.6, third to last sentence.** There should be a table listing the PRGs and a soil contaminant level comparison. Appendix A lists the analytical data. There is no comparison with the PRGs. A table showing this comparison should be provided.

Section 2.6. The 1st bullet on page 4 indicates that exposure to the environment (animals, water fowl, etc) is a factor in warranting a removal. There should be a discussion of whether the environment is potentially impacted by the contamination. A summary of ecological risk is needed.

Section 2.6 should list the contaminants of concern by each unit. Presently, the document does not include a listing of the COCs.

Table 2. Chromium should be listed because it is included in analytical summaries in Appendix A.

7. **Section 3.2, first sentence.** There are other removal action objectives that should be included. For instance, if a removal action was deemed necessary because of exceedences of industrial and residential PRGs, the objectives of preventing industrial and residential exposure should be included. "Limiting migration" is only one of many objectives.
8. **Table 3.** ARARS that should be added to this table include:
40 CFR 261 Subpart B: Identification of Hazardous Wastes

40 CFR 261 Subpart C: Characteristics of Hazardous Wastes

These should be added because they pertain to identifying wastes and determining whether they are hazardous. This is pertinent to all the alternatives because a distinction is made between hazardous and non-hazardous for costing purposes.

9. **Section 3.3.2.3.** ARARs that are missing from this section include:

40 CFR 263: Transportation of Hazardous Wastes. This is an ARAR because the alternatives include off site transportation for disposal.

40 CFR 268 Subpart D: Treatment Standards. This is applicable because the alternatives consider both on site and off-site treatment. It is unlikely that CAMU requirements would negate the LDRs.

10. **Section 3.4, second paragraph.** There are an estimated 1,440 cubic yards of impacted soil. Table 1 (p. 11) states an estimated volume of 1,194 cubic yards. Please explain or correct this discrepancy.

Additional discussion of how the soil volume was classified is needed. The alternative costs make a distinction between 1,705 tons classified as non-hazardous and 311 tons classified as hazardous. Describe how this distinction was made and what soil falls into each category. This is important information that is needed to appropriately implement the remedial action.

11. **Section 4.1, p. 30, sampling paragraph, last sentence.** It is not clear whether analyses for all previously detected contaminants will be performed, particularly when contaminants are lower than screening levels.
12. **Section 4.2.1.1, fourth paragraph and Section 4.2.2.1, fourth paragraph.** All soil above screening levels will be removed, not just the stained soil. Metal contamination may not show up as staining. Remove the word "stained".
13. **Section 4.2.2.3.** The time frame of 1 to 2 months appears to be too short in duration. An off-site disposal timeframe of 2 months is most likely the minimum for this activity. Therefore, the duration of this alternative (including the time for treating the soil) should be probably 2 to 3 months.
14. **Section 4.2.3.1, fourth paragraph.** Recycling may not meet ARARs for metals since this technology generally does not reduce metals concentrations appreciably. Some minor reductions may be achieved through metal volatilization. This should be discussed.

All soil above screening levels will be removed, not just the stained soil. Metal contamination may not show up as staining. Remove the word "stained".

15. **Section 4.2.3.3.** See comment 13 above.
16. **Section 4.2.4.1, fourth paragraph.** see comment 12 above.
17. **Section 4.2.4.3.** The cost of Alternative 4 is not correct. The cost should be \$475,057 instead of \$430,000. See General Comment 1.

The time duration for recycling appears to be too short. The time needed to mobilize, set up the process and perform tests may take up to 1 month. The duration of this process is more likely to be 3 months.

18. **Section 5.1.** Will Alternatives 2 through 4 reduce hazardous substances to non-detectable levels?

Discuss the possibility that recycling will not meet ARARs for metals.

19. **Section 5.3, p. 40, last sentence.** Alternative 3, Off-Site Recycling, not Alternative 4 is the lowest cost alternative. See General Comment 1.
20. **Section 6.0, Cost.** As previously stated, On-Site Recycling not On-Site Stabilization is the lowest cost alternative.
21. **Table 4, page 41.** The total for Alternative 4 should be \$475,057 instead of \$430,000. See General Comment 1.

APPENDIX A

1. This appendix should include a table of PRGs as discussed in earlier comments. Several different cleanup goals are used for the same contaminant, but this is not clearly explained. For instance, lead and chromium have two and three different cleanup goals listed, respectively, for the different sites.
2. **EE-01, Figure.** The Exploratory Excavation boundary does not include the location of Boring PA23SS04, which contains high levels of arsenic, lead and 4,4'-DDT. The planned excavation should include this area.
3. **EE-01, Proposed Action.** Please justify the statement that the chromium concentration is isolated and likely represents naturally occurring chromium levels in the native serpentine soil.
4. **EE-02, Site Description.** EE-02 is near the former location of Building 116 not 161.
5. **EE-03, Figure.** Please include boring locations on the figure.

6. **EE-03, Proposed Action.** Please justify limiting the excavation to a depth of 2 feet below ground surface, when lead was detected at 10.25 feet below ground surface. Will the excavation exceed the 300 cubic yard limit for this scope of work?
7. **EE-05, Figure.** The Exploratory Excavation Site should include location of boring IR26B018.
8. **EE-07, Proposed Action.** State whether other non-petroleum contaminants may have been discharged in this location. If so, what type of contaminants are suspected?
9. **EE-09, Proposed Action.** What are the cleanup goals at this location? It appears that cleanup to below screening levels would require excavation of more than the maximum 300 cubic yards. Please explain, including whether this location would be transferred to the RI.
10. **EE-11, Proposed Action.** State the nature of the suspected contaminants.
11. **EE-11, Figure.** Provide the suspected locations on the figure.
12. **EE-12, Proposed Action.** Chromium was detected at a concentration of 1,720 ppm at 7.25 feet below ground surface, but the estimated depth of excavation is 7 feet. It is not clear whether the chromium is believed to naturally occur. If so, please include justification for naturally occurring chromium in this area.
13. **EE-13, Proposed Action.** It is possible that visibly stained soil may only include petroleum which would not require removal under this project. Please discuss this possibility. Please specify the planned analyses for this location.
14. **EE-15, EE-16.** It is not clear why EE-15 and EE-16 are two separate excavations.
15. **EE-17, Figure.** The excavation location in the figure should include areas of Boring IR55B025.
16. **EE-18, Proposed Action.** It is possible that visibly stained soil may only include petroleum which would not require removal under this project. Please discuss this possibility. Please specify the planned analyses for this location.

APPENDIX B

1. **Table B-1, General Assumptions for All Alternatives.** Task 4.1 Imported Fill. Please explain 20% compaction in more detail.

ATTACHMENT B
ENVIRONMENTAL PROTECTION AGENCY COMMENTS ON THE
DRAFT ENGINEERING EVALUATION/COST ANALYSIS
REMOVAL ACTION DOCUMENTATION
FOR IR-6 TANK FARM SITE
HUNTERS POINT ANNEX

GENERAL COMMENTS

1. Figure 4-1 presents the proposed areas in the Tank Farm to be excavated. There are several sample points that have metal concentrations above target cleanup levels that are not within the proposed excavations. For example, location SS09 (see Figure 2-5) contains 1,900 mg/kg of lead (target cleanup level of 130 mg/kg) and is not included in the proposed excavation. Similarly sample locations SS19, B026, B024 and SS12 have detected concentrations of metals greater than target levels, but are also not included in the proposed excavations.
2. Are the estimated depths of the contamination accurate? Were sufficient deeper soil samples analyzed to allow for an accurate estimate of the depth of contamination? One cPAH result in Area A1 (B039) shows a concentration greater the ambient level at a depth of 5.75 below ground surface. The estimated excavation depth in this area is 5 feet. Please explain why the excavation will not include this contamination.
3. The discussion on pretreatment of hazardous soils prior to disposal at the Class I landfill is not presented in detail. Please specify where pretreatment will be performed. What was the basis for the estimated disposal costs?
4. The cost estimates for Alternatives 2 and 3 include installation and abandonment of four monitoring wells, but the text does not include justification for the wells. Please discuss the purpose of the wells. Are the wells to monitor the management of soils in waste piles after the excavation?
5. The objectives of the removal action need to be stated in more detail rather than just the objectives of the EE/CA document. Further, the Navy must explain how this removal action fits into the overall cleanup strategy for the site (i.e. final remedial action).

SPECIFIC COMMENTS

1. **Section 2.1.2, first paragraph.** Please discuss the locations of Triple A's illegal waste discharge. Include a discussion of whether the Tank Farm is a known or suspected source of illegal discharge.

2. **Section 2.2.1, p. 2-6, last paragraph.** This section says tanks 1-8 were sampled but no discussion of tank 2 is included. Tank 9 is discussed instead. Please clarify.
3. **Section 2.2.2, last paragraph.** This paragraph states that 140 cubic yards were excavated from the bermed areas and disposed in 1993. Please delineate the previously excavated areas on a figure. Cite the specific report reference.
4. **Figure 2-4.** This figure does not show the location of sample CF-13. This sample was taken to confirm PCB contamination and should be included on the figure.
5. **Section 2.3.** It is not clear whether the data discussed in this section includes both HLA data and CH2M Hill data or solely CH2M Hill data. The first paragraph on p. 2-10 says no PAHs were detected, yet the second paragraph of section 2.3 says they are a primary contaminant. The third paragraph of this section indicates metals are a problem, yet the first paragraph on p.2-10 indicates no metals were analyzed in the most recent sampling. Please specify which data set is being used to determine nature and extent for each part of the discussion.
6. **Section 2.3, third paragraph, p. 2-10.** The EE/CA for Exploratory Excavation Sites (PRC 1995) provides a list (Table 2) of background metals levels that have been approved by the regulatory agencies. Table 2-2 of this EE/CA has background levels that are different. The values should be the same. For example, the PRC table provides an ambient level for manganese of 1,430 mg/kg.
7. **Figure 2-6.** Provide a legend for the symbols used on this figure. In particular, the depth should be noted.
8. **Section 3.5, last paragraph, third sentence.** Provide more details on the relative cost-benefit evaluation for the two PCB cleanup levels.
9. **Section 4.2, second paragraph.** Explain why stabilization or solidification are not appropriate if the Navy plans to sell parcel B to the City of San Francisco. Other EE/CAs have not used this as a limitation (for example, the EE/CA for Exploratory Excavation Sites) and, as a result, have selected this technology for site remediation. This inconsistency should be resolved and the EE/CAs revised accordingly.
10. **Section 5.0.** These alternatives need more description. In particular, include a discussion of the types of soil to be treated with each technology. Also specify the analytes and the extent of confirmatory sampling.
11. **Section 5.1.** State that the No Action alternative also does not protect human health and the environment.

12. The cost table for alternative 3a indicates the soil is being disposed in a class II landfill whereas the alternative description says class I. Please be consistent.
13. **Section 6.1.** Alternative 2 is not necessarily more effective than alternative 3. Alternative 3, which destroys the contaminants offers much better long-term protection than sending the soil to a landfill. Thermal desorbers have an excellent record of treating PAHs, which are the predominant contaminant in this material, to non-detect levels. In addition, once the contaminants are destroyed, there is no potential for future liability as there is with land disposal. This section should be revised to indicate thermal desorption is more effective.
14. **Section 7.0.** This section should include the assumptions that were used to determine the recommended alternative. In particular, the assumption that the soil is not a hazardous material should be stated. If the soil is a hazardous material, then alternative 3 should be recommended.
15. **Reference Section.** Many of the referenced documents/sources are not included in this section. The list of references should be complete.
16. **Appendix, Cost Tables, P. 4.** The estimate of quantity of excavation and loading is 3,610 tons. How was this quantity calculated?