



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
1235 Mission Street
San Francisco, CA 94103

28 AUG 1990

Mr. Stephen Chao
Department of the Navy
Western Division Naval Facilities
Engineering Command
900 Commodore Drive, Building 101
P.O. Box 727
San Bruno, California 94066-0720

Dear Mr. Chao:

Please find enclosed the Environmental Protection Agency's (EPA) comments for the Removal Action Plan, Phase II Tank Removal for Naval Air Station Moffett Field.

If you have any questions please give me a call at (415) 744-1996.

Sincerely,

A handwritten signature in cursive script, appearing to read "Lewis Mitani".

Lewis Mitani
Remedial Project Manager

enclosure

cc: distribution list

941
E/N 19

Distribution List

Wil Bruhns
Regional Water Quality Control Board
San Francisco Bay Region
1800 Harrison Street
Oakland, CA 94612

Lynn Nakashima
Department of Health Services
Toxic Substances Control Division
2151 Berkeley Way, Annex 7
Berkeley, CA 94704

Sue A. Loyd
CDM Federal Programs Corporation
301 Howard Street, Suite 910
San Francisco, CA 94105

Comments to Removal Action Plan
Phase II Tank Removals
Naval Air Station Moffett Field

General Comments

1. EE/CA OUTLINE

The report does not follow the general outline that should be adhered to when writing EE/CA reports. In general all pertinent information contained in the guidance documents should be included in this report. The guidance documents are EPA's draft guidance dated June 1987 for Engineering Evaluation/Cost Analysis (EE/CA), and the updated EE/CA guidance memo (EPA) dated March 30, 1988, "Outline of EE/CA Guidance."

2. Site Characterization

As mentioned above, Section 2.0 should include a section labeled "Site Characterization" with subsections "Site Description", "Site Background", "Analytical Data", and "Site Conditions that Justify a Removal Action". Important information is left out of the report such as the distance to and description of nearby sensitive environments, distance to and uses of surface waters and groundwater, site topography, geology, hydrogeology (i.e., depth to water table), description of contaminants (i.e., extent, concentrations), potential or actual release of contaminants, and potential or actual impacts of the tanks and sumps to adjacent properties and populations. Why have the four abandoned USTs and two sumps been identified as potential sources of soil and groundwater contamination? These items should be included in the report.

3. Removal Action Objectives

Section 3.0 "Identification of Removal Action Objectives"; should include statutory limits of each removal action, and removal action scope, which includes a description of the principal public health and environmental threats to be addressed by each removal. It is important to clearly define the scope because the removal action will not address the universe of threats posed by the tanks and sumps. Also include how the removal action contributes to the efficient performance of the remedial action. These items need to be added to the report.

4. Initial Screening

The document needs a section labeled "Initial Screening of Removal Alternatives". The alternatives need to be screened using the following factors: the public health and environmental protection provided; the ability of the technologies to produce the desired results in the stipulated time frame; the feasibility of the technologies; and the acceptability of the technologies in light of institutional considerations. In order for a technology to be considered further it must ensure, at a minimum, short-term mitigation of site threats. The report should document how both alternatives presented in this report achieve short-term mitigation.

5. Analysis of Removal Alternatives

Section 6.0 "Analysis of Removal Alternatives" does not identify action specific ARARs for each alternative, nor does it include narrative sections discussing technical feasibility, reasonable cost, institutional considerations, and environmental impacts. This Section should document the reasons for not attaining compliance with any particular ARAR or TBC. Include any environmental impacts associated with the alternatives (i.e., hydrology, air quality, land use, etc.). Although Section 6 mentions technical feasibility and reasonable cost, more detail is needed. The text should contain narrative details as described in the guidance documents.

6. Soil and Groundwater Investigations

The report should include an explanation on the processes to be carried out with regards to soil/groundwater investigations if any of the following situations occurred: (1) obvious tank system failure is encountered, (2) initial soil samples are greater than 100 ppm TPH or O&G, (3) initial soil samples detect petroleum hydrocarbons and the soil is highly permeable, (4) and/or petroleum hydrocarbons are detected in soil at or below the seasonal high groundwater level. Soil samples collected from excavations of tanks and sumps of unknown use should be analyzed for BNAs, VOCs, metals, TPH, and BTEX.

Specific Comments

1. Page 4, Paragraph 1, Sentence 1.

Where (what site) are these "six other tanks" located?

2. Page 4, Paragraph 1, Sentence 2.

An explanation is needed regarding why these six underground tanks were removed from the Phase II RAP. The paragraph should be revised.

3. Page 4, Paragraph 2.

This paragraph should describe the approximate depth below ground surface of each tank and sump. Also, present an evaluation of data from previous groundwater and soil investigations performed in the vicinity of the four tanks. In addition, the type of soil and groundwater flow found at Site 9 should also be described. Finally, specify which tanks are 10,000 gallon tanks and which one is a 500 gallon tank.

4. Page 4, Paragraphs 3 and 4.

These two paragraphs discuss underground storage tanks at Site 10. They do not belong in Section 2.1 which describes Site 9. Paragraphs 3 and 4 should be located at the end of Section 2.0.

More information is needed on Site 10 before tanks Nos. 51 and 52 can be eliminated from the RAP. What part of Site 10 was visually inspected. Could any of the former employees, described in paragraph 3, be contacted to assist in determining the approximate location of the tanks. GPR surveys could also be used to substantiate verbal information. Paragraphs 3 and 4 should be revised.

5. Page 6, Paragraph 1.

An explanation is needed in this paragraph describing why sump 60 was selected for removal. Where is the evidence suggesting it is a source of contamination? For removal of the sump a visual inspection of the site should be performed prior to construction activities. The information from such an inspection should be presented in this paragraph.

6. Page 6, Paragraph 3, Section 2.3.

A table showing concentrations of contaminants in soil and groundwater found at Site 17 should be included in this section. If background soil concentrations for Site 17 are available they should be reported.

7. Page 10, Section 3.2.2.

This section should state that sumps will be removed in accordance with appropriate underground tank removal and management guidelines.

8. Page 10, Paragraph 4, Bullets.

The second bullet should state that the initial soil samples are to be taken within the first two feet of native soil beneath the tank.

The third bullet should state that detection of petroleum hydrocarbons at or below the seasonal high groundwater level requires investigation.

Additionally, two bullets should be added which address the following: (1) detectable levels of any petroleum hydrocarbons are found in the soil sample(s) beneath the tank, within the first two feet of native soil, and the soil contains layers of sand, gravel, and/or other high permeability material" and (2) "evidence of detectable levels of petroleum hydrocarbons are found in the water sample(s) from tank excavation.

9. Page 11, Paragraph 3

Specify the expected wastes to be packaged and labeled. Will all wastes be shipped to a hazardous waste disposal facility? A description of the characterization processes needs to be included in this section. Also, the initial generator of a restricted waste needs to notify the TSDs that the waste is restricted in accordance with 40 CFR, Part 268. Analytical analysis, not site specific information, is the appropriate form of waste characterization for a restricted waste. This last sentence of Paragraph 3 needs to be revised.

10. Page 11, Section 3.2.5

The justification for not excavating to zero contamination is inappropriate. Additional justification is required. The proximity of site 9, 16, and 17 to "other contaminated sources" should be shown on a figure. Also, the text should explain what the depth to groundwater is at each site. In addition, the expected concentration of soil contamination that will remain after removal actions are complete should be described. How will the expected residual concentration be verified?

11. Page 11, Paragraph 4, Last Sentence.

If product exists in the tanks will it be sampled and analyzed? If not, then an explanation is required. An analytical determination of tank contents will assist in determining if a tank is the source of surrounding groundwater and soil contamination. This item should be addressed in the report.

12. Page 12, Paragraph 2.

The concentration of contaminated soil left in place after completion of removal actions needs to be documented. Also, this paragraph should clearly state the expected minimum concentration (TPH or O & G) of contaminated soil that will be removed.

13. Page 12, Paragraph 3.

This paragraph states that after removal further characterization of the removal sites will be performed if needed. This paragraph should state the criteria to be used to determine if additional investigations are required. Will the criteria be analytical results of soil and groundwater samples from excavations? This item should needs be addressed in Paragraph 3.

What evidence suggests that a release to the environment may have occurred from each tank and sump? This evidence should be presented in the report and should be provided in Sections 2.1, 2.2, and 2.3.

14. Page 13, Paragraph 4, Sentence 2.

A description of the substantive requirements of the SCCDPH for tanks and sumps is needed.

15. Page 13, Paragraph 5.

Since liquid and solid waste characterization may be performed, a description of the characterization process should be included in this paragraph. The specific analyses and analytical methods must be stated. All samples (i.e., soil, water, rinseate, floating product, sludge) from the two MOGAS USTs should be analyzed for TPH, BTEX, and lead. All samples from the remaining two USTs and two sumps, since their contents are unknown, should be analyzed for the full suite of analytes (BNAs, VOCs, metals, TPH, and BTEX).

16. Page 13, Paragraph 6, Sentence 3.

Will all sludge and liquid be transported to a permitted hazardous TSD facility? The sludge and liquids should be characterized to determine if it is hazardous waste. The analytical method should be described in the text.

17. Page 14, Top Paragraph.

40 CFR, Section 262 is not a guidance, it is a regulation. Also Section 268, the Land Disposal Restrictions (LDRs), which include notification requirements for initial generators should be followed for any restricted waste generated.

18. Page 14, Paragraph 2.

More explanation is needed on the rinseate. Is the text referring to the rinseate in the tank or the rinseate in the pipes or both? Will characterization of the floating product be conducted to determine if it should be disposed of as hazardous waste? The sample analyses done for the contents and rinseate of each tank and sump should be specified as given in specific comment 15.

19. Page 14, Paragraph 5.

Specify the sample analyses and methods to be performed for soil samples as given in specific comment 15. Explain how soil samples will be collected below the tanks and sumps.

20. Page 15, Top Paragraph.

If groundwater is encountered, will water samples be collected and analyzed? Explain "most downgradient location". More information is needed, especially on the determination of contamination in the soils around and below the tank. How much contaminated soil will be removed? Will soil/groundwater investigations be conducted if one or more of the conditions given on Page 10, 4th Paragraph, Section 3.2.2 exist?

21. Page 15, Paragraph 3, Sentence 3.

Because the contents/use of two of the four tanks is not known (or not mentioned in this report), soil analyses for these two tanks must include the full suite of analytes as described in comment 15. A description of the disposal of the soil, depending on concentration levels, should be included in the report.

22. Page 17, Paragraph 2, Sentence 2.

See comment 14.

23. Page 17, Paragraph 3.

Since waste characterization may need to be performed, a description of the analytical method should be included. The analytes to be investigated for each of the four tanks and two sumps should be clearly stated, along with the appropriate analytical methods for soil and water. See specific comment 15.

24. Page 17, Paragraph 4.

The report should include how the determination (i.e. analytical methods, concentration limits) will be made on whether the sludge and flushing fluid are hazardous waste and will be disposed of at a hazardous waste facility. Paragraph 4 should be revised to describe this process.

25. Page 17, Paragraph 7, Sentence 2.

All tank contents should be evacuated prior to tank removal.

26. Page 17, Paragraph 7.

Inspection of the removed tanks should be documented in a field log book. If tanks will be destroyed versus disposal, a certification of destruction should be obtained. The paragraph should be revised to reflect these items.

27. Page 18, Paragraph 2.

This paragraph needs to describe how "background levels" will be determined. Also explain the process for determining clean material versus contaminated material.

28. Page 19, Paragraph 2.

Specify that a maximum of two feet of native soil will be removed before sampling. The analyses to be performed on soil and water samples should be specified.

The report should state the field screening level used to determine soil contamination. Also, more information is needed which explains the process for identifying the level of contamination which will remain after a removal action is completed and how this will be verified.

29. Page 19, Paragraph 5.

Specify the analytical methods to be performed on soil samples collected in the trench excavations. See specific comment 15.

30. Page 20, Paragraph 2, Sentence 1.

Water in an excavation should be sampled for constituents which were suspected of leaking from the tanks or sumps. If contents are unknown then analysis should include TPH, BTEX, VOC, BNAs, and metals analysis.