SAMPLING PLAN COMMENTS

RWQCB 21 SEP 87

General Comments

1. Page 1.1, Section 1.1 - The current sampling plan, revision 1, primarily deals with sites 1 through 9. Although the plan mentions that there are other sites (e.g. underground tanks and sumps), it is unclear how and when these other sources will be investigated. All sites need to be investigated in a timely fashion. This section should clarify which sites are covered by the sampling plan and how the other sites will be addressed.

2. Page 1.2, Objectives - Similar to comment 1 above, all sites need to addressed.

3. Change in contractor - Since it is the Navy's intention to have a new consultant revise the sampling plan and conduct the field work, it will be necessary to modify the sampling plan to reflect the change in consultant. For example, Figure 1-2, Project Organization, will need to be revised.

4. Page 2.2, first paragraph - As stated previously regarding the first sample plan submittal, the extent of soil pollution is poorly addressed or defined at most sites. It will be necessary to conduct soil sampling at all sites, not just sites 3 and 8.

5. Page 2.5, General Element #5 - No mention is made regarding the MEW wells. Consideration should be given to utilizing these wells for water quality sampling and water level measurements.

6. Page 2.6, General Element #6 - Surface water sampling should also be addressed.

7. Page 2.6, General Element #7 - It is unlikely that three aquifer pump tests locations will be sufficient to properly assess the hydraulic characteristics of aquifers underlying Moffett Field.

The following comments are site specific technical comments on the sampling plan for Moffett Field:

Site 1

8. Page 2.8, first paragraph, Section 2.4.3 - It is unclear why a soil sample will be analyzed at the 60 foot depth. Is the intent to collect a soil sample of the aquifer material to be screened?

9. Page 2.8, second paragraph, Section 2.4.3 - In order to adequately monitor the leachate in the landfill it will be necessary to install several monitoring wells within the landfill boundary to monitor both water quality and water levels. In addition, assuming that the A aquifer exists at this site, one monitoring well in the B1 aquifer is inadequate to monitor for contamination vertically beneath the landfill.

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10. Page 2.8, third paragraph, Section 2.4.3 - The third paragraph states that there are no monitoring wells proposed for the landfill itself; however, wells W1-6(A) and W1-8(A) are located in the landfill as shown on Figure 2-4. Clarification is needed. In addition, the "downgradient wells" may not be sufficient to monitor for any leachate that may affect groundwater.

11. Page 2.8, fourth paragraph, Section 2.4.3 - No additional soil sampling is proposed besides the soil samples for chemical analyses from A aquifer monitoring wells. As stated in previous comments regarding the August 1986 Sample Plan, additional soil borings are recommended to adequately characterize the extent of soil pollution at site 1. The need to conduct additional soil sampling within the landfill is also required to satisfy the solid waste assessment test (SWAT) requirements. It is also recommended that a soil sample be collected of the native soils located beneath the landfill. The soil samples should also be analyzed for BNAs.

Site 2

12. Page 2.10, fourth paragraph, Section 2.5.3 - Similar to comments for Site 1, additional soil borings at Site 2, including analyses for BNAs, are needed to adequately characterize the extent of soil pollution in accordance with SWAT requirements. The same soil sampling interval that is recommended for Site 1 is also recommended for Site 2. In addition, it is recommended to collect samples of the native soils beneath any refuse encountered for borings within the landfill.

13. Page 2.10, fifth paragraph, Section 2.5.3 - Similar to Site 1, it will be necessary to install wells within the landfill to monitor for possible leachate. A B(1) aquifer well is also recommended upgradient of the landfill [e.g. adjacent to proposed monitoring well W2-5(A)].

Site 3

14. Page 2.12, last paragraph, Section 2.5.3 - Proposed monitoring well W3-14(B1) should be labeled on Figure 2-5. Given the fact that hazardous materials have been pumped from Marriage Road Ditch into the "Drainage Ditch" leading to Guadalupe Slough, it will be necessary to determine the presence of any soil and groundwater pollution adjacent to and downgradient of the drainage ditch.

15. Page 2.13, second paragraph, first sentence - This sentence should state that the groundwater samples will be analyzed according to the schedule presented in Section 3.

16. Page 2.13, fourth paragraph, Section 2.5.3 - Soil sampling along the downgradient surface drainages from Marriage Road ditch is necessary as previously stated in the Regional Board staff's 11-26-86 sampling plan comments. The Navy's May 15, 1987 response to the 11-26-86 comments stated that soil samples at shallow depths would occur along downgradient surface drainages. In addition, the soil samples should also be analyzed for BNAs.

Sites 4, 6, and 7

17. Page 2.15, last paragraph, Section 2.6.2 - An additional objective for

Sites 4, 6, and 7 should be to define the extent of soil pollution at all three sites.

18. Page 2.16, second paragraph, Section 2.6.3 - As stated previously, soil sampling is needed at Sites 4, 6, and 7 to define the extent of soil pollution. In addition, it would be useful to show the locations of the soil gas sampling points on Figure 2-5.

19. Page 2.16, third paragraph, Section 2.6.3 - Given the fact that existing monitoring wells W7-3(AX) and W7-14(AX) are improperly installed, it will be necessary to install additional monitoring wells north and east of hangar 2 to determine the extent of any groundwater pollution.

20. Page 2.16, fifth paragraph, Section 2.6.3 - The soil samples should also be analyzed for BNAs (modify Table 3.1).

Site 5

21. Page 2.18, second paragraph - The location of the soil borings should be shown on Figure 2-6.

22. Page 2.19, fifth paragraph - As stated previously in the Regional Board staff's 11-26-86 sampling plan comments, additional soil sampling at Site 5 is necessary to adequately assess the extent and character of soil pollution. The Navy's 5-15-87 response to the 11-26-86 comments stated that soil sampling would be conducted at Site 5, including analyses for total petroleum hydrocarbons (TPH). Tables 3-1 through 3-6 should be modified to include TPH analyses for Site 5 for both soil and groundwater samples.

Site 8

23. Page 2.19, last paragraph, Section 2.8.1 - What is the current status of the sump? Is it planned for removal? Was this sump included in the June 1986 underground tank/sump report prepared by ERM-West? The location of the sump should be shown on Figure 2-7.

24. Page 2.20, last paragraph, Section 2.8.3 - One B(2) aquifer well is proposed downgradient of Site 8; however, no B(1) wells have been installed to date at this site. It is recommended that at least two B(1) aquifer wells be installed downgradient concurrent or prior to installation of any B(2) wells.

25. Page 2.21, first paragraph - An additional A and B(1) aquifer well are also recommended to be installed upgradient in Phase I. In addition, proposed monitoring well W8-7B(1) should be installed during Phase I.

26. Page 2.21, second paragraph - Although Table 3-1 indicates that soil samples will be analyzed for BNAs, this is not stated in the last sentence. In addition, it may be necessary to analyze soil samples at depths greater than 3 feet.

Site 9

27. Page 2.22, last paragraph - It is recommended that all of the tanks and sumps in the vicinity of Site 9 be shown on Figure 2-8 and 2-9 in order to

properly assess the proposed locations of the monitoring wells. In addition, it would be useful to show the locations of the MEW wells on Figure 2-8. The monitoring wells installed by ERM-West should also be located on Figures 2-8 and 2-9.

28. Page 2.23, last paragraph - It is recommended that some of the "Phase II" wells be installed during Phase I. An additional A aquifer monitoring well is also needed downgradient of well W9-2A.

29. Page 2.24, fourth paragraph - Consideration should be given to utilizing the MEW wells for water quality sampling and water level measurement. No mention is made regarding groundwater analyses. It is recommended that soil and groundwater samples also be analyzed for TPH and included in Tables 3-2 and 3-3.

30. Page 2.24, fifth paragraph - Though soil sampling is proposed from all wells to be installed, this will be inadequate to define the extent of soil pollution associated with Site 9 sources, especially sump #66. It is critical to identify the locations of all potential sources (tanks, sumps, spill areas, etc.) on Figures 2-8 and 2-9 in order to properly assess the adequacy of proposed soil and groundwater investigations. Similar to earlier comments, it is also recommended to include TPH analyses for soil and groundwater samples.

Site 10

31. Page 2.26, fifth paragraph, third sentence - Should well W10-7(B1) be W10-6(B1)? Clarification is needed.

32. Page 2.26, fifth paragraph - No mention is made regarding soil sampling at Site 10 although Table 3-1 indicates that limited sampling will take place. Additional soil sampling is needed at tanks 19 and 20. The soil and groundwater samples should also include analyses for TPH (modify Tables 3-1 through 3-3).

C Aquifer Investigation

33. Page 2.27, third paragraph - Monitoring well W3-10(CX) and the MEW C aquifer wells should be shown on Figure 2-10. In addition, the legend for well W3-16(C) needs to be corrected.

34. Page 2.28, second paragraph - Wells W8-3(C) and W9-3(C) are located downgradient of documented sources of pollution on Moffett Field.

Other Technical Comments

35. Page 3.1, second and third paragraphs - Total petroleum hydrocarbon analyses should also be included in the list of soil and groundwater analyses.