STATE OF CALIFORNIA — ENVIRONMENTAL PROTECTION AGENCY

PETE WILSON, *Governor*

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

EGION 2
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September 21, 1994

Commanding Officer
Western Division
Attn: Mr. Ernesto Galang, Code 1813
Naval Facilities Engineering Command
90 Commodore Drive
San Bruno, California 94066-0720

Dear Mr. Galang:

COMMENTS TO DRAFT PHASE IIB REMEDIAL INVESTIGATION WORK PLAN ADDENDUM (JULY 20, 1994)

The Department of Toxic Substances Control (Department) and San Francisco Bay Regional Water Quality Control Board (Regional Board) have reviewed the subject document. The Department and Regional Board have concerns about the following issues:

1. The organization of the work plan with respect to zones of investigation;

2. Involvement of the project team in certain decisions such as placement of monitoring wells;

3. Adequate contingency plans for collection of hard-rock samples and sand samples;

4. Assuring that a representative well is in place for each site, pending results of the Phase II RI;

5. The purpose of and approach to leachate sampling and analysis;

6. Adequate review of historic data, including maps and reports.

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Specific comments are enclosed. If you have any questions regarding this letter, please contact me at (510) 540-3818.

Sincerely,

Mary Rose Cassa

Mary Rose Cassa
Engineering Geologist
Office of Military Facilities

Enclosures

cc: Mr. Michael Bessette
CA Regional Water Quality Control Board
San Francisco Bay Region
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Admin Record (3 copies)

DEPARTMENT OF TOXIC SUBSTANCES CONTROL
COMMENTS TO DRAFT PHASE IIB REMEDIAL INVESTIGATION WORK PLAN ADDENDUM, NAVAL STATION TREASURE ISLAND, SAN FRANCISCO, CALIFORNIA (JULY 20, 1994)

General Comments

1. General organization: The work plan would benefit from being organized according to preliminary investigative zones.

2. Field Methods and Procedures: A decision-making process for determining locations for Geoprobe, soil borings, and monitoring wells should be outlined in the work plan. Monitoring well locations should be selected with on-board review by the project team whenever possible.

3. Sampling of relevant storm drains at IR sites may be advantageous and provide information of contaminant transportation.

Specific Comments

4. Section 3.0, page 5: Since it is unlikely that SCAPS will be available for use at NAVSTA TI, this discussion should be deleted from the work plan and possibly included as an appendix, should the technology become available. This information should be included in the BCP as a Strategy.

5. Section 3.1.2, page 7, first bullet: Please clarify what is meant by "the area of highest contamination."

6. Section 3.1.3, page 8: As expressed at the project managers' meeting on August 11, 1994, the Department is concerned that the description of screen point sampler placement is not adequate for each site-specific situation. The work plan should be modified to allow for site-specific determination, including contaminant type (i.e., contaminants that are "floaters" versus "sinkers").

7. Section 3.1.3, page 9: The work plan should allow for generation of waste ground water; e.g., "Should any waste ground water be generated it will be handled as follows . . ."

8. Section 3.2, page 10: The work plan should include contingency plans for poor or no sample recovery using conventional techniques. The Department finds it unacceptable to have no recovery of samples. The Navy should have plans in place to use appropriate techniques to assure sample recovery at every sampling location.

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9. Section 3.4, page 11: The Navy should use the same color chart that has been used in previous investigations. The Munsell chart is preferred.

10. Section 3.10, page 13: The work plan should include provisions to protect power to the sample refrigeration unit.

11. Section 3.12.1, page 14: Please use "gasoline" to avoid confusion with natural gas or soil gas.

12. Section 3.13, page 18-19:

    a. Please describe what will happen to archived samples not sent to an off-site laboratory.

    b. The work plan should include provision for project team review of field screening results compared to off-site laboratory results.

    c. The table on page 19 should be given a number. Please give the rationale for the two categories (second and third columns). Recommend changing column 1 so that all the </> symbols are "pointing" in the same direction.

13. Section 3.15, page 23: The Navy is reminded that hazardous waste cannot be stored longer than 90 days. Recommend rewording the sentence, "The drums will be transported . . . within 48 hours following the completion of drum use" as follows: " . . . within 48 hours from the time the drum is secured."

14. Section 3.16, page 24: Please check the last sentence of the first paragraph on this page for consistency (well/hydraulic punch numbering).

15. Section 4.1, page 25:

    a. The site history should include the use of Site 04 prior to the 1970s.

    b. The background information should include a discussion of the oil seepage in Building 342 (i.e., move the second paragraph of Section 4.4.1 to this section).

16. Section 4.1.1, page 27:

    a. Only one sample is proposed near the soil seepage in Building 342. This is not adequate. An investigation from within the building should be considered.

b. The area of contamination (SB-1, -2, -4) should be re-sampled for complete analysis.

17. Section 4.2.2, page 30: Since the 1987 pipeline trenching operations uncovered buried asbestos debris, the work plan should include sampling in the vicinity of the trench where the debris was observed.

18. Section 4.3, page 31: The boundary streets should be listed more completely (at least one side of the polygon is not included here).

19. Section 4.3.2, page 33:

    a. The text should clarify if the Phase IIA and IIB groundwater monitoring events will take place at the same time or, if not, what the anticipated time difference will be.

    b. See comment 6.

20. Sections 4.4 and 4.7, pages 37-39 and 44-47: Sites 7 and 10 should be handled together (see comment 1).

21. Section 4.5, page 39:

    a. The Department's project manager does not recall that Site 8 is overgrown only with small trees and shrubs. Are not low-growing herbaceous plants predominant?

    b. The Navy must be prepared to use methods that will assure recovery of hard-rock samples (see comment 8).

22. Section 4.5.1, page 40: Please explain how the depth 10 ft bgs was selected.

23. Section 4.6, page 41: The background discussion should include the paint booth and floor drain.

24. Section 4.6.1, page 42: Does the Navy plan to sample the contents of the pit associated with the lift system in order to correlate potential soil and/or ground water contamination? If so, this should be stated in the work plan.

25. Section 4.6.2, page 42: The sampling strategy should include the paint booth and floor drain.

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26. Section 4.6.3, pages 43-44:

    a. Samples likely to be affected by fluids from the lift system should be analyzed for PCBs that may have been contained in hydraulic fluid.

    b. Only one monitoring well is proposed if groundwater contamination is detected. Groundwater gradient cannot be determined using only one well. Can other wells in the area be used to establish gradient?

27. Section 4.7.1, page 45:

    a. Please explain why pesticides and herbicides will not be investigated further west of Building 335/in the western portion of the site.

    b. The discussion of PAH and diesel contamination should clarify that the contamination is 5-8 ft bgs. Recommend modifying the last paragraph of this discussion by deleting the word "soil."

    c. In the last paragraph on this page, the terms "diesel" and "PAH" seem to be used interchangeably. Please use both terms if that is the intended information.

28. Section 4.7.2, page 46:

    a. The proposed number of samples does not agree with Table 9 and Figure 9. Please correct.

    b. Sampling locations inside Building 335, near the suspected drain, should be considered. Geoprobe may be an appropriate method.

29. Section 4.8, pages 47-48:

    a. The condition of Site 11 before it was used as a dump is not yet well established. The Department recommends conducting further research (e.g., seismic survey) to better define the former shoreline and likely lateral and vertical extent of fill material.

    b. The Draft Phase I RI report did not include trench dimensions or trench logs. This information should be included in the Phase II report. The Department's RPM would like to inspect photos of the open trenches, if any are available.

c. The last sentence should be more specific as to the locations where the color change and hydrocarbon odor was noted. The existence of oil saturation at approximately 11 ft bgs has been noted at other filled locations around the Bay (e.g., NAS Alameda and FISCO-Alameda Annex). This information should be correlated to perhaps establish the presence of "relic" contamination from early in the century. If such contamination is suspected, the approach to delineation and cleanup would be quite different from that for "modern" contamination.

d. This section should discuss the USTs and fuel lines at Site 11.

30. Section 4.8.2, page 49:

a. The text should describe the sampling grid on Figure 10 and explain its use.

b. Only three locations will be used to investigate the USTs and pipeline. This does not appear to be adequate. Sampling points should be located between USTs 204A and B and monitoring well MW04. This will help determine if the USTs are the source of hydrocarbon contamination.

31. Section 4.8.3, pate 51: Please check the text under "Monitoring Well Installation" for completeness.

32. Section 4.9, pages 51-52:

a. In Section 2.0, Site 12 is explicitly left out of this phase of the RI. This discussion of Site 12 does not seem necessary in this work plan.

b. The first paragraph does not accurately convey the information contained in the 1988 Dames and Moore report. The Dames and Moore report indicates several housing foundations were constructed (1200-series housing) and that site preparation recommendations included removing debris to an elevation of +2 ft MSL, but debris probably remains below this depth (maximum depth of observation was -2 ft MSL).

c. First paragraph on page 52: typographical error ("suspended" should be "suspected")?

d. This section should reference Figure 11.

e. The Department's RPM would like to inspect maps and engineering reports for this site as referenced by Dames and Moore (1988).

33. Section 4.10.1, page 54: Please explain what LNAPL indicators are.

34. Section 4.10.2, page 54: The text describes 28 cells in Figure 12, but only 27 are shown. Please correct as appropriate.

35. Sections 4.11-4.11.3, pages 56-59.

a. Since Site 15 seems to be heavily contaminated with PAHs (documented by Phase I sampling) and petroleum hydrocarbons (reported during construction activities), the Department recommends taking a broader approach to investigation of vertical and lateral extent rather than targeting fuel storage tanks and pipelines. Phase II sampling should attempt to confirm earlier reports of petroleum contamination during construction activities at the commissary (Building 34) and Pier 1.

b. The Department requests at least two samples near the former AST near Building 91.

c. Please provide justification for not including the UST in the investigation.

36. Section 4.12.1, page 60:

a. The Navy must be prepared to use methods that will assure recovery of hard-rock samples (see comment 8).

b. Please clarify what is meant by the sentence, "If necessary, the monitoring wells will be installed in the coreholes."

37. Section 4.16.1, page 72:

a. Please explain how the depth of 10 ft below the water table was selected for ground water sampling.

b. The lithology beneath this site should be more thoroughly investigated and described. Deep CPTs and/or data from previous geotechnical boreholes can be used to provide this information.

38. Section 4.16.2, page 73: The Department recommends obtaining samples from beneath the trench drains in Building 99 and sampling nearby pipeline trenches which may have

served as preferential migration pathways for DNAPL.

39. Section 14.17.1, page 76: The proposed fuel line investigation at Site 24B is not adequate. Sampling every 200 feet may not adequately characterize the contamination and identify areas of release. Soil gas sampling and/or vacuum excavation should be considered for this site to help direct soil sampling.

40. Section 4.17.2, page 77: Please explain the criteria for determining sampling depth described in the first paragraph.

41. Section 4.18, page 79: Are there any fuel lines in this area?

42. Section 4.19.3, page 84: Since Sites 28 and 29 have not been systematically sampled, and various chemicals may have been used for road maintenance and weed abatement, the Department recommends revising the list of analytes, at least for field screening, to include TPH, PAH, and PCBs.

43. Table 2: Please revise this table so that water consistently precedes soil in the matrix column.

44. Figure 3:

    a. Please include the dotted pattern in the legend.

    b. As discussed in the RPM meeting on August 11, 1994, the configuration of the pipelines as drawn seems strange. Please confirm the pipeline as mapped, including locations of pipe crossings and intersections (the meeting of two pipelines in the lower right corner of the figure appears as an intersection, not a crossing).

    c. The work plan should include a sample at the observed oil seepage in building 342.

    d. As discussed on August 11, sample location D should be moved about 20 ft south-southwest.

    e. The purpose for sample location C is not clear. If it is intended to sample the dumpster location and delineate lateral extent of possible contamination, perhaps an additional sample is needed about 20 ft south of C.

45. Figure 4: Please modify this map to show that 5th Street jogs to the south at H Street. If possible, please show the location of the 1987 pipeline trench that originally exposed the buried asbestos.

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46. Figure 5: The two southernmost cells (row 2, column 10; row 3, column 10) within the drainage trench, including the footprint of Building 244, should be added as sampling cells.

47. Figure 6: The site plan for adjacent Site 10 does not match that shown in Figure 9. Please correct as appropriate.

48. Figure 9: The figure shows 5 primary sampling locations (A-E), but the text says there will be 6 primary locations. Please correct as appropriate.

49. Figure 10: How certain is the boundary between landfill/non-landfill at the southwest end of the site? What is the evidence for differentiating this area? Please check the match between the site outline and the shoreline at the northeast end of the site.

50. Figure 11: The legend should include the solid black rectangles. The Department recommends re-evaluating the original excavation reports and aerial photographs in order to provide a more accurate depiction of the early site conditions.

51. Figure 12: The legend contains a symbol for "soil only" proposed sampling location, but none are shown on the figure. Please remove from the legend if not used in this figure. Please label the horizontal tank battery near the center of the figure. The label, "Unused Fuel Pump Islands," should be corrected to identify the objects as vacuum cleaning stations.

52. Figure 13: The line around former tank locations 4M and 5M should be included in the legend.

53. Figure 20: The figure should identify the "anomaly" in the lower right corner as a geophysical anomaly from ground penetrating radar and magnetometer surveys.

54. Figures 23-25: The implementation of the Investigative Zone concept does not meet the objectives of the BCP. The Zone maps should show all ground water wells and soil boring locations. If necessary, the scale of the maps should be changed in order to accommodate this information.

Prepared By: Michael M. Bessette, RPM Phone No.: (510) 286-1028

Date: September 13, 1994 File No.: 2169.6013 (MMB)

Subject: **RWQCB Comments on the July 20, 1994, Draft Phase IIB Remedial Investigation Work Plan Addendum.**

General Comments:

1. Following the initial screening of all the IR Sites at NAVSTA TI, it is important to confirm that all the sources have been located. If new sources or if a source delineation changes as a result of this screening then, we need to analyze the groundwater monitoring wells and insure a representative well is in place for the site.

2. Elaborate on the purpose of taking leachate samples during this phase of investigation (page 7)?

3. All figures with groundwater flow direction arrows should specify if the flow direction is assumed or based on field data.

Specific Comments:

4. Page 5, 3.0: Remove discussion pertaining to site characterization and analysis penetrometer system (SCAPS) due to the unlikely nature of this technique being performed.

5. Page 7, 3.1.2, 1st Bullet: Specify which leachability test will be used and explain why leachability tests will only be performed on selected sites (e.g. 6, 9, 14, 24A, 24B, and 25).

6. Page 7, 3.1.3, 1st Bullet: Install the screen point sampler so that the top of the 19-inch screen is minimum of 6-inches above groundwater surface.

7. Page 9, 3.1.4: Provide RWQCB with background information regarding vacuum excavation and potential VOC loss due to vacuum stripping.

8. Page 10, 3.2, 1st paragraph: Specify continuous sample collection.

9. Page 10, 3.2, 2nd paragraph: Prepare for sandy conditions and employ sand catchers to improve recovery rates.

10. Page 11, 3.5: The 1991 FSP (PRC 1991b) indicates that monitoring well construction will be completed with only 1.0-foot of screen above the groundwater surface. We prefer well completion with a minimum of two to three feet of screen above the groundwater surface.

11. Page 14, 3.12: Provide Standard Operating Procedures (SOP) for the immunoassay test. For example, provide name of test, methodology for performing test, detection, limits, etc.

12. Page 19, 3.14: Specify internal review process of the field screening.

13. Page 30, 4.2.3: If groundwater is encountered during the trenching, will there be an attempt to collect any samples?

Subject: **RWQCB Comments on the July 20, 1994, Draft Phase IIB Remedial Investigation Work Plan Addendum.**

Specific Comments (continued):

14. Page 35, Sample Analysis Bullet: It appears appropriate to add dioxins to the analysis list for Site 06. Explain rationale for preclusion of analysis for dioxin.

15. Page 35, Leachate Sample Bullet: One sample taken from the highest concentration area may not be sufficient to make an analysis of the fate and transport of contaminants associated with this site. If the purpose of collecting a leachate sample is to assess impact to groundwater, you can expect the area with the highest concentration of contaminants to already to have impacted groundwater. To better understand the fate and transport of the contaminants, the Navy may want to take more than one leachate sample. Also, you may want to take leachate samples from areas not as high in concentration of contaminants, to prove any hypothesis that low concentrations have not impacted groundwater.

16. Page 36, Groundwater Sampling from New Monitoring Wells Bullet: The "the chalk and water-finding paste method technique" methodology does not appear in the 1991 FSP. Specify procedure and consider using an oil/water interface probe.

17. Page 39, Site 08: The same sludge was disposed of at both Sites 07 and 08, please analyze for the same constituents at both locations.

18. Page 49, Site 11 Field Investigation Strategy: Pesticides should be included on the list for a type of analysis because it was detected in the previous RI phase.

19. Page 49, 4.8.1: As more site specific information is collected regarding groundwater behavior, installation of a groundwater monitoring well upgradient from the landfill may be appropriate to establish background water quality. A contingency plan should be included in this work plan to address this situation if necessary.

Concurred By: Shin-Roei Lee 9/20/94

Shin-Roei Lee, Section Leader