



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street
San Francisco, CA 94105-3901

September 22, 1994

Ernesto M. Galang
Western Division - Code T4A2EG
Naval Facilities Engineering Command
900 Commodore Drive
San Bruno, California 94066-2402

Re: Draft Phase IIB Remedial Investigation Work Plan Addendum
for Naval Station Treasure Island dated July 20, 1994

Dear Mr. Galang,

The U. S. Environmental Protection Agency (EPA) has received and reviewed the subject document. EPA's comments are enclosed.

If you have any questions, please call me at (415) 744-2368.

Sincerely,

Rachel D. Simons

Rachel D. Simons
Remedial Project Manager
Federal Facilities Cleanup Office

Enclosures

cc: Jim Sullivan, NAVSTA TI
Mary Rose Cassa, DTSC
Michael Bessette, CRWQCB
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H-9-2 File

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DRAFT PHASE IIB REMEDIAL INVESTIGATION WORK PLAN ADDENDUM
NAVAL STATION TREASURE ISLAND (NSTI) DATED JULY 20, 1994

General Comments:

1. In general, the Draft Phase IIB Remedial Investigation Work Plan Addendum (Work Plan) is well written and adequately contains the information from Work Plan scoping meetings. The use of immunoassay tests for field screening is well executed.
2. It is recommended that the results from the Phase I RI be summarized in the Work Plan. If the results of the Phase I RI are included in the Work Plan, conclusions can be made about the Phase II RI field work such as data gaps, sample locations and analyses selected. This may be especially important if a new contractor is selected for the CLEAN II contract and subsequently performs the Phase IIB RI field work. Since this request would require substantial revisions to the Work Plan, it is recommended that this comment be discussed by the Project Team (EPA, DTSC, RWQCB and Navy) at the next Project Managers meeting.
3. Data Quality Objectives (DQOs) should be addressed in the Work Plan to evaluate the end use of the data collected during the Phase II Remedial Investigation (RI). Some DQOs were addressed during the Phase I RI (1991), but the objectives of data collection have changed since that time. DQOs should include, but are not limited to, evaluating if data collected will meet the requirements for human health and ecological risk assessment and if data collected will meet remedial design objectives including evaluation of potential treatment technologies. It is recommended that an approach for DQOs be discussed by the Project Team at the next Project Managers meeting.
4. EPA recommends that aerial photographs of NSTI be reviewed for historical information prior to finalizing the Work Plan.
5. EPA recommends sampling the sediment in the storm drain catch basins that are located within Installation Restoration (IR) sites. This storm drain investigation is particularly important for the sites with a history of waste disposal into storm drains (e.g. Sites 04/19, 07 and 10).
6. Explain how analytical detection limits were determined to be adequate for both human health and ecological risk assessment. For example, U.S. EPA Region IX Preliminary Remedial Goals (PRGs) would be appropriate for determining if detection limits for soil analyses are adequate for human health risk assessment.

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7. Provide the criteria that will be used to verify the field screening data with the off-site laboratory data.
8. In the Draft Phase I RI Report, it has been noted that some of the information in the field borelogs (Appendix A) is not consistent with the data presented on the figures for corresponding sites. Explain the following inconsistencies:
 - Site 15: The field borelog for 15-SB01 shows that four samples were collected for chemical analysis, yet only three samples are displayed on Figure 27.
 - Site 16: The field borelog for 16-SB04 shows no sample collected for Zone C, yet Zone C is represented as non-detect (ND) on Figure 28.
 - Site 20: The field borelog for 20-SB02 shows a sample collected for chemical analysis at 3 feet, yet 20-SB02 is missing from Figure 33.

Specific Comments:

1. **Section 2.0 Project Background and Phase IIB RI Objectives, p-3**

The text states that specific data needs and field investigation objectives, strategies, methods, and procedures for each site are provided in Section 4.0. However, in Section 4.0, conceptual site models were not included. A conceptual site model should be included which describes known and suspected sources of contamination, types of contaminants and affected media, known and potential routes of migration, and known or potential human and environmental receptors. The conceptual site model is used to identify the data gaps that exist, and from this information, a field sampling effort can be developed that will satisfactorily characterize the site.

2. **Section 2.0 Project Background and Phase IIB RI Objectives, p-3**

In this section, specify how the investigation for Sites 01, 13A/B and 27 will be addressed.

3. **Section 3.1.2 Soil Sampling with a Hydraulic Punch, p-7**

It is recommended that split samples be collected instead of two separate samples for immunoassay screening and off-site laboratory analysis.

4. Section 3.1.2 Soil Sampling with a Hydraulic Punch, p-7

Under the first bullet on this page, explain why the listed sites were selected for soil leachate tests and how the analyses were selected for each site.

5. Section 3.12 Field Analytical Procedures, p-14

The quality control procedures are not clearly defined for the field analytical immunoassay methods. For example, duplicates, method blanks, and standards will be analyzed, but the text does not describe the control limits that will be used and what corrective action that will occur when a duplicate or second source standard is out of control.

6. Section 3.13 Daily Evaluation of Field Analytical Results, p-18

Explain how the locations for off-site laboratory samples will be selected based on the field screening results. It is recommended that when possible samples at hot spots be sent to the off-site laboratory.

7. Section 4.1 Site 04, Hydraulic Training School and Site 19, Refuse Transfer Area, p-25

At this time, there is not enough information to make conclusions about the volume of contaminated soil and vertical extent of contamination. Delete or revise the last two sentences of the first paragraph.

8. Section 4.1.1 Sites 04 and 19 Field Investigation Strategy, p-26

In the table titled "Proposed Investigations: Phase II RI and Removal Actions" (Table PI) distributed at the March 21, 1994 Project Managers meeting, oil and grease is listed under Analyses for samples collected at soil borings SB-6, SB-8, SB-9 and SB-10. Explain why these analyses were not included in the Work Plan for Site 04. Since Table PI documents the rationale behind the sampling approach for all the Sites, Table PI should be included in the Work Plan.

9. Section 4.1.1 Sites 04 and 19 Field Investigation Strategy, p-26

To investigate the potential source of contamination, soil and groundwater samples should be collected inside building 342 directly beneath the oil staining observed on the equipment pad during the March 1994 site visit.

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10. Section 4.1.2 Sites 04 and 19 Sampling Locations, p-27

At Site 04, the highest concentrations of contamination were detected at Preliminary Assessment/Site Inspection (PA/SI) samples SB-1 and SB-2. These surface soil samples were analyzed for oil and grease and total petroleum hydrocarbons (TPH). To completely define the nature and vertical extent of this hot spot, a soil boring should be placed in the same area as PA/SI samples SB-1 and SB-2 and the samples sent to an off-site analytical laboratory.

11. Section 4.1.2 Sites 04 and 19 Sampling Locations, p-27

Based on historical waste disposal practices at Sites 04 and 19, a sampling plan should be proposed for sampling the storm drains at Sites 04 and 09. If contaminants are detected in any of the storm drain samples with field screening, the samples should be analyzed at an off-site analytical laboratory.

The Draft Phase I RI Report references a stormdrain 30 feet from the asphalt pad behind building 342. Verify the existence this storm drain and show its location on Figure 3.

12. Section 4.1.3 Sites 04 and 19 Field Methods and Procedures, p-28

In Table 3, explain why are there no surface samples for field screening in the column titled "Samples Analyzed/Surface Samples".

13. Section 4.1.3 Sites 04 and 19 Field Methods and Procedures, p-28

Since the hydraulic oil used at the hydraulic training school (building 342) may have contained PCBs, selected samples collected at Site 04 should be analyzed for PCBs including the samples referenced in Specific Comments 6 and 7.

14. Section 4.1.3 Sites 04 and 19 Field Methods and Procedures, p-28

Monitoring Well Installation

More detailed criteria for the placement of groundwater monitoring wells should be provided. After a plume as been delineated with field screening, the following criteria should be applied for placement of groundwater wells:

- installation of at least one upgradient monitoring well

- installation of at least two downgradient monitoring wells
- installation of at least one monitoring well inside the plume boundaries to monitor the plume
- placement of any monitoring wells or collection of hydraulic punch samples should take into account the results of the Tidal Influence Study (TIS) conducted under the Phase IIA RI. Since the TIS will determine the mean hydraulic head and the direction of groundwater flow, the results of the TIS should be considered for the placement of up/downgradient monitoring wells.

Prior to installation, the proposed locations for monitoring wells should be presented by the Navy to the Project Team (EPA, DTSC, RWQCB and Navy) along with the field screening results for evaluation at each site.

15. Section 4.3 Site 06, Fire Training School, p-31

The "piping above and below ground" referenced in this section should be represented on Figure 5.

16. Section 4.3.1 Site 06 Field Investigation Strategy, p-31

Since waste fuel burned at Site 06 may have contained PCBs, selected samples collected at Site 06 should be analyzed for PCBs.

17. Section 4.3.1 Site 06 Field Investigation Strategy, p-31

Under Additional Concerns, Table PI references Underground Storage Tanks (USTs) 248A and B which contained waste oil for Site 06. Identify the USTs on Figure 5 and provide information on the use of these USTs.

18. Section 4.3.2 Site 06 Sampling Locations, p-32

Provide the rationale for selecting a 50-foot by 50-foot cell size.

19. Section 4.3.2 Site 06 Sampling Locations, p-33

In the August 22, 1994 Project Managers meeting, it was stated that if the soil and groundwater plumes extend beyond the Site 06 boundaries shown on Figure 5, the plumes will be delineated beyond the Site 06 boundaries. Add this to the text.

Provide the analytical result of pre-RI soil borings B1 and B2 shown on Figure 5.

20. Section 4.3.3 Site 06 Field Methods and Procedures, p-36

Sample Analyses

Based on the historical use of Site 06 as a fire training school and the general lack of documentation on the type of waste fuel burned at Site 06, selected samples at Site 06 should be analyzed for dioxins. Samples should be selected for dioxin analysis in areas where chlorine donor compounds are detected and in areas of substantial contamination. A field screening immunoassay test is currently available for dioxins from EnSys Environmental Products, Inc.

21. Section 4.4.1 Site 07 Field Investigation Strategy, p-37

Since the Draft Phase I RI Report states that excess pesticide and paint fluids were historically disposed of into the stormwater drains at Site 07, a sampling plan should be proposed for sampling the storm drains at Site 07. If contaminants are detected in any of the storm drain samples with field screening, the samples should be analyzed at an off-site analytical laboratory.

22. Section 4.6.1 Site 09 Field Investigation Strategy, p-42

During the March 1994 site visit, a concrete floor sump was observed in building 41 near the former paint booth. Due to the history of waste disposal at this site, it is recommended that the sediment and wastewater in the sump be sampled.

23. Section 4.6.2 Site 09 Sampling Locations, p-42

During the March 1994 site visit, it appeared that the 30-gallon tank shown on Figure 8 contained hydraulic fluid for the lift in building 41. Since hydraulic fluid most likely contained PCBs, soil samples A and B should be analyzed for PCBs.

24. Section 4.7.1 Site 10 Field Investigation Strategy, p-45

Identify the locations of the do-it-yourself steam cleaning rack and waste storage on Figure 9 and include sampling locations for these areas at Site 10.

25. Section 4.7.1 Site 10 Field Investigation Strategy, p-45

Under Analyses, Table PI identified pesticides for analyses at Site 10. Pesticides were determined to chemicals of concern based on the historical use of pesticides/herbicides at Site 10 and the detection of pesticides at soil borings 10-SB02, 10-SB03 and 10-SB04. Under Sampling Locations, Table PI also identified

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locations around building 335 for pesticide analysis. Explain why pesticides were not included for analyses at Site 10.

26. Section 4.7.2 Site 10 Sampling Locations, p-46

Based on historical waste disposal practices at Site 10, a sampling plan should be proposed for sampling the storm drains at Site 10. If contaminants are detected in any of the storm drain samples with field screening, the samples should be analyzed at an off-site analytical laboratory.

During the March 1994 site visit, storm drains were observed on the southeast side of building 335. These storm drains have been recently diverted to drain to the sewer. Due to the complex history of waste handling and disposal at Site 10, it is recommended that the areas adjacent to these storm drains be investigated.

27. Section 4.7.2 Site 10 Sampling Locations, p-46

It is recommended that the soil and groundwater directly beneath the suspected drain in building 335 be investigated as a potential source of contamination.

28. Section 4.8.1 Site 11 Field Investigation Strategy, p-49

During the Phase I RI, low levels of pesticides were detected in soil borings 11-MW02, 11-MW04 and 11-TP02. Due to presence of ecological receptors on Yerba Buena Island, pesticides should be included for sample analyses at Site 11.

29. Section 4.8.1 Site 11 Field Investigation Strategy, p-49

Under Additional Concerns, Table PI references USTs 204A and B as potential sources of contamination for Site 11. Identify the USTs as existing or removed on Figure 10 and explain how the USTs will be investigated as potential sources.

Identify the estimated groundwater flow direction on Figure 10.

30. Section 4.10 Site 14, New Fuel Farm and Site 22, Navy Exchange Service Station, p-53

What type of fuel was released from Tank 4 in 1984 and 1985?

31. Section 4.11.1 Site 15 Field Investigation Strategy, p-57

Under Data Gaps in Table PI, "near commissary in area of reported contamination" is referenced as a location to be investigated for Site 15. The investigation of this data gap should be addressed

in the Work Plan.

32. Section 4.11.1 Site 15 Field Investigation Strategy, p-57

An abandoned fuel line and UST are shown inside of the Site 15 boundaries on Figure 13. Both the fuel line and UST should be investigated as potential sources of contamination.

33. Section 4.12.2 Site 16 Sampling Locations, p-60

At Site 16, the highest concentrations of contamination were detected at pre-RI soil samples 1, 2 and 3. These surface soil samples were analyzed for lead and TPH. To completely define the nature and vertical extent of this hot spot, a soil boring should be placed in the same area as pre-RI samples 1, 2 and 3 and the samples sent to an off-site analytical laboratory. After the initial round of sampling, it is also recommended that this area be evaluated for continuous core sampling.

34. Section 4.13 Site 17 Field Investigation Strategy, p-63

Under Analyses, Table PI lists VOCs for Site 17. Explain why VOC analyses were not included in the Work Plan for Site 17.

35. Section 4.14 Site 20, Auto Hobby Shop and Transportation Center, p-66

Since the Draft Phase I RI Report states that waste fluids were historically disposed of into the stormwater sewer system at Site 20, a sampling plan should be proposed for sampling the storm drains at Site 20. If contaminants are detected in any of the storm drain samples with field screening, the samples should be analyzed at an off-site analytical laboratory. Storm drains located within the boundaries of Site 20 should also be identified on Figure 16.

36. Section 4.14.1 Site 20 Field Investigation Strategy, p-67

In the March 1994 site visit, a sump was observed in a heavily stained area at the south corner of the pad behind building 225. This sump should be identified on Figure 16 and included in the investigation for Site 20. Propose sampling locations for this area.

37. Section 4.14.2 Site 20 Sampling Locations, p-67

At Site 20, the highest concentrations of contamination were detected at pre-RI soil samples 2 and 3. These surface soil samples were analyzed for oil and grease, lead and TPH. To completely define the nature and vertical extent of this hot

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spot, a soil boring should be placed in the same area as pre-RI samples 2 and 3 and the samples sent to an off-site analytical laboratory.

38. Section 4.14.2 Site 20 Sampling Locations, p-67

Please present the results of the investigation performed by BSK Associates for Site 20.

39. Section 4.14.2 Site 20 Sampling Locations, p-67

Section 4.14 lists drums of hydraulic fluid as potential sources of contamination for Site 20. Since hydraulic fluid used and stored at Site 20 may have contained PCBs, selected samples at Site 20 should be analyzed for PCBs including the samples near the sump referenced in Specific Comment 32.

40. Section 4.16.1 Site 24A Field Investigation Strategy, p-72

Since the source of chlorinated solvents at Site 24A has not been identified, it is recommended that the soil and groundwater below the suspected dry cleaning drains inside building 99 be investigated. Sampling locations should be proposed for this area.

41. Section 4.16.3 Site 24A Field Methods and Procedures, p-74

Since the source of chlorinated solvents in building 99 has not been identified, it is recommended that the soil and groundwater on the southwest side of building 99 be investigated. Propose a sampling location for this area.

42. Section 4.17 Site 24B, Fuel Line Releases, p-75

Identify if UST 230 is existing or removed on Figure 18 and what chemicals were stored in UST 230.

43. Section 4.17.2 Site 20 Sampling Locations, p-77

The third paragraph states that the criteria for additional sampling locations will be applied to "three pre-phase IIB RI sampling locations". Please list the three locations.

44. Section 4.18.1 Site 25 Field Investigation Strategy, p-80

Chapter 1 of the Draft Phase I RI Report references pipelines located at Site 25 which carried fuel to Pier 21. These pipelines should be identified on Figure 20 and be investigated as potential sources of contamination.

45. Section 4.18.1 Site 25 Field Investigation Strategy, p-80

Under Data Gaps in Table PI, UST 143 and drains/sumps (used for seaplanes) in building 2 are referenced as potential sources of contamination, but they were not included in the Work Plan for Site 25. Identify the drains/sumps in building 2 on Figure 20. These potential sources should be included in the investigation of Site 25.

46. Figure 20 Proposed Sampling Locations Site 25-Seaplane Maintenance Area

Several square shapes on Figure 20 are not labeled. Clearly identify which squares on Figure 20 are existing USTs, removed USTs and buildings. For example, it is unclear what the shapes labeled 141, 385, 448 and 459 represent.

47. Section 4.18.2 Site 25 Sampling Locations, p-81

What equipment was decontaminated at the former decon pad shown on Figure 20? What chemicals were used in the decontamination process? It is recommended that the soil directly beneath the drain in the center of the decon pad be sampled as well as the end point of the drain.

48. Section 4.18.2 Site 25 Sampling Locations, p-81

Under Sampling Locations, Table PI identified the area near soil boring 25-SB02 for sampling locations. Soil boring 25-SB02 detected 17.4 mg/kg of diesel at 5 feet. The 1991 pre-RI soil borings SB11 and SB12 were not analyzed for diesel and therefore can not be used to determine the extent of diesel contamination at 25-SB02. Since the source of this contamination is unknown, the area around 25-SB02 should be considered for investigation.

49. Section 5.2.2 Soil Physical Parameters, p-87

Identify the computer models that will be used to model contaminant migration.

50. Section 5.2.3 Fuel Fingerprint Analysis, p-88

Identify the sites where fuel fingerprint analysis will be performed.

51. Section 5.4.2 Data Validation, p-92

The text states "Rejected results will be retained in the database but will not be used in quantitative evaluation." Change statement to read "Rejected results will not be used for

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quantitative or qualitative evaluations."

52. Section 5.4.2.2 Laboratory Data, p-93

The most recent validation guidelines should be referenced. For example, *USEPA National Functional Guidelines for Inorganic Data Review*, February 1994, EPA-540/R-94-013; and *USEPA National Functional Guidelines for Organic Data Review*, February 1994, EPA-540/R-94/012.

53. Section 6.0 Data Evaluation, p-96

The second paragraph on this page states that a computer model will be used to determine contaminant fate and transport at NSTI and to evaluate the impacts to groundwater. Identify which computer model will be used.

54. Section 6.0 Data Evaluation, p-96

Provide an estimated schedule for the technical memoranda identified in this section.

55. Section 6.0 Data Evaluation, p-96

The last paragraph references the following topic for Technical Memorandum (1):

- Revision of the BHHRA to incorporate Phase II RI data and methodology.

The spatial distribution of the 20% confirmation samples must be considered when conducting the BHHRA. This issue should be addressed in Technical Memorandum (1).

56. Table 5, Site 06, Fire Training School Samples and Analyses, p-107

The table indicates a leachability test will be performed. include in Table 2 (Analytical Methods...) all the analytical methods that will be used, including leachability and extraction procedures.