

**RESPONSE TO CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL  
COMMENTS ON THE DRAFT SAMPLING AND ANALYSIS PLAN,  
PARCEL D SITE INVESTIGATION INSTALLATION SITES 33, 35 AND 37  
HUNTERS POINT SHIPYARD  
SAN FRANCISCO, CALIFORNIA**

This document presents the U.S. Department of the Navy's responses to comments from the California Department of Toxic Substances Control (DTSC) on the draft sampling and analysis plan for the Parcel D site investigation at Installation Restoration (IR) Sites 33, 35, and 37 at Hunters Point Shipyard (HPS), dated April 18, 2000. The comments addressed below were received by the Navy on May 22, 2000.

DTSC comments are presented in boldface type.

**GENERAL COMMENT**

1. **Comment:** **The purpose of the SAP is to describe the field efforts as they will be performed. Therefore, it is not appropriate for various options to be included in the SAP (e.g., hollow stem auger/drive sample, summary/full data package, cursory/full data validation). Only the option to be employed should be included in the SAP.**

**Response:** The Navy's intent for the sampling and analysis plan (SAP) was to describe the field sampling procedures, data gathering methods, data quality objectives (DQO), quality assurance (QA) objectives, and quality control (QC) requirements for the data gap investigations at Parcel D.

The Navy agrees that only the methods and procedures that are to be used in the investigation should be described in the SAP. For example, cursory and full data validation are both explained because both are relevant to the data analysis: 80 percent of the data will undergo cursory validation, while 20 percent will also be subject to full validation. Similarly, the preparation of both summary and full data packages are described because they will be generated during the validation procedure. In addition, both the hollow-stem auger and the drive sampling methods are described because the Navy intended to use both. However, the Navy was required to deviate from the proposed hollow-stem auger and split spoon sampling method described in the SAP. Due to limited access inside of Buildings 306 and 274, the Navy completed all borings and sampling with the use of direct push technology. Direct push technology is an acceptable method for collecting samples from various media.

## SPECIFIC COMMENTS

**1. Comment: Sumps**

- 1.1** Cleaning out and inspection of sumps, vaults and drains is presumed to include cleaning and inspection of associated piping. This should be explicitly stated in the text.
- 1.2** How will potential migration of contaminants from soil, surface water, and groundwater into cleaned sumps, vaults be prevented? For example, in building 411, there was evidence of surface flow into sumps due to infiltrating rainwater, and the sump outside building 302A is open to the weather.

**Response:**

1.1 All materials contained in the sumps, floor vaults, and a false floor were removed and placed in containers in accordance with the applicable laws and regulations. The disposal of these wastes will be completed by July 2000. Exposed sumps, floor vaults, and false floor bottoms and sides were inspected, and no indications of equipment or facility failure (including cracks, fractures, or volume loss) were noted. All sumps, floor vaults, and the false floor were clean, in accordance with the Resource Conservation and Recovery Act (RCRA), at the completion of the scheduled site activities.

1.2 The Navy is in the process of closing the sumps and floor vaults located inside of Building 411 and the sump located in front of Building 302A.

**2. Comment: EnCore™ sampling**

- 2.1** Pursuant to previous agreements between the Navy and the agencies at the site, EnCore™ sampling is proposed for volatile organic compound (VOC) and total petroleum hydrocarbon-purgeable (gasoline range) (TPH-p) analyses. However, preservation requirements cited in Table 2A are not consistent with the State of California Hazardous Materials Laboratory's (HML) requirements or with USEPA Interim Guidance (see below). Please correct Table 2A accordingly.
- 2.2** Table 2A. Please change preservation and holding time requirements of "Off-site Laboratory Analyses" to agree with the specifications of HML user's Manual (1999), as follows: 1) 48 hours at 4° C, then preserve, and analyze, or 2) no more than 48 hours at 4° C, then preserve, and analyze within 12 days, or 3) 7 days at 12° C (i.e., freezing) then preserve, and analyze within 7 days. Also low level VOCs (<200 ug/kg) require 5 gram samplers and high level VOCs (>200 ug/kg) require 25 gram samplers. HML requirements are consistent with USEPA guidance, included in Appendix A of the SAP (e.g., pages 3, 7 and 8).
- 2.3** HML standard operating procedures (SOPs) pertaining to EnCore™ sampling have been provided previously to the Navy. The SOPs should be followed by the chemical analytical laboratory and field

**portions of the SOPs should be incorporated into the SAP by reference.**

**Response:** 2.1 EnCore samples were not preserved in the field. The laboratory analyzed these samples within 48 hours from collection..

2.2 EPA's interim guidance states that the holding time for preserved soil samples should be interpreted as 14 days from the time of sample collection (stored at 4 degrees centigrade). Regarding DTSC's request to add additional language on changes to Table 2A, as stated above, the Navy does not plan to reissue the SAP.

2.3 DTSC SOP 732-S and the EPA's interim guidance on EnCore sampling were provided to the field crew prior to sampling, consistent with DTSC's comment.

**3. Comment: Reports. A description of the reports required following the investigation should be included. Field notes should be included in the summary report. For example, notes regarding field inspection of sumps and drains, and dye tracer test notes should be included.**

**Response:** Analytical results, daily reports, and boring logs from the RMR data gap investigation are included in the draft final RMR report. As stated above, the Navy does not plan on reissuing the SAP because the field activities are complete.

**4. Comment: Schedules. A schedule should be included.**

**Response:** As stated above, the Navy does not plan on reissuing the SAP because the field activities are complete.

**5. Comment: Section 2.0. The collection of one surface sample is mentioned in this paragraph, but is not noted in Table 1. Please clarify where the surface sample is to be collected.**

**Response:** All samples collected for the data gap field investigations were from the subsurface. The reference to a surface sample location was in error.

**6. Comment: Section 3.1.1. Surface soil samples are defined by DTSC (HML User's Manual 1999) as samples taken within the top six inches (10 cm) of soil; this usage is consistent with risk assessment protocols. However, the SAP text allows for samples up to two feet below ground surface (fbgs) to be classified as surface samples, which is potentially confusing. Please amend the text to define surface samples as a maximum six inches in depth. Also, Soil Sampling SOP No. 005 defines surface sampling as samples collected up to six fbgs (page 5), which is not in agreement with the SAP text or with HML's usage.**

- Response:** Soil samples were collected from depths ranging from 2.25 to 7.25 feet below ground surface.
7. **Comment:** Section 3.1.2. The SAP should specify the soil sampling/drilling method to be used. Several approaches are discussed in the text (hollow-stem auger, hand auger, drive samples), leading to ambiguity. Please clarify.
- Response:** See the response to general comment 1.
8. **Comment:** Section 3.6.1. Temperature should be recorded in the field prior to release of samples to the courier, and should be recorded by the laboratory upon receipt of the samples.
- Response:** Upon receipt of the samples, the laboratory records the cooler temperature. The Navy requests DTSC to provide the guidance documents that require obtaining the temperature of coolers prior to their release to the courier.
9. **Comment:** Section 3.6.2. Sample collection techniques should be recorded in the field logs (e.g., hollow-stem auger, etc.). Subcontractors (e.g., drillers) should be identified.
- Response:** The drilling techniques and the subcontractor are recorded on the field boring logs. As stated in the response to general comment 1, all samples were collected using direct push technology.
10. **Comment:** Section 4.0. Typos. Scott Wald should be identified as "TtEMI Project Manager" on page 10, first column. Similarly, please correct "TtEMI Project Chemist" and "R&M Site Safety Officer". A "TtEMI On-Site Safety Officer" is described on page 15, but on page 1 the "Site Safety Officer" is described as R&M personnel. Are there two safety officers? If so, please clarify their responsibilities. What is the relationship between R&M and other parties? What are the responsibilities of the R&M Project Manager?
- Response:** The TtEMI on-site safety officer is a representative from R&M Environmental and Infrastructure Engineering, Inc (R&M). R&M is a small disadvantaged business and is TtEMI's protégé firm under the Department of Defense's Mentor Protégé Program. R&M's project manager, Masood Ghassemi, is responsible for the duties listed under the TtEMI project manager, page 12.
11. **Comment:** The review of Section 6.0: Analytical Quality Control Procedures was cursory. It is presumed that USEPA's has reviewed QA/QC procedures, as for previous documents. If a more detailed review is required, HML should be consulted. Comments are also provided under Tables 5-1 to 5-5, below.

- Response:** The SAP was submitted to EPA for it's review. The abbreviated SAP completed for this project provides only a summary of the extensive analytical quality control procedures followed by TtEMI and the Navy.
12. **Comment:** **Section 6.1. The SAP should identify the laboratory (and other subcontractors) to be used. The laboratory location should be included—i.e., are the samples to be shipped by air?**
- Response:** APC Laboratory in Chino, California, analyzed the samples.
13. **Comment:** **Sections 6.6 and 6.7. The SAP should specify whether the full data package or summary data package is to be provided.**
- Response:** Both the summary and full data packages will be provided upon request.
14. **Comment:** **Section 8 and References (and elsewhere) The United States Environmental Protection Agency should be abbreviated to "USEPA" to distinguish it from the California Environmental Protection Agency, or "CalEPA".**
- Response:** The United States Environmental Protection Agency and the California Environmental Protection Agency are abbreviated as EPA and Cal/EPA, respectively.
15. **Comment:** **Section 8.3. The SAP should clarify whether a cursory or full data validation will be performed.**
- Response:** Cursory validation is performed on 80 percent of the samples, and full validation is performed on 20 percent of the samples.
16. **Comment:** **Section 8.4. Results should be reported to the agencies with data qualifiers attached.**
- Response:** Once the analytical results are validated, the data is reported in the draft final RMR with the appropriate qualifiers.
17. **Comment:** **Table 1. Hexavalent chromium should be added to the analytical program for RA37-1, as per text on page 1 (Section 1.1, sixth bullet)—for example, "metals, including hexavalent chromium."**
- Response:** The footnote on Table 1 notes that hexavalent chromium is included in the analyses for metals.
18. **Comment:** **Table 2A. Correct EnCore™ sampling requirements per comment 2A.**
- Response:** See the response to specific comment 2.2.

19. **Comment:** **Table 2B. Why is this table included? No water samples are proposed.**
- Response:** No groundwater samples were collected as part of this data gap effort. However, one equipment blank and one trip blank were submitted for analysis as part of the field quality control samples.
20. **Comment:** **Table 3. The decision rules in Step 5 indicate that industrial re-use is the criteria of the Navy. As discussed at the risk management review meetings, residential re-use has not been ruled out for IR37. Comments will be provided below (under IR37) for both industrial and residential re-use options.**
- Response:** The draft final RMR report will present the Navy's evaluation of IR-37 for residential reuse.
21. **Comment:** **Tables 5-1 to 5-5. The accuracy (% Recovery) and precision (Relative Percent Difference; RPD) cited in these tables do not meet HML requirements for all compounds. These requirements are listed in Table 4.4-2 of HML User's Manual 1999, which is attached for your convenience. It is beyond my expertise to assess the significance of these deviations from HML requirements. For example, USEPA's contract laboratory program (CLP) tests methods are to be used which may be different from those assumed by HML. If USEPA QA/QC reviewers have approved the accuracy and precision requirement, perhaps that approval will suffice. Surrogate recovery limits were not checked.**
- Response:** The EPA Contract Laboratory Program (CLP) and other accuracy and precision goals listed in the table provide data of sufficient quality to meet the project data quality objectives.
22. **Comment:** **Chain of custody (COC), form. Temperature must be added to this form. Temperature in the field and temperature upon receipt by the lab must be recorded.**
- Response:** The Navy requests DTSC to provide the guidance documents that require obtaining the temperature of coolers prior to their release to the courier. The laboratory records the temperature of the cooler upon receipt, on both its sample log-in sheet and cooler receipt checklist.
23. **Comment:** **The SAP should specify the decontamination area, and indicate the location on a figure.**
- Response:** Generally, steam cleaning of large pieces of equipment (such as auger flights and heavy equipment) is conducted at the decontamination pad located in Parcel E. Smaller pieces of equipment (such as split spoon samplers and rods) requiring soap-and-rinse decontamination are cleaned at the site where the field activity takes place.

**24. Comment: IR33 North**

**The sump should be cleaned and inspected prior to sample collection. If cracks or breaks in the sump are noted, the soil sample should be collected at cracks/breaks in the sump. Connections between the sump and nearby trough should be investigated. The soil sample should be located near pipe inlets or outlets if no cracks in the sump are indicated, since pipe connections may be leaking. If outlet piping is associated with the sump, the sample should be collected at the depth of the piping, below the sump bottom.**

**Response:** The sump located in front of Building 302A was cleaned and inspected on April 26, 2000, and soil samples were collected on May 9, 2000. No evidence of cracks or holes on the sides or the bottom of this sump were observed. The sample was collected at a depth of 6.5 to 7 feet bgs, adjacent to the bottom of the sump. A description of the field activities will be included in the draft final RMR report.

**25. Comment: IR33 South**

- 1. Why are no sediment samples proposed for IR 33 South? Visual inspection indicated potential contaminants (i.e., due to odor, color, sheen, floating product) in some locations during the risk management review site visit. Potential contaminants of the soil and groundwater should be identified at this time based on sediment contaminants as well as site history.**
- 2. Associated piping should be inspected for leaks and breaks.**

**Response:** The contents of the 12 sumps and 12 floor vaults, and debris from the false floor were placed in approved containers. The sediments removed from the floor vaults and sumps were segregated into drums and sampled for hazardous waste profiling. Wooden blocks and miscellaneous debris (metal and paper) were removed from the floor vaults and sumps, segregated into roll-off bins, and then sampled for hazardous waste profiling. Water contained in the sumps was contained into Baker tanks, while the water generated from steam cleaning activities was contained in separate Baker tanks. These Baker tanks were sampled for hazardous waste profiling. The accumulated dirt and debris under the false floor was bagged and placed into roll-off bins. These roll-off bins were sampled for hazardous waste profiling. The sumps, floor vaults, and the false floor were steam cleaned and visually inspected. There were no cracks or holes observed in the sumps, floor vaults, and false floor sides or bottoms.

No inspection of the associated piping was conducted.

**26. Comment: IR35; Building 274**

**The purpose of the investigation at building 274 is to determine whether the high concentrations of contaminants measured in floor drains have contaminated soil under the building. A minimum of five soil sampling**

locations are proposed, to be located under five floor drains, and the SAP states that a dye trace study may be performed.

The drainage system should be inspected prior to soil sampling to determine where leaks exist: video inspections of pipelines may facilitate the investigation. The dye test should also be performed prior to the soil sampling, to determine drainage direction and discharge locations. Additional soil samples should be located at any breaks or suspect junctions. Details should be provided regarding the dye test, including specific dye to be used, injection point(s), observation points, etc.

The proposed chemical program is appropriate.

The depths of the samples to be collected under floor drains is not specified. Samples should be collected at 6 to 12 inches below the ground surface.

The sump outside of Building 274 has not been addressed in the SAP.

**Response:**

The five floor drains located inside of Building 274 were visually inspected for sediments. It was noted that little to no sediments were contained within the floor drains. A vacuum with a hose attachment was placed in each drain. The resulting dust collected in the vacuum could not be measured. A dye test was completed after the floor drains were vacuumed. BRIGHT DYES fluorescent green liquid concentrate was used as the dye to determine the drainage direction and discharge location of the floor drains. BRIGHT DYES contains no phosphate and is biodegradable. The dye was administered to all of the floor drains, and showed that the drains discharge is to a sanitary sewer northwest of the building was observed.

The Navy agrees that the proposed chemical analytical program is appropriate.

Soil samples were collected adjacent to the bottom of each floor drain's P-trap, about 2.25 feet bgs.

The sump located outside of Building 274 was not investigated as part of the data gap investigation. The Navy plans on cleaning and closing this sump during the summer of 2000.

27. **Comment:** RA 37-1

1. **Sampling locations.** It appears that the proposed sampling locations are within the previous area of excavation for EE-14. Is it the Navy's intention to sample inside the excavated area but below the depth of excavation area? DTSC recommends that samples be located outside EE-14.
2. **Chromium VI (CrVI).** It is presumed that chromium VI is included in the analytical program. (The text and tables are somewhat ambiguous).
3. **For Residential Re-Use.**
  - 3.1 With regard to residential re-use, manganese (Mn) and nickel (Ni) are chemicals of concern and CrVI contamination has not been ruled out. An exploratory excavation (EE-14) removed other exceedences (e.g., Aroclor, and TPH) but confirmation samples for EE-14 were not analyzed for CrVI, Mn, and Ni.
  - 3.2 CrVI sampling is proposed, and two samples in the EE-14 area will suffice.
  - 3.3 With regard to Mn, samples IR37B016 and IR37B017 (on the west and east sides of EE-14) did not have exceedences of the residential PRG of 1800 mg/kg for Mn. Therefore, these samples demonstrate the extent of contamination to the west and east of the EE-14 area. New samples for Mn should be located between EE-14 and known existing high concentrations (e.g. at PA37SS08 to the northwest and IR37B021 to the southeast), in order to provide more information on the extent of Mn contamination in these other directions.
  - 3.4 With regard to Ni, exceedences of the California Modified Preliminary Remedial Goal (PRG) for residential use (150 mg/kg) are widespread and common at IR37, at concentrations up to 2820 mg/kg (6.25 fbs at IR50B016). Exceedences of the residential PRG represent excess residential risks, even though the concentrations are less than the Hunters Point Ambient Levels (HPALs) for Ni. Similarly, arsenic concentrations which exceed the residential PRG but are less than the HPAL are common at IR37.
4. **For Industrial Re-Use.** Metals sampling (including CrVI) is proposed, and two samples in the EE-14 are will suffice.

**Response:**

27.1 The Navy advanced two borings within the site of exploratory excavation 14 (EE-14). EE-14 was previously excavated to a depth of 3 feet bgs, and there was some concern among the RMR team members that the depth was not sufficient to remove the chemicals driving risk for remedial area 37-1. The Navy collected two samples from each of the borings, at depths of 3.5 to 4.0 feet bgs and 5.5 to 6.0 feet bgs.

27.2 Hexavalent chromium was analyzed in each of the soil samples collected at remedial area (RA) 37-1. Soil samples collected at RA 37-1 were analyzed for the full suite of EPA CLP metals, as shown in Table 1.

27.3.1 See the response to comments 27.1 and 27.2.

27.3.2 See the response to comments 27.1 and 27.2.

27.3.3 Soil samples collected at RA 37-1 were analyzed for manganese. As part of the Navy's RMR analysis of IR-37, under a residential reuse scenario, the Navy has identified two new de minimis areas located at borings IR37SS08 and IR37B021. In order to define the extent of the manganese contamination at these locations, the Navy proposes to conduct pre-excavation sampling as part of the remedial design for Parcel D.

27.3.4 The Navy is committed to cleaning up contamination at the site and does not propose cleaning to levels below Hunters Point ambient levels (HPAL), even though HPAL values may be higher than the 1999 EPA residential preliminary remediation goals (PRG). The HPAL for arsenic is 11.1 milligrams per kilogram (mg/kg), while the 1999 EPA residential PRG is 0.39 mg/kg. The HPAL for nickel is based on a regression equation and is sample-specific, while the 1999 EPA residential PRG for nickel is 150 mg/kg.

27.4 The Navy proposes to clean up IR-37 to a residential reuse scenario.

#### **STANDARD OPERATING PROCEDURES (SOPS) GENERAL COMMENT**

**28. Comment:** Approval of the SAP should not indicate approval of the SOPs. A very cursory review was performed on the SOPs. Only information that directly pertains to the investigation proposed should be included in the SAP. Extraneous SOPs regarding procedures which are not to be used in the investigation under review should not be included. Relevant portions of the SOPs should be excerpted into the text of the SAP.

**Response:** The SOPs were provided for informational purposes only and are general in scope. The SOPs will not be modified for project specific use. In addition, as stated above, the Navy will not reissue the SAP.

#### **SOPS SPECIFIC COMMENT**

**29. Comment:** Soil sampling. No. 005. EnCore™ sampling is not included in this SOP (revised December 1999).

**Response:** DTSC SOP 732-S and the EPA's interim guidance on EnCore sampling were provided to the field crew prior to sampling.