

**RESPONSE TO COMMENTS ON THE
DRAFT SAMPLING AND ANALYSIS PLAN FOR
ADDITIONAL INVESTIGATION OF ONSHORE INSTALLATION RESTORATION
SITES 9 AND 10, TREASURE ISLAND
CONTRACT TASK ORDER 302
NAVAL STATION TREASURE ISLAND, SAN FRANCISCO, CALIFORNIA**

Dated June 11, 2002

This document presents the Navy's responses to comments from 1) Regional Water Quality Control Board (RWQCB), and 2) Geomatrix Consultants on behalf of the City of San Francisco of the Draft Sampling and Analysis Plan, Additional Investigation of Onshore Installation Restoration Sites 9 and 10, Naval Station Treasure Island, San Francisco, California, dated January 2002, and prepared by Tetra Tech EM Inc. (TtEMI). The RWQCB comments were received from Ms. Sarah Raker on January 31, 2002. Geomatrix Consultants comments were received from Ms. Peggy Peischl and Gary Foote on February 25, 2002.

The following comments were received from the Regional Water Quality Control Board (RWQCB), Sarah L. Raker, R.G., C.HG, Associate Engineering Geologist.

General Comments

Comment 1: Please provide either a water level elevation map or indicate the direction of groundwater flow for the site on a figure in order to justify the proposed well locations.

Response: An arrow indicating the suspected groundwater flow direction will be included on the site figure.

Comment 2: Please consider designing the soil boring investigation near the lift station to be expanded or reduced based on field observations. This will allow for a better estimate of the potentially impacted soil volume.

Response: The proposed soil boring and monitor well locations will remain as initially outlined in the Draft SAP. However, five contingency soil borings will be added to the program. The contingency soil borings will be drilled if field observations indicate a need for additional sampling. Locations of the contingency borings will be based on field observations.

The following comments were received from Geomatrix Consultants, Peggy Peischl and Gary Foote, on behalf of the City of San Francisco.

General Comments

Comment 1: Purpose and Objectives, Site 9: Wastewater from the paint booth catch basin was sampled during the RI Phase IIB investigation and analyzed for SVOCs and metals, but not for VOCs. Soil samples from boring 09-SB02 contained acetone and toluene, which are both associated with paint operations. It is recommended that soil and groundwater sampling be conducted in the area of the paint booth catch basin and boring 09-SB02. The analytical program should include VOCs and metals. Relevant sections, tables and figures for the SAP should be revised to incorporate the additional locations.

Response: During the Phase I RI, four boreholes (09SB01-09SB04) were drilled at Site 9. The boreholes were located outside Building 41. Three soil samples were collected from each borehole and analyzed for VOCs, SVOCs, pesticides, PCBs, and metals. Only one soil sample had detectable levels of VOCs with 0.3 mg/kg toluene and 0.003 mg/kg acetone detected in 09SB-02 from 0.8 to 1.3 feet below ground surface (bgs). The residential PRG for toluene is 14 mg/kg and acetone is 1,600 mg/kg. Due to the minimal levels reported in the sample collected from 0.8 to 1.3 feet bgs in soil boring 09SB-02 and the fact that samples collected below that level did not have detectable VOC contamination, additional investigation at this location does not appear warranted.

The wastewater from the paint booth catch basin was analyzed for SVOCs and metals based on analytical results obtained during the Phase I RI sampling. SVOCs reported included, 4-methylphenol at 62 µg/L and phenol at 14 µg/L (estimated). There presently is no TI groundwater screening criteria for 4-methylphenol and the criteria for phenol is 4,600,000 µg/L. SVOCs in the wastewater do not appear to be a concern. However, metal concentrations in the wastewater exceeded Treasure Island groundwater screening criteria for arsenic, manganese, mercury, nickel, silver, and zinc.

During discussions with the BCT following the Phase II RI, the paint booth was not identified as an area of concern. However, in order to evaluate the paint booth catch basin as a potential contaminant source, the Navy proposes to drill one soil boring and install a small diameter monitoring well adjacent to the catch basin. Soil and groundwater samples will be analyzed for metals and VOCs.

Comment 2: Purpose and Objectives, Site 10: We understood that unidentified historical features and the apparent depression northeast of Building 335 would be evaluated

during the proposed investigation. If so, the SAP should be revised to reflect these objectives.

Response: During the Phase I and II Remedial Investigation, four hydropunch borings (07/10HP-16, 17, 18, and 19) were drilled and one groundwater monitoring well (10-MW01) installed in the northeastern corner of Site 10. Water samples from the hydropunch borings were analyzed by immunoassay in the field for TPH. All immunoassay results for TPH were below TI groundwater screening criteria. Groundwater samples from monitoring well 10-MW01 were analyzed for VOCs, SVOCs, pesticides/PCBs, herbicides, metals and TPH-extractables. Groundwater analytical results of samples collected during the RI in 1995 and 1996 reported concentrations of arsenic, chromium, copper, lead, manganese, nickel and zinc above screening criteria. However, analytical results from samples collected in 1998 reported no concentrations above TI groundwater screening criteria except for arsenic. Based on the lack of reported contamination in 1998, the 2001 FSP for the Facility Wide Groundwater Monitoring Program recommended discontinuing sampling of monitoring well 10-MW01. Based on extensive groundwater data and previous analytical results, the Navy does not believe additional sampling is warranted in this area.

Comment 3: During the Navy's recent review of the Environmental Baseline Survey (EBS), the Navy noted a discolored area (approximately 2000 square feet) south of Building 335 in a 1968 aerial photograph. The Navy stated that this area would be included as part of the Site 10 investigation. This document does not address this issue.

Response: Three soil borings have been located in the vicinity of the discolored area and adjacent to the storm drain catch basins on the south side of Building 335. The borings (SS-6-01, SS-6-02, and SS-6-03) were drilled as part of the Environmental Baseline Survey (EBS) in 1997. Soil samples collected from the borings were analyzed for BTEX/MTBE, SVOCs, pesticides, metals, TPH-purgeables and TPH-extractables. The only contaminants detected above screening criteria were molybdenum and thallium, both of which were detected above ambient levels but below residential soil PRGs. All other analytical results were below screening criteria. Based on analytical results and the location of the boreholes within the discolored area, the Navy does not plan to conduct further sampling in this area.

Comment 4: The locations of the former floor drain and catch basins C and 335R should be added to all figures.

Response: The location of the former floor drain and catch basins will be added to the figures.

Comment 5: Sediment and water from catch basins C and 335R, reportedly located on the north side of Building 335, were sampled and analyzed in 1995. These catch basins are

identified as “a potential contaminant source” and are the basis for the proposed sampling at the catch basins on the south side of Building 335. Since the soil and groundwater at the locations of catch basins C and 335R have not been assessed, it is recommended that the SAP include soil borings and small-diameter monitoring wells at these catch basins. Relevant sections, tables and figures for the SAP should be revised to incorporate the additional locations.

Response: Catch basin 335R, which was located on the east side of Building 335, had several soil borings and monitor wells installed in the vicinity of the catch basin during the RI. Based on the results of the 1997 RI Report (TtEMI, 1997), the only area of concern on the east side of the building is centered around soil boring 10SB03 where elevated PAH concentrations have been detected and will be investigated as part of this SAP. Therefore, the Navy believes that additional investigation around catch basin 335R is not warranted.

A hydraulic punch boring (07/10HP004) was also drilled and sampled adjacent to catch basin C. Soil samples from the boring were analyzed for SVOCs, lead, pesticides/PCBs, herbicides, and TPH constituents. Analytical results are listed below.

Analyte	Detected Concentration (mg/kg)	Screening Criteria Residential (mg/kg)
Phenol	0.23 J	37,000 ^a
4,4 – DDD	0.0019J	2.4 ^b
4,4 – DDE	0.013	1.7 ^b
4,4 – DDT	0.0335	1.7 ^b
Alpha-Chlordane	0.006	0.16 ^b
Gamma-Chlordane	0.006	0.16 ^b
TPH - Diesel	ND	1400 ^a
TPH – Motor Oil	ND	1900 ^a

^a TI Screening Criteria

^b EPA Region 9 Preliminary Remediation Goal

ND = Not Detected

J = Estimated

Analytical results indicate that no chemicals of concern were identified in samples collected from the vicinity of catch basin C and no further work is planned in this area.

In addition, the three soil borings drilled as part of the 1997 EBS (SS-6-01, SS-6-02, SS-6-03) were located near the catch basins on the south side of Building 335. The draft SAP proposed soil and groundwater sampling adjacent to these catch basins; however, additional review of EBS data indicates that further sampling at these locations is not

warranted. Therefore, the four soil borings and two monitor wells proposed to be drilled adjacent to the two catch basins on the south side of building 335 will not be installed. The text in the SAP will be revised accordingly.

Comment 6: If no data are available to assess soil and groundwater conditions at the location of the former floor drain, it is recommended that the SAP include soil borings and a small-diameter monitoring well at that location. Relevant sections, tables and figures for the SAP should be revised to incorporate the additional locations.

Response: No soil or groundwater samples have been collected from the former drain area in Building 335. The floor drain has been removed and filled in with concrete. Previous discussions with the BCT have not identified the floor drain as an area requiring additional investigation. Unless the City of San Francisco has additional information to justify collecting soil and groundwater samples from beneath Building 335 and adjacent to the floor drain, the Navy does not believe that additional sampling is warranted in this location.

Comment 7: Historical data indicate that concentrations of several metals exceed the residential PRGs in the area east of Building 335. According to the draft SAP, the samples to be collected from the proposed grid of 9 borings in that area will be analyzed for SVOCs. It is suggested that the SAP include a discussion on the sufficiency of available metals data to adequately characterize metals concentrations in soil.

Response: Thirty soil samples collected during the RI were analyzed for metals. Reported metals concentrations were within TI ambient ranges. Review of the RI data indicates that only four of the thirty samples had reported metal concentrations exceeding TI residential screening criteria. Samples from 07-SB01 (23,500 mg/kg Fe) and 10-SB02 (24,900 mg/kg Fe) exceeded the iron (Fe) screening criteria of 23,000 mg/kg. Samples from 10-SB03 (731 mg/kg Mn) and 10-SB04 (661 mg/kg Mn) exceeded the manganese (Mn) screening criteria of 550 mg/kg. In addition, the Baseline Human Health Risk Assessment determined that metals were not chemicals of concern in soil. As such, additional analyses for metals in the vicinity of 10-SB03 are not warranted.

Comment 8: The area around soil boring 10-SB03 will be investigated to assess the presence of PAHs. Soil samples from boring 10-SB03 were not analyzed for TPH as motor oil. However, TPH was detected at other locations adjacent to this boring (07/10HP10, 07/10HP11 and monitoring well 14MW03) and elsewhere at the site (07/10HP13). The PAHs detected in 10-SB03 may be associated with this petroleum. The proposed 9-boring grid may be adequate to assess borings 07/10HP10 and 7/10HP11, however, the investigation program should be comprehensive enough to fully understand the source and nature of TPH (and possibly associated PAHs) at the site.

At a minimum, it is recommended that the boring grid centered at 07/10HP06 be expanded to incorporate 07/10HP13. Soil samples from borings near 07/10HP13 should be analyzed for SVOCs.

Response: TPH soil concentrations exceeded the former TI TPH screening level of 430 mg/kg in only two surface (0-2 feet bgs) samples collected during the RI at site 10. The sample concentrations were 1,200 at 07/10HP013 and 1,400 mg/kg at 07/10HP011. Based on the revised TI screening level of 1,400 mg/kg, no sample would exceed the screening criteria. Therefore, additional TPH analysis does not appear warranted at this location.

Additionally, previous sampling at hydropunch location 07/10HP06 included immunoassay field analyses for PAHs and TPH from three distinct intervals (1-2 feet, 2-4' feet, and 6-7 feet). Immunoassay analyses did not detect any PAH or TPH constituents above detection limits. Soil samples from hydropunch location 07/10HP06 were also analyzed at the laboratory for pesticides/PCBs and herbicides. Pesticides were detected at all depth intervals. Pesticides were also detected in a water sample collected from hydropunch location 07/10HP06. Pesticides concentrations in both soil and groundwater exceeded TI screening criteria and were identified by the BCT as requiring additional investigation.

Soil samples from hydropunch location 07/10HP13 were also analyzed in the laboratory for pesticides/PCBs, SVOCs, TPH, and chromium. Of the three soil samples collected from hydropunch location 07/10HP13, only the near surface sample (0.75 feet to 1.25 feet bgs) reported concentrations of TPH at 1,200 mg/kg, still below the TI residential screening criteria. The two samples collected below 1.25 feet bgs had no detectable TPH. Phenol was reported at a maximum concentration of 1.6 mg/kg, considerably below the EPA Region IX residential soil PRG of 37,000 mg/kg. Chromium was reported at a maximum concentration of 6.1 mg/kg, while the residential soil screening criteria for chromium is 210 mg/kg. 4,4-DDT had a pesticide concentration of 0.0077 mg/kg, while its residential soil screening criteria is 1.7 mg/kg. Analytical results for the groundwater sample collected at hydropunch location 07/10HP13 reported TPH-diesel at a concentration of 60 µg/L and TPH motor oil at a concentration of 210 µg/L. The TI groundwater screening criteria for both TPH-diesel and TPH-motor oil is 1,400 µg/L. Based on previous analytical results, TPH and PAHs are not a concern and the Navy believes that the proposed soil grid is sufficient to address the remaining data gap identified for pesticides.

Specific Comments

Comment 1: Section 1.1.1, page 3 first paragraph: The text states that the purpose and objectives of the proposed work were “discussed and mutually agreed upon by the Navy and the regulatory agencies” during a September 2001 conference call. We would like to note that the draft figures and documentation were provided to team members just shortly before the conference call (see Item 13 of the September 25, 2001 Treasure Island Meeting Minutes). Although the team members agreed in concept with the approach presented, there had not been an opportunity for a rigorous evaluation by team members.

Response: The text will be revised to indicate that team members had agreed with the general approach.

Comment 2: Section 1.1.2, page 5, first paragraph: The RI report indicates that the storm drain catch basin sediment samples contained other compounds in addition to total petroleum hydrocarbons. Those other compounds should be identified in the text.

Response: Sediment sampling chemical data for VOCs, SVOCs, metals, pesticides/PCBs, and herbicides will be added to the text..

Comment 3: Section 1.1.6, page 12, first paragraph: It appears that the 30-gallon storage tank located near the hydraulic lift in Building 41 (Site 9) is referred to in the text as “the former UST.” The reference to the former UST should be clarified.

Response: The “former UST”, will be correctly referred to as the former 30-gallon storage tank.

Comment 4: Section 1.1.6, page 14, third paragraph: The text states that the “floor drain located in Building 335 [Site 10] was investigated and filled in with cement.” Available data should be included or summarized in the SAP or the text should indicate that data are not available.

Response: The floor drain was filled in with cement. No chemical data for the contents of the floor drain has been found. Additional work in the floor drain area is not planned. See response to general comment number 6. The SAP will be revised accordingly.

Comment 5: Table A-2: Method 8270 SIMS is recommended for the SVOCs analyses to obtain sufficiently low reporting limits. In the event 8270 SIMS is not used, the table should also reflect the laboratory's MDLs for each compound.

Response: In order to obtain sufficiently low reporting limits, analytical method 8270 SIMS will be used for SVOC analyses. The text will be revised accordingly.



TRANSMITTAL/DELIVERABLE RECEIPT

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TO: Mr. Ron Fuller, Code 02R1.RF
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DATE: 06/13/02
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FROM: Daniel Chow, Program Manager

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Tetra Tech EM Inc.

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June 13, 2002

Mr. Scott Anderson
Remedial Project Manager
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Subject: Submittal of Responses to Comments on the Draft Sampling and Analysis Plan (Field Sampling Plan/Quality Assurance Project Plan), Additional Investigation of Onshore Installation Restoration Sites 9 and 10, Naval Station Treasure Island, California CLEAN II Contract No. N62474-94-D-7609, Contract Task Order No. 302, Modification 01

Dear Mr. Anderson:

Enclosed please find Tetra Tech EM, Inc.'s (TtEMI) responses to comments (RTCs) from the Regional Water Quality Control Board and Geomatrix Consultants on the Internal Draft Sampling and Analysis Plan (SAP) (Field Sampling Plan/Quality Assurance Project Plan) for the Additional Investigation of Onshore Installation Restoration Sites 9 and 10, Naval Station Treasure Island, California.

TtEMI received your transmittal letter for the response to comments via email on June 13, 2002. The response to comments and transmittal letter were mailed via Federal Express on June 13, 2002 to members of the Base Realignment and Closure (BRAC) and Base Cleanup Team (BCT) and community RAB members according to the distribution list in the transmittal letter.

If you have any questions, please call me at (406) 442-5588.

Sincerely,

David Donohue
Project Manager

Enclosures (RTC, transmittal letter)

cc: TtEMI CTO 302 Project File
TtEMI San Diego File

TC.0302.11608