

prc ENVIRONMENTAL MANAGEMENT INC.

MEMORANDUM

SAN FRANCISCO OFFICE

Date : October 25, 1991

To : Ernie M. Galang, EIC
Navy WESTDIV San Bruno

From : Emily Pimentel
PRC San Francisco

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Subject : Response to California Department of Toxic Substance Control (DTSC) and San Francisco Bay Regional Water Quality Control Board (RWQCB) Comments on Field Sampling Plan (FSP).

DTSC COMMENTS

Draft Final Field Sampling Plan

1. Comment: Page 4, Section 4.2.1, Ground Penetrating Radar (GPR). The selection of antenna frequency is not discussed. Antenna selection is an important aspect of GPR surveys, since the depth of investigation is dependent on both site geology and radar frequency. The antenna frequency or frequencies proposed for use at TI should be specified in the sampling plan.

Response: A preliminary survey of all sites proposed for geophysical surveys has been completed to better define the specific geophysical methods applicable to the individual sites. At this time, it is anticipated that antenna frequencies of 300 or 500 megahertz will be used for GPR surveys at NAVSTA TI. This information has been added to Section 4.2.1.

2. Comment: Pages 5-6, Section 4.2.2, Electromagnetic Induction (EM).

a) This section states that EM will be used to map contaminant plumes. Plume mapping with EM is extremely difficult to perform and usually requires either homogeneous stratigraphy or repeated measurements over time, neither of which exists at TI. EM would be of better use for locating the lateral extent of waste trenches and landfills (the more common use of EM). This issue should be clarified in the revised plan.

Response: The results of the preliminary survey of the proposed geophysical investigation sites indicate that EM methods will not be feasible at NAVSTA TI. All discussions of EM surveys have been removed from the work plan and FSP.

b) A comment is made that surface plots will be generated along with contour maps. Surface plots of geophysical data are generally of little use.

Response: The results of the preliminary survey of the proposed geophysical investigation sites indicate that EM methods will not be feasible at NAVSTA TI. All discussions of EM surveys have been removed from the work plan and FSP.

c) The report states that unwanted noise will be filtered out. Without understanding what noise and what is true signal, filtering has little chance of success. Even if noise sources are known, filtering may not succeed, especially if the noise and the signal have comparable frequencies. Noise assessment should be discussed in the plan and the limitation of filtering should be acknowledged.

Response: The results of the preliminary survey of the proposed geophysical investigation sites indicate that EM methods will not be feasible at NAVSTA TI. All discussions of EM surveys have been removed from the work plan and FSP.

3. Comment: Page 6, Section 4.2.3, Magnetometry.

a) This section states that a magnetometer will be used "where appropriate." More details should be provided; either name the sites where it will be used or define the criteria that would make magnetometry useful at a particular site.

Response: The results of the preliminary survey of the proposed geophysical investigation sites indicates that magnetometer surveys are feasible and will be attempted at sites 11, 15, 20, 22, 24, and 25. In general, the magnetometer surveys cover broad areas and better focus subsequent GPR surveys. This information has been added to the magnetometry discussion in Section 4.2.2.

b) It also stated in the report that magnetic data "will be first interpreted qualitatively." Quantitative interpretation of magnetometric data is difficult for geology alone--for

hazardous waste investigations, it is virtually impossible (there are special cases where quantitative interpretation is possible, but they do not exist at Treasure Island). DTSC recommends that the Navy proceed no further than a qualitative interpretation.

Response: Section 4.2.2 has been revised to indicate that only qualitative interpretation of the magnetometric data will be utilized.

c) Filtering and surface plots are proposed in this section along the same lines as for the EM investigation. Comments b and c for EM also apply here. Surface plots should not be presented and noise assessment and limitations of filtering should be discussed.

Response: Section 4.2.2 has been revised to eliminate statements implying the magnetometric data will be filtered. The magnetometry discussion includes a statement that a computer-processed, three-dimensional view will be generated from the magnetic contours. This process uses the same data used in generating the contour maps and is simply a three-dimensional illustration of the contour data. It is not intended to replace the two-dimensional contour maps. This has been clarified in Section 4.2.2.

4. Comment: Page 7, section 4.3.1, Soil Boring and Sampling-Power Equipment. The last paragraph of the page does not specify the type of UV light source for Photo Ionization Detector (PID). PID containing 11.7 electron volts (ev) W lamp source will ensure the greatest range of volatile species.

A Flame Ionization Detector (FID), such as an Organic Vapor Analyzer (OVA) should also be used to detect species having ionization potential up to 15 ev during field screening of samples.

Response: Section 4.3.1 was revised to specify that the PID will have a 11.7 electron volt (eV) light source and that an OVA will be used to detect species up to 15 eV during field screening of samples.

5. Comment: Page 8, last paragraph of Section 4.3.1. DTSC ruling on drums containing drill cuttings and well development water is as follows: drums should be labelled as "Drill Cuttings, Pending Lab Analysis." The date when storage started should be also indicated on the drums. Prior to obtaining hazardous waste characterization lab results, the drums and their contents should be handled conservatively as if they were tested as hazardous. This means that the 90-day storage limit applies. A 30-day extension should be requested

from DTSC Facility Permit Branch if lab results are not available prior to the end of the 90-day storage limit.

Response: The last paragraph of Section 4.3.1 was revised to specify that drums containing drill cuttings and well development water will be labelled as "Drill Cuttings, Pending Lab Analysis." The date when storage began will also be indicated on the drums. The drums will be handled as if they tested as hazardous waste and the 90-day storage limit will apply. If lab results are not available during the 90-day storage limit, a request for a 30-day extension will be requested from the DTSC Facility Permit Branch.

6. Comment: Page 8, Section 4.3.2 Soil Boring and Sampling - Hand Equipment. Instead of using a hand auger, a hand operated core sampler (with 6-inch long and 2.0-inch diameter brass sleeve) should be used at locations that can not be accessed by power equipment. A core sampler will reduce disturbance in the soil, particularly for purposes of soil logging and sampling for volatile species.

Response: Section 4.3.2 was revised to specify the use of a hand-operated core sampler (which can be fitted with a brass sleeve) for locations that cannot be accessed by power equipment.

7. Comment: Page 23, Section 5.2, PCB Equipment Storage Area. Two additional soil borings should be added to characterize all three stained areas as shown in Figure 8 of the field sampling report.

Response: Recent observations at site 3 indicate that only two stained areas exist at this site. Section 5.2 and the site map, Figure 8, have been revised to specify that two soil borings will be completed at site 3 to characterize the stained areas.

8. Comment: Page 24, Old Boiler Plant. Metals and waste acids should be analyzed in samples that will be taken from test pits and soil boring. The Handbook of Industrial Waste Composition in California includes metals and waste acids as waste products during boiler cleaning operations and on-site waste disposal, which may have happened during the plant's active service.

Response: Section 5.4, Old Boiler Plant, has been revised to include analyses for metals and soil pH to determine whether metals and waste acids were buried with building debris.

9. Comment: Page 24, section 5.5, Fire Training School. Please see work plan comment number 10.

Response: Please see response to DTSC draft final work plan specific comment number 10.

10. Comment: Page 25, Pesticide Storage Area. Please explain why pesticide storage and disposal were limited to organochlorine pesticides and chlorinated herbicides. Organophosphorus (EPA Method 8140) and carbamates (EPA Method 632) may have been also stored and disposed of on the surrounding area of this site.

Response: Information reviewed to date indicates that all pesticide storage and disposal was limited to common organochlorine pesticides and chlorinated herbicides. Soil sample pesticide analyses at site 7 will be limited to organochlorine pesticides and chlorinated herbicides at this time.

11. Comment: Page 27, Old Bunker Area. Please see work plan comment number 7.

Response: Please see response to DTSC draft final work plan specific comment number 7.

12. Comment: Page 27, Stormwater Outfalls (site 13/13A). Please see work plan comment number 12.

Response: Please see response to DTSC draft final work plan specific comment number 12.

13. Comment: Page 29, Clipper Cove Tank Farm. Please see work plan comment number 14.

Response: Please see response to DTSC draft final work plan specific comment number 14.

14. Comment: Page 30, Auto Hobby Shop and Transportation Center. In December 1990, DTSC, the Water Board and WESTDIV observed soil that was stockpiled in a fenced area by the Auto Hobby Shop. Evidently, soil was excavated from the hobby shop's yard in order to pull out a leaking underground storage tank (UST). The excavated soil

surrounding the UST was contaminated with fuel. Please discuss what happened to the excavated soil and to the excavated area. Also, explain rationale why this previous investigation was ignored in the development of the sampling plan for this site.

Response: As discussed in the response to DTSC general comment number 1, Section 3.2.18 of the work plan has been revised to include discussion of the bioremediation activities taking place at site 20 under CTO 61. Currently, the excavated soil has been spread to enhance the bioremediation process.

15. Comment: Table 3, Sample Criteria for Soil and Water Samples. The holding time for pesticides is 7 days (from sample collection) to extraction analysis and 40 days after extraction.

Response: Table 3 was revised to show the holding time for pesticides as 7 days from sample collection to extraction and 40 days after extraction until analysis.

16. Comment: Figures 11, 22, 25, and 27. The blow-up maps (maps inside circles) show systems of rectangular grids. Please explain the purpose of the grids in the text.

Response: The rectangular grids shown on the blow-up maps illustrate the general areas of the proposed geophysical investigations. Appropriate explanations have been added to the text.

RWQCB COMMENTS

SPECIFIC COMMENTS

Draft Final Field Sampling Plan

1. Comment: Page 9, end of last paragraph. Should be Figure 1, not 3.

Response: The reference to Figure 3 at the end of the last paragraph is correct.

2. Comment: P.12, Section 4.5: Surface and Sediment Sampling. The Navy should evaluate the feasibility of conducting storm drain sampling from within the storm drains and not from off-shore or at the outfalls. Are there manholes which can yield access to the drains of interest? I refer the Navy to their own study of storm drain contamination at Hunters

Point Annex, as a model (WESTDIV, July 10, 1991). Before individual storm drains are selected for sampling, a rational must be provided for choosing the drains and maps provided showing the areas of the facility and how they are drained.

Response: Given that this RI/FS study is taking a phased study approach, it is considered more prudent at this time to conduct a more detailed study involving the storm drain systems after the overall base is characterized.

3. Comment: Page 13 and Appendix A (SOP 10): Sediments should be taken using an eckman or ponar dredge and/or sediment core collection device. The "pipe dredge" as described in Appendix A is not appropriate. Sediment cores should be logged in detail and copies supplied with the sampling report.

Response: SOP 11 was added to the FSP and includes sediment sampling using an Ekman or ponar dredge and/or sediment core collection device. The reference to a pipe dredge was deleted in the text. Section 4.5 was revised to specify that sediment cores will be logged in detail and copies will be supplied with the sampling report.

4. Comment: Section 5.5, Fire Training Area: Why were previous reports not reviewed prior to preparing this work plan? The RWQCB has had reports on the free product and fuel contamination for several years.

Response: Please see response to DTSC general comment number 1.

5. Comment: Section 5.6, Pesticide Storage Area: Soil samples should be taken where the wastewater treatment sludge was disposed of if it has not already occurred. The work plan just describes perimeter soil borings.

Response: As discussed in Section 5.6, specific sampling locations at the pesticide storage area will be selected following the preliminary survey. The sample locations shown in Figure 13 were for illustration purposes only; however, the sampling locations are now shown within the potential wastewater treatment sludge disposal area in Figure 13. This was done to clarify that sampling is intended to investigate whether all potentially contaminated soil has been removed.

6. Comment: Section 5.11, Family Housing Area (Old Bunker Area). Four borings by itself does not appear to be adequate coverage of this area. Additional surface sampling and

geophysical surveys would be appropriate to fully characterize this site.

Response: As discussed in Section 3.2.1 of the work plan, geophysical surveys and extensive soil sampling activities have been completed in the Old Bunker Area (site 12). The purpose of the four borings is to install ground water monitoring wells.

7. Comment: Section 5.13, New Fuel Farm. The RWQCB does not have a copy of the 1986 WESTDIV report for this site. Please supply a copy to the above address.

Response: A copy of this report will be made available by the Navy.

8. Comment: Section 5.18, Auto Hobby Shop. The Navy should have reviewed its own reports before submitting this work plan. PRC hired Riedel Environmental to remediate soil contamination. This work plan should start where there investigation left off.

Response: Please see response to DTSC general comment number 1.