



N00217.001620
HUNTERS POINT
SSIC NO. 5090.3

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, Ca. 94105

November 23, 1990

Commanding Officer
Naval Facilities Engineering Command
Western Division
ATTN: Louise Lew (1811) *MM*
PO Box 727
San Bruno, CA 94066

Dear Ms. Lew:

Attached are EPA's comments on the **Reconnaissance Activities Report** for Hunters Point Annex. These comments are presented in three attachments as follows:

Attachment 1 presents overall comments.

Attachment 2 discusses the geophysical surveys.

Attachment 3 examines whether objectives identified in the Sampling Plans were satisfied in the Recon Report.

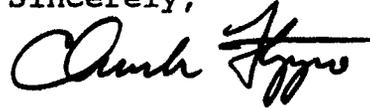
In general, the Report does not always clearly identify how the findings of the Recon Activities will be used to guide subsequent field work. See especially Attachment 1, which identifies the need for recommendations to follow up on a number of specific findings.

Because the Primary Phase field work is already underway, we do not believe that revising the Recon Report to address our concerns is necessary. If the Navy wishes to prepare a formal response, a letter should suffice. Ultimately, the RI Reports should discuss how the results of the Recon Report were addressed in the primary and/or subsequent field investigations.

The comments in Attachment 2, concerning how the geophysical data was presented and used, are included for your information. Again, while no revision of the report is needed, you may find these comments useful in your own evaluation of the Recon effort and for future geophysical projects.

If you have any questions, or if you feel further discussion of these comments at a TRC or RPM meeting would be helpful, please call me at (415) 744-2388.

Sincerely,

A handwritten signature in cursive script, appearing to read "Chuck Flippo".

Chuck Flippo
Remedial Project Manager

cc: Eddie Sarmiento, NSTI
Mark Malinowski, DHS
Tom Gandesbery, SFRWQCB

Attachment 1 - Specific Comments on the Reconnaissance
Activities Report

Executive Summary

- Page 1: It is stated that results of the Reconnaissance Activities will be used to identify data needs for the ongoing Phases II and III; however, in subsequent portions of the executive summary no suggestions are made for activities to address data needs identified.
- Page 2: It was noted that portions of the northern Industrial Landfill boundary appear to extend beyond the property boundary. No recommendations are provided for Phase II or III activities to fill this data need.
- Page 2: Soil gas readings described as "likely indicative of the presence of methane" in the Industrial Landfill are not addressed in terms of potential health and safety impacts.
- Page 3: The absence of bay mud in the northwestern portion of the Industrial Landfill indicates possible direct communication and potential contaminant migration between fill materials and ground water. No indication is made as to whether this finding requires additional investigation beyond what is already planned for Phase II and III activities.
- Page 4: The alleged refuse disposal site in the Bay Fill Area which was not found during this Reconnaissance Activity, but subsequent observations indicated it might be located just outside the area surveyed. Specific additional activities such as test pits in the indicated area should be suggested.
- Page 4: Health and safety aspects related to radiation and methane for Phase II and III activities are not addressed for the Bay Fill Area.
- Page 6: The containment vault which houses the pickling tanks may permit direct communication between the vault and ground water. The need for Phase II and III activities related to this finding are not addressed.
- Page 7: A north-south trending trough in the bedrock surface at the Battery and Electroplating Shop site may provide a preferential pathway for ground-water flow, and therefore contaminant migration. The need for Phase II and III activities related to this finding are not addressed.
- General: No reference is made to the Well Survey (Section 4.0).

Sections 1.0 Introduction and 2.0 Reconnaissance Activities

These sections were given only a cursory review because the information reported repeats that provided in the Work Plan and the Sampling Plans for Group I through IV sites.

Section 3.0 Discussion of Results

- Page 36: No clarification is provided as to whether the ravine deposits belong to one of the four major geologic units described as underlying HPA or whether these deposits represent a separate and minor unit.
- Page 37: If the criteria for identifying bay mud based on visual examination and geophysical logging is provided in the Sampling Plan or QAPP, it should be stated. Otherwise it could be assumed that identification was based on judgement and experience of the geologist who, in that case, should have appropriate credentials.
- Page 48: A measurement of 1,100 ppb for total hydrocarbons excluding methane is noted. However, no reference is made to this measurement in the executive summary. As the nature of hydrocarbon(s) detected was not determined, there should be a recommendation for further investigation and for health and safety precautions in the Industrial Landfill area where this measurement was recorded.
- Page 53: Asphalt-covered areas such as the Suspected Burn Area should be noted for future investigation if not already planned in the Phase II and III activities.

Section 4.0 Well Survey

The identification of locations of 191 off-site wells for which no other information is available (Table 16) seems to have little value. If the purpose of this survey was to determine ground-water use in the vicinity of the site, this should be stated and a conclusion could be drawn (e.g., ground water had been used more extensively in the past as indicated by the number of lost or abandoned wells compared to the number still in use).

- Page 63: Typo - reference to Table 15 in next to last sentence should be Table 16.

Section 5.0 Conclusions and Summary of Results

This section could be improved by providing specific information on how the Reconnaissance Activity findings should be applied to Phase II and III activities.

Attachment 2 - Comments on the Geophysical Survey

Purpose of the Geophysical Survey

Though it is not explicitly stated in the report, we assume that the purpose of the full-scale survey was also to delineate waste boundaries and/or characterize subsurface stratigraphy. The results of the test program resulted in the decision to use only EM and GPR for full-scale surveys of the areas Industrial Landfill (IR-1 (here referred to as "IL")), Bay Fill Area (IR-2 {"BFA"}, GPR only), and Sub-Base Area (IR-7 {"SBA"}, GPR only). MAG and VES were not used as it was thought that EM and GPR, in conjunction with test pits and borings, could obtain necessary information. It is clear from the full-scale survey results that the EM method was effective in delineating waste boundaries in the IL area. Neither EM nor GPR methods, however, can characterize subsurface topography. VES can. Albeit, VES is more time-consuming to run, it does result in a depth structure representation, not possible with EM. GPR often has too shallow penetration, particularly in the presence of clay, as in the Bay Mud. Either there was an implicit change in the purpose of the full-scale survey from that of the test survey, or the results of the full-scale survey only met half of its purpose (waste boundary delineation) - and for only one area at that. The only notable results appear to be from the full-scale geophysical survey and is that of delineation of the waste boundaries in IL, primarily from EM with a little contribution from GPR, as presented in Plate 22.

Presentation of the Results

There is some inconsistency between the tenor of Table 8 and the text of the report. Specifically in a couple places, Table 8 reads to the effect that the geophysical survey results were more effective in attaining their objectives than they were according to the text. Where the Table uses words like "may represent" and "suggests", the text gives more negative impressions using "not clear" and "limited use".

The report (p. 20) notes that there was interest in whether hydrocarbon wastes floating above the ground water table could be detected. In Table 8 it is noted that EM and VES surveys (during the test survey) may be indicating subsurface hydrocarbons in the Oil Reclamation Ponds (IR-3 {"ORP"}). Though the table implies the hydrocarbon detection was a possibility, the text (p. 40) indicates that EM for this purpose in ORP was of limited use. In the text there is no discussion of the effectiveness of VES for hydrocarbon detection.

In Table 8 GPR in the ORP gave a sharp change in reflection character and signal penetration at suspected transition zone between serpentinite fill and sandblast debris piles. The text (p. 52) notes that at this location GPR recorded a sloping reflection suggesting some type of subsurface boundary, the character of which could not be determined.

The data in Appendix G, Table 9, and the text show some inconsistencies:

In Table 9 GPR records suggest a change in the subsurface in IL for records IR01GP02 and IR01GP03, but not IR01GP01. In the Appendix records IR01GP01 (Plate G1-3) and IR01GP02 (Plate G1-4) do not appear that different and neither has any annotation by the geophysical contractor. The only annotation among the three records is of IR01GP03 (Plate G1-6) that indicates a possible landfill anomaly. The text (p. 45-46) notes that IR01GP02 reflects a subsurface change (consistent with Table 9, but not annotated in data), however, IR01GP03 did not show a definitive change that might indicate a landfill boundary. Is the text misrepresenting the data?

Table 9 and annotation of the GPR data for SBA indicate record changes suggesting subsurface changes only for record IR07GP01, and not for IR07GP02, IR07GP03, or IR07GP04. The text (p. 57), however, notes that all four GPR profiles showed indications of subsurface lithology changes that might suggest boundaries of sandblast wastes.

The most effective presentation of the geophysical survey is for the EM survey. This may be appropriate since the most information was obtained from this method. Plate 22 is a very useful presentation of the results. It would have also been helpful to have had the actual data presented as a separate contour plot, as is usually done, to allow for additional assessment of the interpretations. For example, with a contour plot the definition of the 3 EM Type ranges may be more readily apparent. EM data was also obtained during the test survey for the BF and ORP areas. It would be helpful to have this data as clearly presented in the main report as was the EM data for IL. It may help in clarifying why EM was not used outside of the IL area.

**ATTACHMENT 3 – EXAMINES WHETHER
OBJECTIVES IDENTIFIED IN THE SAMPLING
PLANS WERE SATISFIED IN THE
RECONNAISSANCE REPORT**

**EPA COMMENTS ON RECONNAISSANCE
ACTIVITIES REPORT**

**THE ABOVE IDENTIFIED ATTACHMENT IS NOT
AVAILABLE.**

**EXTENSIVE RESEARCH WAS PERFORMED BY
SOUTHWEST DIVISION TO LOCATE THIS
ATTACHMENT. THIS PAGE HAS BEEN INSERTED
AS A PLACEHOLDER AND WILL BE REPLACED
SHOULD THE MISSING ITEM BE LOCATED.**

QUESTIONS MAY BE DIRECTED TO:

**DIANE C. SILVA
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