



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

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San Francisco, CA 94105-3901

N00217.003678
HUNTERS POINT
SSIC NO. 5090.3

December 17, 1997

Mr. Richard Powell
Mail Code 1832
Engineering Field Activities West
900 Commodore Drive
San Bruno, CA 94066-2402

**SUBJECT: PROJECT COMPLETION REPORT, EXPLORATORY EXCAVATIONS,
HUNTERS POINT NAVAL SHIPYARD**

Dear Mr. Powell:

The Environmental Protection Agency (EPA) has completed review of the subject document. As detailed in the comments, it appears that contamination was left in place at several Exploratory Excavations (EEs). This is of particular concern in Parcels B and D as the RODs for these Parcels do not include these EEs as requiring action. As you know, the Parcel B ROD was signed in October and did not include remediation of the EEs. Therefore these additional EEs must be included in the remedial design/remedial action documents for Parcel B and the Navy must determine if changes to the ROD are required. Further, there appears to be problems with the handling of soil during the removal action which may have resulted in violations of RCRA. Based on the information provided, it appears that the Navy failed to make a proper waste determination as required by RCRA, mixed RCRA and non-RCRA hazardous waste in stockpiles and violated LDRs through the placement of soil outside the Area of Contamination (AOC). The Navy should be prepared to discuss these issues at the January 6, 1998 BCT meeting and provide the Agencies with an outline of an appropriate course of action. Please call either of the undersigned, if you have any questions regarding these comments.

Sincerely,

A handwritten signature in cursive script that reads "Sheryl Lauth".

Sheryl Lauth
Remedial Project Manager

A handwritten signature in cursive script that reads "Claire Trombadore".

Claire Trombadore
Remedial Project Manger

cc: Mr. Chein Kao, DTSC
Mr. David Leland, RWQCB
Mr. Jim Sickles, Tetra Tech EMI
Mr. Bill McAvoy, Navy
Ms. Karla Braesemle, Weston

**COMMENTS ON COMPLETION REPORT
EXPLORATORY EXCAVATIONS
HUNTERS POINT NAVAL SHIPYARD
SAN FRANCISCO, CALIFORNIA**

GENERAL COMMENTS

1. There are several exploratory excavations where cleanup criteria were exceeded yet the excavations were not continued. This is of particular concern for the EEs in Parcel B as these were to be final actions as documented in the ROD. EPA reviewed the EE samples against the residential soil levels (RSL) in the Parcel B ROD and the industrial soil levels (ISL) in the Parcel D ROD, whichever was appropriate (note: Areas designated for future Maritime use and as Open Space were also evaluated using ISLs; this may not have been appropriate and will be determined as part of the RODs for these areas). In addition, the detection limit for PAHs and PCBs almost always exceeded the residential clean-up levels. Based on our review, it would appear that contamination may have been left in place for the following EEs:

The SL criteria used to evaluate each excavation is noted in parentheses.

EE-01 (RSL): There was one sample that exceeded the 4,4-DDT RSL; an additional 2 feet of excavation was done to the northeast, but no confirmation sample was taken. After additional excavation, one bottom (601 mg/Kg) and one sidewall (southern-most, 1300 mg/Kg) sample exceeded the RSL for nickel, but no further action was taken because the detected levels allegedly were below HPALs.

EE-02 (RSL): The detection limits for PAHs were much higher than the RSL (by as much as 23 times). The Aroclor 1260 detection limit also exceeded the B RSL by a factor of 22. All four sidewall samples (collected after the excavation was expanded) exceeded the B RSL for nickel; the concentration of nickel detected in the sample from the northeast wall (2480 mg/kg) was about 35% higher than the sample collected from the northeast wall before the excavation was expanded (1830 mg/Kg), suggesting that there may be additional nickel contamination to the northeast of EE-02. One additional note is that 2-methylnapthalene, benzo(g,h,i)perylene, and phenanthrene were originally identified as COCs, but results for these SVOCs are not included in the data summary tables.

EE-03 (RSL): The B RSL for arsenic and nickel were exceeded. The RSL for arsenic was exceeded in 2 trench bottom samples; resampling resulted in confirmation of the sample that exceeded the RSL in 1 of the 2 locations. The RSL for nickel was exceeded in every sample collected from both the bottom and sidewalls of the excavation (range 383 to 955 mg/Kg). Cobalt was originally identified as a COC, but is not included in the data summary tables.

EE-04A (RSL): The detection limits exceeded the EE and B RSLs, but all samples were non-detect.

EE-04B (RSL): The detection limits exceeded the EE and B RSLs. One sidewall (PCBs) and the bottom sample (PAHs, TCE) initially exceeded RSLs. An additional foot of vertical excavation was done in the 12x12 area of greatest concern, but the new bottom sample was only analyzed for SVOCs, so it is possible that soil may still be contaminated with TCE. A confirmation sample was collected at the location where the sidewall sample exceeded the RSL, but the detection limits were elevated because of the presence of TPH. The detection limit for Aroclor 1260 was 0.180 mg/Kg, so it is possible that soil is still contaminated with PCBs.

EE-04C (RSL): The detection limits exceeded the EE and B RSLs, but most results were non-detect. After additional excavation, vinyl chloride was not detected. Chromium was initially identified as a COC, but results for this metal were not included in the data summary tables.

EE-05 (RSL): After the excavation was expanded, samples still exceeded the RSLs for nickel, lead, manganese and mercury. Every sidewall and bottom sample exceeded the RSL for nickel. On the north side of the excavation sample EE0511 exceeded the RSLs for lead (2090 mg/Kg) and mercury (134 mg/Kg) and sample EE0515 exceeded the RSLs for mercury (9.1 mg/Kg) and manganese (2420 mg/Kg), but no further excavation could be done because of the building foundation. Round 2 sidewall sample EE0514 exceeded the RSL for lead (2910 mg/Kg) and mercury (434 mg/Kg); additional excavation was done to the east and the excavation was extended to the water table, but no bottom confirmation sample was collected from this area. Since significant vertical contamination may have existed in this area, the lack of a bottom confirmation sample is problematic. This is confirmed by the bottom sample (EE0517) that was collected about 10 feet south of this location where the RSL for mercury was exceeded (6.8 mg/Kg); this sample also exceeded the RSL for arsenic. It is likely that there is an area with significant mercury contamination at and below the water table in the vicinity of sample locations EE0514 and EE0517. A second area with significant mercury contamination exists in the vicinity of samples EE0505 and EE0511.

One additional note on EE-05. Benzo(g,h,i)perylene and phenanthrene were originally identified as COCs, but were not included in the data summary tables.

EE-11A (RSL): The analytical data that defines the COCs was not included in the Action Memorandum or in the EE Project Completion Report, so it is difficult to evaluate whether there are problems. If the post-excavation samples were analyzed for the correct analytes, the only problem is that the detection limit for PCBs exceeds the RSL.

EE-11B (RSL): The analytical data that defines the COCs was not included in the Action Memorandum or in the EE Project Completion

Report, so it is difficult to evaluate whether there are problems. If the post-excavation samples were analyzed for the correct analytes, the only problem is that the detection limit for PCBs exceeds the RSL.

EE- 11?: The Action Memorandum shows 3 small areas that were to be excavated as EE-11, however, only 2 of these areas were actually excavated. The reason the third area was not excavated is not discussed in the EE Project Completion Report.

EE-12 (ISL): The summary states that "approximately 160 cubic yards of soil was excavated from EE-12 site, containing primarily PCBs, polynuclear aromatic hydrocarbons (PAH), and metals to a depth of 10 feet bgs." This is somewhat misleading because PCBs and PAHs were only detected in one surface soil sample and the confirmation samples were apparently only analyzed for metals and TPH-mo. The elevated Thallium does not exceed the ISL.

EE-13?: The Action Memorandum contained EE-13, but the EE Project Completion Report does not. It is not clear what happened to this site.

EE-14 (ISL): The document states, "At IR-37, approximately 36 cubic yards of soil was excavated from EE-14, containing PCBs, PAHs, and metals to a depth of 3 feet bgs." However, the confirmation samples were not analyzed for PAHs, or PAHs (specifically phenanthrene) or were not reported in the summary table. The excavation appears to have removed all soil with elevated PCBs and metals.

EE-15/16 (ISL): The document states, "At IR-53, approximately 65 cubic yards of soils was excavated from EE-15 and EE-16 sites, containing PCBs, pentachlorophenol, and metals to a depth of 3 feet bgs...." However, confirmation samples were not analyzed for PCBs or pentachlorophenol, or the results were not listed in the summary tables. The excavation did not extend past a confirmation sample with elevated thallium, apparently because of an adjacent foundation would have been undermined, but the thallium ISL exceeds the SL used for the EE project. Lead and 2-hexanone were listed as COCs in the Action Memorandum, but results for these analytes were not included in the summary tables.

EE-17 (ISL): The document states, "At IR-70, approximately 94 cubic yards of soil was excavated from EE-17 site, containing PCBs, pesticides, and metals to a depth of 7 feet bgs...." However, it appears that confirmation samples were not analyzed for PCBs or pesticides, or the data summary tables did not include these contaminant groups. The excavation appears to have removed all soil with elevated arsenic, thallium, TPH-d, and TPH-mo.

EE-18 (ISL): The analytical data that defined the extent of contamination at EE-18 was not provided in the Action Memorandum or in the EE Project Completion Report, so it is difficult to evaluate whether all of the contamination was removed. Based on the

information provided, the excavation was sufficient to remove soil contaminated with arsenic and mercury.

2. Please clarify how the stockpiles were consolidated from multiple excavations. Explain whether the combined soil cells comprised of soil from excavations exhibiting similar contaminants and concentrations or whether some other method was used. It appears that the analytes exceeding screening levels were different where soil from different excavations was combined. For examples see the following table (compiled from Table 1 of the Action Memorandum and Appendix D):

Cell ID	Cell Contents	Unique Analytes Exceeding Screening Levels
20	EE-15 EE-16 EE-17	-- lead, SVOCs arsenic
18	EE-15 EE-16	-- lead, SVOCs
14	EE-06 EE-07 EE-10 EE-11	arsenic -- thallium to be sampled (unknown)
13	EE-10 EE-11 EE-18	thallium, TPH-diesel, TPH-motor oil to be sampled (unknown) to be sampled (unknown)
19	EE-01 EE-05	chromium, 4,4-DDT beryllium, manganese, mercury, SVOCs, TPH-motor oil
29	EE-04 EE-15 EE-16	-- -- lead, SVOCs
28	EE-01 EE-05	chromium, 4,4-DDT beryllium, manganese, mercury, SVOCs, TPH-motor oil
6	EE-14 EE-18	chromium, thallium, SVOCs, TPH-diesel, TPH-motor oil to be sampled (unknown)

It appears that soil from these excavations should not have been combined because the effect of stockpiling soil with unique contaminants is to dilute those contaminants. Please explain why this was done. Soil with unique contaminants should have been sampled for characterization before stockpiling. Please discuss this relative to RCRA requirements.

Also, please explain how it was determined that the composite soil sampling technique would yield results representative of an entire cell.

3. The analytical data from delineation of the extent of contamination of exploratory excavations 11, 13, and 18, which were labeled "To be Sampled" in Table 1 of the Action Memorandum needs to be included in this document. It is EPA's understanding that these areas were to be sampled before excavations were done. Please specifically discuss the procedures used to delineate the extent of contamination at these sites.

4. Please discuss how the characterization of the waste stream (contaminated soil) was conducted to determine final transportation and disposal of the soil. Please clarify whether characterization was based on the sampling used to delineate the exploratory excavation sites, or whether it was based on the results of the composite samples from the 100 cubic yard soil cells.

5. Please clarify whether chemical analyses of the borrow source were done to determine whether the backfill was clean. This should be discussed in the report.

6. Please clarify how the remaining risk will be evaluated for contaminants left in the excavations below the 10-ft level or in excavations where soil removal was suspended. The Action Memorandum indicates that if impacted soil was left in place, site controls may become necessary (Section 5.1). The same Action Memorandum indicates, however, that if the removal action is delayed, there is a potential for further soil contamination and impacts to groundwater or surface water (Section 6). Please clearly explain in the text that remediation of these sites will be deferred to the remedial investigation as stated in the Engineering Evaluation/Cost Analysis, Attachment A of Appendix A (Section 4.1 of the EE/CA).

7. The completion report references other reports for information. The citations should include at least the section number, and perhaps page number, table number, and figure number. Some of the material, such as screening levels, should be included in the completion report for clarity.

SPECIFIC COMMENTS

1. **Section 2.0, p. 2, paragraph 4, last sentence.** Please identify the criteria that were discussed to determine if an excavation was complete.

2. **Section 2.0, p. 3, paragraph 3, sentence 3.** Please clarify whether the soil in the cells was segregated according to contaminant type and concentration.

3. **Section 2.0, p. 4, paragraph 1, sentence 2.** This sentence should be rewritten to say "... results of the field density tests of the compacted soil backfill and asphalt paving...."

4. **Section 3.0, p. 4, paragraph 1, sentence 4.** Please clarify whether the 2,678 cubic yards mentioned here were bank yards or loose yards.

5. **Section 3.0, p. 4, paragraph 1, sentence 7.** List the cleanup threshold concentrations.
6. **Section 3.0, p. 4, last paragraph.** Please state where the "voluminous laboratory reports" are kept and indicate that they will be available for inspection.
7. **Section 3.0, p. 5, paragraph 2, sentence 4.** Please discuss the specific criteria used to classify the waste prior to shipment. Also discuss whether the waste stream was characterized from the sampling used to delineate the exploratory excavation sites or from the composite sampling from the 100 cubic yard soil cells.
8. **Section 5.0, p. 7, paragraphs 1, 2, 3, and 4.** Please discuss plans for the future disposition of the sites with contaminants remaining in the soil medium after excavation was suspended (Sites EE-3, EE-4B, EE-5, and EE-12). The Action Memorandum (Appendix A) indicates that a detailed risk evaluation will be conducted on remaining soil as part of a possible feasibility study. Please indicate if this will occur for these sites.