



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

N00217.000549  
HUNTERS POINT  
SSIC NO. 5090.3

November 8, 2001

Mr. Richard Mach  
Department of the Navy  
Naval Facilities Engineering Command  
Southwest Division  
BRAC Office  
1220 Pacific Highway  
San Diego, CA 92132-5190

Re: EPA review and comment, Parcel D Time Critical Removal Action Closeout Report, Hunters Point Shipyard, dated September 28, 2001

Dear Mr. Mach:

EPA has completed its review of the above-referenced document. Comments are provided in an attachment to this letter. It is very important to clearly state that the Parcel D TCRA is an interim action initiated by the Navy, at their discretion. As the TCRA is an interim action, the Navy established interim or removal action cleanup goals. Final cleanup goals will be discussed in the feasibility study and proposed plan and selected in the Record of Decision.

If you have any questions, please contact me at my new telephone number, 415-972-3013.

Sincerely,

A handwritten signature in black ink, appearing to read "Claire", written over a large, light-colored circular stamp or watermark.

Claire Trombadore  
Remedial Project Manager

cc: Dave Demars, Navy  
Mike Wanta, TtEMI  
Chein Kao, DTSC  
Michael Rochette, RWQCB  
Amy Brownell, City of SF  
Karla Brasaemle, TechLaw

**EPA Review and Comment**  
**Draft Parcel D Time Critical Removal Action Closeout Report**  
**Hunters Point Shipyard**

**GENERAL COMMENTS**

1. There are four remediation areas that need additional samples to confirm the extent of contamination along particular sidewalls and/or the excavation bottom. Upon reviewing the figures for the following remediation areas, it appears that the extent of contamination was not fully determined and/or excavated: RA 8-2, RA 8-3, RA 8-4 and DM 11260. There are additional specific comments below.
2. Many of the data summary tables contain analytes that are not mentioned or discussed in the text. For example, tables summarizing data from DM 6864, DM 6965 and DM 6967 have magnesium data that are not discussed in the text. Similarly the table for DM 7167 contains magnesium and arsenic data and the tables for RA 37-1 and DM 10676 have arsenic data that are not discussed. Please discuss why samples were analyzed for additional metals and discuss the analytical results in the appropriate sections of the text.
3. The soil sampling protocol specified in the Final Sampling and Analysis Plan, Parcel D Soil Site Delineation, Hunters Point Shipyard, November 9, 2000 does not appear to have been routinely followed. Per the rule, samples should have been collected every 17 feet along sidewalls, or at the midpoint of sidewalls less than 17 feet long. In addition, discrete biased samples should also have been collected when the sidewalls are more than 17 feet long. This protocol was not followed for Excavations 8-3 (biased samples were not collected) and de minimus (DM) 7167 (sidewalls are more than 17 feet long but only one sample was collected); DM 6671 (biased samples were not collected); or for DM 6864, DM 6965, DM 6967, DM 6771, Excavation 10676 and Excavation 8866 (samples not collected at midpoint).

**SPECIFIC COMMENTS**

1. **Section 1.2, History of TCRA Soil Sites, Page 3:** EPA continues to have concerns about the Supplemental Manganese Ambient Level (SMAL) calculated by the Navy for Hunters Point Shipyard. The BCT needs to revisit the SMAL and resolve the issues surrounding its value and application. In the interim, the Navy should clarify that the Parcel D TCRA is an interim action and that the Navy established interim or removal action cleanup goals. Final cleanup goals will be discussed in the feasibility study and proposed plan and selected in the Record of Decision.
2. **Section 3.2, IR-08: RA8-2, Figure 8-2, and Section 5.1.1, IR-08: RA8-1, RA8-2, RA8-3, and RA8-4:** Samples were not collected east or southeast of locations IR08B022 and 0802S1AX, which had Polychlorinated Biphenyl (PCB) detections above cleanup goals, so it is unclear how it can be concluded that all of the PCB contaminated soil has been removed. Figure 8-2 does not include soil sampling locations beyond the delineation area which could bound the area of contamination. Please explain how it can be concluded that

the excavation was sufficient to remove all of the PCB contaminated soil to the east and southeast of locations IR08B022 and 0802S1AX. Please consider doing additional work to complete the delineation in the southeastern part of this area.

3. **Section 3.3, IR-08 RA8-3, Figure 8-3, and Section 5.1.1, IR-08: RA8-1, RA8-2, RA8-3, and RA8-4:** It is unclear whether all of the PCB and benzo(a)pyrene (BaP) contaminated soil has been removed. Samples were not collected east of locations 0803N2A or 0803N1A, which had PCBs above the cleanup goals or directly north of 0803W1B, which had BaP above the cleanup goal, so it is unclear if the excavations extended far enough to remove all of the contaminated soil. The excavation was extended to the north beyond the limits of the delineation area and it is unclear why this was done because no samples have been collected at or beyond the limits of the excavation. Also, the detection limit for BaP exceeded the cleanup goal in samples collected from two locations in the western part of the delineation area, 0803W4B and 0803W5B; these locations were not resampled, so it is unclear if soil is contaminated with BaP above the cleanup goal. Finally, it does not appear that the biased discrete samples required by the Sampling and Analysis Plan were collected. Please explain why the excavation was extended north of the delineation area. Please explain why it can be concluded that the excavation was sufficient to remove all PCB and BaP contaminated soil to the east, north, and west. Please consider completing additional borings to ensure that all of the contamination was removed.
4. **Figure 8-3:** It appears that the PCB result for location 0803W1B should also be shaded red. Please verify that the analytical result for this sample was 9.2 mg/kg, and if so, please shade the PCB result red.
5. **Section 3.4, IR-08 RA8-4, Figure 8-4, and Section 5.1.1, IR-08: RA8-1, RA8-2, RA8-3, and RA8-4:** It is unclear whether all of the PCB contamination has been removed from RA 8-4. Samples were not collected northwest or directly west of 0804N1A, where Aroclor-1260 was detected at a concentration of 19 mg/kg; the excavation only extended 4 to 5 feet beyond this location. Please explain how it can be concluded that all of the PCB contamination has been removed when no samples were collected northwest or directly west of the most contaminated sampling location. Please collect at least one additional sample northwest of location 0804N1A to verify that PCB contamination hot spot does not extend to the northwest.
6. **Section 3.11.2, Summary of Sampling, page 31:** The text states that "it was concluded that the concentrations of manganese were of natural origin," however the text also states "at two boreholes chert or chert fragments were not found." The text does not indicate whether chert fragments were observed in the samples that were analyzed or if chert fragments were observed in soil samples that were immediately above or below the interval that was selected for analysis. This information is important because shallow soil at Hunters Point Shipyard is mostly fill, and some fill material may not contain chert, but could be contaminated with manganese. It is possible that chert fragments could be observed at a depth of 5 feet, and not be observed in shallow soil; this would imply that manganese detected at 1.25 or 1.5 feet may not be of natural origin. Additional information must be provided to support the conclusion that "the concentrations of

manganese were of natural origin.” Please revise the text to clearly discuss the correlation between the depths of observed chert fragments and the depths of samples containing manganese. Further, please see EPA specific comment 1 above.

7. **Section 3.13, IR53: DM 11260 and Section 5.1.4, IR-53: DM 11260:** Side wall resampling results from the north, west, and south sides of the delineation area and samples at depth in boring location 11260B01 were rejected and the detection limits of the original side wall and boring samples were elevated above the soil cleanup goals; this suggests that contamination may exist beyond the horizontal and vertical boundaries of the excavation. It is unclear if sufficient soil has been excavated. Please explain why this excavation was not completed to a depth of 3.5, or preferably, 5.5 feet as the Action Memorandum appears to require. Please explain why the excavation was not extended to the north, west and south. Also, please explain why it was concluded that no further action is needed at this site.
8. **Section 3.16.1, Background and Table 3-16:** According to the text, samples 3722B01, 3723B01 and the 5 soil samples collected near IR09B004 were “analyzed for PAHs and TPH-E.” However, the analytical results for total extractable petroleum hydrocarbons (TPH-E) are missing from Table 3-16 and the results are not discussed in the text. Please include all analytical results in Table 3-16 and discuss the TPH-E results in the text.
9. **Section 4.1.1, General Observations, Page 41:** It is not clear what actions were taken to locate steam system lines that could not be found. For example, it is unclear if excavations were used to locate missing lines along H Street. Please discuss actions that were taken to locate steam lines that could not be found.
10. **Table 3:** It is unclear why the same wipe sample series number is listed for several access locations. For example, Wipe Sample Series “29-W640 thru 645” is listed for Access location G8-I1 pipe sections D-15, D-16, and D-48. Only one TPH concentration is listed, so it appears that a single sample number should be listed. Please either explain why the individual sample numbers are not listed, or revise the table to present results for each wipe sample.
11. **Section 4.1.2.1, Steam System Liquid Samples, Page 43:** The text states that “PCBs and SVOCs were not detected,” however, the detection limits for these analytes were elevated above cleanup goals. Please discuss the elevated detection limits and the limitations on the conclusions that can be drawn from samples with elevated detection limits in the text.
12. **Section 4.1.2.2, Steam System Wipe Samples and Table 3:** The text does not explain how the total petroleum theoretical maximum leachate concentration (TMLC) was calculated. Table 3 contains some apparent discrepancies in TMLC calculations. In general, low TPH wipe sample results correlate with low TMLCs, but this is not always the case. For example, for access location H10-I3 (steam) sample series 29-W-877 thru 883, the total TPH concentration in the wipe sample was 0.18 mg/wipe and the TMLC was 393.8 mg/L, but for Sample H10-I4 (steam) sample series 29-W-801 thru 807 the TPH concentration was 113.67 mg/wipe, but the TMLC was only 61.33 mg/L. There are

many other access locations with similar apparent discrepancies, for example, all of the H7-I1 entries, all of the H8-I4 entries, I6-I2 D-28 N2(6), J7-I1 D-28 and D-29 N1(3), etc. Please provide the formula (s) used to calculate the TPH TMLC, explain the apparent discrepancies in the TMLCs for H10-I3 and H10-I4 and the other locations cited in this comment, and verify that all of the TMLCs in Table 3 are correct.

13. **Figure 11260 and Appendix B, Table B-15:** Figure 11260 indicates that benzo(a)pyrene and dibenz(a,h)anthracene were rejected for 4 samples, but Table B-15 indicates that only 2 samples were rejected for benzo(a)pyrene and 1 sample was rejected for dibenz(a,h)anthracene. Please resolve this discrepancy. Also, dibenz(a,h)anthracene is misspelled on Figure 11260. Please correct the spelling of this analyte.
14. **Table 3 and Appendix J:** Based on spot checks of data presented in these tables, there appear to be some discrepancies between the data presented in Table 3 and the data presented in Appendix J. For example:
- H10-I3 D-09 S3(6): Table 3 has TPH of 0.18 mg/wipe but the sum of TPH data in Appendix J is 182.01 mg/wipe.
  - H6-I1 D-22 N2(3): Table 3 has TPH of 1.82 mg/wipe but the sum of TPH data in Appendix J is 1.65 mg/wipe. Also, in Table 3, the TMLC is 15.74 mg/kg, but the total TMLCs in Appendix J is 14.26 mg/kg.
  - H7-I4 D-46 E2(3): Table 3 has TMLC of 4.36 mg/kg but the data from this calculation is missing from Appendix J.
  - H8-I3 D-17, D-19, D-20 and D-42 in Table 3 have TPH of 15.75 mg/wipe, but the total of TPH results in Appendix J is 15.65 mg/wipe.
  - I6-I2 D-28 N2(6): The TPH value in Table 3 is 26.0 mg/wipe, but the total TPH concentration in Appendix J is 0.026 mg/wipe.
  - Some of the TPH-motor oil and TPH-diesel data appears to be missing from Appendix J (for example, for access location I6-I2)

Please resolve these discrepancies and verify that data has been transferred accurately from Appendix J to Table 3.

14. **Section 4.1.2.4, Steam System Line Pothole Excavations and Soil Samples, Page 45:** The text in the third paragraph does not discuss the detections of nickel above industrial cleanup goals in samples H7-11-PH and EXCV sample 0110F002. Please discuss these nickel results in the text.
15. **Section 4.1.2.4, Steam System Line Pothole Excavations and Soil Samples, Page 46:** The text states that some of the polynuclear aromatic hydrocarbon (PAH) data was rejected and goes on to state that "concentrations of...PAHs were below the TCRA

industrial cleanup goals.” The text does not acknowledge that rejected data cannot be used to draw conclusions. Please clearly explain that conclusions cannot be drawn from the rejected results, so it is not known if PAH results from the 8.75 foot sample exceed cleanup goals.

16. **Section 4.1.2.4, Steam System Line Pothole Excavations and Soil Samples, Page 45 and Table 6:** The last paragraph on page 45 discusses analysis of “TPH-P and TPH-E (sample PH2 at 6.25 feet in Table 6),” but analytical results for TPH-P and TPH-E are not included in Table 6. Please include all analytical results in Table 6.
17. **Section 4.2.2, Summary of Soil Sampling, Page 48:** It is unclear if the fuel line excavation was left open for the further investigation referenced in the text. Please clarify the status of this excavation.
18. **Figure 7 and Table 7:** Figure 7 appears to show that portions of pipe sections D-24 and possibly all of section D-22 were removed, but Table 7 indicates that all of these sections were closed in place. Please explain or resolve this discrepancy. Also, please revise Figures 5 and 7 to clearly indicate where each pipe section is located.

#### MINOR COMMENTS

1. **Section 2.1.1, In Situ Delineation Samples, Page 6, Paragraph 2:** In the second line, “11 milligram” should be “11 milligrams” and “(mg/kg0” should be “(mg/kg).” Please make these minor corrections.
2. **Figure 11260.** Dibenz(a,h)anthracene is misspelled on Figure 11260. Please correct the spelling of this analyte.
3. **Appendix H, Photo 3:** This photo shows a person conducting steam line wipe sampling. Sample bottles, bottles or reagents and plastic bags with samples have all been placed directly on the ground. This is not best sampling practice because soil particles can be transferred to the sampler’s gloves when reagent bottles were picked up and then transferred to the wipe sample material, potentially contaminating the sample. Sample bottles, reagents, and samples that have already been collected should not be placed on the ground, and instead should be placed on a surface that is known to be free of contamination like a clean sheet of Visqueen. Also, clothing and footwear should not be touched when the sampler is wearing gloves, as is apparently being done in this picture.