



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

July 2, 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 Information Package, Phase II Groundwater Data Gaps, Hunters Point Shipyard, dated June 1, 2001

Dear Mr. Mach:

EPA has completed its review of the above-referenced document. Comments are provided in an attachment to this letter.

If you have any questions, please contact me at 415-744-2409.

Sincerely,

A handwritten signature in black ink, appearing to read "Claire", with a long horizontal flourish extending to the right.

Claire Trombadore
Remedial Project Manager

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

**EPA REVIEW AND COMMENT
PARCEL D INFORMATION PACKAGE,
PHASE II GROUNDWATER DATA GAPS INVESTIGATION
HUNTERS POINT SHIPYARD**

GENERAL COMMENTS

1. In general, the Navy does not tie observed groundwater contamination to site activities or to soil contamination. For example, the significance of the persistent detections of chromium and chromium VI in several wells at IR09 is not discussed. Since IR09 was the pickling and plate yard, the detection of chromium and chromium VI and the resultant groundwater plumes are most likely related to plating activities that occurred at this site. As another example, numerous metals exceed screening criteria at site IR22. Please discuss these plumes in a site context and reference former site activities as the likely source when appropriate. Also - it would be preferable to discuss areas of contamination as opposed to, or in addition to, individual COCs. This way, EPA can see all of the groundwater contaminants at a given location/potential source area and relate it to what, if anything, is present in the soil. If the Navy will be doing this type of big picture analysis in the FS document then please clarify that this information package is primarily for data presentation not data interpretation.
2. The Navy identified new data gaps for Chromium and Chromium VI. These data gaps were discussed in section 4.2.1.6 (Chromium), page 4-13, last sentence and section 4.2.1.7 (Chromium VI), page 4-17, last sentence, second paragraph. Specifically, in the northwest corner of IR09, the extent of the chromium and chromium VI contaminant plumes to the west and north have not been defined. There is no further discussion of this data gap. Please discuss whether the extent of these plumes will be determined, and if so, discuss the schedule for this evaluation.

SPECIFIC COMMENTS

1. **Table 2-1:** This table is missing information. The significance of the asterisk following IR08MWW-6 is not included in the footnotes. Please include the reason for the asterisk following the well ID in the footnotes. The description of the current condition of several wells is missing. Please include the current condition of wells IR17P12AA, IR17P12AB, IR22P15A1, and IR22P15A2.
2. **Tables 2-3 and 2-4:** The results of the ferrous iron and manganese analyses do not appear to be included in this report: these results are not included on the field sheets in Appendix A or on Table 2-3. Please include all analytical results, field analyses, and field measurements.

Results for IR33MW65A nitrate/nitrite as nitrogen are included in Table 2-4, but this analysis is not included in Table 2-3. Please include this analysis in Table 2-3. Also, Table 2-3 does not indicate that this well was sampled on two separate occasions. Please include a second line for wells that were sampled on two different occasions and discuss

the reason for the second sampling in the text.

A page appears to be missing from Table 2-3. This page appears to belong between page 11 of 27 and page 12 of 27 and should contain the remainder of the results from IR33MW65A (TPH-ext, TPH-purg, magnesium, iron, sodium, potassium, methane, ethane, ethene, nitrate-N, nitrite-N, sulfate, and total dissolved solids are missing). Similarly, the first few analyses for IR33MW66A (alkalinity, total alkalinity, bicarbonate alkalinity, chloride, nitrate/nitrite-n, nitrite-n, sulfate and calcium) are missing. Please include the missing data in this table.

3. **Figure 3-1:** The distances between wells and borings is not always accurately represented in the cross-sections in Figure 3-2, and it does not appear that interpolation was done to bring more distant wells into the line of section. For example, there is a 15 or 20 foot offset at the beginning of cross-section A-A' where the distance between well IR09MW51F and all wells or borings beyond IR09B007 is 15 or 20 feet less on the cross-section than shown on Figure 3-1. In addition, projection of distant wells/borings onto the line of section without interpolation has resulted in nearly vertical contacts and bedrock spires that probably do not really exist. Please correct the distances on the cross-sections and either interpolate the data to the line of section or redraw the lines of cross-section from point to point instead of merely drawing a straight line that indicates the general trend of each cross-section.
4. **Figure 3-2, A-A':** Figure 3-1 indicates that IR09B005 was used between IR09B003 and IR09B007, but this boring is not shown on the cross-section. Please include all the borings/ wells that are indicated with the magenta symbol in Figure 3-1 on the cross-sections in Figure 3-2.

Borings PA33B053 and IR33B096 should be included between IR09MW42A and IR33MW120B. Also, IR50B020 should be included between IR33MW120B and IR11MW03A. Please include relevant borings on the cross-section and include the logs in Appendix C.

The order of boring DMB215 and well IR55MW01A should be reversed because IR55MW01A is actually south of DMB215, but this well is shown on the cross-section as being to the north of the boring. Please reverse the order of the boring and well. Then, PA55B012 and DMB322 should be included before DMB175 to provide information in the gap. Please include these borings in the cross-section and include the logs in Appendix C. Also, IR17B002 is mislabeled as IR1B002. Please correct this oversight.

C-C': The middle of this cross-section contains a loop that crosses back over itself. This loop is in the sequence: IR44B006, IR33MW121B, IR71MW03A, IR50B021, IR33MW63A, IR45B025, IR71B002, and IR71MW03A. Note that IR71MW03A occurs twice on the cross-section. This order should most likely be revised to : IR44B006, IR44B007, IR33MW121B, IR33MW63A, IR45B025, IR71B002, and IR71MW03A/IR71MW12B. Please revise the cross-section so that it does not loop back on itself.

Also, the inclusion of IR22B006, located north of the line of cross-section, creates an artificial bedrock spire that may not exist on the line of section. Please consider removing this boring and redrawing the cross-section.

5. **Figure 3-3:** According to Table 2-3, a water level measurement should have been taken from PA33MW37A, but this well is not listed in Table 2-2, nor is a value posted on Figure 3-3. Please include this water level on Figure 3-3, revise the contours if necessary, and include the value in Table 2-2, or explain why it is missing.
6. **Section 3-3, Groundwater Flow Patterns, Page 3-6, last paragraph:** In the case of wells IR33MW61A, IR33MW64A, IR33MW66A, and IR34MW01A, only 2 measurements separated by approximately an hour and a half were taken; this is insufficient to evaluate whether these wells are tidally influenced. Also, the further a well is from the Bay, the smaller the response to the tide and the greater the lag time. Limiting “significant” response to greater than 0.1 feet for distant wells does not allow tidal influence to be adequately evaluated, particularly for wells that are more distant from the Bay. Collecting measurements over a 4 to 6 hour time period is generally not sufficient to establish tidal influence; measurements are normally collected for a period greater than one tidal cycle (12 hours). As a result, the conclusion that significant tidal effects were only seen in two wells is misleading. It is true that the tidal influence can clearly be seen in these two wells, but the results are inconclusive for the other wells in this limited duration study. Please revise this paragraph to include a discussion of the impact on the limited time period over which measurements were collected and also discuss the impact of distance from the Bay on the wells in the study.
7. **Figure 3-4:** Please note that this figure, a comparison of tide to groundwater elevations at IR-22 wells, was not included in the hard copy version of the deliverable. It is on the CD. Please provide a hard copy of figure 3-4.

Also, tidal influence was confirmed at IR-22 in the original RI/FS? Why did the Navy reevaluate tidal influence at IR-22. Has the more recent study at IR-22 changed the hydrogeological conceptual model in this portion of Parcel D?

8. **Table 4-2:** The aluminum results for IR22MW61A and IR34MW01A and the manganese result for IR34MW37A are missing from this table. Please include these missing results.

The thallium result for IR34MW37B is incorrect; please correct this listing.
9. **Table 4-2:** The MCL for nitrate (10 mg/L) was exceeded in IR09MW51F. Please include nitrate in Table 4-1 and include this exceedence in Table 4-2.
10. **Section 4.2.1.4, Barium, Page 4-11:** The lowest concentration of barium detected in IR09P043A was 559 $\mu\text{g/L}$, not 563 $\mu\text{g/L}$. Please revise the penultimate sentence to correct this value.
11. **Figure 4-10:** An 8000 $\mu\text{g/L}$ contour line is missing around IR22MW08A. Also, the

contour line around IR33B075 is missing. Please include the missing contour lines.

12. **Section 4.2.1.10, Installation Restoration Sites 36 and 67, Page 4-24:** In the last sentence, the well associated with the 7,380 to 11,800 $\mu\text{g/L}$ range was omitted. Please include the well in which these concentrations were detected in this sentence.

IR33: Please also discuss the 8410 $\mu\text{g/L}$ detection of manganese in IR33B075.

13. **Section 4.2.1.12, Nickel, and Figure 4-12:** The discussion of the nickel detection at IR16, in IR16B020, is missing from this section. Please discuss this detection in the text. Also, please note that there are 6 areas where nickel was detected, not 5 as stated in the last paragraph of the first paragraph of this section. Please revise this sentence.
14. **Section 4.2.2.5, Trichloroethene, Page 4-37:** Figure 4-20 indicates that TCE was detected in IR34B021 at the MCL, but this detection is not discussed. Please include this location in the discussion in the text and also include a contour line around this boring in Figure 4-20.
15. **Section 4.2.2.6, Benzo(a)pyrene, Page 4-38:** The first sentence on this page uses the abbreviation PCE, when it the text is about Benzo(a)pyrene. Please revise the sentence to cite the correct analyte.

Also, the fact that most of the analyses had a detection limit of 10 $\mu\text{g/L}$, which is significantly above the MCL of 0.2 $\mu\text{g/L}$, is not discussed. Please discuss the uncertainties associated with the elevated detection limit in this section.

16. **Section 4.2.2.7, Bis(2-ethylhexyl) phthalate (BEHP):** The detection of BEHP in IR22B009 at a concentration of 54 $\mu\text{g/L}$ is not discussed in this section. Please discuss this detection.
17. **Figure 4-47:** This figure is not a plot of TCE concentrations vs. time, based on the description in the text and Table 4-2. Please provide the correct figure.
18. **Table 5-2, Related field activities:** The July 12, 2000 map is figure D-5, not D-1 as stated in the first paragraph. Please correct this citation.
19. **Table 5-4:** The case of new detections is not included in this table. Please clarify whether new RUs will be established if necessary and whether new chemicals of concern will be added to existing RUs.
20. **Appendix A:** Please review the sampling data sheet for IR17MW13A and determine if the salinity measurement is an error. Based on the data in table 2-4, it appears that there should be a second sampling sheet, dated 2/21/01 for IR33MW66A. The sampling sheet for PA50MW11A, dated 2/8/01 is missing. Please include these missing sampling sheets.

Some of the turbidity values are very high. Please discuss whether wells will be

PAGE 5

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