



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

February 13, 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 Comments on the Revised Phase I Data Package and the Draft Phase II Groundwater Sampling Field Sampling and Quality Assurance Plans, Hunters Point Shipyard

Dear Mr. Mach:

EPA has reviewed the above referenced documents and is providing comments in two attachments to this letter.

If you have any questions about this letter, please contact me at (415)744-2409.

Sincerely,

A handwritten signature in black ink, appearing to read "Claire", with a long, sweeping underline.

Claire Trombadore  
Remedial Project Manager

cc: Chein Kao, DTSC  
Brad Job, RWQCB  
Mike Wanta, TtEMI  
Julie Crosby, Navy  
Dave DeMars, Navy  
Rich Pribyl, Navy  
Indira Balkissoon, Tech Law  
Amy Brownell, City of SF  
John Chester, City of SF

## Attachment 1

### REVIEW OF TECHNICAL MEMORANDUM, REVISED INFORMATION PACKAGE FOR THE PHASE I GROUNDWATER DATA GAPS INVESTIGATION HUNTERS POINT SHIPYARD

#### General Comments

1. The objectives of the Phase I Investigation were to resolve data gaps in four areas:
  1. Determine the current condition of existing onsite monitoring wells;
  2. Measure basewide water levels to determine the potentiometric surface at existing A-aquifer and B-aquifer wells;
  3. Perform additional characterization of the B-aquifer in Parcels C and D and by sampling existing and newly installed wells for hydrogeological and chemical parameters; and,
  4. Resample existing A-aquifer and bedrock water-bearing zone wells in Parcels C and D for chemical parameters to confirm the extent of existing groundwater remedial units.

The Revised Information Package for the Phase I Groundwater Data Gap Investigation (Revised Information Package or Phase I GDGI) addressed the first two objectives. However, field activities associated with the third and fourth objectives are incomplete and several activities have been postponed to the Phase II field activities. The postponed activities include completion of well installation, additional groundwater sampling, and collection of hydrogeological parameters. This objective has not been met because the data collection activities and data interpretation activities have not been completed. In particular, additional characterization of the B-aquifer using newly-installed wells has not been performed. The Revised Information Package does not discuss an anticipated schedule for completing the data collection activities nor does the Revised Information Package discuss expected future reporting procedures. Please provide the anticipated schedule for completion of data collection. Also, please discuss the planned reporting approach, and indicate if one comprehensive report will be prepared which will document all the data collected as planned under the July 31, 2000 Field Sampling Plan and which will include evaluation and interpretation of the data, conclusions and recommendations. In other words, how do we get from this data gaps investigation to the FS? Will there be a technical memorandum which summarizes all of the results of the data gaps investigations per parcel prior to issuance of the revised FS reports?

2. The Introduction section of the Revised Information Package provides limited background and project history information, and does not reference a work plan on which the investigation is based, which is presumably the Field Sampling Plan dated July 31, 2000. This type of background information and work plan reference is important to understand the objectives of the document and to determine whether the document meets its objectives. Please modify the Revised Information Package to include more project history and

background information in the Introduction, and reference the work plan on which the Phase I GDGI work is based.

3. The Revised Information Package does not present an evaluation and interpretation of the groundwater analytical data (not including figures showing the distribution of contaminants). Initial interpretation of groundwater analytical results would assist in the development of Phase II field activities.
4. Some data collection activities scheduled for the Phase I GDGI have been postponed to Phase II. According to the July 31, 2000 Field Sampling Plan, Phase II of the investigation was planned only to conduct an additional round of groundwater sampling. Please revise the Revised Information Package to justify or explain the reason that some activities originally scheduled for the Phase I Investigation have been postponed to Phase II.
5. In the Introduction, the text indicates that Phase I GDGI results would be provided to the Base Closure Team (BCT) so that the BCT can evaluate sampling and recommend changes to the Phase II work plan. The Revised Information Package does not present an evaluation and interpretation of the groundwater analytical data (other than figures showing the distribution of contaminants), nor does the document present recommendations for future sampling. Please discuss the origin of the approach of this document or revise the report to include data interpretation, conclusions and proposed next steps.
6. Analytical data for groundwater samples is sorted by well, and for each well, the results are listed in alphabetical order by analyte. For the purpose of evaluation, review and interpretation of data is generally facilitated when the data are sorted by analytical class (such as VOCs, metals, etc.). Revise Table 3 to present the groundwater analytical data in a format that sorts data by monitoring well and for each well, by analytical class or provide the data in an electronic format suitable for manipulation - e.g. an electronic spreadsheet (do not provide the data in PDF format).
7. Low concentrations of TCE and PCE were detected in the groundwater sample collected from monitoring well IR 71MW03A (Parcel D) in August 2000. No discussion of an attempt to provide lateral definition of these detections of volatile organic compounds (VOCs) is presented in the document. Revise the document to address the detections of VOCs in IR71MW03A and activities to define the lateral extent of these impacts. Further, how does the original RI data set relate to these findings? What has the Navy concluded about the potential sources of this contamination?
8. In a year 2000 sampling event, TCE was detected in the monitoring well IR09MW51F (Parcel D) at 25 ppb. No discussion of an attempt to provide lateral definition of this detection is presented in the document. Please revise the document to address the detection of TCE in IR09MW51F and activities to define the lateral extent of these impact. Further, how does the original RI data set relate to these findings? What has the Navy concluded about the potential sources of this contamination?

## Specific Comments

1. **Section 2.1, Results, page 2:** The text indicates that the Navy is currently conducting basic repairs to wells. The text does not mention an anticipated schedule for completion of these repairs, nor does it mention the anticipated reporting procedure which will document these repairs. Discussion at recent BCT meetings suggests that this work is completed. Please clarify the current status of well repairs and the plan for documentation of this work or revise the Revised Information Package, as appropriate, to include this information.
2. **Section 3.0, Water Level Measurement Survey, page 4:** The text indicates that a total of 187 A-aquifer wells and 18 B-aquifer wells were surveyed during the July 12, 2000 water level measurement event. This extensive re-surveying was performed because in a sampling survey of a limited number of wells, the measurements on more than 30% of the wells varied significantly from initial survey data, triggering a more extensive re-surveying. The survey results are not presented in the Revised Information Package. Please revise the Revised Information Package to include a table of survey results.
3. **Section 4.0, B-Aquifer Study, page 8:** The text indicates that several B-aquifer monitoring wells have been installed and additional wells are currently being installed. Given the information presented in the Revised Information Package, the only manner in which to determine which B-aquifer wells were installed and which were not is to compare the boring logs provided in Appendix C to the list of well proposed for installation in Table 4.7 of the July 31, 2000 Field Sampling Plan. Based on this comparison, it appears that only two B-aquifer wells were not installed at the date of the Revised Information Package: IR28MW395B and IR34MW37B. A comparison between Appendix C of the Revised Information Package and a table in a separate document is an inefficient manner in which to make this determination. Please revise the Revised Information Package to include a concise table of the B-aquifer wells planned for installation and the B-aquifer wells installed to date.
4. **Section 4.0, page 8:** The text states that, "To date, over 90 percent of the Parcel C B-aquifer wells have been installed but none have been sampled." Based on the figures and Table 3, several Parcel C B-aquifer wells were sampled, and results are provided. It is not clear if the statement that no B-aquifer wells were sampled refers only to the series of B-aquifer wells currently being installed or to previously-existing B-aquifer wells. Please modify the Revised Information Package to clarify the statement that no Parcel C B-aquifer wells have been sampled.
5. **Section 4.1, Page 8, second paragraph:** The Phase I GDGI report states that, "The relationship between the A- and B-aquifers will be evaluated as part of the Phase II activities. Phase II activities will include evaluation of vertical hydraulic gradients and well pairs and hydraulic testing..." However, the Final Field Sampling Plan and Quality Assurance Project Plan, dated July 31, 2000, indicates that additional characterization of the B-aquifer in Parcels C and D will be performed under the Phase I GDGI. As requested

in the General Comments above, please justify or explain the postponement of the hydrogeological characterization of the B-aquifer from the Phase I GDGI to the Phase II.

6. **Appendix C:** Appendix C includes boring logs for the following wells: IR25MW42B, IR28,MW395F, IR28MW402F and IR06MW59A1. It appears that these wells are not listed in the various tables in the Revised Information Package, and it is unclear how these wells should be categorized. Please revise the Revised Information Package to discuss the locations and purposes of wells IR25MW42B, IR28,MW395F, IR28MW402F and IR06MW59A1 and to describe how they were used in the investigation, if used.

## Attachment 2

### REVIEW OF THE FIELD SAMPLING PLAN AND QUALITY ASSURANCE PROJECT PLAN ADDENDA FOR PHASE II GROUNDWATER DATA GAPS INVESTIGATION HUNTERS POINT SHIPYARD

#### General Comments

1. The purpose of the Phase II Field Sampling Plan and Quality Assurance Project Plan Addenda (the Phase II FSP and QAPjP) is to address additional data gaps identified by the Phase I Investigation. However, neither the Phase II FSP nor QAPjP clearly states the deficiencies or data gaps that made this investigation necessary. The document presents what work will be performed but does not include the reasons why the work is required. Instead, general statements have been made that the A-aquifer wells will be resampled to characterize the extent of contamination. Furthermore, a number of recommendations made in the Phase I Groundwater Data Gaps Investigation Report (Phase I GDGI) and in November/December 2000 BCT Meeting Minutes were not addressed. These recommendations are listed below:

- The Phase I GDGI recommended making a thorough evaluation of the potentiometric surface of the A-aquifer and revisions to plume boundaries pending groundwater sampling program results.
- No discussion is included regarding further evaluation of thallium exceedances in the one new B-aquifer well at Parcel D and its paired A-aquifer well which had elevated levels of thallium that were not consistent with previously detected concentrations in the near vicinity.
- More detailed evaluation of the B-aquifer hydrogeology to verify that the existing B-aquifer wells adequately characterize the B-aquifer.
- Further evaluation of the vertical gradient at the existing and newly installed A- and B- aquifer well pairs.

Without a detailed explanation of previous deficiencies or data gaps, the adequacy of the proposed Phase II activities cannot be evaluated. Please revise either the Phase II FSP or QAPjP to provide a discussion of the deficiencies or data gaps that made this investigation necessary.

2. Neither the Phase I FSP nor the Phase II FSP/QAPjP provide a detailed description of the HPS geology or hydrogeology. Without this information, the locations of the A and B aquifers, and their relationship to one another, cannot be determined. In addition, it cannot be determined if the monitoring well locations for either aquifer will accurately detect potential contaminants of concern from Remedial Unit-D1 (RU-D1). Revise the Phase II FSP or QAPjP to provide a detailed and accurate description of the HPS Parcel D geology and hydrogeology. The level of detail presented should be sufficient to enable a qualified reviewer to make the above determinations.

3. The Navy recently proposed to EPA that a number of wells be added to the Phase II sampling effort to support the Navy's groundwater beneficial use evaluation. The Phase II document should be revised to include the additional sampling that will be conducted as a result of recent discussions on the groundwater beneficial use evaluation so that the record is clear as to what sampling is to be performed and why.

### FSP Specific Comments

1. **Section 4.2, Water Level Measurement:** This section refers to Figure 4-1 and Table 4-2 for the Parcel D wells to be sounded to determine horizontal and vertical gradients in the B aquifer and to provide additional data for the A-aquifer potentiometric surface map. However, in reviewing Table 4-2 it appears that water levels will not be measured in a number of wells. No justification has been provided as to why some wells were selected to be sounded and others were not. Please revise this section to provide justification for why water levels will or will not be measured in the Parcel D wells. If this information is included in the Phase I FSP, it should be referenced.
2. **Section 4.2, Water Level Measurement:** This section provides the procedure for how water levels will be measured in the wells. The procedure described may be adequate to determine water levels during one specific tidal condition. However, groundwater levels may be affected by high, low and changing tides. Therefore, the proposed water level measuring procedure may not provide a complete description of site water levels. Please revise this section to explain how accurate groundwater levels can be determined with one set of measurements considering the changing tidal conditions present at HPS.

Furthermore, it should also be ensured that all water level measuring devices are calibrated against one standard device immediately before going into the field. The reason for this is that tapes/cords may stretch or kink leading to inaccurate measurements. Standard devices may also vary slightly. Therefore, the FSP should explain, or reference, how measuring device accuracy and comparability will be ensured.

3. **Section 4.3.4, Sample Analysis:** This section states that samples will be analyzed for Contract Laboratory Program dissolved metals. However, total metals are more often the accepted method of groundwater analysis. Please provide justification for only analyzing for dissolved metals in Parcel C and D groundwater samples. In addition, please discuss the relevance of the filtered vs. unfiltered sample collection study being performed on Parcel B, if any, to the Phase I/II groundwater data gaps being conducted for Parcels C and D.
4. **Table 4-6, Parcel D Wells For Resampling:** This table presents the rationale for resampling Parcel D Wells. Some of the rationale provided include:
  - Conclusions from BCT meetings
  - Recommendations from BCT meetings

- Obtain TDS data for beneficial use analysis
- Evaluate geology and hydrogeology of B aquifer
- Assess progress of natural attenuation

However, the intended information to be gathered (i.e., the conclusions and recommendations made at the BCT meetings, etc.) is unclear. Revise Table 4-6 to briefly describe the conclusions or recommendations made at the BCT meetings, explain how the progress of natural attenuation will be assessed, describe how the geology and hydrogeology of aquifer B will be evaluated, etc.

### **QAPjP Specific Comments**

1. **Section A1.3.3, Phase II Groundwater Data Gaps Investigation:** This section states that the existing A-aquifer wells will be resampled to confirm the extent of the existing RU. In addition, it appears that most of the wells scheduled for sampling are to the east of RU-D1. Furthermore, the only A-aquifer well west of RU-D1 scheduled for sampling is approximately 700 feet from the RU, no A-aquifer wells scheduled for sampling are directly south of RU-D1 and no A-aquifer wells are north of the RU are scheduled to be sampled. Since the Parcel D geology and hydrogeology have not been described, it not possible to determine if RU-D1 will be adequately characterized to the north, south and west if the Phase II plan is followed. Please revise this section to ensure that the proposed well locations will adequately characterize the extent of RU-D1.