UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901



June 9, 1997

Ernesto M. Galang
EFA West - Code 1832.5EG
Naval Facilities Engineering Command
900 Commodore Drive
San Bruno, California 94066-2402

Re: Draft Final Interim Groundwater Monitoring Plan for Naval Station Treasure Island dated April 17, 1997

Dear Mr. Galang,

The U. S. Environmental Protection Agency (EPA) has received and reviewed the subject document. EPA's comments are enclosed.

If you have any questions, please call me at (415) 744-2383 or Mark Filippini, Site Hydrogeologist, at (415) 744-2395.

Sincerely,

Rachel D. Simons

Rachel D. Simons
Remedial Project Manager
Federal Facilities Cleanup Office

Enclosures

cc: Jim Sullivan, NAVSTA TI
Mary Rose Cassa, DTSC
Gina Kathuria, CRWQCB
Martha Walters, SFRDA
Richard Knapp, PRC
File
Pat Nelson
Paul Hehn
ARC Ecology
John Allman
Usha Vedagiri
} RAB
Admin Record File (3 copies)

**Draft Final Interim Groundwater Monitoring Plan for Naval Station Treasure Island dated April 17, 1997**

General Comments:

1. In May 1995, EPA conducted an evaluation of the groundwater sampling at Naval Station Treasure Island. Based on the evaluation, EPA prepared a report dated May 31, 1995 and provided recommendations to improve the groundwater sampling process (see attached pages). These recommendations should be considered in the subject monitoring plan.

2. To evaluate the biodegradation of TCE and PCE into vinyl chloride, EPA recommends analyzing for DCE isomers at IR Sites 21 and 24 (see EPA's comments on the Draft RI Report Addendum #4).

3. The evaluation of many of the wells was based on analytical data last obtained in November 1995; some well data was obtained from sampling performed as recently as September 1996. Site conditions and water quality could have changed considerably since the last sampling episodes. This could affect the conclusions and resulting monitoring program for many of the sites. This should be considered when evaluating the appropriateness of the proposed program (see Specific Comment #3).

Specific Comments:

**1. Section 4.0 Monitoring Well Evaluation, page 5**

In the first paragraph, the monitoring plan states that an evaluation of the conditions and construction of all of the wells and piezometers on-site was performed in 1994. The evaluation should also include a detailed inspection of the condition of the wells. Given the age of some of the wells and the potential exposure of the wells to activities, such as traffic, which could compromise their integrity, the results of an evaluation could be of interest. These results could affect the evaluation criteria of the wells. The results of the evaluation should be presented in the monitoring plan or the reference for the document which contains the information should be cited.

The information obtained in an evaluation of the construction and general condition of the wells should be used in the well evaluation criteria. This information could affect which wells are selected for abandonment or non-sampling and which analytical parameters are selected for each well. The well information to be used in the evaluation criteria would include; age, construction material, screened interval, condition of filter

pack, and turbidity of water samples produced from the well.

**2. Section 4.0 Monitoring Well Evaluation, page 5**

In this section, it is stated that monitoring wells 06-MW05 and 06-MW08 were not located. Why weren't these wells located?

**3. Section 4.2 Monitoring Frequency and Analytical Rationale, page 7**

In the first complete paragraph of page 7, the second sentence reads: "As identified in the site-specific sections below, selected wells that met physical standards for monitoring have been deleted from the monitoring network because they do not provide necessary information." It is unclear what is meant by the term "physical standards"; it is also possible that the sentence is syntactically incorrect or missing a key work or phrase. Please explain.

The next paragraph discusses the collection of both filtered and unfiltered metal samples during the first round of sampling; the analytical results will then be evaluated. Please be specific as to what the determining factors will be for deciding whether future samples will be filtered. Also, please specify if samples will be field filtered, acidified and then filtered in the lab, or filtered and then acidified in the lab.

Figures 7 through 34 present contaminant plume configurations for each of the sites based on November 1995 data. Additional data was collected in September 1996 for many of the sites. A review of the data summaries in Appendix A indicate that significant changes in contaminant concentrations occurred in several wells. Please discuss the potential changes to the extent and concentrations of the plumes presented in the figures based on the more recent data.

**4. Section 4.2.1 Site 04/19 - Hydraulic Training School/Refuse Transfer Area, page 7**

According to the results of Phase II Remedial Investigation, a motor oil groundwater plume was identified at this site approximately 80 feet up gradient of well 4/19-MW02. This plume is not identified on Figure 2. Was this plume considered during the monitoring well evaluation?

Also, it is unclear how effective wells 4/19-MW01 and 4/19-MW02 will be in monitoring Site 24 contaminants since the wells are screened from 3.5-13.5 feet and the solvent plume from Site 24 appears to be sinking as it migrates.

**5. Section 4.2.5 Site 14/22 - New Fuel Farm and Navy Exchange Service Station and Site 7/10 - Pesticide Storage Area/Bus**

**Painting Shop, page 11**

There is no discussion of the age of the wells at this site and who installed them. Please provide this information to make it consistent with the remainder of the site discussions.

This section also discusses the selection of Well 22-MW02 to be abandoned. This well had higher concentrations of TPHg and TPHd than 22-MW01 (7,800 ug/L TPHg and 2,000 ug/L TPHd verses 2,500 ug/L and 610 ug/L, respectively). Well 22-MW02 is also closer to the edge of the plume as presented in Figure 2. Why was this well selected for abandonment as opposed to Well 22-MW01?

**6. Section 4.2.8 Site 24 - 5th Street Fuel Releases/Dry Cleaning Facility, page 13**

Well 24-MW02 showed TPH concentrations from the sampling period of September 1996 at 78 ug/L diesel and 86 ug/L motor oil; all previous sampling events showed no detectable levels of either compound. This well has been selected for no further sampling based on the evaluation criteria. This well should be sampled at least one more time to confirm whether dissolved constituents are present. If so, sampling should continue indefinitely.

**7. Section 4.3 Well Repair, Abandonment, and Water Level Monitoring, page 14**

The Introduction (page 2) states that this monitoring plan will present procedures (or criteria) for well repair and abandonment. Section 4.3 presents neither the criteria nor procedures for repair or abandonment. Please specify what wells are in need of repair, what are the criteria for determining the need for repair, and what the procedures will be (see also Specific Comment #1 above).

C. **Recommendations**

1. General: The FSP should be updated. Sampling procedures have been modified considerably since they were documented in the 1991 FSP. A SOP that documented the updated groundwater sampling procedures was submitted to EPA on May 22, 1995. This procedure be reviewed and formalized in a revised FSP or FSP amendment.

   Additionally, the appropriate sections of the FSP should be updated to address the field measurement instruments that are in current use, including calibration procedures these instruments, and calibration frequency.

2. Well Construction: Surface casings should be examined and retrofitted if a potential exists for surface water to collect within the protective casing.

3. Field Instruments: The adequacy of the field instrument calibration procedures should be reevaluated. An interface probe should be used to detect immiscible phase liquids prior to sampling. Additionally, it is recommended that a two-point calibration be performed for parameters that involve absolute measurements.

4. Groundwater Sampling:

   A. *Sampling Equipment*: The use of bailers for the collection of groundwater samples to be analyzed for volatile organic constituents is not recommended. Additionally, the surging action of a bailer during purging and sampling may artificially elevate turbidity to unacceptable levels. Therefore, it is recommended that pumps capable of a discharge less than 0.3 l/min be used during sampling. If the use of bailers is to be continued, they should be fitted with a bottom-emptying device employing a stopcock. Sample containers should *not* be filled by pouring groundwater from the top of bailers.

5. Sample Handling:

   A. Forty milliliter vials observed to contain air bubbles should be discarded and unused vials filled with an undisturbed sample aliquot.

B. All sample containers be stored out of the sun in a cool place (e.g., in ice chest), both prior to and following sample collection.

6. Field QC Samples: It is recommended that field blank samples be collected daily during groundwater sampling to monitor for contamination present in sample containers or introduced in the field or during sample handling and transport. Additionally, collection of an EB sample with each new lot of disposable bailers is recommended.

7. Documentation: Instrument calibration information should be recorded in a bound log book with consecutively numbered pages.

If you have any questions concerning this memorandum, please feel free to call Lisa Hanusiak at (415)744-1528.

Attachments (2)

cc: Brenda Bettencourt (P-3-1)
Anna-Marie Cook (W-6-2)
Vance Fong (P-3-2)
James Johnson (P-3-1)
Kira Lynch (P-3-1)
Douglas Steele (H-9-3)