

Admin Record
DTSC : Chein Nao
EPA : Rachel Simons
RWQCB : Gina Kathuria
PRC : Sharon Tokian

N60028_000569
TREASURE ISLAND
SSIC NO. 5090.3.A

MEMORANDUM

TO: Treasure Island Restoration Advisory Board, and Jim Sullivan-NSTI

FROM: Paul V. Hehn, Treasure Island RAB - Technical Subcommittee Chair

DATE: September 10, 1996

RE: **Comments on Documents:**
1) "Phase IIB Remedial Investigation Additional Characterization at Sites 12 and 17"
and
2) "Ecotoxicological Testing Sampling and Analysis Plan for Development of Petroleum Cleanup Goals"

The following are my comments on the two above referenced documents. I have also included comments by community co-chair Pat Nelson.

The comments that have been prepared are related to general issues and to specific sections of the work plan.

DOCUMENT:

**PHASE IIB REMEDIAL INVESTIGATION ADDITIONAL
CHARACTERIZATION AT SITES 12 AND 17**

Comments

My concerns about this work plan are all associated with the work planned for delineation of the chlorinated solvents at and downgradient of Site 17.

It is unclear in the work plan the method in which the Geoprobe™ borings will be drilled in this area. Since it appears that the borings will be drilled to test the depth of impacts near this site, the borings will be drilled deeper than previous borings. Since the contaminant of interest are DNAPLs, its is very important to

determine how the drilling will be done. An earlier presentation on July 23, 1996 on the subsurface geology at the site for Site 24, cross sections indicated that thin gray clay layer was present in the subsurface at a depth of approximately 20 feet bgs. I would like to know if this clay layer will be penetrated during this drilling.

If this drilling is going to penetrate this clay layer, the boring should be completed using conductor casing in the upper part above the clay and then drilled through the conductor casing to the lithology below the clay. This will isolate the upper sediments from the lower sediments, and prevent DNAPLs from moving from the upper to the lower part. Thus any DNAPLs in the upper will not contaminate the lower during or following the drilling of the borings and completion of the future wells.

Studies by the University of Waterloo on the movement of DNAPLs in the subsurface have shown that if DNAPLs are located in an upper aquifer in the area of a boring, the DNAPLs will move rapidly from the upper to the lower aquifer right along with the advance of the boring. If the bore is not done using conductor casing, by the time the boring reaches the lower aquifer, the lower aquifer will now be impacted with DNAPLs when previously it may not have been prior to the boring. This is why I would strongly recommend that all borings that will be drilled into and through the clay layer be drilled using conductor casing. This is also true for any wells that will be drilled in these areas. The use of conductor casings should also be used from the multiple completion wells indicated in the work plan.

Since I do not know the depth of the boring in the previous Geoprobe™ boring 05-HP005, the depth of the concentrations for PCE and TCE detected in this boring are unknown but they might be located near the upper surface of the clay layer. Higher concentrations might also be present immediately above the clay. It is these high concentrations that should not be allowed to move into the lower aquifer.

I would also be very careful about placing too much emphasis on the concentrations detected in downgradient Well 17-MW01. First, that the depth the well might not be adequately sampling the contact with the clay and not getting a representative sample of the possible DNAPLs present, and second, DNAPLs plumes have been shown to commonly be very long and thin plumes which may not be sampled by this well if the plume is originating in the area of Geoprobe™ boring 05-HP005. Also other Geoprobe™ borings might not have been drilled deep enough to sample for the DNAPLs. I would also look closely at the abandoned pipeline route

that was previously reported to be along 5th Avenue as a possible conduit for lateral movement of DNAPLs towards the Bay.

Considering all of these factors, it appears that more detailed discussion and presentation of the drilling and completion methodology for the Geoprobe™ borings and the monitoring wells is needed in this work plan to address these issues.

DOCUMENT:

**ECOTOXICOLOGICAL TESTING SAMPLING AND ANALYSIS PLAN
FOR DEVELOPMENT OF PETROLEUM CLEANUP GOALS**

Comments on Specific Sections

- Section 4.1 - Please describe more fully the procedures used at the San Francisco airport that are used as the guidance for this work.
- Section 4.2 - How were the sites for the representative types of TPH chosen?
- Section 4.4 - Please describe more fully the methods to be used to get the Derivation of Cleanup Goals.
- Section 5.2 - How will the representative samples to be tested for each level of TPH be collected to insure that they really are in these ranges?
- Section 2.2 - Will the mixing of the soil and spitting of the samples be done by the laboratory or by the field crew?

TO: Paul Hehn

Date: Aug 29, 1996

FR: Pat Nelson

Subject: Technical Memorandum Phase II B.R.I.
Additional Characterization

Have reviewed the subject document and have the following comments/questions

- 1) Re: Field procedures - refer to asterisk "2*" on Feb 17, 1995 comments (attached)
- 2) Re: Work near IR site boundaries - refer to asterisk "1*" on Feb 17, 1995 comments (attached)
- 3) Are there additional IR sites for which additional characterization is required and if so, when would such characterization be performed?
- 4) Is performance of the additional characterization delaying the issuance of the Draft RI report?

Post-It [®] brand fax transmittal memo 7671		# of pages ▶ 4
To Paul Hehn	From Pat Nelson	
Co.	Co.	
Dept.	Phone # 415 973 7694	
Fax # 510-2333204	Fax # 415 973 9201	

MEMORANDUM

To: Sharon Tobias, PRC Date: February 17, 1995
Fr: Pat Nelson, NSTIBAR Subject: "Responses to Responses"

The following concerns are submitted to you separately from the other NSTIRAB comments because I was out of town when the others were being assembled and submitted February 16, 1995.

1) Thank you for taking the time and effort to respond to the RAB subcommittee's written comments. Although other comments were provided at the January meeting and have not been addressed, the responses to the written comments that were discussed at the February 7, 1995 meeting were appreciated.

2) The responses to the RAB subcommittee comments for the most part addressed procedural issues rather than technical content issues. My particular interest is in the technical content issues and found the responses inadequate. The response to the "Basis for Sampling Rationale" is an example of this inadequacy: the response identified meetings and documents that were developed in the preparation of the Phase IIB Work Plan Addendum. Although this information provides an overview of the process the Navy and its consultant undertook with regulatory agencies, it does not describe the technical bases for the Phase IIB remedial investigation work on a site by site basis. One could construe from this that the Navy and its consultant assume that RAB members either don't have the background or interest to understand technical issues. This is not the case.

To discern the technical bases for the Phase IIB work I took a random site, No. 6 (the fire training school), and reviewed the Phase I RI (provided by ARC), Agency Comment documents (provided by EPA) and the Phase IIB Work Plan Addendum. I learned from this review that hydrocarbon wastes and VOC are of concern at this site and that the fuel sources of fires set for the purposes of training were diesel and gasoline. In addition, I learned that the agencies had a concern that waste oil may have been used as a fuel source for training fires and that dioxins may be present at the site. This comment was rebutted with a reaffirmation that gasoline and diesel were the fuel sources for such fires and that testing for PCB or successor chemicals such as dioxin would not be performed. Therefore, I found it interesting that in the Phase IIB Work Plan no less than 11 soil samples would be taken and analyzed for dioxin because there appears to be no technical basis for such testing since it was found that PCB containing fuels were not used as feedstock for training fires.

In no document provided to the RAB was a clear rationale developed that indicated there was a need for dioxin testing and

analyses. There are few labs in California that perform such analyses and they are one of the most costly, approximately \$1500/sample. The reasons and decisions to test and analyze for dioxin appears not to have been documented, as far as I can tell. From the outside looking in, the dioxin testing has no foundation in NSTI operations history or understandable technical justification. PRC may wish to consider PCB testing and analysis as an alternative screening technique to the potentially costly and potentially wasteful dioxin testing proposed for Site No. 6 and all other TI and YBI sites.

Because there appears to be some lack of technical justification for performing certain tests at Site No. 6, as outlined above, it is entirely possible that there is some lack of technical justification for all other sites being investigated on TI and YBI.

3) Lack of footnotes and discernable bases (e.g. written vendor estimates) for the cost estimates provided make them appear suspect. A source/manufacturer and per unit cost for the various immunoassay kits should be provided in addition to the unit costs for the chemical analyses by EPA method should also be provided. At our February 7, 1995 meeting, PRC indicated that the on-site laboratory cost estimate did not represent a cost for a certified laboratory, the explanation itself invalidated that estimate.

Other Site No. 6 issues to be addressed:

- a) Although Site Nos. 6 and 12 are adjacent, the IIB Work Plan does not address the common boundary area or the potential for common soil and groundwater contamination. How will common boundary areas between all sites be addressed?
- b) Reuse of the dozen or so wells in Site No. 6 is not addressed as an option to performing ground water screening; results of the IIA ground water monitoring should be considered prior to undertaking IIB work at Site No. 6 and all other TI/YBI sites.
- c) Why is there no sampling proposed west of Buildings 240-244 or 248,464,246?
- d) What is the source of gasoline contamination in MW04, upgradient of Site No. 6?
- e) Why are groundwater samples being taken upgradient of USTs 240A&B and not USTs 240C&D?

2 * 4) At the February 7, 1995 meeting we discussed at length the pros and cons of the screening methods PRC proposes to use in the field. The Phase IIB Work Plan specifies the use of a hydraulic punch, not the Geoprobe which was specified at the meeting. It was suggested by the RAB at that meeting that one TI site be

selected on which screening methods would be used and then verified with traditional methods of taking and analyzing soil and ground water samples prior to other TI sites being screened/investigated. Verification of the screening techniques by using traditional techniques on one site should be considered as a required task before undertaking other site investigations. If the results of the screening techniques are not validated by traditional field methods, PRC should consider completing the field work using traditional methods.

Ecotox testing - Comments from Usha Vedagiri

pg 15 - Rationale for selecting control site, what if they find str?
 what

pg 16 - NO TIE/TRE rather than weighted averages proportions? Basis for LC₅₀ number? Proportional weighting for cleanup may NOT at all mean LC₅₀ attained.

A-1 - Schindler test - Range finder first or have they preselected dilution series?

pg 16 - Rationale for selection of these species? If they are both rocky shore dwellers, are their habitats comparable to TI offshore habitats?

pg A-67 - Pre water elutriate is being used rather than 2 phase sediment test - so why would ~~the~~ direct subsampling be so tough?

pg B-4 - why is there a difference in elutriate preparation between the 2 sp?

(from NSTI RAB Community Member - USHA VEDAGIRI)

Phone - (510) 283-7077
Fax (510) 283-3894