

MEMORANDUM

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

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

DATE: January 19, 1996

RE: Comments on Documents from Technical Subcommittee Meeting
January 9, 1996

The technical subcommittee of the Treasure Island RAB met on January 9, 1996 at the Treasure Island Navy Administration building on Treasure Island. The first two hours of the meeting were spent discussing RAB administrative issues dealing with upcoming documents to be reviewed, follow-up comments and discussion on the Ecological Risk Assessment, educational issues and priorities. Notice of Intent to Sue by Bay Keeper on petroleum hydrocarbon issues, update of the External Affairs Committee by Dan McDonald, information on CRC by Laurie Glass and DTSC issues. During the final 45 minutes, we were able to discuss the Pre-Final UST Investigation and Corrective Measures Study.

The following compiles the main points of discussion and areas of concern expressed by those RAB members who had reviewed the Pre-Final UST Investigation and Corrective Measures Study. This summary compiles the comments verbally submitted during this discussion, by RAB community members Chris Shirely, Usha Vedagiri, Dan McDonald, Brad Wong, Richard Hansen, Fred Hayden and John Allman.

I have again taken the liberty of submitting the compiled comments and questions expressed during the meeting into an overall General comments and questions category since most of the discussion centered around these issues related to this particular document. We ran out of time before we could cover Specific issues at

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each particular site, and these specific issues should be brought out during the RAB meeting discussion or at additional meetings dealing with the UST issues at TI. I have added a few Specific comments of my own from my review of the document. There was also a lively discussion about general UST, AST, pipeline and petroleum hydrocarbon in soil and groundwater issues that need to be addressed at future meetings.

DOCUMENT:

Pre-Final UST Investigation and Corrective Measures Study

General Comments

- The overall document not presented in context with the overall basewide investigation and remediation options. This is an isolated study that does not include interaction with the rest of the program.
- How and why were these particular sites picked?
- How do these sites interact with the other impacted sites nearby? Especially in light of the pump and treat remediation suggested for several sites. Will the pumping pull contaminants from others nearby sites towards the pumping location?
- Need to address the possible pathways for movement of petroleum hydrocarbons through nearby pipeline, stormdrains, sewerline backfills, etc.
- Need to put together a holistic view of all sites and their interaction rather than just these few isolated sites. Need to address the overall strategy for the entire base interactively.
- Does not address the possible tidal influence on the sites and how the tide may effect the remediation options and what impacts to bay waters from the sites.
- Many of the options would utilize the onbase sewer treatment plant to treat the water from these pump and treat remediation options. Can the plant handle this addition load? What about during rainfall events? What about the long term availability of treatment plant capacity if the City and County of San Francisco decide to reduce the amount of treatment capacity of the plant?
- Soil remediation issues are totally ignored in the investigation results and in the remediation options.

- What actions standards were used to determine that the soil was not impacted or important? Where did these standards come from?
- Within the study it talks about a "low level of contamination". What is a "low level of contamination" and who established it?
- The "low level of contamination" was used to determine the remediation strategy for the sites. If this level is not appropriate, the remediation strategy may need to be reexamined.
- Table 3-1 on Page 3-10 need to be reevaluated. The Table is not correct, is lacking in detail and makes sweeping generalizations.
- The study should not assume the paving is complete throughout the base. There are open areas that need to be considered, and also the possibility for vapors to escape from cracks in older paved surfaces.
- The study states that bioaccumulation need not be addressed and is not an issue. This may not be correct and needs to be reevaluated or at least state the reference from which this conclusion is drawn.

Specific Comments by Paul V. Hehn

- The investigation need to be totally updated in light of new regulatory issues. The Non-Attainment Zone strategy presented is now the Containment Zone strategy of the Regional Water Quality Control Board. The very recent (January 1996) release by the State Water Quality Control Board of the Lawrence Livermore Study could drastically change the way these soil and groundwater impacts are viewed from a regulatory standpoint, and also greatly modify the possible options for remediation and monitoring. The entire subject of this investigation needs to be revisited and revised.
- Due the high concentrations of petroleum hydrocarbons (mostly diesel) in some of the groundwater samples, some of these wells should be on a regular monitoring program (at least annual?) to determine possible migration and/or reductions/increases in concentrations.
- Study needs less reliance on pump and treat technology and more on more effective (even emerging technologies) need to be considered for remediation of these sites. Seem to discount most in-situ soil remediation option which have recently been shown to be very cost effective and efficient. Natural

biodegradation combined with Containment Zone strategy needs to be more fully evaluated in the remediation options.

- Most of the remediation strategies are based on the USEPA PRGs. If other, more stringent cleanup criteria are established for the base, or for these areas specifically, does that mean that all of these site would then be reevaluated and a new study and report would be generated?
- Groundwater sample results for TPH as diesel are presented as 280 mg/L. Should be in $\mu\text{g/L}$? Or is it really 280,000 $\mu\text{g/L}$?
- On Site 368B, why is the highest concentration "upgradient" from the UST? Is this plume going under the building?
- The remediation option assume a 30-year remediation time frame when most recent studies have shown that the petroleum hydrocarbons will have degraded long before the 30-year time frame.
- In Section 4, the volume of soil impacted by the TPH needs to be clarified. Soil even in the saturated zone is still impacted soil (source area for impacts to groundwater). How will this be addressed?
- In the Evaluation of Remedial Alternatives section on Alternative 4, relies on pump and treat and carbon adsorption. The carbon usage costs for this alternative could be very expensive. Needs to be reevaluated.
- Remedial Alternative 5 is a very complex system of extraction, treatment and reinjection. This could be a very expensive and time-consuming system to operate. Are there other better, cheaper alternatives? This system also recommends adding oxygen, nutrients and microbes to the system. Previous discussions in this report stated that this was too expensive a method to be used. Why does it then show up here again as an alternative?
- Need to reevaluate the use of intercept trenches at some or all of these site. Recent advances in this technology have produced significantly lower cost, more efficient system over pump and treat options. Also these systems are very easy and cost effective to operate over time.
- While the system proposed for Site 270 is expensive, it looks like it could be a very beneficial use of the technology and very effective. This uses well thought out options. These options must also consider the possibility of pulling contaminants on to this site from the upgradient site (Site 42?). Also, how much of the contamination has come from the upgradient site?