Geomatrix
N60028_001310
TREASURE ISLAND
SSIC NO. 5090.3.A

MEMORANDUM

TO:	La Rae Landers and James Sullivan Department of the Navy	**DATE:**	July 11, 2005
FROM:	Gary Foote	**CC:**	Marc McDonald and Jack Sylvan Treasure Island Development Authority

SUBJECT: Comments on May 2005 "Draft Remedial Investigation Report Installation Restoration Site 30, Daycare Center, Naval Station Treasure Island, San Francisco, California"

On behalf of the Treasure Island Development Authority (TIDA), Geomatrix Consultants, Inc. (Geomatrix) has reviewed the draft subject report (Draft Site 30 Remedial Investigation [RI] Report). Geomatrix comments on the draft report are presented below. The human health risk assessment, included within the Site 30 RI Report, was reviewed by Mr. Greg Brorby of Exponent. Mr. Brorby's comments are attached.

GENERAL COMMENT

1. ***Groundwater Monitoring Wells Considered in this RI.*** The document indicates that two monitoring wells were installed as part of the Site 30 RI (Executive Summary, subsection Groundwater Results; Sections 3.4, 4.1.2, 4.3, and 7.0; and Figure 2-1). The two wells are 30/31MW06 (located outside the site boundary in 11th Street) and 30/31MW08 (located within the site boundary). It is unclear why well 30/31MW07 would not be included and discussed in this report. It is also located in 11th Street (similar to 30/31MW06) and is immediately downgradient of the area where debris was removed at Site 30. I recommend that results from well 30/31MW07 be discussed in Sections 4.3 and 7.0 of the Report and the well location shown on Figure 2-1.

SPECIFIC COMMENTS

1. ***Executive Summary (p. ES-1) and Section 1.2.2 (p. 1-6).*** The text indicates that documentation regarding the "old trash dump" was discovered during the environmental baseline survey to support the Finding of Suitability to Lease (FOSL). This does not appear to be correct. The FOSL for the parcel was completed in July 1997 and I believe the documentation was discovered several years later (2001 or 2002).
2. ***Executive Summary, subsection Pesticides and Polychlorinated Biphenyls in Soil (p. ES-4).*** The discussion of the chlordane detections should include a comparison to the screening criteria (consistent with discussions for DDT, DDD, DDE and PCBs).
3. ***Executive Summary, subsection Geology and Hydrogeology (p. ES-3).*** The last sentence states that groundwater at Site 30 flows in an approximately westerly direction. This is inconsistent with the text in Section 3.4.2 and Figure 3-6, which indicates that groundwater flows in a north-northwesterly direction.

4. ***Section 1.2.4.*** The bulleted list of future activities that may be undertaken at Site 30 per the 1996 Draft Reuse Plan should include residential uses.
5. ***Section 2.5 Monitoring Well Installation.*** The first paragraph provides the general rationale for temporary wells installed during Site 30/31 investigations ("...based on previous soil analytical results and the anticipated groundwater flow direction." It would be helpful to document the explicit rationale for each well specifically installed to assess groundwater impacts associated with Site 30 (wells 30/31MW06 through 30/31MW08).
6. ***Section 2.6 Groundwater Sampling.*** The last sentence of the first paragraph says that the sections below describe procedures for "an alternative sampling method." I do not see such a discussion.
7. ***Section 2.7 Decontamination Procedures.*** This section discusses decontamination procedures for drilling activities. It should also include a discussion of decontamination procedures for trenching or excavation activities.
8. ***Figures 3-4 and 3-5, Cross Sections.*** The cross sections only present sources of lithologic information that provide data to a depth of 10 feet below ground surface (bgs; i.e., temporary wells, trenches). What were the sources of information used to provide the lithologic interpretation between 10 and 40 feet bgs on the cross sections? Figure 3-4 (Cross section A-A') incorrectly shows the area beneath 11th Street as an "area where debris has been removed and backfilled with clean fill material." The Navy conducted no removal beneath 11th Street.
9. ***Section 4.1 Sample History.*** The discussion about which trenches were excavated during different phases of investigation is difficult to follow without a figure showing all trench locations. I suggest adding a figure that shows the locations of all trenches discussed in this section and color-coding the locations according to the phase of investigation during which they were excavated.
10. ***Section 5.2 Contaminant Fate and Transport Processes.*** This section provides a lengthy generic discussion about contaminant fate and transport processes without explicitly addressing the six chemicals exceeding screening criteria. It would be helpful if the text discussed the relevance of these processes with respect to the chemicals of interest at Site 30.

I:\Project\4000s\4850.005\Document Review\Site 30 RI Comments.doc

Exponent

EXTERNAL MEMORANDUM

TO: Gary Foote – Geomatrix

FROM: Greg Brorby

DATE: July 7, 2005

PROJECT: 8601649.003

SUBJECT: Comments on Site 30 Remedial Investigation Report

This memorandum presents the results of my review of specific sections of the draft "Remedial Investigation Report, Installation Restoration [IR] Site 30, Day Care Center, Naval Station Treasure Island," dated May 2005. Specifically, my review focused on Appendix I, Human Health Risk Assessment (HHRA). In addition, I reviewed other sections of the report that pertain to the HHRA, as indicated below. It should be noted that this review did not include a rigorous assessment of the information presented in the tables, nor any verification of the risk assessment calculations. To the extent that I noticed discrepancies between information presented in the text versus information presented in the tables during my review, these discrepancies are indicated below.

Specific Comments

1. Section 8.2, p. I-14 — There is no mention of ingestion of homegrown produce as a potential exposure pathway for the future residential receptor. This issue has been discussed many times for other IR sites at Treasure Island. Given that "The draft NAVSTA TI reuse plan designates Site 30 for 'Residential/Open Space/Publicly Oriented Uses,' " ingestion of homegrown produce is clearly a potentially complete pathway at some time in the future. This pathway should be acknowledged, even if it is not evaluated quantitatively in the HHRA. This comment also applies to Figure I-2 and Section 1.4 of the main text.

2. Section 8.3.4, p. I-17 — It is unclear why the use of a particulate emission factor (PEF) of 1.316×10^9 cubic meters per kilogram (m^3/kg) is "conservative" for evaluating future residents or commercial/industrial workers. Further, the PEF of 6.581×10^8 m^3/kg to be used for the construction worker scenario is not provided in the cited EPA Region IX guidance. The derivation of this factor should be documented in the HHRA. Further, it should also be documented who considers this factor "relevant for construction workers engaged in redevelopment activities at Site 30, including excavation."

3. Section 8.3.4, p. I-17, 2nd paragraph — The output from the vapor intrusion model should be provided in Attachment I2 so that the results can be evaluated independently. Similarly, the calculations for the air-in-trench exposure-point concentration (EPC) should be provided in the HHRA.

4. Section 8.4.2, pp. I-23 to I-28 — The exposure pathways, equations, and input parameters used to evaluate the future residential child are different from those used to evaluate the current day-care center child, because general EPA/DTSC guidance was used in the former case and specific OEHHA guidance was used in the latter case. Because these differences do not necessarily make sense from a technical perspective (e.g., a future residential child is as likely to be exposed to indoor dust as a day-care center child), some type of discussion of these discrepancies is warranted, perhaps in the uncertainty section. This comment also applies to Section 1.4 of the main text.

5. Section 11.2, p. I-41, last paragraph — A value of "1.0" represents two significant figures, not one significant figure as indicated in the text. This comment also applies to Section 11.3, where the total hazard index reported for the child resident of 1.3 should be rounded to 1, and to the corresponding sections of the main text (i.e., Sections 6.2.1.2 and 6.2.2, respectively). Finally, the total hazard indexes (and cancer risks) are not mentioned in the Executive Summary of the main text. This information should be added to the Executive Summary for completeness.

6. Section 12.2.4, p. I-48 — The incidental soil ingestion rate of 200 mg/day used for the pica child in the LeadSpread model is given as an example of exposure variables representing "standard upperbound estimates." While there are many other examples that could be provided to support this statement, the input parameters to the LeadSpread model represent central tendency values, not upper-bound values.[1]

7. Section 12,3.2, p. I-50 — It is unclear what is meant by the following statement: "The magnitude of the uncertainties in the TPH assessment was assumed to be a function of the spatial distribution of TPH as gasoline contamination, relative to the distribution of the samples analyzed for PAHs." This sentence needs to be rewritten to clearly convey the intended meaning.

8. Section 12.3.4, p. I-51, 2nd paragraph — While it is stated that the estimated risks based on Methods 1 and 2 are within an order of magnitude for the residents and commercial/industrial workers, thereby implying that there is no significant difference between the risks estimated by the two methods, no mention is made that the estimated

---

[1] Carlisle, J., J. Christopher, B. Davis, K. Klein, B. Renzi, and M. Wade. 2000. Updated version of the California EPA lead risk assessment spreadsheet model for predicting blood lead in children and adults. California Department of Toxic Substances Control, Sacramento, CA. Presented at 39th Annual Meeting of the Society of Toxicology, Philadelphia.

risks for the day-care center child are two to three orders of magnitude different, depending on which method was used.

9. Section 12.4.1, p. I-52 — The bulk of this section has nothing to do with the potential uncertainty associated with risk estimates for benzo(a)pyrene or other polycyclic aromatic hydrocarbons.

Miscellaneous Comments

1. Section 3.1, p. I-3 — I suggest re-wording the first sentence as follows: "To satisfy federal (Navy and EPA) and state (DTSC) requirements, *risk estimates will be prepared by two different methods*, which will be referred to as Method 1 and Method 2." This comment also applies to the Executive Summary and Section 6.1 of the main text.

2. Section 7.0, p. I-8, 1st subbullet — The use of the term "similar" in the second sentence is confusing, because metals were evaluated in exactly the same way in both Methods 1 and 2. I recommend rewording this sentence as follows, "*As in* Method 1, ..." (i.e., rather than "Similar to ..."). This comment also applies to Section 6.1.2.1 of the main text.

3. Section 7.1.1, p. I-9, 1st paragraph — Children are not necessarily more "sensitive" to chemical exposure than adults. I believe the point is that, at a given concentration, children may be exposed to a higher degree than adults on a per-body-weight basis.

4. Section 7.2, p. I-11 — The second "e" is missing from "o-Xylene" toward the bottom of this page.

5. Section 8.3.2 – p. I-16 — This section states that no samples were collected below 6.5 feet below ground surface (bgs), but does not say why that is the case. I believe that no samples were collected below this depth, because depth to groundwater is approximately 7 feet bgs and samples were not collected below the groundwater table. If this is true, then I suggest providing this explanation as justification for why samples were not collected below 6.5 feet bgs. In addition, the last paragraph of this section seems repetitive and unnecessary.

6. Section 12.3, p. I-49 — OEHHA, not DTSC, is the primary group within Cal-EPA that develops toxicity criteria.

7. Section 12.3.4, p. I-51, 2nd paragraph — I believe the first sentence should be reworded as follows: "Estimates of potential cancer risks were uniformly within or *below* the EPA risk management range ..." (i.e., rather than "outside of," which could imply above or below the range).