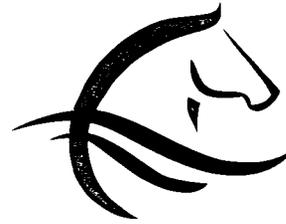


April 27, 2009



Mr. Michael S. Bloom
BRAC Environmental Coordinator
United States Department of the Navy
BRAC Project Management Office West
1455 Frazee Road, Suite 900
San Diego, California 92108

Subject: *Lennar Mare Island, LLC Comments to the Draft Final Technical Memorandum for Total Petroleum Hydrocarbons at the Defense Reutilization and Marketing Office (DRMO) Site and Vicinity, Former Mare Island Naval Shipyard, Vallejo, California dated March 6, 2009*

Dear Mr. Bloom:

The purpose of this letter is to provide the United States Department of the Navy (Navy) with Lennar Mare Island, LLC's (LMI's) comments and/or questions to the *Draft Final Technical Memorandum for Total Petroleum Hydrocarbons at the Defense Reutilization and Marketing Office (DRMO) Site and Vicinity, Former Mare Island Naval Shipyard, Vallejo, California* dated March 6, 2009 (DRMO TPH TM). These comments and questions are submitted in accordance with the Navy's request for comments in the DRMO TPH TM cover letter. These comments are presented in sections on General Comments and Specific Comments.

General Comments

LMI's general comments are as follows:

- 1) **The Navy is the Only Known Entity to Dispose of Oil on Mare Island** - The Navy is the only entity that ever disposed of oil on Mare Island as part of its historical shipyard practices. Neither LMI nor the City of Vallejo, have ever disposed of oil on Mare Island. Thus, a discussion of differences between Navy-owned and LMI-owned property must focus on depositional history and disposal practices of the Navy itself.
- 2) **Petroleum Hydrocarbon Sources** - The DRMO is the only area in the immediate vicinity of the DRMO/Crane Test Area (CTA)/Dump Road/Azuar Drive Area to have a reported use of "...handling of petroleum and waste oils." In addition, the Oil Sump Box (OSB) and the wooden sump box near the eastern boundary of the DRMO (on Navy property), appear to be structures where oil was disposed. To

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the east, the IR02 waste oil disposal sumps also used to dispose of large volumes of waste oil, not all of which was recovered or for which there is an accurate accounting. Neither the CTA (Investigation Area [IA] B.1) nor portions of IA B.2 have ever had a reported use of "...handling of petroleum and waste oils" or the disposal of such materials.

- 3) **Nature of the FPPH** - The nature of the free-phase petroleum hydrocarbons (FPPH) is characterized and described (a black, viscous liquid with a chemical signature of a heavy fuel-oil [HFO] such a Bunker C). However, the forensic analysis indicates that there is substantial variation in the makeup of the HFO. We therefore believe it is reasonable to assume that the Navy used and disposed of varying types of petroleum hydrocarbon products at the DRMO as evidenced in the immediate area and east of the OSB.
- 4) **Mobility of Free-Phase Petroleum Hydrocarbons** – The DRMO TPH TM concludes that the HFO's high viscosity (five orders of magnitude greater than water), lack of driving pressure and the fine-grained nature of geologic materials at depth indicates that it is immobile, unless it encounters a preferential pathway (i.e., metal debris or an underground utility). Please describe the mechanism(s) that would allow for the observed extent of free product, if the HFO is immobile. Clarify the depth of HFO, versus the depths of utilities, to support the conclusion that the corridors essentially cut off contaminant flow to the east.
- 5) **Metal-Debris Layer and Mobility of Free-Phase Petroleum Hydrocarbons** – The DRMO TPH TM concludes that the FPPH is strongly correlated with the presence of the metal debris, which is encountered in the subsurface at the DRMO, the CTA, Dump Road, Azuar Drive and IA B.2 (LMI property across Azuar Drive from the DRMO). However, the report concludes that FPPH could not have migrated across the Navy/LMI property boundary, even though the metal debris layer extends all the way across that boundary. If the metal debris layer is present, please describe what prevents the FPPH from migrating from the Navy OSB disposal area, across the boundary and onto the LMI property through that metal debris layer.
- 6) **Forensic Analysis** – LMI believes the forensic analysis, while useful, is not extensive enough, spatially or temporally, to reach the unequivocal conclusions made in the report. These issues are related to the limited data set used, the implied assumption that data collected today are representative of years of potential FPPH migration, gaps in the data and a focus on sample dissimilarities with no evaluation of similarities.



Specific Comments

LMI's specific comments are as follows:

- 1) **Page 5-3, Section 5.1.3, First bullet on page** – Change “SSL-4 station 99 to 10” to “SSL-4 station 99 to 110.”
- 2) **Page 5-6, Section 5.3.1** – In the first paragraph in the section it is written that “Nineteen free product samples...” were collected. However, in the bullets directly below this paragraph it is written that $5 + 3 + 3 + 4 + 1 + 5 = 21$ free product samples were collected. One of those samples is counted twice in the bullets (FTPH-TR-DDD2), leaving 20 samples. Please explain this discrepancy.
- 3) **Page 6-3, Section 6.2** – In the first paragraph at the top of the page, last sentence, it is written that “The thickness of the HFO was 375 feet at its widest just northwest of the former OSB location, and approximately 50 feet at the southeastern end.” This should be changed to “The *width* of the HFO was 375 feet at its widest just northwest of the former OSB location, and approximately 50 feet at the southeastern end.”
- 4) **Page 6-7, Section 6.3.2** – In the second to last bullet at the bottom of the page, last sentence it is written that “...or undocumented HFO contaminated backfill HFO that was placed within the EETP itself.” This should be changed to “...or undocumented HFO contaminated backfill that was placed within the EETP itself.”

We trust that this submittal meets your needs. Should you require any additional information and/or clarification, please call me at (707) 557-8224.

Very truly yours,

LENNAR MARE ISLAND, LLC



Neal E. Siler
Environmental Manager

cc: Anthony Megliola, Navy
Marie Dreyer, Navy
Tom Sheaff, LMI
Sheila Roebuck, LMI

