California Regional Water Quality Control Board
San Francisco Bay Region

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N00221_001303
MARE ISLAND
SSIC NO. 5090.3.A

Letter sent via email

Date: March 5, 2009
File No. 2129.2011 (PJ)
GeoTracker No. T0609560708

Department of the Navy
BRAC Program Management Office
Attn: Mr. Michael Bloom
1455 Frazee Road, Suite 900
San Diego, CA 92108-4301
michael.s.bloom@navy.mil

SUBJECT: Comments on the *Draft Engineering Evaluation/Cost Analysis/Interim Remedial Action Plan, Building 742 Former Degreasing Plant, Investigation Area C2,* Former Mare Island Naval Shipyard, Vallejo, California, dated December 1, 2008

Dear Mr. Bloom:

Thank you for providing the Water Board with the Draft Engineering Evaluation/Cost Analysis/Interim Remedial Action Plan, Building 742 Former Degreasing Plant, Investigation Area C2, dated December 1, 2008. Water Board staff has reviewed the above-reference document and have the following comments.

GENERAL COMMENTS

1. While the Water Board understands that this Draft Engineering Evaluation/Cost Analysis/Interim Remedial Action Plan (Draft EE/CA/IRAP) addresses the removal of soil and treatment of the groundwater surface, impacted groundwater at this site has not been fully delineated laterally or vertically.

   In addition to the proposed groundwater monitoring wells located southeast of the stormwater line and upgradient of the former degreasing plant, additional groundwater monitoring wells located between the site and Mare Island Strait may be necessary to assess migration of impacted groundwater to Mare Island Strait.

   Due to the historical use of degreasers at the site, there is a high potential of volatile organic compound (VOC) impacts to deep soil and groundwater. Pending review of the groundwater monitoring well construction logs (see Specific Comment # 3); additional soil borings, grab groundwater samples, or monitoring wells may be necessary to assess VOC impacts to deep soil and groundwater.

2. As presented in Section 2.1.7.2 and on Figure 2-6, local groundwater flow apprears to be towards the north/northwest, while regional groundwater flow is to the northeast. Based on Figure 2-6, the groundwater elevation in monitoring well D1C85W03 is causing the

groundwater contour lines to show groundwater flowing to the northwest. In addition, it appears that monitoring well D1C85W03 may be constructed within the backfill of the stormwater line (see Specific Comment #3). In order to determine if the groundwater levels reported are representative, please evaluate the local groundwater flow, omitting data from monitoring well D1C85W03 and including other data from other surrounding monitoring wells (data is available from Lennar Mare Island).

3. The Water Board disagrees with the conclusion that "plugging of the manholes would likely limit any contaminant migration to the strait and affecting localized groundwater or stormwater flow", as presented in Section 2.1.7.2. While plugging of the manholes would indeed limit contaminant migration from within the stormwater lines, it likely would have no affect on contaminant migration within the backfill of the utility lines.
4. Based on literature available from Regenesis (the maker of ORC-Advanced®), this product provides a "long-term source of oxygen to the subsurface (up to 12 months)". The proposal of conducting one year (four quarters) of groundwater monitoring is inadequate. The first year of groundwater monitoring only would provide data to assess the initial biodegradation of contaminants. Continued groundwater monitoring (i.e. rebound monitoring) will be required to assess the long-term efficacy and success of this proposed groundwater remedial action.
5. Based on analytical results presented in Appendix A, Table A-3, total petroleum hydrocarbons as gasoline (TPHg) have been detected in grab and monitoring well groundwater samples. Analysis for TPHg should be included in the baseline and remedy performance groundwater monitoring. In addition, please include groundwater TPHg results in the Statistical Summary presented in Table 2-8 and on Figure 2-11.
6. During remedial excavations, any free product encountered should be removed to the maximum extent practicable.
7. All references to the Water Board's environmental screening limits (ESLs) should be changed to reflect the Revised version of the Interim Final (May 2008). In addition, update all tables and figures to use current ESLs.

SPECIFIC COMMENTS

1. **Section 2.2.7.2, Page 2-15** – There is a reference to Section 2.2.7.3 containing a discussion of elevated concentrations of VOCs in grab groundwater samples. Section 2.2.7.3 discusses soil sampling results. Please resolve this discrepancy.
2. **Section 7.0, Page 7-2** – The first bulleted item indicates that groundwater monitoring well D1C85W01 will be destroyed prior to remedial excavations. Based on Figure 5-1, it appears that groundwater monitoring well D1C85W02 also is located with the proposed limits of excavation. This well should also be destroyed prior to remedial excavations. Monitoring well destruction permits must be obtained from the County of Solano prior to well destruction.

3. Provide well construction logs for groundwater monitoring wells D1C85W01, D1C85W02, and D1C85W03. In addition, please provide information regarding the depth of stormwater lines at the location adjacent to the monitoring wells.
4. On all figures, report "not detected" concentrations (i.e. ND) as a "less than reporting limit" value (i.e. <0.05).
5. **Figure 2-8** – The ESL for chlorobenzene is 25 micrograms per liter (µg/L), not 50 µg/L. Revise locations where chlorobenzene concentrations have exceeded the ESL.
6. **Figure 5-1** – Please clarify the difference between the graphics showing the "Proposed Excavation Areas" and the "Proposed Limits of Excavation".
7. **Figure 6-1** – Show the utility lines (two stormwater, one Industrial Wastewater) that should appear in this cross-section.
8. **Appendix A** – Analytical results for soil samples indicated that duplicate samples were collected at location D1C85GB006. The analytical results for the duplicate samples were not considered in the preparation of figures or tables. Since the results of duplicate samples are valid data, please use the greater of the results from the original sample or its duplicate. Tables 2-6 and 2-7, and Figures 2-13 and 2-14 should be amended to reflect the higher concentrations of TPH-d and TPH-m detected in the duplicate samples.

Please contact me at (510) 622-2756 or pjorgensen@waterboards.ca.gov if you have any questions.

Sincerely,

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Engineering Geologist

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