California Regional Water Quality Control Board
San Francisco Bay Region

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Department of the Navy
Base Realignment and Closure Program Management Office West
ATTN: Thomas L. Macchiarella
1455 Frazee Road, Suite 900
San Diego, CA 92108-4310

Subject: Comments on the Draft Feasibility Study Report for IR Site 2, West Beach Landfill and Wetlands, Alameda Point

Dear Mr. Macchiarella:

Upon review of the *Draft Feasibility Study Report for IR Site 2, West Beach Landfill and Wetlands, Alameda Point* dated September 2006 (Draft FS Report), we have the following comments:

General Comments:

1. Proposed remedial activities will potentially impact wetlands (North Pond and South Pond) at IR Site 2. Since the anticipated future land use is a wildlife refuge, preserving and restoring wetland functions and values should be an important consideration. Our concerns include the following:
    - A jurisdictional determination should be obtained from the Army Corps of Engineers (Corps) to verify the extent of wetland habitat and determine whether the South Pond is hydrologically connected via surface water to the North Pond. If the South Pond is determined to be connected to the North Pond, any impacts to the South Pond will potentially impact San Francisco Bay and will need to be considered in risk evaluations.
    - Regardless of whether the wetland ponds fall under Corps jurisdiction, they are regulated by the Water Board. The Navy needs to demonstrate that avoidance and minimization measures were implemented to the maximum extent practicable to prevent impacts to wetlands. Any impacts to wetlands that cannot be avoided or minimized, such as the placement of soil cover, will require mitigation and should be included in the cost estimates.
    - The remedial alternatives analysis should include an evaluation of how each proposed remedial action will influence wetland hydrology and impact wetland functions and values. For example, the placement of an engineered cap over the landfill would result in increased sheet flow to the wetlands and lead to altered wetland functions and values.

- The Navy's preferred soil remedy will leave contamination in place, representing a continuous source of contamination to the wetlands. According to Figure 2-11, the existing slurry wall directs leachate discharged to groundwater towards the North Pond, which is hydrologically connected to San Francisco Bay. Justification should be provided as to why contaminant migration into the wetland, and ultimately San Francsico Bay, is not addressed by the proposed remedies.

2. The Navy's preferred remedy for the landfill is to place a two-foot thick permeable soil cover to protect against the presence of COCs in surface soils. Our concerns with this remedy, include the following:
   - A permeable soil cover will not be protective in the long-term because of the potential for development of preferential flow pathways through dessication cracking, root growth and penetration, and burrowing animals.
   - Specifications of the landfill cover should comply with Title 27 (Section 20950 et seq.) which requires the landfill cover should be a minimum of four feet thick and be impermeable to minimize infiltration of water into waste and the production of leachate. The final cover should also be graded and maintained to prevent ponding and soil erosion.
   - The soil cover should be managed to create enhanced upland habitat for the threatened and endangered bird species with the potential to forage at Site 2.
   - The remediation area does not include locations "in the interior margin [of the landfill]... where COCs are present at concentrations responsible for potentially unacceptable risk". The Navy explains that this exclusion is due to "overall engineering logistics" (Section 5.2.1.2.1.1). Provide a more complete explanation of why this area is not included in the remediation footprint (e.g. explain the engineering logistics involved).

3. The Navy's preferred remedy for groundwater, monitored natural attenuation (MNA), does not protect beneficial uses of groundwater, wetlands within Site 2, and surface water in San Francisco Bay. Based on our concerns listed below, more justification should be provided to support the Navy's preferred remedy. Also, explain why active remediation technologies were not evaluated for groundwater in the FS, particularly for the existing plumes.

   - The Navy should refer to EPA policy guidance to determine if MNA is an appropriate remedy for Site 2.
   - The Navy has not provided a reasonable timeframe for natural attenuation to reduce COCs to acceptable levels. Data should be provided to demonstrate that acceptable concentrations of COCs can be achieved over a reasonable period of time.
   - The evidence does not support the conclusion that natural attenuation is the appropriate remedy for Site 2. The attenuation analysis (Appendix G) was based on calculating an attenuation factor to estimate groundwater COPC concentration,

rather than actual groundwater concentration data. In addition, attenuation-corrected concentrations of copper, nickel, pesticides, SVOCs/PAHs, and PCBs in the first water-bearing zone (FWBZ) exceeded CTR criteria.

- Figure 2-11 shows that the existing slurry wall does not create an adequate inward hydraulic gradient to prevent the migration of contaminants to San Francisco Bay. In addition, contaminants are migrating to the wetlands.
- Landfill waste is located below the water table and continually leaches into groundwater and ultimately San Francisco Bay. The Navy is relying on dilution as a mitigating factor as contaminants migrate into San Francisco Bay. However, we concur with US EPA that impacts to surface water should be evaluated using non-tidally influenced groundwater monitoring wells closest to the shoreline. Also, see previous Water Board correspondence regarding interactions between groundwater and surface water.
- Evidence should be provided to demonstrate that the existing plumes are stable or decreasing over time.
- The remedial alternatives analysis focuses on the FWBZ. However, the attenuation analysis for the second water-bearing zone (SWBZ) shows that the attenuation-corrected concentrations of metals and SVOCs/PAHs exceed CTR criteria. Explain why the proposed remedial alternatives do not address contamination in the SWBZ.

4. Discussions and cost estimates of long-term monitoring throughout the FS assume a period of thirty years. However, no data has been provided to show the length of time needed for natural attenuation to achieve acceptable concentrations of COCs. In addition, a considerable amount of waste will be left in place at the landfill, which will continually discharge leachate to groundwater. Explain why a 30-year monitoring period is expected to be an adequate length of time.

Specific Comments:

1. Section 2.4.7.3: Clarify that the field trapping surveys for the salt marsh harvest mouse were conducted according to USFWS protocols.

2. Section 2.4.7.4: The discussion on plant surveys concludes that no threatened, endangered, or sensitive plant species were found at Site 2. However, Table 2-14 shows that *Lotus formosissimus* (seaside trefoil), a rare species[1] and California Native Plant Society (CNPS) List 4 plant, was observed at Site 2. Plants categorized as CNPS List 4 have limited distribution, and populations may be significant locally. Further, CNPS strongly recommends that List 4 plants be evaluated for consideration during preparation of environmental documents. The locations and distribution of this species should be mapped so that populations will not be impacted by remedial actions.

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[1] Listed as a rare native species on Calflora (www.calflora.org).

3. Section 2.4.7.4: This section states that surveys were conducted to identify threatened, endangered, or sensitive plant species. A discussion should also be included on the potential for occurrence of threatened, endangered, or sensitive plants that were not found during field surveys. Also, provide more information on how many field surveys were conducted and when. For example, were field surveys conducted during the blooming periods of threatened, endangered, or sensitive plants with the potential for occurrence on site?

4. Table 2-14: This table does not specify which species of *Plagiobothrys* was observed at Site 2. Since there are several rare or endangered species in this genus, please verify which species was found.

5. Section 3.0 (Remedial Action Objectives): The third bullet should be revised to the following: "Protect existing beneficial uses of surface water in San Francisco Bay adjacent to the site **and wetlands adjacent to the landfill**, including overall ecological health".

6. Section 5.4.2.6: The fourth paragraph states that Groundwater Alternative 3 has "reasonable technical implementability, but uncertainty related to administrative restrictions". However, the detailed screening of this alternative (Section 5.3.2.3.2.6) states that the technologies involved are "recognized and effective" and the "overall technical and administrative implementability of this alternative would be high". Please revise to resolve the contradictions between these two sections. Also, explain what the administrative restrictions are.

Please contact me at (510) 622-2401 or email AFarres@waterboards.ca.gov if you have any questions regarding these comments. You can also contact Gina Kathuria at (510) 622-2378 or email at GKathuria@waterboards.ca.gov if you need to discuss comments before January 31, 2007.

Sincerely,

Agnes Farres

Agnes Farres
Environmental Scientist

CC (via US Mail and email):

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