Cal/EPA

California Environmental Protection Agency

Integrated Waste Management Board

8800 Cal Center Dr.
Sacramento CA 95826
(916) 255-2200



DEC 2 1996

Mr. Tayseer Mahmoud
California Environmental Protection Agency
Department of Toxic Substances Control
Office of Military Facilities
Southern California Operations
245 W. Broadway, Suite 350
Long Beach, California 90802-4444

Subject: Review of Draft Phase II Feasibility Study Report for Operable Unit 2C - Site 3, Marine Corps Air Station, El Toro, California

Dear Mr. Mahmoud:

We have reviewed the subject document dated October 1996, prepared by Bechtel National, Inc., on behalf of the Department of the Navy. The California Integrated Waste Management Board (Board) staff have reviewed this submittal for conformance with Title 14, California Code of Regulations, Division 7 (14 CCR), Chapter 3, Article 7.8. These regulations consist of potential applicable or relevant and appropriate requirements for the Site 3 Landfill.

Based on our review, we submit the following comments:

General Comments

1. In the event a landfill clean closure or consolidation are to be chosen (this applies to all four landfill sites: 3, 5, 2, and 17) as a part of final landfill closure and if these activities result in either vertical and/or lateral expansion of the remaining landfill units, such expansion must comply with the applicable U.S. E.P.A. Subtitle D regulations regarding bottom liner installation. However, a regional water quality control board (Santa Ana Regional Water Quality Control Board) has the authority to exempt the proposed landfill expansion from bottom landfill liner installation requirement, if the project proponent (U.S. Department of Navy) can demonstrate that the absence of liner poses no increased environmental threat to the ground water quality in the landfill area. The Santa Ana Regional Water Quality Control Board staff should be contacted directly in this matter.

2. If available, information regarding both short term and long term postclosure land use should be taken into consideration when selecting the remediation alternatives applicable to each site. Consistently, the submitted remedial investigation and feasibility study documents have stated that the presumptive remedy approach was chosen for closure of landfill units at El Toro MCAS.

Because of this approach, only a limited site investigation (this applies to all four landfill units) regarding waste characterization, landfill vertical and lateral extent, and landfill gas generation potential has been conducted. Although the gathered information is sufficient to close the landfill units in accordance with the minimum closure standards, it also limits future postclosure land uses for these sites. For example, if an irrigated park or golf course is to be developed on some landfill units, closure requirements may be far more stringent than if the site is to be left as non-irrigated open space (under presumptive remedy approach).

Thus, if a defined postclosure land use exists for any of the landfill units, this end land use should be factored into remediation alternatives. For example, it would be futile to review final closure design involving use of a concrete or asphalt cap when it is already known that a site will be developed into a landscaped and irrigated recreational area (a park or golf course).

Also, certain postclosure land uses may have negative impact on both short-term and long-term longevity of materials chosen for landfill final cover.

Please note that since it was indicated that the postclosure land use for Site 3 is to be a light industrial development, both concrete and asphalt caps remain viable options.

3. A more accurate estimate of waste quantities contained in the landfill should be provided in order to validate the proposed grading plan.

   Also, the text must discuss an action plan for waste removal, underlying soil verification testing, and regrading activities.

4. Since the previously reviewed Remedial Investigation Report did not include an adequate lateral/vertical waste extent investigation, it is unclear how the depths of the landfill gas monitoring probes have been chosen.

5. For the analyses of costs associated with each of the final cover alternatives, it should be clarified that the postclosure maintenance costs are provided on a per year basis.

6. The analyses of the proposed final cover alternatives do not account for soil loss resulting from surface erosion. Specifically, soil loss analyses should be conducted for the proposed final site configuration for alternatives using a soil cover. A commonly used method to evaluate soil losses is the Universal Soil Loss Equation with acceptable soil loss not exceeding two tons per acre per year.

7. Similarly, the drainage system design considered for this project must be supported by appropriate drainage calculations yielding channel sizing and validating energy dissipating features (if present). In addition, the issue of flow capacity of the downstream facilities should be included. Sediment load must be included in channel sizing calculations.

8. When analyzing final cover costs, the costs related to construction of a final cover test pad should be included when applicable.

9. For the alternatives proposing the use of synthetic or geocomposite low permeability materials, the need for a drainage layer should be discussed.

10. It should be noted that if a chosen final cover consists of a monolithic soil cap (Alternatives 3 and 4), in accordance with regulations included in 14 CCR, section 17773 (c), such design shall be submitted and reviewed as an engineered alternative to the prescriptive cover. Please refer to the aforementioned regulation for the specific submittal requirements.

Specific Comments

11. Figure 4-3, Typical Drainage Cross Sections, should include final cover materials on the drainage system cross-sections. Specifically, anchoring points for the synthetic and geocomposite materials and keying locations for earth materials should be shown

12. Section A.4.1.2 cites Article 7.8 of Title 23 CCR, which should be changed to Article 7.8 of Title 14 CCR.

13. Section B.2.3, Landfill Gas Monitoring and Reporting Frequency, states that perimeter landfill gas monitoring will be conducted semiannually for the first five years following landfill closure. In accordance with 14 CCR, section 17783.11, these inspections should be conducted quarterly, at least until the landfill gas situation stabilizes and monitoring results become consistent.

14. Section B.5.1, Landfill Cap Inspection, states that the final cover will be inspected monthly for the first six months after site capping and then semiannually for the next four and one-half years, and annually for the remaining 25 years. Cap inspections should be conducted on a quarterly basis and following major storm events until full site revegetation occurs. Upon site condition stabilization, a lesser frequency may be proposed.

15. Section B.5.2, Drainage System Inspection, should state that the drainage system will be monitored quarterly and after major storm events, until site conditions stabilize; upon approval, a lesser frequency may then be allowed. Also, it should be stated that repairs and maintenance of the drainage system will be conducted prior to the next storm event.

Should you have any questions regarding this matter, please call me at (916) 255-1195.

Sincerely,

Michael B. Wochnick

for Peter M. Janicki
Closure and Remediation South
Permitting and Enforcement Division