



Department of Toxic Substances Control

Incoming
OU-1/2A
10/2/03
AK



Edwin F. Lowry, Director
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Winston H. Hickox
Agency Secretary
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M60050.002943
MCAS EL TORO
SSIC #5090.4

February 21, 2003

Mr. F. Andrew Piszkin
BRAC Environmental Coordinator
Base Realignment and Closure
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DRAFT TECHNICAL MEMORANDUM, GROUNDWATER MODELING, OPERABLE
UNIT (OU) 1 AND OU-2A, FORMER MARINE CORPS AIR STATION (MCAS)
EL TORO

Dear Mr. Piszkin:

The Department of Toxic Substances Control (DTSC) reviewed the subject document, dated January 2003. The report presents the results of modeling conducted for the volatile organic compound (VOC) plume in groundwater at Installation Restoration Program (IRP) Site 18 (OU-1) and IRP Site 24 (OU-2A). The groundwater modeling results will be used to support the design of the groundwater extraction well field that is a part of the remedy documented in the *Final Record of Decision, Operable Unit 1, Site 18 - Regional Volatile Organic Compound Groundwater Plume and Operable Unit 2A, Site 24 - VOC Source Area, Former Marine Corps Air Station, El Toro, California*, dated June 2002 (ROD).

In general, the document is well written and provides the results of the modeling in a detailed and comprehensive manner. DTSC appreciates the overview that was provided to staff during the meeting on January 30, 2003. The presentation and resulting discussion was useful and productive.

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our Web-site at www.dtsc.ca.gov.

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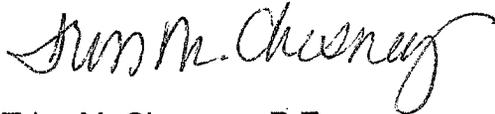
After review of the document, DTSC has the following comments.

1. Please provide figures showing vertical profiles of the contaminant groundwater plumes. These will aid visualization of the downward migration of contamination along the plume center line and groundwater flow between the upper and lower aquifers.
2. Page 2-25, Section 2.2.2, Updated Conditions: Please correct the typographical error in the retardation factor equation; " ρ_h " should be " ρ_b ."
3. Page 2-25, Section 2.2.2, Updated Conditions: Please provide references or justification for the values assumed for porosity (n), fraction of organic carbon (f_{oc}), and bulk density (ρ_b).
4. Page 2-25, Section 2.2.2, Updated Conditions: The organic carbon-water partition coefficient (K_{oc}) used for TCE is 94 liters per kilogram (L/kg). In the table of "Physical Chemical Data for Volatile Organic Compounds" included in the Preliminary Remediation Goals prepared by the United States Environmental Protection Agency (EPA), Region IX, dated October 1, 2002, the value of K_{oc} for TCE is 1.7×10^2 cubic centimeters/gram (cm^3/g) which is approximately 170 L/kg. Please explain the reason for selecting the value of 94 L/kg rather than the EPA Region IX value.
5. Figure 3-11, Computed TCE [trichloroethene] Concentrations in Model Layer 1, and Figure 3-12, Computed TCE Concentrations in Model Layer 2, for Scenario 2: The predicted TCE concentrations after 40 years in Layers 1 and 2 show that the TCE plume continues to migrate in the shallow groundwater unit. Please show and discuss how the remaining plume will be addressed during remediation.
6. Figure 3-14, Computed TCE Concentrations in Model Layer 5 for Scenario 2: The predicted TCE concentrations after 40 years in Layer 5 show that the TCE plume continues to migrate in the principal aquifer. Please show and discuss how the remaining plume will be addressed during remediation.
7. Page 4-1, Section 4, Conclusions and Recommendations: Please include a discussion of the time required to reduce VOC concentrations in the Site 24 shallow groundwater unit and the Site 18 principal aquifer to federal or state cleanup levels specified in the ROD. The discussion should include a comparison to the estimates provided in the Proposed Plan and ROD based on the conceptual design.

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Please provide responses to the comments provided above. If you have any questions, please contact me at (714) 484-5395.

Sincerely,



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