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MCAS EL TORO
SSIC # 5090.3

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February 28, 1992

Mr. Wayne Lee
Environmental Director
Facilities Management Department
MCAS El Toro
Santa Ana, CA 92709-5010

Subject: Proposed Handling/Disposal of Drill Cuttings from IDP Wells Constructed
On Base Property

Dear Mr. Lee:

After reviewing the MCAS El Toro IR Program Waste Management Plan (dated 12/14/91), that you provided, and after briefly discussing the matter with Ken Williams (Santa Ana Regional Water Quality Control Board), the Orange County Water District proposes the following storage, testing, and disposal procedures for drill cuttings that will be generated during the construction of three production wells to be located on the property of the MCAS El Toro. These wells have been designated with the names IDP-1, -2, and -3.

Although all three well sites are on base property, none are located within designated potential hazardous waste sites (other than Site 18, the regional TCE plume area). Groundwater quality has been fairly well determined near the proposed well sites from previous monitoring well data. We understand that the primary contaminants that exist in the vicinity of the well sites are volatile organic compounds (VOCs), including TCE and PCE. As such, we propose to evaluate the disposal alternatives of the drill cuttings based on laboratory analysis of a representative number of soil cuttings samples by EPA Methods 8010 and 8020.

Generation of Drill Cuttings - The wells will be drilled using the reverse circulation drilling method, which uses "clean" water as the drilling fluid. The cuttings and water are "air lifted" from the borehole using an air compressor. The cuttings are separated from the water, which is recirculated back down the borehole, in a large chambered settling tank next to the drill rig. Cuttings are periodically removed from the bottom of the tank using a backhoe without ceasing drilling operations. Approximately 150 cubic yards of soil will be generated at each of the three well sites.

Based on past experience, we anticipate that any VOCs in the sub-100 ppb range, that may be encountered during drilling, will be unavoidably driven off to nondetectable levels due to the air lifting and dilution effects of the water. Regardless of this probable scenario, we propose to take the following reasonable measures to contain and test the drill cuttings in order to determine their disposal fate.

Temporary Storage - We propose to contain the soil on 4-mil plastic sheeting, which will be bermed around the outside edge. The backhoe will carry the cuttings from the settling tank and place them on the sheeting. The large volume of the cuttings to be generated and the limited work space, as well as practical cost considerations, precludes the use of roll-off bins for storage - between 15 and 20 bins would be necessary at each drill site to contain the cuttings.

Soil Sampling and Analysis - At least four separate soil samples will be collected from the cuttings storage areas at incremental intervals during the drilling of each of the three boreholes, for a total of at least twelve samples. The samples will be delivered to a state-certified laboratory and analyzed for volatile petroleum and chlorinated hydrocarbons by EPA Methods 8020 and 8010.

Cuttings Disposal - The disposal method of the soil cuttings will be determined based on the results of the chemical analyses. If the chemical results indicate the cuttings contain either nondetectable levels of VOCs or levels below state drinking water standards, then we propose to dispose of the cuttings by spreading them out evenly in an approved area outside the southern perimeter fence, between well sites IDP-1 and -3. If chemical results indicate any VOCs exceeding state drinking water standards, then the contaminated cuttings will be transported, by a licensed hauler, to a Class I or II waste disposal facility, under the base's EPA ID number (CA 6170023208). Any manifests will be submitted to Sgt. Douglas Childers for signature.

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I trust the above procedures adhere to the spirit and purpose of the Waste Management Plan and will satisfy requirements necessary for your approval. As I am currently preparing the final draft of the Contractor Specifications for the production well drilling (including cuttings handling), I would appreciate receiving any questions or comments on the above proposed work within the next two weeks. My phone number is (714) 378-3260. Thank you for your continued assistance on the Irvine Desalter Project.

Sincerely,



Roy L. Herndon
Project Hydrogeologist

cc: Mr. Ken Williams, RWQCB, Santa Ana
Mr. Manny Alonzo, DTSC, Long Beach
Mr. John Hamill, EPA Region IX
✓ Mr. Andy Piszkin, NAVFAC, San Diego