Department of Toxic Substances Control

Edwin F. Lowry, Director
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December 27, 2000

Mr. Dean Gould
BRAC Environmental Coordinator
Marine Corps Air Station El Toro
Base Realignment and Closure
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DRAFT WORK PLAN, PHASE II REMEDIAL INVESTIGATION, INSTALLATION RESTORATION PROGRAM (IRP) SITE 1, EXPLOSIVE ORDNANCE DISPOSAL (EOD) RANGE, MARINE CORPS AIR STATION (MCAS) EL TORO

Dear Mr. Gould:

The Department of Toxic Substances Control (DTSC) received the above draft Work Plan, dated September 2000. The draft Work Plan describes the objectives and procedures to conduct a Phase II Remedial Investigation (RI) at IRP Site 1. The purpose of the Phase II RI is to further identify and characterize the potential impact to human health and the environment as a result of past operations at Site 1.

DTSC forwarded comments on the draft Work Plan on December 15, 2000. The enclosed comments from the DTSC Human and Ecological Risk Division supplements the previously submitted comments.

Please contact me at (714) 484-5395 if you have any questions.

Sincerely,

Triss M. Chesney

Triss M. Chesney, P.E.
Remedial Project Manager
Southern California Branch
Office of Military Facilities

Enclosure

cc: See next page

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MEMORANDUM

TO: Triss Chesney
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FROM: John P. Christopher, Ph.D., D.A.B.T.
Staff Toxicologist
Human and Ecological Risk Division (HERD)

DATE: 26 December 2000

SUBJECT: MCAS El Toro: Draft Work Plan for Phase II Risk Assessment at Site 1
PCA: 14740 Site: 400055-47

Background

Marine Corps Air Station (MCAS) El Toro is a closed military facility in Orange County. Remedial activities at this base are being directed by the Department of the Navy, Naval Facilities Engineering Command Southwest Division (SWDIV). The Marine Corps used Site 1 as an explosive ordnance disposal (EOD) range. The Navy intends to transfer this parcel to another Federal agency, which will continue to use it as an EOD range. The current document outlines procedures for assessing risks to human and non-human receptors at Site 1.

For your information, in a memorandum dated 25 June 1993, we presented our comments on the Navy's proposed approach to risk assessment at several sites at MCAS El Toro, including Site 1. In memoranda dated 1 February and 10 October 1995, we presented our comments on a generalized work plan for risk assessment procedures for MCAS El Toro. Lastly, in a memorandum dated 28 October 1994 (attached), we presented our recommended approach for screening risk assessments using USEPA Region 9 (Preliminary Remediation Goals (PRG).

Document Reviewed

We reviewed "Draft Work Plan, Phase II Remedial Investigation, IRP Site 1, Explosive Ordnance Disposal Range, Marine Corps Air Station El Toro, California". This document, dated September 2000, was prepared by EARTH TECH, Inc., contractors to SWDIV. HERD received a work request to review this document on 2 October 2000.

General Comments

The work plan is very well written; its objectives and methods are clearly presented. Unfortunately, the work plan is not acceptable. The Navy proposes several methods for eliminating detected chemicals as chemicals of potential concern (COPC) by comparing detected concentrations to various risk-based criteria. We do not allow this. All detected chemicals, except inorganics within the range of ambient conditions, remain in the risk assessment. Screening risk assessments identify sites for more detailed investigation or assessment. We have attached guidance for performing screening assessments using Preliminary Remediation Goals (PRG) published by USEPA Region 9. The Department does not have a published policy for using USEPA's Soil Screening Levels in this context. Although USEPA Region 9 PRGs have no component to allow for protection of groundwater, the Navy has outlined ample methods for determining when and where investigations of soils should be broadened to groundwater at Site 1.

Specific Comments

1. **Sec. 1.1, 3rd §, line 2, p. 1-1:** " . . .human health and the environment;"

2. **Perchlorate, Table 2-3, p. 2-15:** HERD has not reviewed any earlier documents indicating that perchlorate was detected at MCAAS El Toro. In particular, the risk assessment for Operable Unit 1 (OU-1), basewide groundwater, contains no consideration of perchlorate. At the time OU-1 was investigated, detection limits for perchlorate in water were two to three orders of magnitude higher than today. The Navy should consider whether the risk assessment for OU-1 is still adequate, given these detections of perchlorate in the vicinity of Site 1, which lies upgradient from the main plume farther south and west.

3. **Chemical-Specific Values "To Be Considered", Table 3-1, p. 3-9:** This table does not contain any of the toxicity criteria on which risk-based cleanup goals will be derived for Site 1. Therefore, this table should include California EPA's Toxicity Criteria Database and USEPA's Integrated Risk Information System (IRIS). These databases may be accessed on line at, respectively, http://www.oehha.ca.gov/risk/chemicalDB/index.asp and http://www.epa.gov/iris/subst/index.html.

4. **Comparison to Industrial Risk-Based Criteria, Sec. 3.3.3, p. 3-11:** Because the re-use of Site 1 is identified as an EOD range, we concur with the Navy's choice to base risk management decisions at this site primarily on comparisons to risk-based criteria derived from an industrial exposure setting, such as the commercial/industrial PRGs from USEPA Region 9. Because the Navy cannot fully control future re-uses of Site 1, we strongly urge that additional comparisons be made to risk-based criteria based on a residential setting, such as USEPA Region 9's residential PRGs. These comparisons need not be featured in the report, but they should be included for completeness, in case any risk-based restriction of future uses is decided upon.

5. **Soil Screening Levels, Sec. 3.3.3 *et al.*, pp. 3-11 ff.:** We do not recommend the use of USEPA Soil Screening Levels for screening risk assessment. We do recommend using USEPA Region 9 PRGs within the framework of the *Preliminary Endangerment Assessment Guidance Manual* (DTSC, 1994). Guidance for using PRGs in screening risk assessment at Federal facilities is outlined in a memorandum dated 28 October 1994 (attached). In general, we do not permit screening chemicals of potential concern (COPC) against multiple criteria, as the Navy proposes in this section and in Section 3.3.5. Screening risk assessments identify sites where further analysis or investigation should take place. Screening risk assessments are not to be used for eliminating detected chemicals as COPC. DTSC allows elimination of inorganic chemicals within the range of ambient conditions. All other detected chemicals must be included in the risk assessment.

   We recognize that USEPA Soil Screening Levels include considerations of protecting against migration of contaminants to groundwater. We believe that the Navy's plans for characterizing Site 1 will be generate adequate data for determining if contamination in the upper 10 ft of soil presents potential threats to groundwater.

6. **Chemicals with No Published Criteria, Sec. 3.3.5, p. 3-15:** The screening risk assessment should include estimates of the toxic effects of exposure to all detected chemicals. If a detected chemical has no published toxicity criterion, the Navy should contact toxicologists of DTSC and USEPA Region 9 to agree on a suitable strategy for assessment. Oftentimes, we have decided on surrogate chemicals, similar in structure and/or toxicity. We have used this procedure at several other bases where breakdown products of nitroaromatic explosive materials were detected.

Conclusions and Recommendations

The work plan is not acceptable. The Navy should build its screening risk assessment around PRGs, not Soil Screening Levels. The Navy should follow DTSC guidance for screening risk assessment at Site 1, as they have at hundreds of other sites in California.

Reviewed by: Michael J. Wade, Ph.D., D.A.B.T.
Senior Toxicologist, HERD

cc: Dr. J. Paull, USEPA Region IX

Attachment