



Department of Toxic Substances Control

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ALAMEDA POINT
SSIC NO. 5090.3



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Secretary for
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October 31, 2003

Ms. Glenna Clark
Department of Navy
Southwest Division
Naval Facilities Engineering Command
1230 Columbia Street, Suite 1100
San Diego, CA 92101

DRAFT WORKPLAN, FULL-SCALE IN-SITU CHEMICAL OXIDATION AT INSTALLATION RESTORATION SITES 9 AND 16, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Dear Ms. Clark:

Attached please find Part III of our comments dated October 8, 2003 regarding the above referenced site. Should you have any questions, please contact me at (510) 540-3767.

Sincerely,

Marcia G. Liao

Marcia Liao, Ph.D., CHMM
Project Manager
Office of Military Facilities

Enclosure



Ms. Clark
October 31, 2003
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cc: Michael McClelland, SWDiv
Andrew Dick, SWDiv
Mark Ripperda, EPA
Anna-Marie Cook, EPA
Judy Huang, RWQCB
Elizabeth Johnson, City of Alameda
Peter Russel, Northgate Environmental
Randolph Brandt, LHF
Bert Morgan, RAB Co-Chair
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Department of Toxic Substances Control



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MEMORANDUM

TO: Marcia Liao, Ph.D. CHMM
Hazardous Substances Engineer
Office of Military Facilities

FROM: Michael Kenning, RG
Engineering Geologist
Geologic Services Unit

REVIEWED BY: Mark Vest, CEG
Senior Engineering Geologist
Geologic Services Unit

DATE: October 30, 2003

SUBJECT: REVIEW OF FULL-SCALE IN-SITU CHEMICAL OXIDATION
AT INSTALLATION RESTORATION SITES 9 AND 16,
ALAMEDA POINT, ALAMEDA, CALIFORNIA.

Activity Requested

At your request the Geologic Services Unit (GSU) has reviewed the above document, which is dated August 8, 2003 and was prepared by Shaw Environmental for the U.S. Department of the Navy, Southwest Division, Naval Facilities Engineering Command. Other documents used in this review include the Field Summary Report (FSR) of July 3, 2003 and the Draft CERCLA Sites 9 and 16 Dissolved Phase Report of June 17, 2002.

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General Comments

The work plan was prepared to facilitate a proposed full-scale in-situ chemical oxidation (ISCO) tests for dissolved-phase chlorinated and aromatic hydrocarbons at Installation Restoration (IR) Sites 9 and 16. GSU has the following comments on the work plan.

A. The first bullet on page 1-2 of the draft work states that the full-scale tests at IR Sites 9 and 16 will evaluate the nature and extent of dissolved-phase plumes and will define the plumes at Sites 9 and 16. The nature and extent of groundwater and soil contamination should be known and the data presented to DTSC before the start up of the full-scale ISCO.

B. GSU does not believe the proposed six CPT and groundwater grab samples at Site 9 will determine the extent of contamination. The grab groundwater samples at Site 9 are proposed to be no deeper than 15 feet. The proposed maximum sampling depths at Site 16 are 40 feet, which may or may not determine the extent of contamination. The following are GSU's concerns:

1. Results from the CT059 hydropunch sampling have not been provided in Table 2.
2. Figure 6, plume map of MTBE. The depth of MTBE contamination is not known below well MW410-2 (screened 5 -15 ft below ground surface (bgs)) in which MTBE was detected at 20 ug/l. The deeper well adjacent well, D09-01 (screened 50 – 60 ft bgs) was not sampled.
3. Figure 9, plume map of 1,1-Dichloroethane (DCA). The western limit of the 1,1-DCA plume has not been defined in the Merritt sand. 1,1-DCA was detected at 30 ft bgs in borings S09-DGS-DP11 and 12.
4. Figure 11, plume map of vinyl chloride. The vertical extent has not been determined southeast of Building 410. A grab groundwater sample collected in September, 1994 had vinyl chloride concentrations at 220 ug/l at a depth of 27-30 ft bgs in DHP-S09-10.
5. Site 16 area, figures 12 through 15. Currently, the vertical extent has not been determined in the area surrounding MWC2-2. Grab groundwater samples from S16-DGS-19 at 12-14 ft bgs and S16-DGS- 23 at 8 – 10 ft bgs indicate that the groundwater is contaminated at least to these depths. Near the Building 608 area, well 608MJ-MW02, screened from 5 – 15 ft bgs, has PCE and TCE at 611 ug/l and 185 ug/l, respectively. Grab groundwater samples from nearby borings were collected at depths less than 10 ft bgs, so the depth of contamination has not been determined.

6. It is assumed that the plume maps showing iso-concentration contours for the various organic contaminants were based on groundwater samples collected over a short period of time. Contaminant concentrations are expected to change over time, and any map based on samples collected at different times can be misleading. There are no dates of sample collection in Tables 2 and 4, which were apparently used to generate these maps.

7. None of the reports reviewed for the in-situ chemical oxidation tests provided contour maps of groundwater flow direction. It is necessary to know the site specific groundwater flow directions before the extent of contamination can be determined. Horizontal and vertical gradient information for Sites 9 and 16 were referenced to a 1997 report. More recent groundwater elevation data measured at different times of the year should have been provided.

8. Detailed subsurface information is necessary before beginning large scale remediation projects. An accepted method of presenting this information is to include the boring logs and cross-sections of the area of interest. However, no site specific cross-sections or boring logs were provided in any of ISCO plans. GSU recommends that all boring logs and updated cross-sections for each site be included.

9. The tabulated groundwater data should include results from all the sampling events for the monitoring wells, including compounds that were ND. Also the tables should include the detection limits for ND results as well as the date of sampling.

10. The work plan states that there are no hydraulic parameter estimates available for Sites 9 and 16. However, aquifer and slug tests were conducted as described in the FSR. Please address this discrepancy. Also, please include actual drawdown data in the aquifer test sections.

If you have any questions, contact me by telephone at (916) 255-3625 or by e-mail at mkenning@dtsc.ca.gov.