STATE OF CALIFORNIA—ENVIRONMENTAL PROTECTION AGENCY

DEPARTMENT OF TOXIC SUBSTANCES CONTROL
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December 2, 1994

Mr. Hubert H. S. Chan
Remedial Project Manager
Western Division
Naval Facilities Engineering Command
BRAC Environmental Program, Code T4A
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DRAFT SITE INVESTIGATION REPORT AND DRAFT FIRST QUARTERLY GROUNDWATER MONITORING REPORT, NAVAL AUXILIARY LANDING FIELD CROWS LANDING, CALIFORNIA

Dear Mr. Chan:

This transmittal constitutes the comments of the Department of Toxic Substances Control, and the Regional Water Quality Control Board, Central Valley Region on the subject reports dated September 8, 1994. Please find enclosures from the respective agencies.

If there are any questions or comments regarding this matter, please contact me at (916) 255-3705.

Sincerely,

Kent Strong

Kent Strong
Project Manager
Office of Military Facilities

Enclosures

cc: Ms. Karen Bessette
Regional Water Quality Control Board
Central Valley Region
3443 Routier Road
Sacramento, California 95827-3098

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ENCLOSURE

DEPARTMENT OF TOXIC SUBSTANCES CONTROL
COMMENTS ON
DRAFT SITE INVESTIGATION REPORT AND DRAFT FIRST QUARTERLY GROUNDWATER MONITORING REPORT
NAVAL AUXILIARY LANDING FIELD, CROWS LANDING

The Department of Toxic Substances Control (Department) received the Draft Site Investigation (DSI) Report and Draft First Quarterly Groundwater Monitoring Report (DQGWMR) on September 23, 1994. The Department has reviewed the reports and has the following comments:

(1) DSI and DQGWMR - As required by California State Law - Business and Professions Code (Professional Engineers Act, Section 6735 and Geologists and Geophysicists Act, Section 7835) the reports should be signed by a California registered geologist and registered civil engineer, as appropriate, indicating their responsibility for geologic and engineering aspects.

(2) DSI - SECTION 5.0 DATA QUALITY ASSESSMENT, page 28: Acceptance of the interpretation of the analytical data is contingent upon whether or not data quality assessment is satisfactory.

(3) DSI - SECTION 6.0 CONCLUSIONS AND RECOMMENDATIONS, pages 30 through 31: The Department agrees with the conclusions and recommendations presented.

   (a) Additional background data is needed to distinguish between surface soil versus subsurface soil characteristics due to agricultural activities.

   (b) Background ground water samples should also be analyzed to evaluate possible impact from organic constituents.

   (c) Metal concentrations in surface soils affected by agricultural activities should be evaluated and potential health risks associated with these metal concentrations should be evaluated.

(4) DQGWMR - The Central Valley Regional Water Quality Control Board has recommended that monthly ground water elevation surveys be performed. In addition, the Department recommends the development of monthly ground water elevation contour maps. The contour maps can be presented in the quarterly ground water monitoring reports.

(5) DQGWMR - TABLE 2, GROUNDWATER SAMPLE SUMMARY, Field Quality Control (QC) Samples, Field Duplicates: Midpoints of well MW109-5 and MW117-3 screens are presented which fall outside

of the screened intervals of the two wells. The table should be checked for typographical errors.

(6) DQGWMR - SECTION 3.1 GROUNDWATER ELEVATION, page 7: The report refers to ground water mounding in the vicinity of UST sites 109 and 117. FIGURE 2, WATER TABLE ELEVATION MAP, page 10, does not depict this mounding. The Department recommends that ground water mounding be depicted on FIGURE 2.

(7) DQGWMR - SECTION 5.0 SUMMARY AND RECOMMENDATIONS, page 21 through 22: The Department agrees with the recommendations presented.

(a) Standardize the ground water sampling process to filter and preserve samples collected in the field.

(b) Add the analyses for volatile organic compounds (VOCs), Extractable total petroleum hydrocarbons (TPH-E), and purgeable total petroleum hydrocarbons (TPH-P) to the background ground water sampling efforts.

(c) Evaluate if leaded gasoline was stored in UST 117, by analyzing the adjacent ground water monitoring wells for tetraethyl lead.

STATE OF CALIFORNIA - Environmental Protection Agency PETE WILSON, Governor
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18 November 1994

Mr. Kent Strong
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DRAFT FIRST QUARTERLY GROUNDWATER MONITORING REPORT AND DRAFT SITE INVESTIGATION REPORT, NAVAL AUXILIARY LANDING FIELD (NALF) CROWS LANDING, STANISLAUS COUNTY

We have reviewed the Draft First Quarterly Groundwater Monitoring Report (Quarterly Report) and the Draft Site Investigation Report (SI Report) submitted on 23 September 1994. These reports are well organized and well presented. We concur with the recommendations presented in Section 5.0 of the Quarterly Report and Section 6.0 of the SI Report. We have the following comments and additional recommendations which must be addressed in these reports:

Quarterly Report

1. **Long-Term Ground Water Monitoring Plan.** We are pleased that NALF Crows Landing has initiated a comprehensive ground water monitoring and reporting program. While we agree that the ground water data included in the first annual monitoring report should be used in the development of a long-term ground water monitoring plan (plan) for NALF Crows Landing, it is not necessary to wait until after the fourth quarter monitoring period to complete the plan. The plan should be developed based on all available data to date. The plan should continue to be modified and updated on an ongoing basis, with an annual update being the minimum. The Long-Term Ground Water Monitoring Program Guidance, dated March 1994, should be considered in completing this plan. As you are aware, a copy of this guidance was provided with our 13 April 1994 comment letter on the Site Investigation Draft Final Field Work Plan Addendum.

2. **Replacement Monitor Wells.** As stated in the introduction of the Quarterly Report, the report summarizes data from the first quarterly monitoring period only. The report indicates that previous ground water monitoring results will be described in the annual monitoring report. However, 14 of the 31 existing ground water monitor wells were reported as dry during the first quarter ground water sampling round (Table 1). As a result, limited or no ground water samples were collected at some of the sites during this round of sampling. As discussed in our comments on the Site Investigation Draft Final Field Work Plan Addendum, replacement wells must be installed at sites where contaminants have previously been detected, to further investigate and monitor the lateral and vertical extent of ground water contamination. Therefore, the Quarterly Report must include a historical data summary for

each well reported as dry, a brief discussion of resulting data gaps, and recommendations for future actions, such as installing replacement wells, to address the data gaps. These data, conclusions, and recommendations should also be used as part of the basis for completing a long-term monitoring plan for NALF Crows Landing.

3. **Continued Quarterly Sampling and Analysis.** Further development of the historical water quality data base, to be used in making future remedial action decisions at NALF Crows Landing, is necessary. Until an adequate data base is developed, at least quarterly ground water sampling and analysis must be conducted from all existing monitor wells with sufficient water, and from any newly installed monitor wells at the facility. Constituents and methods of analyses must be in accordance with those set forth in the Quarterly Report. Analyses of dissolved metals (Title 22), general minerals, and general ground water parameters, should also be conducted to characterize ground water at the facility.

4. **Continued Ground Water Level Measurements.** Based on the reported declining ground water levels, and the localized reversals in ground water flow that have been observed at NALF Crows Landing, ground water levels must be measured monthly from the existing monitor wells with sufficient water, and any newly installed wells, for at least one year, to establish a baseline to evaluate future ground water gradients, especially with respect to the seasonal affects due to irrigation practices.

5. **Affects on Ground Water Gradient.** The report states that the apparent localized depression in the water table in upgradient wells may have been due to the operation of nearby irrigation wells, which includes the irrigation supply well located within approximately 500 feet of background monitor well BG-MW-1, during June 1994 (page 7.). The locations of the irrigation supply wells referred to in the Quarterly Report should be shown on Figure 1 of the report. In addition, the annual monitoring report should include a detailed discussion of the affects on ground water flow due to irrigation practices.

6. **Background Ground Water Data Base.** As stated in the Quarterly Report (page 11.), background ground water sample analytical results indicate that concentration for many inorganic constituents are an order of magnitude less in samples from monitor well BG-MW-1 than in samples from monitor wells BG-MW-2 and BG-MW-3. We concur that additional sampling and analyses will be necessary to evaluate background water quality at NALF Crows Landing. The background monitor wells must be sampled at least quarterly for an additional year to further develop the water quality data base as discussed in foregoing comment #3.

7. **Reporting Analytical Results.** As discussed in the Quarterly Report (page 16.), the analytical data in this report are presented as reported by the analytical laboratory and observations or recommendations presented in the report may be modified based on the data validation results. However, it is unclear whether the analytical results and data qualifiers are presented with respect to analytical reporting limits or analytical detection limits. The Quarterly Report, and all other reports for NALF Crows Landing which present analytical laboratory results, must differentiate between "non-detect" and "trace" results. The analytical detection limits must be identified. All data must be reported as either: 1.

numerical concentrations, for results at or above the quantitation limit; 2. "trace" along with detection and quantitation limits, for results which fall between those limits; or 3. "less than [detection limit]", for results which are below the analytical detection limit.

SI Report

1. **Background.** The SI report states that pesticides were analyzed in the soil samples to evaluate whether pesticides detected in soils sampled as part of previous SI activities could result from regional agricultural use unrelated to waste handling or disposal at NALF Crows Landing (page 7.). However, based on the laboratory results presented in Appendix C of the report, it appears that analyses for organochlorine pesticides were performed on only one surface sample from background boring BG-SB-1. We concur that a larger data base for background with respect to pesticides in soil appears to be necessary.

2. **Site 17.** The SI Report indicates that all analytical results from the Site 17 sampling efforts are included in Appendix C (page 20.). However, the analytical results from the soil gas samples do not appear to be included in the SI Report. Although the report states that no compounds were detected in the Site 17 soil gas samples, the analytical results from these samples must be incorporated into the SI Report.

3. **Site 18.** The SI Report states that background metal concentrations in surface soils affected by agricultural activities should be evaluated and compared to the Site 18 soil samples before determining if additional investigation is warranted. We agree that further review of background metals concentrations in soils at NALF Crows Landing are necessary with respect to making decisions regarding additional site investigation activities at this site. However, a cursory review of the inorganic constituent concentration data, as presented in Appendix C, indicates that concentrations for antimony, barium, and lead in Site 18 soil samples are slightly elevated above concentrations for these metals in background surficial soil samples. In addition, in contrast to the discussion of general trends in metals concentrations in Site 18 soil samples (page 27.), for a number of metals, concentrations in the subsurface soil samples, particularly from boring 18-HB-2, are slightly elevated relative to concentrations in the surface soil samples. It may be necessary to analyze additional soil samples from Site 18 for soluble metals concentrations to determine if soils at this site pose a threat to water quality.

4. **Document Title.** We encourage the Navy to include the word "addendum" in the title of this report to clarify that it is not inclusive of data from all SI activities completed at the facility.

If you have any questions concerning these comments, please call me at (916) 255-3065.

Karen G. Bessette

KAREN A. BESSETTE
Project Engineer
KAB:kb