



Department of Toxic Substances Control



Winston H. Hickox
Agency Secretary
California Environmental
Protection Agency

Edwin F. Lowry, Director
700 Heinz Avenue, Suite 200
Berkeley, California 94710-2721

N00236.001934
ALAMEDA POINT
SSIC NO. 5090.3

Gray Davis
Governor

September 5, 2003

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

DRAFT FINAL REMEDIAL INVESTIGATION REPORT, OPERABLE UNIT 6, SITE 26, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Dear Ms. Clark:

The Department of Toxic Substances Control (DTSC) has reviewed the above referenced document dated July 15, 2003. Our comments including those from the Office of Military Facility (OMF) and the Geological Service Unit (GSU) are attached. Comments from the Human and Ecological Risk Assessment Division (HERD) will be forwarded under separate cover hereafter. Should you have any questions, please contact me at 510-540-3767.

Sincerely,

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

enclosure

Ms. Glenna Clark
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cc: Michael McClelland, SWDiv
Andrew Dick, SWDiv
Mark Ripperda, EPA
Judy Huang, RWQCB
Jim Polisini, DTSC
Michael Kenning, DTSC
Elizabeth Johnson, City of Alameda
Peter Russel, Northgate Environmental
Randolph Brandt, LHF
Bert Morgan, RAB Co-Chair
Lea Loizos, Arc Ecology

DTSC COMMENTS
DRAFT FINAL REMEDIAL INVESTIGATION REPORT
SITE 26
ALAMEDA POINT, ALAMEDA, CALIFORNIA

Part I: Comments from Office of Military Facilities (OMF)

Comments #1 through 6, 11, 12, and 18
Potential Areas of Concern

Overall

1. Please expand Table 1-1 to include not only buildings and structures but also conduit lines and open spaces to provide a full picture of past activities at Site 26. Please explain the basis for considering, or not considering, each of the listed features as a potential AOC.

As indicated in our RCRA corrective action comment letters dated December 16, 2002 and April 11, 2003, DTSC considers all buildings, structures, and site features including conduits and open spaces potential AOCs until determined otherwise. The determination can be non-intrusive. Some form of visual inspection by qualified environmental personnel is, however, necessary.

2. Figures in Appendix L are helpful to the readers in comprehending the site investigation in the lateral aspect. We appreciate the effort and recommend that sampling depths be added on the maps to further allow the readers comprehend the site investigation in the vertical aspect.

Inside the Building

3. Sample location maps including Figures 3-2 and L-19 through L-25 show no or limited sampling inside any of the buildings. It is our opinion that the areas inside the building are potential AOCs until determined otherwise.

Open Spaces

4. Extensive stains were observed on historical aerial photographs taken for the open spaces west of the hangar buildings according to Phase I Environmental Baseline Survey (EBS) reports (October 1994, ERM-West, Inc.). Although numerous samples had been placed at the west side of the hangar buildings, it is unclear if the sampling had adequately addressed the historical stains. Please provide pertinent aerial photographs to help clarify this.
5. According to the figures in Appendix L, the open spaces around Building 24 have been investigated for PAHs, metals, pesticides/PCBs, and SVOCs, but not for VOCs. It is unclear why VOCs have not been investigated. Please explain.

Sewer Systems

6. The sewer segments located at and north of Building 23 were subject to a time-critical removal action (TCRA) between 1996 and 1997 and follow-up studies in 2001 and 2002, respectively. To determine if the sewer system is still a potential AOC, please clarify for the following:
 - Were any confirmation samples collected following the removal? How was the data quality (see Comment #14 below)?
 - Has the agency concurred with the TCRA close-out report? What about the 2001 and 2002 follow-up study reports?
 - The 2001 study recommends that two segments near Building 20 be repaired to prevent infiltration of contaminated groundwater. What is the status of this repair?
 7. The sewer segments south of Building 23 are still to be investigated under the Navy's radiological program and should therefore still be considered an AOC.
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Fuel Lines

8. According to the RI, the fueling manifold system west of Buildings 20 through 23 was closed-in-place between 2000 and 2002 and the fuel line segments south of Building 23 was removed in 1998. To determine that the fuel lines – with the exception of the east-west segment south of Building 23 -- are no longer potential AOCs, please confirm that both the 1998 and 2000/2002 closures are part of the closure report that received concurrence from the Regional Water Quality Control Board (RWQCB) on April 9, 2003. Also, please make sure the concurrence is discussed in the RI (Currently the said concurrence appears in the Response to Comments (RTC), but not in the RI itself).

Comments # 8 through 11 and 16 Chemicals of Interests (COIs)

9. Section 3.5 states that PRGS and MCLs are used as the comparison criteria for identifying COIs in the assessment of the magnitude and extent of contamination at Site 26. It does not, however, explain how the criteria are being implemented. For example, it does not explain how frequently a contaminant has to be detected above the comparison criteria in order to be named a COI. It also does not explain what will happen if the detection limit of a contaminant is higher than the comparison criteria. Please elaborate.

10. To help determine if high detection limit impedes the detection of contaminants, DTSC recommends adding the column "Detection Limits Exceeding Criteria" in Table 3-7.
 11. Figure L-26 indicates that the VOC sampling during the EBS was focused at the fuel line areas and the data were of questionable quality (see page 3-15). The soil gas sampling conducted during the RI focused on areas around Building 20 and south of Building 23. Groundwater VOC sampling, again, focused at areas around Buildings 20 and 23. With such limited VOC sampling, it is difficult to conclude that VOCs are not chemicals of interest for Site 26 and that the areas outside of those surrounding Buildings 20 and 23 are not impacted by VOCs.

It is our opinion that VOCs are potential COIs for Site 26 and additional sampling efforts may be necessary to prove it otherwise.
 12. Appendix H appears to have left out some data corresponding with sampling locations shown in Appendix L. For example, no groundwater data can be found in Appendix H for groundwater VOC samples collected between Buildings 21 and 22 and southwest of Building 24 (see Figure L-28). Please resolve the discrepancy.
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Comment #16
Previous Studies

13. Since data used to interpret the nature and extent of contamination at Site 26 come from not just the 2002 RI but also previous studies including the EBS and fuel line removal and closure. Please expand Section 3.4 to discuss data evaluation, data validation and detection limits for all data, i.e. not just the 2002 RI data but also data from previous studies.
14. Please explain why data from the sewer removal were not used in the evaluation of the nature and extent of contamination. Was it due to poor data quality? If so, the sewer system may warrant further investigation.

Comment #14
Fate and Transport

15. DTSC agrees that at the estimated flow rate groundwater will take more than 30 years to reach the Bay or harbor. But whether natural attenuation during that time will be sufficient to reduce the contaminant concentration to acceptable levels is still a question that will need to be answered. Please refer to DTSC Part II comments for details.

Comment #15
Risk Assessment

16. Please discuss the quality of Site 26 EBS metal data and the criteria used in determining their suitability to be used in risk assessment. Figure L-21 shows that more than 80 EBS samples collected at Site 26 were tested for cadmium but over half of them reported a detection limit of 25,000 ug/kg, which is 15 times the Cal-modified PRG for residential soil. This indicates problems with EBS metal data and risk assessment findings could have been impacted as a result.

Comment #17
Conclusions and Recommendations; Executive Summary

17. The Navy recommends cleanup of the fuel hydrocarbon spill southwest of Building 23 under the Alameda total petroleum hydrocarbon (TPH) program. However, given the close proximity of the TPH plume to the east-west sewer segment south of Building 23, it is unclear if Ra-226 from the sewer system could have impacted the hydrocarbon spill area and the TPH and radionuclide plumes are commingled. Please discuss this possibility and any contingency plan, if appropriate.
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18. For clarity and completeness, please make sure the following are reflected in both the conclusion section and the executive summary section:
 - Sewer segments south of Building 23 are to be investigated and cleaned up under the Navy's radiological program;
 - Northeast corner of Site 26 is currently being investigated and remediated as part of CAA-6 under the Navy's TPH program.

Specific Comments #1 and 2

19. Page ES-4, paragraph 2 of the RI states, "...The Navy has also conducted... Resource Conservation and Recovery Act facility assessments". Please note that it was DTSC, not the Navy, which conducted the RFA.

Additional Comments
Sewer Systems

20. As stated in Section 1.3.4.4, the storm sewer system at Alameda historically received industrial discharges in addition to storm runoff. Please explain why it is appropriate to show the storm sewer and industrial waste as separate sewer systems (e.g. Figure 1-3).
21. Page 1-15, last paragraph states, "Contaminants disposed of this way would have entered the storm sewer, industrial waste, or sanitary sewer drainage systems".

Please clarify if such combined sewer applies to only sewers south of Building 23 or if it applies to all sewer segments across Site 26.

22. Please locate the sanitary sewer system in Figure 1-3.

Part II: Comments from Geological Services Unit (GSU)

Please refer to the attached memo, dated September 3, 2003, prepared by Mr. Michael Kenning.

Part III: Comments from Human and Ecological Risk Assessment Division (HERD)
Dr. Jim Polisini' comments will be forwarded in a separate cover hereafter.



Department of Toxic Substances Control



Winston H. Hickox
Agency Secretary
California Environmental
Protection Agency

Edwin F. Lowry, Director
8800 Cal Center Drive
Sacramento, California 95826-3200

Gray Davis
Governor

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: Michael O. Finch, RG
Senior Engineering Geologist
Geologic Services Unit

DATE: September 3, 2003

SUBJECT: REVIEW OF THE DRAFT FINAL REMEDIAL INVESTIGATION REPORT IR SITE 26, WESTERN HANGAR ZONE, ALAMEDA POINT, ALAMEDA, CALIFORNIA.

Activity Requested

At your request GSU (Geologic Services Unit) has reviewed sections of the above document to determine if earlier comments to the previously released draft document have been adequately addressed. The July, 2003, document was prepared by Bechtel Environmental, Inc. for the U.S. Department of the Navy, Southwest Division, Naval Facilities Engineering Command.

General Comments

In general, there are disagreements concerning the degree of site characterization necessary to achieve cleanup goals. The Navy's responses are often not adequate. For example, in response to OMF's General Comment 3, which requested the Navy to explain why more samples were not collected inside the buildings where stains were observed, the Navy stated that the EBS (Environmental Baseline Survey) had identified

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no other sampling within the buildings as necessary and none were proposed in the workplan.

This reply is unsatisfactory from the perspective of protecting human health and the environment. It is more reasonable and prudent to assume that hazardous substances that may have been released from inside the buildings have actually migrated to the subsurface environment as they have at many of other former military sites that have been in operation for many decades. To the extent possible, the locations must be identified and characterized so that an appropriated remedy can be selected.

The following are GSU's reply to the Navy's comments on our review of the draft RI:

General Comment 1. The Navy states that groundwater flow direction was evaluated during the RI by installation of temporary well points. No contour map of these temporary well points was provided. GSU recommends that the data on these temporary well points be provided. In GSU's opinion, a one-time evaluation of groundwater flow direction is not adequate to characterize flow directions near Building 20 because of possible seasonal fluctuations in groundwater flow direction and gradient. In addition, local, site level groundwater elevations may be influenced by nearby remedial activities. The regional groundwater map presented in Figure 2-7 is useful as a general base-wide indication of groundwater elevations in the first water bearing zone, but is insufficiently detailed to provide the site-specific depiction of groundwater flow directions. GSU still believes monitoring wells are needed for both to determine groundwater gradient and direction and for monitoring groundwater contaminants.

The extent to which Building 20 is cross-gradient can be determined after monitoring wells are installed. It would be useful to know whether or not the apparently discredited soil borings collected inside Building 20 were non-detects for VOCs (Volatile Organic Compounds).

The Navy believes the Bay Mud is an effective barrier to downward migration of contaminants. GSU recommends that this hypothesis be tested with investigations to determine how far contamination has spread. Although the presently known extent and concentration of contamination does not support the presence of DNAPLs (Dense Non-Aqueous Phase Liquids), the aircraft hangers have existed for several decades and if a sufficiently large volume of contamination had been released, then DNAPLS may be present at some depth.

General Comment 2. If radiological wastes were the only contaminants examined in the storm sewer investigation, it may be necessary to investigate other contaminants that may have been discharged into the sewer or were transported along the bedding

material beneath the storm sewers.

General Comment 3. Response noted.

General Comment 4. GSU still believes that it is prudent to analyze for perchlorate in groundwater and possibly in soil as well. Just because the EBS and regulatory agencies did not previously specify that perchlorate be analyzed is an insufficient reason to not analyze for it now. Additional information about the distribution and potential hazards of Perchlorate (and other compounds) have been discovered in the last few years at former military sites and it is the responsibility of the responsible parties to determine the presence or absence of these compounds.

General Comment 5. GSU agrees that benzene contamination is adequately contained in the horizontal dimension, but according to Figure 3-6, isopropylbenzene is not contained. The Navy believes the Bay Mud to be an effective barrier. GSU is not as confident because of all the unknowns – quantity of contaminants released from the broken pipeline, the wash-down area, (and possibly from other sources), actual thickness of the Bay Muds at Site 26, and the occurrence and pervasiveness of sand stringers, shells, worm burrows, and plant roots. GSU recommends further investigations to determine the vertical extent of contamination.

General Comment 6. Response noted. In general it is not a good idea to represent with iso-concentration contours data that has been collected at different intervals of time. Iso-concentration contours are commonly understood to represent conditions at a discrete moment in time.

General Comment 7. Response noted.

General Comment 8. Response noted.

Conclusion

CVOC (Chlorinated Volatile Organic Compound) contamination south of Building 20 is generally contained in the horizontal direction, but not in the vertical direction. Also, little information was provided on hazardous substances stored in Building 20. It may be appropriate to investigate the soil and groundwater beneath this building. Given the current concentrations in the first water bearing zone and the current analyte list, it is unlikely that contamination from the wash-down area would reach the bay. However, monitoring wells to track the CVOCs (including 1,4-Dioxane and perchlorate) are recommended for the Building 20 area as well as an investigation to determine if the bay muds and Merrit sands have been impacted by site operations.

Marcia Liao
September 3, 2003
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The horizontal extent of contamination for VOCs near Building 23 has been determined for the current analytes except for isopropylbenzene, has been found in the two upgradient wells (26SW01 and 26SW02). GSU recommends that the extent of this compound be determined. Future groundwater monitoring should include analyzing for perchlorate. As with Building 20, the vertical extent of contamination has not been determined.

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