Department of Toxic Substances Control

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Agency Secretary
Cal/EPA

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700 Heinz Avenue, Suite 200
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Arnold
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October 18, 2004

Mr. Thomas L. Macchiarella
Southwest Division Naval Facilities Engineering Command
Attn: Code 06CA.TM
1220 Pacific Highway
San Diego, CA 92132-5190

DRAFT REMEDIAL INVESTIGATION REPORT, OU-1, IR SITES 6, 7, 8, AND 16, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Dear Mr. Macchiarella:

Attached are the comments prepared by the Human Health and Ecological Risk Division (HERD) of the Department of Toxic Substances Control (DTSC) concerning the draft Remedial Investigation (RI) report for OU-1 dated February 13, 2004. Please review and incorporate the comments in any future risk assessment conducted for above referenced sites. Should you have any questions, please contact me at 510-540-3767 or mliao@dtsc.ca.gov.

Sincerely,

Marcia Y. Liao

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

Enclosure

Department of Toxic Substance Control
California EPA

1011 N. Grandview Avenue
Glendale, California 91201

Terry Tamminen
Agency Secretary

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TO: Marcia Liao, DTSC Project Manager
OMF Berkeley Office
700 Heinz Street, Second Floor
Berkeley, CA 94704

FROM: James M. Polisini, Ph.D.
Staff Toxicologist, HERD
1011 North Grandview Avenue
Glendale, CA 91201

DATE: July 23, 2004

SUBJECT: NAVAL AIR STATION ALAMEDA (ALAMEDA POINT) DRAFT OU-1 REMEDIAL INVESTIGATION REPORT, SITES 6,7,8 AND 16
[SITE 201209-18 PCA 18040 H:56]

BACKGROUND

HERD reviewed the document titled *Draft OU-1 Remedial Investigation Report, Sites 6, 7, 8, and 16, Alameda Point, Volume I of III,* dated February 13, 2004. This draft Remedial Investigation (RI) Report was prepared by Tetra Tech EM, Inc. of San Diego, California.

NAS Alameda was an active naval facility from 1940 to 1997. Operations included aircraft, engine, gun and avionics maintenance; fueling activities; and metal plating, stripping and painting. An unconfined landfill exists on the margin of San Francisco Bay in the western bayside area of NAS Alameda. In addition to skeet range activities, linked storm water and industrial wastewater lines discharged to the Seaplane Lagoon in the Northwest and Northeast corners, as well as the Oakland Inner Harbor Channel side of NAS Alameda.

Site 6 is approximately 600 feet north of the Seaplane Lagoon and approximately 5.6 acres in size. Nearly all of Site 6 is covered with asphalt and concrete, buildings, roads and parking lots. Site 6 is also known as building 41 (Aircraft Intermediate Maintenance Facility) was constructed before 1945 and was used to house seaplanes and to repair aircraft components. Site 6 also includes RCRA units, NAS Alameda generator components, fuel lines, storm drains and sanitary sewer lines.

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COMMENTS ON DRAFT
REMEDIAL INVESTIGATION REPORT
OU-1, IR SITES 6, 7, 8, AND 16

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QUESTIONS MAY BE DIRECTED TO:

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aquatic species and potentially toxic effects. Mammals and avian species including an invertebrate feeding bird, which typically generates ecologically protective Hazard Quotients (HQs) in the Ecological Risk Assessment (ERA), are included as an RS. This comment is meant for the DTSC Project Manager and no reply is required from the Navy or Navy contractors.

2. The Navy admits that "One of the consequences of the operations that occurred at Alameda Point during its years of operation was the release of contamination to soil, sediments, and water" (Volume I, Section 3.1, page 3-1). This comment is meant for the DTSC Project Manager and no reply is required from the Navy or Navy contractors.

3. The human exposure to emissions of Volatile Organic Compounds (VOCs) from ground water is indicated as incomplete (Volume I, Section 3, Figure 3-1) for the construction worker scenario. Given the shallow depth of ground water at NAS Alameda, this pathway should be listed as potentially complete even if not quantitatively evaluated. Do GROUNDWATER FOR WORKERS.

4. HERD reviewed the summarized Assessment Endpoints and Measurement Endpoints for the ERA (Volume I, Section 3, Table 3-1) and agree that they are appropriate for evaluation of the potential ecological impact based on the CSM. This comment is meant for the DTSC Project Manager and no reply is required from the Navy or Navy contractors.

5. As a point of historical record, HERD never agreed to the polycyclic aromatic hydrocarbon (PAH) data set for areas designated as pink, blue and yellow as indicative of an 'ambient' soil concentration for PAHs in these areas, especially where some of the PAHs were detected in one of 57 samples. Special evaluation of estimates of incremental cancer risk or non-cancer hazard should be conducted by the risk manager for sites where PAHs are eliminated based on the pink, blue or yellow PAH concentrations. This comment is meant for the DTSC Project Manager and no reply is required from the Navy or Navy contractors.

6. The proposed benzo(a)pyrene (BaP) Toxicity Equivalency Factors (TEFs) proposed (Section 3.5.3, page 3-17) are those listed in the U.S. EPA Preliminary Remediation Goal (PRG) table, with the exception of the 'Cal modified' TEFs for benzo(k)fluoranthene and chrysene. The most conservative TEF, whether listed as 'Cal modified' in the PRG table or as released by the CalEPA Office of Environmental Health Hazard Assessment (OEHHA) should be used in evaluating incremental cancer risk and or non-cancer hazard.

7. The PAH 'screening level' for soil which was purportedly agreed upon between the Navy and agencies of 0.62 mg/kg (Section 3.5.3, page 3-17) represents an incremental cancer risk of $1x10^{-05}$. This comment is meant for the DTSC Project Manager and no response is required from the Navy or Navy contractors.

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consumer (e.g., soil invertebrates) when the Navy has performed co-located soil, plant, invertebrate and vertebrate tissue analyses at Mare Island Naval Shipyard and Hunters Point Shipyard. These direct measurements, while subject to some deficiencies, would replace modeled values for trophic transfer with measured values of the ratio between different trophic levels with the same soil concentration.

15. HERD is unaware of any study performed at NAS Alameda which proposed development of 'ambient' concentrations of pesticides (Section 3.5.6.5, page 36). Please provide a reference to the investigation which was the basis for any such values to which HERD and/or DTSC agreed.

16. The Representative Species and the Measurement Endpoints selected (Table 4-21, page 1 of 1) appear protective of ecological receptors based on the CSM. This comment is meant for the DTSC Project Manager and no response is required from the Navy or Navy contractors.

17. HERD attempted, but was unable, to locate in the Draft RI report the document which is the basis for the division of PAHs to support the use of benzo(a)pyrene (BaP) for PAHs less than 200 'atomic units' and naphthalene for those PAHs greater than 200 'atomic units'. Please provide the rationale or scientific reference for this distinction for ecological receptors (Volume I, Section 4, Table 4-21).

18. The HHRA indicates an incremental cancer risk (ICR) of 4.7×10^{-04} and an Hazard Index (HI) of 8 for groundwater (Table 4-17) at Site 6. Site 6 should obviously proceed to a Feasibility Study (FS) based on these values.

19. Tables for Site 6 (Tables 4-12 through 4-18), as well as other sites, do not appear to sum the incremental cancer risk due to soil exposure and groundwater potential intake. U.S. EPA Guidance and DTSC Guidance require that total incremental cancer risk (e.g., due to soil and groundwater) be evaluated in the RI Report. Please provide a table presenting the incremental cancer risk and the non-cancer hazard summed for both soil and groundwater for all sites in this RI Report where soil and groundwater intakes are separately evaluated.

20. There is no reason to assume that avian species would react differently than mammalian species in terms of systemic exposure and toxic effects that are not related to the difference in reproductive strategies (e.g., egg shell deposition). Mammalian Toxicity Reference Values (TRVs) should be used for avian species where no avian-specific TRVs (e.g., Table 4-21) are available and the toxic endpoint is not related to specific reproductive differences (e.g., calcium metabolism which could reasonably be related to egg shell formation).

21. Even a cursory evaluation of the range of soil concentrations detected, the frequency of detection and the sample location of the maximum concentration (Section 5.4.3.1, page 5-19) indicates the potential COCs and the locations requiring

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must be included in the RI for OU1, particularly as many decisions regarding Further Action are being made on proposed future use.

27. The evaluation of lead in soil at the soil debris area arrives at a 95th percentile protective soil concentration of 299 mg/kg (Section 5.4.5.3, page 5-32) for Site 7. The only method by which HERD could approximate this value was to exclude ingestion of homegrown produce. The 99th percentile of the blood lead distribution in children must be used when developing a proposed Remedial Action Goal. Please obtain the agreement of U.S. EPA Region 9 for the exclusion of this pathway and in the event that U.S. EPA Region 9 staff agree, clearly indicate the exclusion of this pathway in the evaluation of lead in the text of this section together with the revised soil lead concentration based on the 99th percentile blood lead of 10 µg/dl for non-pica children.

28. Please move the text section discussing lead to the end of the section discussing the risk and hazard estimates for soil (Section 5.4.5.3, page 5-31), rather than placing it following the discussion of risk and hazard estimates for groundwater.

29. The decision for No Further Action (NFA) for site 7 ecological receptors is based on the small size and low probability that the Site 7 soil debris area would support ecological habitat (Section 5.5.2.2, page 5-45). A deed restriction should be implemented to maintain the current use and limit exposure to Site 7 soils.

30. The statement that lack of VOC data in soil from the surface to 2 feet bgs is not perceived as a data gap (Section 6.3.1, page 6-10) due to rapid volatilization is not applicable to human exposure via indoor air. Underestimation of the indoor air exposure pathway will reduce the potential total intake in Site 8 scenarios by an unknown amount dependent on the VOC soil concentration in the zero to 4 feet bgs and zero to 8 feet bgs samples. This comment is meant for the DTSC Project Manager and no response is required from the Navy or Navy contractors.

31. Potential COCs are identified as posing a potential risk to ecological receptors at Site 8. NFA is recommended by the Navy based on the low 'likelihood the site will be used for ecological habitat' (Section 6.5.3, page 6-34). A deed restriction should be placed on Site 8 such that ecological receptors are not attracted to the area.

32. The evaluation of lead in soil at the soil debris area arrives at a 95th percentile protective soil concentration of 299 mg/kg (Section 7.4.5.3, page 7-34) for Site 16. The only method by which HERD could approximate this value was to exclude ingestion of homegrown produce. Please obtain the agreement of U.S. EPA Region 9 for the exclusion of this pathway and clearly indicate the exclusion of this pathway in the evaluation of lead in the text of this section. As stated above (Specific Comment 27) the 99th percentile of the blood lead distribution in children must be used when developing a proposed Remedial Action Goal.

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OU1 parcels to limit future use to current uses so that future exposure pathways do not differ significantly from current exposure pathways to the detriment of ecological receptors.

HERD Internal Reviewer: Michael Wade, Ph.D., DABT
Senior Toxicologist HERD

cc: Ned Black, Ph.D., BTAG Member
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