



DEPARTMENT OF THE NAVY
ENGINEERING FIELD ACTIVITY, WEST
NAVAL FACILITIES ENGINEERING COMMAND
2001 JUNIPERO SERRA BOULEVARD, SUITE 600
DALY CITY, CALIFORNIA 94014-1976

IN REPLY REFER TO:

**FIRST AMENDMENT TO
FINAL PHASE IVC
FINDING OF SUITABILITY TO TRANSFER
(Dated August 1, 2003)**

**DEPARTMENT OF DEFENSE HOUSING FACILITY
EXCHANGE TRIANGLE PARCEL 1
NOVATO, CALIFORNIA**

September 15, 2003

Prepared by

**Department of the Navy
Southwest Division
Naval Facilities Engineering Command
San Diego, California 92132-5190**

**FIRST AMENDMENT TO FINAL PHASE IVC FINDING OF
SUITABILITY TO TRANSFER**

The Final Phase IVC Finding of Suitability to Transfer, Department of Defense Housing Facility Exchange Triangle Parcel 1 Novato, California, dated August 1, 2003, is hereby amended by **DELETING** Pages 6, 12 and 13 in their entirety and **INSERTING** the attached pages numbered 6, 12 and 13 in their entirety.:



D. S. BIANCHI
CAPTAIN, CEC, USN
Commanding Officer
Engineering Field Activity West
Naval Facilities Engineering Command

15 SEP 03

Date

- “Draft Corrective Action Plan for Groundwater at the Former UST Site 957/970, Department of Defense Housing Facility, Novato, California.” Letter prepared by RWQCB, December 18, 2001 (RWQCB 2001)
- “Draft Remedial Design and Work Plan for Former Underground Storage Tank Site 957/970 at Department of Defense Housing Facility Novato, California.” Prepared by Battelle, February 22, 2002 (Battelle 2002a).
- “Final Corrective Action Plan for Groundwater for Former Underground Storage Tank Site 957/970, Department of Defense Housing Facility, Novato, California.” Prepared by Battelle, March 1, 2002 (Battelle 2002b).
- “Final Report, Human Health Risk Assessment of Volatile Organic Compounds in Soil Gas Near Hamilton Army Airfield, Landfill 26, Novato, California.” Prepared by CH2MHILL, December 2002 (CH2MHILL 2002).
- “Annual Site Status Report (For the Year 2002) for Former UST Site 957/970 at Department of Defense Housing Facility, Novato, California.” Prepared by Battelle, January 31, 2003 (Battelle 2003).
- “Final Asbestos Survey of Condition Report at Buildings 930, 960, 965, 969, 970, 971, 972, and 973, Department of Defense Housing Facility, Novato, California.” Prepared by CDM, January 17, 2003 (CDM 2003).
- “RWQCB Staff Approval of Report Titled ‘Draft Summary Report for Hydraulic Lift and Oil Water Separator Removal from Building 970, Department of Defense Housing Facility, Novato, California.’ Letter prepared by RWQCB, April 16, 2003 (RWQCB 2003).
- “Approval of the Human Health Risk Assessment of Volatile Organic Compounds (VOCS) in Soil Gas Near Hamilton Army Airfield, Landfill 26, Dated December 2002, Novato, California.” Letter Prepared by DTSC, April 22, 2003 (DTSC 2003).
- “Ethylbenzene: Human Health Risk Assessment for Department of Defense Housing Facility, Novato, Marin County California.” DTSC Memorandum, August 5, 2003 (DTSC 2003a).
- “Revisions 2 and 3 of the Human Health Risk Assessment for Department of Defense Housing Facility, Novato, Marin County California. Documents dated September 4, 2003 and September 11, 2003.” DTSC Memorandum, September 15, 2003 (DTSC 2003b)

2.0 PROPERTY DESCRIPTION

The Property consists of portions of Parcels 28, 29, and 30 (Figure 2). The parcels comprise a total area of approximately 2.7 acres. Utilities present on the Property include sanitary sewer lines; storm drain lines; and electric, water, and natural gas lines. Table 1 lists the individual acreage of each parcel and summarizes the status of the buildings on each parcel.

responded in the form of a response to comments table, and none of those comments were related to the conclusion that further evaluation is not required. Finally, the RWQCB has not indicated in letters, meetings, or otherwise, that the conclusion of the assessment is not acceptable to the RWQCB. Therefore, the Navy considers that the conclusion is supported by the RWQCB.

In November 1999, a Tier 3 risk-based corrective action (RBCA) assessment was conducted for the Former UST Site 957/970 (Battelle 1999a). The Tier 3 RBCA assessment compared concentrations of gasoline constituents on site against derived risk-based screening levels. Subsequent to the submission of the Tier 3 RBCA assessment, the evaluation of health risks using a different risk assessment method was requested by DTSC. This other method is a multimedia, multi-chemical risk assessment performed in the forward direction to estimate cancer risk and chemical hazard (non-cancer risk) (a baseline risk assessment), rather than in the reverse direction as was done in the RBCA assessment by deriving target concentrations (comparison of risk-based screening levels to measured concentrations).

In June 2001, a Final Revised Risk Assessment, as amended (Battelle 2001b) was prepared to supplement the Tier 3 RBCA assessment using DTSC's preferred risk assessment method. The Final Revised Risk Assessment evaluated the Property, which includes Building 970 and the former NEX gas station, and will be sold for future commercial/industrial use (Figures 3 and 4). The Property was evaluated for a commercial/industrial use scenario, which is a nonresidential standard, based on the planned reuse of the property. Total cancer risk estimated to the occupational receptor in the Property was 3.23×10^{-6} and 1.06×10^{-5} based on the federal and Cal-EPA unit risk factors for benzene, respectively. This value falls within the risk range (1×10^{-4} to 1×10^{-6}) that warrants a site-specific risk management decision about the suitability of the property for its intended future reuse. At the time that the Navy conducted the risk assessment, ethylbenzene was not listed as a carcinogen on U.S. EPA's preliminary remediation goal table. Recently, DTSC added ethylbenzene to the estimated cancer risks presented in the Final Revised Risk Assessment and documented the results in a memorandum (DTSC 2003a). After recalculation, DTSC has determined that if the restrictions in this FOST are adequately implemented, the total cancer risk estimates in the Property remain health protective and future remediation activities are not necessary to protect the health of future occupational receptors. The total hazard or hazard index (total non-cancer risk) in the Property was below 1.0 for the occupational receptor. As stated in U.S. EPA guidance OSWER Directive No. 9355.0-30 (EPA 1991), remedial action generally is not warranted at a site if the total cancer risk is below 1×10^{-4} and the hazard index is below 1.0. The total cancer risk estimates in the Sale Area are most likely overestimated, and future remediation activities are

not necessary to protect the health of future occupational receptors. Additionally, the risk assessment evaluated the potential risk to an excavation worker at Former UST Site 957/970. It should be noted that the risk assessments were generally based on the risk assessment methodology provided by U.S. EPA's Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual (HHEM 1989). In addition, supplemental guidance from the DTSC was also incorporated into these risk assessments to make it more specific to Cal/EPA methodology. Estimates of total cancer risk for the excavation worker are 5.76×10^{-6} and 2.08×10^{-5} for the Property, based on the federal and Cal-EPA unit risk factors for benzene, respectively. DTSC calculated very similar risk values to those presented in the Final Revised Risk Assessment as amended on September 11, 2003 (DTSC 2003b). The hazard index for the excavation worker in the Property is 1,130. These risks suggest that excavation workers should take precautionary measures (e.g., proper personal protective equipment) when working at the site. Therefore, based on risk assessment results, DTSC's correspondence (DTSC 2001b, DTSC 2003a, DTSC 2003b), and U.S. EPA guidance (EPA 1991), the Property is suitable for its intended commercial/industrial use.

Beginning in April 2000, the Building 970 hydraulic lift and oil/water separator removal was conducted (Battelle and RRM 2000). Subsurface features removed from the site included three hydraulic lifts, two oil/water separator systems, associated lines, floor drains, and four buried drums (acting as subsurface storage tanks) with associated piping. During the removal, petroleum hydrocarbon-affected soil was encountered and over excavation activities were performed. Over excavation activities were conducted in accessible areas until contaminant concentrations were below cleanup levels or U.S. EPA Region 9 residential preliminary remediation goals (PRG). To protect the structural integrity of Building 970, excavation activities were not conducted underneath the building footers or internal walls. Limited petroleum hydrocarbon contamination is still present in these areas (Figure 5). An estimate of the volume of hydrocarbon and metals-impacted soils remaining in place is 120 cubic yards. Soil commercial/industrial PRGs were exceeded at one location on the Property (Battelle and RRM 2000). Potential exposure is limited because the soils are primarily covered with asphalt and, with exception of the areas around the Building 970 foundation, are located at depths greater than 6 feet. Since the potential for exposure would likely be greater by disturbing the soils than leaving them in place and the concentrations are likely to continue to decline due to natural biodegradation processes, the soils will be left in place. RWQCB and DTSC concurred with all remediation is complete for the hydraulic lift and oil water separator removal from Building 970 in a letter dated April 16, 2003 (RWQCB 2003).