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17 Apr 1997

From: Commanding Officer, Engineering Field Activity, West, Naval Facilities Engineering
Command

Subj: REMEDIAL INVESTIGATION/FEASIBILITY STUDY (RI/FS) FOR
NAVAL STATION TREASURE ISLAND (NAVSTA TI)

Encl: (1) Draft Remedial Investigation Report Addendum No. 3,
Ecotoxicological Testing For The Development Of Petroleum Screening Levels
dtd 17 April 1997

1. Enclosure (1) is provided for your review. Please submit your comments on or before 19 May 1997. This addendum presents the results from the ecotoxicological testing of petroleum-contaminated soils collected from IR Sites 6, 12, 15, and 22 at NAVSTA TI. The results from the analytical tests and two bioassays were used to calculate chronic "threshold" values for total petroleum hydrocarbons (TPH) that are protective of ecological receptors in the Bay.

2. Thank you for your guidance and involvement in this project. For further information, please call me at (415) 244-2560.

Original signed by:
ERNESTO M. GALANG
By direction of
the Commanding Officer

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NAVSTA TI
DRAFT REMEDIAL INVESTIGATION REPORT ADDENDUM NO. 3
ECOTOXICOLOGICAL TESTING FOR THE DEVELOPMENT OF
PETROLEUM SCREENING LEVELS

SYNOPSIS

This addendum presents total petroleum hydrocarbon (TPH) screening levels developed for groundwater and soil at Naval Station Treasure Island (NAVSTA TI). The TPH screening levels were developed to determine whether ecological receptors in the San Francisco Bay are being impacted by petroleum-contaminated groundwater from the installation restoration sites at NAVSTA TI. Key highlights of Addendum No. 3 are summarized below.

TPH Screening Level for Groundwater

Chemical and bioassay data were used to calculate a threshold TPH concentration which would be protective of ecological receptors at the point where the groundwater enters the Bay. Bioassays use living organisms to measure the effect of a contaminant by comparing the organism before and after exposure. The petroleum screening level for groundwater was calculated to be 14.3 milligrams per liter.

TPH Screening Level for Soil

TPH screening levels for soil were also established. Petroleum-contaminated soil with concentrations above the screening level could potentially impact groundwater which could then impact ecological receptors in the Bay. The petroleum screening level for soil was calculated to be 430 milligrams per kilogram.

Application of Screening Levels

The petroleum screening levels can be compared to groundwater and soil sample TPH concentrations to determine which sites may require further evaluation. The petroleum screening levels for groundwater and soil are based on conservative assumptions to protect the ecological receptors in the Bay. Petroleum biodegradation, and contaminant migration from the sources to the Bay were not considered in the calculations. These two factors would likely reduce TPH concentrations in the soil and groundwater. Additionally, the screening levels are based on the assumption that the contamination is located adjacent to the ecological receptors in the Bay, even though several of the sites are located further inland.

ENCLOSURE

DRAFT
REMEDIAL INVESTIGATION REPORT
ECOTOXICOLOGICAL TESTING FOR THE DEVELOPMENT OF
PETROLEUM SCREENING LEVELS
ADDENDUM NO. 3

THIS ENCLOSURE WAS NOT RECEIVED IN THE
RESTORATION RECORDS FILE.

FOR ADDITIONAL INFORMATION, CONTACT:

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