



Linda S. Adams
Secretary for
Environmental
Protection



Department of Toxic Substances Control

Maureen Gorsen, Director
700 Heinz Avenue
Berkeley, California 94710-2721

N60028_001840
TREASURE ISLAND
SSIC NO. 5090.3.A



Arnold Schwarzenegger
Governor

November 14, 2008

Mr. James B. Sullivan
BRAC Environmental Coordinator
Department of the Navy
Base Realignment and Closure
Program Management Office West
1455 Frazee Road, Suite 900
San Diego, California 92108-4310

**FINAL REMEDIAL INVESTIGATION AND FOCUSED FEASIBILITY STUDY
REPORT FOR INSTALLATION RESTORATION SITE 24 FORMER DRY
CLEANING FACILITY; NAVAL STATION TREASURE ISLAND (NSTI), SAN
FRANCISCO, CALIFORNIA.**

Dear Mr. Sullivan:

The Department of Toxic Substances Control (DTSC) staff has received and completed its review of the Final Remedial Investigation and Focused Feasibility Study Report for Installation Restoration Site 24 Former Dry Cleaning Facility; Naval Station Treasure Island, San Francisco, California, dated July 3, 2008 (Report). The Remedial Investigation (RI) and Focused Feasibility Study (FFS) were conducted to (1) evaluate the nature and extent of contamination in soil and groundwater, (2) assess the risk to human health and the environment at Site 24 and (3) evaluate alternatives for treatment of chlorinated volatile organic compounds (VOC) that pose an unacceptable risk at the site. Based on our review, DTSC has the following comments:

- The data are insufficient to adequately evaluate the potential for vapor intrusion into indoor air at Site 24. DTSC's 2005 subsurface vapor intrusion to indoor air guidance indicates that soil gas data should be used to evaluate the vapor intrusion pathway. Soil gas data are preferred over other data such as soil matrix because soil gas data represent a direct measurement of the contaminant that will migrate into indoor air. The Navy's use of soil data for evaluating risk from vapor intrusion is inconsistent with DTSC guidance. Further, the available data are inadequate because they are limited to the vicinity of Building 99 and because the detection limits for the existing soil gas data exceed risk-based concentrations for some VOCs (e.g. vinyl chloride). Finally, ground water data

cannot be used for modeling if non-aqueous phase liquids (NAPLs) are present. NAPL (FLUTE™ liner staining) has been discovered historically and recorded in the boring log for MW2B-2.

Discussions with the Navy and DTSC are necessary regarding collection of additional soil gas data in the Building 99 source area which meet risk-based detection limits in light of the ongoing treatability study. Other onsite locations where VOCs have been detected in soil or groundwater may also need to be addressed as a part of soil gas sampling. Prior to updating the indoor air evaluation, the Navy and DTSC should work collaboratively to establish an agreed-upon path forward regarding risk assessment methodology for analysis of the vapor intrusion to indoor air pathway (e.g. modeling assumptions, evaluation of hot spots, and consideration of preferential pathways).

- The Navy must develop remedial action objectives based on 1E-06 risk and California toxicity criteria and exposure parameters, at least as an initial point of departure to adequately assess risks at Site 24. Consideration must also be given to use of the maximum concentrations as exposure point concentrations to ensure risk at potential hot spots is not underestimated. DTSC default assumptions for modeling vapor intrusion to indoor air must be followed unless site-specific assumptions can be supported with site-specific data. The Navy has selected remedial action objectives based on a cancer risk level of 1E-05 and federal toxicity factors in accordance with the Navy's guidance for conducting risk assessments. This fails to provide a range of remedial action objectives for consideration. Therefore, the limited remedial action objectives and remedial goals presented in the Final Site 24 RI/FFS are inconsistent with what is being done at other military and nonmilitary facilities throughout California. This comment is consistent with historic comment letters (Wong Comment # 9 on August 7, 2007; Sarmiento Comment #11 on July 5, 2007) and correspondences (April 3, 2008).
- Both groundwater and soil gas monitoring are essential components for a number of the proposed alternatives in the Final Site 24 RI/FFS. Since Site 24 groundwater and soil gas are impacted with VOCs, monitoring of groundwater and soil gas VOC concentrations are essential for adequate evaluation of the remediation process. Based on the results of the human health risk assessment, the primary exposure pathway for industrial workers and residential receptors is the indoor air vapor intrusion pathway. The site-specific data and scientific basis upon which the Navy deems groundwater monitoring sufficient to ensure the long-term protectiveness of the land use covenant in the absence of soil gas monitoring must be clarified. This comment is consistent with historic comment letters (Wong Comment #13 on August 7, 2007; Dalrymple General Comment #A on June 26, 2007) and correspondences (April 3, 2008).

Mr. James Sullivan
November 14, 2008
Page 3

Proposed path forward:

DTSC does not concur with risk assessment presented in the Final RIFFS Report as additional soil gas data are required for adequate site characterization and incorporation into a revised risk assessment. However, a revised risk assessment would likely still conclude that additional work is required in order to address the identified VOC release at Site 24. An in-situ anaerobic bioremediation pilot study is currently being implemented to evaluate bioremediation as a potential remedial alternative. Therefore, the Final RIFFS Report is conditionally approved with the following items still outstanding and required prior to RAP/ROD approval: (1) additional soil gas sampling and monitoring, (2) incorporation of the additional soil gas sampling results into a revised risk assessment, and (3) development of remedial action objectives for soil, groundwater, and soil gas based on 1E-06 risk and California toxicity criteria and exposure parameters for Site 24.

Soil gas sampling / monitoring at Site 24 may be conducted after the current bioremediation pilot study has been completed in order to determine whether the vapor intrusion to indoor air pathway has been adequately addressed. Prior to collecting the requisite soil gas data, a soil gas sampling work plan (or sampling plan addendum) shall be drafted and submitted to DTSC for review. In addition, before completion of an updated indoor air evaluation, the Navy and DTSC must work collaboratively to establish an agreed-upon path forward regarding risk assessment methodology.

Please contact me at (510) 540-3775 or e-mail me at rmiya@dtsc.ca.gov if you have any questions.

Sincerely,



Ryan Miya, Ph.D.
Senior Hazardous Substances Scientist
Cleanup Program - Berkeley

Copies with sent via email transmission followed by hard copy.

cc: Mr. Charles Perry
Lead Remedial Project Manager
Department of the Navy
Base Realignment and Closure
Program Management Office West
1455 Frazee Road, Suite 900
San Diego, California 92108-4310
charles.l.perry@navy.mil

cc continued on the following page:

Mr. James Sullivan
November 14, 2008
Page 4

cc continued:

Mr. Scott Anderson
Remedial Project Manager
Department of the Navy
Base Realignment and Closure
Program Management Office West
1455 Frazee Road, Suite 900
San Diego, California 92108-4310
scott.d.anderson@navy.mil

Mr. James Whitcomb
BRAC Remedial Project Manager
Department of the Navy
Base Realignment and Closure
Program Management Office West
1455 Frazee Road, Suite 900
San Diego, California 92108-4310
james.h.whitcomb@navy.mil

Ms. Christine Katin
Remedial Project Manager
(SFD-8-1)
U.S. Environmental Protection Agency, Region IX
75 Hawthorne Street
San Francisco, California 94105
Katin.Christine@epamail.epa.gov

Mr. Paisha Jorgensen, PG
Engineering Geologist
California Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, California 94612
pjorgensen@waterboards.ca.gov

Mr. Jack Sylvan
Treasure Island Redevelopment Project Manager
Mayor's Office of Base Reuse and Development
City Hall, Room 436
1 Dr. Carlton B. Goodlett Place
San Francisco, California 94102
jack.sylvan@sfgov.org

cc continued on the following page:

Mr. James Sullivan
November 14, 2008
Page 5

cc continued:

Ms. Mirian Saez
Director of Island Operations
Treasure Island Development Authority
410 Avenue of the Palms
Building 1, 2nd Floor
San Francisco, California 94130
mirian.saez@sfgov.org

Mr. Gary R. Foote
Principal Geologist
AMEC Geomatrix, Incorporated
2101 Webster Street, 12th Floor
Oakland, California 94612
gary.foote@amec.com

Mr. Pete Bourgeois
CERCLA Program Project Manager
Shaw Environmental, Incorporated
Building 670
570 Avenue M
San Francisco, California 94130
peter.bourgeois@shawgrp.com