



Linda S. Adams
Acting Secretary for
Environmental Protection



Department of Toxic Substances Control

Maziar Movassaghi
Acting Director
700 Heinz Avenue
Berkeley, California 94710-2721



Edmund G. Brown Jr.
Governor

January 4, 2011

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
james.b.sullivan2@navy.mil

NAVAL STATION TREASURE ISLAND, SAN FRANCISCO, CALIFORNIA –
DRAFT TREATABILITY REPORT, IN SITU ANAEROBIC BIOREMEDIATION PILOT
STUDY, SITE 21

Dear Mr. Sullivan:

Thank you for the opportunity to comment on the *Draft Treatability Report, In Situ Anaerobic Bioremediation Pilot Study* (Treatability Report), dated November 15, 2010. The Department of Toxic Substances Control (DTSC) has received and reviewed the Treatability Report. The DTSC's Geological Services Unit (DTSC-GSU) has also reviewed the Treatability Report and their comments have been included as an enclosure and should be addressed.

Based on our review we have the following comments:

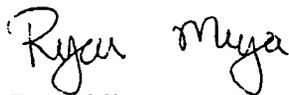
- (1) General Comment. A section should be added to the Treatability Report that describes any modifications to the *Final Project Plans, In Situ Bioremediation Pilot Study, Site 21* and any applicable addenda that were implemented as well as the justification for any changes specific to this pilot study. If no modifications from the final approved project plans were implemented during the pilot study implementation, this section should state that as such.
- (2) General Comment. The 2010 soil gas sampling data for Site 21 must be included in the Treatability Report as well as an evaluation the potential vapor intrusion pathway.

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- (3) General Editorial Comment. The Treatability Report should document the activities that have been already implemented in the Site 21 pilot study. Much of the text is written in a tense that suggests that activities are either currently or will be conducted in the future. Please verify implementation and correct text tense accordingly.
- (4) Section 1.5 – Project Time Line. Paragraph one. Authorization date for field activities associated with Site 24, Building 99 need not be included in the Treatability Report for Site 21 and should be removed.
- (5) Section 6.2 – Recommendations. DTSC cannot concur with the recommendation that no further remedial actions are needed at Site 21 until the 2010 soil gas sampling data for Site 21 is included in the Treatability Report to adequately evaluate the vapor intrusion pathway (General Comment 2), and additional groundwater monitoring is conducted to demonstrate that contaminant rebound post pilot study implementation is not occurring. Therefore, the Treatability Report should be modified to instead recommend that groundwater monitoring at Site 21 will be conducted in accordance with the 2010 Groundwater Sampling Work Plan Addendum to the Final Sampling and Analysis Plan for Sites 21, 24, and 32.

If you have any questions, please contact me at 510-540-3775 or by e-mail at rmiya@dtsc.ca.gov.

Sincerely,



Ryan Miya
Senior Hazardous Substances Scientist
Brownfields and Environmental Restoration Program
Berkeley Office

Enclosure

cc: Email Distribution
Mr. David Clark, U.S. Navy, david.j.clark2@navy.mil
Mr. Scott Anderson, U.S. Navy, scott.d.anderson@navy.mil
Mr. Anthony Konzen, U.S. Navy anthony.konzen.ctr@navy.mil
Ms. Melinda Garvey, U.S. Environmental Protection Agency, Region 9,
garvey.melinda@epamail.epa.gov

Continued on the following page

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cc: Email Distribution (continued)

Mr. Ross Steenson, California Regional Water Quality Control Board,
rsteenson@waterboards.ca.gov

Mr. Jack Sylvan, San Francisco Mayor's Office of Base Reuse and Development,
jack.sylvan@sfgov.org

Ms. Mirian Saez, Treasure Island Development Authority, mirian.saez@sfgov.org

Mr. Gary R. Foote, P.G., AMEC Geomatrix, Incorporated, gary.foote@amec.com

Mr. Pete Bourgeois, Shaw Environmental, Incorporated, peter.bourgeois@shawgrp.com

Mr. William Carson, Terraphase Engineering, william.carson@terraphase.com

Ms. Kristie Reimer, Arcadis, kristie.reimer@arcadis-us.com



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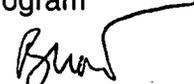
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Berkeley, California 94710-2721

MEMORANDUM

TO: Remedios Sunga, Project Manager
Hazardous Substances Engineer
Cleanup Program – Berkeley Office
Brownfields and Environmental Restoration Program

FROM: Renato A. Medrano, PG 8653 
Engineering Geologist, Geological Services Unit
Office of Geology
Brownfields and Environmental Restoration Program

CONCUR: Brian Lewis, PG 4287, CEG 1414, CHG 136 
Senior Engineering Geologist, Geological Services Unit
Office of Geology
Brownfields and Environmental Restoration Program

DATE: January 3, 2011

SUBJECT: REVIEW OF DRAFT TREATABILITY REPORT IN SITU
ANAEROBIC BIOREMEDIATION PILOT STUDY SITE 21, NAVAL
STATION TREASURE ISLAND, SAN FRANCISCO, CALIFORNIA

PCA: 18040

SITE: 201210-18

GSU#: 1020137

ACTIVITY REQUESTED

The Geological Services Unit (GSU) reviewed the *Draft Treatability Report In Situ Anaerobic Bioremediation Pilot Study Site 21, Naval Station Treasure Island, San Francisco California* dated November 15, 2010.

Activities performed by GSU included reviewing the geologic and hydrogeologic aspects of the document for technical adequacy and data interpretations, and reviewing the DTSC project file for background information.

INTRODUCTION AND SUMMARY

The treatability study was conducted to evaluate the applicability of in situ bioremediation to treat chlorinated ethenes in groundwater at Site 21. The following objectives were established to meet the goal:

- Obtain field and laboratory data to assess the viability and effectiveness of anaerobic treatment technology for degrading the dissolved chlorinated ethenes contamination in groundwater
- Evaluate the effectiveness of permeable reactive barrier (PRB) in preventing chlorinated ethenes from entering into San Francisco bay
- Biologically treat tetrachloroethene and the daughter products in Site 21 groundwater

In situ bioremediation was shown to be an effective mechanism for treatment of low concentrations of chlorinated ethenes. Pending the results of four quarters of rebound monitoring, the data generated may be sufficient to lead to a no further action recommendation for groundwater.

COMMENT AND RECOMMENDATION

The GSU concurs that the in-situ bioremediation treatment was an effective mechanism to treat the chlorinated ethenes in groundwater at Site 21. However, the GSU cannot concur that no further remedial actions are needed until such time that at least four quarters of groundwater monitoring demonstrate that rebound is not occurring. In addition, GSU defers to the DTSC Project Manager and DTSC Human and Ecological Resources Office regarding the appropriate cleanup goals for Site 21 groundwater as stated in Section 4.5.4 of the subject report.

REVIEWED BY: Michelle Dalrymple, PG
Engineering Geologist, Geological Services Unit
Office of Geology
Brownfields and Environmental Restoration Program

If you have any questions or comments regarding this memorandum, please contact me at (510) 540-3947, rmedrano@dtsc.ca.gov or Brian Lewis at (510) 540-3950