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ALAMEDA POINT
SSIC NO. 5090.3



Alan C. Lloyd, Ph.D.
Agency Secretary
Cal/EPA

Department of Toxic Substances Control

700 Heinz Avenue, Suite 200
Berkeley, California 94710-2721



Arnold Schwarzenegger
Governor

September 7, 2005

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

DRAFT SAMPLING AND ANALYSIS PLAN, SUBSLAB SOIL GAS INVESTIGATION OF BUILDINGS 14, 113, 162, 163, AND 398, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Dear Mr. Macchiarella:

The Department of Toxic Substances Control (DTSC) has reviewed the above referenced document dated August 22, 2005. Our comments are attached. Please do not hesitate to contact me at 510-540-3767 or mliao@dtsc.ca.gov, if you have any questions regarding our comments,

Sincerely,

Marcia Liao
Remedial Project Manager
Office of Military Facilities

Attachment

cc: Greg Lorton, SWDiv
Glenna Clark, SWDiv
Anna-Marie Cook, EPA
Judy Huang, RWQCB
Elizabeth Johnson, City of Alameda
Peter Russell, Russell Resources
Jean Sweeney, RAB Co-Chair
Arc Ecology



Department of Toxic Substances Control



Alan C. Lloyd, Ph.D.
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MEMORANDUM

TO: Marcia Liao, Project Manager
Office of Military Facilities
700 Heinz Avenue, Suite 200
Berkeley, California 94710

FROM: Michelle Dalrymple, PG *Michelle Dalrymple*
Engineering Geologist
Geologic Services Unit

REVIEWED

BY: Stewart W. Black, PG
Senior Engineering Geologist
Geologic Services Unit

DATE: September 7, 2005

SUBJECT: REVIEW OF THE DRAFT SAMPLING AND ANALYSIS PLAN (FIELD SAMPLING PLAN/QUALITY ASSURANCE PROJECT PLAN) SUBSLAB SOIL GAS INVESTIGATION OF BUILDINGS 14, 113, 162, 163, AND 398, ALAMEDA POINT, ALAMEDA, CALIFORNIA DATED AUGUST 22, 2005

ACTIVITY REQUESTED

Per your request the Northern California Geological Services Unit (GSU) has reviewed the *Draft Sampling and Analysis Plan (Field Sampling Plan/Quality Assurance Project Plan) Subslab Soil Gas Investigation of Buildings 14, 113, 162, 163, and 398, Alameda Point, Alameda, California* dated August 22, 2005. The draft Sampling and Analysis Plan (SAP) was prepared by Sullivan Consulting Group and Tetra Tech EM Inc. (SulTech) for the U.S. Department of the Navy (Navy), Naval Facilities Engineering Command, Southwest Division. GSU has reviewed the document with respect to the geologic aspects and technical procedures presented.

PROJECT SUMMARY

The investigation proposed in the SAP is being performed to evaluate the potential for vapor intrusion into buildings which overlie groundwater plumes containing volatile

organic compounds (VOCs) at OU-2B. The buildings that are being investigated for potential vapor intrusion are contained within Operable Unit (OU)-2B at Alameda Point. OU-2B is comprised of CERCLA sites 3, 4, 11, and 21. A Remedial Investigation (RI) was performed for OU-2B which used the Johnson & Ettinger (1991) model to evaluate the indoor air pathway using groundwater data obtained from OU-2B. The results of the model indicated that VOC concentrations in groundwater may be high enough for potential intrusion into some buildings at OU-2B. The principal objective of the subslab soil gas investigation is to obtain soil gas data directly beneath the building foundations to further evaluate whether VOCs are present at concentrations that may migrate into building structures and cause an unacceptable risk to building occupants.

GENERAL COMMENTS

- A. GSU questions the rationale for the selection of buildings to be investigated. There are several buildings (most notably Buildings 360 and 372 at Site 4) that overlie the contaminant plume (see Figure 3 of the SAP). **Please explain why only Buildings 14, 113, 162, 163A and a portion of 398 were selected for sampling.**
- B. GSU does not agree that there is sufficient information on the lateral extent of the VOC plume emanating from Site 3 to rule out sampling of the southern portion of Building 398. **GSU requests that samples are collected on the specified grid over the entire footprint of Building 398.**
- C. GSU questions how the data from this investigation will be used. All investigations and interpretations must be completed in accordance with *Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air, Interim Final* (DTSC, December 15, 2004). It is stated in the SAP that Environmental Screening Levels (ESLs) and California Human Health Screening Levels (CHHSLs) will be used to assess the soil gas results. **Please describe what this assessment will entail, how the data will be used, and where/how the data analysis will be presented.**

SPECIFIC COMMENTS

1. Section 1.1.6.1 – Soil and Groundwater Investigations. GSU questions why the RI report for OU-2B is not mentioned in this section. The RI report (SulTech, August 2005) is the primary document which incorporates data from all investigations performed at OU-2B. Also, the basewide groundwater monitoring program has been performed through spring 2005. **Please include information about the RI report for OU-2B in this section. Please also correct the information regarding the basewide groundwater monitoring program to include all rounds of sampling performed to date.**

2. Section 1.1.6.2 – Soil Gas Investigations. It is stated that VOCs were not detected in groundwater at Site 3. However, on Figure 3 of the SAP a 600-foot-long “chlorinated solvent plume” is shown emanating from Site 3. **Please clarify.**
3. Section 1.2.1 – Project Objectives. GSU questions when and how it will be determined whether utilities and associated fill are present beneath the building foundations that will require sampling. **Please clarify.**
4. Section 1.2.1 – Project Objectives. **Please specify the rationale that will be used for the determination that additional soil gas probes are needed for further study. Please also specify the approximate timing proposed for the second round of sampling and the basis for the proposed timing.**
5. Section 1.2.2 – Project Measurements. **Please specify the proposed depth of sampling. GSU recommends 5 inches or less for subslab investigations in accordance with Appendix G of *Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air, Interim Final* (DTSC, December 15, 2004).**
6. Section 2.1.1 – Soil Gas Probe Installation and Sampling. GSU requests the following is included and/or specified in the SAP:
 - **Perform leak testing at each soil probe location in accordance with *Advisory – Active Soil Gas Investigations* (DTSC, January 2003). Specify the procedures that will be followed to accomplish leak testing.**
 - **Specify the proposed borehole annulus. GSU requests that the borehole annulus is no greater than 1 to 2 inches to minimize the potential for surface leakage.**
 - **Specify that deionized water will be used to hydrate bentonite chips and that care will be taken to ensure that the minimum amount of water necessary to hydrate the bentonite chips will be used.**
 - **Specify that the sand pack material used in the annular space surrounding the probe tip will be no smaller than the adjacent subslab materials.**
 - **Specify that information regarding soil gas probe installation will be recorded in a field log book including, but not limited to:**
 - **date and start/finish time of probe installation,**
 - **thickness of building foundation encountered,**
 - **annulus of borehole,**
 - **probe installation depth,**
 - **materials used to construct probes,**
 - **amount of water added,**
 - **methods and results of leak testing.**

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7. Section 2.2.1 – Sampling Methods and Equipment. **Please clarify that soil gas samples will be collected in 1-liter Summa canisters not 6-liter Summa canisters as stated in the first paragraph of this section.**

8. Section 2.2.1 – Sampling Methods and Equipment. **Please remove the statement that specifies raising the soil gas probe 0.5-foot in the flow is too slow, as this is not a viable option. These are semi-permanent installations placed within less than 0.5 foot of the building foundation. Please specify that additional samples will be collected in an adjacent location if airflow is found to be insufficient during sampling.**

If you have any questions, please feel free to contact me at (510) 540-3926 or at mdalrymp@dtsc.ca.gov.