ENVIRO SOIL TECH CONSULTANTS

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File No. 12-99-702-SI

Mr. Barney Chan
Alameda County Environmental
Health Care Services Agency
1131 Harbor Bay Parkway
Alameda, California 94502

SUJBECT: 15595 WASHINGTON AVENUE
SAN LORENZO, CALIFORNIA

Dear Mr. Chan:

Thank you for the opportunity to meet with you and Mr. Levi on May 19 to discuss your concerns about the work plan submitted by our office on behalf of our client, Mr. Mehdi Mohammadian for the cal Gas fueling facility at the above-referenced address. We believe the meeting was productive and helped to clarify the answers to our questions regarding your review of the work plan. We have prepared this letter addendum to address the issues that were raised in the meeting, particularly in regards to the directive issued by Ms. Donna Drogos on August 6, 2004. The following paragraphs reference the comments in that letter.

1. REGIONAL GEOLOGIC AND HYDROGEOLOGIC STUDY

Ms. Drogos requested ESTC to review the published and unpublished literature on the geology and hydrogeology of the San Francisco Bay Region as a first step toward understanding the existing conditions at the site. In our resulting work plan, we indicated

that this literature survey would be conducted as we proceed through the proposed next phase of field investigation, but that due to the short deadline for submission of the plan it would not be possible to perform the survey prior to submission of the plan. ESTC is currently in the process of searching the pertinent literature and hopes to complete this task prior to the next field mobilization.

2. PREFERENTIAL PATHWAY STUDY

ESTC has obtained underground utility maps and other data relating to potential near-surface sensitive receptors and will be reviewing this information in conjunction with additional fieldwork. The results will be included in the Site Conceptual Model.

3. SOIL AND GROUNDWATER INVESTIGATION

This item was dealt with extensively in our work plan. We concur that there are numerous shortcomings in the existing database, but we believe that the drilling program proposed in our work plan will rectify these deficiencies to the extent possible at this time. Our plan proposes 8 new borings situated to define the extent of soil contamination. A minimum of two samples from each boring will be analyzed, and the borings will continuously cored through the contaminated zone. Due to the relatively small size of the site, we do not feel that more than 8 borings are needed for this purpose.

Our plan also proposed 8 new monitoring wells from which groundwater samples will be collected on a quarterly basis. Most of these wells will be located off-site to the west and north, where groundwater contamination is implied by the data from the on-site

wells. Three of the wells will be screened in both the first and second water-bearing zones, so that the possibility of multi-zone contamination can be assessed and hydraulic gradient maps can be constructed for both the first and second zones. We proposed installing these as nested wells, and we strongly disagree with the comment in your March 24, 2005 comment letter that "It is widely agreed that nested wells are not recommended for multi-level groundwater sampling..." We recently installed ten nested wells on a site in San Joaquin County, and have installed more than 30 such wells in the past 4 or 5 years throughout the Central Valley Region (Water Board Region 5). At no time has any other regulator suggested to us that nested wells are unreliable or unacceptable. Nonetheless, if you insist, we will modify our plan to install these wells as clustered wells rather than as nested wells.

4. CHARACTERIZATION OF LOCAL HYDROGEOLOGY AND GROUNDWATER FLOW CONDITIONS

As noted in our work plan, a minimum of two samples from each new boring will be sent to a materials testing laboratory for measurement of hydraulic conductivity. The purpose of these tests is to provide quantitative data on subsurface permeability, and this detailed site-specific data will likely prove far more useful in understanding local groundwater flow patterns and contaminant migration than will more general information such as that obtained from the regional geologic literature study. This quantitative data can be obtained at far less cost than conducting a pumping test, and gives a clearer picture of the differences in various stratigraphic units than can be obtained from pumping test data. Further, should a pumping test be needed in the future, the data from the laboratory testing will help to plan the pump test and interpret the results.

Together with groundwater elevation maps and geologic cross sections, the hydraulic conductivity data will help to determine groundwater flow directions and rates. This is the type of information requested by Ms. Drogos in her August 6, 2004 directive.

5. PROJECT APPROACH AND INVESTIGATION REPORTING

In this task, Ms. Drogos requested development of a Site Conceptual Model to guide future investigation and remediation work. One of the purposes of the model would be to identify data gaps that must be addressed in future phases of the investigation. Several such gaps were identified in her letter, and were again mentioned in our subsequent work plan. We observed that some these gaps, particularly those identified in item 3 above, are so obvious at this stage that they can be identified whether a formal model exists at the moment or not. Hence, we recommended proceeding with the task of investigating the extent of contamination immediately, rather than waiting until all the requirements for submitting a Conceptual Model have been fulfilled. We intend to develop as thorough a model as possible when the new borings and wells have been drilled and the regional geologic study and preferential pathway study have been completed.

6. INTERIM REMEDIATION

Although we agree that interim soil and/or groundwater remediation is appropriate in some cases prior to completion of a full geologic investigation of a contaminant problem, remediation is not appropriate when the nature and magnitude of the problem are poorly known and such remediation could cause further spreading of contaminant plumes or desorption of hydrocarbons from soil into groundwater. Therefore, we request that this task be deferred until more information about the problem can be developed.

7. DATA OF UNAUTHORIZED RELEASE OF MTBE

ESTC will contact previous testing laboratories and request them to review sample chromatograms from prior monitoring events to determine whether MTBE was detected but not reported in prior years. If possible, we will attempt to track the migration of MTBE from well to well over time. This would enable us to locate the source of the MTBE and estimate its rate of migration through the soil. If possible, we will also attempt to identify soil samples in which MTBE was detected but not reported.

8. GROUNDWATER CONTAMNANT PLUME MONITORING

ESTC currently monitors the wells at this site each calendar quarter, and this program will continue after the new wells are installed.

9. ESTIMATION OF MTBE CONTAMINANT MASS FLUX

ESTC will create contaminant isoconcentration maps for discrete depth intervals from the new and existing laboratory data and will calculate the total mass of hydrocarbons in the soil from these maps. Maps will be prepared for TPHg, Benzene and MTBE, so that the mass of each can be estimated. An estimate of the mass of these compounds in groundwater will be developed from similar maps of contaminants in groundwater. It is important to remember that the reliability of these maps is determined largely by the horizontal and vertical distribution of reliable analytical data.

10. CORRECTIVE ACTION PLAN

Ms. Drogos has requested that we develop a Corrective Action Plan for the site. Although this plan is undeniably necessary, it is a long way off in the future and cannot

be reasonably proposed at this time in view of the existing data gaps. It will likely be several quarters before sufficient data have been obtained to develop and validate a suitable Site Conceptual Model that could serve as the basis for Corrective Action Plan.

11. ANALYZE GROUNDWATER SAMPLE FROM WATER SUPPLY WELL

We are in process of getting authorization from the property owner to sample the water supply well. The frequency of future samples should be determined by ACEHCSA after the results have been obtained.

12. ANALYTICAL DATA TABLES

ESTC is in the process of modifying and correcting the summary tables that have been prepared for previous reports and will provide corrected tables in the next submittal.

13. GROUNDWATER GRADIENT

Revised groundwater elevation maps for prior-year monitoring events are in preparation and will be incorporated into the forthcoming Site Conceptual Model Report. The maps will show elevation contours and arrows depicting the inferred groundwater flow direction, and the slope of the water table (hydraulic gradient) will be calculated.

14. GEO TRACKER SUBMITTALS

We had authorized the laboratory to file all the reports with Geotracker.

We hope that we have addressed all your concerns and that you will approve our plan for additional fieldwork as soon as possible so that we can move forward with the investigation. If you have additional questions, please call our office.

Respectfully yours,

ENVIRO SOIL TECH CONSULTANTS

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