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Project No.: 015-01-009

Manwel and Samira Shuwayhat
54 Wolfe Canyon Road
Kentfield, California 94904

Subject: Addendum to the Interim Remediation Action Plan for Fuel Leak Case No. RO0000324, Livermore Gas and Mini-mart, 160 Holmes Street, Livermore, California

Dear Mr. and Mrs. Shuwayhat:

On your behalf, Allterra Environmental, Inc. (Allterra) has prepared an addendum to the August 10, 2005 *Interim Remediation Action Plan* in order to address modifications to the dual-phase extraction (DPE) remedial pilot testing work scope for the property located at 160 Holmes Street in Livermore, California (Site). The original work plan and this addendum were prepared pursuant to Alameda County Environmental Health – Local Oversight Program’s (ACEH) March 29, 2005 letter directive. The scope of work described herein is intended to comply with the State of California Water Resources Control Board’s *Leaking Underground Fuel Tank (LUFT) Manual*, the Regional Water Quality Control Board (RWQCB) *Tri-Regional Board Staff Recommendations for Preliminary Investigation and Evaluation of Underground Tank Sites*, and ACEH guidelines.

Site Location and Description

The subject property is located at the northeast intersection of Holmes Street and Second Street, in Livermore, California (Figure 1). A Valero fuel station currently occupies the Site and the surrounding area is primarily residential with some retail businesses along 1st and 2nd Streets. The approximate surface elevation of the site is 470 feet above mean sea level (MSL) and slopes to the northwest. Pertinent site features, including the locations of the former underground storage tanks (USTs) and existing monitoring wells, are presented in Figure 2.

Modifications to DPE Remedial Pilot Testing Work Scope

To assess subsurface conditions beneath the Site, evaluate the DPE radius of influence (ROI), appropriately size future remediation equipment, and remove contaminant mass, Allterra proposes to conduct DPE pilot testing (pumping groundwater from a well while under vacuum) at the Site. The following is a discussion of activities proposed for performing DPE pilot testing. The tasks described herein are subject to regulatory review and approval.

Pre-Field Activities

Permitting

Prior to conducting DPE pilot testing, the Bay Area Air Quality Management District (BAAQMD) will be notified and a temporary air discharge permit will be obtained, if necessary.

Field Activities

Remedial Pilot Testing

Two individual DPE pilot tests are proposed for the site, the first utilizing EW-1 as a test well and the second utilizing EW-2. A brief description of the pilot testing process is presented below.

DPE Pilot Test Equipment

DPE pilot test equipment will consist of a mobile soil vapor extraction (SVE) unit, a submersible pump with a mechanical liquid level control and associated conveyance piping, a polyethylene storage tank for extracted groundwater storage, and vapor phase granular activated carbon (GAC) vessels to treat petroleum hydrocarbon vapors prior to discharge to the atmosphere.

DPE Pilot Test Setup

The submersible pump setup will first be installed in EW-1. Groundwater conveyance piping and submersible pump electrical wiring will extend out the well through a DPE manifold and the well will be sealed off. Once sealed, the mobile SVE unit will be plumbed to the DPE manifold. With this setup, groundwater extraction pumping can occur while the mobile SVE unit applies a vacuum to the well. Following the test at EW-1, a similar setup will be used to perform a DPE pilot test at EW-2.

DPE Data Collection

While conducting DPE pilot testing, Allterra personnel will collect and record routine measurements from the test well. At a minimum, measurements will include: observed vacuums, soil vapor flow rates, influent soil vapor hydrocarbon concentrations using a photo ionization detector (PID), groundwater flow rates, and qualitative groundwater observations, such as product odor and color. Data collected while conducting DPE pilot testing will be used to evaluate treatment options and size remediation equipment to be installed at the Site.

DPE Data Collection, Observation Wells

Given their proximities to extraction wells EW-1 and EW-2, monitoring wells MW-1A, MW-1B, MW-2, and MW-3 will be utilized as observation wells during DPE pilot test activities. Allterra personnel will collect and record routine measurements from observation wells during DPE pilot test activities. At a minimum, measurements will include: observed vacuums and depths to groundwater. Additionally, Allterra personnel will measure depths to groundwater at set time intervals in site monitoring wells to collect groundwater drawdown data. Data collected from site wells will be used to evaluate the DPE ROI.

Vapor and Groundwater Sampling

As part of pilot testing activities, soil vapor and groundwater samples will be collected from extraction wells EW-1 and EW-2 prior to commencing the DPE pilot test. Once the test has commenced, at a minimum, influent soil vapor samples and groundwater samples will be collected from each test well at the beginning, and end of pilot test activities. Analytical data collected while conducting the DPE pilot test will be used to evaluate treatment options and size remediation equipment to be installed at the Site.

Laboratory Analyses

Vapor and groundwater samples collected during pilot testing activities will be submitted under chain-of-custody protocol to McCampbell Analytical, Inc. (DHS Certification #1644) of Pacheco, California. Soil vapor samples will be analyzed for total petroleum hydrocarbons as gasoline (TPHg) by EPA Method 8015Cm and benzene, toluene, ethyl benzene, and xylenes (BTEX) and methyl tertiary butyl ether (MTBE) by EPA Method 8021b. Groundwater samples collected during pilot testing activities will be analyzed for TPHg by EPA Method 8015Cm and BTEX and MTBE by EPA Method 8021b.

Reporting

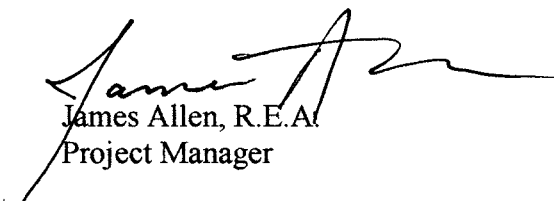
Allterra will prepare a report presenting DPE pilot testing data, ROI data collected from nearby wells, analytical results from vapor and groundwater samples, and contaminant masses removed. The report will present an evaluation of DPE as a remedial alternative for the Site and present conclusions and recommendations regarding observed site conditions with respect to the existing Interim Remedial Action Plan (IRAP) for the Site. Additionally, the report will be signed by a California Professional Geologist.

Limitations

Allterra prepared this document for the use of Mr. Manwel and Mrs. Samira Shuwayhat and ACEH in evaluating site conditions at selected on-site locations at the time of this study. Statements, conclusions, and recommendations in this document are based solely on the field observations and analytical results related to work performed by Allterra and there is no warranty, expressed or implied. Site conditions and data can change over time; therefore, data presented in this work plan is only applicable to the timeframe of this study. Allterra's services have been performed in accordance with environmental principles generally accepted at this time and location.

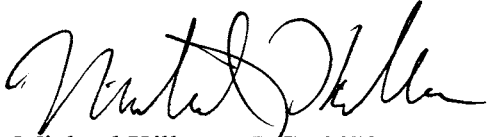
Should you have any questions or comments, please contact Allterra at (831) 425-2608.

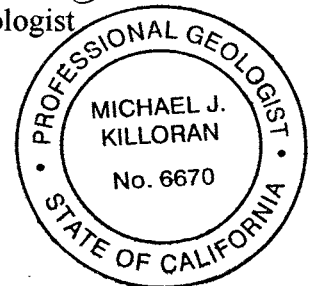
Sincerely,
Allterra Environmental, Inc.


James Allen, R.E.A.
Project Manager

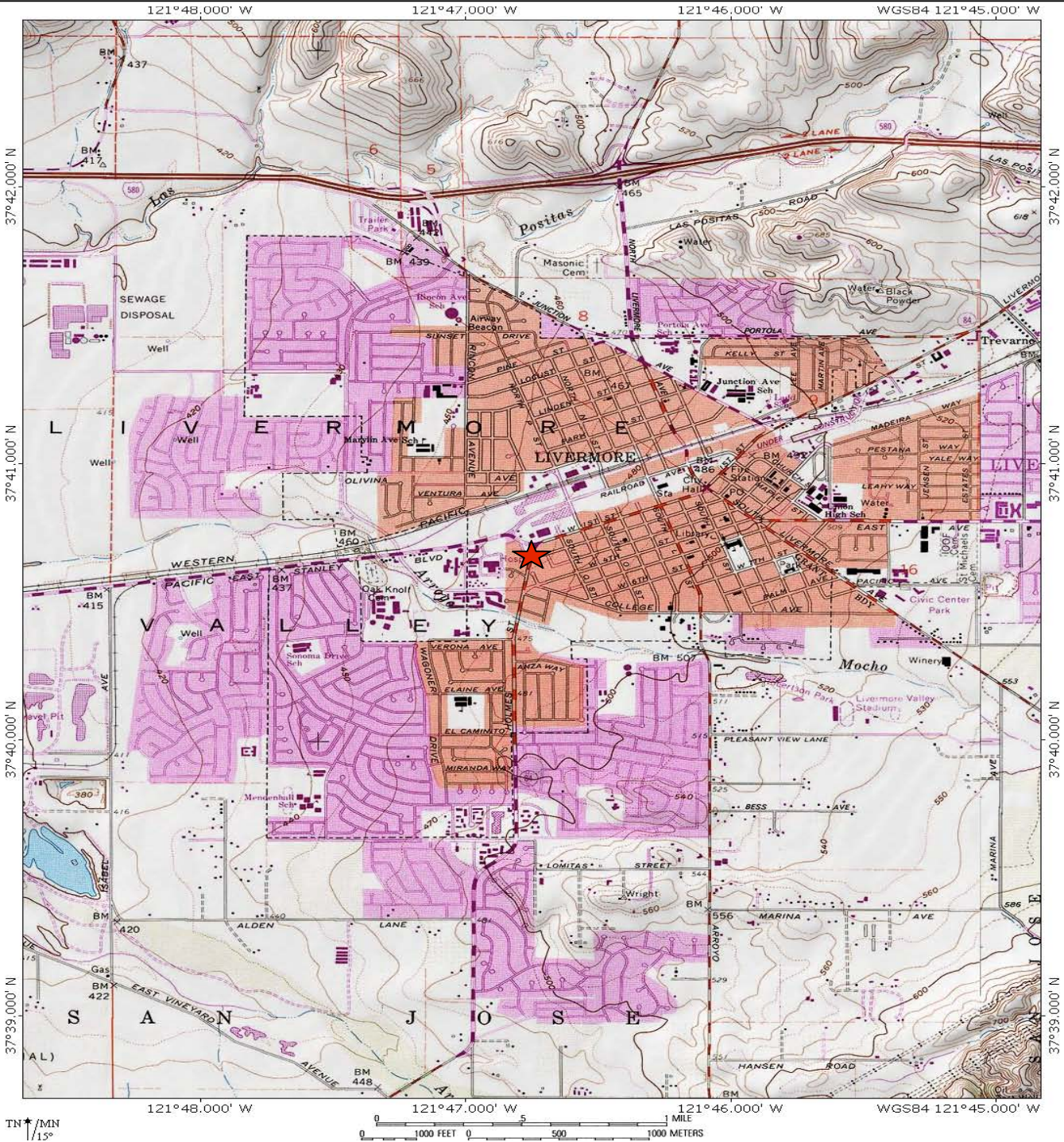
Attachments:
Figure 1, Vicinity Map
Figure 2, Site Plan

cc: Mr. Jerry Wickham, ACEH


Michael Killoran, P.G. 6670
Senior Geologist



FIGURES 1-2



Vicinity Map

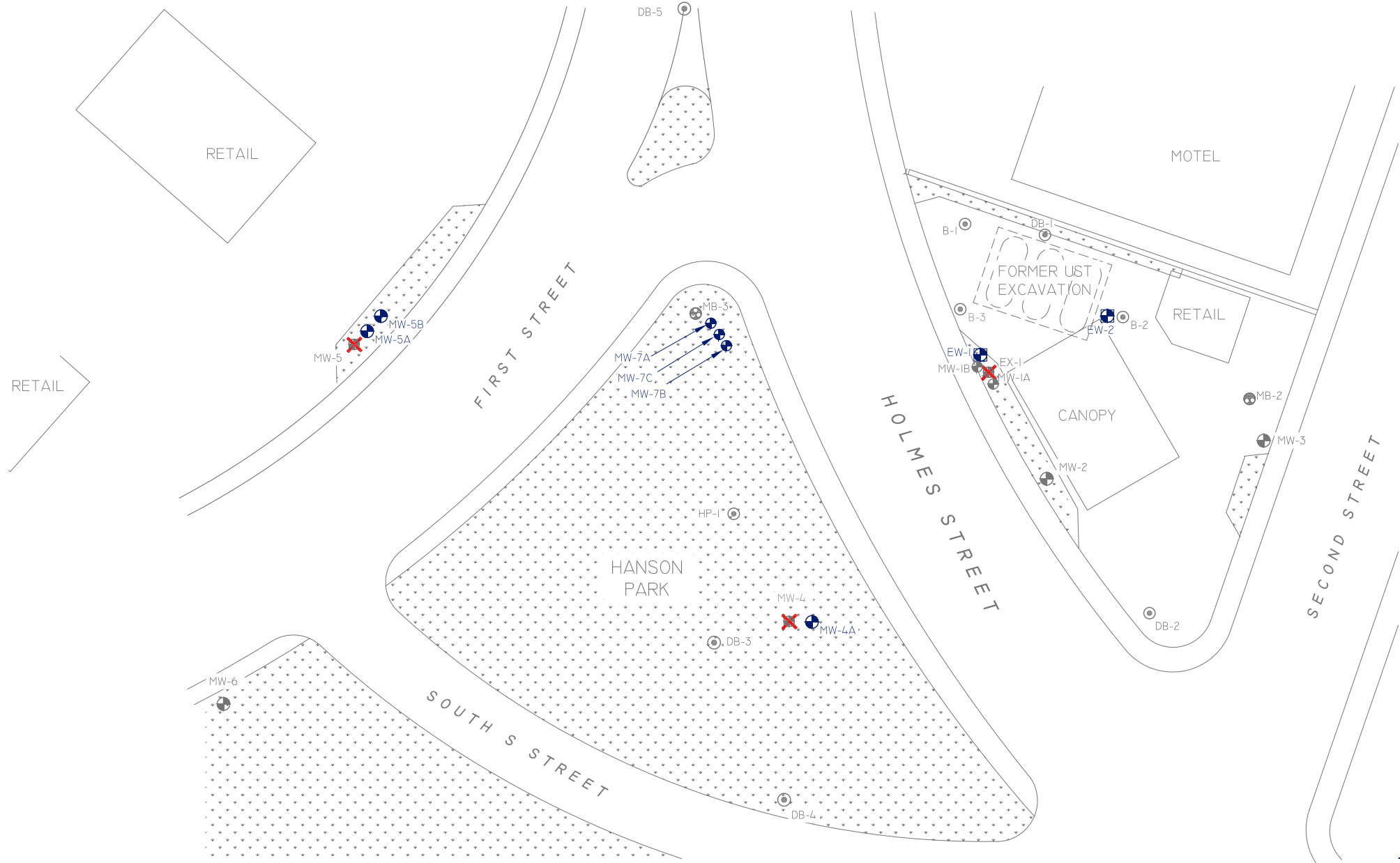
Livermore Gas and Mini-mart
 160 Holmes Street
 Livermore, California

Figure 1

3/31/06



849 Almar Avenue, Suite C, No. 281
 Santa Cruz, California
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LEGEND:

-  MW-4A MONITORING WELL LOCATION
 -  EW-1 EXTRACTION WELL LOCATION
-  MB-3 MULTI POINT SOIL BORING LOCATION
 -  B-1 SOIL BORING LOCATION
 -  DECOMMISSIONED MONITORING WELL



 849 ALMAR AVE., SUITE C, No. 281 SANTA CRUZ, CALIFORNIA WWW.ALLTERRAENV.COM	SITE PLAN 160 HOLMES STREET LIVERMORE, CALIFORNIA	FIGURE 2 3/15/06
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