



# CITY OF EMERYVILLE

INCORPORATED 1896

1333 PARK AVENUE  
EMERYVILLE, CALIFORNIA 94608-3517

TEL: (510) 596-4330 FAX: (510) 596-4389

May 15, 2015

Mr. Mark Detterman, PG, CEG  
Senior Hazardous Materials Specialist  
Alameda County Environmental Health  
1131 Harbor Bay Parkway  
Alameda, CA 94502

**RECEIVED**

By Alameda County Environmental Health 3:37 pm, May 18, 2015

Subject: Data Gap Investigation Work Plan  
for City of Emeryville Fire Station #2 UST Site

Reference: Alameda County Fuel Leak Case No. RO0000061  
GeoTracker Global ID T0600101925

Dear Mr. Detterman:

The City of Emeryville is pleased to submit the attached Data Gap Investigation Work Plan for the City owned Fire Station #2 site. The Work Plan was prepared by OTG EnviroEngineering Solutions, Inc. (OTG) under a consultant service contract with the City of Emeryville.

### **Certification**

I certify under penalty of law that this document and all attachments are prepared by OTG under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who managed the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Please contact Mr. Xinggang Tong at (510) 465-8982 or myself at (510) 596-3728 if you have questions or comments.

Sincerely,  
City of Emeryville

Nancy Humphrey  
Environmental Programs Analyst

May 15, 2015

Mr. Mark Detterman, PG, CEG  
Senior Hazardous Materials Specialist  
Alameda County Environmental Health  
1131 Harbor Bay Parkway  
Alameda, CA 94502

Subject: Data Gap Investigation Work Plan  
for City of Emeryville Fire Station #2 UST Site

Reference: Alameda County Fuel Leak Case No. RO0000061  
GeoTracker Global ID T0600101925

Dear Mr. Detterman:

Enclosed is a Data Gap Investigation Work Plan for the City of Emeryville Fire Station #2 UST Site, which is prepared in response to a 31<sup>st</sup> December 2013 directive letter from Alameda County Environmental Health (ACEH).

### **Certification**

I certify under penalty of law that this document and all attachments are prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who managed the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Please call Xinggang Tong at (510) 465-8982 or Nancy Humphrey at (510) 596-3728 if you have questions or comments.

Sincerely,  
*OTG EnviroEngineering Solutions, Inc.*



Xinggang Tong, PhD, PE  
Project Manager



Attachment

Table 1 – Data Gap Investigation Work Plan  
City of Emeryville Fire Station #2 – GeoTracker ID T0600101925

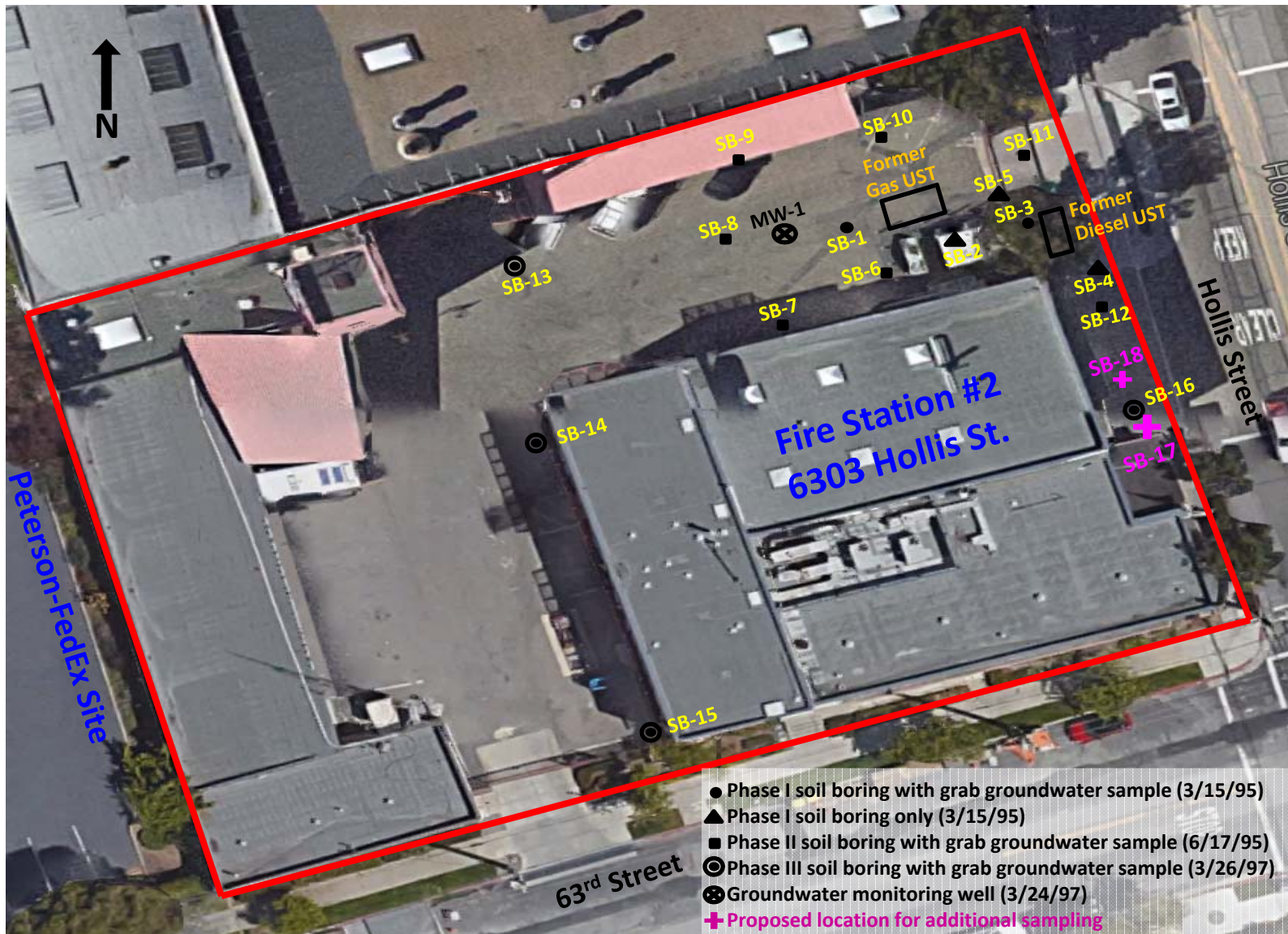
Task	Data Gap Item	Proposed Investigation	Rationale	Analyses
Task 1: LTCP General Criteria d (Free Product) – assess the nature and extent of potential LNAPL in area around SB-16				
1a	A grab groundwater sample collected from borehole SB-16 on 3/26/97 reported 29 mg/L TPH-g, which is an “indirect” evidence of LNAPL existence (> 20 mg/L TPH-g). The length of this potential LNAPL plume is undefined.	Advance 2 borings near SB-16 to approximately 15 ft bgs, as shown on Figure 1. Two soil samples at approximately 5 and 10 ft bgs and a grab groundwater sample will be collected from each borehole.	<ul style="list-style-type: none"> <li>• The reported TPH-g concentration from SB-16 is over 18 years old and does not represent current site conditions. In addition, grab and well groundwater samples were collected from 14 locations throughout the site and surrounding both USTs. With the exception of SB-16, all other samples reported TPH-g less than 6 mg/L. Therefore, the accuracy of SB-16 data should be first verified by additional sampling near its location.</li> <li>• Depending on results from the additional sampling near SB-16, further investigations, including potential installation of monitoring wells, could be proposed later if results were at levels above indirect evidence of LNAPL existence.</li> </ul>	Soil and grab groundwater samples will be analyzed for TPH-g and TPH-d by EPA Method 8015m, BTEX and MTBE by EPA Method 8260.
Task 2: LTCP General Criteria f – removal of secondary source to the extent practicable				
2a	The extent of removal of potential LNAPL in soil bore SB-16 is not	No actions are proposed presently.	The existing data from SB-16 is over 18 years old and does not represent current site conditions. Depending on results from the additional sampling proposed under Task 1a	

Table 1 – Data Gap Investigation Work Plan  
City of Emeryville Fire Station #2 – GeoTracker ID T0600101925

	documented.		above, appropriate removal actions could be proposed later.	
Task 3: LTCP Media Specific Criteria for Groundwater				
3a	Plume length and lateral extent not defined, nor groundwater flow direction.	No additional investigations are proposed presently.	A review of groundwater elevation data from Peterson-FedEx site located next to and west of Fire Station #2 indicates that the shallow groundwater flows in a westerly direction (Appendix A). MW-1 is located directly downgradient of the former gas UST. SB-16 is located up- and cross-gradient of the former gas and diesel USTs. The reported 29 mg/L TPH-g from SB-16 unlikely came from the on-site gas UST, as TPH-g was detected at 0.97 mg/L from SB-12, which is located closer to both former gas and diesel USTs than SB-16.  Depending on results from the additional sampling under Task 1a above, additional investigations could be proposed later.	
3b	Limited data available to assess plume stability	The existing on-site groundwater monitoring well MW-1 will be sampled quarterly for one year to assess plume stability.	Based on groundwater elevation data from Peterson-FedEx site, MW-1 is located directly downgradient of the former gas UST and can be used to assess plume stability.	TPH-g and TPH-d by EPA Method 8015m, BTEX and MTBE by EPA Method 8260.
3c	Distance to closest water supply well or surface water is	A well and surface water body survey will be conducted within ½ mile		

Table 1 – Data Gap Investigation Work Plan  
 City of Emeryville Fire Station #2 – GeoTracker ID T0600101925

	undetermined	radius of the site.		
Task 4: LTCP Media Specific Criteria for Vapor Intrusion to Indoor Air				
4a	Limited data available to allow assessment of vapor intrusion to indoor air.	No additional investigations are proposed presently.	This task will be evaluated after the proposed work for Tasks 1a and 3b is completed.	



	14EMV03.2000	Figure 1. Proposed Locations for Additional Sampling
	April 28, 2015	Fire Station #2, 6303 Hollis Street, Emeryville, California, 94608

## **APPENDIX A**

### **Figure 3**

from *Soil and Groundwater Investigation Work Plan*

1600 63<sup>rd</sup> Street, Emeryville, California

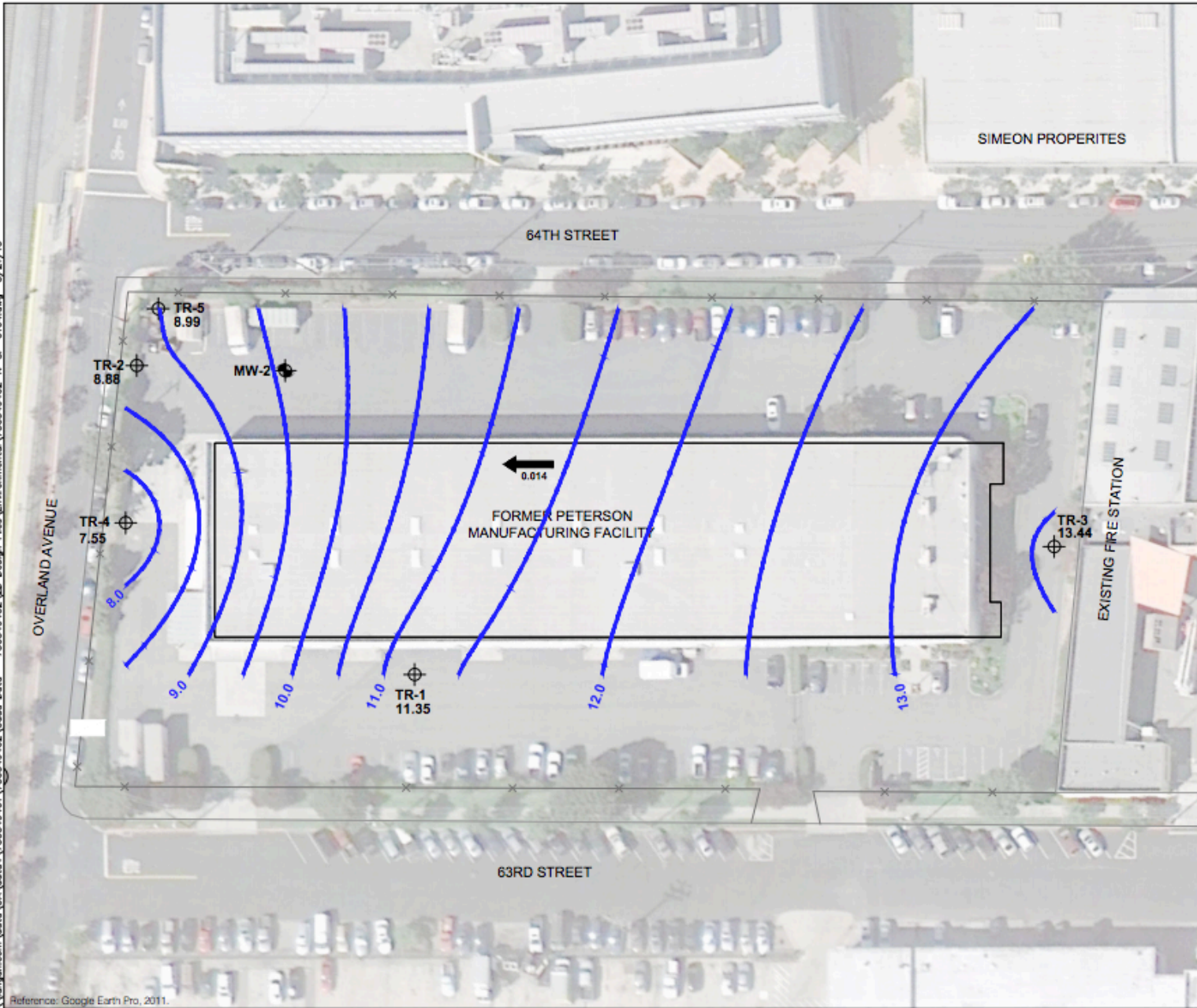
August 27, 2013

Peterson-FedEx Site





ACEH RO# 0000052

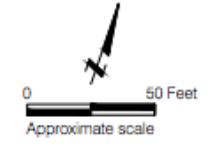


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EXPLANATION

- MW-2**  Approximate location of HLA monitoring well
- TR-1 11.35**  Location of monitoring well and TPH concentration in mg/L (December 2008)
- 9.0**  Groundwater elevation contour
-  Groundwater flow direction and gradient  
**0.014**



1600 63RD STREET  
Emeryville, California

**GROUNDWATER GRADIENT  
MEASURED 16 JANUARY 2010**

Date 08/21/13 Project No. 750349402 Figure 3



Reference: Google Earth Pro, 2011.