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SOMA
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September 9, 2016

Mr. Mark Detterman, PG, CEG
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: Freedom Food and Gas (Formerly Freedom ARCO Mini-Mart)
Site Address: 15101 Freedom Avenue, San Leandro, California
Case No. RO0000473

Dear Mr. Detterman:

SOMA's "Shallow Soil Sample Investigation Report" for the subject property has been uploaded to the State's GeoTracker database and Alameda County's FTP site for your review.

Thank you for your time in reviewing our report. Please do not hesitate to call me (925) 734-6400, if you have questions or comments.

Sincerely,

Mansour Sepehr, Ph.D.,PE
Principal Hydrogeologist

cc: Mr. Mohammad Pazdel

Shallow Soil Sample Investigation Report

Freedom Gas and Food
15101 Freedom Avenue
San Leandro, California

September 9, 2016

Project 2552

Prepared for

Mohammad Pazdel
1770 Pistacia Court
Fairfield, California

SOMA ENVIRONMENTAL ENGINEERING, INC.
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PERJURY STATEMENT

Site Location: 15101 Freedom Avenue, San Leandro, California

"I declare under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge".

Mohammad Pazdel
1770 Pistacia Court
Fairfield, California 94533
Responsible Party

CERTIFICATION

SOMA Environmental Engineering, Inc. submits this report on behalf of Mr. Mohammad Pazdel, owner of the property located at 15101 Freedom Avenue, San Leandro, California. This report has been prepared pursuant to correspondence of Alameda County Health Care Services – Environmental Health Services dated July 5, 2016, approving the workplan.

Mansour Sepehr, PhD, PE
Principal Hydrogeologist

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1. INTRODUCTION

1.1 Overview

SOMA Environmental Engineering, Inc. (SOMA) has prepared this report documenting results of a soil and groundwater investigation at 15101 Freedom Avenue, San Leandro, California. SOMA prepared a workplan to install a boring for shallow soil sampling dated May 16, 2016. ACEH approved the workplan in their correspondence dated July 5, 2016. This report provides details and results of the sampling.

1.2 Site Location and Description

The Site is located at the foot of the San Leandro Hills, along the west side of San Leandro Valley (Figure 1). It is bounded on the north by Freedom Avenue, on the east by Fairmont Avenue, on the south by residential properties and on the west by 151st Avenue. It currently operates as a gasoline service station with mini-mart, and retails gasoline and diesel fuel. No automotive repair facility is on the Site. Three canopied product dispenser islands are on-site as well as three underground storage tanks (USTs): one 6,000-gallon diesel UST, one 8,000-gallon gasoline UST, and one 10,000-gallon gasoline UST. Figure 2 illustrates site features.

The Site has operated as a gasoline service station since the 1960s. Mr. Pazdel, the responsible party, sold the property to Farrokh Hosseinyoun in 2010. Mr. Hosseinyoun subsequently sold the property to Mohammad Mashhoon in 2010. The station currently operates under the business name Freedom Gas and Food (formerly Freedom ARCO Mini-Mart). Previous site activities are summarized in Appendix A.

1.3 Regional Geology and Hydrology

The Site is located in the San Leandro Valley at an elevation of approximately 54 feet above mean sea level with a moderate topographic gradient toward the south. The San Leandro Valley is within the San Francisco Bay – Santa Clara Valley depression, a northwest-to-southeast trending basin bounded on the east and west by mountains. The basin is characterized by Quaternary alluvium, chiefly fan and terrace deposits that are generally several hundred feet thick and flat lying.

There is no water body within a half-mile radius of the Site. The nearest water body, Estudillo Canal, is located about 0.6 miles southwest of the Site. The next closest water body is San Leandro Creek, located approximately 1.5 miles south of the Site. The Site is approximately four miles north of the San Francisco Bay. East of the Site are the northwest-trending Hayward Fault Zone, the San Leandro

Hills, and an assemblage of ultramafic metamorphic and volcanic rocks (California Division of Mines and Geology, 1990).

The United States Geological Survey (USGS) mapped the Site on Late Pleistocene age (10,000 to 70,000 years old) alluvium consisting of irregularly interbedded clay, silt, sand and gravel. Due to the age of this alluvium, these stream-deposited sediments are typically more consolidated than alluvial deposits of Holocene age. In developed urban areas such as the Bay Area, earthwork construction often involves the emplacement of artificial fill derived from nearby cuts or quarries. Artificial fill is emplaced over native earth materials to provide level building pads and base rock for roadways.

The Site is located in the East Bay Groundwater Basin of the San Francisco Bay hydrologic study area. Water-bearing formations include the Santa Clara Formation of Plio-Pleistocene age and late Pleistocene, and recent sediments that have been grouped as Late Quaternary alluvium. Non–water-bearing units underlie the water-bearing formations and are exposed along the surface in the Diablo Range east of the Site and Coyote Hills, near Newark, which is south of the Site.

2. SCOPE OF WORK

Based on SOMA's approved workplan, the scope of work includes the following:

1. Drill two soil borings using hand auger and collect soil samples;
2. Laboratory Analysis;
3. Report Preparation

2.1 Fieldwork Preparation

SOMA submitted required drilling notifications to the ACHCS in advance of drilling activities. SOMA prepared a site-specific Health and Safety Plan (HASP). The HASP is a requirement of the Occupational Safety and Health Administration (OSHA), "Hazardous Waste Operation and Emergency Response" guidelines (29 CFR 1910.120) and the California Occupational Safety and Health Administration (Cal/OSHA) "Hazardous Waste Operation and Emergency Response" guidelines (CCR Title 8, section 5192). The HASP is designed to address safety provisions during field activities and protect the field crew from physical and chemical hazards resulting from drilling and sampling. It establishes personnel responsibilities, general safe work practices, field procedures, personal protective equipment standards, decontamination procedures, and emergency action plans. The HASP was reviewed and signed by field staff and contractors prior to beginning field operations at the Site.

On August 3, 2016, SOMA visited the site, and marked the boring locations using chalk-based white paint and then notified Underground Service Alert (USA) to ensure drilling areas were clear of underground utilities (USA number W621601214). The same day, SOMA retained a private utility locator (OJH Subsurface Utility Locator) to survey proposed drilling areas and locate any additional subsurface conduits.

2.2 Borings Advancement and Soil Sample Collection

On August 9 and 10, 2016, SOMA's field crew advanced two soil borings on-site, SB-6 was advanced in the vicinity of MW-4D and SB-7 was advanced in the vicinity of MW-3. The locations are illustrated in Figure 2. Based on ACEH directive dated July 5, 2016, SB-6 was installed on-site close to the property boundary, instead of installing it on the adjacent property as was proposed in the work plan dated May 16, 2016.

SB-6 and SB-7 were advanced to a depth of 6 feet bgs utilizing a hand auger. Two shallow soil samples were collected at a depth of 3 feet bgs and 6 feet bgs from each boring.

After collection of soil and groundwater samples, each boring was destroyed with a neat cement grout mixture and completed at the surface with asphalt to match existing grade.

Each sample was labeled with a unique sample identifier and preserved on ice pending delivery to a certified analytical laboratory. All samples were delivered to the laboratory for chemical analysis under appropriate chain-of-custody protocol.

2.3 Laboratory Analyses and Analytical Results

As described in the previous section, soil samples, were submitted to a California state-certified environmental laboratory for chemical analysis of the following:

- Total PHCs as gasoline (TPH-g)
- Benzene, toluene, ethylbenzene, total xylenes (collectively termed BTEX)
- Fuel oxygenates, additives and lead scavengers including methyl tertiary-butyl ether (MtBE), tertiary-butyl alcohol (TBA), ethyl tertiary-butyl ether (ETBE), diisopropyl ether (DIPE), tertiary-amyl methyl ether (TAME), 1,2-dichloroethane (1,2-DCA), 1,2-dibromomethane (EDB), and ethanol.
- and Naphthalene.

All analyses were conducted using USEPA Method 8260B except for TPH-g in soil which was conducted using USEPA Method 8015B.

Table 1 summarizes soil analytical results. All contaminants of concern (COC) were below the laboratory reporting limit in all soil samples collected from the three DP locations. Laboratory analytical reports are attached in Appendix B.

3. CONCLUSIONS AND RECOMMENDATIONS

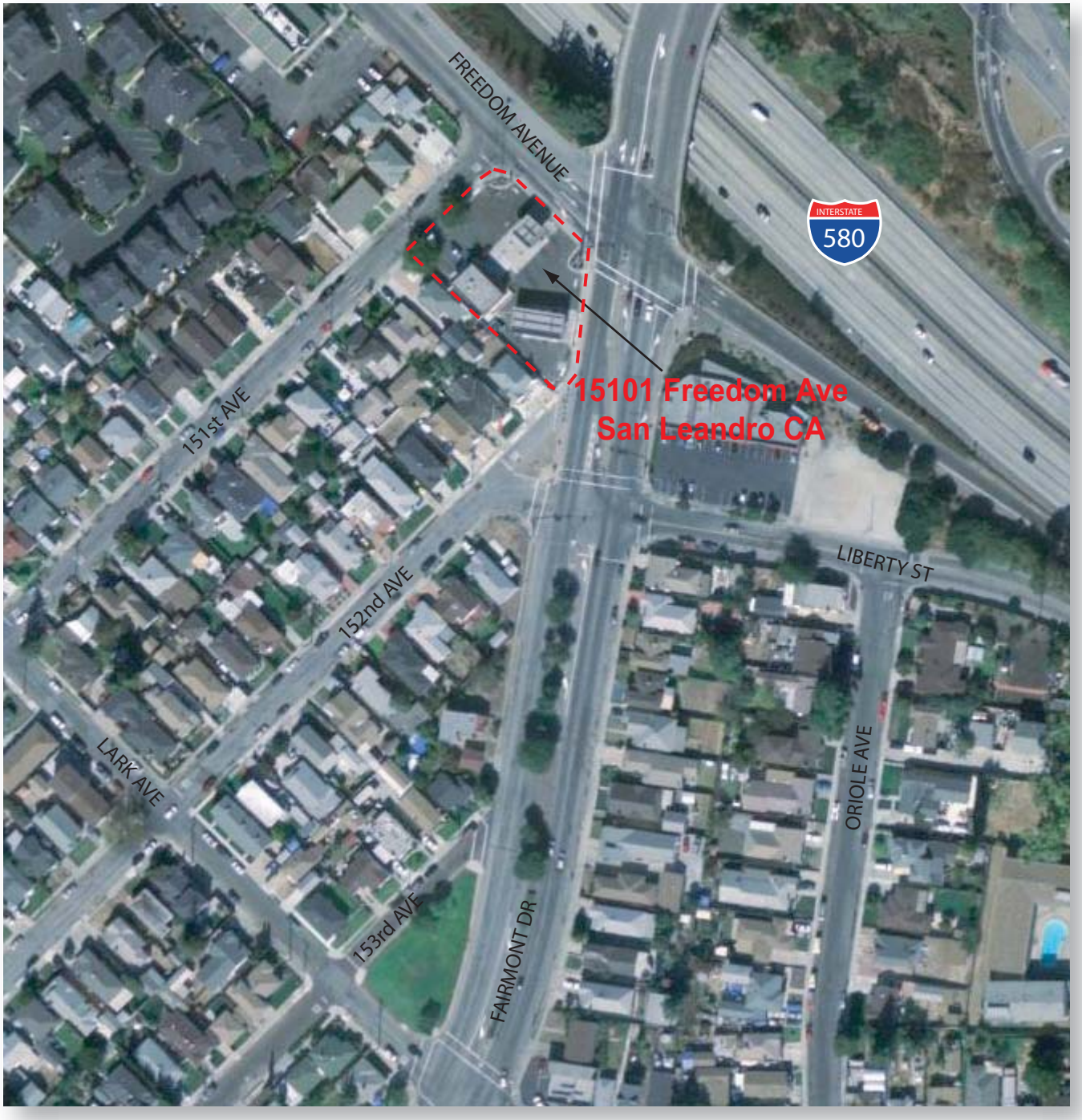
During this investigation, SOMA advanced two on-site borings, SB-6 in the vicinity of property boundary close to well MW-4D and SB-7 in the vicinity of MW-3.

- All contaminants of concern in soil samples collected during this investigation were below the laboratory reporting limits.

- Results of this investigation indicate that the site satisfies the media-specific criteria of the Low Threat Closure Policy for direct contact and outdoor air exposure.

Based on ACEH's correspondence dated March 8, 2016, SOMA has conducted an off-site MPE event utilizing the reconstructed monitoring well MW-10R. Details and results of the MPE event will be documented in the next groundwater monitoring and remediation progress report.

FIGURES



N

approximate scale in feet

0 150 300

Figure 1: Site vicinity map.

SOMA ENVIRONMENTAL ENGINEERING, INC.

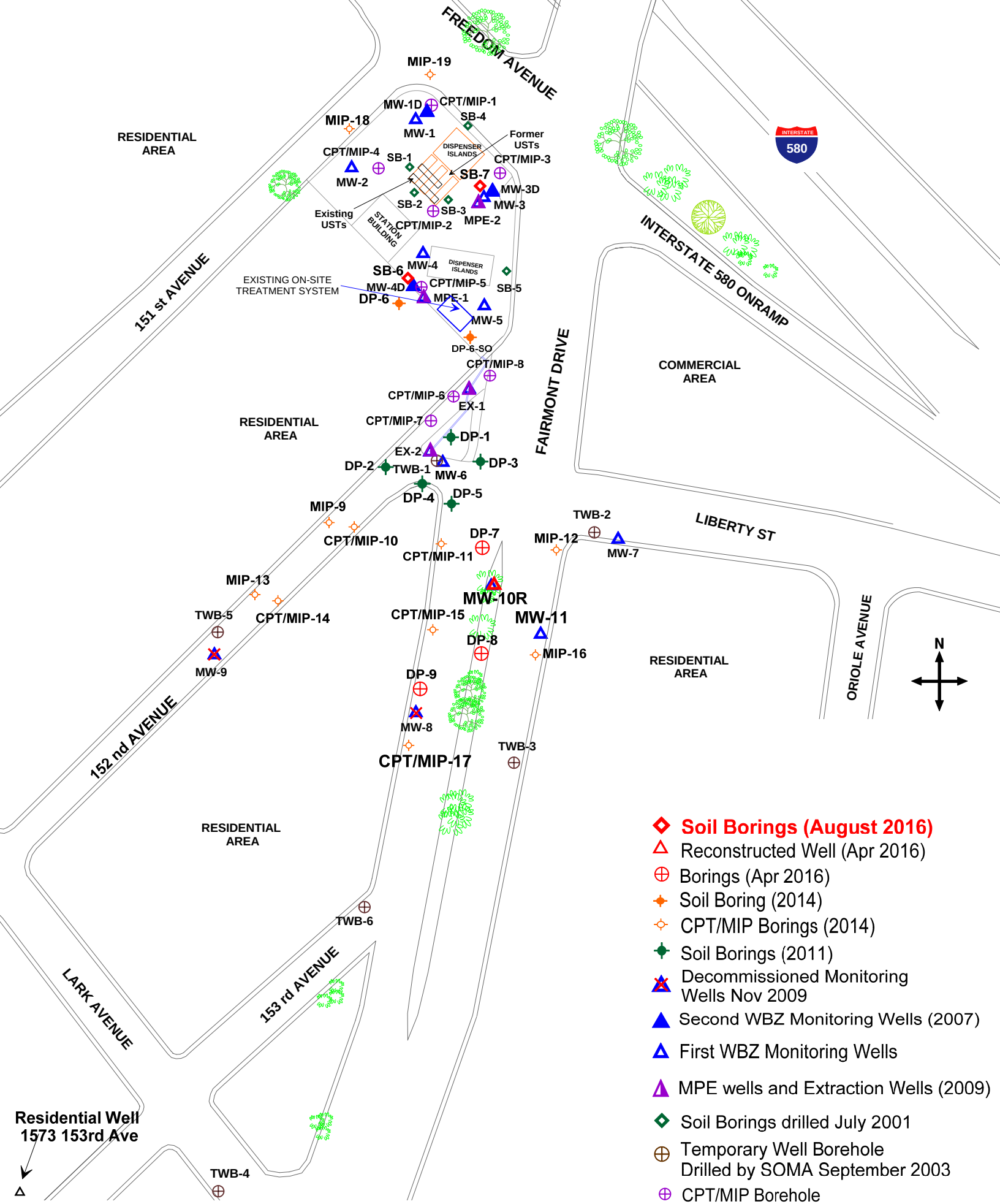


Figure 2: Site Map Showing Locations of USTs, Fuel Dispensers, Soil Borings, and Groundwater Monitoring Wells

SOMA ENVIRONMENTAL ENGINEERING, INC.

TABLES

Table 1
Historical Soil Sample Analytical Results
15101 Freedom Avenue
San Leandro, California

Sample ID	Depth (Feet)	Date	TPH-g (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Total Xylenes (mg/Kg)	MtBE (mg/Kg)	TBA (mg/Kg)	TAME (mg/Kg)	DIPE (mg/Kg)	ETBE (mg/Kg)	1,2-DCA (mg/Kg)	EDB (mg/Kg)	Naphthalene (mg/Kg)
Limited Off-Site Investigation 2011															
DP-1	**6.5**	**7/20/2011**	<1.1	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.096	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048
	16	**7/20/2011**	<0.91	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.094	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047
	20	**7/20/2011**	22	<0.046	<0.046	0.65	**2.94**	<0.046	<0.93	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046
	22	**7/20/2011**	5.7	<0.0048	0.0086	0.14	1.15	<0.0048	<0.096	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048
	23	**7/20/2011**	<1.0	<0.0048	<0.0048	0.01	0.0253	<0.0048	<0.097	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048
	30	**7/20/2011**	1.3	<0.0044	<0.0044	0.024	0.122	<0.0044	<0.088	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044
DP-2	**8**	**7/20/2011**	<0.92	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.094	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047
	10	**7/20/2011**	<1.1	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.094	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047
	20	**7/20/2011**	<0.94	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.093	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046
	24	**7/20/2011**	4.4 Y	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.098	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049
	28	**7/20/2011**	<1.0	<0.0047	<0.0047	0.034	0.042	<0.0047	<0.095	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047
	30	**7/20/2011**	<0.92	<0.0047	<0.0047	0.0071	<0.0047	<0.0047	<0.094	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047
DP-3	**6**	**7/21/2011**	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.099	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	12	**7/21/2011**	<1.1	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.096	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048
	20	**7/21/2011**	26 Y	<0.0048	<0.0048	0.1	0.28	<0.0048	<0.095	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048
	21	**7/21/2011**	<0.98	<0.0046	<0.0046	<0.0046	<0.0046	0.0051	<0.093	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046
	30	**7/21/2011**	<1.1	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.099	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049
DP-4	**8**	**7/21/2011**	<1.1	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.093	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046
	11	**7/21/2011**	<0.99	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.095	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048
	16	**7/21/2011**	<1.0	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.098	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049
	20	**7/21/2011**	5.2 Y	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.092	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046
	24	**7/21/2011**	140	<0.25	<0.25	2.2	**6.79**	<0.25	<5.0	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
	26	**7/21/2011**	40	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.096	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048
	30	**7/21/2011**	<1.0	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.096	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048
DP-5	**7.5**	**7/20/2011**	<1.1	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.096	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048
	10.5	**7/20/2011**	<1.0	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.095	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047
	12.5	**7/20/2011**	<0.93	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.097	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048
	23	**7/20/2011**	67	<0.0047	<0.0047	1.6	1.8	<0.0047	<0.093	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047
	28	**7/20/2011**	<0.96	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.093	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046
	30	**7/20/2011**	<0.96	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.098	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049
Off-Site Investigation 2014															
DP-6	**21**	**1/28/2014**	24 Y	<0.0048	<0.0048	0.15	0.21	<0.0048	<0.096	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	0.065
	28	**1/28/2014**	<0.97	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.098	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049
DP-6-SO	**3**	**2/6/2014**	<0.98	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.096	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048
	6	**2/6/2014**	<1.0	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.096	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048
MIP-9	**21**	**1/17/2014**	180	<0.25	<0.25	**5.2**	**17.9**	<0.25	<5.0	<0.25	<0.25	<0.25	<0.25	<0.25	**1.9**
	24	**1/17/2014**	<0.98	<0.005	<0.005	<0.005	<0.005	<0.005	<0.10	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	31	**1/17/2014**	<1.1	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.099	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049
	52	**1/17/2014**	<1.1	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.096	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048

Table 1
Historical Soil Sample Analytical Results
15101 Freedom Avenue
San Leandro, California

Sample ID	Depth (Feet)	Date	TPH-g (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Total Xylenes (mg/Kg)	MtBE (mg/Kg)	TBA (mg/Kg)	TAME (mg/Kg)	DIPE (mg/Kg)	ETBE (mg/Kg)	1,2-DCA (mg/Kg)	EDB (mg/Kg)	Naphthalene (mg/Kg)
CPT/MIP-10	**21**	**1/15/2014**	200	<0.25	<0.25	2.0	2.5	<0.25	<5.0	<0.25	<0.25	<0.25	<0.25	<0.25	0.72
	24	**1/15/2014**	<0.96	<0.0049	<0.0049	0.02	0.032	<0.0049	<0.099	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	0.0079
	33	**1/15/2014**	<1.1	<0.0048	<0.0048	<0.0048	0.034	<0.0048	<0.097	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	0.0052
	50	**1/16/2014**	<0.92	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
CPT/MIP-11	**23**	**1/13/2014**	29 [Y]	<0.25	<0.25	0.46	0.46	<0.25	<5.0	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
	24	**1/13/2014**	<1.1	<0.005	<0.005	0.0086	0.0068	<0.005	<0.099	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
MIP-12	**20**	**1/20/2014**	<1.1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.099	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	32	**1/20/2014**	<1.1	<0.0049	<0.0049	<0.0049	<0.0049	0.01	<0.099	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049
	52	**1/20/2014**	<1.0	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.095	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048
MIP-13	**21**	**1/16/2014**	25 [Y]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	31	**1/16/2014**	<0.99	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.098	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049
	50	**1/16/2014**	<1.1	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.094	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047
CPT/MIP-14	**21**	**1/14/2014**	54 [Y]	<0.25	<0.25	<0.25	<0.25	<0.25	<5.0	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
	30	**1/14/2014**	<0.95	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.095	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047
	52	**1/14/2014**	<1.0	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.097	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048
CPT/MIP-15	**32**	**1/13/2014**	<0.96	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.097	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048
	42	**1/13/2014**	<1.1	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.096	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048
MIP-16	**21**	**1/17/2014**	<1.0	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.098	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049
	48	**1/20/2014**	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.10	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
CPT/MIP-17	**30**	**1/14/2014**	<1.0	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.095	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048
MIP-18	**26**	**1/21/2014**	<1.0	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.093	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047
MIP-19	**27**	**1/21/2014**	26 [Y]	<0.048	<0.048	0.12	0.078	<0.048	<0.96	<0.048	<0.048	<0.048	<0.048	<0.048	0.19
	38	**1/21/2014**	<1.0	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.094	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047
Off-Site Investigation 2016															
DP-7	**28**	**4/20/2016**	<1.0	0.0057	<0.0044	<0.0044	<0.0044	<0.0044	<0.088	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	0.014
DP-8	**24**	**4/20/2016**	<0.98	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.094	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047
DP-9	**15**	**4/20/2016**	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.10	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
On-Site Shallow Soil Investigation 2016															
SB-6	**3**	**8/10/2016**	<1.0	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.095	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048
	6	**8/10/2016**	<0.99	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.098	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049
SB-7	**3**	**8/10/2016**	<1.0	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.095	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047
	6	**8/10/2016**	<0.99	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.097	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048
ESLs (mg/Kg)			**100**	**0.044**	**2.9**	**1.4**	**2.3**	**0.023**	**0.075**	**NA**	**NA**	**NA**	**0.0045**	**0.00033**	**0.033**

Notes:

ESLs Environmental Screening levels as per SF Bay Region RWQCB-February 2016(Rev2-Tier 1)

NA Not listed on the ESL Tables

<: Below laboratory detection limits

Table 2
Historical Groundwater Analytical Results
15101 Freedom Avenue
San Leandro, California

Sample ID	Date	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L)	TBA (µg/L)	TAME (µg/L)	DIPE (µg/L)	ETBE (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	Naphthalene (µg/L)
Limited Off-Site Investigation 2011														
DP-1	7/20/2011	**84,000**	<17	**250**	**3,600**	**15,300**	<17	<330	<17	<17	<17	<17	<17	NA
DP-2	7/20/2011	**46,000**	<5.0	<5.0	**540**	**1,130**	<5.0	<100	<5.0	<5.0	<5.0	<5.0	<5.0	NA
DP-3	7/21/2011	**1,500**	<1.0	<1.0	**42**	**120**	**150**	**40**	8.9	<1.0	<1.0	<1.0	<1.0	NA
DP-4	7/21/2011	**20,000**	**1.1**	0.98	**1,100**	**1,670**	<0.5	<10	<0.5	<0.5	<0.5	**0.65**	<0.5	NA
DP-5	7/20/2011	**80,000**	**290**	**140**	**4,300**	**16,800**	<25	<500	<25	<25	<25	<25	<25	NA
Off-Site Investigation 2014														
DP-6	1/28/2014	**3,900**	**3.1**	<1.7	**130**	**235**	**220**	**760**	<1.7	<1.7	20	<1.7	<1.7	**35**
MIP-9-1	1/17/2014	84	0.58	<0.5	0.88	4.80	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0
CPT/MIP-10-1	1/15/2014	76	<0.5	<0.5	3.9	6.4	**5.4**	<10	0.51	<0.5	<0.5	<0.5	<0.5	<2.0
CPT/MIP-11-1	1/13/2014	<50	<0.5	<0.5	<0.5	<0.5	**58**	<10	5.2	<0.5	<0.5	<0.5	<0.5	<2.0
MIP-12-1	1/20/2014	<50	<0.5	<0.5	<0.5	<0.5	**14**	<10	<0.5	<0.5	<0.5	**72**	<0.5	<2.0
MIP-13-1	1/16/2014	<50	0.75	<0.5	<0.5	<0.5	3.9	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0
CPT/MIP-14-1	1/14/2014	<50	<0.5	<0.5	<0.5	<0.5	**9.2**	<10	0.53	<0.5	<0.5	**0.69**	<0.5	<2.0
CPT/MIP-15-1	1/13/2014	<50	<0.5	<0.5	<0.5	<0.5	**5.8**	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0
MIP-16-1	1/17/2014	**980**	**1.8**	0.65	0.55	<0.5	0.64	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0
CPT/MIP-17-1	1/14/2014	<50	<0.5	<0.5	<0.5	<0.5	10	<10	0.77	<0.5	<0.5	<0.5	<0.5	<2.0
MIP-18-1	1/28/2014	<50	**1.1**	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0
MIP-19-1	1/21/2014	**690**	<0.5	<0.5	7.7	6.0	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	**14**
Off-Site Investigation 2016														
DP-7	4/20/2016	**13,000**	**20**	<5.0	**190**	**210**	**8.7**	**320**	<5.0	<5.0	<5.0	<5.0	<5.0	**39**
DP-8	4/20/2016	<50	0.56	<0.5	<0.5	<0.5	4.2	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0
DP-9	4/20/2016	<50	<0.5	<0.5	<0.5	<0.5	**44**	<10	4.4	<0.5	<0.5	<0.5	<0.5	<2.0
Second WBZ														
MIP-9-2	1/17/2014	**160**	0.88	<0.5	2.1	5.24	1.3	<10	<0.5	<0.5	<0.5	8.9	<0.5	<2.0
CPT/MIP-10-2	1/16/2014	110	0.61	<0.5	4.5	8.8	3.8	<10	<0.5	<0.5	<0.5	**9.1**	<0.5	<2.0
CPT/MIP-11-2	1/13/2014	63	<0.5	<0.5	1.6	2.55	<0.5	<10	<0.5	<0.5	<0.5	**1.1**	<0.5	<2.0
MIP-12-2	1/20/2014	<50	**1.1**	0.51	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5	**3.4**	<0.5	<2.0
MIP-13-2	1/16/2014	96	1.7	0.69	1.7	1.0	1.1	<10	<0.5	<0.5	<0.5	**1.4**	<0.5	<2.0
CPT/MIP-14-2	1/15/2014	<50	0.71	<0.5	<0.5	<0.5	0.95	<10	<0.5	<0.5	<0.5	**3.2**	<0.5	<2.0
CPT/MIP-15-2	1/13/2014	<50	0.57	<0.5	<0.5	<0.5	1.4	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0
MIP-16-2	1/20/2014	<50	**1.0**	0.53	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0
CPT/MIP-17-2	1/14/2014	<50	**1.2**	0.57	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0
ESLs		**100**	**1**	**40**	**13**	**20**	**5**	**12**	**NA**	**NA**	**NA**	**0.5**	**0.05**	**0.17**

Notes:

ESLs	Environmental Screening levels as per SF Bay Region RWQCB-February 2016 (Groundwater is a Current or Potential Source of Drinking Water)
NA	Not listed on the ESL Tables
<:	Below laboratory detection limits

APPENDIX A
Previous Activities

In May 1999, three 10,000-gallon USTs, approximately 250 feet of product piping, and six product dispensers were removed from the Site (Geo-Logic, 1999). A total of 21 soil samples were collected for laboratory analyses from the removal areas, including seven from the east and west sides of the UST removal excavation, at depths ranging from 12 to 14 feet below ground surface (bgs), and 14 from beneath the fuel dispensers and product delivery piping ranging in depth from 2.5 to 3.5 feet bgs. Samples were analyzed for the following: total petroleum hydrocarbons as gasoline (TPH-g); benzene, toluene, ethylbenzene, xylenes (BTEX); and methyl tertiary-butyl ether (MtBE). Analysis results indicated the need for removal of additional soil from product piping areas and the UST removal excavation. Concentrations of TPH-g, BTEX and MtBE in soil samples from the UST removal excavation were elevated relative to those from the product piping and dispenser areas, where concentrations were relatively low. Following overexcavation, three soil samples were collected for laboratory analysis from the enlarged UST removal excavation ranging in depth from 16.5 to 24.5 feet bgs, and one from the product delivery piping at 5 feet bgs. Laboratory analysis detected elevated concentrations in soil samples at 24.5 feet bgs from the UST removal excavation relative to those at 16.5 and 19.5 feet bgs. Low concentrations of petroleum hydrocarbons were detected in the soil sample from the product delivery piping.

In July 1999, one 14,000-gallon UST divided into a 6,000-gallon unit for diesel and an 8,000-gallon unit for gasoline, and one 20,000-gallon UST for gasoline were installed at the site (Geo-Logic, 1999).

On January 3, 2000, ACHCS notified the property owner, Mr. Pazdel, of an unauthorized release that had occurred during removal of old USTs in May 1999. ACHCS requested a preliminary site assessment.

On July 5, 2001, a soil and groundwater investigation was conducted at the Site to delineate the extent of soil and groundwater impact discovered during removal of the USTs, product delivery piping and product dispensers in May 1999 (CSS Environmental Services, 2001). Five soil borings, SB-1 through SB-5, were advanced using direct-push methods, to a maximum depth of 31 feet bgs. Groundwater was encountered in borings at depths ranging from 29 to 30 feet bgs, and stabilized at depths ranging from 17 to 20 feet bgs. Ten soil samples were collected from borings for laboratory analysis of TPH-g, BTEX and MtBE. Analytical results revealed elevated concentrations between 19 and 25.5 feet bgs. Maximum concentrations of TPH-g and BTEX in samples were 470,000 µg/kg, 2,600 µg/kg, 16,000 µg/kg, 12,000 µg/kg, and 73,000 µg/kg, respectively. MtBE was not detected in any soil samples. Grab groundwater samples were collected from each boring for laboratory analysis of TPH-g, BTEX and MtBE. Maximum concentrations of TPH-g and benzene in boring samples were 83,000 µg/L and 19,000 µg/L, respectively. MtBE was detected in four of five grab groundwater samples, at a maximum concentration of 87,000 µg/L.

In April 2002, groundwater monitoring wells MW-1 through MW-5 were installed on the Site to a total depth of 30 feet bgs, and competed with well screens installed between 15 and 30 feet bgs. The wells were installed to evaluate the groundwater flow gradient and the extent of dissolved-phase fuel hydrocarbons in groundwater (SOMA, 2002). Groundwater was first encountered at depths ranging from approximately 25 to 29 feet bgs, and stabilized at depths ranging from 21 to 23 feet bgs. Five soil samples were collected from borings for laboratory analyses of TPH-g, BTEX and MtBE. Results revealed elevated concentrations of TPH-g and BTEX between 21 and 26 feet bgs, coincident with the depth at which groundwater was first encountered in the boreholes. No MtBE was detected in soil samples. Groundwater samples were initially collected from each monitoring well during Second Quarter 2002 (May 2002) for laboratory analyses of TPH-g, BTEX and MtBE (SOMA, 2002a). Maximum concentrations of TPH-g, benzene and MtBE in groundwater samples were 44,000 µg/L, 6,000 µg/L and 12,000 µg/L, respectively. Groundwater was determined to flow south across the Site. Elevated levels of dissolved-phase hydrocarbons in the farthest downgradient monitoring well indicated off-site migration.

Between August and October 2003, a soil and groundwater investigation was conducted to evaluate off-site extent of dissolved-phase hydrocarbon migration with groundwater (SOMA, 2003). The investigation included a sensitive receptor survey to locate water supply wells and/or water bodies within a 2,000-foot radius of the Site, and a conduit study to identify underground utilities adjacent to the Site beneath Freedom Avenue, Fairmont Drive and 153rd Avenue. Soil borings TWB-1 through TWB-6 were advanced to depths ranging from 30 to 44 feet bgs, at locations ranging from 125 to 750 feet hydraulically downgradient from the Site. Fourteen soil samples were collected at depths ranging from 16 to 39 feet bgs for laboratory analysis of TPH-g, BTEX, MtBE and 1,2-dichloroethene (1,2-DCE). Results revealed soil impact off-site to a maximum distance of 265 feet hydraulically downgradient of the Site, at depths ranging from 18 to 31.5 feet bgs. Elevated concentrations were detected at depths ranging from 21.5 to 24.5 feet bgs, approximately 125 feet hydraulically downgradient from the Site. Concentrations of benzene, MtBE and 1,2 DCE were not detected in soil samples. Grab groundwater samples were collected from each boring for laboratory analysis of TPH-g, BTEX, MtBE and 1,2-dichloroethane (1,2-DCA). Maximum concentrations of TPH-g and benzene were 410,000 µg/L and 2,200 µg/L, respectively, detected in a boring 125 feet hydraulically downgradient of the Site. Maximum concentration of MtBE was 34 µg/L, detected in a boring 265 feet hydraulically downgradient of the Site. The investigation resulted in preliminary identification of two water-bearing zones beneath the Site and proximity. The sensitive receptor survey identified 10 wells within 2,000 feet of the Site. Three are located hydraulically downgradient of the Site: one irrigation well and two wells of unknown use. The remaining wells are either hydraulically upgradient or cross-gradient of the Site. No water body was identified within a 0.5-mile distance from the Site. The conduit study revealed two sewer lines beneath Fairmont

Drive and 153rd Avenue; it was determined that neither was submerged by groundwater.

In September 2004, an additional soil and groundwater investigation was conducted to further evaluate the extent of dissolved-phase hydrocarbon migration with groundwater off-site (SOMA 2004). Groundwater monitoring wells MW-6 thru MW-9 were installed downgradient from the Site to total depths ranging from 21 to 33 feet bgs, and completed with well screens ranging from 4 to 15 feet long installed at the base of each well. Groundwater was first encountered at depths ranging from approximately 15 to 20 feet bgs, and stabilized at depths ranging from 12 to 17 feet bgs. Four soil samples were collected from one monitoring well borehole. Soil samples were not collected from other boreholes because of extensive and unexpected lateral lithologic changes encountered between the well boreholes during drilling, necessitating continuous coring that precluded soil sample collection. Collected samples were analyzed for TPH-g and BTEX; neither was detected.

During this investigation, an attempt was made to collect a groundwater sample from an irrigation well hydraulically downgradient from the Site, identified by the sensitive receptor survey conducted between August and October 2003. The irrigation well had been unused for some time and, subsequently, no groundwater sample could be collected.

An attempt was made to locate another well of unknown use hydraulically downgradient from the Site, also identified by the sensitive receptor survey. This well could not be located despite canvassing of the surrounding residential neighborhood with written requests for information. Based on results of this investigation and the previous investigation conducted between August and October 2003, one water-bearing zone was identified to consist of discontinuous water-bearing layers and stringers separated by discontinuous clay lenses of varying thickness. Additionally, a preferential flow pathway study was proposed consisting of a possible buried stream channel trending north to south beneath the eastern portion of the Site, and extending off-site to the south, beneath the intersection of 153rd Avenue, Fairmont Drive and Liberty Avenue, which is hydraulically downgradient from the Site.

On November 21, 2005, ACHCS requested that the property owner submit a workplan for a soil and water investigation by January 21, 2006. It was submitted on December 28, 2005 (SOMA, 2005) and proposed installation of eight cone penetrometer test (CPT), membrane interface probe (MIP) borings to refine hydrogeologic conditions using CPT technology on- and off-site. The purpose of this investigation was to define the horizontal and vertical extent of the soil and groundwater impact on- and off-site using MIP technology, and to collect soil and groundwater samples for laboratory analyses to support MIP findings.

Based on a telephone conversation between SOMA and ACHCS, an addendum to SOMA's December 2005 workplan was prepared and submitted on March 3, 2006. The workplan provided further clarification for advancing the CPT/MIP as requested by ACHCS.

On April 10, 2006, SOMA oversaw drilling of CPT/MIP boreholes. Fisch Environmental, SOMA's subcontractor, used a Geoprobe 6600. Because of unforeseen subsurface drilling conditions, and the fact that Fisch's drilling rig was not strong enough to drill through the hard subsurface materials, drilling could not advance beyond 35 feet bgs in any of the CPT/MIP locations despite three days effort. An ACHCS representative was present during this operation. On April 26, using a hollow stem auger, a CPT calibration borehole was drilled to 47 feet bgs. Because CPT/MIP boreholes could not be advanced to targeted depths, Gregg Drilling was selected to drill CPT/MIP boreholes at a later date, and Fisch's compensation was to be appropriately reduced.

In a letter dated May 29, 2006, ACHCS reduced the quantity of on-site CPT/MIP borings from six to five, altered some boring locations, adjusted depths at which to collect groundwater samples, and requested development of a site conceptual model (SCM) and corrective action plan (CAP) along with an interim remediation and migration control evaluation. ACHCS established a November 30, 2006 deadline for report submittal.

On September 7, 2006, SOMA resumed the field investigation. To characterize site lithology and hydrogeology, and evaluate lateral and vertical distribution of soil and groundwater impact on- and off-site, SOMA supervised advancement of eight CPT/MIP borings by Gregg, using a 25-ton CPT rig. The MIP portion of the study was performed by Fisch utilizing an MIP probe attached to Gregg's CPT probe. After completion of the CPT/MIP program, eight borings were advanced using direct-push drilling methods, in the immediate proximity of the CPT/MIP borings. These borings were advanced to collect soil and groundwater samples for laboratory analyses to support MIP findings.

Investigation results were presented by SOMA in "Additional Soil and Groundwater Investigation Report and Initial Conceptual Site Model, Texaco Gasoline Service Station, 15101 Freedom Avenue, San Leandro, California," dated November 27, 2006. The report also included an interim remediation and migration control evaluation.

In summary, the report described two main water-bearing zones designated as the First and Second water-bearing zones (WBZs). Both WBZs appear to be laterally continuous across the Site and hydraulically downgradient of the Site, and are separated by a laterally continuous aquitard. Moderately weathered fuel hydrocarbons are adsorbed to soil or dissolved in groundwater within the First and Second WBZs. The source area in the First WBZ appears to be in proximity to the location of the former USTs and the existing fuel dispensers in both the

north and southeast portions of the Site. A source area for the Second WBZ is indeterminate because limited data for the Second WBZ was generated by the investigation. The Site is located in an area of primarily residential properties with a commercial property to the east. Population/receptors exposed to fuel hydrocarbons in soil and groundwater of the First WBZ on- and off-site include current and future on-site workers and current off-site commercial workers and residents. Sources are fuel hydrocarbons adsorbed to soil, and dissolved-phase hydrocarbons in groundwater, of the First WBZ. Exposure pathways for on-site receptors are inhalation of volatile emissions from impacted soil and groundwater of the First WBZ. The only exposure pathway for off-site residents appears to be incidental ingestion of groundwater from the First and Second WBZs. The soil interim remediation alternatives evaluated included soil excavation, soil vapor extraction (SVE), and multi-phase extraction (MPE). Groundwater interim remediation alternatives included groundwater extraction, ozone sparging and hydrogen peroxide injection.

ACHCS correspondence dated March 14, 2007 directed that a workplan be prepared to address ACHCS comments contained therein and SOMA's recommendations in the November 27, 2006 report.

A workplan detailing proposed monitoring well installation, soil gas survey and remediation feasibility study was submitted to ACHCS on April 11, 2007 and approved in ACHCS correspondence dated October 18, 2007.

SOMA submitted "Additional Soil and Groundwater Investigation for Remedial Investigation and Feasibility Study" on March 14, 2008. ACHCS comments included in correspondence dated April 25, 2008 were addressed by SOMA's correspondence dated June 9, 2008.

In December 2007 SOMA installed three groundwater monitoring wells within the Second WBZ (MW-1D, MW-2D, and MW-3D) to approximately 60 feet bgs. A soil vapor study was conducted utilizing four soil gas sampling probes (SGS-1 through SGS-4, advanced to 5 feet bgs). Based on results of the soil gas sampling, concentrations of COCs in soil gas at the Site are not considered a significant risk to human health.

In March 2009, ACHCS approved SOMA's CAP and initiated a public comment period for affected stakeholders to comment on SOMA's remedial action plan. On April 27, 2009, SOMA installed extraction wells MPE-1 and MPE-2 onsite. In their May 2009 correspondence, ACHCS approved SOMA's recommendation to decommission MW-8 and MW-9, off-site wells that have consistently demonstrated COCs below ESLs and laboratory detection limits. November 2009, SOMA installed EX-1 and EX-2 off-site, within the downgradient plume and installed a groundwater extraction and treatment system at the Site.

Quarterly and/or Semi-Annual groundwater monitoring/sampling has been regularly conducted at the Site since Second Quarter 2002. Currently there are 14 groundwater monitoring wells, ten on-site and four off-site.

SOMA conducted MPE pilot testing between November 13 and 16, 2007. An estimated VOC mass of 106 lbs was removed during testing, at a mass removal rate of 35 lbs/day over 72 hours. Several week-long and extended MPE events have been conducted at the Site with a total of 2,737 lbs of VOCs being removed as of November 2013.

The groundwater extraction system was initiated on December 9, 2009 and has removed and treated 2,960,274 gallons of groundwater as of February 25, 2014 and approximately 43.51 lbs of hydrocarbons.

In July 20 and 21, 2011, SOMA advanced five soil borings in the vicinity of MW-6 and EX-2 within the First WBZ. TPH-g was detected above environmental screening levels (ESL) published by SB Bay Region RWQCB in DP-4 (located in the sidewalk area) at 24 feet bgs (140 mg/kg). TPH-g in all other soil samples was either below the laboratory-reporting limit or below ESL (100 mg/kg). Toluene was the only other contaminant of concern (COC), and was detected above ESL (2.9 mg/kg) in DP-1 at 20 feet bgs (2.94 mg/kg), and in DP-4 at 24 feet bgs (6.79 mg/kg). TPH-g in grab groundwater samples from advanced soil borings ranged from 1,500 µg/L (DP-3) to 84,000 µg/L (DP-1). Maximum benzene concentration was detected in DP-5 at 290 µg/L; Maximum MtBE and TBA were detected in DP-3 at 150 µg/L and 40 µg/L, respectively, and were below laboratory-detection limits in the other borings.

Based on ACEH directive dated April 22, 2013, SOMA submitted a data gaps workplan along with an updated site conceptual model on July 22, 2013 and an addendum was submitted on October 17, 2013. ACEH approved the workplan on October 30, 2013.

In October 2013, SOMA obtained a sample of free-product from MW-6 and had the laboratory run fingerprinting analysis on it. The laboratory reported that chromatographic pattern for the sample included a wide range of peaks in C6 through C12 range. However, this pattern did not resemble that of TPH-g or any other light-end distillates for which the laboratory has standards.

During January and February 2014, SOMA advanced eleven cone penetrometer test (CPT) and/or membrane interface technology (MIP) borings (MIP-9 through MIP-19) to the south of DP-4 and DP-5 and upgradient of the source on 151st Avenue. DP-6 was installed in the backyard of adjacent residential property and DP-6-SO was installed on-site. An air sample was obtained from the crawl space of the same adjacent property. Based on the results of this investigation, ACEH requested installation of three off-site groundwater monitoring wells, and an additional crawl space air sample.

In September 2014, two 2-inch groundwater monitoring wells (MW-10 and MW-11) were installed off-site in the First WBZ. MW-10 was installed at the northern end of the center median in Fairmont Drive. MW-11 was installed along the eastern side of Fairmont Drive to the south of MIP-12.

In April 2016, three off-site direct-push borings (DP-7 through DP-9) were advanced downgradient of the site to define the downgradient extent of contaminant plume and the off-site more impacted well MW-10 was reconstructed to convert it into a 4-inch remediation well MW-10R.

In May 2016, SOMA submitted work plan to address data collection for Low Threat Closure Policy (LTCP) evaluation.

APPENDIX B
Laboratory Analytical Report

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 279578
ANALYTICAL REPORT

SOMA Environmental Engineering Inc.
6620 Owens Dr.
Pleasanton, CA 94588

Project : 2552
Location : 15101 Freedom Avenue
Level : II

Sample ID	Lab ID
SB-6@3	279578-001
SB-6@6	279578-002
SB-7@3	279578-003
SB-7@6	279578-004

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Tracy Babjar Date: 08/22/2016

Tracy Babjar
Project Manager
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(510) 204-2226

CA ELAP# 2896, NELAP# 4044-001

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**279578**
Client:	**SOMA Environmental Engineering Inc.**
Project:	**2552**
Location:	**15101 Freedom Avenue**
Request Date:	**08/10/16**
Samples Received:	**08/10/16**

This data package contains sample and QC results for four soil samples, requested for the above referenced project on 08/10/16. The samples were received cold and intact.

TPH-Purgeables and/or BTXE by GC (EPA 8015B):
No analytical problems were encountered.

Volatile Organics by GC/MS (EPA 8260B):
High response was observed for tert-butyl alcohol (TBA) in the CCV analyzed 08/12/16 10:40; affected data was qualified with "b". High recoveries were observed for methyl tert-amyl ether (TAME) and tert-butyl alcohol (TBA) in the BS for batch 237989; the associated RPDs were within limits, and these analytes were not detected at or above the RL in the associated samples. No other analytical problems were encountered.

CHAIN OF CUSTODY

Curtis & Tompkins, Ltd
Analytical Laboratory Since 1878
2323 Fifth Street
Berkeley, CA 94710
(510)486-0900 Phone
(510)486-0532 Fax

LOGIN # 279578

Sampler: Davoud bazrpash

Project No: 2552

Report To: Joyce Bobek

Project Name:15101 Freedom Ave.,San Leandr **Company :** SOMA Environmental

Turnaround Time: Standard

Telephone: 925-734-6400

Fax: 925-734-6401

Lab No.	Sample ID.	Sampling Date Time	Matrix: Soil	Water	Waste		# of Containers	Preservative: HCL	H_2SO_4	HNO_3	ICE		Analyses: TPHg EPA 8015	Gasoline Oxygenates & Lead Scavengers (including TBA, TAME, ETBE, DIPE, 1,2-DCA, EDB), Ethanol	BTEX, MtBE 8260B									
	SB-6@3	8/10/2016 12:55	*				6" Sleeve				*		*	*	*									
	SB-6@6	8/10/2016 13:40	*				6" Sleeve				*		*	*	*									
	SB-7@3	8/10/2016 11:30	*				6" Sleeve				*		*	*	*									
	SB-7@6	8/10/2016 12:10	*				6" Sleeve				*		*	*	*									

Notes: **EDF OUTPUT REQUIRED**

RELINQUISHED BY:	RECEIVED BY:
DB 8/10/16 14:29 DATE/TIME	8/10/16 1429 DATE/TIME
DATE/TIME	DATE/TIME
DATE/TIME	DATE/TIME

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 279578 Date Received 8/10/16 Number of coolers 1
Client SOMA Project 2552

Date Opened 8/10/16 By (print) DJA (sign)
Date Logged in ↓ By (print) DTN (sign) dnguyen
Date Labelled ↓ By (print) ↓ (sign) ↓

1. Did cooler come with a shipping slip (airbill, etc)_____ YES (NO)
   Shipping info_____
2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☒ NO
   How many _____ Name_____ Date_____
2B. Were custody seals intact upon arrival? _____ YES NO N/A
3. Were custody papers dry and intact when received?_____ YES NO
4. Were custody papers filled out properly (ink, signed, etc)? _____ YES NO
5. Is the project identifiable from custody papers? (If so fill out top of form)___ YES NO
6. Indicate the packing in cooler: (if other, describe)_____

☐ Bubble Wrap ☐ Foam blocks ☐ Bags ☒ None
☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C)_____

☐ Temperature blank(s) included? ☐ Thermometer#_____ ☐ IR Gun#_____

☒ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present?_____ YES (NO)
   If YES, what time were they transferred to freezer?_____
9. Did all bottles arrive unbroken/unopened?_____ YES NO
10. Are there any missing / extra samples? _____ YES (NO)
11. Are samples in the appropriate containers for indicated tests? _____ YES NO
12. Are sample labels present, in good condition and complete? _____ YES NO
13. Do the sample labels agree with custody papers? _____ YES NO
14. Was sufficient amount of sample sent for tests requested? _____ YES NO
15. Are the samples appropriately preserved? _____ YES NO N/A
16. Did you check preservatives for all bottles for each sample? _____ YES NO N/A
17. Did you document your preservative check? (pH strip lot#_____) YES NO N/A
18. Did you change the hold time in LIMS for unpreserved VOAs? _____ YES NO N/A
19. Did you change the hold time in LIMS for preserved terracores? _____ YES NO N/A
20. Are bubbles > 6mm absent in VOA samples? _____ YES NO N/A
21. Was the client contacted concerning this sample delivery? _____ YES (NO)
   If YES, Who was called?_____ By_____ Date:_____

COMMENTS _____

Curtis & Tompkins, Ltd.

Detections Summary for 279578

Results for any subcontracted analyses are not included in this summary.

Client : SOMA Environmental Engineering Inc.
Project : 2552
Location : 15101 Freedom Avenue

Client Sample ID : SB-6@3 Laboratory Sample ID : 279578-001

No Detections

Client Sample ID : SB-6@6 Laboratory Sample ID : 279578-002

No Detections

Client Sample ID : SB-7@3 Laboratory Sample ID : 279578-003

No Detections

Client Sample ID : SB-7@6 Laboratory Sample ID : 279578-004

No Detections

Curtis & Tompkins, Ltd.

Total Volatile Hydrocarbons

Lab #:	279578	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2552	Analysis:	EPA 8015B
Matrix:	Soil	Diln Fac:	1.000
Units:	mg/Kg	Sampled:	08/10/16
Basis:	as received	Received:	08/10/16

Field ID: SB-6@3 Batch#: 237951
Type: SAMPLE Analyzed: 08/11/16
Lab ID: 279578-001

Analyte	Result	RL
Gasoline C7-C12	ND	1.0

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	91	78-138

Field ID: SB-6@6 Batch#: 237988
Type: SAMPLE Analyzed: 08/12/16
Lab ID: 279578-002

Analyte	Result	RL
Gasoline C7-C12	ND	0.99

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	112	78-138

Field ID: SB-7@3 Batch#: 237988
Type: SAMPLE Analyzed: 08/12/16
Lab ID: 279578-003

Analyte	Result	RL
Gasoline C7-C12	ND	1.0

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	105	78-138

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Total Volatile Hydrocarbons

Lab #:	279578	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2552	Analysis:	EPA 8015B
Matrix:	Soil	Diln Fac:	1.000
Units:	mg/Kg	Sampled:	08/10/16
Basis:	as received	Received:	08/10/16

Field ID: SB-7@6 Batch#: 237988
Type: SAMPLE Analyzed: 08/12/16
Lab ID: 279578-004

Analyte	Result	RL
Gasoline C7-C12	ND	0.99

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	113	78-138

Type: BLANK Batch#: 237951
Lab ID: QC846891 Analyzed: 08/11/16

Analyte	Result	RL
Gasoline C7-C12	ND	1.0

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	91	78-138

Type: BLANK Batch#: 237988
Lab ID: QC847047 Analyzed: 08/12/16

Analyte	Result	RL
Gasoline C7-C12	ND	1.0

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	110	78-138

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Total Volatile Hydrocarbons

Lab #:	279578	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2552	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC846892	Batch#:	237951
Matrix:	Soil	Analyzed:	08/11/16
Units:	mg/Kg		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1.000	0.9727	97	80-121

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	98	78-138

Curtis & Tompkins, Ltd.

Batch QC Report

Total Volatile Hydrocarbons

Lab #:	279578	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2552	Analysis:	EPA 8015B
Field ID:	SB-6@3	Diln Fac:	1.000
MSS Lab ID:	279578-001	Batch#:	237951
Matrix:	Soil	Sampled:	08/10/16
Units:	mg/Kg	Received:	08/10/16
Basis:	as received	Analyzed:	08/12/16

Type: MS Lab ID: QC846895

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	0.1095	10.31	6.464	62	50-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	96	78-138

Type: MSD Lab ID: QC846896

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	9.901	6.013	60	50-120	3	31

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	97	78-138

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Total Volatile Hydrocarbons

Lab #:	279578	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2552	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC847048	Batch#:	237988
Matrix:	Soil	Analyzed:	08/12/16
Units:	mg/Kg		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1.000	1.109	111	80-121

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	116	78-138

Curtis & Tompkins, Ltd.

Batch QC Report

Total Volatile Hydrocarbons

Lab #:	279578	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2552	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Diln Fac:	1.000
MSS Lab ID:	279607-017	Batch#:	237988
Matrix:	Soil	Sampled:	08/09/16
Units:	mg/Kg	Received:	08/11/16
Basis:	as received	Analyzed:	08/12/16

Type: MS Lab ID: QC847049

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	0.1889	10.00	7.863	77	50-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	113	78-138

Type: MSD Lab ID: QC847050

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	9.804	7.307	73	50-120	5	31

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	116	78-138

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

BTXE & Oxygenates

Lab #:	279578	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2552	Analysis:	EPA 8260B
Field ID:	SB-6@3	Diln Fac:	0.9524
Lab ID:	279578-001	Batch#:	237989
Matrix:	Soil	Sampled:	08/10/16
Units:	ug/Kg	Received:	08/10/16
Basis:	as received	Analyzed:	08/12/16

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	95
MTBE	ND	4.8
Isopropyl Ether (DIPE)	ND	4.8
Ethyl tert-Butyl Ether (ETBE)	ND	4.8
1,2-Dichloroethane	ND	4.8
Benzene	ND	4.8
Methyl tert-Amyl Ether (TAME)	ND	4.8
Ethanol	ND	950
Toluene	ND	4.8
1,2-Dibromoethane	ND	4.8
Ethylbenzene	ND	4.8
m,p-Xylenes	ND	4.8
o-Xylene	ND	4.8
Naphthalene	ND	4.8

Surrogate	%REC	Limits
Dibromofluoromethane	104	78-134
1,2-Dichloroethane-d4	111	80-138
Toluene-d8	98	80-120
Bromofluorobenzene	104	78-123

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

BTXE & Oxygenates

Lab #:	279578	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2552	Analysis:	EPA 8260B
Field ID:	SB-6@6	Diln Fac:	0.9766
Lab ID:	279578-002	Batch#:	237989
Matrix:	Soil	Sampled:	08/10/16
Units:	ug/Kg	Received:	08/10/16
Basis:	as received	Analyzed:	08/12/16

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	98
MTBE	ND	4.9
Isopropyl Ether (DIPE)	ND	4.9
Ethyl tert-Butyl Ether (ETBE)	ND	4.9
1,2-Dichloroethane	ND	4.9
Benzene	ND	4.9
Methyl tert-Amyl Ether (TAME)	ND	4.9
Ethanol	ND	980
Toluene	ND	4.9
1,2-Dibromoethane	ND	4.9
Ethylbenzene	ND	4.9
m,p-Xylenes	ND	4.9
o-Xylene	ND	4.9
Naphthalene	ND	4.9

Surrogate	%REC	Limits
Dibromofluoromethane	104	78-134
1,2-Dichloroethane-d4	111	80-138
Toluene-d8	97	80-120
Bromofluorobenzene	103	78-123

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

BTXE & Oxygenates

Lab #:	279578	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2552	Analysis:	EPA 8260B
Field ID:	SB-7@3	Diln Fac:	0.9488
Lab ID:	279578-003	Batch#:	237989
Matrix:	Soil	Sampled:	08/10/16
Units:	ug/Kg	Received:	08/10/16
Basis:	as received	Analyzed:	08/12/16

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	95
MTBE	ND	4.7
Isopropyl Ether (DIPE)	ND	4.7
Ethyl tert-Butyl Ether (ETBE)	ND	4.7
1,2-Dichloroethane	ND	4.7
Benzene	ND	4.7
Methyl tert-Amyl Ether (TAME)	ND	4.7
Ethanol	ND	950
Toluene	ND	4.7
1,2-Dibromoethane	ND	4.7
Ethylbenzene	ND	4.7
m,p-Xylenes	ND	4.7
o-Xylene	ND	4.7
Naphthalene	ND	4.7

Surrogate	%REC	Limits
Dibromofluoromethane	100	78-134
1,2-Dichloroethane-d4	112	80-138
Toluene-d8	97	80-120
Bromofluorobenzene	101	78-123

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

BTXE & Oxygenates

Lab #:	279578	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2552	Analysis:	EPA 8260B
Field ID:	SB-7@6	Diln Fac:	0.9653
Lab ID:	279578-004	Batch#:	237989
Matrix:	Soil	Sampled:	08/10/16
Units:	ug/Kg	Received:	08/10/16
Basis:	as received	Analyzed:	08/12/16

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	97
MTBE	ND	4.8
Isopropyl Ether (DIPE)	ND	4.8
Ethyl tert-Butyl Ether (ETBE)	ND	4.8
1,2-Dichloroethane	ND	4.8
Benzene	ND	4.8
Methyl tert-Amyl Ether (TAME)	ND	4.8
Ethanol	ND	970
Toluene	ND	4.8
1,2-Dibromoethane	ND	4.8
Ethylbenzene	ND	4.8
m,p-Xylenes	ND	4.8
o-Xylene	ND	4.8
Naphthalene	ND	4.8

Surrogate	%REC	Limits
Dibromofluoromethane	101	78-134
1,2-Dichloroethane-d4	108	80-138
Toluene-d8	98	80-120
Bromofluorobenzene	101	78-123

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

BTXE & Oxygenates

Lab #:	279578	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2552	Analysis:	EPA 8260B
Matrix:	Soil	Batch#:	237989
Units:	ug/Kg	Analyzed:	08/12/16
Diln Fac:	1.000		

Type: BS Lab ID: QC847053

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	196.9 b	158 *	49-131
MTBE	25.00	28.27	113	61-122
Isopropyl Ether (DIPE)	25.00	23.75	95	54-129
Ethyl tert-Butyl Ether (ETBE)	25.00	28.72	115	60-120
1,2-Dichloroethane	25.00	26.93	108	78-136
Benzene	25.00	25.01	100	80-123
Methyl tert-Amyl Ether (TAME)	25.00	31.38	126 *	70-120
Toluene	25.00	24.05	96	80-120
1,2-Dibromoethane	25.00	27.17	109	80-124
Ethylbenzene	25.00	24.27	97	80-122
m,p-Xylenes	50.00	49.53	99	80-127
o-Xylene	25.00	24.13	97	80-125

Surrogate	%REC	Limits
Dibromofluoromethane	102	78-134
1,2-Dichloroethane-d4	109	80-138
Toluene-d8	97	80-120
Bromofluorobenzene	100	78-123

Type: BSD Lab ID: QC847054

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	153.2 b	123	49-131	25	40
MTBE	25.00	25.57	102	61-122	10	26
Isopropyl Ether (DIPE)	25.00	22.90	92	54-129	4	24
Ethyl tert-Butyl Ether (ETBE)	25.00	27.06	108	60-120	6	24
1,2-Dichloroethane	25.00	25.14	101	78-136	7	21
Benzene	25.00	24.12	96	80-123	4	21
Methyl tert-Amyl Ether (TAME)	25.00	29.18	117	70-120	7	22
Toluene	25.00	23.85	95	80-120	1	20
1,2-Dibromoethane	25.00	25.31	101	80-124	7	21
Ethylbenzene	25.00	23.95	96	80-122	1	20
m,p-Xylenes	50.00	48.67	97	80-127	2	20
o-Xylene	25.00	23.67	95	80-125	2	20

Surrogate	%REC	Limits
Dibromofluoromethane	101	78-134
1,2-Dichloroethane-d4	103	80-138
Toluene-d8	98	80-120
Bromofluorobenzene	100	78-123

*= Value outside of QC limits; see narrative
b= See narrative
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

BTXE & Oxygenates

Lab #:	279578	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2552	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC847055	Batch#:	237989
Matrix:	Soil	Analyzed:	08/12/16
Units:	ug/Kg		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	100
MTBE	ND	5.0
Isopropyl Ether (DIPE)	ND	5.0
Ethyl tert-Butyl Ether (ETBE)	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Methyl tert-Amyl Ether (TAME)	ND	5.0
Ethanol	ND	1,000
Toluene	ND	5.0
1,2-Dibromoethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Naphthalene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	100	78-134
1,2-Dichloroethane-d4	106	80-138
Toluene-d8	97	80-120
Bromofluorobenzene	103	78-123

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

BTXE & Oxygenates

Lab #:	279578	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2552	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	237989
MSS Lab ID:	279653-004	Sampled:	08/11/16
Matrix:	Soil	Received:	08/11/16
Units:	ug/Kg	Analyzed:	08/12/16
Basis:	as received		

Type: MS Diln Fac: 0.9294
Lab ID: QC847101

Analyte	MSS Result	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	<7.842	232.3	272.5 b	117	44-120
MTBE	<0.2994	46.47	48.85	105	49-120
Isopropyl Ether (DIPE)	<0.2938	46.47	45.72	98	46-120
Ethyl tert-Butyl Ether (ETBE)	<0.2061	46.47	54.82	118	48-120
1,2-Dichloroethane	<0.2350	46.47	45.51	98	55-124
Benzene	<0.4986	46.47	42.47	91	57-120
Methyl tert-Amyl Ether (TAME)	<0.3541	46.47	55.81	120	52-120
Toluene	<0.5359	46.47	41.18	89	51-120
1,2-Dibromoethane	<0.2557	46.47	43.35	93	51-120
Ethylbenzene	<0.4819	46.47	41.34	89	45-120
m,p-Xylenes	<0.6551	92.94	81.74	88	45-123
o-Xylene	<0.5225	46.47	40.62	87	44-122

Surrogate	%REC	Limits
Dibromofluoromethane	105	78-134
1,2-Dichloroethane-d4	106	80-138
Toluene-d8	98	80-120
Bromofluorobenzene	99	78-123

Type: MSD Diln Fac: 0.8993
Lab ID: QC847102

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	224.8	259.9 b	116	44-120	1	46
MTBE	44.96	46.04	102	49-120	3	40
Isopropyl Ether (DIPE)	44.96	43.03	96	46-120	3	41
Ethyl tert-Butyl Ether (ETBE)	44.96	51.01	113	48-120	4	40
1,2-Dichloroethane	44.96	44.96	100	55-124	2	41
Benzene	44.96	43.09	96	57-120	5	44
Methyl tert-Amyl Ether (TAME)	44.96	53.60	119	52-120	1	36
Toluene	44.96	40.89	91	51-120	3	47
1,2-Dibromoethane	44.96	43.91	98	51-120	5	45
Ethylbenzene	44.96	41.13	91	45-120	3	55
m,p-Xylenes	89.93	81.58	91	45-123	3	53
o-Xylene	44.96	40.43	90	44-122	3	55

Surrogate	%REC	Limits
Dibromofluoromethane	105	78-134
1,2-Dichloroethane-d4	108	80-138
Toluene-d8	97	80-120
Bromofluorobenzene	100	78-123

b= See narrative
RPD= Relative Percent Difference