



ENVIRONMENTAL ENGINEERING, INC.
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May 16, 2016

RECEIVED

By Alameda County Environmental Health 1:56 pm, May 16, 2016

Mr. Mark Detterman
Alameda County Health Care Services Agency
Environmental Health Services, Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Workplan to Install a Boring for Shallow Soil Sample Collection at
15101 Freedom Avenue, San Leandro, California, **STID 4473/RO0000473**

Dear Mr. Detterman:

SOMA has prepared this letter work plan to address the ACEH's concerns about insufficient data for Low Threat Closure Policy (LTCP) evaluation. Based on the county directive dated March 8, 2016, the site fails the LTCP Media specific criteria for Vapor intrusion to indoor air and the Media-Specific Criteria for Direct Contact due to the lack of shallow soil samples collected from beneath the off-site residence.

SOMA had collected shallow soil samples from one on-site location (DP-6-SO) on February 6, 2014. Two soil samples were collected at 3 feet and 6 feet to satisfy LTCP requirements. The laboratory analytical showed that all contaminants of concern were below laboratory reporting limits in both soil samples (Table 1).

Based on ACEH's concerns, SOMA proposes to collect shallow soil samples from beneath the backyard of the off-site residential property adjacent to the southwestern property boundary.

Prior to initiating field activities, SOMA will obtain required drilling permit from the Alameda County Public Works Agency and submit drilling notifications. SOMA will also request access into the backyard of this residence from the property owner/occupant.

SOMA will visit the site and mark boring locations using chalk-based white paint and then contact Underground Service Alert (USA) to verify that drilling areas are clear of underground utilities. Following USA clearance, SOMA will retain a private utility locator to survey proposed drilling areas and locate any additional subsurface conduits.

One shallow boring (SB-6) will be advanced at the location illustrated in Figure 1 utilizing hand auger due to accessibility issues. Two shallow samples between the depth of 0 to 5 feet bgs and 5 to 10 feet bgs will be collected from the boring. Each sample will be labeled with a unique sample identifier and preserved on ice pending delivery to a certified analytical laboratory. All samples will be delivered to the laboratory for chemical analysis under appropriate chain-of-custody protocol.

Following soil sampling, the boring will be destroyed with a neat cement grout mixture, tremmied into place, and completed at the surface with materials to match existing grade. Soil samples will be submitted to a California state-certified environmental laboratory for chemical analysis of the following:

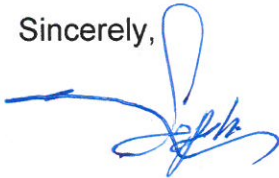
- Total petroleum hydrocarbons as gasoline (TPH-g)
- Benzene, toluene, ethylbenzene, total xylenes (collectively termed BTEX)
- Naphthalene
- Fuel oxygenates, additives and lead scavengers including methyl tertiary-butyl ether (MtBE), tertiary-butyl alcohol (TBA), ethyl tertiary-butyl ether (ETBE), diisopropyl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

All analyses will be conducted using USEPA Method 8260B.

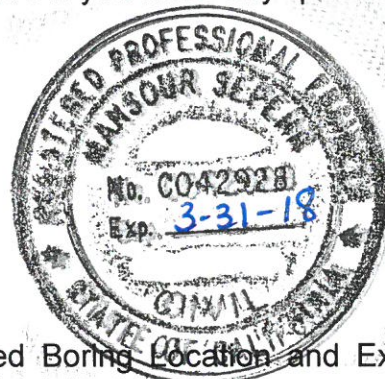
If SOMA is able to obtain the access authorization from the property owner of the residence and a drilling permit in time, the results of this investigation will be reported along with the next groundwater monitoring event report.

Please do not hesitate to call me at 925-734-6400 if you have any questions or comments.

Sincerely,



Mansour Sepehr, PhD, PE



Attached: Figure 1-Site Map Showing Proposed Boring Location and Existing Site Features; Tables 1- Historical Soil Sample Analytical Results

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".

A handwritten signature in cursive script, reading "M. Pazdel", written over a horizontal line.

Mohammad Pazdel
1770 Pistacia Court
Fairfield, California 94533
Responsible Party

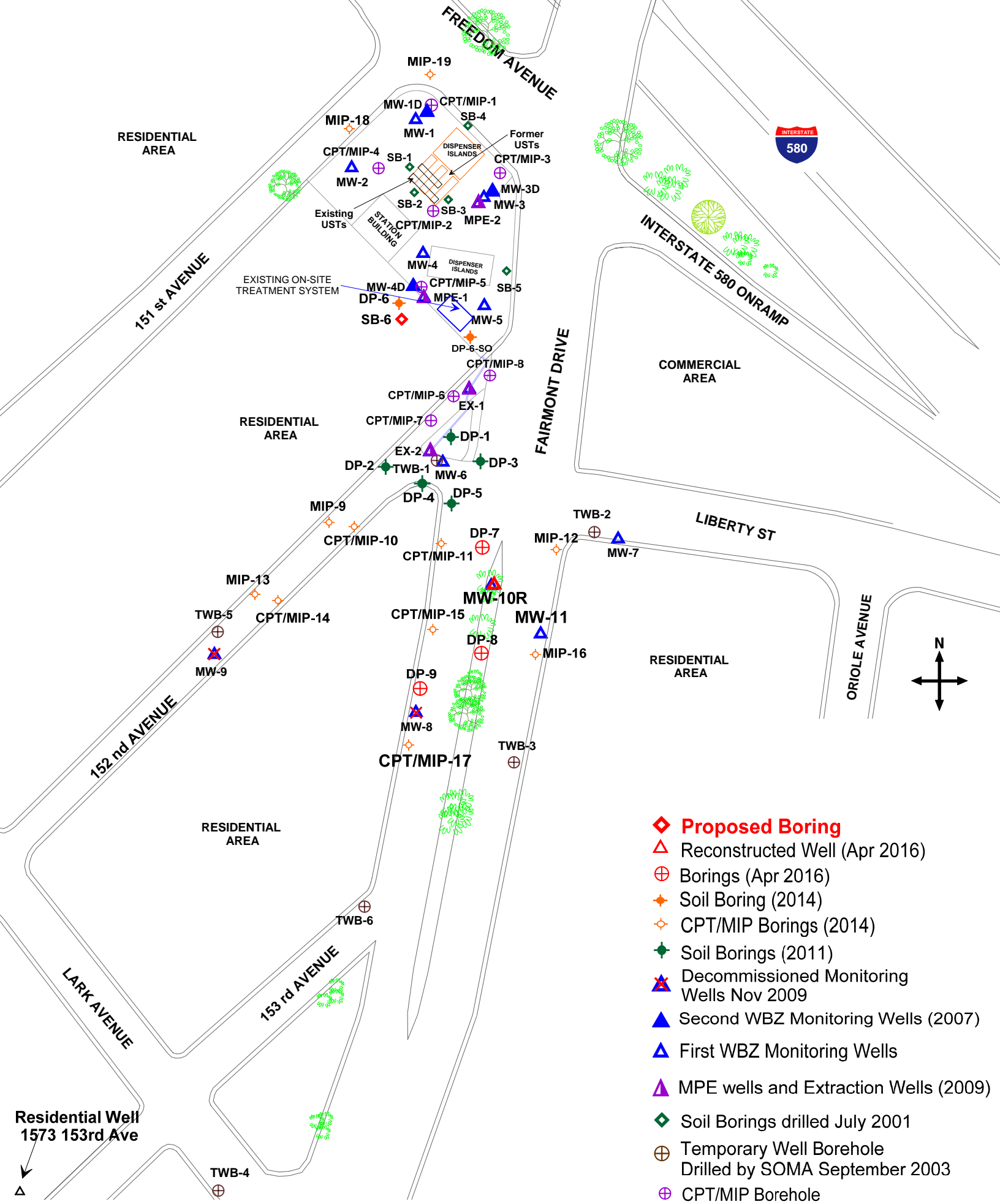
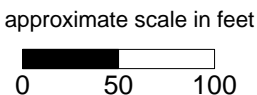


Figure 1: Site Map Showing Proposed Boring Location and Existing Site Features



Residential Well
1573 153rd Ave

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	<0.094	<0.0047	<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	<0.099	<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	<0.096	<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	<0.098	<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
MIP-13	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
	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
CPT/MIP-14	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
	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
CPT/MIP-15	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
	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	<0.093	<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
ESLs (mg/Kg)		Residential	100	0.044	2.9	1.4	2.3	0.023	0.075	NA	NA	NA	0.0045	0.00033	0.033
		Commercial	500	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 (Groundwater is a Current or Potential Source of Drinking Water)
- NA Not listed on the ESL Tables
- < Below laboratory detection limits