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December 10, 2015

Lisa Babcock, P.G., C.E.G., Fund Manger  
Underground Storage Tank Cleanup Fund  
State Water Resources Control Board  
Division of Financial Assistance  
P.O. Box 944212  
Sacramento, CA 94244-2120

**RE: UNDERGROUND STORAGE TANK CLEANUP FUND (FUND) REVISED FINAL  
STAFF DECISION TO ACCEPT CLAIM: CLAIM NUMBER 19748 FOR SITE ADDRESS  
645 4<sup>th</sup> STREET, OAKLAND**

Dear Ms. Babcock,

First, thank you again for all the assistance you and staff have provided in processing the USTCF (Fund) application by Terradev Jefferson LLC (Terradev) for the above referenced claim.

This letter responds to the Fund eligibility determination (undated) Micah Reich forwarded to me by email on November 18, 2015.

As I believe you are familiar, I have worked with Fund staff and claimants since program inception, and have participated in legislative and internal initiatives in service of the Fund mission, process improvement, and the fiscal health and longevity of the Fund itself. I am a steadfast believer in the program and the substantial contribution its operation makes to human/environmental health and water quality.

Respectfully, it is from this perspective that I must express great dismay with the determination described in the Fund transmittal of middle November. As documented below, the basis for the denial of a substantial (50%) portion of the referenced claim's eligibility is without technical merit in its entirety. I fully appreciate and understand the Fund's desire to act in the interest of both the claimant and the Fund so as to ensure fair treatment and the sustenance of funding resources. This noted, Fund staff must invest sufficient effort in case analysis to reach a technically reasonable and defensible decision. To do otherwise (as we observe here) is to waste both Fund and claimant resources in an insensitive and unnecessary fashion.

Following your review of this material, should you continue to believe that this claim merits anything other than 100% reimbursement, we request a meeting with the technical review staff and Fund management to discuss this matter further.

Each of the "issues" raised in the November letter are addressed below as responses to excerpts from the body of the letter's "Discussion." Attachments from relevant documents are provided for reference.

*1. The eligible underground storage tank (UST) system for this claim is a 1,000-gallon UST which was reportedly operated by an unknown business before 1950.*

This response is material only for the sake of correcting a factual inaccuracy – nothing in the technical record "reports" definitively that the UST at the subject site was operated by an unknown business before 1950. The only substantive information pertaining to prior owners/operators is presented in the 2006 Phase I Environmental Site Assessment (ESA) by ERAS. The 2006 ESA updates a 1999 ESA, also by ERAS. In the 2006 ESA report ERAS documents a 1999 interview of a representative related to the family that owned the subject property from the 1950s to the 1990s. This representative, who himself does not appear to have direct knowledge of operations during this period, reports that he knows of no UST at the subject site.

This single assertion by a representative of the entity that plausibly views itself as a potentially responsible party must be taken as an assertion only, not as fact. For the purposes of this review, the UST was discovered during renovation work in 2006 and was installed/operated at a date and for a period before 1999 (the date of the earlier ESA which, like the 2006 ESA, did not identify the UST). No other installation/operation-related conclusion can be made from the available technical record.

Fund staff may access the ESA via the on-line environmental case database maintained by Alameda County. From the November Fund letter it appears as if staff confined their review of material to GeoTracker alone. Due to the age of the pertinent cases/documents the Alameda County database is far more complete and useful than GeoTracker.

*2. According to GeoTracker, there are other UST releases upgradient and in the vicinity of the subject site. Thus, there is a single occurrence from the subject 1,000 gallon UST, with a corrective action eligibility date of September 2006, which is the date the 1,000-gallon UST was abandoned in place and evidence of a release was confirmed by tank pit soil samples. Costs incurred for corrective action due to the release from the subject UST are eligible. Costs for corrective action for releases from the other USTs are not eligible.*

The very general and unsubstantiated first sentence of the paragraph copied above attempts to make a foundation for the eligibility discussion that follows. Please

refer to Figure 1 (attached) which shows a screen-shot of the GeoTracker map referenced by staff. Note that there are two cases in reasonably close proximity to the subject site. Only one of the two can be reasonably described as "upgradient." What staff fails to note is:

a) The case for the Grove Auto release north of the Terradev property is closed. The UST at the Grove property were taken out of service in 1983 and remedial action (excavation) conducted in 1988. Grove groundwater investigation and monitoring showed the release to be confined to the Grove property itself. As the tanks at Grove were removed prior to the use of MtBE in any market (1987 was the year MtBE was first used as a gasoline additive, with MtBE as a percent of fuel increasing until the middle 1990s) the MtBE detection at Terradev cannot be attributed to Grove.

By omitting these important facts Fund staff misrepresents the Grove release, and suggest that it may be a candidate for comingling with the Terradev contamination. There is absolutely no technical data to support this assertion.

b) The Allen property release exists to the west and laterally away hydrogeologically from the Terradev property, and like Grove, the UST case at this facility is closed. The UST at Allen was removed from service (abandoned in place) in 1991 and, like Grove, investigation and monitoring show the contamination associated with this release to be confined to the Allen site.

The second attachment to this letter contains figures and tables from Bluerock showing the results of analysis of groundwater samples from the Allen site and Terradev. As shown, the Allen release is of limited extent and contains no MtBE.

As with the Grove case, through the omission of technical facts Fund staff leads a reader to believe that the Allen case is a plausible contributor to contamination at Terradev. And again, as with Grove, this is simply not the truth.

*3. Data indicate that the newer release that occurred from an upgradient source has commingled with the release from the subject UST. MTBE was found a [sic] the subject site, which was in use in the mid-1990s and early 2000s, as well as elevated TPH-g and benzene concentrations detected in SB-7 and SB-8 upgradient of the site. It is clear that nearby petroleum hydrocarbon sources have contributed and commingled with the subject UST release. Due to the commingling of plumes, the Fund has determined that a reasonable and equitable 50 percent of corrective action costs associated with this claim will be eligible for reimbursement.*

The first sentence of the paragraph copied above builds on the insubstantial technical foundation and attempts to reinforce that either the Grove or Allen property is a source for some of the contamination beneath the Terradev property.

a. As described above – this is not accurate.

b. Relatively high concentrations of MtBE were measured in a single grab groundwater sample (B-6) collected from a temporary point installed in the southern portion of the Terradev property (see Attachment 2). The verbiage used by Fund staff suggests, however, that MtBE contamination is pervasive. While the occurrence of MtBE is both curious and noteworthy given the presumed period of Terradev UST operation and the known operational periods for the proximal case sites – MtBE contamination is neither pervasive nor the contaminant driving Terradev response/oversight activity.

c. As noted by Fund staff, gasoline contamination was detected in SB-7 and 8. While these borings are as staff asserts – upgradient – they are only about 25 feet upgradient in a hydrogeologic setting that is characterized by a fairly flat hydraulic gradient. This gradient and a dispersion gradient commonly associated with higher-strength releases are reasonable explanations for the presence of dissolved contamination in the proximal upgradient direction.

Fund staff makes no mention of the April 22, 2015 letter from the Alameda County regulator finding that the contamination in SB-7 and 8 are likely related to the Terradev release (Attachment 3). Staff ignore this, and conclude for themselves that this contamination must be associated with an off-site source. Staff provides no evidence to support this conclusion.

d. For emphasis, the second to last sentence of the Fund determination is repeated here:

*It is clear that nearby petroleum hydrocarbon sources have contributed and commingled with the subject UST release.*

As detailed above, this is far from clear. In fact, the record is fairly clear with respect to the opposite, showing that due to their age and as proven by respective case-related testing, neither site is a contributor to contamination measured at Terradev.

e. For emphasis, the last sentence in the determination is repeated here:

*Due to the commingling of plumes, the Fund has determined that a reasonable and equitable 50 percent of corrective action costs associated with this claim will be eligible for reimbursement.*

Not only does the Fund determination mislead with respect to off-site contribution, it goes so far as to allocate a percentage responsibility with absolutely no discussion as to the origin of the percentage set-aside.

Fund regulations are clear, monies spent mitigating conditions unrelated to a candidate release are ineligible for reimbursement. The intent of this rule is obvious and equitable. This recognized, it is absolutely necessary for Fund staff to take their responsibility seriously, and in situations where a comingled plume is a possibility, invest the time and effort required to support an allocation that is technically defensible and makes sense.

Here the Fund does neither.

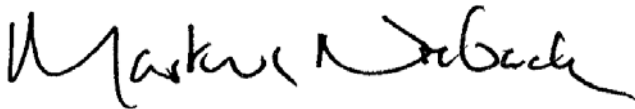
While it is true that the presence of an elevated concentration of MtBE in a restricted area of the property is somewhat confusing, the magnitude of the release near the Terradev UST and the need for its mitigation are straightforward. No expense has been incurred in association with the detected MtBE that would not have already been incurred while mitigating the contamination associated with the Terradev UST.

Fund staff offers no evidence that expense has been incurred in association with any contamination other than that originating from the UST on the Terradev property. Staff simply says that 50% of project costs are deemed ineligible for reimbursement. This "conclusion" must be revisited.

We fully understand and appreciate the fiscal pressure that comes with the administration of a program such as the USTCF. We trust also that you can understand the pressures experienced by an RP, and that you will take the time to reexamine the assertions in the November letter. Again, should you not agree that important details were overlooked during the initial technical review, we request that a meeting be scheduled with staff and senior management to discuss.

Thank you again for your assistance.

Sincerely,

A handwritten signature in black ink that reads "Markus Niebanck". The signature is fluid and cursive, with the first name "Markus" and last name "Niebanck" clearly distinguishable.

Markus B. Niebanck, PG  
Principal

Attachments

cc:

Terradev Jefferson, LLC  
Attn: Sara May  
580 Second Street  
Oakland, CA 94607

Jerry Wickham  
Alameda County LOP  
1131 Harbor Bay Parkway, 2nd Fl.  
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Lu Anne Rolland, USTCF  
[lrolland@waterboards.ca.gov](mailto:lrolland@waterboards.ca.gov)

**ATTACHMENT 1**

**Geotracker Screen Image Showing Nearby UST Cases**

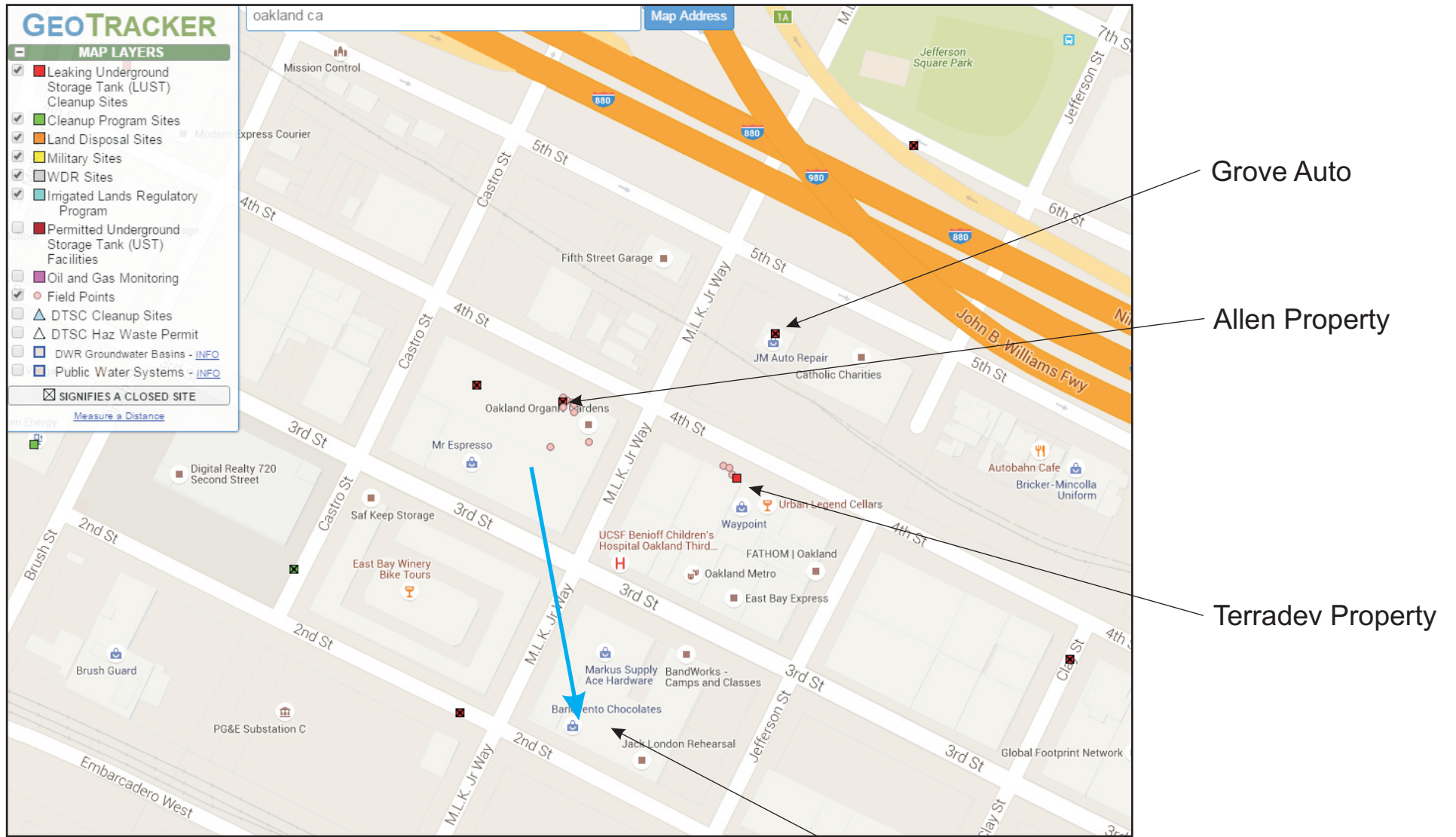


Figure 1 - UST Sites on Geotracker

Terradev Property - 645 4th Street  
Oakland, CA

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Groundwater Flow Direction

Grove Auto

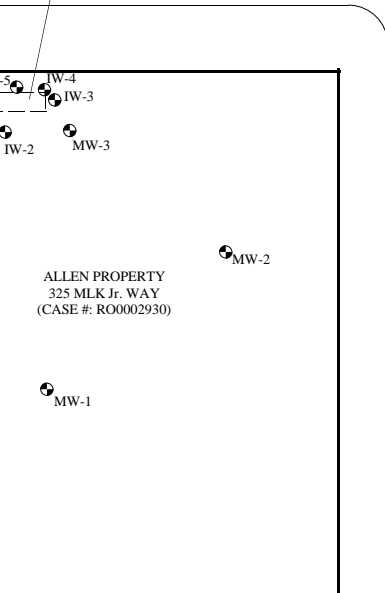
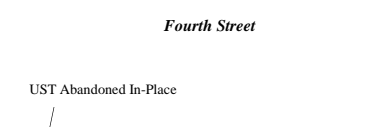
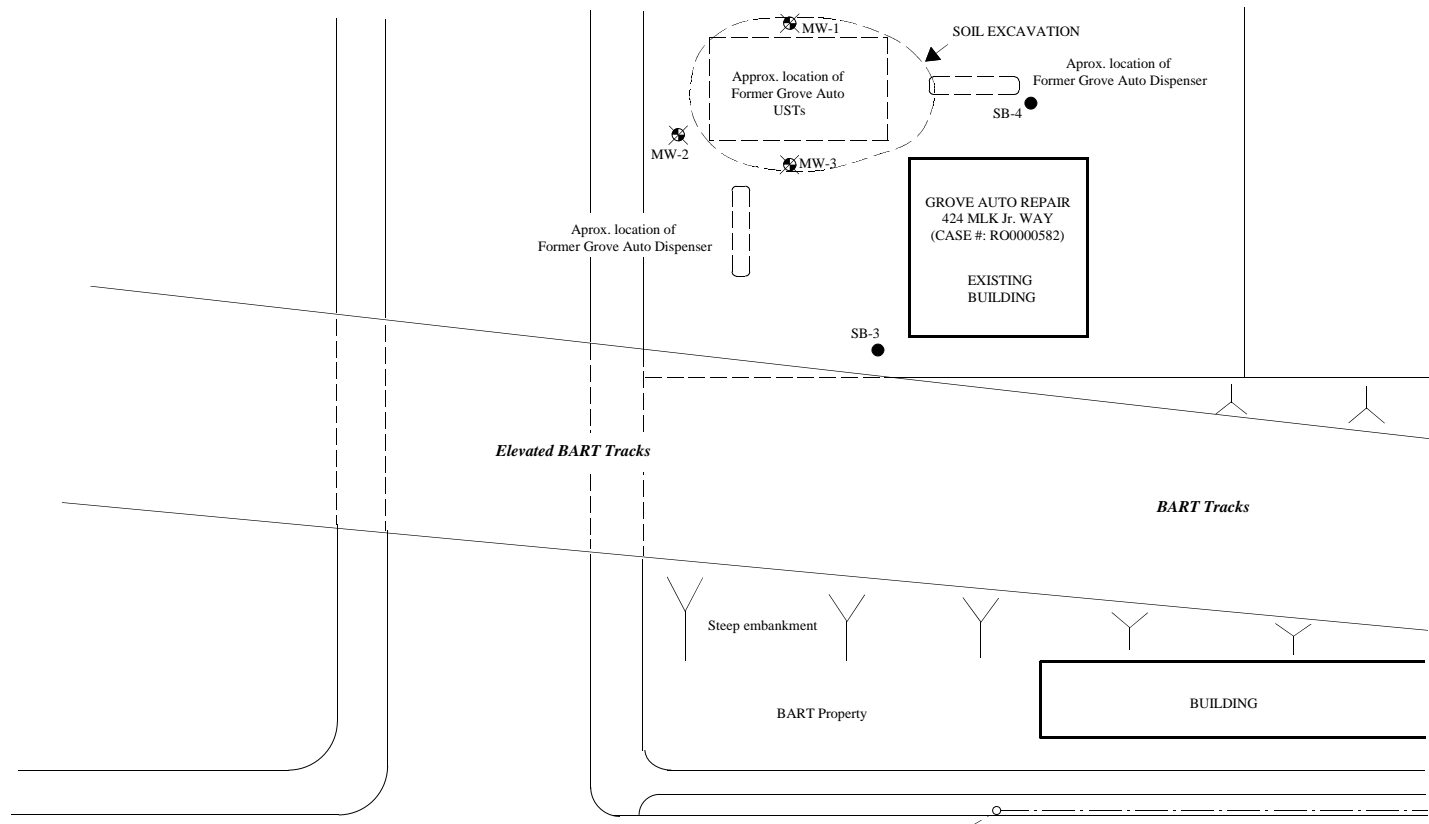
Allen Property

Terradev Property

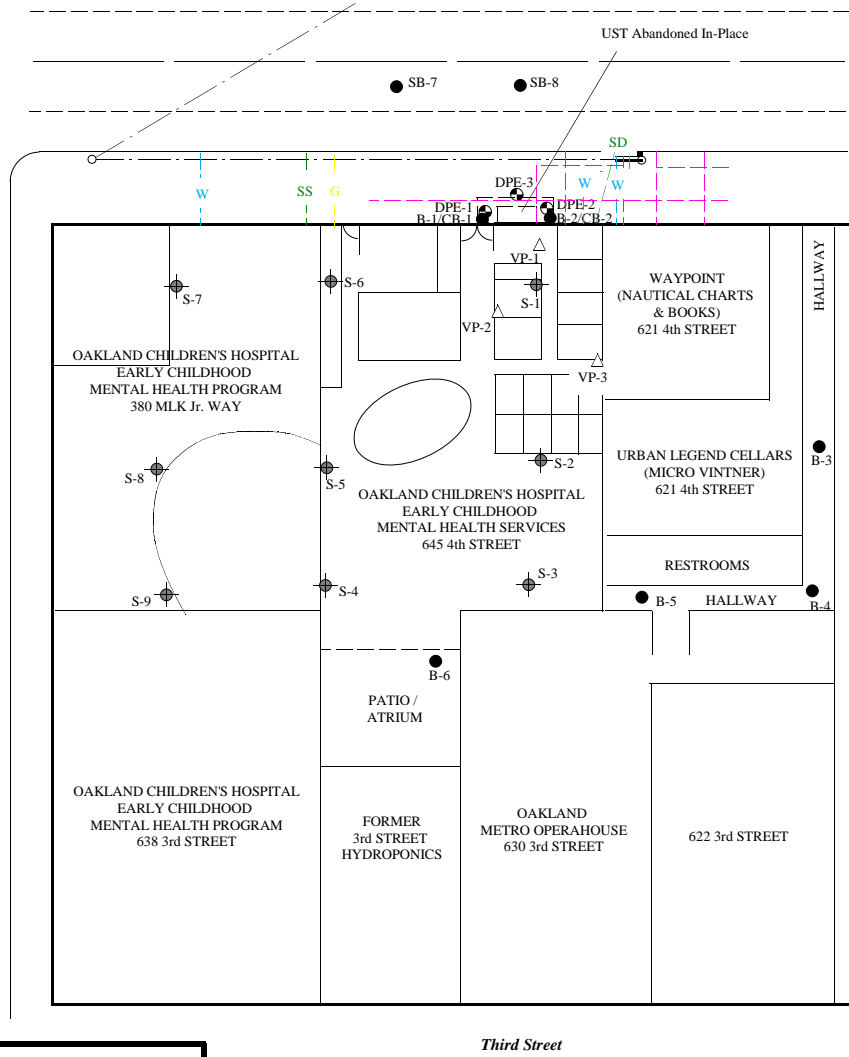


**ATTACHMENT 2**

**Bluerock Figures and Tables**



EXPLANATION	
B-6 ●	SOIL BORING
DPE-3 ⊕	PROJECT WELL
VP-2 △	SUB-SLAB SOIL VAPOR POINT
S-7 ⊕	PASSIVE SAMPLER

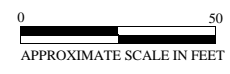


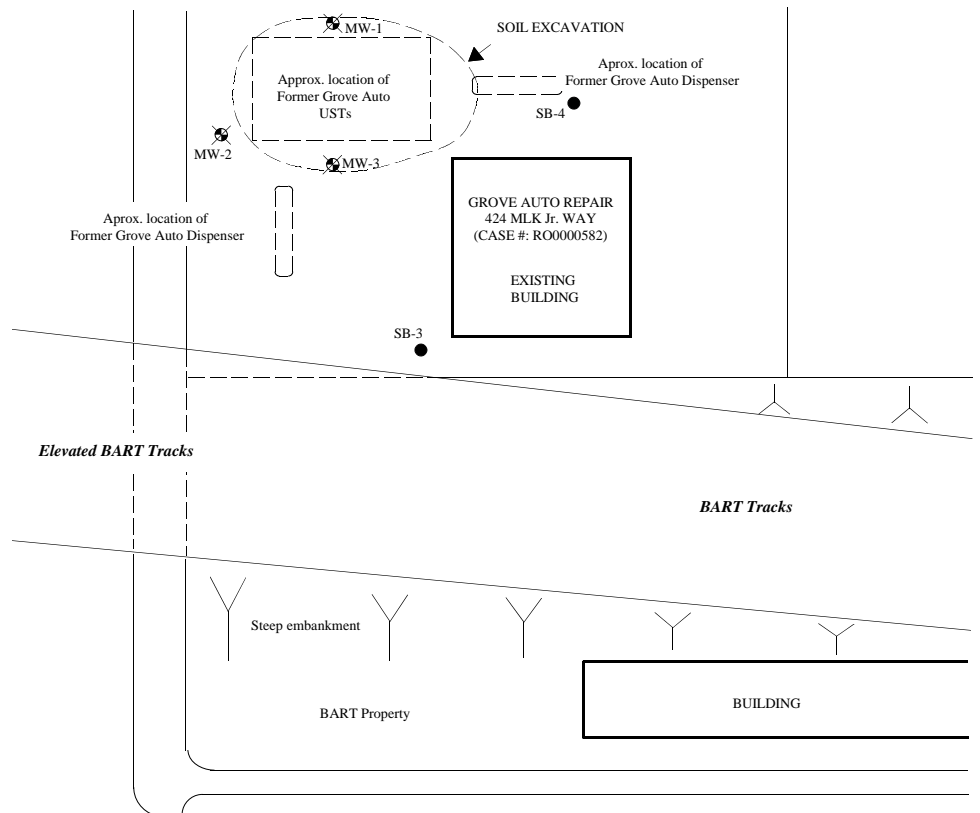
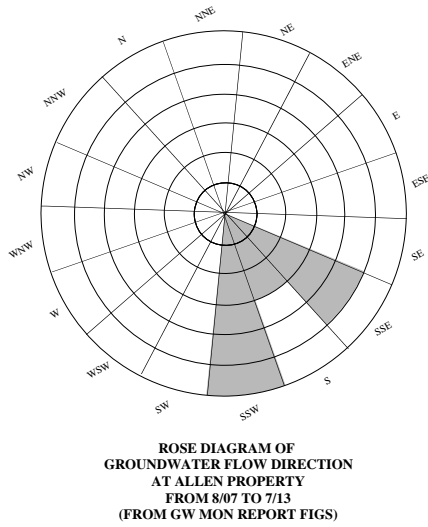
Martin Luther King Jr. Way

Third Street

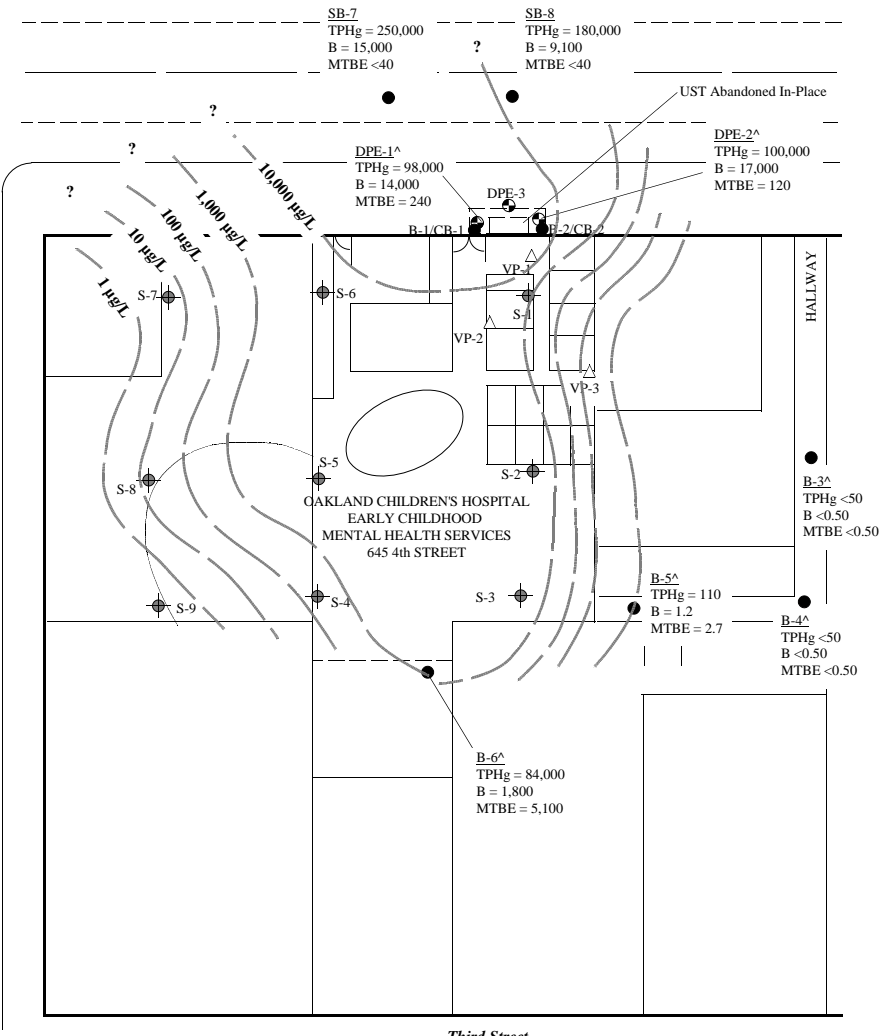
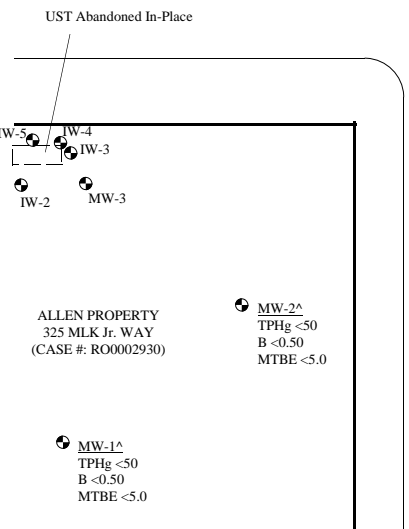
**SITE PLAN**  
Terredev Jefferson LLC Property  
645 Fourth St.  
Oakland, CA

Project No. ASE-1	Figure Date 3/15	Figure 2





Fourth Street

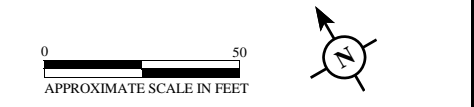


**EXPLANATION**

- B-6 ● SOIL BORING
- DPE-3 ● PROJECT WELL
- VP-2 △ SUB-SLAB SOIL VAPOR POINT
- S-7 ⊕ PASSIVE SAMPLER
- B-6<sup>^</sup>  
TPHg = 84,000  
B = 1,800  
MTBE = 5,100
- TPHg, BENZENE, MTBE (µg/L)
- <sup>^</sup> INDICATES MOST RECENT AVAILABLE DATA
- 10 µg/L
- ESTIMATED BENZENE ISO-CONCENTRATION (IN µg/L)
- PASSIVE SAMPLER DATA USED TO INTERPRET PLUME GEOMETRY

**BENZENE IN GROUNDWATER MAP - DEC. 2014**  
Terredev Jefferson LLC Property  
645 Fourth St.  
Oakland, CA

Project No. ASE-1	Figure Date 3/15	Figure 3



**TABLE 1**  
**Well Construction Data**  
Terradev Jefferson, LLC Property  
645 Fourth Street  
Oakland, CA

**Extraction Wells**

<b>Well ID</b>	<b>Date Installed</b>	<b>Total Boring Depth (ft bgs)</b>	<b>Casing Diameter (inches)</b>	<b>Screen Depth (ft bgs)</b>	<b>Sandpack Depth (ft bgs)</b>	<b>Bentonite Depth (ft bgs)</b>	<b>Cement Grout Depth (ft bgs)</b>
DPE-1	9/20/10	15	2	8 - 15	7 - 15	5 - 7	0 - 5
DPE-2	9/20/10	15	2	8 - 15	7 - 15	5 - 7	0 - 5
DPE-3	9/20/10	10	2	6 - 10	5 - 10	3 - 5	0 - 3

**Vapor Probes**

<b>Well ID</b>	<b>Date Installed</b>	<b>Total Probe Depth (in bgs)</b>	<b>Tubing Diameter (inches)</b>	<b>Slab Thickness (in bgs)</b>	<b>Screen Depth (in bgs)</b>	<b>Rubber Plug (in bgs)</b>	<b>Cement Depth (in bgs)</b>
VP-1	6/16/12	9	0.25	6.0	~ 6 - 9	~5.0 - 6.0	0 - 5
VP-2	6/16/12	9	0.25	4.5	~ 6 - 9	~3.5 - 4.5	0 - 3.5
VP-3	6/16/12	9	0.25	4.0	~ 6 - 9	~3.0 - 4.0	0 - 3

**Notes:**

ft bgs      Feet below ground surface.  
in bgs      Inches below ground surface.

**TABLE 2**  
**Soil Sample Analytical Data**  
Terradev Jefferson, LLC Property  
645 Fourth Street  
Oakland, CA

Sample ID	Depth (ft bgs)	Sample Date	TPHd			B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	DIPE,		EDB (mg/kg)	Napht. (mg/kg)
			TPHd (mg/kg)	w/SGCU (mg/kg)	TPHg (mg/kg)							ETBE, TAME (mg/kg)	1,2-DCA (mg/kg)		
<b><i>UST Removal Samples</i></b>															
8795-EX-W-9'	9	8/23/06	<120	---	10,000	130	1,000	230	1,200	<12	<100	all<12	---	---	---
8795-EX-E-9'	9	8/23/06	<25	---	920	6.8	55	18	110	<1.2	<10	all<1.2	---	---	---
<b><i>Investigation Samples</i></b>															
DPE-1-7.5	7.5	9/20/10	810^	---	6,500	14	320	180	980	<0.50	<2.5	---	<0.50	0.50	---
DPE-1-12	12	9/20/10	260^	---	2,300	26	160	45	240	0.71	<1.5	---	<0.30	<0.30	---
DPE-1-15	15	9/20/10	92^	---	770	10	53	15	80	0.39	<0.50	---	0.11	<0.090	---
DPE-2-6	6	9/20/10	15	---	1.2	<0.0050	0.0054	<0.0050	0.021	<0.0050	<0.0050	---	<0.0050	<0.0050	---
DPE-2-11	11	9/20/10	1,200^	---	160,000	1,400	10,000	3,300	19,000	<0.25	<1.5	---	<0.25	1.8	---
DPE-2-15	15	9/20/10	66^	---	430	3.8	25	8.3	47	<0.50	<2.5	---	<0.050	<0.50	---
DPE-3-7	7	9/20/10	260^	---	860	2.1	37	19	100	<0.10	<0.50	---	<0.10	<0.10	---
DPE-3-10	10	9/20/10	800^	---	8,900	78	580	180	980	<0.25	<1.5	---	<0.25	0.82	---
CB-1-7.5	7.5	2/18/13	1.2*	---	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	<0.0050	<0.0050	---
CB-1-9	9	2/18/13	110^	---	1,200	2.8	55	27	150	<0.25	---	---	<0.25	<0.25	---
CB-1-12	12	2/18/13	880^	---	14,000	100	850	180	1,400	0.53	---	---	<0.25	0.86	---
CB-1-15	15	2/18/13	89^	---	1,000	8.4	62	15	100	<0.050	---	---	<0.050	<0.050	---
CB-2-9	9	2/18/13	120^	---	840	0.44	17	20	110	<0.15	---	---	<0.15	<0.15	---
CB-2-11	11	2/18/13	110^	---	2,700	23	160	48	260	<0.40	---	---	<0.40	<0.40	---
CB-2-15	15	2/18/13	45^	---	380	3.9	18	6.6	34	<0.050	---	---	<0.050	<0.050	---
B-6-6'	6.5	1/11/14	340^	350^	1,700	0.13	8.0	12	91	<0.050	<0.25	---	<0.050	<0.050	---
B-6-10.5'	10.5	1/11/14	280^	280^	1,500	4.1	48	26	130	<0.25	<1.5	---	<0.25	<0.25	---
SB7-8.5/9	8.5-9	12/29/14	1.2^	---	4.0	0.16	0.50	0.081	0.50	<0.0050	<0.0050	---	<0.0050	0.0070	0.043
SB7-10.5/11	10.5-11	12/29/14	1,400^	---	19,000	150	1,100	330	1,800	<0.25	<1.5	---	<0.25	2.5	99
SB7-12.5/13	12.5-13	12/29/14	310^	---	3,600	29	200	59	330	<0.090	<1.5	---	<0.090	0.46	23
SB-8-8.5/9	8.5-9	12/29/14	750^	---	6,600	30	290	120	580	<0.25	<1.5	---	<0.25	0.38	38
SB-8 11.5/12	11.5-12	12/29/14	170^	---	1,400	6.4	54	22	130	<0.25	<1.5	---	<0.25	<0.25	10
SB-8 14.5	14.5	12/29/14	<1.0	---	<1.0	0.026	0.060	0.011	0.065	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050

**Notes:**

ft bgs feet below ground surface  
mg/kg milligrams per kilogram  
TPHd total petroleum hydrocarbons as diesel by EPA Method 8015M or 8015B, w/SCGCU = analysis performed after silica-gel clean-up.  
TPHg total petroleum hydrocarbons as gasoline by EPA Method 8260B  
BTEX benzene, toluene, ethylbenzene, and xylenes by EPA Method 8260B  
MTBE, TBA, ETBE, methyl tert-butyl ether, tert-butanol, ethyl tert-butyl ether, di-isopropyl ether, tert-amyl methyl ether by EPA Method 8260B,  
DIPE, TAME  
1,2-DCA, EDB 1,2-dichloroethane, 1,2-dibromoethane by EPA Method 8260B.  
µg/L Micrograms per liter.  
<### Not detected at or above the indicated reporting limit.  
^ Laboratory Flag: Hydrocarbons are lower-boiling than typical Diesel Fuel  
\* Laboratory Flag: Hydrocarbons are higher-boiling than typical Diesel Fuel  
--- Data not available, not monitored, or not sampled

**TABLE 3**  
**Groundwater Analytical Data**  
TerraDev Jefferson, LLC Property  
645 Fourth Street  
Oakland, CA

Sample ID	Sample Date	TOC (ft MSL)	DTW (ft)	LNAPL (ft)	GWE (ft MSL)	TPHd (µg/L)	TPHd										
							w/SGCU (µg/L)	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	Napht. (µg/L)
<b>Grab Groundwater Samples</b>																	
B-1-GW*	7/10/09	--	-9.5	--	--	5,300	--	78,000	15,000	13,000	1,700	10,500	570	--	--	--	--
B-2-GW*	7/10/09	--	-9.5	--	--	2,300	--	60,000	13,000	13,000	890	4,800	120	--	--	--	--
B-3	1/10/14	--	~12	--	--	58#	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	--
B-4	1/10/14	--	~12	--	--	67#	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	--
B-5	1/10/14	--	~12	--	--	110#	<50	110	1.2	1.4	0.65	4.5	2.7	200	43	<0.50	--
B-6 (2)	1/11/14	--	~11	--	--	5,200^	360^	84,000	1,800	7,600	2,400	12,000	5,100	180J	110	<20	--
SB-7	12/29/14	--	~9	--	--	60,000^	--	250,000	15,000	34,000	4,000	20,000	<40	<200	130	240	1,000
SB-8	12/29/14	--	~9	--	--	16,000^	--	180,000	9,100	22,000	3,000	16,000	<40	<200	130	140	1,200
<b>Monitoring Well Data</b>																	
DPE-1	9/22/10	15.81	9.21	0.00	6.60	<4,000 (1)	--	120,000	25,000	18,000	3,300	17,000	320	320	620	<40	--
Screen	9/28-10/3/10	15.81	--	--	--	5-day HVDPE Remedial Event											
~8' - 15'	10/18/10	15.81	9.26	sheen	6.55	<4,000 (1)	--	97,000	15,000	20,000	1,600	11,000	490	270	390	<40	--
	1/20/11	15.81	8.56	sheen	7.25	<3,000 (1)	--	83,000	12,000	16,000	2,000	11,000	270	<200	220	<40	--
	7/6/12	15.81	8.85	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/9-7/24/12	15.81	--	--	--	15-day HVDPE Remedial Event											
	8/12/12	15.81	9.03	0.00	6.78	<2,000 (1)	--	71,000	7,500	9,800	1,000	6,500	280	89	190	<15	--
	2/11/13	15.81	8.74	0.00	7.07	<3,000 (1)	--	81,000	9,400	14,000	1,800	10,000	240	110	210	<15	--
	1/10/14	15.81	9.84	0.00	5.97	1,600^	56^	98,000	14,000	13,000	2,100	12,000	270	200	270	<25	--
DPE-2	9/22/10	16.01	9.44	0.00	6.57	<4,000 (1)	--	110,000	21,000	18,000	3,100	14,000	200	260	540	110	--
Screen	9/28-10/3/10	16.01	--	--	--	5-day HVDPE Remedial Event											
~8' - 15'	10/18/10	16.01	9.48	sheen	6.53	<5,000 (1)	--	84,000	11,000	16,000	1,600	9,200	77	<200	220	77	--
	1/20/11	16.01	8.77	sheen	7.24	<5,000 (1)	--	94,000	12,000	19,000	2,500	13,000	64	<200	220	88	--
	7/6/12	16.01	9.06	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/9-7/24/12	16.01	--	--	--	15-day HVDPE Remedial Event											
	8/12/12	16.01	9.27	0.00	6.74	<2,000 (1)	--	70,000	9,900	16,000	1,700	9,600	54	<200	160	56	--
	2/11/13	16.01	8.95	0.00	7.06	<4,000 (1)	--	60,000	7,300	9,500	1,400	7,000	34	<90	120	<20	--
	1/10/14	16.01	10.08	0.00	5.93	2,800^	<50	100,000	17,000	15,000	2,400	11,000	120	100	220	27	--
DPE-3	9/22/10	15.87	9.43	0.00	6.44	insufficient water column for sampling (i.e. <0.5-ft)											
Screen	9/28-10/3/10	15.87	--	--	--	5-day HVDPE Remedial Event											
~6' - 10'	10/18/10	15.87	9.35	0.00	6.52	insufficient water column for sampling (i.e. <0.5-ft)											
	1/20/11	15.87	8.51	0.13	7.36	no groundwater sample collected, LNAPL present.											
	7/6/12	15.87	8.65	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/9-7/24/12	15.87	--	--	--	15-day HVDPE Remedial Event											
	8/12/12	15.87	9.02	sheen	6.85	<200,000 (1)	--	190,000	1,400	7,800	3,700	29,000	27	120	40	130	--
	2/11/13	15.87	8.34	sheen	7.53	<40,000 (1)	--	130,000	4,700	9,000	1,900	25,000	<40	<200	54	80	--
	1/10/14	15.87	Dry	--	--	--	--	--	--	--	--	--	--	--	--	--	--

**Notes:**

- Screen Well screen depth interval.
- TOC Top of casing relative to feet above mean sea level (ft MSL) (ref NAVD88).
- DTW Depth to water (for borings DTW shows "depth to water" and "depth to bottom of boring")
- LNAPL Light non-aqueous phase liquid petroleum, "sheen" is an immeasurable thickness (i.e. <0.01-ft)
- GWE Groundwater Elevation (TOC-DTW) in ft MSL. (This does not account for LNAPL thickness, if present).
- TPHd Total petroleum hydrocarbons as diesel by EPA Method 8015M, \*8015B. SGCU = Silica-gel cleanup prior to analysis.
- TPHg Total petroleum hydrocarbons as gasoline by EPA Method 8260B, \*8015B.
- BTEX Benzene, toluene, ethylbenzene, and xylenes by EPA Method 8260B, \*8021B.  
Note: total xylenes equal the sum of separate isomers reported for the 7/09 samples.
- MTBE Methyl tert-butyl ether by EPA Method 8260B, \* 8021B.
- TBA Tert-butanol by EPA Method 8260B.
- 1,2-DCA, EDB 1,2-dichloroethane, 1,2-dibromoethane by EPA Method 8260B.
- µg/L Micrograms per liter.
- <### Not detected at or above the indicated reporting limit.
- Data not available, not monitored, or not sampled
- ^ Laboratory Flag: Hydrocarbons are lower-boiling than typical Diesel Fuel
- # Laboratory Flag: Discrete peaks in Diesel range, atypical for Diesel Fuel
- J Laboratory Flag: TBA concentration may be biased slightly high due to conversion of a small fraction of MTBE to TBA during water sample analysis.
- (1) Method detection limit increased due to interference from gasoline range hydrocarbons
- (2) Repeat analysis by Method 8260B yielded inconsistent results. The concentrations appear to vary between bottles. The highest valid result is reported.

**ATTACHMENT 3**

**ACEH April 22, 2015 letter addressing contamination detected in SB-7 and SB-8**



ENVIRONMENTAL HEALTH SERVICES  
ENVIRONMENTAL PROTECTION  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577  
(510) 567-6700  
FAX (510) 337-9335

April 22, 2015

Ms. Sara May (Sent via E-mail to: [smay@metrovation.com](mailto:smay@metrovation.com))  
Terradev Jefferson LLC  
c/o Metrovation  
580 Second Street  
Oakland, CA 94607

Subject: Case File Review for Fuel Leak Case No. RO0003001 and GeoTracker Global ID T10000001072, Terradev Jefferson LLC Property, 645 Fourth Street, Oakland, CA 94607

Dear Ms. May:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above referenced site including the recently submitted document entitled, "*Additional Site Characterization Report*," dated March 27, 2015 and received by ACEH on March 31, 2015 (Report). The Report, which was prepared on your behalf by Blue Rock Environmental, Inc., presents results from two soil borings advanced in Fourth Street and passive soil vapor sampling at nine locations inside the building. Based on these results, the Report concludes that a gasoline source upgradient of the site appears to be present. The only known release of gasoline directly upgradient of the site is from a former underground storage tank (UST) and dispensers at the Grove Auto Repair site (ACEH fuel leak case RO0000582 closed on November 4, 1993) at 424 Martin Luther King Jr. Way near the intersection of Fifth Street and Martin Luther King Jr. Way. The former UST is approximately 250 feet from the closed-in-place UST at the site and the nearest dispenser is approximately 210 feet from the closed-in-place UST at the site. We have reviewed the Report and do not find sufficient basis to conclude that there is an upgradient gasoline source affecting the site. Although it cannot be definitively concluded that a gasoline source is not present north of the site, the nature and extent of contamination is much more consistent with a source of gasoline in the area of the closed in place UST at the site based on the following:

1. Light nonaqueous phase liquids (LNAPL) have been measured at thicknesses up to 0.13 feet in groundwater monitoring wells adjacent to the closed-in-place UST. Based on the highly elevated concentrations of hydrocarbons detected in soil and groundwater in upgradient borings SB-7 and SB-8, it appears that the capillary fringe in the area of these borings has been affected by LNAPL. LNAPL migrates downward until encountering a physical barrier or are affected by buoyancy near the water table. Once the capillary fringe is reached, the NAPL migrates laterally as a free-phase layer along the upper boundary of the water-saturated zone due to gravity and capillary forces. Although the principal migration may be in the direction of the maximum decrease in water table elevation, some migration may occur initially in the upgradient and cross gradient directions. As the LNAPL migrates laterally, infiltrating precipitation and passing groundwater in contact with the LNAPL will dissolve soluble components and form a dissolved phase plume. It appears that the petroleum hydrocarbons detected in borings SB-7 and SB-8 are from LNAPL migration north from the closed in place UST at the site. Please see technical comment 3 below regarding utilities in the area of the closed-in-place UST which potentially could act as conduits to utilities beneath Fourth Street and borings SB-7 and SB-8.



2. LNAPL was not reported at 424 Martin Luther King Jr. Way. Furthermore, it seems implausible that LNAPL would travel 250 feet from a former UST at 424 Martin Luther King Jr. Way to the specific area of the closed in place UST at the site.
3. The maximum concentration of benzene detected in groundwater during the final sampling event at 424 Martin Luther King Jr. Way on March 7, 1988 was 13,000 micrograms per liter ( $\mu\text{g/L}$ ). Benzene concentrations in groundwater at the site are similar to or higher than 13,000  $\mu\text{g/L}$ . Some attenuation would be expected over this distance and time period.
4. There is no evidence of a migration pathway from the former UST and dispensers at 424 Martin Luther King Jr. Way to the site. Soil boring SB-3, which is located approximately 50 feet southeast of the former UST at 424 Martin Luther King Jr. Way, is located between the former UST and dispensers at 424 Martin Luther King Jr. Way and the site. If a plume migrated from 424 Martin Luther King Jr. Way to the site, some impacts would be observed in boring SB-3. Two soil samples collected at depths of 9-9.5 feet bgs and 14-14.5 feet bgs from boring SB-3 did not contain petroleum hydrocarbons at concentrations above reporting limits.
5. Two mobile dual-phase extraction (DPE) events were conducted at the site in October 2010 (5 days) and July 2012 (15 days). During the DPE events, an estimated 340 to 423 pounds of petroleum hydrocarbons were removed. Following the DPE events, groundwater concentrations rebounded indicating that a significant mass still remains. It appears highly unlikely that the significant mass of hydrocarbons removed and remaining following 20 days of DPE in the area of the closed in place UST is related to an off-site source more than 200 feet away.
6. A review of historic aerial photos for the site indicates that the current building was constructed sometime between 1980 and 1988. Prior to that time, the area adjacent to the closed in place UST appeared as an open yard area and it is possible the tank could have been in use. The UST at 424 Martin Luther King Jr. Way was removed in 1983. Therefore, both tanks may have been removed from service around the same time. MTBE detected in groundwater at the site may be from the closed in place UST at the site and does not necessarily indicate an off-site source. Lead scavengers have been detected at elevated concentrations in site groundwater indicating that releases also occurred prior to the early 1980s.

From the facts and observations above, it appears that the most likely source of gasoline beneath the site is the closed-in-place UST at the site. We have also located and reviewed additional information from the City of Oakland case files on the Grove Auto Repair site at 424 Martin Luther King Jr. Way. Those additional reports have been uploaded to the case file for ACEH case RO000582 and can be reviewed on the ACEH website (<http://www.acgov.org/aceh/lop/ust.htm>). If there is additional evidence to indicate that another UST was located closer to the site than the former UST at 424 Martin Luther King Jr. Way, please present that information.

Based on review of the passive soil vapor sample data, it appears that further evaluation of the potential for vapor intrusion is necessary as described in technical comment 1 below. The passive soil vapor data also appear to indicate that groundwater contamination may extend continuously from the closed in place UST at the site to boring B-6. Please see technical comment 2 below regarding further plume delineation.

### **TECHNICAL COMMENTS**

1. **Passive Soil Vapor Sampling Results in Area of Previous Sub-slab Vapor Sampling.** The passive soil vapor sampling results within the building were variable with benzene concentrations ranging from 0.04 µg at S-1 to 48.01 µg at S-2. Passive sampling location S-1 is the nearest location to the closed-in-place UST and is also the nearest passive sampling location to previous active soil vapor sampling locations VP-1, VP-2, and VP-3. Based on a comparison of S-1 to other locations within the building, it is possible that sub-slab soil vapor samples collected within the area of S-1 may be biased low. Therefore, we request that you conduct additional evaluation of the potential for vapor intrusion within the building. Please present plans for the evaluation in a Work Plan no later than June 24, 2015. The evaluation should include additional sub-slab vapor sampling and indoor air sampling.
2. **Plume Delineation.** Passive soil vapor samples S-2, S-3, S-5, S-6, and S-8 within the interior portion of the building, had higher concentrations of total petroleum hydrocarbons and benzene than the other four passive soil vapor samples. This distribution of higher concentrations may indicate that the plume extends continuously from the closed-in-place UST to boring B-6. Elevated concentrations of TPHg and benzene were detected in groundwater at B-6. No sampling locations are located south of B-6 to define the extent of the plume. We request that you include plans in the Work Plan requested below to define the extent of the plume by collecting groundwater samples south of the building on Third Street.
3. **Utilities in Fourth Street.** A review of the Geophysical Survey Map in Appendix A of the "*Report for Geophysical Survey and Additional Site Characterization Workplan*," dated September 18, 2014 indicates that the geophysical survey identified utility lines either below or above the closed-in-place UST at the site that appeared to extend beneath Fourth Street. These utility lines potentially could provide conduits between the closed-in-place UST and utilities beneath Fourth Street. Please review available information on the locations, size, and depths, of utility lines in the vicinity of the closed-in-place UST and present the results of your review in the Work Plan requested below. Please propose any recommended additional investigation of the utilities to evaluate the potential for the utilities to act as conduits.

### **TECHNICAL REPORT REQUEST**

Please upload technical reports to the ACEH ftp site (Attention: Jerry Wickham), and to the State Water Resources Control Board's GeoTracker website according to the following schedule and file-naming convention:

- **June 24, 2015** – Work Plan  
File to be named: WP\_R\_yyyy-mm-dd RO3001

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

Ms. Sara May, RO0003001  
April 22, 2015, Page 4

If you have any questions, please call me at (510) 567-6791 or send me an electronic mail message at [jerry.wickham@acgov.org](mailto:jerry.wickham@acgov.org). Online case files are available for review at the following website: <http://www.acgov.org/aceh/index.htm>.

Sincerely,

Jerry Wickham, California PG 3766, CEG 1177, and CHG 297  
Senior Hazardous Materials Specialist

Attachment: Responsible Party(ies) Legal Requirements/Obligations

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Markus Niebanck, Amicus, 580 Second Street, Suite 260, Oakland CA 94607 (*Sent via E-mail to:* [markus@amicusenv.com](mailto:markus@amicusenv.com))

Brian Gwinn, Blue Rock Environmental, Inc., 1169 Chess Drive, Suite C, Foster City, CA 94404  
(*Sent via E-mail to:* [brian@bluerockenv.com](mailto:brian@bluerockenv.com))

Michelle Heckle, Children's Hospital & Research Center, 747 52<sup>nd</sup> Street, Oakland, CA 94609

Jerry Wickham, ACEH (*Sent via E-mail to:* [jerry.wickham@acgov.org](mailto:jerry.wickham@acgov.org))

GeoTracker, eFile

## Attachment 1

### Responsible Party(ies) Legal Requirements / Obligations

#### REPORT REQUESTS

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

#### ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) GeoTracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the GeoTracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in GeoTracker (in PDF format). Please visit the SWRCB website for more information on these requirements ([http://www.waterboards.ca.gov/water\\_issues/programs/ust/electronic\\_submittal/](http://www.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal/)).

#### PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "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." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

#### PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

#### UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

#### AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to \$10,000 per day for each day of violation.

<b>Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)</b>	<b>REVISION DATE:</b> May 15, 2014
	<b>ISSUE DATE:</b> July 5, 2005
	<b>PREVIOUS REVISIONS:</b> October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010, July 25, 2010
<b>SECTION:</b> Miscellaneous Administrative Topics & Procedures	<b>SUBJECT:</b> Electronic Report Upload (ftp) Instructions

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

## REQUIREMENTS

- **Please do not submit reports as attachments to electronic mail.**
- Entire report including cover letter must be submitted to the ftp site as **a single portable document format (PDF) with no password protection.**
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- **Signature pages and perjury statements must be included and have either original or electronic signature.**
- **Do not password protect the document.** Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted.**
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:

RO#\_Report Name\_Year-Month-Date (e.g., RO#5555\_WorkPlan\_2005-06-14)

## Submission Instructions

- 1) Obtain User Name and Password
  - a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
    - i) Send an e-mail to [deh.loptoxic@acgov.org](mailto:deh.loptoxic@acgov.org)
  - b) In the subject line of your request, be sure to include "**ftp PASSWORD REQUEST**" and in the body of your request, include the **Contact Information, Site Addresses**, and the **Case Numbers (RO# available in Geotracker) you will be posting for.**
- 2) Upload Files to the ftp Site
  - a) Using Internet Explorer (IE4+), go to <ftp://alcoftp1.acgov.org>
    - (i) Note: Netscape, Safari, and Firefox browsers will not open the FTP site as they are NOT being supported at this time.
  - b) Click on Page located on the Command bar on upper right side of window, and then scroll down to Open FTP Site in Windows Explorer.
  - c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
  - d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
  - e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.
- 3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
  - a) Send email to [deh.loptoxic@acgov.org](mailto:deh.loptoxic@acgov.org) notify us that you have placed a report on our ftp site.
  - b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
  - c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO#, use the street address instead.
  - d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.