TETRA TECH, INC.

March 30, 2016

Lynn Nakashima
Project Manager
Department of Toxic Substances Control
700 Heinz Avenue
Berkeley, CA 94710

Subject: Proposed Continued Groundwater Monitoring Locations for 2016
Richmond Field Station Site
Berkeley Global Campus, Richmond, CA
Site Investigation and Remediation Order I/SE-RAO 07/07-004, Section 5.16

Dear Ms. Nakashima:

Tetra Tech, Inc. was contracted by the University of California Berkeley to conduct groundwater sampling activities at Richmond Field Station (RFS) Site, at the Berkeley Global Campus in Richmond, California. The scope of the sampling was outlined in the Phase I Groundwater Field Sampling Workplan, dated June 2, 2010. The results of the Phase I investigation (2010 – 2012) and of continued groundwater monitoring in 2013 are presented in the Phase I November 2010 through April 2012 Groundwater Sampling Results Technical Memorandum, dated December 12, 2012, the 2013 Groundwater Sampling Results Technical Memorandum, dated October 10, 2013, the 2014 Groundwater Sampling Results Technical Memorandum, dated November 24, 2014, and the 2015 Groundwater Sampling Results Technical Memorandum, dated October 19, 2015.

The Phase I groundwater field effort was conducted to address data gaps through the installation and continued semi-annual monitoring of 51 piezometers throughout the RFS: 47 in the shallow groundwater zone and four in a deeper zone. Data collected from the developed piezometers included groundwater sample analyses, geological borehole logging, and depth to water measurements; all of which were used to develop a hydrogeologic model of the site, improve the understanding of overall site-wide groundwater quality, and to help confirm or deny the presence of contamination. UC Berkeley continued with a semi-annual groundwater sampling program at the 47 piezometers in the shallow groundwater zone and three existing shallow piezometers previously installed (PZ8, PZ9, and PZ11) for a total of 50 piezometers.

As a follow up to the Phase I groundwater investigation, UC Berkeley recommended annual groundwater monitoring in 2013 at a subset of the initial 50 shallow piezometers to evaluate ongoing conditions at RFS. Monitoring consisted of chemical analysis at 40 piezometers with sample results exceeding one-half of either the California or Federal maximum contaminant level (MCL) for drinking water standards during any of the previous four monitoring events; analytes were limited to those analytes that exceeded one-half the MCLs in each piezometer. Depth to water measurements were collected bi-annually, concurrent with the ongoing biannual sampling at the adjacent Campus Bay site, at all 50 shallow and 4 deep piezometers to continue the comprehensive assessment of seasonal groundwater flow. Groundwater sampling was completed in 2014 and 2015 consistent with the piezometers and analytes within the 2013 event.

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UC Berkeley has completed a review of the four most recent consecutive groundwater sampling events: April 2012, April 2013, April 2014, and April 2015. The review compared the results from the four recent events with the State and Federal water quality criteria and Berkeley Global Campus risk-based concentrations presented in Table 5, State and Federal Water Quality Criteria, 2015 Groundwater Sampling Results Technical Memorandum, dated October 19, 2015. In all chemicals, one-half the California or Federal MCL represents the most stringent screening criteria. Results indicate that in several piezometers all analytes are below one-half of the California and Federal MCL. As a result, UC Berkeley recommends the elimination of these analytes from the April 2016 event. Proposed analytes to be eliminated are summarized below:

- Elimination of volatile organic compound (VOC) analysis at piezometers Bulb1, Bulb2, CCC3, EERC, EPA, and WTA. Piezometer Bulb2 also meets the criteria for elimination of VOCs; however, UC Berkeley will continue to monitor for VOCs as a result of (1) trichloroethene detections near one-half of the MCL limits, and (2) since the piezometer is placed within known fill in the Western Transition Area.

- Elimination of semi-volatile organic compounds and polycyclic aromatic hydrocarbons (SVOC/PAH) analyses at piezometers B128, B158, B180, B280A, Bulb2, CCC2, CTP, EPA, MFA, and WTA. Note there are no California or Federal MCLs with any SVOC/PAH detected.

- Elimination of metals analysis at piezometers B128, B158, B175S, B178, B480, CCC3, and PZ8. Piezometer Bulb2 also meets the criteria for elimination for metals; however, UC Berkeley will continue to monitor for metals pending ongoing investigations in the Bulb and Western Transition Area under FSP Phase V.

The proposed April 2016 sampling event will also include the four piezometers installed in January 2015: ETA01, ETA02, ETA03, and WSM01 which were not sampled during the April 2015 event.

Modifying the sampling design in this way will eliminate all sampling at piezometers B128, B158, B180, CCC3, EPA, PZ8, and WTA. The revised number of piezometers proposed for sampling is 37. Table 1 summarizes the piezometers and analytes recommended for sampling in 2016, and also demonstrates which piezometers sampled in 2015 are not recommended for further sampling in 2016. Tables 2, 3, and 4 present the analytical data from the past four consecutive monitoring events for the piezometers identified above. Figure 1 shows graphically the piezometers proposed for continued monitoring in 2016, piezometers eliminated in 2013, and the current recommendations for piezometers to be eliminated from the April 2016 sampling event.

The groundwater samples will be collected consistent with the protocols outlined in the Field Sampling Workplan dated June 2, 2010 and will follow the quality control measures for both field work and data analysis as outlined in the accompanying Quality Assurance Project Plan. Samples will be analyzed for dissolved metals (field-filtered) and VOCs at locations described above.

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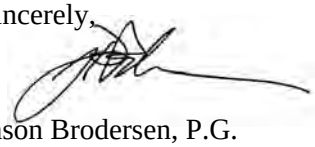
If you have any questions or comments regarding this submittal, please call me at (510) 302-6283.

Sincerely,



Jason Brodersen, P.G.
Project Manager

cc: Greg Haet, UC Berkeley Office of Environment, Health and Safety
Bill Marsh, Edgcomb Law Group

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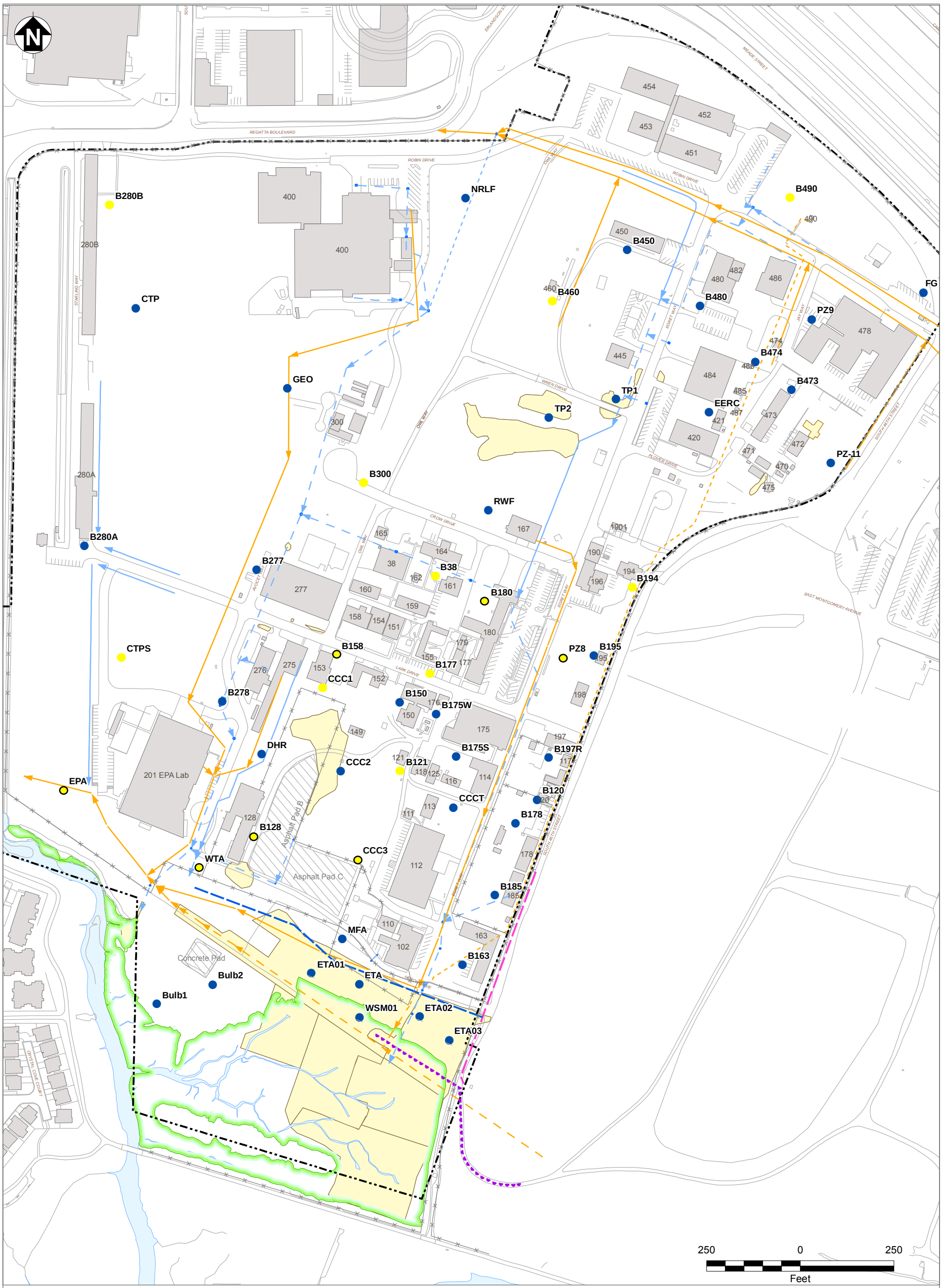

- Existing Buildings
- Asphalt/Concrete Pads
- Remediated Areas
- Surface Water
- Marsh Boundary
- Richmond Field Station Site Boundary
- Roads and Other Landscape Features
- Fenceline
- Biologically Active Permeable Barrier Wall
- Former Seawall (Approximate)
- Slurry Wall

Storm Drain Lines:

- Open Swale
- Underground Culvert
- Underground Culvert, Abandoned (Grouted at Manholes)

Sanitary Sewer Lines:

- Existing Sewer Line
- Removed Sewer Line
- Abandoned Sewer Line

- Proposed piezometer for sampling in April 2016
- Piezometer not sampled in April 2015
- Piezometer sampled in April 2015; proposed for eliminated sampling in April 2016

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Richmond Field Station Site
University of California, Berkeley

FIGURE 1
PROPOSED GROUNDWATER SAMPLING LOCATIONS

2016 Groundwater Sampling Event

2015-06-29 V:\Misc_GIS\Richmond_Field_Station\Projects\Field_Sampling_Workplan\Phase_II\GW_Sampling\Layouts\2015\Groundwater Sampling Locations.mxd TtEMI-OAK yashekia.evans.

Table 1. Piezometers Recommended for Sampling in 2016			
Piezometer	**VOC EPA Method 8260B**	**SVOC/PAH EPA Method 8270C, SIM**	**Field Filtered Metals EPA Method 6020A/7400 Series**
B120	X		
B128 *		0	0
B150			X
B158 *			0
B163	X	0	X
B175S	X		0
B175W	X		
B178	X		0
B180 *		0	
B185	X		
B195	X		X
B197R	X		X
B277	X		
B278	X		
B280A	X	0	
B450	X		X
B473	X		
B474			X
B480	X		0
Bulb1	0		X
Bulb2	X	0	X
CCC2	X	0	X
CCC3 *	0		0
CCCT	X		
CTP	X	0	X
DHR			X
EERC	0		X
EPA *	0	0	
ETA	X		X
ETA01	X		X
ETA02	X		X
ETA03	X		X
FG			X
GEO	X		
MFA	X	0	
NRLF			X
PZ11	X		X
PZ8 *			0
PZ9	X		
RWF	X		
TP1	X		X
TP2	X		
WTA *	0	0	
WSM01	X		X

Notes:

X Sampling analyte recommended in 2016

0 Sampling analyte not recommended in 2016 (but was evaluated in 2015)

* Sampling at this piezometer would be discontinued

Table 2: VOC Detected Results Summary
2016 Groundwater Well Elimination Justification
University of California, Berkeley, Richmond Field Station Site

Sample Location	Sample Date	ETHYLBENZENE	ISOPROPYLBENZENE	m-p-XYLENE	METHYL TERT-BUTYL ETHER	o-XYLENE	p-ISOPROPYLTOLUENE	sec-BUTYLBENZENE	TETRACHLOROETHENE	TRANS-1,2-DICHLOROETHENE	TRICHLOROETHENE	VINYL CHLORIDE
California MCLs		300		10,000	13	10,000			5	10	5	0.5
Federal MCLs		700		1,750		1,750			5	100	5	2
1/2 MCL		150		875	6.5	875			2.5	5	2.5	0.25
BULB1	4/5/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	4/5/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	4/10/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	4/13/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BULB2	4/5/2012	0.1 J	0.3 J	0.2 J	0.6	0.3 J	0.5 U	0.1 J	0.5 U	0.5 U	0.3 J	0.5 U
	4/5/2013	0.5 U	0.5 U	0.5 U	0.8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.5	0.5 U
	4/10/2014	0.5 U	0.5 U	0.5 U	0.7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.7	0.5 U
	4/13/2015	0.5 U	0.5 U	0.5 U	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.4	0.5 U
CCC3	4/10/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.3	0.5 U
	4/2/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	0.5 U
	4/2/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1	0.5 U
	4/15/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U
EERC	4/6/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	4/8/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	4/3/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	4/16/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EPA	4/6/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	4/4/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	4/10/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	4/17/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
WTA	4/5/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.3	0.5 U	0.2 J	0.5 U
	4/5/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.5	0.5 U	0.2 J	0.5 U
	4/10/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1	0.5 U	0.5 U	0.5 U
	4/13/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.5	0.5 U	0.3 J	0.5 U

Notes:

All results are presented in µg/L.

µg/L	Micrograms per liter
ID	Identification
J	Estimated value
MCL	Maximum contaminant level
U	Not detected
VOC	Volatile organic compound

Table 3: SVOC Detected Results Summary
2016 Groundwater Well Elimination Justification
University of California, Berkeley, Richmond Field Station Site

Sample Location	Sample Date	1,4-DIOXANE	1-METHYLNAPHTHALENE	4-METHYLPHENOL	ACENAPHTHENE	ACENAPHTHYLENE	ANTHRACENE	FLUORANTHENE	FLUORENE	NAPHTHALENE	PHENANTHRENE	PYRENE
B128	4/2/2012	0.9 U	0.09 U	9.6 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
	4/5/2013	0.9 U	0.09 U	9.4 U	0.09 U	0.09 U	0.09 U	9.4 U	9.4 U	9.4 U	0.09 U	0.09 U
	4/10/2014	0.9 U	0.09 U	9.8 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
	4/13/2015	1 U	0.1 U	9.4 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
B163	4/2/2012	0.09 J	0.09 U	9.6 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
	4/3/2013	0.2 J	0.1 U	11 U	0.1 U	0.1 U	0.1 U	11 U	11 U	11 U	0.1 U	0.1 U
	4/1/2014	0.2 J	0.1 U	9.4 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
	4/14/2015	0.2 J	0.09 U	10 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
B180	4/4/2012	0.9 U	0.09 U	9.7 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
	4/8/2013	0.9 U	0.09 U	9.3 U	0.09 U	0.09 U	0.09 U	9.3 U	9.3 U	9.3 U	0.09 U	0.09 U
	4/8/2014	0.9 U	0.09 U	9.4 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
	4/14/2015	0.9 U	0.09 U	9.6 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
B280A	4/3/2012	0.2 J	0.09 U	9.4 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
	4/4/2013	0.2 J	0.09 U	10 U	0.09 U	0.09 U	0.09 U	10 U	10 U	10 U	0.09 U	0.09 U
	4/9/2014	0.2 J	0.1 U	9.3 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
	4/17/2015	0.2 J	0.1 U	9.8 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
BULB2	4/5/2012	1 U	0.1 U	9.4 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
	4/5/2013	1 J	0.1 U	10 U	0.1 U	0.1 U	0.1 U	10 U	10 U	10 U	0.1 U	0.1 U
	4/10/2014	1	0.09 U	9.4 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
	4/13/2015	0.8 J	0.1 U	9.6 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
CCC2	4/10/2012	0.9 U	0.09 U	9.4 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
	4/2/2013	0.9 U	0.09 U	9.5 U	0.09 U	0.09 U	0.09 U	9.5 U	9.5 U	9.5 U	0.09 U	0.09 U
	4/2/2014	1 U	0.1 U	9.4 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
	4/15/2015	1 U	0.1 U	9.4 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
CTP	4/3/2012	0.9 U	0.09 U	9.5 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
	4/4/2013	1 U	0.1 U	10 U	0.1 U	0.1 U	0.1 U	10 U	10 U	10 U	0.1 U	0.1 U
	4/3/2014	1 U	0.1 U	9.3 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
	4/17/2015	1 U	0.1 U	9.3 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
EPA	4/6/2012	0.5 J	0.05 J	9.4 U	0.2	0.09 U	0.09 U	0.04 J	0.03 J	0.4	0.02 J	0.02 J
	4/4/2013	0.9 U	0.09 U	9.3 U	0.09 U	0.09 U	0.09 U	9.3 U	9.3 U	9.3 U	0.09 U	0.09 U
	4/10/2014	1 U	0.1 U	9.6 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
	4/17/2015	1 U	0.1 U	9.6 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MFA	4/5/2012	1.2	0.09 U	9.4 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
	4/5/2013	1.9	0.09 U	10 U	0.09 U	0.09 U	0.09 U	10 U	10 U	10 U	0.09 U	0.09 U
	4/8/2014	1.8	0.09 U	9.3 U	0.09 U	0.09 U	0.09 UJ	0.09 U	0.09 U	0.09 U	0.09 U	0.09 UJ
	4/13/2015	1.6	0.1 U	9.4 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
WTA	4/5/2012	0.9 U	0.09 U	9.4 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
	4/5/2013	0.04 J	0.09 U	9.8 U	0.09 U	0.09 U	0.09 U	9.8 U	9.8 U	9.8 U	0.09 U	0.09 U
	4/10/2014	0.9 U	0.09 U	9.4 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
	4/13/2015	0.03 J	0.1 U	9.4 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U

Notes:
No California or Federal MCLs are available for SVOCs detected in April 2012 through 2015.
All results are presented in µg/L.

µg/L	Micrograms per liter
ID	Identification
J	Estimated value
MCL	Maximum contaminant level
NA	
SVOC	Semivolatile organic compound
U	Not detected

Table 4: Metals Detected Results Summary
2016 Groundwater Well Elimination Justification
University of California, Berkeley, Richmond Field Station Site

Sample Location	Sample Date	ALUMINUM	ANTIMONY	ARSENIC	BARIUM	BERYLLIUM	CADMIUM	CALCIUM	CHROMIUM	COBALT	COPPER	IRON	LEAD	MAGNESIUM	MANGANESE	MERCURY	MOLYBDENUM	NICKEL	POTASSIUM	SELENIUM	SILVER	SODIUM	THALLIUM	VANADIUM	ZINC
California MCLs		1,000	6	10	1,000	4	5		50		1,300		15			2		100		50			2		
Federal MCLs			6	10	2,000	4	5		100		1,300		15			2				50			2		
1/2 MCL		500	3	5	500	2	2.5		25		650		7.5			1		50		25			1		
B128	4/2/2012	55	1.0 U	5.7	23	0.50 U	1.0 U	69000	1.1	0.58	1.3 J	250	2.0 U	46000	360	0.048	2.8	2.7	6400	2.0 U	0.50 U	180000	2.0 U	4.0 U	2.8 J
	4/5/2013	50 U	1.4	0.77 J	44	1 U	1 U	22000	1 U	0.17 J	2.3 U	31 J	1 U	17000	86	0.025 J	0.6 UJ	5.8	510	1 U	1 U	110000	1 U	1.2	20 U
	4/10/2014	50 U	0.76 J	0.8 J	52	1 U	1 U	26000	0.41 J	1 U	3.4 U	71 U	1 U	17000	3.6	0.2 U	0.45 J	6	600	1 U	1 U	120000	1 U	1.2	5 U
	4/13/2015	50 U	1 U	1.4	68	1 U	1 U	27,000	1.3	1 U	1 U	41 J	1 U	18,000	37	0.2 U	0.46 UJ	10	270 J	0.21 UJ	1 U	100,000	1 U	2 UJ	12 U
B158	4/6/2012	590	1.0 U	6.3	13	0.50 U	1.0 U	4200	2.8	0.50 U	1.4 J	500	2.0 U	2600	13	0.030 U	0.87	1.8	1100 J	2.0 U	0.50 U	52000	2.0 U	6.4	3.0 J
	4/8/2013	15 J	1 U	4.6	8.5	1 U	1 U	2400	2	1 U	2.3 U	25 J	1 U	2200	5.5	0.2 U	0.38 UJ	1 U	340	0.31 J	1 U	50000	1 U	7.3	20 U
	4/2/2014	79 J	1 U	4.6	8.9	1 U	1 U	3200	1.9	1 U	3.4 U	65 J	1 U	2400	9.5	0.2 U	0.72 J	4.2 U	320	1 U	1 U	48000	1 U	7.1	2.4 J
	4/16/2015	9 J	1 U	4.7	9.8	1 U	1 U	3,200	1.3	0.074 J	0.32 UJ	50 U	0.092 UJ	2,200	54	0.2 U	0.61 UJ	2.2	170	1 U	1 U	49,000	1 U	7.1	12 U
B175S	4/4/2012	17 J	1.0 U	1.6	56	0.50 U	1.0 U	53000	0.81 J	0.36 J	1.4 J	100 U	2.0 U	43000	250	0.072	1.3	3.3	2100	2.0 U	0.50 U	91000	2.0 U	4.0 U	2.5 J
	4/2/2013	7.3 J	1 U	0.81 J	57	1 U	1 U	55000	0.48 J	1 U	2.3 U	50 U	1 U	45000	8.2	0.06 J	0.52 UJ	0.59 UJ	450	0.28 J	1 U	84000	1 U	2.9	14 J
	4/1/2014	50 U	1 U	1.1	62	4.3 U	1.3 U	63000	0.77 J	1 U	1 U	71 U	1 U	49000	4.1	0.2 U	3.2 U	1.8 J	490	1.5	1 U	100000	1 U	3.5	16 U
	4/15/2015	50 U	2	1.2	52	1 U	1 U	52,000	0.77 UJ	1 U	0.33 UJ	19 J	0.088 UJ	42,000	3.7	0.033 J	1.6 UJ	1.4	500	1.2	1 U	82,000	0.12 J	3.3 UJ	12 U
B178	4/3/2012	20 U	1.0 U	1.8	25	0.50 U	1.0 U	170000	1.0 U	0.87	2.2	100 U	2.0 U	140000	570	0.030 U	2.4	7.5	2800	2.0 U	0.50 U	150000	2.0 U	2.9 J	4.7 J
	4/2/2013	50 U	1 U	0.87 J	22	0.18 J	1 U	150000	0.31 J	2.3	2.3 U	280	1 U	160000	1800	0.2 U	2.9 UJ	7.7	1200	0.51 J	1 U	160000	1 U	2.1	20 U
	4/8/2014	50 U	2.6	4.9	23	1 U	1 U	180000	1 U	1.5	3.4 U	1100 J	1 U	190000	2400	0.2 U	1.8	5.1	1600	0.63 J	1 U	250000	0.054 J	0.46 J	3.2 J
	4/10/2015	9 J	0.21 J	1.7	17	1 U	1 U	170,000	0.26 UJ	0.82 J	1 U	800	1 U	160,000	2,200	0.2 U	1.6	4.2	1,200	1 U	1 U	160,000	1 U	1.6 UJ	12 U
B480	4/9/2012	22	1.0 U	6.5	41	0.50 U	1.0 U	53000	0.68 J	1.5	2.0 U	420	2.0 U	46000	480	0.030 U	1.5	2.0	3900	2.0 U	0.50 U	110000	2.0 U	2.0 J	3.3 J
	4/3/2013	8.1 J	0.41 UJ	2.5	93	1 U	1 U	50000	1.3	1 U	2.3 U	50 U	1 U	49000	11	0.2 U	0.38 UJ	1 U	1100	1 U	1 U	83000	1 U	4.7	9.1 J
	4/3/2014	50 U	0.25 J	3	130	1 U	1 U	54000	1.8	0.24 J	3.4 U	63 U	1 U	50000	7.9	0.2 U	0.66 J	2.7 J	1100	1 U	1 U	79000	1 U	6	3.7 J
	4/17/2015	50 U	1 U	2.1	140	1 U	1 U	54,000	1.5	1 U	1 U	50 U	1 U	48,000	0.43 J	0.022 J	0.35 UJ	1.5 UJ	1,000	1 U	1 U	93,000	1 U	6.3	12 U
BULB2	4/5/2012	770	1.0 U	8.9	540	0.50 U	1.0 U	130000	3.0	8.1	5.6 J	2800	3.9	190000	5600	**2.5**	7.9	25	40000	3.0	0.50 U	1900000	2.0 U	2.8 J	22
	4/5/2013	12 J	1 U	2	65	1 U	1 U	41000	1 U	1.3	2.3 U	220	1 U	43000	770	0.026 J	6.4	1 U	10000	1 U	1 U	220000	1 U	1.1	20 U
	4/10/2014	50 U	1 U	2.4	74	4.3 U	1.3 U	43000	0.2 J	1.4	1 U	520	0.14 J	60000	1100	0.2 U	7	2.2 J	9900	0.28 J	1 U	260000	1 U	1.2	16 U
	4/13/2015	50 U	1 U	3.3	53	1 U	1 U	29,000	1 U	0.72 J	1 U	720	1 U	29,000	390	0.2 U	6.1	1.8	11,000	1 U	1 U	310,000	1 U	2.1 UJ	12 U
CCC3	4/10/2012	390	1.0 U	5.9	27	0.50 U	1.0 U	68000	2.8	2.1	2.4	550	2.0 U	47000	940	0.019 J	4.0	6.5	4200	2.0 U	0.50 U	110000	2.0 U	3.5 J	3.9 J
	4/2/2013	100	1.8	2	13	1 U	1 U	55000	0.46 J	1 U	0.83 J	63	0.35 J	35000	24	0.024 J	1.6 UJ	1 U	1600	0.31 J	0.4 J	94000	1 U	3.4	20 U
	4/2/2014	50 U	1 U	2.6	14	1 U	1 U	61000	1 U	0.2 J	3.4 U	32 J	1 U	46000	190	0.2 U	1.5	1.9 J	1300	1 U	1 U	86000	1 U	2.4	2.4 J
	4/15/2015	50 U	0.22 J	2.7	15	1 U	1 U	50,000	1 U	0.15 J	0.63 UJ	50 U	1 U	38,000	47	0.2 U	1.1 UJ	1.8	1,200	1 U	1 U	90,000	1 U	4.3	12 U
PZ8	4/3/2012	68	1.0 U	1.6	96	0.50 U	1.0 U	44000	1.3	0.29 J	1.5 J	110	2.0 U	40000	27	0.030 UJ	0.49 J	2.5	2000 U	2.0 U	0.50 U	66000	2.0 U	3.5 J	3.4 J
	4/8/2013	15 J	1 U	1.1	84	1 U	1 U	45000	0.89 J	1 U	1.1 J	50 U	1 U	41000	2.3	0.2 U	1 U	1 U	700	0.29 J	1 U	59000	1 U	3.8	7.7 J
	4/8/2014	30 J	0.17 J	1.3	95	1 U	1 U	53000	0.97 J	0.24 J	3.4 U	41 J	0.14 J	46000	37	0.2 U	0.46 J	3.6 J	770	0.34 J	1 U	64000	1 U	4.2	4.4 J
	4/14/2015	50 U	0.26 J	1.5	84	0.1 J	1 U	48,000	1	1 U	1 U	50 U	0.076 J	41,000	0.73 J	0.2 U	0.45 UJ	0.96 J	690	0.92 J	1 U	64,000	1 U	5	12 U

Notes:

All results are presented in µg/L.

µg/L	Micrograms per liter
ID	Identification
J	Estimated value
MCL	Maximum Contaminant Level
U	Not detected