

HTW BCT Meeting, January 31, 2020

Table 1: Sites 2/12 GWTP and SVTU Statistics as of December 31, 2019

Monthly Statistics	Volume Treated	Average Flow	Percent of Time Online	COC Mass Removed (pounds)
December 2019 GWTP	6,021,150 gal	135 gpm	98.5	0.36
Total since April 1999	2.117 billion gal			489
December 2019 SVTU	0 scf	0 scfm	0	0
Total since September 2015	1.330 billion scf			9.7

Table 2: January 2020 – Sites 2/12 Treated Water Analytical Results at TS-212-INJ

COC	Discharge Limit (µg/L) ²	Sample Date / Analytical Results
		1/2/2020
1,1-Dichloroethene (1,1-DCE)	6.0	ND (0.25)
1,2-Dichloroethane (1,2-DCA)	0.50	0.13 J
1,3-dichloropropene (1,3-DCP) ¹	0.50	ND (0.25)
Chloroform	2.0	0.27 J
cis-1,2-dichloroethene (cis-1,2-DCE)	6.0	0.37 J
Tetrachloroethene (PCE)	5.0	ND (0.25)
Trichloroethene (TCE)	5.0	ND (0.25)
Vinyl Chloride (VC)	0.10	ND (0.05)

Notes:

¹ The reported value is the sum of both cis- and trans-isomers.

² Discharge limits are the ACLs for injection over the plume.

J: Estimated results below the limit of quantitation (LOQ).

ND: The analyte was not detected at or above the limit of detection (LOD).

gpm: gallon(s) per minute

gal: gallon(s)

COC: chemical of concern

NS: Not sampled

scf: standard cubic foot or feet

scfm: standard cubic feet per minute

µg/L: micrograms per liter

Results in gray are ND

*Preliminary data

December 2019 Key Events for Sites 2/12

- Dec 2-6: Fourth Quarter 2019 Groundwater Monitoring Event.
- Dec 5: Sites 2/12 GWTP shut down for 8 hours due to a high backwash/effluent tank alarm.
- Dec 10: Semi-Annual Optimization meeting.
- Dec 22: Sites 2/12 GWTP shut down for 3.5 hours due to a power issue at OU2 GWTP.

January 2020 Key Events for Sites 2/12

- Jan 8: Sites 2/12 GWTP shut down for 3 hours due to overcurrent fault at OU2 GWTP.
- Jan 21-22: Sites 2/12 GWTP shut down for 10 hours due to programming issue at OU2 GWTP.

February 2020 Key Events for Sites 2/12

- Feb 18-20: First Quarter 2020 Soil Gas Monitoring Event.
- Replace control valves and flow meters at Sites 2/12 infiltration galleries.

March 2020 Key Events for Sites 2/12

- Mar 2-6: First Quarter 2020 Groundwater Monitoring Event.



Table 3. Sites 2/12 Soil Gas Monitoring Results

Soil Gas Probe ID	1Q 2019	2Q 2019	3Q 2019	4Q 2019	1Q 2019	2Q 2019	3Q 2019	4Q 2019	Schedule
	PCE				TCE				
SG-12-01-65	140	180	ND	ND	ND	ND	ND	ND	Q ²
SG-12-02-10	<i>810</i>	<i>1,200</i>	<i>1,300</i>	<i>1,200</i>	ND	ND	ND	ND	Q ¹
SG-12-02-20	NS	NS	860	NS	NS	NS	ND	NS	A
SG-12-02-30	NS	NS	810	NS	NS	NS	ND	NS	A
SG-12-02-40	NS	NS	690	NS	NS	NS	ND	NS	A
SG-12-02-50	NS	NS	630	NS	NS	NS	45 J	NS	A
SG-12-02-57	NS	NS	570	NS	NS	NS	ND	NS	A
SG-12-02-65	NS	NS	580	NS	NS	NS	ND	NS	A
SG-12-04-10	100	ND	62 J	98	ND	100	580	<i>910</i>	Q ¹
SG-12-04-65	ND	ND	54 J	110	ND	90	400	440	Q ²
SG-12-06-10	ND	ND	84	150	ND	ND	ND	ND	Q ¹
SG-12-06-70	ND	NS	95	NS	ND	NS	ND	NS	R
SG-12-16-60	NS	NS	ND	NS	NS	NS	560	NS	R
SG-12-17-40	NS	NS	ND	NS	NS	NS	640	NS	Q
SG-12-20-10	NS	NS	<i>1,200</i>	NS	NS	NS	ND	NS	A
SG-12-20-20	NS	NS	750	NS	NS	NS	ND	NS	A

	SGCL (µg/m ³)	SG-SL (µg/m ³)
PCE	1,800	<i>603</i>
TCE	1,000	<i>888</i>

Notes:

*Preliminary results

A = Annual

J = estimated result below the limit of quantitation (LOQ)

ND = not detected above the limit of detection (LOD)

NS = not sampled

Q = Quarterly

R = Removed

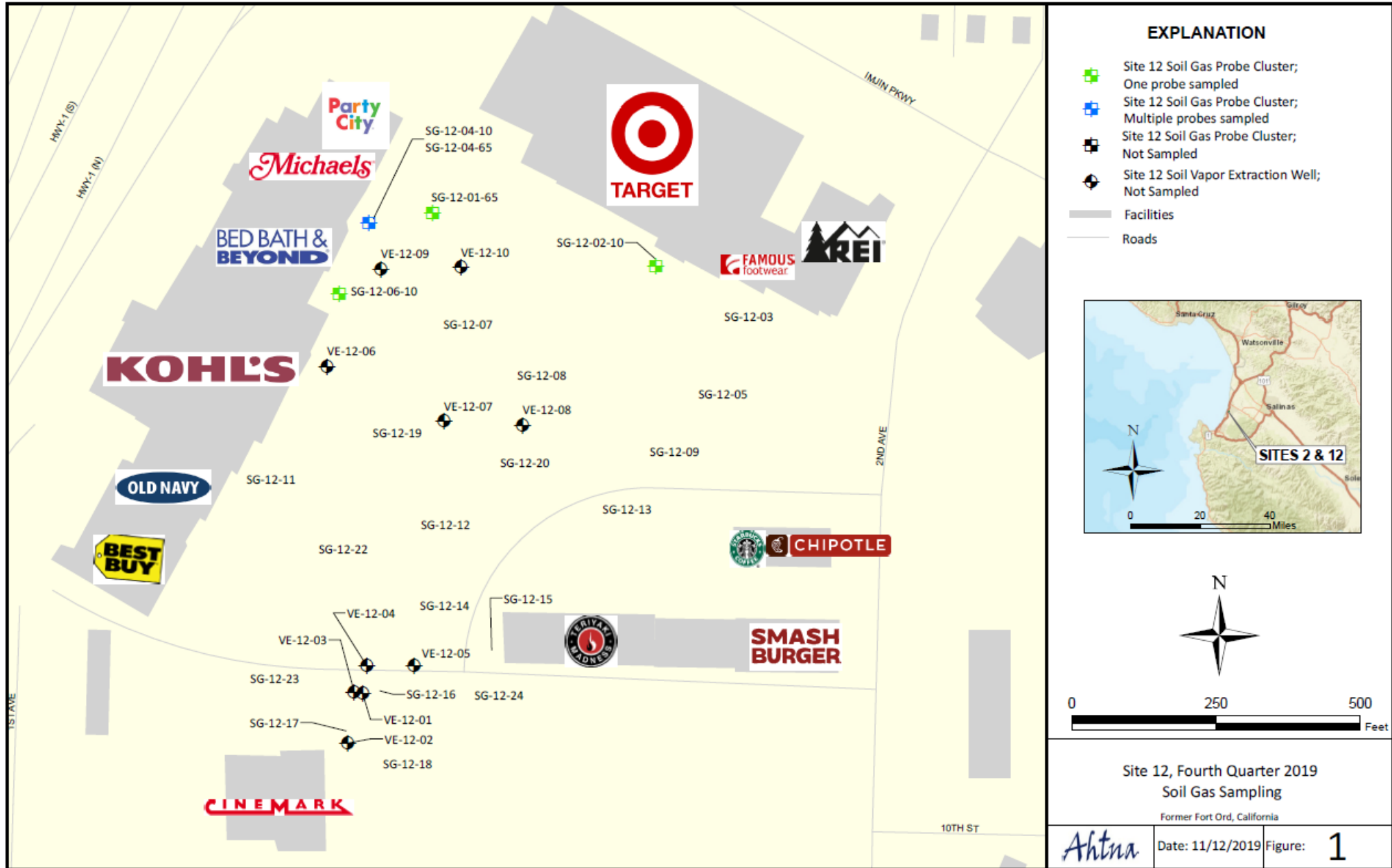
Concentrations in **bold** exceed the SGCL

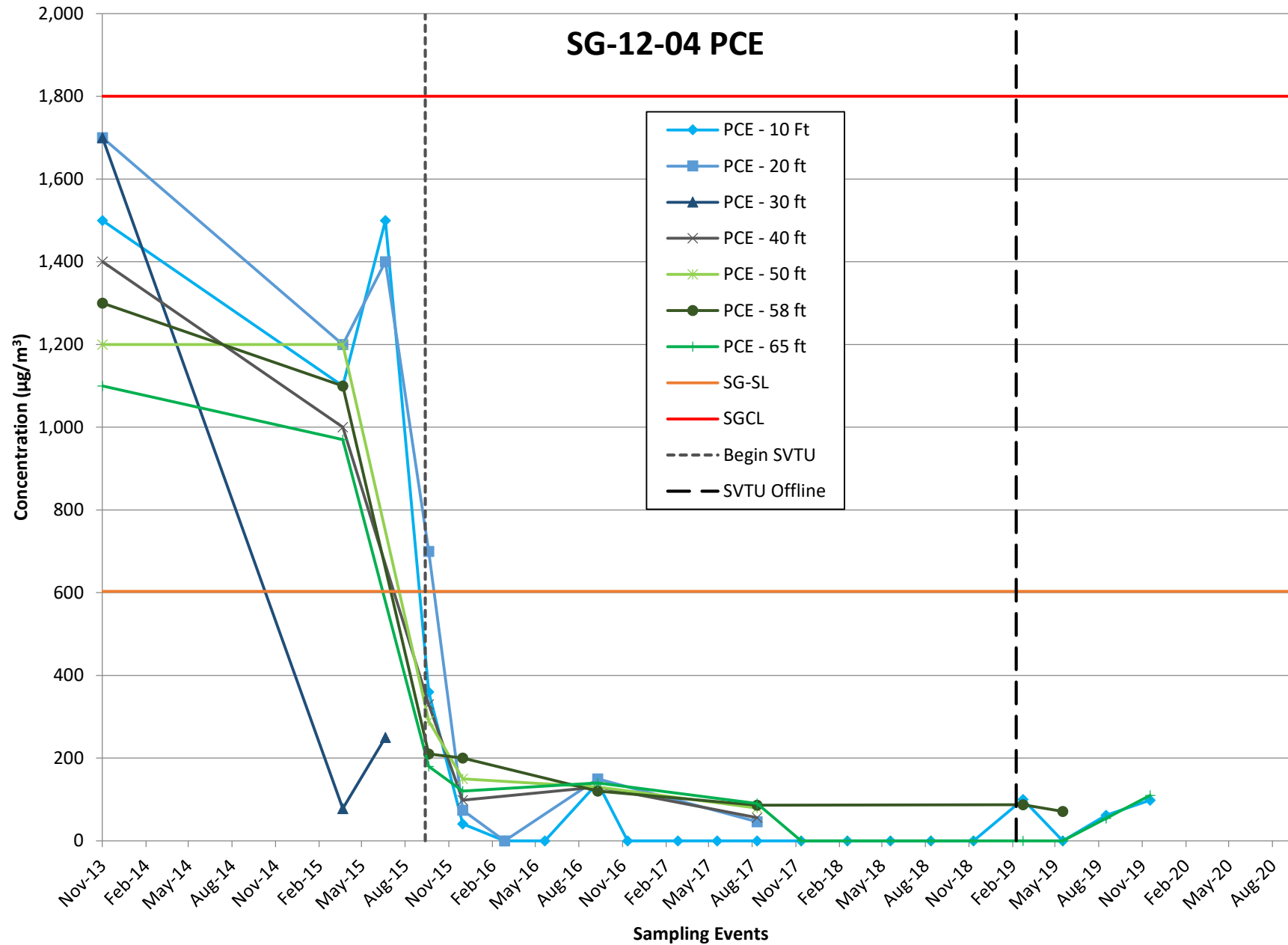
Concentrations in *italics* exceed the SG-SL

Results reported in micrograms per cubic meter (µg/m³)

¹ Quarterly probe due to proximity of store front in an area of historic soil gas concentrations above the SGCL.

² Will continue to sample probe quarterly if it is within the vicinity of the current groundwater plume above the ACL (probe adjacent to deepest probe will be sampled in lieu if deepest probe is in saturated zone).





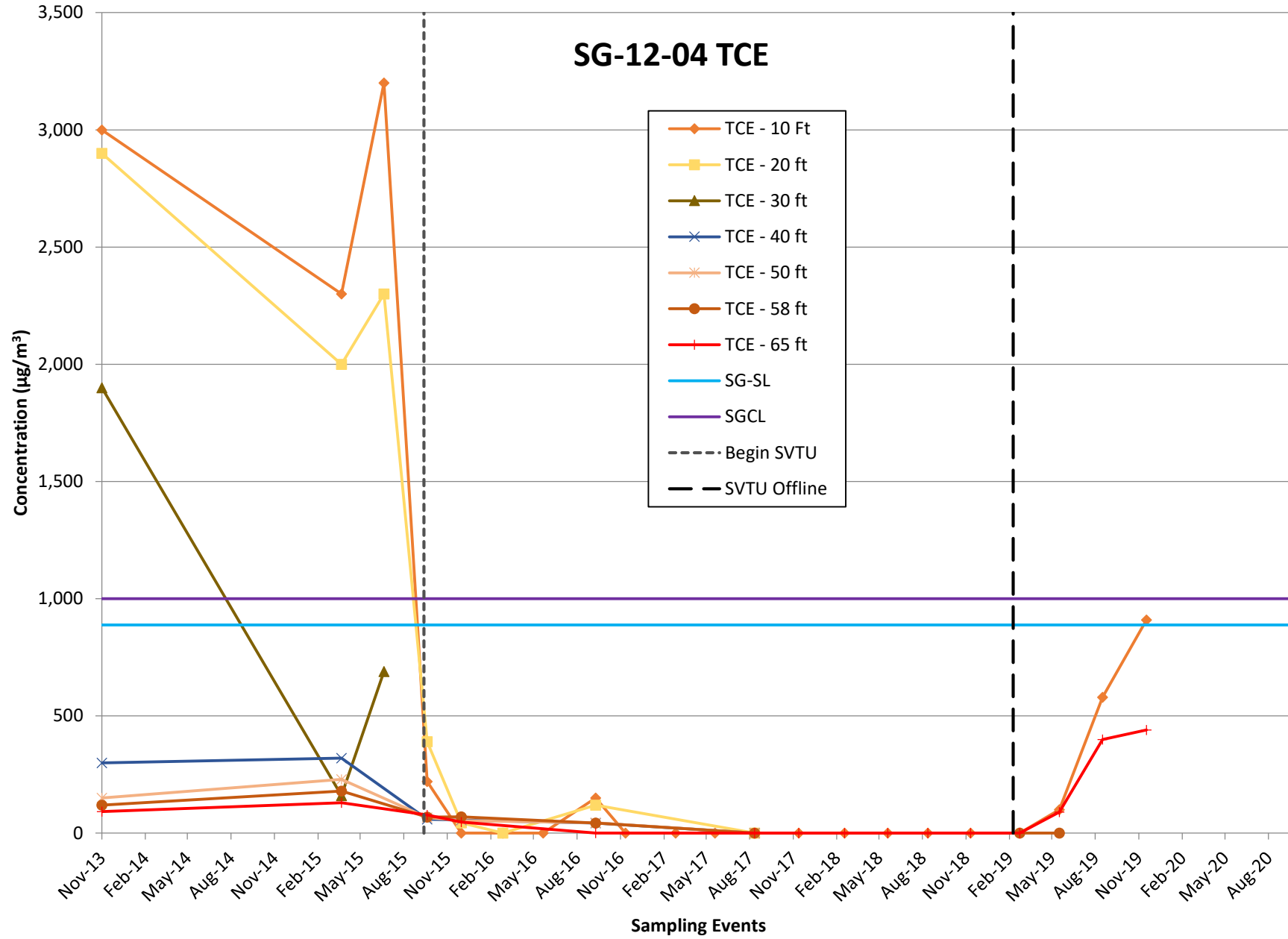


Table 4. Sites 2/12 Select Groundwater Extraction/Monitoring Well Data

Well Identification	Select COC Concentrations (µg/L) ³							
	1Q 2019	2Q 2019	3Q 2019	4Q 2019	1Q 2019	2Q 2019	3Q 2019	4Q 2019
	TCE				PCE			
ACL:	5.0 µg/L				5.0 µg/L			
EW-12-03-180M	0.86	2.0	1.7	1.3	0.11 J	0.27 J	ND (0.25)	0.25 J
EW-12-05-180M	2.1	2.4	1.9	2.1	0.84	0.76	0.71	0.66
EW-12-07-180M	2.2 J-	1.7	1.1	0.81	0.59	0.41 J	0.28 J	0.27 J
EW-12-08-180U	0.59	0.47 J	0.47 J	0.36 J	15.7	12.5	14.1	13.5
MW-12-09R-180	2.6	2.2	1.9	1.7	0.44 J	0.42 J	0.28 J	0.29 J
MW-12-14-180M	1.5	2.4	2.4	1.5	0.30 J	0.43 J	0.28 J	0.34 J
MW-12-16-180M	2.0	1.4	1.2	1.5	0.15 J	ND (0.25)	ND (0.25)	ND (0.25)
MW-12-20-180U	0.11 J	ND (0.25)	ND (0.25)	ND (0.25)	5.3	3.1	2.7	5.6
MW-12-21-180U	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	0.14 J+	0.12 J	0.28 J	0.38 J
MW-12-24-180U	ND (0.25)	ND (0.25)	0.13 J	ND (0.25)	1.8	0.66	1.8	3.1
MW-12-28-180U	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	0.40 J	0.54	0.33 J	0.31 J
MW-12-32-180U	0.11 J+	0.28 J	0.42 J	0.54	0.32 J	0.39 J	0.41 J	0.54

Notes:

¹ The reported value is the sum of both cis- and trans-isomers.

² Discharge limits are the ACLs for injection over the plume.

³ Concentration in **bold** and shaded exceeds the Aquifer Cleanup Level (ACL). Concentrations in gray text are ND.

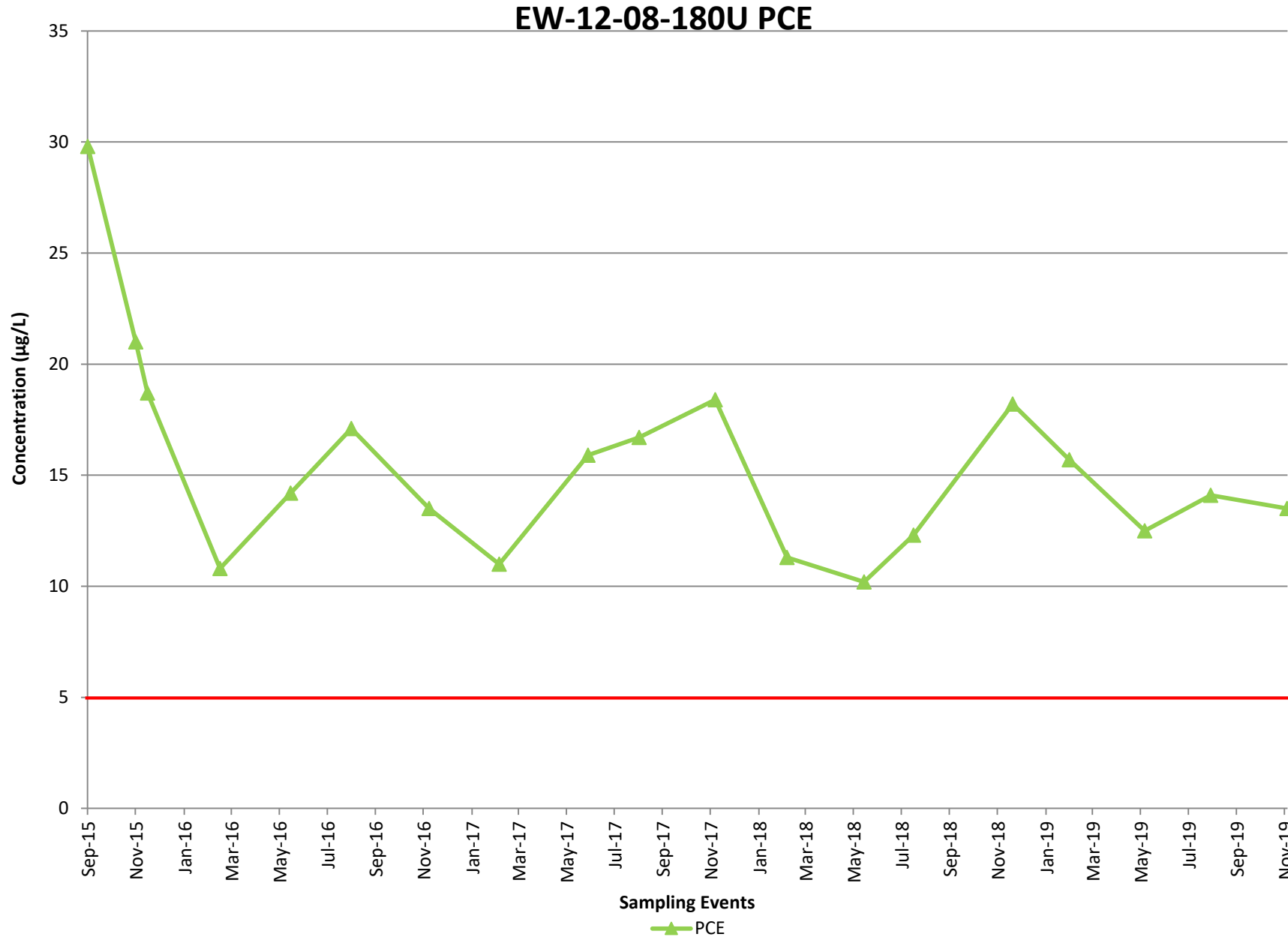
J: Estimated results below the limit of quantitation (LOQ)

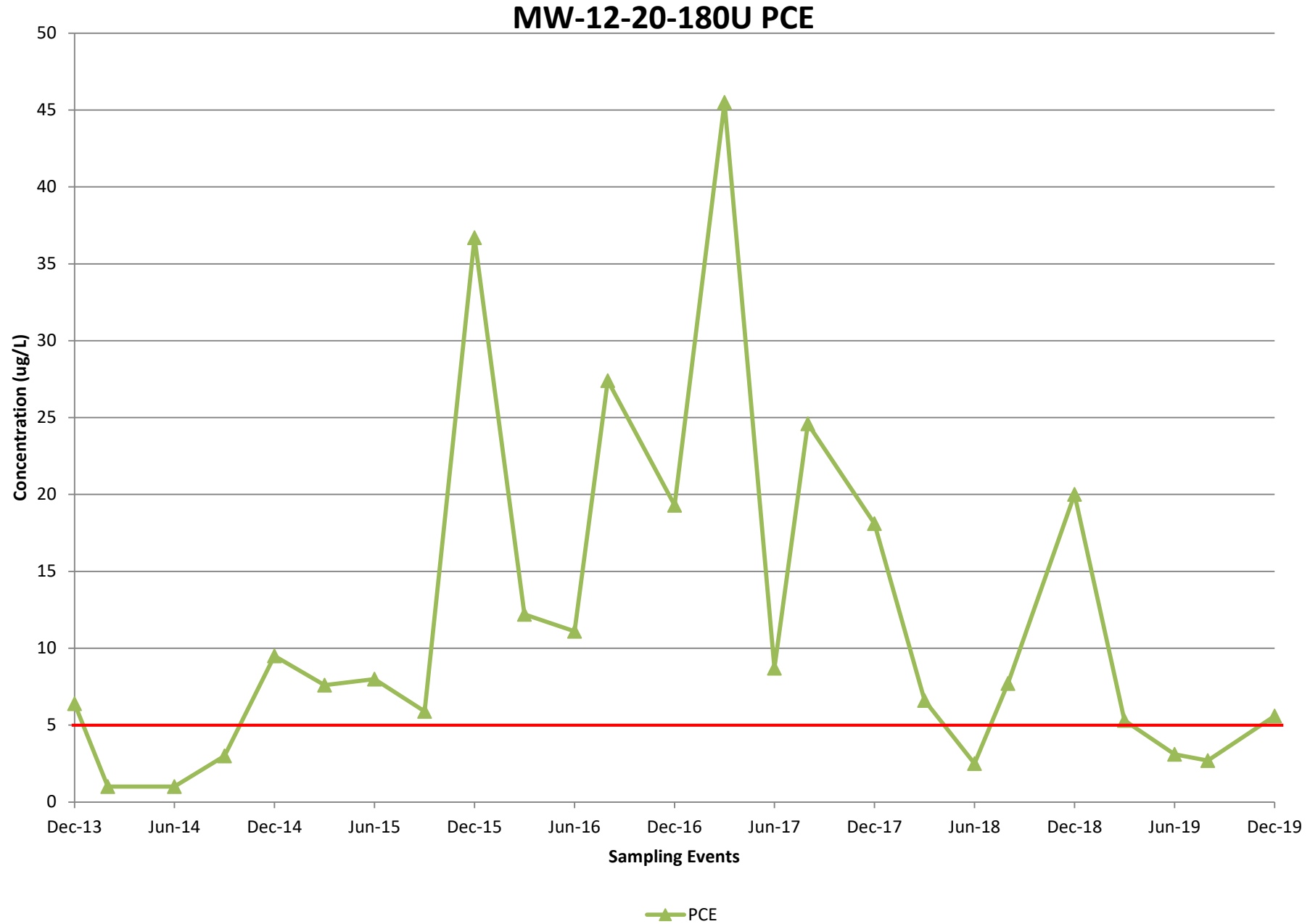
ND: The analyte was not detected at or above the limit of detection (LOD)

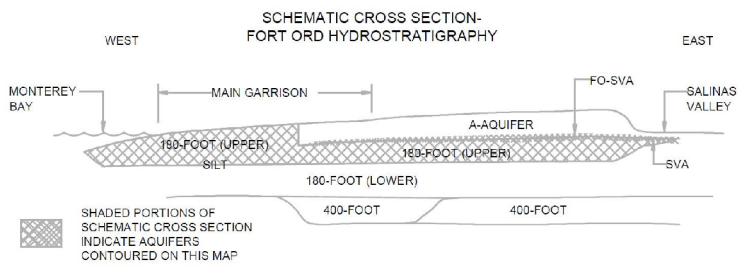
COC: chemical of concern

µg/L: micrograms per liter

* Preliminary data







EXPLANATION

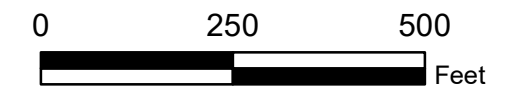
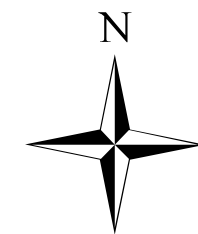
- Monitoring Well with PCE Detection.
 - Monitoring Well with No PCE Detection.
 - Monitoring Well Not sampled.
 - Extraction Well with PCE Detection above or equal to ACL.
 - Extraction Well with PCE Less than ACL.
 - Groundwater Extraction Wells No PCE Detected.
 - Extraction Well Not Sampled
- Well ID - Bold when ACL Exceeded
TCE and/or PCE concentration (µg/L)
with validation/lab qualifier.

Chemical of Concern (COC) Aquifer Cleanup Level (ACL)
Exceedance Contour in µg/L.

- 5 Tetrachloroethene (PCE)
- General Groundwater Flow Direction
- Roads
- Facilities

NOTES:

- (1) Samples were collected between August 26, 2019 and September 17, 2019.
- (2) Contours are based on one interpretation of the data that were available at the time this report was prepared; other interpretations may be possible.
- (3) Contours based on highest value obtained from multiple bags where applicable.
- (4) Other COC ACL Exceedances detected beyond the extent of the



GROUNDWATER PCE CONTRATIONS
UPPER 180-FOOT AQUIFER
FOURTH QUARTER 2018 THROUGH THIRD QUARTER 2019
Sites 2 and 12, Third Quarter 2019
Groundwater and Soil Gas Monitoring and Treatment
System Report, Former Fort Ord, California

