

Former Fort Ord Sites 2 and 12 Data and Status

HTW BCT Meeting, June 19, 2019

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

Monthly Statistics	Volume Treated	Average Flow	Percent of Time Online	COC Mass Removed (pounds)
May 2019 GWTP	6,055,059 gal	136 gpm	96.2	0.35
Total since April 1999	2.077 billion gal			487
May 2019 SVTU	0 scf	0 scfm	0	0
Total since September 2015	1.330 billion scf			9.7

Table 2: May 2019 – Sites 2/12 Treated Water Analytical Results at TS-212-INJ

COC	Discharge Limit (µg/L) ²	Sample Date / Analytical Results
		5/1/2019
1,1-Dichloroethene (1,1-DCE)	6.0	ND (0.25)
1,2-Dichloroethane (1,2-DCA)	0.50	ND (0.25)
1,3-dichloropropene (1,3-DCP) ¹	0.50	ND (0.25)
Chloroform	2.0	ND (0.25)
cis-1,2-dichloroethene (cis-1,2-DCE)	6.0	ND (0.25)
Tetrachloroethene (PCE)	5.0	0.51
Trichloroethene (TCE)	5.0	0.22 J
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

May 2019 Key Events for Sites 2/12

- May 3: Sites 2/12 GWTP offline for 14 hours due to OU2 communications loss.
- May 7: Sites 2/12 GWTP offline for 12 hours due to OU2 communications loss.
- May 13: Sites 2/12 GWTP offline for 2.5 hours to repair a leak.
- May 21-23: Second Quarter 2019 Soil Gas Monitoring – second rebound study sampling.

June 2019 Key Events for Sites 2/12

- June 3-7: Second Quarter 2019 Groundwater Monitoring.
- June 4: Sites 2/12 GWTP GAC change-out.



Table 3. Sites 2/12 Northern SVE Well Field Monitoring Results

Sample Date	North SVE Field									
	VE-12-06		VE-12-07		VE-12-08		VE-12-09		VE-12-10	
	PCE	TCE	PCE	TCE	PCE	TCE	PCE	TCE	PCE	TCE
9/16/2015	<i>1,700</i>	ND	<i>1,200</i>	ND	2,100	ND	<i>1,500</i>	48	460	ND
9/22/2015	<i>1,100</i>	ND	<i>750</i>	ND	<i>1,200</i>	ND	<i>1,100</i>	86	230	ND
9/29/2015	<i>940</i>	ND	<i>860</i>	ND	<i>970</i>	ND	<i>1,100</i>	90	220	ND
10/6/2015	<i>680</i>	ND	<i>560</i>	ND	<i>670</i>	ND	<i>870</i>	53	180	ND
11/12/2015	260	ND	180	84	310	ND	410	ND	97	ND
12/8/2015	230	ND	130	180	260	ND	350	ND	ND	ND
3/1/2016	66	ND	ND	ND	130	ND	190	ND	44	ND
6/6/2016	130	ND	55	ND	120	ND	190	ND	48	ND
9/30/2016^	54	ND	130	ND	190	ND	310	ND	92	ND
11/16/2016	77 J	ND	NS	NS	NS	NS	220	ND	92	ND
3/1/2017	ND	ND	NS	NS	NS	NS	160	ND	46 J	ND
5/23/2017	ND	ND	NS	NS	NS	NS	110	ND	ND	ND
8/8/2017	ND	ND	NS	NS	120	ND	170	ND	ND	ND
11/15/2017	ND	ND	NS	NS	NS	NS	66 J	ND	ND	ND
2/20/2018	ND	ND	NS	NS	NS	NS	74 J	ND	ND	ND
5/22/2018	ND	ND	NS	NS	NS	NS	64 J	ND	ND	ND
8/22/2018	NS	NS	NS	NS	NS	NS	ND	ND	NS	NS
11/13/2018	NS	NS	NS	NS	NS	NS	ND	ND	NS	NS
2/27/2019	ND	ND	NS	NS	NS	NS	ND	ND	NS	NS
5/22/2019*	ND	ND	NS	NS	NS	NS	64 J	ND	NS	NS

Notes:

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

NS = not sampled

Concentrations in **bold** exceed the SGCL

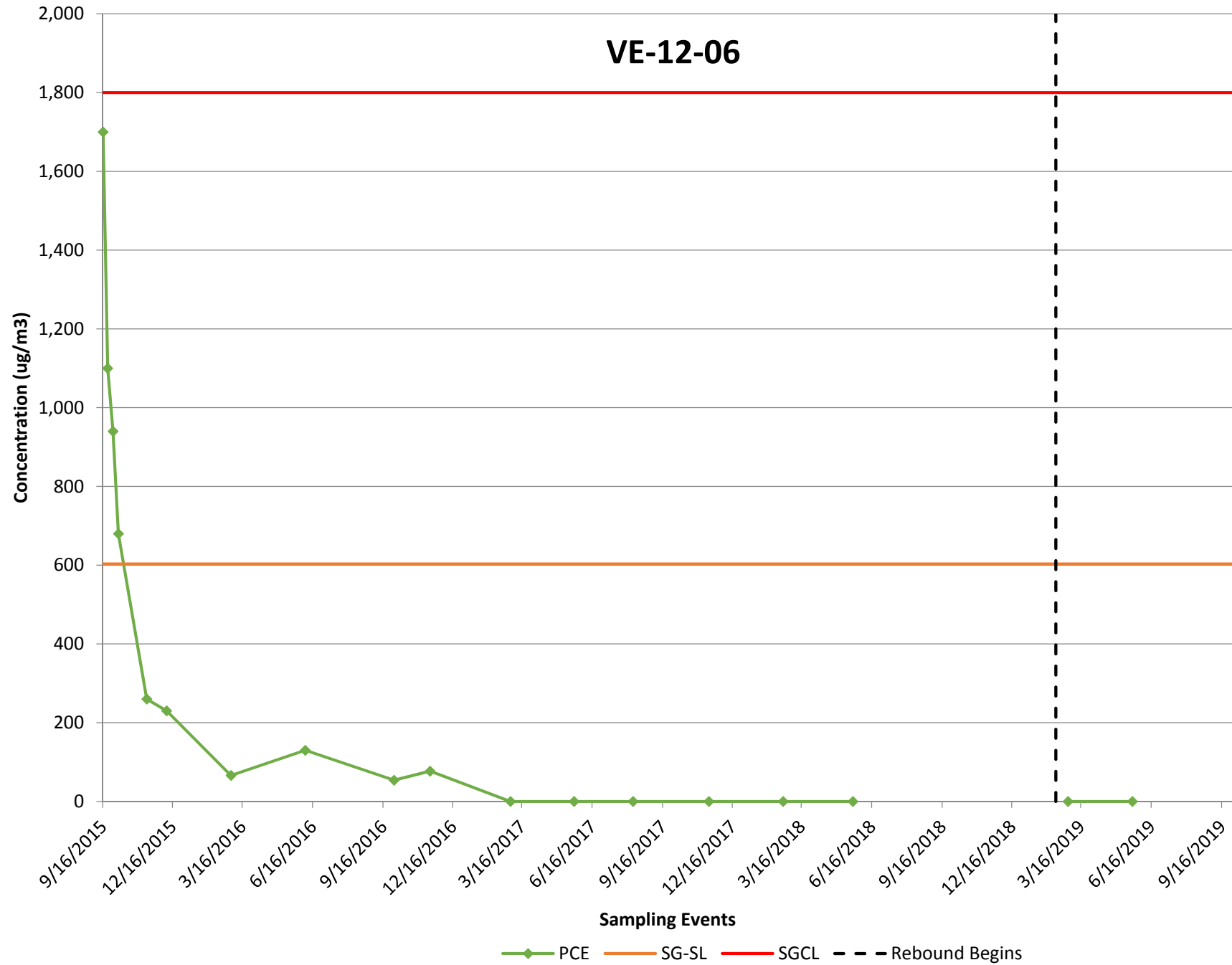
Concentrations in *italics* exceed the SG-SL

Results reported in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

^SVE Northern well field offline mid-July to Sept 23, 2016 (approx. 10 weeks), and online for one week prior to sampling for rebound study.

*Preliminary results





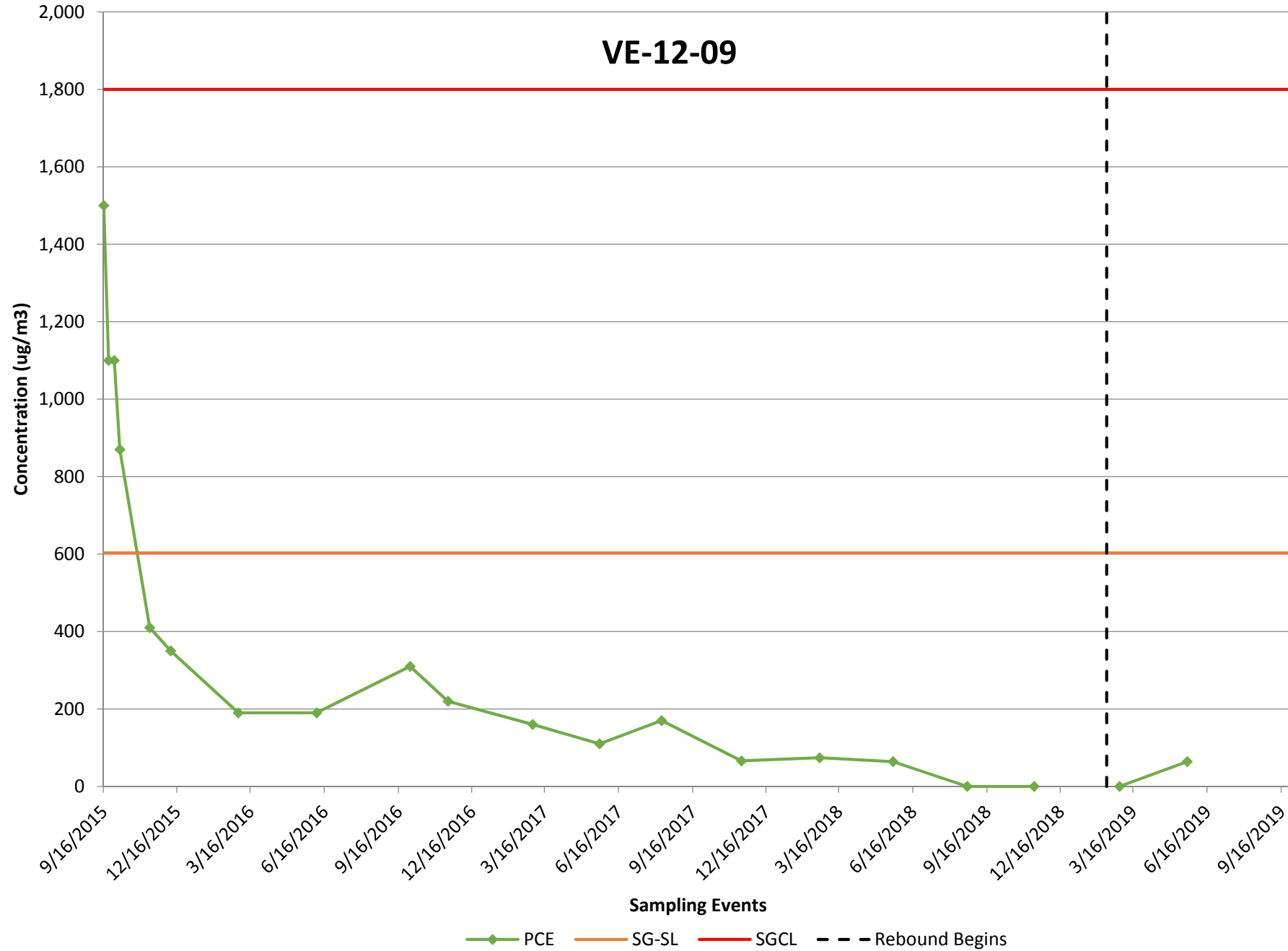


Table 4. Sites 2/12 Soil Gas Monitoring Results - North

Soil Gas Probe ID	4Q 2018	1Q 2019	2Q 2019*	4Q 2018	1Q 2019	2Q 2019*	Schedule
	PCE			TCE			
SG-12-01-58	NS	120	180	NS	ND	ND	R
SG-12-01-65	ND	140	180	ND	ND	ND	Q ²
SG-12-02-10	<i>1,300</i>	<i>810</i>	<i>1,200</i>	ND	ND	ND	Q ¹
SG-12-04-10	ND	100	ND	ND	ND	100	Q ¹
SG-12-04-58	NS	87	71 J	NS	ND	ND	R
SG-12-04-65	ND	ND	ND	ND	ND	90	Q ²
SG-12-06-10	ND	ND	ND	ND	ND	ND	Q ¹
SG-12-06-50	NS	NS	70 J	NS	NS	ND	R
SG-12-06-60	NS	ND	ND	NS	ND	ND	R
SG-12-06-70	ND	ND	NS	ND	ND	NS	A

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

Notes:

*Preliminary results

A = Annual

B = sampled for 4Q17 and 1Q18 for rebound study

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

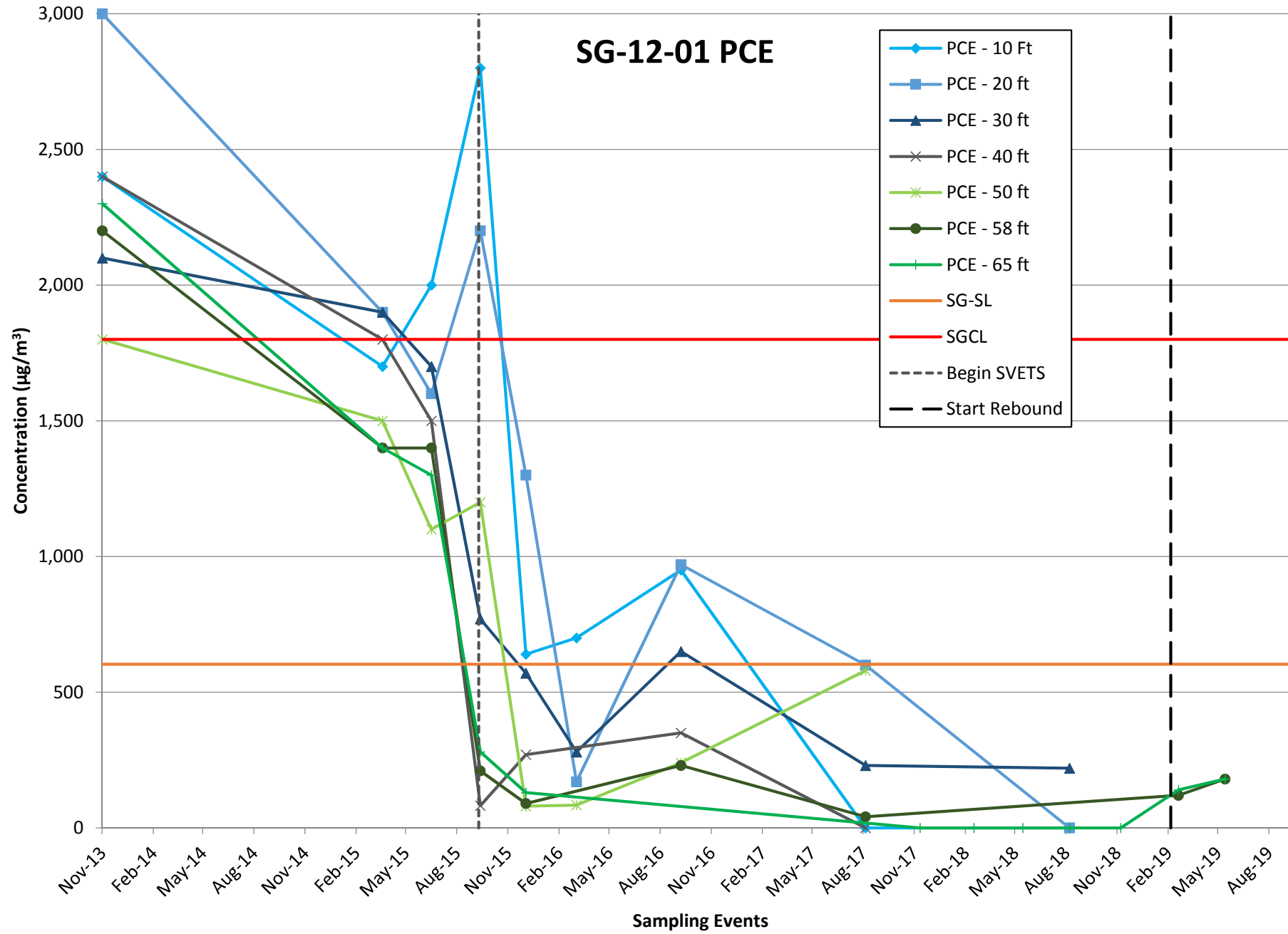
Concentrations in **bold** exceed the SGCL

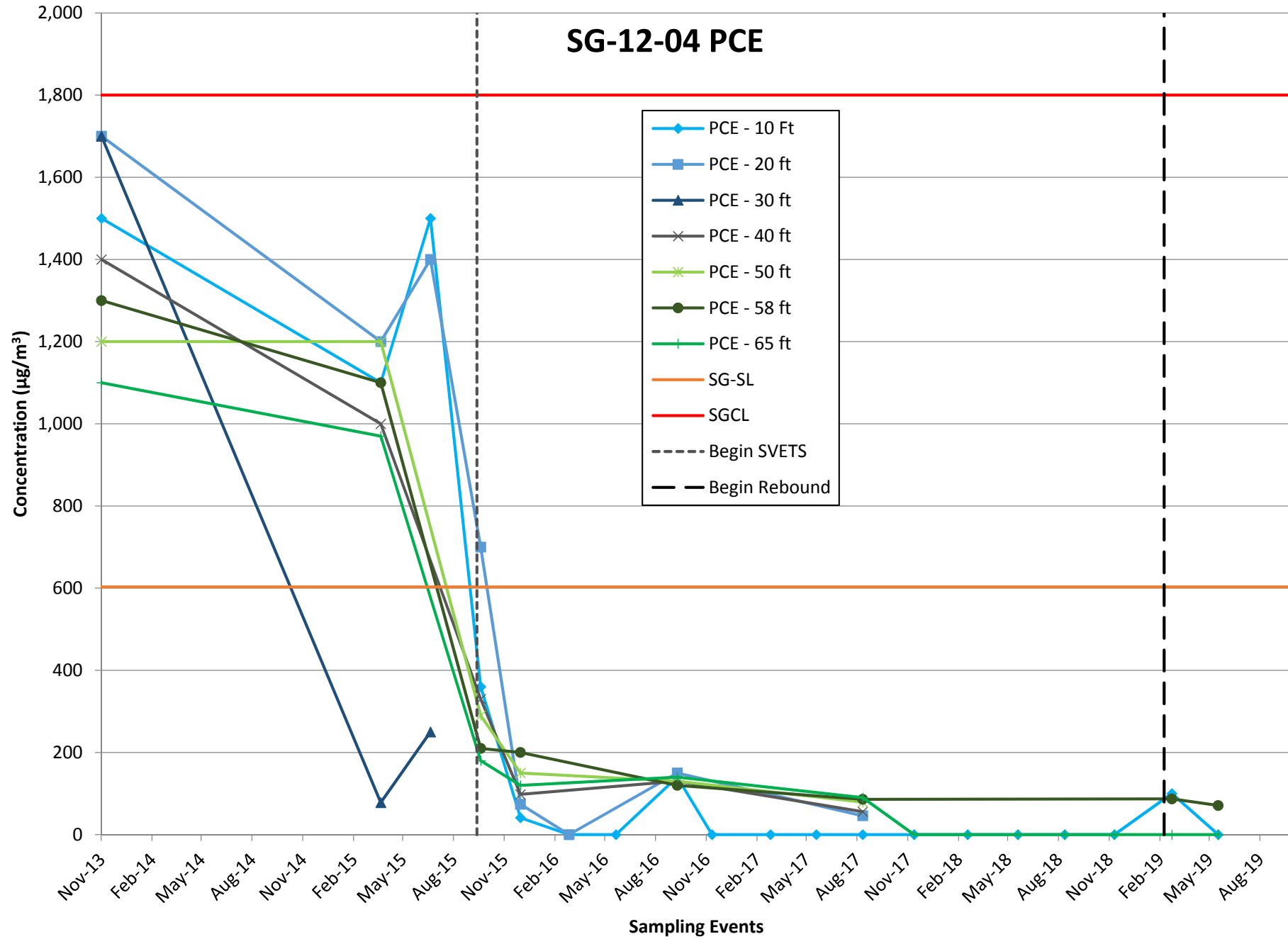
Concentrations in *italics* exceed the SG-SL

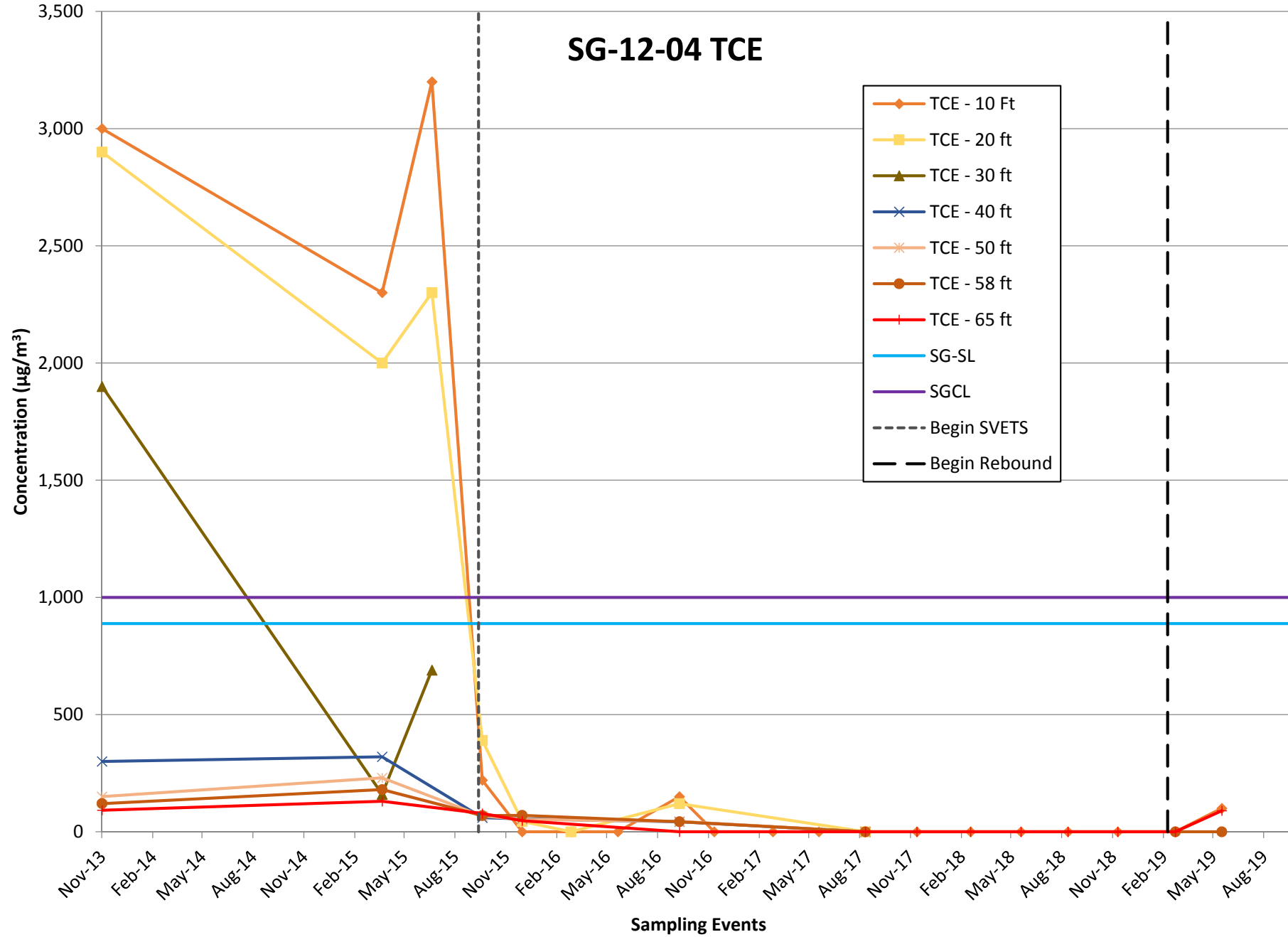
Results reported in micrograms per cubic meter (µg/m³)

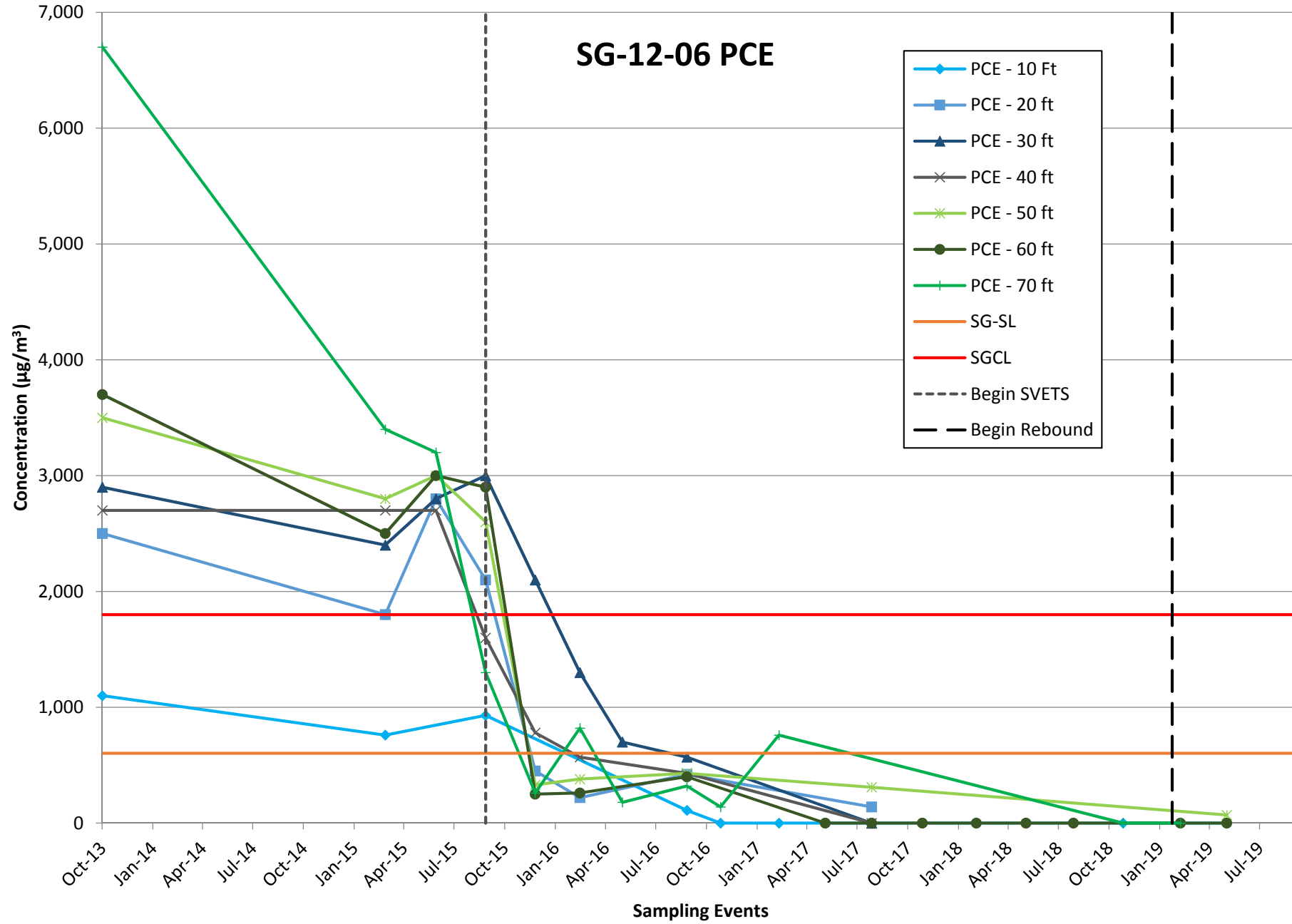
¹ Quarterly probe due to proximity of store front in an area of historic soil gas concentrations above the SGCL.

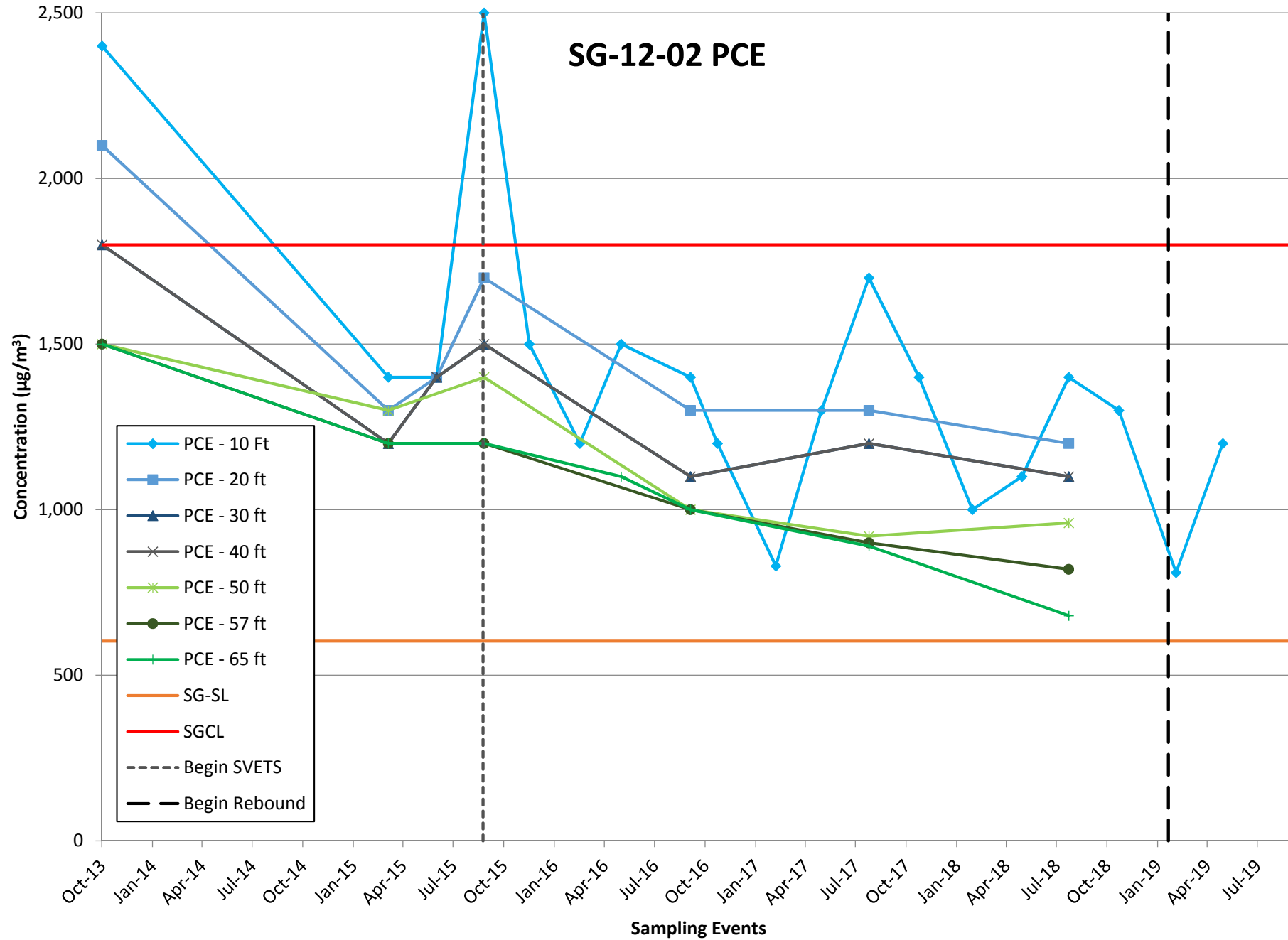
² Will continue to sample probe quarterly if it is within the vicinity of the current groundwater plume above the ACL (probe adjacent to deepest probe will be sampled in lieu if deepest probe is in saturated zone).











QAPP Volume I, Appendix C, Revision 4

Soil Gas Monitoring at Sites 2/12, Worksheet #10

AR# BW-2792G

Section 2.9.5.6: SVE well operation with respect to soil gas plume remediation:

- Operate if any COC concentration is greater than SGCL.
- Operate if ROI and analytical data from nearby SVE wells or soil gas probes indicate operation is necessary for soil gas plume remediation.
- *Discontinue operation if COC concentrations are less than or equal to SGCL for two consecutive quarterly monitoring events, and if ROI and analytical data from nearby SVE wells and soil gas probes indicate operation is no longer necessary for soil gas plume remediation.*

Section 2.9.5.7: SVE well operation with respect to groundwater plume remediation:

- Operate if located within an area where any groundwater COC concentration is greater than the corresponding ACL.
- *If analytical data from the operating SVE well and nearby groundwater monitoring wells indicate the SVE well is not facilitating groundwater remediation, a recommendation will be presented for regulatory agency approval to discontinue operation of the SVE well.*
- Operate if ROI and analytical data from nearby groundwater wells indicate operation may supplement groundwater plume remediation.
- *Discontinue operation if ROI and analytical data from nearby groundwater wells indicate operation is no longer necessary for groundwater plume remediation.*

Table 5. Sites 2/12 Select Groundwater Extraction/Monitoring Well Data

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

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 Extraction wells not listed have met the QAPP decision rules to no longer operate.

⁴ 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

