Former Fort Ord Sites 2 and 12 Data and Status

HTW BCT, September 12, 2018

Table 1: Sites 2/12 GWTP and SVTU Statistics as of August 31, 2018

Monthly Statistics	Volume Treated	Average Flow	Percent of Time Online	COC Mass Removed (pounds)
August 2018 GWTP	5,270,636 gal	118 gpm	100	0.35
Total since April 1999	2.043 billion gal			485
August 2018 SVTU	22,358,342 scf	500 scfm	99.7	0.04
Total since Sept 2015	1.216 billion scf			9.5

Table 2: August 2018 – Sites 2/12 Treated Water Analytical Results at TS-212-INJ

COC	Discharge Limit (µg/L)[2]	Sample Date / Analytical Results	
		08/07/2018	08/25/2018
1,1-Dichloroethene (1,1-DCE)	6.0	ND (0.25)	ND (0.25)
1,2-Dichloroethane (1,2-DCA)	0.50	ND (0.25)	ND (0.25)
1,3-dichloropropene (1,3-DCP)[1]	0.50	ND (0.25)	ND (0.25)
Chloroform	2.0	0.16 J	0.21 J
cis-1,2-dichloroethene (cis-1,2-DCE)	6.0	0.16 J	0.29 J
Tetrachloroethene (PCE)	5.0	0.13 J	ND (0.25)
Trichloroethene (TCE)	5.0	ND (0.25)	ND (0.25)
Vinyl Chloride (VC)	0.10	ND (0.05)	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

August 2018 Key Events for Sites 2/12

- August 13-16: Third Quarter 2018 soil gas probes sampled.
- August 22: Third Quarter 2018 SVTU and VE-12-09 sampled.
- August 23: Decommissioned MW-02-12-180.
- August 15: Third Quarter 2018 EW-12-05-180M, EW-12-07-180M, and EW-12-08-180U samples collected.
- August 15: SVETS offline for 2 hours to check sumps and perform routine inspections and maintenance.
- August 27-31: Third Quarter 2018 groundwater monitoring wells sampled.

September 2018 Key Events for Sites 2/12

- None planned.

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Legend

- Soil Gas Probe Cluster
- Soil Vapor Extraction Well

Soil Gas Results Description

- Not sampled
- PCE & TCE at or below SG-SLs
- PCE above SG-SL and at or below SGCL
- PCE above SGCL
- TCE above SGCL

Label Description:

SG-12-11-10 Sample location identification
PCE: PCE and/or TCE concentration (µg/m^3)
TCE:

Notes:

(1) Samples were collected between August 13 to 22, 2018.
(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 duplicate and primary samples.
(4) <## results are not detected at or above the limit of detection.

N

0 62.5 125 250 Feet

Soil Gas PCE/TCE Concentrations and SGCL Exceedances, Third Quarter 2018

Sites 2 and 12 Fourth Quarter 2017 through Third Quarter 2018
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Table 3. Sites 2/12 Northern SVE Well Field Monitoring Results

	North SVE Field									
	VE-12-06		VE-12-07		VE-12-08		VE-12-09		VE-12-10	
Sample Date	PCE	TCE	PCE	TCE	PCE	TCE	PCE	TCE	PCE	TCE
9/16/2015	*1,700*	ND	*1,200*	ND	**2,100**	ND	*1,500*	48	460	ND
9/22/2015	*1,100*	ND	*750*	ND	*1,200*	ND	*1,100*	86	230	ND
9/29/2015	*940*	ND	*860*	ND	*970*	ND	*1,100*	90	220	ND
10/6/2015	*680*	ND	560	ND	*670*	ND	*870*	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

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 (µg/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 data

Table 4. Sites 2/12 SVTU Monitoring Results

	PCE		TCE	
Sample Date	SVE-12-INF	SVE-12-EFF	SVE-12-INF	SVE-12-EFF
9/16/2015	*1,500*	ND	38	ND
9/22/2015	*1,100*	ND	61	ND
9/29/2015	*710*	ND	57	ND
10/6/2015	370	1.3 J	43	ND
11/12/2015	240	0.80 J	92	ND
12/8/2015	160	ND	100	ND
3/1/2016	65 J+	ND	49 J+	ND
6/7/2016	50	ND	31	ND
9/14/2016	1.3 J+	ND	9.7 J+	ND
9/30/2016	130	NS	6.0	NS
11/16/2016	29	ND	16	2.7
3/1/2017	27 J+	ND	12 J	4.5 J
5/23/2017	30	ND	19	14
8/8/2017	34	ND	17	11
11/15/2017	49	ND	4.8	7.4
2/20/2018	34	0.72 J	6.9	28
5/22/2018	37	5.9	6.1	38
8/22/2018*	22	ND	5.4	25

Notes:
J = estimated result below the limit of quantitation (LOQ) with a potential low (-) or high (+) bias
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
*Preliminary data
Results reported in micrograms per cubic meter (µg/m^3)
SVTU Effluent emission AERSCREEN Modeling discharge compliance calculation results are:
Rule 207 Emission: 0.001 pounds VOCs per day (less than limit of 25 pounds per day)
Rule 1000 Hazard Index: 0.00001 (less than limit of 1.0)
Rule 1000 Excess Cancer Risk: 0.0075×10^{-5} (less than limit of 1×10^{-5})

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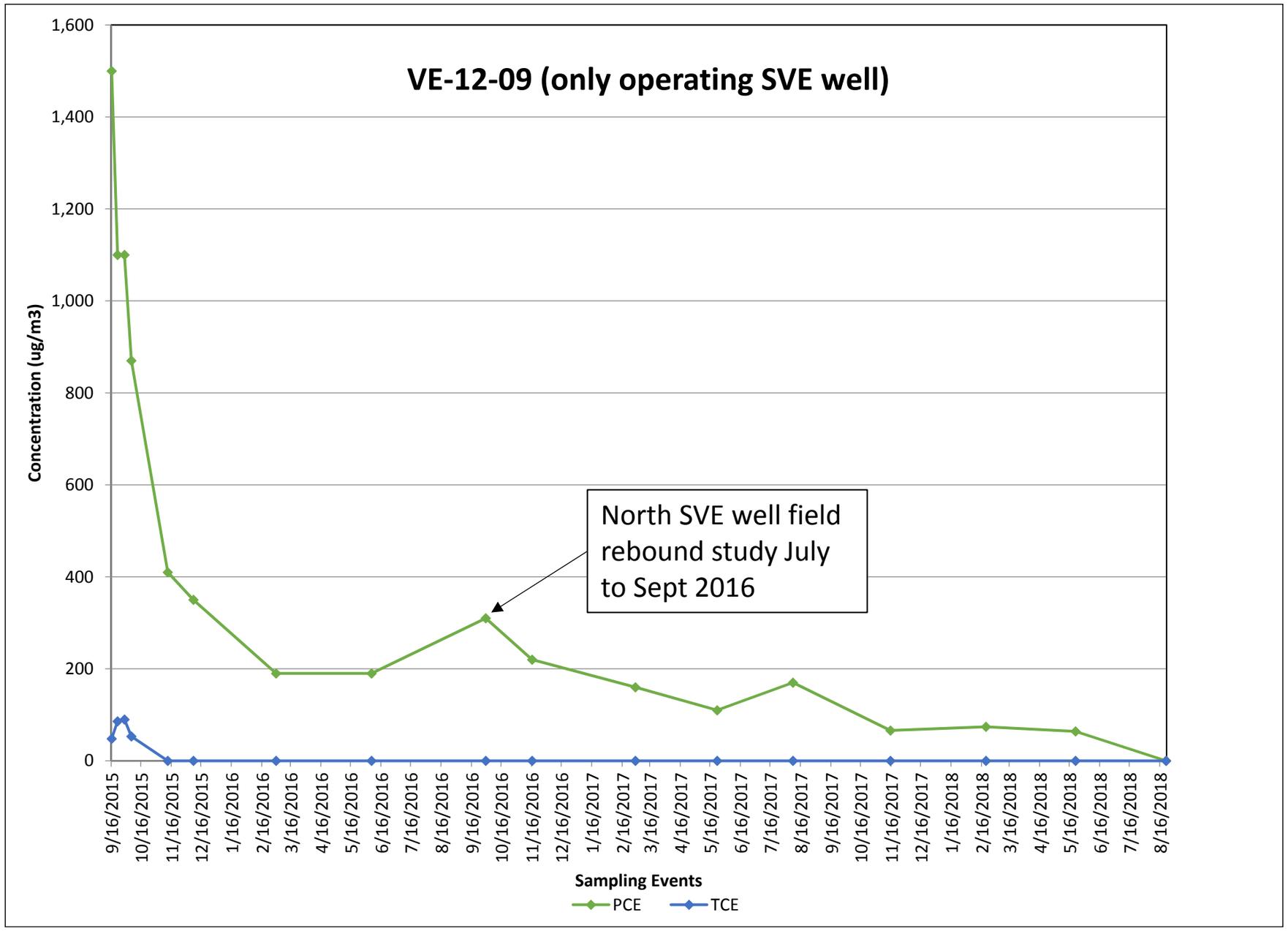
VE-12-09 (only operating SVE well)
Concentration (ug/m3)
1,600
1,400
1,200
1,000
800
600
400
200
0
North SVE well field rebound study July to Sept 2016
9/16/2015
10/16/2015
11/16/2015
12/16/2015
1/16/2016
2/16/2016
3/16/2016
4/16/2016
5/16/2016
6/16/2016
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7/16/2017
8/16/2017
9/16/2017
10/16/2017
11/16/2017
12/16/2017
1/16/2018
2/16/2018
3/16/2018
4/16/2018
5/16/2018
6/16/2018
7/16/2018
8/16/2018
Sampling Events
PCE
TCE

Table 5. Sites 2/12 Soil Gas Monitoring Results

Soil Gas Probe ID	PCE			TCE			New Schedule
	3Q 2017	2Q 2018	3Q 2018*	3Q 2017	2Q 2018	3Q 2018*	
SG-12-01-10	ND	NS	ND	ND	NS	ND	R
SG-12-01-20	600	NS	220	ND	NS	ND	R
SG-12-01-30	230	NS	ND	ND	NS	ND	R
SG-12-01-65	NS	ND	ND	NS	ND	ND	Q[2]
SG-12-02-10	*1,700*	*1,100*	*1,400*	ND	ND	ND	Q[1]
SG-12-02-20	*1,300*	NS	*1,200*	ND	NS	ND	A
SG-12-02-30	*1,200*	NS	*1,100*	ND	NS	ND	A
SG-12-02-40	*940*	NS	*920*	ND	NS	ND	A
SG-12-02-50	*920*	NS	*960*	ND	NS	ND	A
SG-12-02-57	*900*	NS	*820*	ND	NS	ND	A
SG-12-02-65	*890*	NS	*680*	ND	NS	ND	A
SG-12-04-10	ND	ND	ND	ND	ND	ND	Q[1]
SG-12-04-65	90	ND	ND	ND	ND	ND	Q[2]
SG-12-06-10	ND	ND	ND	ND	ND	ND	Q[1]
SG-12-06-60	ND	ND	ND	ND	ND	ND	Q[2]
SG-12-07-65	130	ND	ND	ND	ND	ND	Q[2]
SG-12-16-60	ND	NS	ND	ND	NS	590	R
SG-12-17-40	ND	NS	ND	130	NS	320	R
SG-12-20-10	*1,200*	NS	*1,200*	ND	NS	ND	A
SG-12-20-20	310	NS	*720*	ND	NS	ND	A

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

Notes:

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

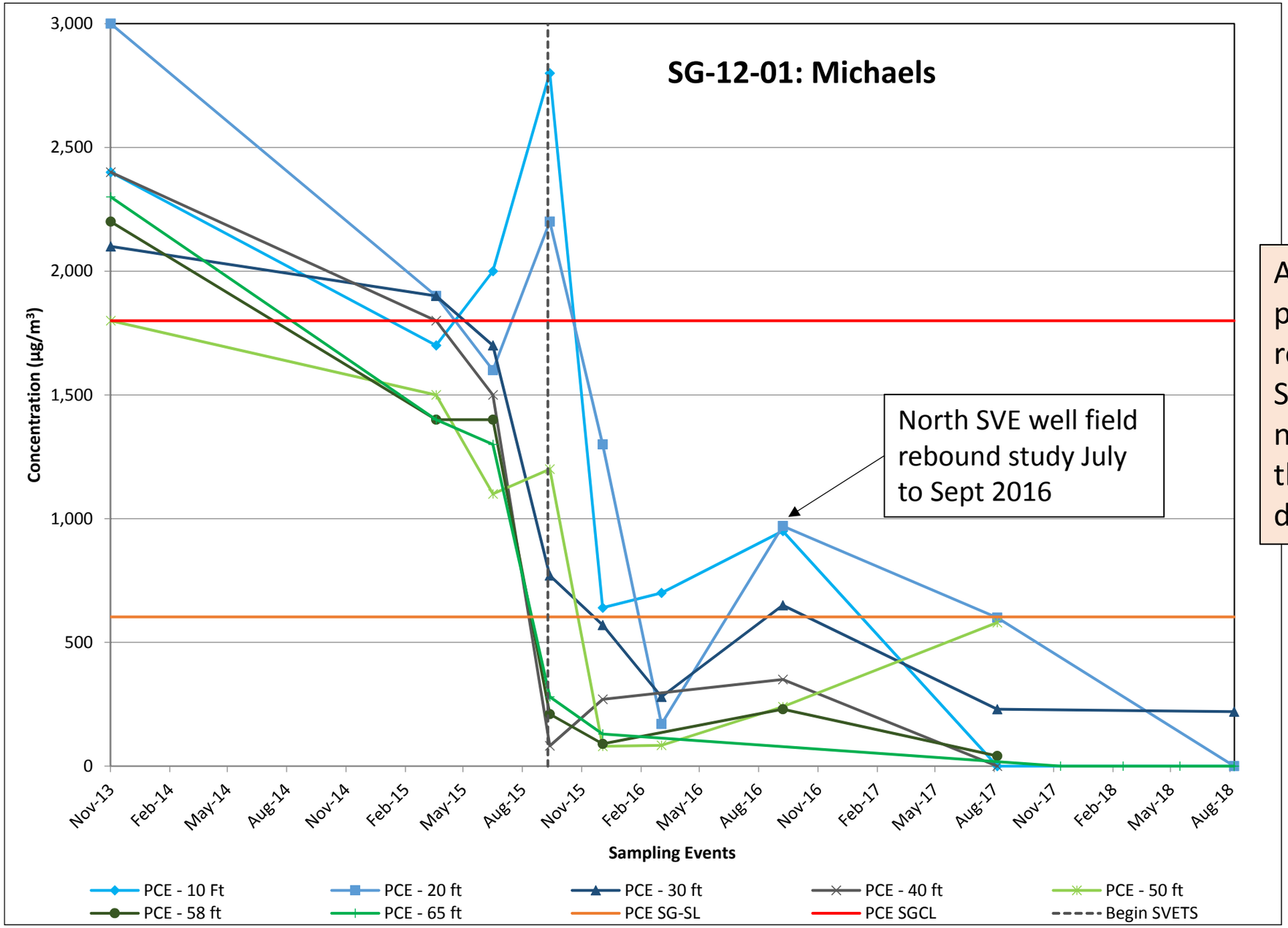
Concentrations in *italics* exceed the SG-SL

Results reported in micrograms per cubic meter (µg/m^3)

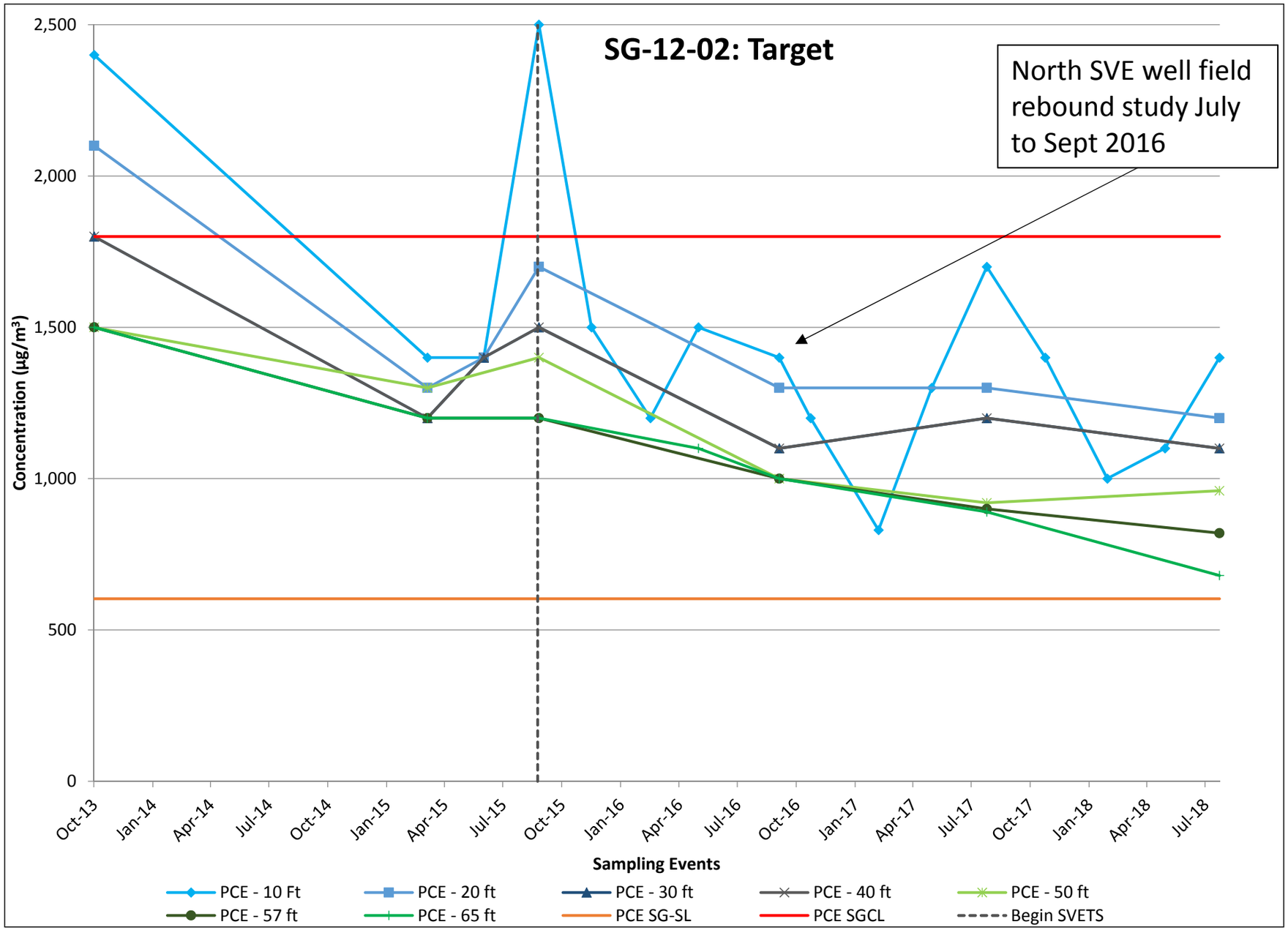
[1] Quarterly probe due to proximity of store front in an area of historic soil gas concentrations above the SGCL.

[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).

* Preliminary data

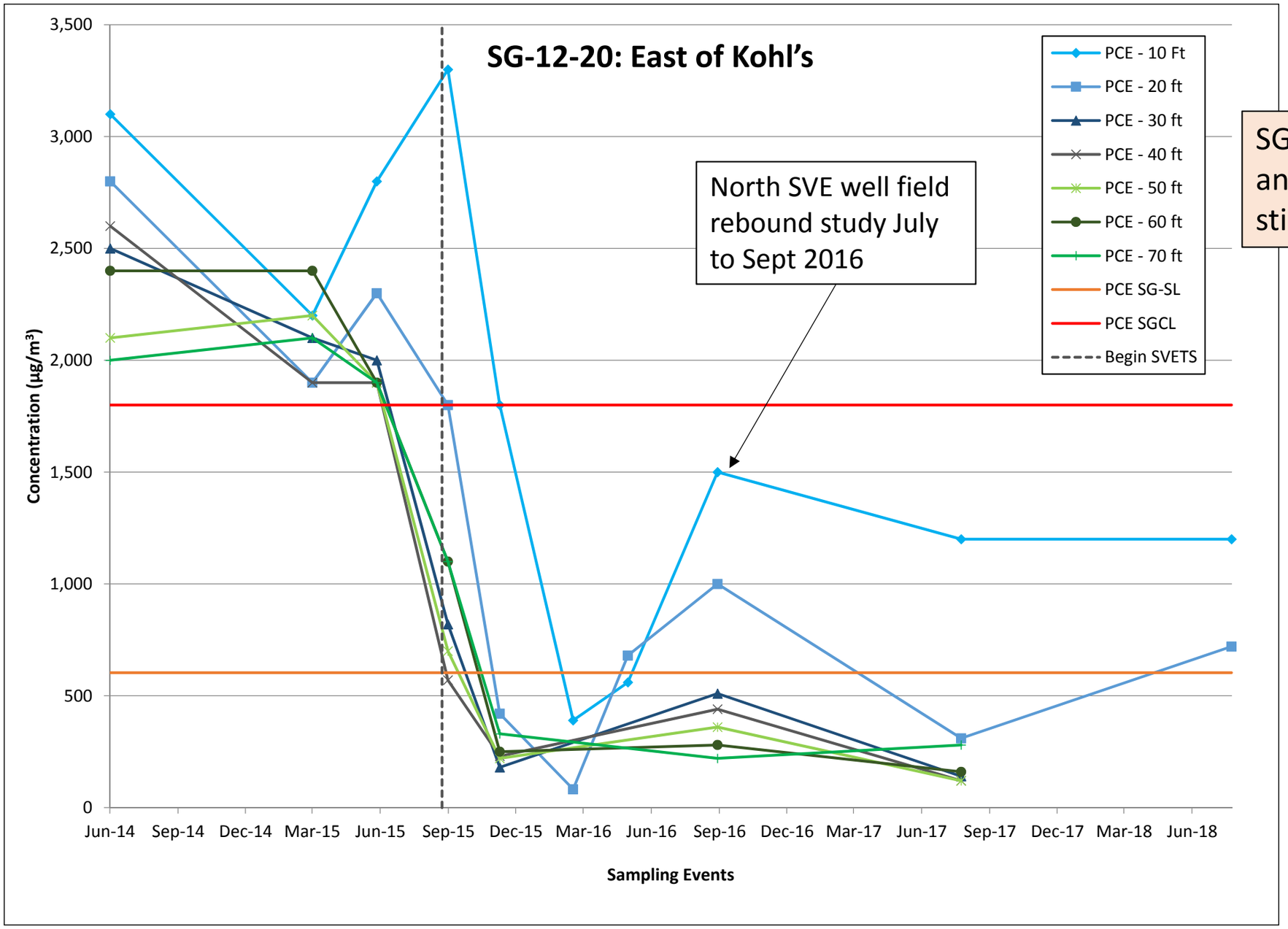


All SG-12-01 probes now removed from SGMP unless near GW plume then sample deepest probe

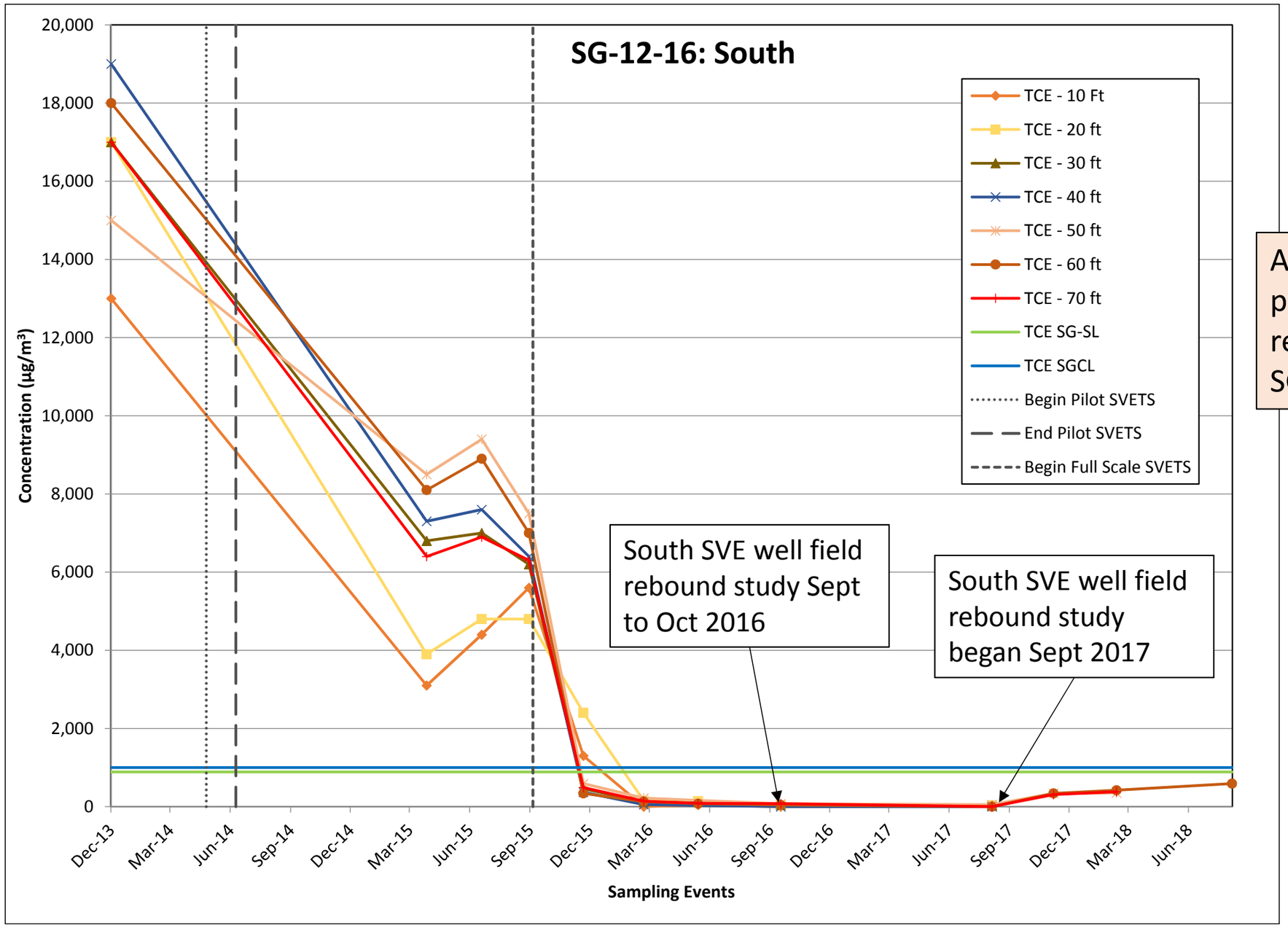


All SG-12-02 probes still Annual except 10-ft probe (Quarterly because adjacent to Target).

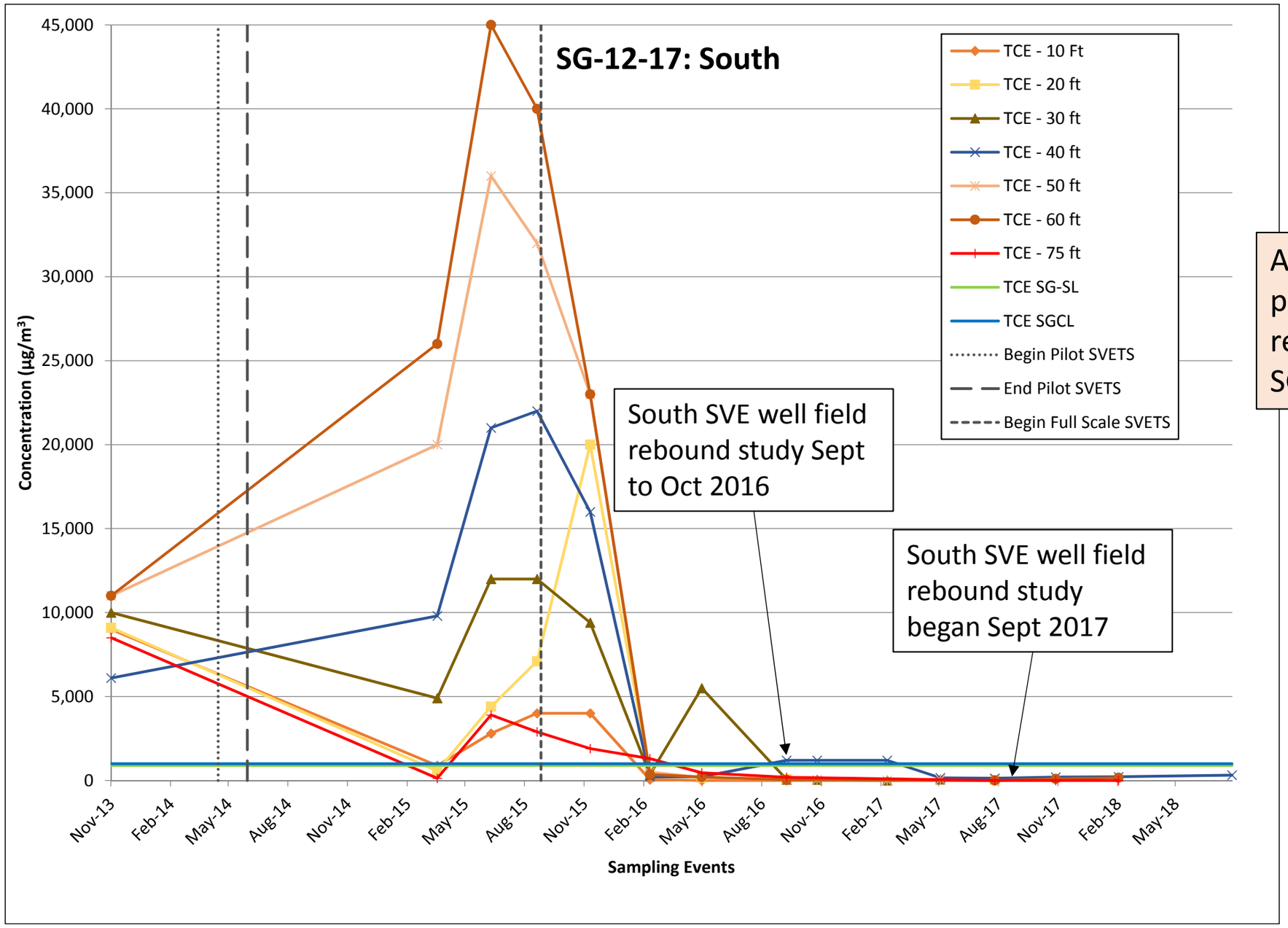
Probes not in ROI of SVETS operations but decreasing trends.



SG-12-20 10-ft and 20-ft probes still Annual



All SG-12-16 probes now removed from SGMP



All SG-12-17 probes now removed from SGMP