

# Former Fort Ord Sites 2 and 12 Data and Status

HTW BCT, July 13, 2018

**Table 1:** Sites 2/12 GWTP and SVTU Statistics as of June 30, 2018

Monthly Statistics	Volume Treated	Average Flow	Percent of Time Online	COC Mass Removed (pounds)
June 2018 GWTP	5,022,955 gal	116 gpm	89.2	0.26
Total since April 1999	2.033 billion gal			484
June 2018 SVTU	26,687,280 scf	527 scfm	100	0.07
Total since Sept 2015	1.170 billion scf			9.4

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

COC	Discharge Limit (µg/L) <sup>2</sup>	Sample Date / Analytical Results	
		06/13/2018	06/26/2018
1,1-Dichloroethene (1,1-DCE)	6.0	ND (0.25)	ND (0.25)
1,2-Dichloroethane (1,2-DCA)	0.50	0.18 J	ND (0.25)
1,3-dichloropropene (1,3-DCP) <sup>1</sup>	0.50	ND (0.25)	ND (0.25)
Chloroform	2.0	0.31 J	0.11 J
cis-1,2-dichloroethene (cis-1,2-DCE)	6.0	1.4	0.23 J
Tetrachloroethene (PCE)	5.0	ND (0.25)	0.29 J
Trichloroethene (TCE)	5.0	0.54	0.25 J
Vinyl Chloride (VC)	0.10	ND (0.05)	ND (0.05)

**Notes:**

<sup>1</sup> The reported value is the sum of both cis- and trans-isomers.

<sup>2</sup> 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

**June 2018 Key Events for Sites 2/12**

- June 9 to 11: Sites 2/12 GWTP shut down for 48 hours due to a power outage and loss of communications.
- June 11: Monterey County changed the Sites 2/12 GWTP in CERS to a non-regulated facility and closed it out in Envision.
- June 11 to 14: Second Quarter 2018 Groundwater Monitoring Program (GWMP) conducted.
- June 19: Sites 2/12 GWTP shut down for three hours due to OU2 GAC change out.
- June 21: Monterey County inspection of Sites 2/12 GWTP: disconnected tank discharge pipe, and County proceeding with closure of hazardous materials permit.
- June 24 to 25: Sites 2/12 GWTP shut down for 27 hours due to power outage.

**July 2018 Key Events for Sites 2/12**

- Prepare for 2018 decommissioning of one Sites 2/12 monitoring well.



Ahtna

**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	1,700	ND	1,200	ND	<b>2,100</b>	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 <sup>^</sup>	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

**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 ( $\mu\text{g}/\text{m}^3$ )

<sup>^</sup>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.

**Table 4.** Sites 2/12 SVTU Monitoring Results

Sample Date	PCE		TCE	
	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

**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

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

SVTU Effluent emission AERSCREEN Modeling discharge compliance calculation results are:

Rule 207 Emission: 0.002 pounds VOCs per day (less than limit of 25 pounds per day)

Rule 1000 Hazard Index: 0.00002 (less than limit of 1.0)

Rule 1000 Excess Cancer Risk:  $0.0096 \times 10^{-5}$  (less than limit of  $1 \times 10^{-5}$ )



**Table 5. Sites 2/12 Soil Gas Monitoring Results - North**

Soil Gas Probe ID	4Q 2017	1Q 2018	2Q 2018	4Q 2017	1Q 2018	2Q 2018	Schedule
	PCE			TCE			
SG-12-01-65	ND	ND	ND	ND	ND	ND	Q <sup>2</sup>
SG-12-02-10	<i>1,400</i>	<i>1,000</i>	<i>1,100</i>	ND	ND	ND	Q <sup>1</sup>
SG-12-04-10	ND	ND	ND	ND	ND	ND	Q <sup>1</sup>
SG-12-04-65	ND	ND	ND	ND	ND	ND	Q <sup>2</sup>
SG-12-06-10	ND	ND	ND	ND	ND	ND	Q <sup>1</sup>
SG-12-06-60	ND	ND	ND	ND	ND	ND	Q <sup>2</sup>
SG-12-07-65	ND	ND	ND	ND	ND	ND	Q <sup>2</sup>

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

**Notes:**

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/m<sup>3</sup>)

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

<sup>2</sup> 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 6.** Sites 2/12 Select Groundwater Extraction/Monitoring Well Data

Well Identification <sup>3</sup>	Select COC Concentrations (µg/L) <sup>4</sup>			
	1Q 2018	2Q 2018*	1Q 2018	2Q 2018*
	TCE		PCE	
ACL:	5.0		5.0	
EW-12-03-180M	2.2	3.3	0.13 J	0.42 J
EW-12-05-180M	2.1	2.5	0.80	0.86
EW-12-07-180M	2.7	2.9	0.51	0.51
EW-12-08-180U	0.42 J	0.50	<b>11.3</b>	<b>10.2</b>
MW-12-09R-180	3.9	3.1	0.49 J	0.45 J
MW-12-14-180M	2.1	3.1	0.39 J	0.41 J
MW-12-16-180M	1.8	1.4	ND (0.25)	ND (0.25)
MW-12-20-180U	ND (0.25)	0.13 J	<b>6.6</b>	2.5
MW-12-21-180U	ND (0.25)	ND (0.25)	0.35 J	0.13 J
MW-12-24-180U	0.17 J	ND (0.25)	2.0	0.81
MW-12-25-180U	ND (0.25)	ND (0.25)	0.34 J	0.16 J
MW-12-28-180U	0.16 J	ND (0.25)	0.44 J	0.41 J
MW-12-31-180M	ND (0.25)	ND (0.25)	0.26 J	0.31 J
MW-12-32-180U	1.2	0.96	0.36 J	0.47 J

**Notes:**

<sup>1</sup> The reported value is the sum of both cis- and trans-isomers.

<sup>2</sup> Discharge limits are the ACLs for injection over the plume.

<sup>3</sup> Extraction wells not listed have met the QAPP decision rules to no longer operate.

<sup>4</sup> 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 results

**Table 7.** Sites 2/12 Select Groundwater Extraction/Monitoring Well TPH Data\*

Well Identification	4Q 2017		1Q 2018		2Q 2018	
	TPH-GRO (C6-10)	TPH-DRO (C10-28)	TPH Diesel (C10-24)	TPH Motor Oil (C24-36)	TPH Diesel (C10-24)	TPH Motor Oil (C24-36)
<b>Screening Level:</b>	<b>100 µg/L</b>					
MW-12-18-180U	NS	NS	41 JY	ND (94)	NS	NS
MW-12-19-180U	NS	NS	ND (16)	ND (96)	NS	NS
MW-12-19-180M	NS	NS	ND (16)	ND (96)	NS	NS
MW-12-20-180U	ND (50)	<b>262</b>	<b>210 Y [17 JY]</b>	ND (96)	<b>220 Y [27 JY]^</b>	ND (94)
MW-12-21-180U	NS	NS	23 JY	ND (94)	NS	NS
MW-12-24-180U	NS	NS	33 JY	ND (96)	NS	NS
MW-12-25-180U	NS	NS	20 JY	ND (94)	NS	NS

**Notes:**

\*Concentration in **bold** and shaded exceeds the USEPA Regional Screening Level (RSL) for tap water. Concentrations in gray text are ND. All results pending validation

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

Y: sample exhibits chromatographic pattern which does not resemble standard

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

Results in brackets are after silica gel cleanup to remove polar non-petroleum hydrocarbons

NS: Not sampled µg/L: micrograms per liter

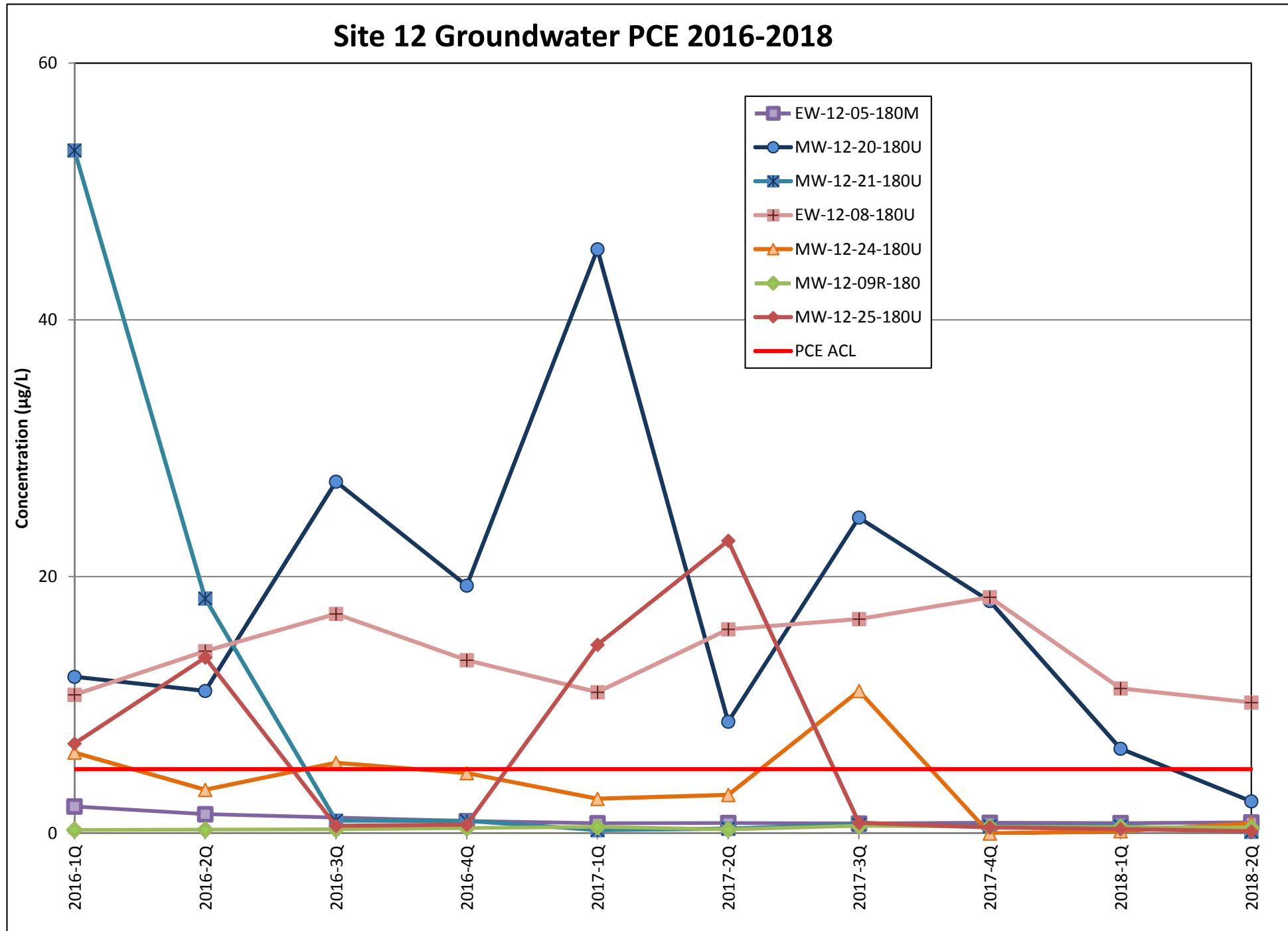
TPH: total petroleum hydrocarbons

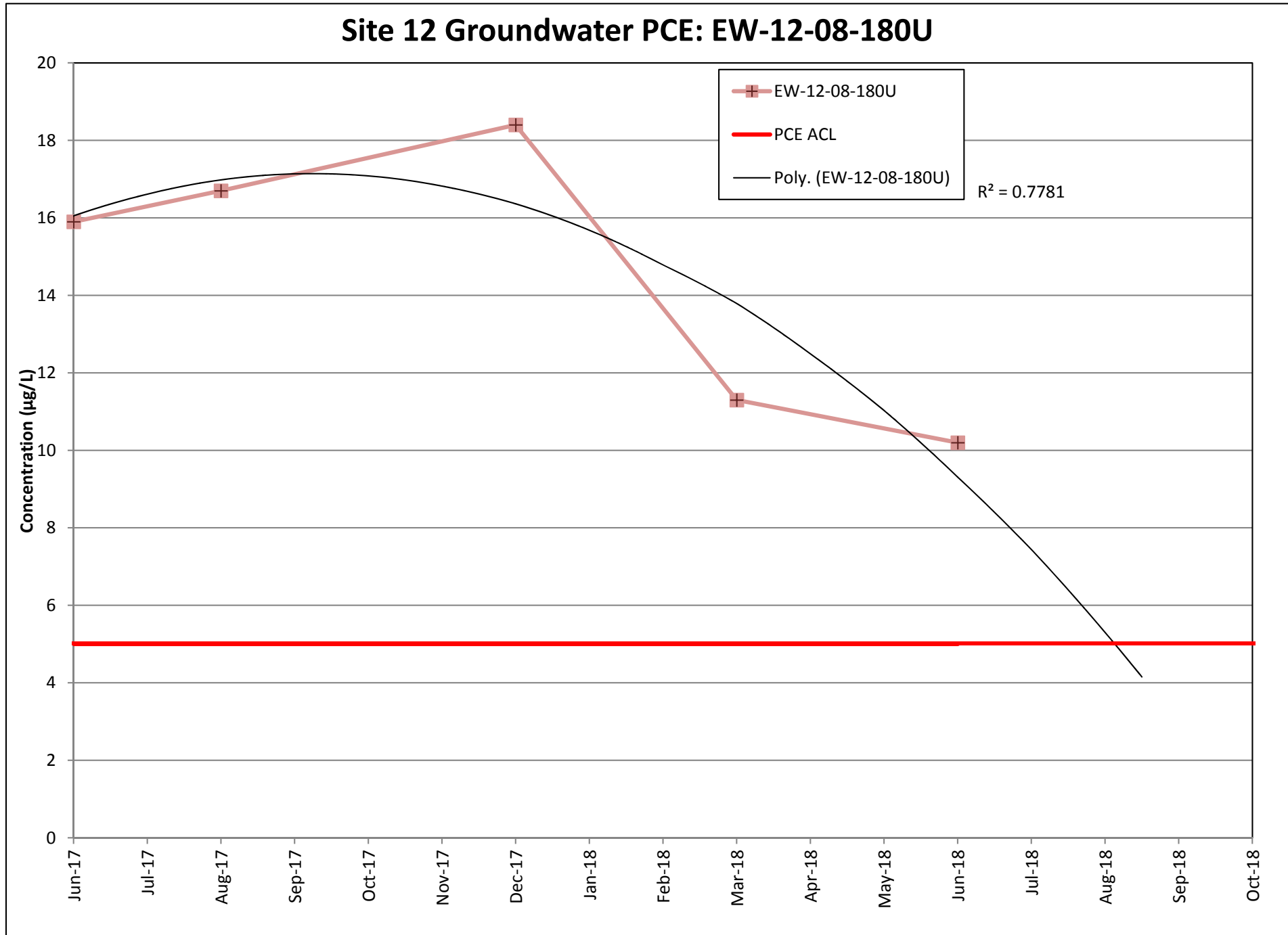
^ TPH Diesel present in the lab blank at 19 J [ND (16)]

**Recommend no further action for TPH at Sites 2/12**

**Will be reported in the 2018-3Q Annual 2/12 Report to be issued in 2019**









### 2018-2Q SVETS Recommendation

- Only EW-12-08-180U has PCE above the ACL in the 2Q 2018. No wells above TCE ACL.
- No soil gas probe/SVE well has been above the PCE/TCE SGCLs for over a year.
- Recommend per Soil Gas QAPP decision rules to turn off VE-12-06 and VE-12-10. Both have been ND for PCE and TCE for over a year.
- VE-12-09 will be the only operating SVE well; closest to EW-12-08-180U. Has had low PCE concentrations below the SG-SL for 2.5 years.

