

UPDATE TO AOC-65 *IN-SITU* CHEMICAL OXIDATION PHASE V ASSESSMENT REPORT



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TABLE OF CONTENTS

Acronyms and Abbreviations	iii
CHAPTER 1 Introduction	1-1
1.1 Purpose	1-1
1.2 Background	1-1
1.3 UIC Permit Modification	1-2
CHAPTER 2 ISCO Oxidant	2-1
2.1 December 2016 Installation of ISCO Cylinders	2-1
2.2 November 2017 Redistribution of ISCO Cylinders	2-1
2.3 October 2018 ISCO Cylinder replacement	2-1
2.4 November 2018 ISCO Cylinder Installation.....	2-2
2.5 January 2019 Liquid Sodium Permanganate Injections.....	2-2
2.6 Monitoring	2-2
CHAPTER 3 Assessment of Analytical Results	3-1
3.1 Field Parameters	3-1
3.1.1 Conductivity	3-1
3.1.2 Oxidation-Reduction Potential.....	3-1
3.2 Laboratory Analyses	3-2
3.2.1 Volatile Organic Compounds	3-2
3.2.2 Metals	3-4
3.2.3 Anions (Sulfate and Chloride)	3-5
CHAPTER 4 Conclusions and Recommendations.....	4-1
Appendix A Analytical Data Tables	4-1

LIST OF TABLES

Table 1.1 General History of AOC-65..... 1-3
Table 2.1 ISCO Treatability Study Monitoring Locations 2-2

LIST OF FIGURES

Figure 1.1 AOC-65 Site Map 1-5
Figure 1.2 AOC-65 ISCO Monitoring Locations..... 1-6
Figure 1.3 Installation of Oxidant-Infused Cylinders at AOC-65..... 1-7
Figure 2.1 Redistribution of Oxidant-Infused Cylinders at AOC-65 2-3
Figure 3.1 Changes in Anion Concentrations and PCE at TSW-04 and
ORP Response 3-2
Figure 3.2 UGR Well PCE Concentration Trends 3-3
Figure 3.3 Off-Post Supply Well PCE Concentration Trends..... 3-4
Figure 3.4 Changes in Manganese Concentrations at AOC-65..... 3-5
Figure 3.5 Changes in Chloride Concentrations at AOC-65 3-6

LIST OF APPENDICES

Appendix A Analytical Data Tables

ACRONYMS AND ABBREVIATIONS

AOC	Area of Concern
CSSA	Camp Stanley Storage Activity
DCE	Dichloroethene
IIW	ISCO Injection Well
ISCO	<i>In-Situ</i> Chemical Oxidation
IRA	Interim Removal Action
ORP	Oxidation-Reduction Potential
PCE	Tetrachloroethene
PZ	Piezometer
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation Report
SIW	Steam Injection Well
SVE	Soil Vapor Extraction
TCE	Trichloroethene
TSW	Treatability Study Well
UIC	Underground Injection Control
USEPA	United States Environmental Protection Agency
VEW	Vapor Extraction Well
VOC	Volatile Organic Compound
WB	Westbay [®]

CHAPTER 1 INTRODUCTION

1.1 PURPOSE

This Phase V technical report is an addendum to the existing Area of Concern 65 (AOC-65) *In Situ* Chemical Oxidation (ISCO) Phase IV Assessment Report (Parsons, 2016) on the ongoing remediation of tetrachloroethene (PCE) and trichloroethene (TCE) groundwater plume located on the south side of the Camp Stanley Storage Activity (CSSA) facility (**Figure 1.1**). This report specifically documents ISCO activities performed at AOC-65 from January through December 2018. The purpose of the Phase V injections was to passively apply chemical oxidants to the contaminated source area within AOC-65. Activities associated with Phase V injections during the year include:

1. Quarterly groundwater monitoring;
2. Replacement of oxidant-infused cylinders;
3. Installation of oxidant-infused cylinders within additional wells; and
4. Post-application groundwater monitoring.

1.2 BACKGROUND

The objective of the Phase I through III ISCO application injections (August 2012 to November 2014) was to provide increasing amounts of sodium persulfate oxidant in order to increase the contact time between oxidants and contaminants. Oxidation of PCE (and other chlorinated compounds) occurs when sufficient contact time between oxidants and volatile organic compounds (VOCs) have been established. Groundwater monitoring was conducted following each of the three injections in an injection trench and a network of wells (**Figure 1.2**) in and around AOC-65 to assess the impact of ISCO injections on VOC concentrations.

Phase IV injections (August and November 2016) introduced a new oxidant (sodium permanganate) and reduced artificial mounding associated with the large volume of sodium persulfate injections. Additionally, injections targeted suspected source areas via new infiltration galleries adjacent to Building 90. While injected volumes were reduced, in comparison to previous sodium persulfate injections, the contact time between oxidant and contaminant increased due to a lack of oxidant auto decomposition.

The Phase V oxidant application included a transition from active oxidant injections to a passive approach of oxidant delivery. The oxidant application system includes the use of oxidant-infused paraffin wax cylinders installed in wells near suspected source area(s). This approach allows for year-round oxidant delivery under varying hydrologic conditions.

The Phase V injections have multiple objectives:

1. Increase oxidant/contaminant contact time through prolonged (year-round) application of

oxidants.

2. Apply oxidants during all encountered hydrologic conditions (when water table is elevated following precipitation events and when water table is low during drier periods);
3. Target wells near the suspected source areas or where concentrations increased following previous oxidant injections.
4. Evaluate oxidant distribution and impacts to VOC concentrations within cylinder-installed well water column.

Phase V ISCO application commenced with the installation of oxidant-infused cylinders following the completion of the December 2016 groundwater sampling event at AOC-65. Samples collected in December 2016 serve as the baseline for future contaminant concentration comparisons. Cylinders were initially installed within six wells at AOC-65 (**Figure 1.3**). A general history of AOC-65 is listed in **Table 1.1**.

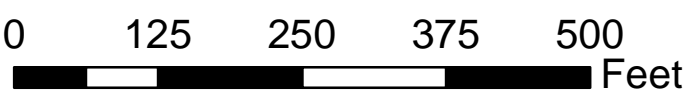
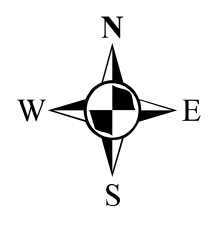
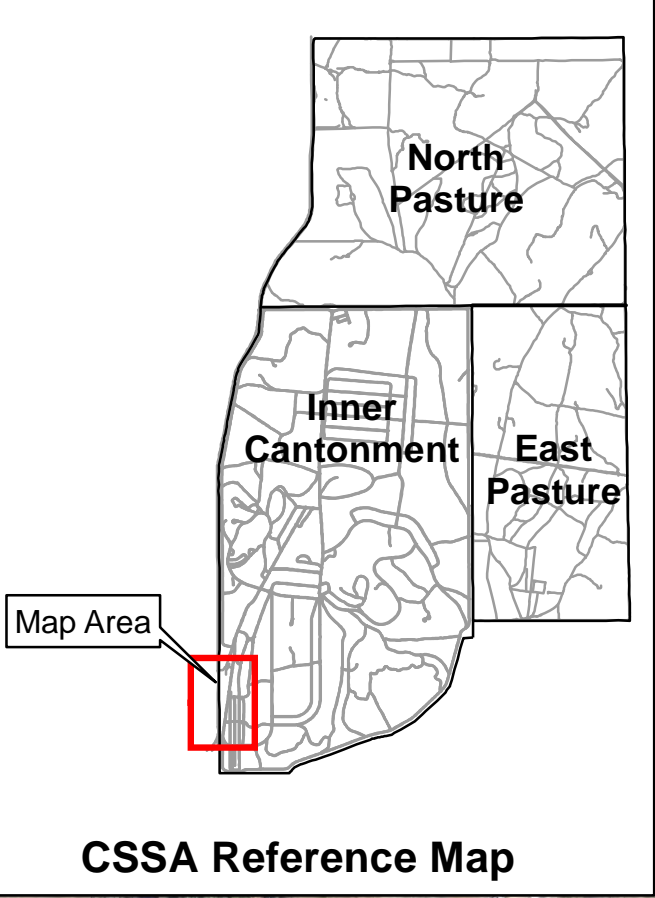
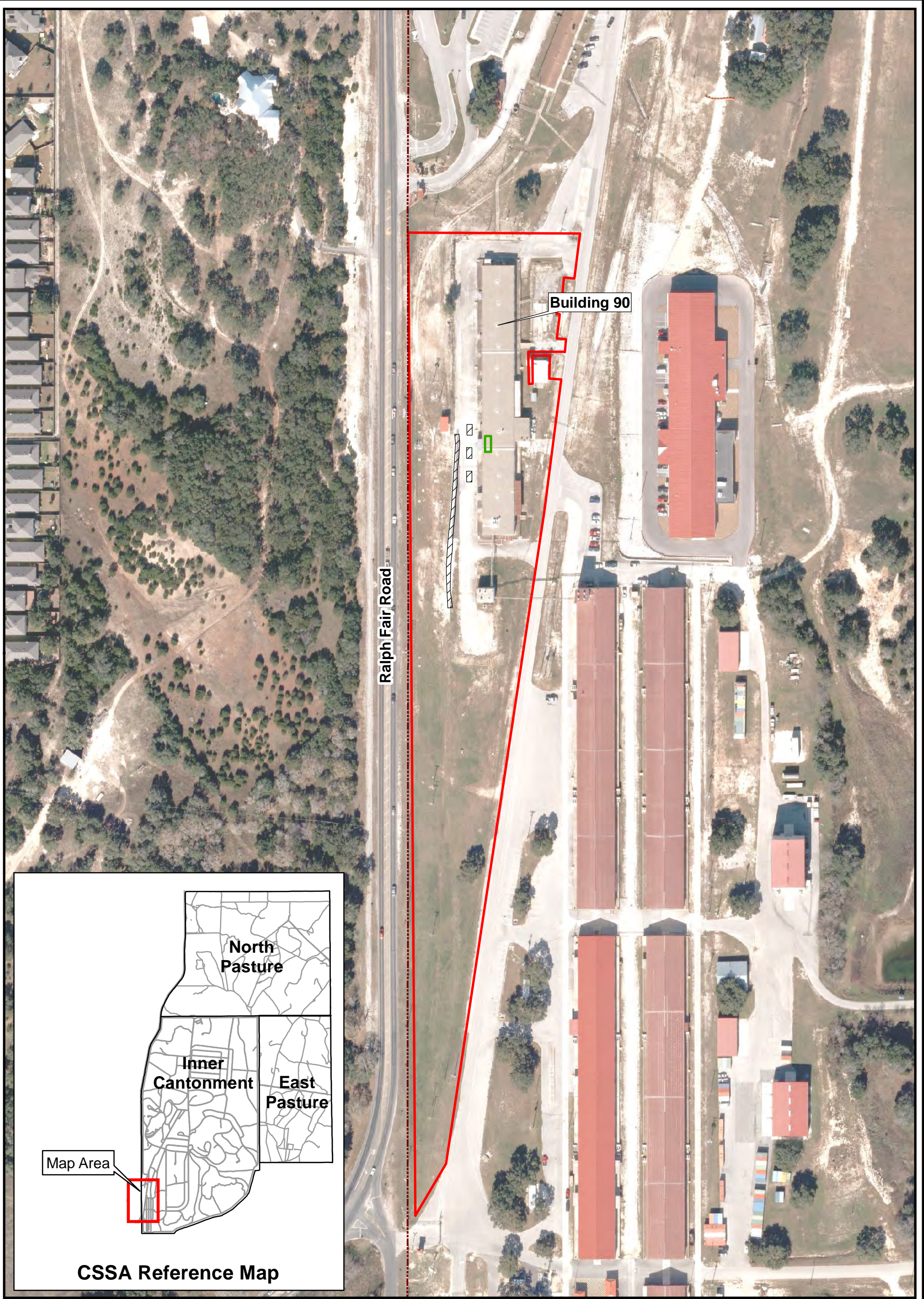
1.3 UIC PERMIT MODIFICATION

Modification of the Class V UIC Permit (TCEQ Authorization No. 5X600645) including changes to the applied oxidants, delivery method, and injection locations at AOC-65 was authorized by the TCEQ UIC Permits Team in November 2017. The subsequent authorized modification includes the use of previously approved and planned oxidant injectates (sodium persulfate, sodium hydroxide, sodium permanganate, potassium permanganate) in all available locations (including: piezometers (PZs), treatability study wells (TSWs), vapor extraction wells (VEWs), steam injection wells (SIWs), infiltration cells, and the infiltration trench).

Table 1.1
General History of AOC-65

Date	Activity
Prior to 1995	Chlorinated solvent PCE was used as a cleaning agent within Building 90 for more than 30 years.
1995	Citrus-based cleaner usage replaced chlorinated solvents at Building 90.
1999	A 3008(h) Compliance Order was agreed to by the United States Environmental Protection Agency (USEPA) and US Army. PCE was identified in wells in the vicinity of Building 90 during the Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI). There were no reported spills or records documenting contaminant releases to the environment.
2001	Soil gas survey conducted at over 300 points in and around Building 90. The soil gas survey detected PCE and its natural degradation products TCE, <i>cis</i> -1,2-dichloroethene (DCE), and <i>trans</i> -1,2-DCE.
2002	RFI report for AOC-65 completed. An interim removal action (IRA) was completed including the removal of surface soils underlying pavement and drainage swale west of Building 90. The drainage swale was lined with concrete to prevent rainwater run-off infiltration.
2002 - 2012	Soil vapor extraction (SVE) treatability study system installed and operated within AOC-65. The SVE system was enhanced in 2006 and 2010, including installation of additional blowers and vapor extraction wells (VEWs).
2011	Steam enhanced extraction treatability study conducted. SVE system returned to normal operations following test completion.
February 2012	Onset of ISCO related activities included a second IRA to remove contaminated soil and bedrock west of Building 90, and subsequent installation of an ISCO infiltration gallery within the excavation trench.
August 2012	Phase I ISCO injection including the injection of ~10 tons of sodium persulfate within the infiltration gallery trench and SIW-01.
August 2012	SVE system operations formally terminated due to its significantly decreased effectiveness. Specifics regarding the termination of SVE activities are provided in the <i>2012 Update to AOC-65 Soil Vapor Extraction Operations and Maintenance Assessment Report</i> (Parsons, 2012)
May 2013	Phase II ISCO injection including the application of ~22 tons of sodium persulfate within the infiltration gallery trench, SIW-01, and four newly installed ISCO Injection Wells (IIWs).

Date	Activity
September – November 2014	Phase III ISCO injection including the application of ~66 tons of sodium persulfate within the infiltration gallery trench, SIW-01, and IIWs.
August 2015 and November 2015	Phase IV ISCO injections including the application of 3,500 gallons of 0.45 mg/L and 7,000 gallons of 0.9 mg/L potassium permanganate within five newly constructed infiltration cells inside and west of building 90 (2 interior and 3 exterior).
December 2016	Phase V ISCO application of 12 persulfate/permanganate cylinders. Cylinders installed in 6 wells at the base of respective well screens.
November 2017	Additional cylinders installed within original six wells; cylinders redistributed throughout respective well screens.
October 2018	All cylinders (18) replaced with new RemOx+ 2.5” and 1.35” cylinders in original six wells. Cylinders distributed across screened intervals.
November 2018	Twelve (12) cylinders installed within four additional AOC-65 wells. Cylinders distributed across screened intervals.
Jan 2019	Phase V additional application of 100 gallons of 6.6% sodium permanganate solution within three ISCO injection wells (IIWs) and 500 gallons of 6.6% sodium permanganate in two infiltration cells (NIC and MIC).







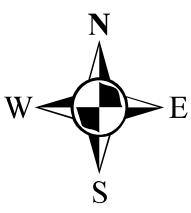
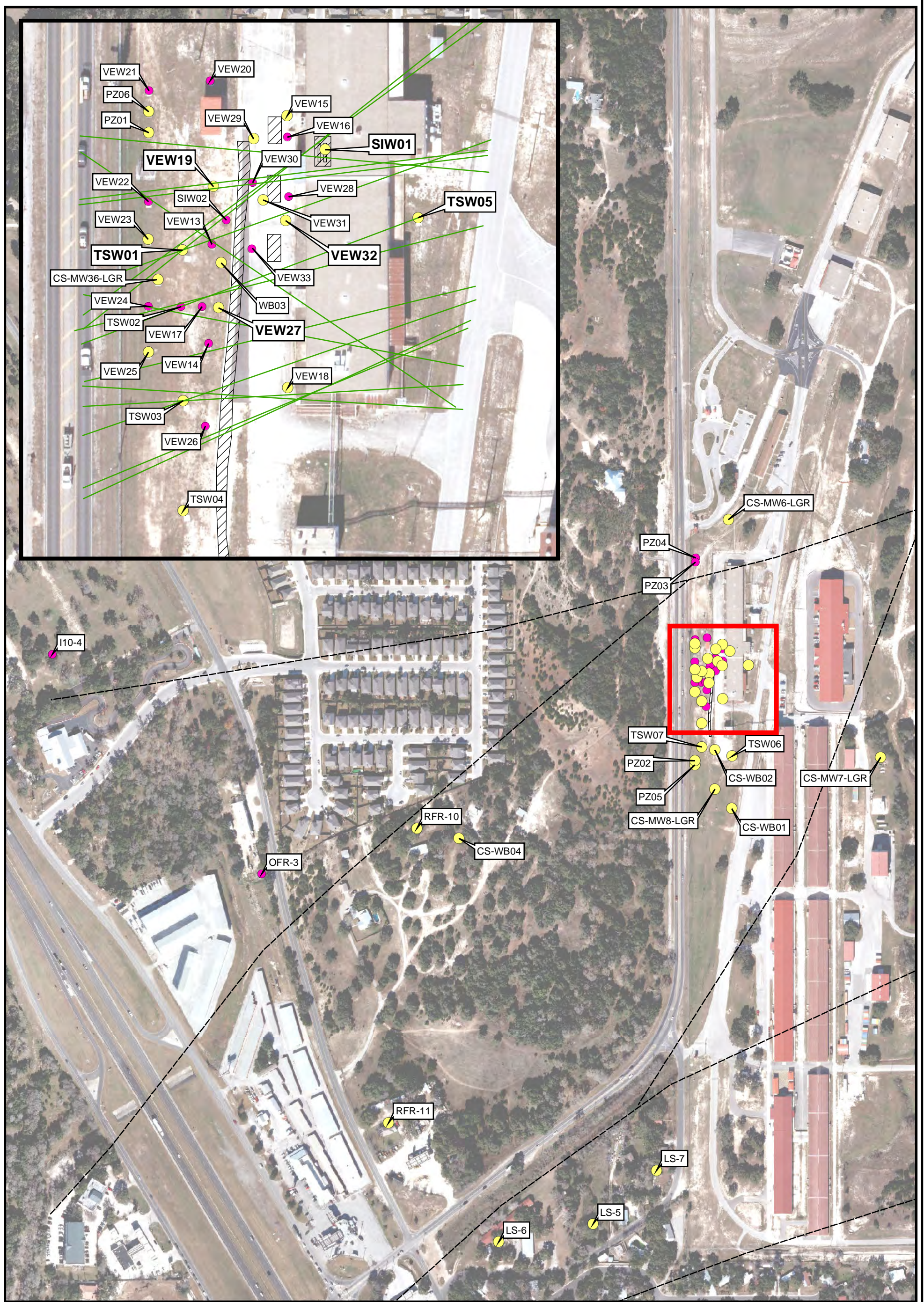
-  2012 IRA Trench/Infiltration Trench Exterior Infiltration Cells
-  Former Solvent Vat Location/Interior Infiltration Cell Location
-  AOC-65
-  CSSA Boundary

Figure 1.1
AOC-65
Site Map
Camp Stanley Storage Activity
PARSONS



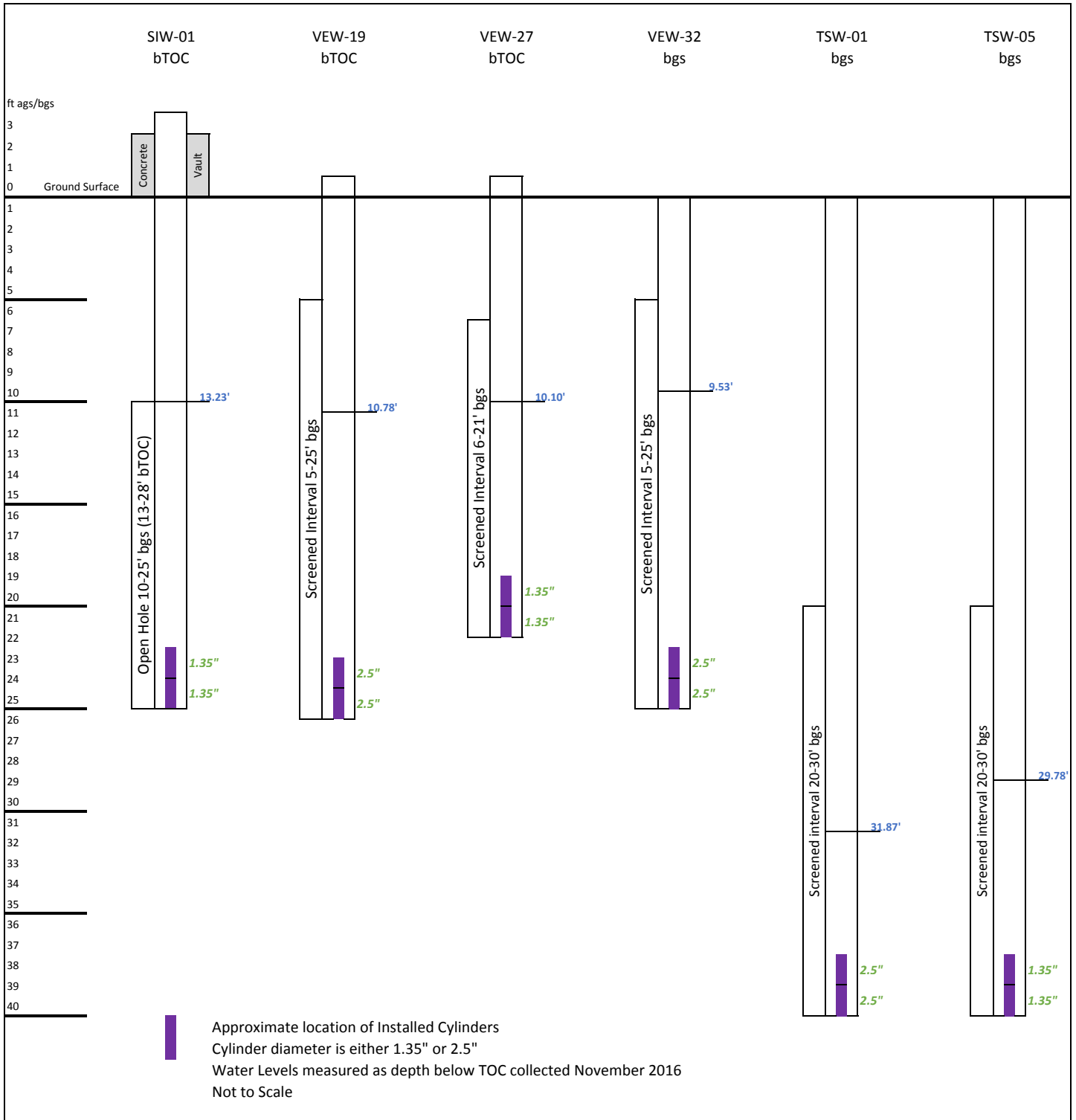
0 200 400 800 Feet

- Fracture Trends Identified in IRA
- USGS Mapped Faults
- ISCO Infiltration Gallery/Cells
- Primary Monitoring Locations
- Secondary Monitoring Locations
- Label** = ISCO Cylinder Installation Well

Figure 1.2
AOC-65 ISCO
Monitoring Locations
Camp Stanley Storage Activity

PARSONS

Figure 1.3 Installation of Oxidant-Infused Cylinders at AOC-65



CHAPTER 2 ISCO OXIDANT

2.1 DECEMBER 2016 INSTALLATION OF ISCO CYLINDERS

Twelve oxidant-infused wax cylinders were installed within six wells at AOC-65 in December 2016. The cylinders consist of potassium permanganate, sodium persulfate, and paraffin wax in a ratio of 38:38:24. The cylinders are 18 inches long and either 2.5 or 1.35 inches in diameter. The 2.5-inch cylinders each weigh 5.75 pounds, and the 1.35-inch cylinders weigh 2.875 pounds. The cylinders were installed at the base of the screened interval in each of the 6 wells (VEW-19, VEW-27, VEW-32, SIW-01, TSW-01, and TSW-05). Two 2.5-inch cylinders were installed in each of the following wells: VEW-19, VEW-32, and TSW-01. Two 1.35-inch cylinders were installed in each of the following wells VEW-27, SIW-01, and TSW-05.

Installation of cylinders were accomplished via the use of polyethylene plastic mesh sleeving to contain the cylinders. The mesh sleeve is securely closed on the bottom end and cylinders are enclosed within the mesh stacked atop one another. The mesh pouches containing the cylinders were then lowered to the base of the screened interval in each well. The use of the mesh sleeving allows for easy removal and reinstallation during sampling. Once installed, the cylinders remain in place except during sampling events, when they are removed temporarily. When cylinders are removed, the mesh pouches are inspected for signs of deterioration, and replaced as needed.

2.2 NOVEMBER 2017 REDISTRIBUTION OF ISCO CYLINDERS

An additional oxidant-infused wax cylinder was installed in each of the six injection wells (bringing the total to three per well) around the site in November 2017. Cylinders were originally installed at the base of the screened interval in each well to maximize contact with groundwater and provide a persistent source of oxidant; however, vertical profiling of VOCs and permanganate concentrations within two of the oxidant-infused cylinder-containing wells indicated untreated groundwater occurring above the installed cylinders, and was potentially flowing through the screened interval, bypassing treatment. Cylinders were redistributed within well screen intervals on November 14, 2017, at which time an additional 1.35-inch-diameter cylinder was installed in each of the six cylinder-installed wells.

2.3 OCTOBER 2018 ISCO CYLINDER REPLACEMENT

Quarterly monitoring data through the first half of 2018 indicated an increasing trend in PCE and other VOC constituents within some of the cylinder-installed wells. These increases indicate some of the cylinders may have reached or exceeded their usable life expectancy and required replacement. In October 2018, all 18 cylinders installed at AOC-65 were replaced with new RemOx Sr+ cylinders. Each of the six wells, excepting SIW-01, received two 2.5-inch-diameter and one 1.35-inch-diameter cylinders. Three 1.35-inch diameter cylinders were installed in SIW-01 due to its 2-inch-diameter wellhead limiting access.

2.4 NOVEMBER 2018 ISCO CYLINDER INSTALLATION

Analysis of monitoring data from quarterly monitoring events identified additional wells for ISCO cylinder application. The evaluation criteria included: well installation depth, available water, and PCE concentration. The passive approach to ISCO application is designed to target suspected source areas or areas where contaminant concentrations are highest within AOC-65; therefore, wells screened within the near-surface UGR stratigraphic unit are preferred to wells installed within deeper LGR unit where diffusion results in lower VOC concentrations. Water levels within wells installed in the UGR can vary greatly due to the fractured nature of the host rock. Contact between groundwater and ISCO cylinders is required to disperse oxidants and treat VOC contamination, therefore a minimum saturated thickness of five feet within a well is required to ensure up to three 18-inch long cylinders may be fully submerged. Lastly, contaminant concentration in groundwater from prospective wells is evaluated to determine which are most directly impacted by VOC contamination, thus are most suitable for treatment.

Evaluating the remaining available wells at AOC-65 using these criteria, four additional wells were selected to receive oxidant cylinders. These wells include VEW-15, VEW-18, VEW-29, and VEW-31 and their locations are shown on **Figure 2.1**.

2.5 JANUARY 2019 LIQUID SODIUM PERMANGANATE INJECTIONS

Additional injections were performed within three permitted wells (IIW-01, IIW-02, and IIW-04) and two permitted infiltration cells (NIC and MIC) in January 2019. Approximately 600 gallons of 6.6% liquid sodium permanganate ISCO solution was injected within the permitted wells. Twenty-five gallons were injected in IIW-02 and IIW-04, 50 gallons were injected into IIW-01, and 250 gallons were injected into each of the two infiltration cells, MIC and NIC. A total of 800 gallons of raw water from supply well CS-10 were injected into the NIC as chase water upon completion of injection activities. Additional discussions regarding liquid ISCO solution applications will be included in the *ISCO Annual Report Update* for 2019.

2.6 MONITORING

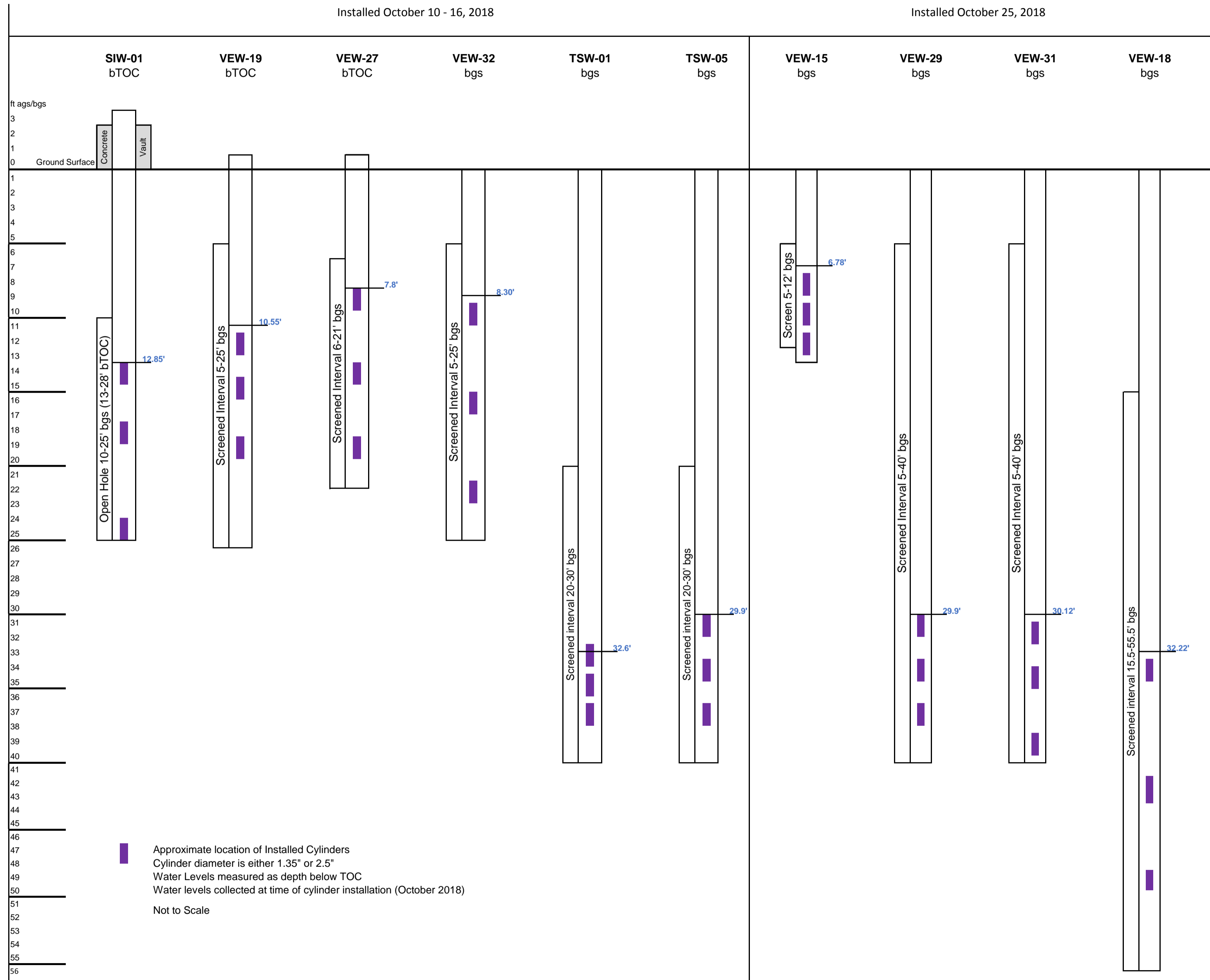
The monitoring network consists of nearby TSWs, MWs, VEWs, PZs, and Westbay® (WB) wells. A list of monitoring locations is provided in **Table 2.1**. Many of these wells (VEWs and WBs) were designed and installed prior to ISCO injections as part of previous treatability studies. Groundwater sampling occurred quarterly following the installation of oxidant-infused cylinders at a selection of monitoring wells located within AOC-65. Groundwater samples are collected from nearby monitoring wells, private water supply wells, and all zones of the WB wells within ¼ mile of the injection points at AOC-65. A map depicting the monitoring locations is provided as **Figure 1.2**. Groundwater samples are analyzed for VOCs, metals, total manganese, and anions (sulfate and chloride). Analytical results are presented in **Tables A.2** through **A.4**. Additional analyses and performance parameters may include temperature, pH, conductivity, dissolved oxygen, and oxidation-reduction potential (ORP) (**Table A.1**). Performance parameters provide direct and indirect evidence of ISCO solution distribution, oxidizing geochemical conditions, and chlorinated solvent destruction.

Table 2.1
ISCO Treatability Study Monitoring Locations

Off-Post Wells	On-Post Wells	Additional On-Post Monitoring Locations
LS-5	CS-MW6	VEWs (15, 18, 19, 23, 25, 27, 29, 31, and 32)
LS-6	CS-MW7	CS-WB-01 (UGR-01, LGR-01)
LS-7	CS-MW8	CS-WB-02 (UGR-01, LGR-01)
RFR-10	CS-MW36	CS-WB-03 (UGR-01, LGR-01)
RFR-11	CS-WB01-LGR09	TSWs (01, 03, 04, 05, 06, and 07)
CS-WB04-LGR11	CS-WB02-LGR09	PZs (01, 02, 05, and 06)
	CS-WB03-LGR09	SIW-01

***BOLD** denotes oxidant-infused cylinder installation locations.

Figure 2.1
2018 Cylinder Distribution at AOC-65 Injection Wells



CHAPTER 3 ASSESSMENT OF ANALYTICAL RESULTS

Results from monitoring efforts associated with all ISCO applications, including the Phase V oxidant-infused wax cylinders, are presented as tables and figures at the end of this document unless otherwise provided in text. ISCO monitoring included the collection of water quality parameters (pH, conductivity, and oxidation-reduction potential field readings) at various wells and the collection of groundwater samples for laboratory analysis of total manganese, VOCs, metals, and anions (chloride and sulfate). Sampling results are presented in **Appendix A**.

3.1 FIELD PARAMETERS

Application of an oxidant can result in an alteration of subsurface geochemical conditions including conductivity and ORP. Monitoring field parameters for changes in these geochemical conditions provides indirect evidence of ISCO solution movement along preferred subsurface flow paths. Measurements were collected from performance monitoring locations within AOC-65; however, cylinder-installed wells were excluded from field parameter collection. Measurements were collected only if water levels were greater than six inches above the total depth of the well. Field parameter results are presented in **Table A.1**.

3.1.1 Conductivity

Conductivity data may provide information useful for determining where contaminant oxidation has occurred in response to ISCO injection. Alterations in subsurface geochemical conditions arise as a result of the breakdown of VOCs and/or the ISCO solution as the oxidation reaction progresses. An increase in conductivity values in monitoring points near wells with oxidant-infused wax cylinders may indicate an increase in inorganic dissolved solids such as sulfate and chloride.

Minor fluctuations in conductivity are observed within monitoring wells across the site throughout the year. Significant increases are noted in three of the four additional wells following the November 2018 installation of cylinders (**Table A.1**).

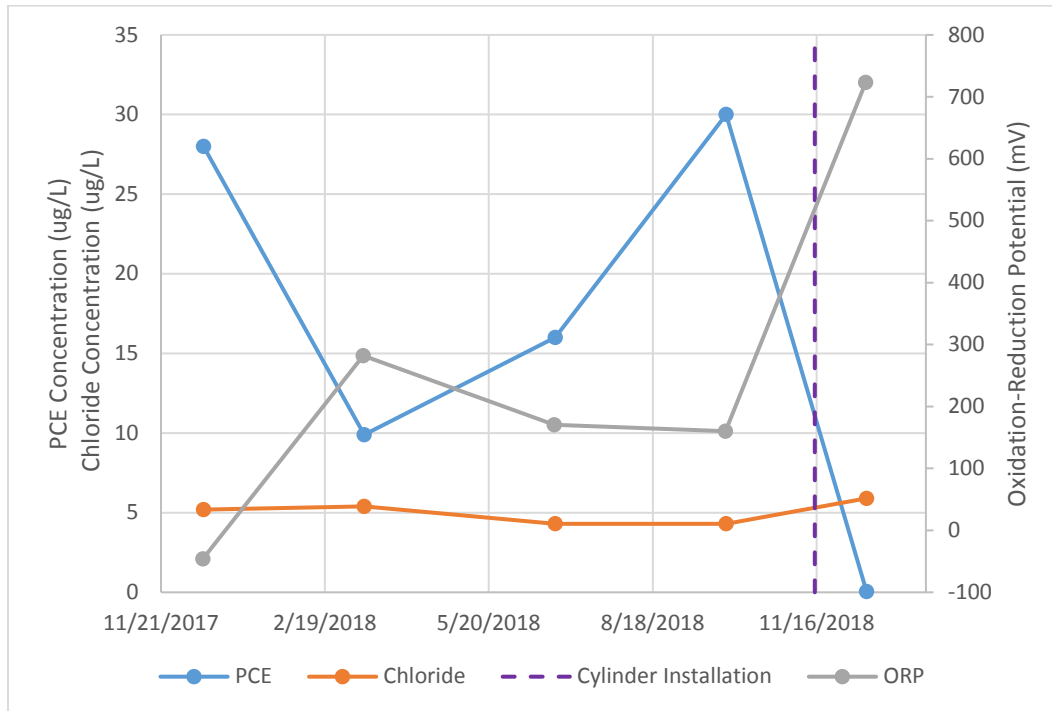
3.1.2 Oxidation-Reduction Potential

ORP is used as a general screening tool to determine whether subsurface geochemical conditions are oxidizing or reducing in an area. It is anticipated that ORP values in areas affected by installed oxidant-infused cylinders would remain in the oxidizing range (~100 mV or greater), as was the case at AOC-65 during injections, with few exceptions. Of the wells monitored for ORP, only VEWs 13, 29, 31 and TSWs 02, 03, 04, 06, and 07 indicated significant periods with continuous reducing conditions in 2018; however, wells VEW-29 and -31 indicated a marked increase in ORP values following the installation of cylinders in November (**Table A.1**).

One of the most accurate indicators of treatment success is the measurement of contaminant oxidation byproducts such as chloride. An increase in chloride due to the oxidation of VOCs could result in a decrease in ORP values.

Figure 3.1 shows PCE, chloride, and ORP at VEW-15 through 2018. During the first three quarters of 2018, ORP and chloride remained mostly constant while PCE concentrations fluctuated with an increasing trend from March through September. Following the installation of oxidant cylinders in November, a sharp reduction in PCE concentrations accompanies the expected sharp rise in ORP (due to application of new oxidant cylinders) and slight rise in chloride concentrations.

Figure 3.1 Changes in PCE and Chloride Concentrations and ORP Response at VEW-15



3.2 LABORATORY ANALYSES

3.2.1 Volatile Organic Compounds

The expected outcome resulting from an application of ISCO solution is a reduction in VOC concentrations including PCE. The sampling results for wells in the UGR and the upper and lower portions of the LGR are described below. Locations of the selected UGR wells discussed are provided in **Figure 1.2**. VOC analytical results for monitoring locations are presented in **Table A.2**.

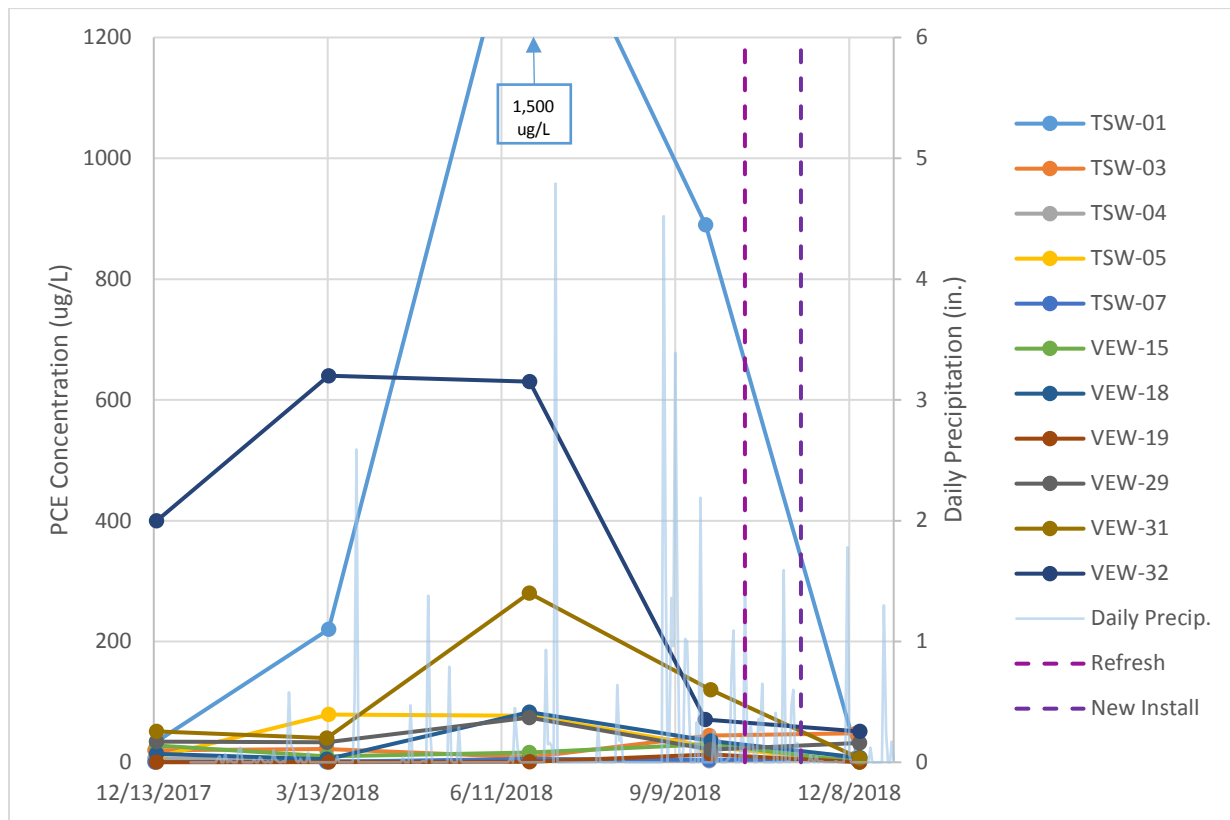
3.2.1.1 Upper Glen Rose (UGR)

Analytical results from groundwater samples collected in the first and second quarters of 2018 indicate increasing PCE concentration trends at five of six cylinder-installed wells. The observed PCE concentration increases suggest oxidants are no longer being released at a rate sufficient to oxidize VOCs in influent groundwater, and the cylinders have reached the end of their effective life. All cylinders were replaced in October following the third quarter monitoring event, and by December, PCE concentrations at these six wells had significantly declined.

Reduction of PCE concentrations following cylinder replacement was observed in UGR wells SIW-01, TSWs 01 and 05, and VEWs 19 and 27. Analytical results from samples collected in December from these five wells indicated no detections of PCE. While reduction in PCE concentration at VEW-32 was not as dramatic as the other wells, a decrease from 630 µg/L in June to 51 µg/L in December was observed.

At the four additional wells selected for cylinder installation (VEWs 15, 18, 29, and 31), reductions were observed at three wells and an increase was observed at VEW-29. The complete oxidation of PCE was observed at VEW-15 and, while decreases at VEWs 18 and 31 were significant, PCE was still detected in groundwater samples. For example, VEW-31 went from a pre-installation concentration of 120 µg/L in September to 6.6 µg/L in December, which is still above the MCL for PCE (5 µg/L). It should be noted that cylinders were installed in these wells in November and sampled in December, allowing limited time for dissolution of chemicals and VOC oxidation.

Figure 3.2 UGR Well PCE Concentration Trends

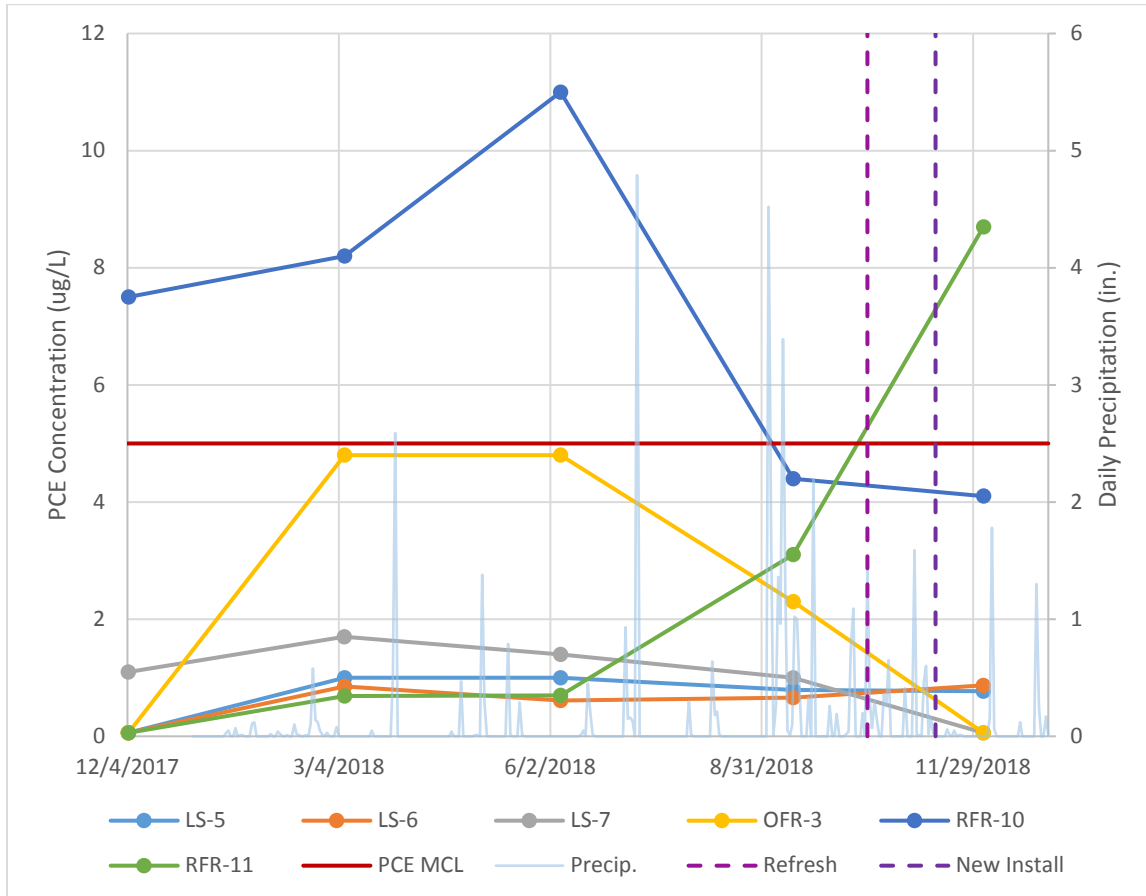


3.2.1.2 Lower Glen Rose (LGR)

Monitoring wells installed within the upper portion of the LGR (WB-01-LGR-01, WB02-LGR-01, WB03-LGR-01, and WB04-LGR-01) indicated only slight fluctuations in PCE concentrations. These fluctuations, whether increasing or decreasing, are difficult to attribute directly to the either installed oxidant-infused cylinders during Phase V or to changes in groundwater elevations associated with precipitation events.

Within the productive portion of the LGR (the lower portion), no significant changes in VOC concentrations can be attributed to ISCO activities at any of the off-post private supply wells (**Figure 3.3**). The trends seen for supply wells OFR-3 and RFR-10 are consistent with prior years' data and may not reflect changes due to ISCO activities, and the increasing trend observed at OFR-3 likely result from the heavy precipitation in September flushing a slug of VOC-impacted groundwater through the aquifer. These wells are particularly important due to their use and potential impacts to receptors. These off-post water supply wells will continue to be monitored following the completion of ISCO efforts.

Figure 3.3 Off-Post Supply Well PCE Concentration Trends

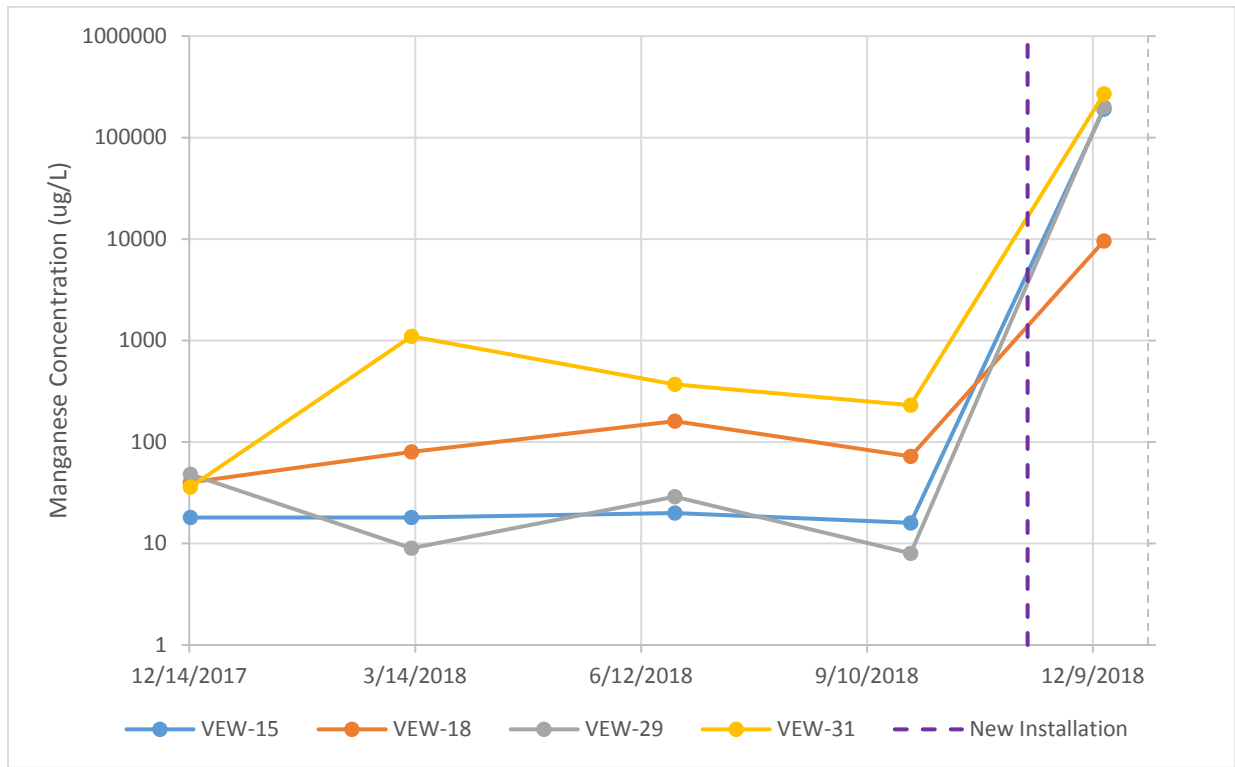


3.2.2 Metals

Metals mobilization is a possible result of the oxidation processes. An increase in metals concentrations is possible due to the changing geochemical conditions in the subsurface as a result of changes in pH. Results from laboratory analyses for metals at monitoring locations are presented in **Table A.3**.

The analytical results for samples collected at both on- and off-post monitoring locations during 2018 generally show little deviation from baseline concentrations. However, analytical results from samples collected at AOC-65 indicate an increase in manganese concentrations following cylinder installation at the four new wells (**Figure 3.4**).

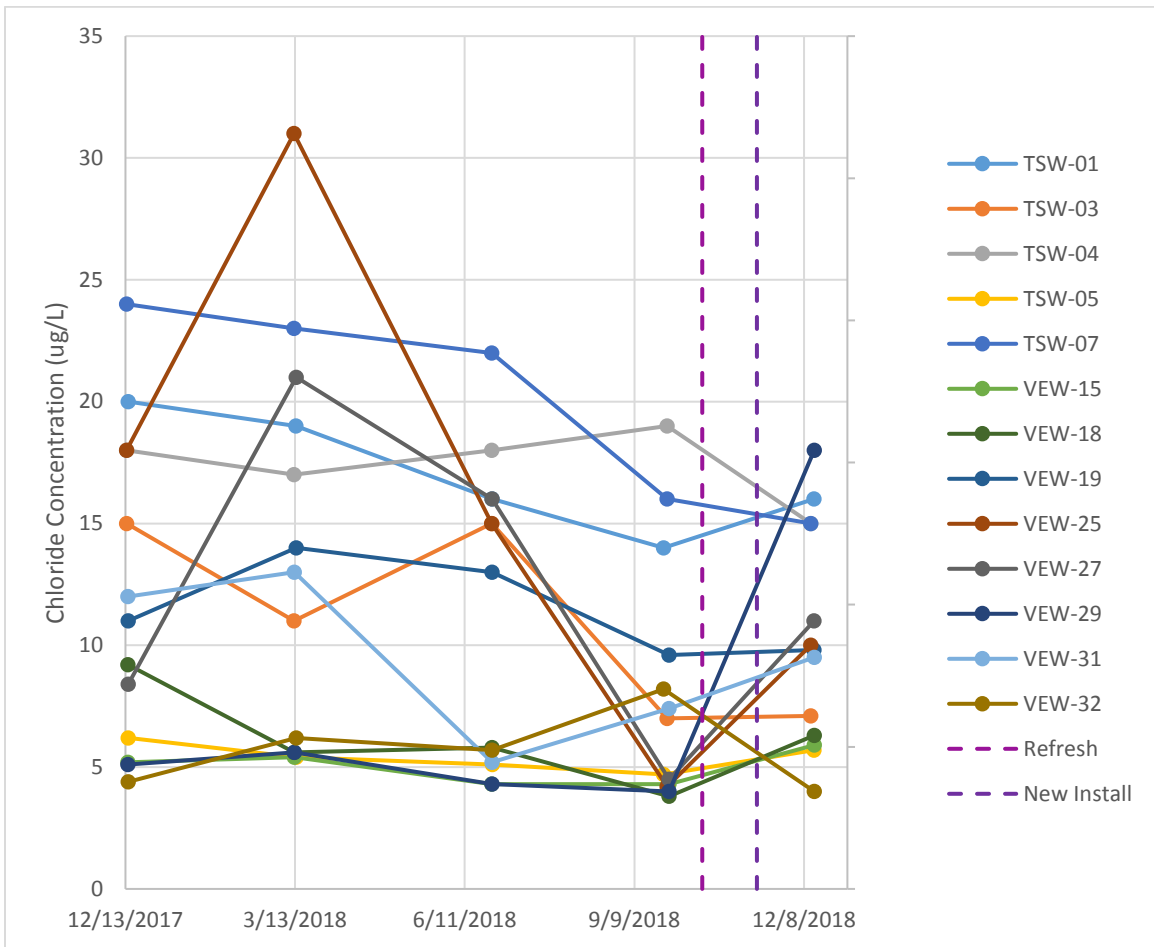
Figure 3.4 Changes in Manganese Concentrations at New ISCO Wells at AOC-65



3.2.3 Anions (Sulfate and Chloride)

Increases in sulfate and chloride concentrations are typically anticipated following ISCO injections. An increase in chloride could indicate treatment success as chloride is a byproduct of contaminant oxidation, while an increase in sulfate could indicate the degradation of sodium persulfate. Analytical results from samples collected at AOC-65 indicate a slight decrease in chloride concentrations over the first three quarters of monitoring; then slight to moderate increases following cylinder replacement and installation within new wells (**Figure 3.5** and **Table A.4**).

Figure 3.5 Changes in Chloride Concentrations at AOC-65



CHAPTER 4

CONCLUSIONS AND RECOMMENDATIONS

Quarterly monitoring will continue at AOC-65 at infiltration cells, nearby monitoring wells, private water supply wells, and WB wells. Results will be analyzed to identify wells for additional oxidant application, determine when cylinders should be replaced, and identify if additional liquid oxidants should be applied within infiltration cells.

Future plans may include installation of additional oxidant-infused wax cylinders in monitoring wells within AOC-65, and liquid oxidant applications to existing infiltration cells or galleries. Cylinders will be monitored during sampling events to determine if oxidants are expended and require replacement. The paraffin wax matrix in which the oxidants are infused helps control oxidant release, enhancing the efficiency of ISCO application and allowing long-term passive treatment of chlorinated solvent contamination. Deployment via this method provides a continual source of oxidants under all types of flow regimes encountered throughout the year, including recharge events from intense rain to low water levels experienced during extended periods of drought.

APPENDIX A
ANALYTICAL DATA TABLES

Table A.1 Performance Monitoring Well Field Parameters

Well ID	Date	Depth to Water (ft bgs)	Temp. (°C)	Cond. (ms/cm^c)	pH	DO (mg/L)	ORP (mV)
VEW-13	1/25/17	33.74	22.77	0.649	6.83	0.04	-30.5
	4/3/17	34.59	22.79	0.659	6.79	1.17	-91.8
	7/5/17	35.24	23.58	0.631	6.78	0.38	-107.8
	10/5/17	35.7	22.91	0.668	6.71	1.09	-14.5
	12/13/17	35.66	22.7	0.695	6.87	0.74	-178.8
	3/12/18	35.51	22.97	0.569	6.89	0.51	-86.4
	6/25/18	35.84	23.1	0.657	6.78		7.4
	9/26/18	31.65	22.98	0.627	6.7	0.96	92.7
	12/12/18	33.25	22.87	0.609	6.89	1.36	242.7
VEW-14	1/25/17	60.46	22.13	0.740	7.17	3.37	246.3
	4/3/17	60.48			Dry		
	7/5/17	60.47	23.29	0.808	6.99	2.55	196.1
	10/5/17	60.47	22.84	0.839	6.96	4.07	185.4
	12/13/17	60.49	22.03	0.866	7.15	3.34	-112.2
	3/12/18	60.5	22.1	0.699	7.22	3.84	268.8
	6/25/18	60.48	22.84	0.929	6.77		129.3
	9/26/18	57.85	22.99	0.876	6.93	3.54	159.9
	12/12/18	57.5	22.7	0.729	6.98	3.69	273.8
VEW-15	1/25/17	7.29	22.19	0.736	7.15	3.08	219.3
	4/3/17	7.22	21.82	0.584	7.36	5.22	213.4
	7/6/17	7.28	24.11	0.672	7.13	0.20	252.1
	10/5/17	7.17	26.19	0.697	7.04	0.12	185.4
	12/14/17	7.15	24.49	0.705	7.02	0.94	-45.9
	3/12/18	7.28	20.35	0.410	7.41	16.00	281.9
	6/25/18	7.2	23.93	0.530	6.91		170.7
	9/27/18	6.98	26.11	0.541	7.23	3.54	159.9
	12/13/18	7.75	23.63	12.120	6.25	0.60	723.5
VEW-16	1/25/17	29.95	22.52	0.604	7.02	0.10	-10.2
	4/3/17	29.97	22.89	0.594	6.85	0.30	-72.7
	7/6/17	29.93	23.04	0.595	6.89	0.13	237.3
	10/5/17	29.93	22.98	0.600	6.78	0.08	-71.1
	12/14/17	29.93	22.85	0.620	6.74	2.55	-92.3
	3/12/18	29.96	23	0.510	6.84	5.56	295.5
	6/25/18	29.98	23.07	0.584	6.28		189.5
	9/27/18	29.93	22.75	0.554	6.91	0.30	112.9
	12/12/18	29.92	22.61	0.634	6.95	0.23	35.2
VEW-17	1/25/17	51.23	22.47	0.813	6.80	2.20	-23.7
	4/3/17	51.11	22.78	0.745	6.73	0.89	-39.2
	7/5/17	51.27	22.96	0.761	6.78	0.77	-113.6
	10/5/17	51.71	22.94	0.004	6.76	5.93	67.5
	12/13/17	51.70	22.79	0.794	6.86	2.74	-115.8

	3/12/18	51.65	22.69	0.633	6.87	3.00	257.7
	6/25/18	51.58	22.91	0.709	6.73		19.8
	9/26/18	48.58	22.88	0.643	6.82	4.52	149
	12/12/18	50.68	22.68	0.731	6.96	3.58	263.2
VEW-18	1/25/17	36.60	22.87	6.218	7.28	3.50	212.7
	4/3/17	40.42	23.04	5.666	7.10	3.03	219.7
	7/6/17	46.68	23.17	6.627	7.12	2.88	207.2
	10/5/17	39.48	23.16	7.077	7.11	2.83	12.4
	12/14/17	39.81	22.84	6.617	7.05	3.38	-124.2
	3/12/18	44.88	23.02	5.113	7.19	5.64	257.6
	6/25/2018	46.55	23.2	5.534	6.83		181.8
	9/27/2018	35.42	23.11	3.93	7.19	3.44	114
	12/13/2018	39.38	23.1	3.757	7.18	3.47	601.9
VEW-19	1/25/17			2 large (2.5") candles installed			
	4/3/17	11.73		pink/light purple			
	7/5/17			stratified: pink at top, purple at bottom of bailer			
	10/6/17	13.3		2 large (2.5") and 1 (1.35") candle			
	12/14/17	11.52					
	3/13/18	11.95					
	6/25/18	13.67					
	9/27/18	9.91			purple		
	12/13/18	9.87	24.08	12.480	8.14	0.98	664.80
VEW-20	1/25/17	11.64	23.21	0.711	7.33	1.11	214.5
	4/3/17	11.22	22.33	0.642	7.43	2.56	204.2
	7/5/17	12.03	22.60	0.655	7.23	1.24	130.7
	10/5/17	12.59	22.30	0.700	7.16	0.08	-52.4
	12/13/17	13.00	23.62	0.709	7.25	0.10	-233.7
	3/12/18	13.79	22.57	0.555	7.36	2.14	219.9
	6/25/18	14.00	22.34	0.638	7.08		125.1
	9/26/18	14.00	23.22	0.675	7.27	0.19	112.9
	12/12/18	13.03	23.65	0.721	7.28	0.15	180.1
VEW-21	1/25/17	12.41	22.9	0.676	7.08	0.61	269.6
	3/23/17	13.69	22.47	0.614	7.10	3.37	315.2
	7/5/17	14.11	22.37	0.630	7.17	1.50	518.3
	10/4/17	13.50	22.98	0.663	6.96	0.43	326.0
	12/13/17	13.16	23.21	0.675	7.15	0.23	-151.4
	3/12/18	13.79	22.71	0.510	7.33	3.74	464.3
	6/25/18	14.02	22.35	0.588	7.01		29.8
	9/26/18	11.82	22.9	0.626	7.14	0.15	268.5
	12/11/18	11.45	23.37	0.661	7.18	0.14	377.4
VEW-22	1/25/17	49.42	22.36	0.645	6.8	3.91	269.5
	3/23/17	49.41	22.49	0.599	6.77	4.02	291.8
	7/6/17			Dry			
	10/4/17	49.95	22.82	0.645	6.57	5.40	282.1
	12/13/17			Dry			
	3/12/18			Dry			

	6/25/18				Dry		
	9/26/18	44.74	22.8	0.553	6.8	4.86	301.5
	12/11/18	46.81	22.54	0.599	6.9	4.13	289.3
VEW-23	1/25/17	12.05	23.25	1.625	6.51	0.20	-52.5
	3/23/17	21.15			Dry		
	7/6/17	20.9			Dry		
	10/4/17	19.86	23.56	1.597	6.85	4.97	224
	12/13/17	19.25	23.61	1.204	7.07	4.37	-73.4
	3/12/18				Dry		
	6/25/18				Dry		
	9/26/18	10.11	24.07	0.525	7.04	4.8	250.7
	12/11/18	10.4	23.82	0.513	7.28	6.02	245.3
VEW-24	1/25/17				Dry		
	3/23/17				Dry		
	7/6/17				Dry		
	10/4/17				Dry		
	12/13/17				Dry		
	3/12/18				Dry		
	6/25/18				Dry		
	9/26/18	46.43	22.95	1.905	6.9	4.39	363
	12/11/18	49.02	22.34	1.724	6.96	3.39	247.7
VEW-25	1/25/17	16.58	23.27	10.420	7.43	0.66	179.7
	3/23/17	17.99	22.72	9.230	7.39	2.25	235.7
	7/5/17	18.71	22.72	9.730	7.26	0.45	408.4
	10/4/17	16.75	23.75	10.650	7.09	0.77	221.1
	12/13/17	16.8	23.69	10.610	7.25	2.10	80.1
	3/12/18	18.9	22.71	6.595	6.87	3.74	265.9
	6/25/18	18.47	22.4	9.564	7.08		304.4
	9/26/18	14.81	23.83	1.249	8.15	5.49	302
	12/11/18	16.44	23.74	6.147	7.65	4.54	223.1
VEW-26	1/25/17	43.81	22.47	9.495	6.92	2.59	253.3
	4/3/17	45.4	22.66	9.202	6.89	2.98	243.1
	7/5/17	47.71	23.11	9.301	6.78	1.97	286.3
	10/5/17	47.99	22.89	9.537	6.73	2.24	174.5
	12/13/17	48.30	22.54	9.062	6.84	3.34	14.5
	3/12/18	48.07	22.96	18.270	6.47	0.81	-13.5
	6/25/18	48.23	22.93	7.332	6.57		182.9
	9/26/18	42.99	22.97	3.226	6.91	4.66	139.2
	12/12/18	46.33	22.69	5.847	6.97	4.58	284.3
VEW-27	1/25/17			2 small (1.5") candles installed			
	4/3/17	10.37		medium purple/red			
	7/5/17	11.97		dark purple (VOAs turned brown)			
	10/6/17	8.30		dark pink			
	12/14/17	7.66					
	3/13/18	11.65					
	6/25/18	11.30					

	9/27/18	6.20	23.94	16.45	6.63	0.26	666.7
	12/13/18	8.57	24.14	22.34	6.65	1.03	679.6
VEW-28A	9/27/18	106.56	21.3	0.605	7.08	8.72	-3.8
	12/12/18	86.15	20.36	0.731	7.16	6.81	284.6
VEW-28B	9/27/18	109.61	20.87	0.58	7.12	5.79	-6.1
	12/12/18	86.25	21.39	0.643	7.19	6.93	265.3
VEW-29	1/25/17	30.11	22.7	0.688	6.92	0.11	-70.3
	4/3/17	29.85	23.14	0.646	6.75	2.10	118.7
	7/6/17	31.45	23.12	0.747	6.84	0.11	-317.9
	10/5/17	30.88	23.09	0.703	6.76	0.06	-281.5
	12/14/17	31.91	22.84	0.740	6.78	0.28	-229.2
	3/12/18	31.48	23.03	0.561	6.84	4.76	-68.2
	6/25/18	31.23	23.2	0.645	6.75		-13.6
	9/27/18	29.58	22.93	0.641	6.87	0.16	-196.7
	12/13/18	30.53	23.09	8.316	6.29	0.12	702.8
VEW-30	1/25/17	24.21			Dry		
	4/3/17	24.24			Dry		
	7/6/17	24.4			Dry		
	10/5/17	24.2			Dry		
	12/14/17	24.21			Dry		
	3/12/18	24.21			Dry		
	6/25/18	24.37			Dry		
	9/27/18	24.25			Dry		
	12/12/18	24.25			Dry		
VEW-31	1/25/17	30.07	22.96	1.139	6.77	0.05	75.9
	4/3/17	30.17	23.06	1.180	6.68	0.94	48.8
	7/6/17	30.15	23.16	1.592	6.66	0.44	-111.6
	10/5/17	30.15	23.08	0.703	6.76	0.34	-95.6
	12/14/17	30.13	22.56	1.256	6.71	0.21	-175.5
	3/12/18	30.15	23.08	0.728	6.81	1.43	144.8
	6/25/18	30.17	23.11	0.889	6.49		13.9
	9/27/18	30.16	22.8	0.741	6.84	0.14	43.3
	12/13/18	31.00	23.12	7.650	6.25	0.14	698.1
VEW-32	1/25/17				2 large (2.5") candles installed		
	4/3/17	10.81			silty		
	7/6/17	10.83			silty (VOAs went clear)		
	10/6/17	8.50			light pink (silty)		
	12/14/17	8.25					
	3/13/18	10.25					
	6/25/18	10.35					
	9/24/18	8.69	23.75	0.939	7.16	0.25	581.7
	12/13/18	9.00	24.05	2.592	6.87	0.29	649.5
VEW-33	1/25/17	24.37			Dry		
	4/3/17	24.27			Dry		
	7/6/17	24.28			Dry		
	10/5/17	24.25			Dry		

	12/14/17	24.28						Dry
	3/12/18	24.25						Dry
	6/25/18	24.45						Dry
	9/27/18	24.3						Dry
	12/12/18	24.26						Dry
TSW-01	1/25/17		2 large (2.5") candles installed					
	4/3/17	32.6						medium purple/red
	7/5/17	32.7						dark purple (VOAs turned brown)
	10/6/17	31.85						light pink
	12/13/17	32.7						
	3/13/18	32.74						
	6/25/18	32.78						
	9/24/18	32.47	23	5.707	6.42	0.39	677.5	
	12/13/18	32.5	22.94	12.40	6.29	0.76	715.3	
TSW-02	1/25/17	31.5	22.81	4.836	6.45	0.02	-87.0	
	4/3/17	31.51	22.72	4.099	6.64	0.9	-120.3	
	7/5/17	31.79	23.13	4.111	6.4	0.49	-219.5	
	10/5/17	31.65	22.90	3.947	6.42	0.14	-285.2	
	12/13/17	32.03	22.76	3.459	6.55	0.13	-365.2	
	3/12/18	31.85	22.97	2.665	6.56	0.21	42.9	
	6/25/18	31.99	23.04	3.169	6.6		-46.3	
	9/26/18	31.2	22.89	0.959	6.53	0.39	28.3	
	12/11/18	31.34	22.63	3.439	6.61	0.36	-145.8	
TSW-03	1/25/17	28.68	22.59	31.46	6.49	0.31	245.5	
	3/23/17	28.73	22.95	29.15	6.42	0.26	240.9	
	7/5/17	28.6	23.26	23.91	6.33	0.55	242.3	
	10/5/17	28.52	22.92	19.95	6.49	0.20	51.5	
	12/13/17	28.5	22.84	15.37	6.61	0.14	-145.9	
	3/12/18	28.56	22.96	18.27	6.47	0.81	-13.5	
	6/25/18	28.58	23.04	16.46	6.51		-46.3	
	9/26/18	28.59	22.91	17.97	6.47	0.38	-142.7	
	12/11/18	25.75	22.94	16.93	6.55	0.29	-273.9	
TSW-04	1/25/17	28.39	22.26	40.84	6.41	0.25	235.2	
	3/23/17	28.84	22.61	39.11	6.40	0.25	218.2	
	7/5/17	28.52	22.77	31.44	6.34	0.46	261.8	
	10/5/17	28.44	22.58	37.09	6.41	0.63	54.5	
	12/13/17	28.5	22.41	34.72	6.50	0.39	-273.3	
	3/12/18	28.52	22.57	24.12	6.41	0.36	33.1	
	6/25/18	28.56	22.65	30.95	6.72		-56.1	
	9/26/18	28.41	22.55	29.64	6.42	0.43	-233	
	12/11/18	28.45	22.48	25.43	6.49	0.3	-248.9	
TSW-05	1/25/17		2 small (1.5") candles installed					
	4/3/17	29.92						pink
	7/6/17	29.99	stratified: light pink to clear (VOAs went clear)					
	10/6/17	29.78						faint pink
	12/14/17	30.00						

	3/13/18	30.05					
	6/25/18	30.10					
	9/24/18	29.90	22.76	0.995	6.9	0.22	616.9
	12/13/18	30.57	22.74	10.75	6.29	0.24	710.2
TSW-06	1/25/17	35.94	22.29	0.693	6.93	0.12	125.6
	4/3/17	35.87	22.72	0.697	6.75	0.44	-56.3
	7/6/17	35.94	22.81	0.702	6.92	0.70	-233.9
	10/5/17	35.90	22.62	0.707	6.78	0.85	-245.6
	12/14./17	35.90	22.13	0.710	6.85	0.35	-192.1
	3/12/18	35.90	22.61	0.575	6.9	0.33	-38.6
	6/25/18	35.91	22.76	0.665	6.81		6.2
	9/26/18	35.83	22.72	0.669	6.88	0.15	-20.5
	12/12/18	35.89	22.78	0.715	6.97	0.22	290.4
TSW-07	1/25/17	28.18	22.11	8.014	6.61	0.05	195.4
	3/23/17	28.19	2.41	9.666	6.5	0.25	-26.9
	7/5/17	28.19	22.48	6.543	6.57	2.89	130.2
	10/5/17	28.13	22.35	8.306	6.52	0.06	45.5
	12/13/17	28.15	22.3	6.449	6.66	0.48	-132.5
	3/12/18	28.18	22.47	6.232	6.61	0.95	-13.5
	6/25/18	28.2	22.41	6.910	6.91		-4.4
	9/26/18	27.97	22.35	6.599	6.48	0.35	-26
	12/11/18	28.07	22.66	6.285	6.63	0.15	47.6
PZ-01	1/25/17	114.34	20.8	0.585	7.15	6.55	269.3
	3/23/17	113.71	21.63	0.583	7.01	6.19	295
	7/5/17	116.78	22.79	0.592	6.85	5.06	516.8
	10/4/17	118.21	23.29	0.563	7.05	7.72	260.1
	12.13/17	118.82	20.89	0.499	7.52	7.88	-46.1
	3/12/18	119.89	18.24	0.412	7.28	7.24	428.4
	6/25/18	120.24	22.33	0.466	7.11		290.9
	9/26/18	112.88	22.59	0.320	7.03	8.89	299
	12/11/18	91.94	20.74	0.636	7.19	7.67	283.2
PZ-02	1/25/17	41.92	21.96	4.697	7.16	3.93	234.0
	3/23/17	42.56	22.33	3.596	7.13	3.69	255.2
	7/5/17	46.2	22.65	4.461	7.04	3.84	385.2
	10/4/17	41.60	22.51	5.065	7.01	5.50	224.7
	12/13/17	44.20	22.1	5.322	7.01	3.05	56.7
	3/12/18	45.31	22.04	3.259	7.12	4.86	405.1
	6/25/18	46.63	22.53	3.387	7.11		290.9
	9/26/18	30.56	22.61	1.442	6.95	4.32	299.1
	12/11/18	38.77	22.39	2.204	7.14	4.54	228.7
PZ-03	1/25/17	123.72	20.27	0.552	6.93	6.6	280.9
	3/23/17	123.51	21.31	0.542	6.98	6.2	332.9
	7/5/17	126.02	22.73	0.524	7.04	9.96	581.9
	10/04/17	127.40	22.75	0.533	6.83	6.47	392.10
	12/13/17	127.85	20.37	0.545	7.11	7.05	-48.90
	03/12/18	128.41	19.97	0.440	6.93	7.48	509.40

	06/25/18	128.50	22.31	0.497	6.91		35.60
	09/26/18	125.23	22.14	0.554	6.94	5.43	286.40
	12/11/18	102.45	20.91	0.605	7.03	8.20	425.10
PZ-04	1/25/17	36.4	22.65	0.740	6.76	2.19	289.2
	3/23/17	36.37	22.78	0.716	6.88	1.73	357.2
	7/5/17	36.43	22.94	0.700	6.84	5.37	555
	10/4/17	36.41	22.86	0.725	6.59	3.72	456.4
	12/13/17	36.41	22.81	0.736	6.84	3.7	-66.8
	3/12/18	36.47	27.89	0.589	6.78	2.8	555.1
	6/25/18	36.44	23	0.669	6.77		42.3
	9/26/18	36.14	22.91	0.711	6.76	3.39	284.4
	12/11/18	36.14	22.99	0.731	6.84	0.85	469.1
PZ-05	1/25/17	96.85	20.21	0.778	7.09	5.29	240.2
	3/23/17	86.6	22.66	0.599	6.76	3.53	340.2
	7/5/17	112.81	23.42	0.748	7.05	12.64	351.4
	10/4/17	100.95	24.14	1.314	6.76	5.19	239.4
	12/13/17	121.78	20.75	0.489	7.06	6.84	-41.9
	3/12/18	115.78	19.33	0.605	7.04	6.53	389
	6/25/18	118.63	22.37	0.810	6.66		308.2
	9/26/18	50.27	23.09	0.731	7.03	8.84	292.5
	12/11/18	85.39	20.34	0.672	7.16	7.85	233.1
PZ-06	1/25/17	36.38	22.49	0.609	6.82	3.58	271.8
	3/23/17	36.4	22.66	0.599	6.76	3.53	340.2
	7/5/17	36.5	22.69	0.592	6.85	5.06	516.8
	10/4/17	36.36	22.74	0.598	6.68	4.76	295.6
	12/13/17	36.41	22.67	0.628	6.79	3.52	-54
	3/12/18	36.36	22.8	0.524	6.78	3.62	459.4
	6/25/18	36.45	22.82	0.588	6.68		292.9
	9/26/18	36.42	22.77	0.579	6.78	3	286.8
	12/11/18	36.41	22.58	0.581	6.92	1.37	366.8
IIW-01	9/26/18	105.31	23.1	0.988	7.16	4.52	272.0
	12/12/18	85.76	21.58	1.188	7.02	5.08	263.9
IIW-02	9/26/18	29.19	22.95	0.629	6.88	3.20	241.8
	12/12/18	85.68	20.26	7.762	6.96	5.15	279.9
IIW-03	9/26/18	28.4	23.71	4.356	10.48	2.37	202.2
	12/12/18	28.27	22.15	3.345	10.80	5.67	92.4
IIW-04	9/26/18	87.1	23.33	4.372	7.02	4.54	293.1
	12/12/18	75.12	21.33	6.125	7.21	5.30	271.9
SIW-01	9/27/18	13.2	23.06	78.080	8.95	3.58	565.0
	12/13/18	13.45	23.34	86.600	8.92	2.78	603.9
SIW-02	9/26/18	21.25	23.35	0.900	7.00	0.75	162.0
	12/12/18	19.9	23.75	0.958	6.99	0.21	459.6
South-IC	9/27/18	7.77	26.62	2.455	7.03	2.88	644.0
	12/12/18	8.1	24.41	5.367	6.97	3.59	624.7
Middle-IC	9/27/18	6.86	27.81	0.609	7.17	3.23	137.8
	12/12/18	7.05	22.65	0.451	7.37	5.31	264.4

North-IC	9/27/18	Dry
	12/12/18	Dry


 Oxidant cylinder installed

Table A.2 - VOC Concentrations

Well ID	Sample Date	1,1-Dichloroethene µg/L	cis-1,2-Dichloroethene µg/L	Tetrachloroethene (PCE) µg/L	Trichloroethene (TCE) µg/L	trans-1,2-Dichloroethene µg/L	Vinyl chloride µg/L
LS-5	3/7/2012	0.12	0.070	0.81	2.5	0.080	0.080
	6/4/2012	0.12	0.070	1.2	3.3	0.080	0.080
	8/3/2012	0.12	0.070	0.40	1.2	0.080	0.080
	8/6/2012	0.12	0.070	1.3	2.8	0.080	0.080
	8/16/2012	0.12	0.070	1.2	2.8	0.080	0.080
	8/30/2012	0.12	0.070	0.84	3.0	0.080	0.080
	10/1/2012	0.12	0.070	0.98	2.5	0.080	0.080
	12/3/2012	0.12	0.070	0.84	2.7	0.080	0.080
	3/11/2013	0.12	0.070	0.80	2.7	0.080	0.080
	4/23/2013	0.12	0.070	1.2	3.1	0.080	0.080
	6/19/2013	0.12	0.070	0.84	2.3	0.080	0.080
	7/19/2013	0.12	0.070	0.72	2.4	0.080	0.080
	9/17/2013	0.12	0.070	0.95	2.7	0.080	0.080
	12/9/2013	0.12	0.070	0.95	2.5	0.080	0.080
	3/5/2014	0.12	0.070	1.0	3.0	0.080	0.080
	6/2/2014	0.12	0.070	0.85	2.8	0.080	0.080
	9/3/2014	0.12	0.070	0.88	3.1	0.080	0.080
	12/1/2014	0.12	0.070	0.91	2.9	0.080	0.080
	3/2/2015	0.12	0.070	0.98	3.4	0.080	0.080
	6/1/2015	0.12	0.070	1.2	2.7	0.080	0.080
	9/8/2015	0.12	0.070	0.83	2.4	0.080	0.080
	11/30/2015	0.12	0.070	1.0	2.1	0.080	0.080
	3/7/2016	0.12	0.070	1.1	2.5	0.080	0.080
	6/6/2016	0.12	0.070	0.88	1.8	0.080	0.080
	9/6/2016	#N/A	0.070	0.75	1.8	#N/A	0.080
	12/5/2016	#N/A	0.070	1.1	2.2	#N/A	0.080
	3/28/2017	#N/A	0.070	1.2	2.2	#N/A	0.080
	6/5/2017	#N/A	0.070	1.1	2.4	#N/A	0.080
	9/21/2017	#N/A	0.070	0.99	2.8	#N/A	0.080
	12/4/2017	#N/A	0.070	0.060	2.8	#N/A	0.080
3/6/2018	#N/A	0.070	1.0	3.6	#N/A	0.080	
6/6/2018	#N/A	0.070	1.0	3.6	#N/A	0.080	
9/13/2018	#N/A	0.070	0.79	2.6	#N/A	0.080	
12/3/2018	#N/A	0.070	0.77	3.1	#N/A	0.080	
LS-6	3/7/2012	0.12	0.070	0.81	1.8	0.080	0.080
	6/4/2012	0.12	0.070	1.1	3.4	0.080	0.080
	8/3/2012	0.12	0.070	0.76	1.6	0.080	0.080
	8/6/2012	0.12	0.070	0.74	2.0	0.080	0.080
	8/16/2012	0.12	0.070	0.87	1.5	0.080	0.080
	8/30/2012	0.12	0.070	0.55	1.8	0.080	0.080
	10/1/2012	0.12	0.070	0.69	1.9	0.080	0.080
	12/3/2012	0.12	0.070	0.85	2.2	0.080	0.080
	3/11/2013	0.12	0.070	0.87	2.7	0.080	0.080
	4/23/2013	0.12	0.070	1.1	3.0	0.080	0.080
	6/19/2013	0.12	0.070	0.68	3.0	0.080	0.080
	7/19/2013	0.12	0.070	0.58	1.9	0.080	0.080
	9/17/2013	0.12	0.070	0.68	2.1	0.080	0.080
	12/9/2013	0.12	0.070	0.84	2.7	0.080	0.080
	3/5/2014	0.12	0.070	0.76	3.2	0.080	0.080
	6/2/2014	0.12	0.070	0.91	3.2	0.080	0.080
	9/3/2014	0.12	0.070	0.80	3.1	0.080	0.080
	12/1/2014	0.12	0.070	0.93	3.7	0.080	0.080
	3/2/2015	0.12	0.070	0.81	3.5	0.080	0.080
	6/1/2015	0.12	0.070	0.29	0.050	0.080	0.080
9/8/2015	0.12	0.070	0.62	2.0	0.080	0.080	
11/30/2015	0.12	0.070	0.060	0.050	0.080	0.080	
3/7/2016	0.12	0.070	0.76	1.5	0.080	0.080	

	6/6/2016	0.12	0.070	0.72	0.89	0.080	0.080
	9/6/2016	#N/A	0.070	0.88	0.050	#N/A	0.080
	12/5/2016	#N/A	0.070	0.060	0.050	#N/A	0.080
	3/28/2017	#N/A	0.070	0.84	0.050	#N/A	0.080
	6/5/2017	#N/A	0.070	0.80	0.52	#N/A	0.080
	9/21/2017	#N/A	0.070	0.060	1.6	#N/A	0.080
	12/4/2017	#N/A	0.070	0.060	1.4	#N/A	0.080
	3/6/2018	#N/A	0.070	0.85	2.4	#N/A	0.080
	6/6/2018	#N/A	0.070	0.61	1.9	#N/A	0.080
	9/13/2018	#N/A	0.070	0.66	0.050	#N/A	0.080
	12/3/2018	#N/A	0.070	0.87	0.050	#N/A	0.34
LS-7	3/7/2012	0.12	0.070	2.4	0.36	0.080	0.080
	6/4/2012	0.12	0.070	3.1	0.42	0.080	0.080
	8/3/2012	0.12	0.070	1.8	0.30	0.080	0.080
	8/6/2012	0.12	0.070	2.8	0.41	0.080	0.080
	8/16/2012	0.12	0.070	2.4	0.30	0.080	0.080
	8/30/2012	0.12	0.070	2.6	0.66	0.080	0.080
	10/1/2012	0.12	0.070	1.7	0.46	0.080	0.080
	12/3/2012	0.12	0.070	2.0	0.43	0.080	0.080
	3/11/2013	0.12	0.070	2.0	0.41	0.080	0.080
	4/23/2013	0.12	0.070	2.7	0.27	0.080	0.080
	6/19/2013	0.12	0.070	1.7	0.24	0.080	0.080
	7/19/2013	0.12	0.070	2.0	0.24	0.080	0.080
	9/17/2013	0.12	0.070	1.9	0.19	0.080	0.080
	12/9/2013	0.12	0.070	2.1	0.23	0.080	0.080
	3/5/2014	0.12	0.070	1.6	0.44	0.080	0.080
	6/2/2014	0.12	0.070	2.1	0.46	0.080	0.080
	9/3/2014	0.12	0.070	2.1	0.54	0.080	0.080
	10/15/2014	0.12	0.070	2.2	0.47	0.080	0.080
	10/29/2014	0.12	0.070	1.7	0.37	0.080	0.080
	11/18/2014	0.12	0.070	2.0	0.45	0.080	0.080
	12/1/2014	0.12	0.070	2.0	0.38	0.080	0.080
	3/2/2015	0.12	0.070	1.9	0.44	0.080	0.080
	6/1/2015	0.12	0.070	0.060	0.050	0.080	0.080
	9/8/2015	0.12	0.070	1.3	0.050	0.080	0.080
	11/30/2015	0.12	0.070	0.24	0.050	0.080	0.080
	3/7/2016	0.12	0.070	1.6	0.28	0.080	0.080
	6/6/2016	0.12	0.070	0.62	0.050	0.080	0.080
	9/6/2016	#N/A	0.070	0.57	0.050	#N/A	0.080
	12/5/2016	#N/A	0.070	0.060	0.050	#N/A	0.080
	12/29/2016	0.12	0.070	0.97	0.24	0.080	0.080
	3/28/2017	#N/A	0.070	1.1	0.25	#N/A	0.080
	6/5/2017	#N/A	0.070	1.1	0.050	#N/A	0.080
	9/21/2017	#N/A	0.070	1.6	0.50	#N/A	0.080
	12/4/2017	#N/A	0.070	1.1	0.20	#N/A	0.080
	3/6/2018	#N/A	0.070	1.7	0.58	#N/A	0.080
	6/6/2018	#N/A	0.070	1.4	0.53	#N/A	0.080
	9/13/2018	#N/A	0.070	1.0	0.050	#N/A	0.080
	12/3/2018	#N/A	0.070	0.060	0.050	#N/A	0.080
OFR-3	3/8/2012	0.12	0.17	5.2	3.3	0.080	0.080
	6/4/2012	0.12	0.070	6.5	6.6	0.080	0.080
	8/3/2012	0.12	0.070	3.9	3.0	0.080	0.080
	8/6/2012	0.12	0.070	5.0	3.2	0.080	0.080
	8/16/2012	0.12	0.070	7.1	4.5	0.080	0.080
	8/30/2012	0.12	0.070	7.9	5.8	0.080	0.080
	12/6/2012	0.12	0.070	3.4	3.1	0.080	0.080
	3/11/2013	0.12	0.070	3.2	2.9	0.080	0.080
	4/23/2013	0.12	0.25	11	7.0	0.080	0.080
	4/3/2015	0.12	0.070	6.2	3.3	0.080	0.080
	6/1/2015	0.12	0.070	4.2	2.6	0.080	0.080
	9/8/2015	0.12	0.070	6.9	3.6	0.080	0.080
	11/30/2015	0.12	0.070	3.5	1.9	0.080	0.080

	3/7/2016	0.12	0.070	2.9	2.4	0.080	0.080
	6/6/2016	0.12	0.070	3.2	3.0	0.080	0.080
	9/6/2016	#N/A	0.070	3.1	2.0	#N/A	0.080
	12/5/2016	#N/A	0.070	6.6	3.0	#N/A	0.080
	3/28/2017	#N/A	0.070	7.0	3.6	#N/A	0.080
	6/5/2017	#N/A	0.070	6.3	3.6	#N/A	0.080
	9/27/2017	#N/A	0.070	3.7	2.1	#N/A	0.080
	12/4/2017	#N/A	0.070	0.060	0.75	#N/A	0.080
	3/6/2018	#N/A	0.070	4.8	2.8	#N/A	0.080
	6/6/2018	#N/A	0.070	4.8	3.8	#N/A	0.080
	9/13/2018	#N/A	0.070	2.3	1.7	#N/A	0.080
	12/3/2018	#N/A	0.070	0.060	0.050	#N/A	0.080
RFR-10	3/8/2012	0.12	0.40	16	10	0.080	0.080
	6/4/2012	0.12	0.49	26	14	0.080	0.080
	8/3/2012	0.12	0.33	8.9	3.4	0.080	0.080
	8/6/2012	0.12	0.070	12	4.5	0.080	0.080
	8/16/2012	0.12	0.070	8.5	3.1	0.080	0.080
	8/30/2012	0.12	0.070	12	4.8	0.080	0.080
	10/1/2012	0.12	0.070	9.6	4.6	0.080	0.080
	12/3/2012	0.12	0.29	18	7.7	0.080	0.080
	3/11/2013	0.12	0.070	8.4	3.2	0.080	0.080
	4/23/2013	0.12	0.070	12	4.3	0.080	0.080
	6/19/2013	0.12	0.28	13	8.7	0.080	0.080
	7/19/2013	0.12	0.21	15	6.9	0.080	0.080
	9/17/2013	0.12	0.070	7.4	2.3	0.080	0.080
	12/9/2013	0.12	0.16	14	6.4	0.080	0.080
	3/5/2014	0.12	0.070	8.4	3.4	0.080	0.080
	6/2/2014	0.12	0.070	9.4	4.9	0.080	0.080
	9/3/2014	0.12	0.070	6.8	2.4	0.080	0.080
	10/15/2014	0.12	0.070	6.1	2.2	0.080	0.080
	10/29/2014	0.12	0.070	6.4	2.0	0.080	0.080
	11/18/2014	0.12	0.18	11	8.0	0.080	0.080
	12/1/2014	0.12	0.19	12	7.1	0.080	0.080
	3/2/2015	0.12	0.35	22	14	0.080	0.080
	5/19/2015	0.12	0.070	7.9	4.7	0.080	0.080
	6/1/2015	0.12	0.13	9.2	5.5	0.080	0.080
	9/8/2015	0.12	0.070	20	7.9	0.080	0.080
	11/30/2015	0.12	0.070	6.3	3.5	0.080	0.080
	3/7/2016	0.12	0.18	14	7.4	0.080	0.080
	4/4/2016	0.12	0.17	12	6.7	0.080	0.080
	5/3/2016	0.12	0.070	6.5	4.5	0.080	0.080
	6/6/2016	0.12	0.070	7.7	4.9	0.080	0.080
	9/6/2016	#N/A	0.18	7.0	4.3	#N/A	0.080
	12/5/2016	#N/A	0.070	8.0	3.6	#N/A	0.080
	3/28/2017	#N/A	0.37	9.5	4.5	#N/A	0.080
	6/5/2017	#N/A	0.070	9.7	5.3	#N/A	0.080
	9/21/2017	#N/A	0.35	18	11	#N/A	0.080
	12/4/2017	#N/A	0.070	7.5	5.0	#N/A	0.080
	3/6/2018	#N/A	0.070	8.2	4.5	#N/A	0.080
	6/6/2018	#N/A	0.070	11	6.1	#N/A	0.080
	9/13/2018	#N/A	0.070	4.4	2.6	#N/A	0.080
	12/3/2018	#N/A	0.070	4.1	2.4	#N/A	0.080
RFR-11	3/8/2012	0.12	0.070	0.47	1.7	0.080	0.080
	6/4/2012	0.12	0.070	1.2	2.0	0.080	0.080
	8/3/2012	0.12	0.070	0.55	2.1	0.080	0.080
	8/6/2012	0.12	0.070	0.47	1.9	0.080	0.080
	8/16/2012	0.12	0.070	0.80	2.7	0.080	0.080
	8/30/2012	0.12	0.070	0.54	2.9	0.080	0.080
	12/3/2012	0.12	0.070	0.67	2.0	0.080	0.080
	3/11/2013	0.12	0.070	0.59	2.3	0.080	0.080
	4/23/2013	0.12	0.070	0.79	2.7	0.080	0.080
	6/19/2013	0.12	0.070	0.64	2.3	0.080	0.080

Regulatory Wells

	7/19/2013	0.12	0.070	0.63	2.6	0.080	0.080
	9/17/2013	0.12	0.070	0.65	2.1	0.080	0.080
	12/9/2013	0.12	0.070	0.060	2.5	0.080	0.080
	3/5/2014	0.12	0.070	0.54	2.3	0.080	0.080
	6/2/2014	0.12	0.070	0.69	2.4	0.080	0.080
	9/3/2014	0.12	0.070	0.73	2.6	0.080	0.080
	12/1/2014	0.12	0.070	0.81	2.7	0.080	0.080
	3/2/2015	0.12	0.070	0.77	2.6	0.080	0.080
	6/1/2015	0.12	0.070	0.93	0.050	0.080	0.080
	9/8/2015	0.12	0.070	0.84	1.7	0.080	0.080
	11/30/2015	0.12	0.070	1.2	0.050	0.080	0.080
	3/7/2016	0.12	0.070	0.96	1.6	0.080	0.080
	6/6/2016	0.12	0.070	0.94	0.30	0.080	0.080
	9/6/2016	#N/A	0.070	1.5	0.47	#N/A	0.080
	12/5/2016	#N/A	0.070	0.91	1.3	#N/A	0.080
	3/28/2017	#N/A	0.070	1.1	1.8	#N/A	0.080
	6/5/2017	#N/A	0.070	0.87	1.6	#N/A	0.080
	9/21/2017	#N/A	0.070	0.68	2.1	#N/A	0.080
	12/4/2017	#N/A	0.070	0.060	1.9	#N/A	0.080
	3/6/2018	#N/A	0.070	0.69	2.2	#N/A	0.080
	6/6/2018	#N/A	0.070	0.70	2.2	#N/A	0.080
	9/13/2018	#N/A	0.070	3.1	0.050	#N/A	0.080
	12/3/2018	#N/A	0.070	8.7	5.0	#N/A	0.080
CS-MW6-LGR	3/20/2012	0.12	0.070	0.25	0.050	0.080	0.080
	8/6/2012	0.12	0.070	0.060	0.050	0.080	0.080
	8/16/2012	0.12	0.070	0.060	0.050	0.080	0.080
	8/31/2012	0.12	0.070	0.060	0.050	0.080	0.080
	12/13/2012	0.12	0.070	0.060	0.050	0.080	0.080
	4/22/2013	0.12	0.070	0.22	0.050	0.080	0.080
	6/19/2013	0.12	0.070	0.060	0.050	0.080	0.080
	7/19/2013	0.12	0.070	0.060	0.050	0.080	0.080
	9/17/2013	0.12	0.070	0.060	0.050	0.080	0.080
	11/20/2013	0.12	0.070	0.060	0.050	0.080	0.080
	2/13/2014	0.12	0.070	0.060	0.050	0.080	0.080
	6/17/2014	0.12	0.070	0.060	0.050	0.080	0.080
	9/4/2014	0.12	0.070	0.060	0.050	0.080	0.080
	11/13/2014	0.12	0.070	0.060	0.050	0.080	0.080
	3/10/2015	0.12	0.070	0.060	0.050	0.080	0.080
	6/10/2015	0.12	0.070	0.65	0.050	0.080	0.080
	9/11/2015	0.12	0.070	0.060	0.050	0.080	0.080
	12/9/2015	0.12	0.070	0.26	0.050	0.080	0.080
	3/8/2016	0.12	0.070	0.060	0.050	0.080	0.080
	6/7/2016	0.12	0.070	0.70	0.050	0.080	0.080
	9/12/2016	#N/A	0.070	0.060	0.050	#N/A	0.080
	12/12/2016	0.12	0.070	0.33	0.050	0.080	0.080
	3/6/2017	0.12	0.070	0.060	0.050	0.080	0.080
	6/8/2017	#N/A	0.070	0.060	0.050	#N/A	0.080
	9/22/2017	0.12	0.070	0.060	0.050	0.080	0.080
	12/6/2017	0.12	0.070	0.060	0.050	0.080	0.080
	3/5/2018	0.12	0.070	0.060	0.050	0.080	0.080
	6/7/2018	0.12	0.070	0.060	0.050	0.080	0.080
	9/5/2018	#N/A	0.070	0.88	0.050	#N/A	0.080
	12/5/2018	0.12	0.070	0.46	0.050	0.080	0.080
CS-MW7-LGR	3/20/2012	0.12	0.070	0.69	0.050	0.080	0.080
	8/6/2012	0.12	0.070	0.35	0.050	0.080	0.080
	8/16/2012	0.12	0.070	0.40	0.050	0.080	0.080
	8/31/2012	0.12	0.070	0.53	0.050	0.080	0.080
	12/17/2012	0.12	0.070	0.060	0.050	0.080	0.080
	4/22/2013	0.12	0.070	0.89	0.050	0.080	0.080
	6/19/2013	0.12	0.070	0.39	0.050	0.080	0.080
	7/19/2013	0.12	0.070	0.50	0.050	0.080	0.080
	9/19/2013	0.12	0.070	0.68	0.050	0.080	0.080

	11/20/2013	0.12	0.070	0.51	0.050	0.080	0.080
	2/13/2014	0.12	0.070	0.80	0.050	0.080	0.080
	6/20/2014	0.12	0.070	0.83	0.050	0.080	0.080
	9/4/2014	0.12	0.070	0.71	0.050	0.080	0.080
	11/13/2014	0.12	0.070	1.1	0.050	0.080	0.080
	3/10/2015	0.12	0.070	0.87	0.050	0.080	0.080
	6/10/2015	0.12	0.070	0.77	0.050	0.080	0.080
	9/14/2015	0.12	0.070	0.78	0.050	0.080	0.080
	12/9/2015	0.12	0.070	0.81	0.050	0.080	0.080
	3/8/2016	0.12	0.070	0.93	0.050	0.080	0.080
	6/7/2016	0.12	0.070	0.72	0.050	0.080	0.080
	9/12/2016	#N/A	0.070	0.72	0.050	#N/A	0.080
	12/12/2016	0.12	0.070	0.91	0.080	0.080	0.080
	3/6/2017	0.12	0.070	0.76	0.050	0.080	0.080
	6/20/2017	#N/A	0.070	0.88	0.050	#N/A	0.080
	9/22/2017	0.12	0.070	1.1	0.050	0.080	0.080
	12/6/2017	0.12	0.070	0.95	0.050	0.080	0.080
	3/5/2018	0.12	0.070	1.2	0.050	0.080	0.080
	6/7/2018	0.12	0.070	1.2	0.32	0.080	0.080
	9/5/2018	#N/A	0.070	1.1	0.050	#N/A	0.080
	12/5/2018	0.12	0.070	1.1	0.050	0.080	0.080
CS-MW8-LGR	3/20/2012	0.12	0.070	2.4	0.050	0.080	0.080
	8/6/2012	0.12	0.070	1.6	0.050	0.080	0.080
	8/16/2012	0.12	0.070	2.4	0.050	0.080	0.080
	8/30/2012	0.12	0.070	2.0	0.050	0.080	0.080
	9/11/2012	0.12	0.070	1.8	0.050	0.080	0.080
	12/13/2012	0.12	0.070	2.1	0.050	0.080	0.080
	4/22/2013	0.12	0.070	3.0	0.16	0.080	0.080
	6/19/2013	0.12	0.070	2.5	0.050	0.080	0.080
	7/19/2013	0.12	0.070	1.6	0.050	0.080	0.080
	9/17/2013	0.12	0.070	1.4	0.050	0.080	0.080
	11/20/2013	0.12	0.070	3.1	0.050	0.080	0.080
	3/6/2014	0.12	0.070	1.8	0.050	0.080	0.080
	6/17/2014	0.12	0.070	3.3	0.050	0.080	0.080
	9/4/2014	0.12	0.070	1.5	0.050	0.080	0.080
	11/13/2014	0.12	0.070	2.2	0.050	0.080	0.080
	3/10/2015	0.12	0.070	3.4	0.050	0.080	0.080
	6/10/2015	0.12	0.070	2.4	0.050	0.080	0.080
	9/11/2015	0.12	0.070	2.4	0.050	0.080	0.080
	12/9/2015	0.12	0.070	2.7	0.050	0.080	0.080
	3/8/2016	0.12	0.070	3.2	0.050	0.080	0.080
	6/7/2016	0.12	0.070	2.8	0.050	0.080	0.080
	9/12/2016	#N/A	0.070	2.7	0.050	#N/A	0.080
	12/12/2016	0.12	0.070	2.8	0.050	0.080	0.080
	3/6/2017	0.12	0.070	2.4	0.050	0.080	0.080
	6/8/2017	#N/A	0.070	2.6	0.050	#N/A	0.080
	9/22/2017	0.12	0.070	3.1	0.050	0.080	0.080
	12/6/2017	0.12	0.070	0.060	0.050	0.080	0.080
	3/5/2018	0.12	0.070	2.1	0.050	0.080	0.080
	6/7/2018	0.12	0.070	1.6	0.050	0.080	0.080
	9/5/2018	#N/A	0.070	2.4	0.050	#N/A	0.080
	12/5/2018	0.12	0.070	2.7	0.050	0.080	0.080
CS-MW36-LGR	3/19/2012	0.12	0.070	8.4	4.9	0.080	0.080
	6/11/2012	0.12	0.070	7.7	1.8	0.080	0.080
	8/6/2012	0.12	1.6	19	46	0.080	0.080
	8/16/2012	0.12	2.0	22	57	0.080	0.080
	8/30/2012	0.12	1.7	21	55	0.080	0.080
	10/2/2012	0.12	0.34	9.0	13	0.080	0.080
	12/13/2012	0.12	0.63	13	19	0.080	0.080
	3/5/2013	0.12	1.7	27	65	0.080	0.080
	4/22/2013	0.12	2.2	31	69	0.080	0.080
	6/19/2013	0.12	0.070	7.6	6.3	0.080	0.080

	7/19/2013	0.12	0.83	16	31	0.080	0.080
	9/17/2013	0.12	0.78	16	29	0.080	0.080
	12/2/2013	0.12	0.38	11	15	0.080	0.080
	3/6/2014	0.12	0.79	18	33	0.080	0.080
	6/17/2014	0.12	0.070	9.6	7.8	0.080	0.080
	9/9/2014	0.12	0.63	16	23	0.080	0.080
	10/2/2014	0.12	0.72	22	31	0.080	0.080
	10/15/2014	0.12	0.74	18	28	0.080	0.080
	10/29/2014	0.12	0.62	18	26	0.080	0.080
	11/13/2014	0.12	0.29	12	12	0.080	0.080
	12/2/2014	0.12	0.17	13	11	0.080	0.080
	3/10/2015	0.12	0.70	17	28	0.080	0.080
	6/10/2015	0.12	0.070	8.7	6.3	0.080	0.080
	9/11/2015	0.12	0.36	13	12	0.080	0.080
	12/9/2015	0.12	0.070	6.7	2.3	0.080	0.080
	3/8/2016	0.12	0.28	8.3	7.9	0.080	0.080
	6/7/2016	0.12	0.070	4.1	1.5	0.080	0.080
	9/12/2016	#N/A	0.070	5.3	2.4	#N/A	0.080
	12/12/2016	0.12	0.090	5.5	3.1	0.080	0.080
	3/6/2017	0.12	0.070	4.9	1.6	0.080	0.080
	6/8/2017	#N/A	0.070	5.4	4.2	#N/A	0.080
	9/22/2017	0.12	0.24	4.3	7.4	0.080	0.080
	12/12/2017	0.12	0.44	29	18	0.080	0.080
	3/5/2018	0.12	0.58	14	27	0.080	0.080
	6/7/2018	0.12	0.90	17	35	0.080	0.080
	9/5/2018	#N/A	0.56	10	18	#N/A	0.080
	12/5/2018	0.12	0.070	9.0	8.0	0.080	0.080
CS-WB01-LGR-09	3/12/2012	0.12	0.37	14	19	0.080	0.080
	8/3/2012	0.12	0.35	11	16	0.080	0.080
	8/6/2012	0.12	0.41	18	22	0.080	0.080
	8/17/2012	0.12	0.43	17	19	0.080	0.080
	8/30/2012	0.12	0.40	18	22	0.080	0.080
	9/4/2012	0.12	0.39	15	19	0.080	0.080
	12/12/2012	0.12	0.39	13	18	0.080	0.080
	4/23/2013	0.12	0.63	19	25	0.080	0.080
	6/13/2013	0.12	0.53	8.6	12	0.080	0.080
	7/22/2013	0.12	0.50	8.7	13	0.080	0.080
	9/23/2013	0.12	0.40	7.0	11	0.080	0.080
	12/4/2013	0.12	0.43	12	14	0.080	0.080
	3/20/2014	0.12	0.61	14	16	0.080	0.080
	6/25/2014	0.12	0.35	12	14	0.080	0.080
	9/16/2014	0.12	0.50	16	15	0.080	0.080
	12/9/2014	0.12	0.41	10	13	0.080	0.080
	3/23/2015	0.12	0.35	6.5	8.7	0.080	0.28
	6/17/2015	0.12	0.80	11	14	0.080	0.080
	9/16/2015	0.12	0.60	12	14	0.080	0.080
	12/2/2015	0.12	0.58	17	19	0.080	0.080
	3/9/2016	0.12	0.44	10	12	0.080	0.080
	6/8/2016	0.12	0.69	9.6	13	0.080	0.080
	9/14/2016	#N/A	0.49	8.0	11	#N/A	0.080
	12/14/2016	0.12	0.61	18	18	0.080	0.080
	3/15/2017	0.12	0.61	8.6	11	0.080	0.080
	6/21/2017	#N/A	0.49	0.060	0.050	#N/A	1.9
	10/2/2017	0.12	0.070	8.8	11	0.080	0.080
	12/11/2017	0.12	0.070	8.9	10	0.080	0.080
	3/7/2018	0.12	0.32	9.3	11	0.080	0.080
	6/11/2018	0.12	0.070	7.8	10	0.080	0.080
	9/11/2018	#N/A	0.36	7.6	10	#N/A	0.080
	12/5/2018	0.12	0.72	10	14	0.080	0.080
CS-WB02-LGR-09	3/12/2012	0.12	0.31	16	14	0.080	0.080
	8/3/2012	0.12	0.070	12	11	0.080	0.080
	8/6/2012	0.12	0.23	8.1	7.3	0.080	0.080

	8/17/2012	0.12	0.42	14	13	0.080	0.080
	8/30/2012	0.12	0.29	15	11	0.080	0.080
	9/4/2012	0.12	0.31	14	12	0.080	0.080
	12/12/2012	0.12	0.070	120	12	0.080	0.080
	4/29/2013	0.12	0.28	12	11	0.080	0.080
	6/12/2013	0.12	0.32	110	11	0.080	0.080
	7/22/2013	0.12	0.28	13	12	0.080	0.080
	9/18/2013	0.12	0.27	260	11	0.080	0.080
	12/4/2013	0.12	0.26	47	9.5	0.080	0.080
	3/19/2014	0.12	0.070	7.8	5.8	0.080	0.080
	6/24/2014	0.12	0.28	430	11	0.080	0.080
	9/16/2014	0.60	0.35	120	9.6	0.40	0.40
	10/2/2014	0.12	0.070	10	9.1	0.080	0.080
	10/15/2014	0.12	0.28	12	11	0.080	0.080
	10/29/2014	0.12	0.070	6.9	6.1	0.080	0.080
	11/13/2014	0.12	0.24	97	10.0	0.080	0.080
	12/10/2014	0.12	0.20	7.6	7.0	0.080	0.080
	3/23/2015	0.12	0.21	7.9	8.0	0.080	0.080
	6/22/2015	0.12	0.21	17	9.7	0.080	0.080
	9/23/2015	0.12	0.20	9.4	7.3	0.080	0.080
	12/2/2015	0.12	0.18	14	11	0.080	0.080
	3/14/2016	0.12	0.070	5.7	6.2	0.080	0.080
	6/14/2016	0.12	0.070	7.3	7.4	0.080	0.080
	9/15/2016	#N/A	0.070	7.0	6.8	#N/A	0.080
	12/15/2016	0.12	0.18	13	10	0.080	0.080
	3/15/2017	0.12	0.070	7.6	7.2	0.080	0.080
	6/22/2017	#N/A	0.070	7.1	6.8	#N/A	0.080
	10/2/2017	0.12	0.070	6.4	6.4	0.080	0.080
	12/11/2017	0.12	0.070	5.8	5.9	0.080	0.080
	3/7/2018	0.12	0.070	6.7	6.2	0.080	0.080
	6/11/2018	0.12	0.070	5.6	5.6	0.080	0.080
	9/12/2018	#N/A	0.070	5.0	5.2	#N/A	0.080
	12/5/2018	0.12	0.070	7.0	7.7	0.080	0.080
CS-WB03-LGR-09	3/13/2012	0.12	21	9.1	5.0	0.080	0.080
	8/6/2012	0.12	8.6	2.5	2.0	0.080	0.080
	8/16/2012	0.12	9.2	4.3	4.1	0.080	0.080
	8/30/2012	0.12	10.0	4.2	3.3	0.080	0.080
	9/5/2012	0.12	12	3.5	3.8	0.080	0.080
	12/12/2012	0.12	20	3.5	2.4	0.080	0.080
	4/23/2013	0.12	7.6	3.5	3.3	0.080	0.080
	6/12/2013	0.12	8.9	1.6	2.1	0.080	0.080
	7/22/2013	0.12	15	1.8	1.8	0.080	0.080
	9/18/2013	0.12	9.6	1.3	2.2	0.080	0.080
	12/4/2013	0.12	10	1.3	1.7	0.080	0.080
	3/17/2014	0.12	4.1	2.9	1.5	0.080	0.92
	6/24/2014	0.12	4.0	1.8	2.5	0.080	0.080
	9/16/2014	0.12	1.9	3.0	4.3	0.080	0.080
	12/3/2014	0.12	1.7	2.0	1.3	0.080	0.080
	3/24/2015	0.12	1.8	0.75	1.2	0.080	0.080
	6/18/2015	0.12	0.070	2.9	3.7	0.080	0.080
	9/17/2015	0.12	0.49	4.6	4.4	0.080	0.080
	12/2/2015	0.12	0.20	3.2	3.8	0.080	0.080
	3/14/2016	0.12	0.070	2.3	2.6	0.080	0.080
	6/15/2016	0.12	0.070	1.9	2.7	0.080	0.080
	9/19/2016	#N/A	0.070	2.6	2.9	#N/A	0.080
	12/15/2016	0.12	0.070	4.9	4.9	0.080	0.080
	3/15/2017	0.12	0.070	2.6	2.9	0.080	0.080
	6/22/2017	#N/A	0.070	2.6	2.3	#N/A	0.080
	10/2/2017	0.12	0.070	2.4	2.1	0.080	0.080
	12/11/2017	0.12	0.74	1.6	1.9	0.080	0.080
	3/7/2018	0.12	0.95	1.8	2.2	0.080	0.080
	6/13/2018	0.12	1.1	2.5	3.1	0.080	0.080

	9/17/2018	#N/A	0.070	2.2	2.1	#N/A	0.080
	12/6/2018	0.12	0.070	2.6	3.5	0.080	0.080
CS-WB04-LGR-11	3/13/2012	0.12	0.070	0.42	0.21	0.080	0.080
	8/6/2012	0.12	0.070	0.060	0.050	0.080	0.080
	8/16/2012	0.12	0.070	0.29	0.050	0.080	0.080
	8/30/2012	0.12	0.070	0.060	0.050	0.080	0.080
	9/6/2012	0.12	0.070	0.27	0.050	0.080	0.080
	10/2/2012	0.12	0.070	0.060	0.050	0.080	0.080
	12/12/2012	0.12	0.070	0.060	0.050	0.080	0.080
	4/24/2013	0.12	0.070	0.40	0.050	0.080	0.080
	6/20/2013	0.12	0.070	0.24	0.050	0.080	0.080
	7/22/2013	0.12	0.070	0.12	0.050	0.080	0.080
	9/23/2013	0.12	0.070	0.27	0.050	0.080	0.080
	12/2/2013	0.12	0.070	0.060	0.050	0.080	0.080
	3/6/2014	0.12	0.070	0.060	0.050	0.080	0.42
	6/25/2014	0.12	0.070	1.2	0.050	0.080	0.080
	9/17/2014	0.12	0.070	0.73	0.050	0.080	0.080
	12/8/2014	0.12	0.070	0.92	0.050	0.080	0.080
	3/24/2015	0.12	0.070	440	2.7	0.080	0.080
	5/18/2015	0.12	0.070	0.28	0.050	0.080	0.080
	9/22/2015	0.12	0.070	1.5	0.050	0.080	0.080
	12/3/2015	0.12	0.070	22	0.12	0.080	0.080
	3/8/2016	0.12	0.070	0.060	0.050	0.080	0.080
	6/9/2016	0.12	0.070	0.060	0.050	0.080	0.080
	9/20/2016	#N/A	0.14	1.4	0.10	#N/A	0.16
	12/14/2016	0.12	0.070	0.64	0.050	0.080	0.080
	3/22/2017	0.12	0.070	0.62	0.050	0.080	0.080
	7/10/2017	#N/A	0.070	0.45	0.050	#N/A	0.080
	10/4/2017	0.12	0.070	0.72	0.050	0.080	0.080
	12/13/2017	0.12	0.070	0.84	0.050	0.080	0.080
	3/8/2018	0.12	0.070	1.2	0.050	0.080	0.080
	6/13/2018	0.12	0.070	0.060	0.050	0.080	0.080
	9/17/2018	#N/A	0.070	0.93	0.050	#N/A	0.080
	12/10/2018	0.12	0.070	0.61	0.050	0.080	0.080
PZ-01	7/20/2012	0.12	0.070	8.6	3.9	0.080	0.080
	1/9/2013	0.12	0.070	8.7	2.6	0.080	0.080
	4/16/2013	0.12	0.070	6.2	2.5	0.080	0.080
	6/19/2013	0.12	0.070	4.4	2.4	0.080	0.080
	7/23/2013	0.12	0.070	10	3.9	0.080	0.080
	9/17/2013	0.12	0.070	5.6	3.2	0.080	0.080
	11/18/2013	0.12	0.070	7.8	3.0	0.080	0.080
	2/10/2014	0.12	0.070	6.9	3.0	0.080	0.080
	5/14/2014	0.12	0.070	13	5.8	0.080	0.080
	8/6/2014	0.12	0.070	13	4.3	0.080	0.080
	11/18/2014	0.12	0.070	12	5.1	0.080	0.080
	2/19/2015	0.12	0.070	12	4.9	0.080	0.080
	5/14/2015	0.12	0.070	14	5.8	0.080	0.080
	9/24/2015	0.12	0.070	4.4	1.7	0.080	0.080
	12/1/2015	0.12	0.070	3.6	1.6	0.080	0.080
	1/13/2016	0.12	0.070	4.0	1.5	0.080	0.080
	2/10/2016	0.12	0.070	4.4	2.0	0.080	0.080
	3/10/2016	0.12	0.070	5.2	2.1	0.080	0.080
	6/20/2016	0.12	0.070	12	4.1	0.080	0.080
	10/4/2016	0.12	0.070	6.0	2.4	0.080	0.080
	11/29/2016	0.12	0.070	5.5	2.3	0.080	0.080
	3/23/2017	0.12	0.070	6.1	2.4	0.080	0.080
	10/4/2017	0.12	0.070	4.2	1.8	0.080	0.080
	12/13/2017	0.12	0.070	2.0	0.71	0.080	0.080
	3/12/2018	0.12	0.070	2.6	0.83	0.080	0.080
	6/25/2018	0.12	0.070	4.0	1.5	0.080	0.080
	9/26/2018	0.12	0.070	3.7	1.7	0.080	0.080
	12/11/2018	0.12	0.070	4.7	2.1	0.080	0.080

PZ-02	7/20/2012	0.12	0.070	1.6	0.37	0.080	0.080
	1/9/2013	0.12	0.070	2.7	1.7	0.080	0.080
	4/16/2013	0.12	0.070	1.1	1.1	0.080	0.080
	6/19/2013	0.12	0.070	1.1	1.3	0.080	0.080
	7/23/2013	0.12	0.070	1.1	1.3	0.080	0.080
	11/18/2013	0.12	0.070	1.5	0.93	0.080	0.080
	2/10/2014	0.12	0.070	1.2	0.48	0.080	0.080
	5/14/2014	0.12	0.070	0.87	0.21	0.080	0.080
	8/6/2014	0.12	0.070	1.1	0.63	0.080	0.080
	11/18/2014	0.12	0.070	1.0	0.50	0.080	0.080
	2/18/2015	0.12	0.070	0.61	0.35	0.080	0.080
	5/14/2015	0.12	0.070	0.46	0.87	0.080	0.080
	9/24/2015	0.12	0.070	0.71	1.4	0.080	0.080
	12/1/2015	0.12	0.070	1.3	1.2	0.080	0.080
	1/13/2016	0.12	0.070	0.85	0.62	0.080	0.080
	2/10/2016	0.12	0.070	0.77	0.78	0.080	0.080
	3/10/2016	0.12	0.070	0.56	0.90	0.080	0.080
	6/20/2016	0.12	0.070	0.39	1.4	0.080	0.080
	10/4/2016	0.12	0.070	0.85	2.2	0.080	0.080
	11/29/2016	0.12	0.070	2.0	2.1	0.080	0.080
	3/23/2017	0.12	0.070	1.2	2.6	0.080	0.080
	10/4/2017	0.12	0.070	2.0	2.6	0.080	0.080
	12/13/2017	0.12	0.070	6.3	2.5	0.080	0.080
3/12/2018	0.12	0.070	1.9	2.0	0.080	0.080	
6/25/2018	0.12	0.070	3.4	4.0	0.080	0.080	
9/26/2018	0.12	0.070	3.2	1.9	0.080	0.080	
12/11/2018	0.12	0.070	4.7	2.9	0.080	0.080	
PZ-05	7/20/2012	0.12	0.070	2.6	0.27	0.080	0.080
	1/9/2013	0.12	0.070	5.4	0.40	0.080	0.080
	4/16/2013	0.12	0.070	4.1	0.27	0.080	0.080
	6/19/2013	0.12	0.070	1.9	0.050	0.080	0.080
	7/23/2013	0.12	0.070	3.4	0.22	0.080	0.080
	9/17/2013	0.12	0.070	2.8	0.41	0.080	0.080
	11/18/2013	0.12	0.070	2.8	0.17	0.080	0.080
	2/10/2014	0.12	0.070	2.9	0.26	0.080	0.080
	5/14/2014	0.12	0.070	5.2	0.28	0.080	0.080
	8/6/2014	0.12	0.070	4.6	0.050	0.080	0.080
	11/18/2014	0.12	0.070	2.1	0.050	0.080	0.080
	2/18/2015	0.12	0.070	2.0	0.050	0.080	0.080
	5/14/2015	0.12	0.070	1.4	0.050	0.080	0.080
	9/24/2015	0.12	0.070	3.1	0.35	0.080	0.080
	12/1/2015	0.12	0.070	1.4	0.19	0.080	0.080
	1/13/2016	0.12	0.070	2.0	0.25	0.080	0.080
	2/10/2016	0.12	0.070	3.5	0.81	0.080	0.080
	3/10/2016	0.12	0.070	3.9	0.71	0.080	0.080
	6/20/2016	0.12	0.070	0.85	0.050	0.080	0.080
	10/4/2016	0.12	0.070	0.75	0.26	0.080	0.080
	11/29/2016	0.12	0.070	2.0	0.58	0.080	0.080
	3/23/2017	0.12	0.070	1.6	0.19	0.080	0.080
	7/5/2017	0.12	0.070	4.2	1.4	0.080	0.080
10/4/2017	0.12	0.070	2.2	0.050	0.080	0.080	
12/13/2017	0.12	0.070	2.6	0.42	0.080	0.080	
3/12/2018	0.12	0.070	3.5	0.62	0.080	0.080	
6/25/2018	0.12	0.070	3.4	0.96	0.080	0.080	
9/26/2018	0.12	0.070	1.9	0.20	0.080	0.080	
12/11/2018	0.12	0.070	1.9	0.42	0.080	0.080	
PZ-06	7/20/2012	0.12	0.070	0.060	0.050	0.080	0.080
	1/9/2013	0.12	0.070	16	0.24	0.080	0.080
	4/16/2013	0.12	0.070	6.8	0.22	0.080	0.080
	6/19/2013	0.12	0.070	8.5	0.20	0.080	0.080
	7/23/2013	0.12	0.070	5.4	0.050	0.080	0.080
	9/17/2013	0.12	0.070	2.9	0.18	0.080	0.080

	11/18/2013	0.12	0.070	6.6	0.050	0.080	0.080
	2/10/2014	0.12	0.070	5.4	0.20	0.080	0.080
	5/14/2014	0.12	0.070	4.8	0.26	0.080	0.080
	8/6/2014	0.12	0.070	5.6	0.050	0.080	0.080
	11/18/2014	0.12	0.070	5.3	0.050	0.080	0.080
	2/19/2015	0.12	0.070	6.4	0.26	0.080	0.080
	5/14/2015	0.12	0.070	16	0.33	0.080	0.080
	9/24/2015	0.12	0.070	5.5	0.17	0.080	0.080
	12/1/2015	0.12	0.070	8.3	0.13	0.080	0.080
	1/13/2016	0.12	0.070	14	0.050	0.080	0.080
	2/10/2016	0.12	0.070	9.6	0.21	0.080	0.080
	3/10/2016	0.12	0.070	10	0.27	0.080	0.080
	6/20/2016	0.12	0.070	10	0.18	0.080	0.080
	10/4/2016	0.12	0.070	6.1	0.050	0.080	0.080
	11/29/2016	0.12	0.070	11	0.26	0.080	0.080
	3/23/2017	0.12	0.070	13	0.24	0.080	0.080
	7/5/2017	0.12	0.070	12	0.050	0.080	0.080
	10/4/2017	0.12	0.070	8.5	0.050	0.080	0.080
	12/13/2017	0.12	0.070	12	0.19	0.080	0.080
	3/12/2018	0.12	0.070	15	0.18	0.080	0.080
	6/25/2018	0.12	0.070	11	0.050	0.080	0.080
	9/26/2018	0.12	0.070	4.2	0.29	0.080	0.080
	12/11/2018	0.12	0.070	18	0.050	0.080	0.080
TSW-01	7/18/2012	0.12	1.2	6,400	4.8	0.080	0.080
	8/30/2012	0.12	16	64,000	49	0.31	0.080
	9/28/2012	0.12	15	28,000	29	0.080	0.080
	10/1/2012	3.0	14	25,000	27	2.0	2.0
	1/9/2013	0.12	5.0	13,000	12	0.080	0.080
	4/16/2013	0.12	7.0	7,600	32	0.080	0.080
	6/19/2013	24	14	6,100	54	16	16
	7/23/2013	12	7.0	9,500	28	8.0	8.0
	9/17/2013	24	14	3,900	18	16	16
	11/18/2013	60	35	7,800	32	40	40
	2/10/2014	0.12	2.5	3,100	7.1	0.080	0.080
	5/14/2014	0.12	3.8	4,100	13	0.080	0.080
	8/6/2014	6.0	9.3	5,400	15	4.0	4.0
	10/2/2014	12	7.0	6,400	23	8.0	8.0
	10/15/2014	12	7.0	19,000	5.0	8.0	8.0
	10/29/2014	24	14	18,000	10	16	16
	11/18/2014	12	7.0	3,800	5.0	8.0	8.0
	2/19/2015	0.60	0.35	1,100	1.4	0.40	0.40
	5/14/2015	3.0	1.8	2,300	4.5	2.0	2.0
	9/24/2015	3.0	1.8	820	1.2	2.0	2.0
	11/30/2015	0.12	0.070	710	0.75	0.080	0.080
	1/13/2016	1.2	0.70	1,700	3.0	0.80	0.80
	2/10/2016	2.4	1.4	1,300	1.0	1.6	1.6
	3/10/2016	6.0	3.5	840	2.5	4.0	4.0
	6/21/2016	0.12	2.3	4,600	5.1	0.080	0.080
	10/4/2016	0.12	3.7	5,300	6.1	0.080	0.080
	11/29/2016	0.12	1.7	3,100	5.0	0.080	0.080
	4/3/2017	0.12	1.0	930	1.4	0.080	0.080
	7/5/2017	0.12	0.070	600	0.67	0.080	0.080
	10/6/2017	0.12	0.69	1,300	2.6	0.080	0.080
	12/14/2017	0.12	0.070	34	0.050	0.080	0.080
	3/13/2018	0.12	0.070	220	0.35	0.080	0.080
	6/25/2018	0.12	2.8	1,500	4.4	0.080	0.080
	9/24/2018	0.12	0.92	890	2.1	0.080	0.080
	12/13/2018	0.12	0.070	0.060	0.050	0.080	0.080
TSW-03	7/20/2012	0.12	0.070	1.9	0.97	0.080	0.080
	8/30/2012	0.12	0.070	3.1	0.63	0.080	0.080
	10/1/2012	0.12	0.070	12	0.25	0.080	0.080
	4/16/2013	0.12	0.070	4.1	3.4	0.080	0.080

	6/19/2013	0.12	0.070	2.5	2.4	0.080	0.080
	7/23/2013	0.12	0.070	1.4	2.4	0.080	0.080
	9/17/2013	0.12	0.070	3.1	0.65	0.080	0.080
	11/18/2013	0.12	0.070	5.3	1.4	0.080	0.080
	2/10/2014	0.12	0.070	1.0	0.050	0.080	0.080
	5/14/2014	0.12	0.070	1.1	0.68	0.080	0.080
	8/6/2014	0.12	0.070	3.6	0.98	0.080	0.080
	11/18/2014	0.12	0.070	2.5	1.9	0.080	0.080
	2/19/2015	0.12	0.070	1.2	0.050	0.080	0.080
	5/14/2015	0.12	0.070	1.1	1.1	0.080	0.080
	9/24/2015	0.12	0.070	2.3	0.050	0.080	0.080
	11/30/2015	0.12	0.070	3.9	0.050	0.080	0.080
	1/13/2016	0.12	0.070	0.96	0.050	0.080	0.080
	2/10/2016	0.12	0.070	0.060	0.050	0.080	0.080
	3/10/2016	0.12	0.070	0.060	0.050	0.080	0.080
	6/21/2016	0.12	0.070	6.9	0.050	0.080	0.080
	10/4/2016	0.12	0.070	7.4	0.050	0.080	0.080
	11/29/2016	0.12	0.070	5.6	1.0	0.080	0.080
	3/23/2017	0.12	0.070	7.0	0.17	0.080	0.080
	7/5/2017	0.12	0.070	12	2.2	0.080	0.080
	10/5/2017	0.12	0.070	31	0.84	0.080	0.080
	12/13/2017	0.12	0.12	20	0.54	0.080	0.080
	3/12/2018	0.12	0.070	22	1.1	0.080	0.080
	6/25/2018	0.12	0.070	8.2	0.61	0.080	0.080
	9/26/2018	0.12	0.55	44	1.8	0.080	0.080
	12/11/2018	0.12	0.62	48	1.5	0.080	0.080
TSW-04	7/20/2012	0.12	0.070	0.79	1.7	0.080	0.080
	8/30/2012	0.12	0.070	2.8	3.8	0.080	0.080
	4/16/2013	0.12	0.070	0.71	2.6	0.080	0.080
	6/19/2013	0.12	0.070	3.9	0.42	0.080	0.080
	7/23/2013	0.12	0.070	1.7	0.050	0.080	0.080
	9/17/2013	0.12	0.070	0.74	0.58	0.080	0.080
	11/18/2013	0.12	0.070	0.26	0.050	0.080	0.080
	2/10/2014	0.12	0.070	0.62	0.050	0.080	0.080
	5/14/2014	0.12	0.070	0.63	0.050	0.080	0.080
	8/6/2014	0.12	0.070	2.1	0.39	0.080	0.080
	11/18/2014	0.12	0.070	0.64	0.050	0.080	0.080
	2/18/2015	0.12	0.070	0.060	0.050	0.080	0.080
	5/14/2015	0.12	0.070	0.50	0.050	0.080	0.080
	9/24/2015	0.12	0.070	0.27	0.050	0.080	0.080
	11/30/2015	0.12	0.070	0.24	0.050	0.080	0.080
	1/13/2016	0.12	0.070	0.33	0.050	0.080	0.080
	2/10/2016	0.12	0.070	0.27	0.050	0.080	0.080
	3/10/2016	0.12	0.070	0.060	0.050	0.080	0.080
	6/21/2016	0.12	0.070	0.32	0.050	0.080	0.080
	10/4/2016	0.12	0.070	0.060	0.21	0.080	0.080
	11/29/2016	0.12	0.070	1.4	0.41	0.080	0.080
	3/23/2017	0.12	0.070	2.0	0.53	0.080	0.080
	7/5/2017	0.12	0.070	5.1	0.79	0.080	0.080
	10/5/2017	0.12	0.070	11	1.0	0.080	0.080
	12/13/2017	0.12	0.070	6.8	1.2	0.080	0.080
	3/12/2018	0.12	0.070	2.2	0.60	0.080	0.080
	6/25/2018	0.12	0.070	2.4	0.92	0.080	0.080
	9/26/2018	0.12	0.070	2.5	1.2	0.080	0.080
	12/11/2018	0.12	0.070	7.5	2.7	0.080	0.080
TSW-05	7/20/2012	0.12	0.070	24	0.050	0.080	0.080
	8/14/2012	0.12	0.070	16	0.050	0.080	0.080
	8/30/2012	0.12	0.070	14	0.18	0.080	0.080
	10/1/2012	0.12	0.070	15	0.28	0.080	0.080
	1/9/2013	0.12	0.070	42	0.61	0.080	0.080
	4/18/2013	0.12	0.070	44	0.50	0.080	0.080
	6/19/2013	0.12	0.070	94	0.37	0.080	0.080

	7/23/2013	0.12	0.070	220	0.34	0.080	0.080
	9/17/2013	0.12	0.070	82	0.34	0.080	0.080
	11/18/2013	0.12	0.070	61	0.43	0.080	0.080
	2/10/2014	0.12	0.070	37	0.39	0.080	0.080
	5/14/2014	0.12	0.070	29	0.26	0.080	0.080
	8/6/2014	0.12	0.070	150	0.35	0.080	0.080
	10/2/2014	0.12	0.070	81	0.32	0.080	0.080
	10/15/2014	0.24	0.14	120	0.36	0.16	0.16
	10/29/2014	0.12	0.070	82	0.32	0.080	0.080
	11/18/2014	0.12	0.070	220	0.40	0.080	0.080
	2/18/2015	0.60	0.35	270	0.37	0.40	0.40
	5/14/2015	0.60	0.35	680	0.25	0.40	0.40
	8/21/2015	0.12	0.070	240	0.27	0.080	0.080
	9/24/2015	0.24	0.14	170	0.10	0.16	0.16
	11/30/2015	0.12	0.070	110	0.22	0.080	0.080
	1/13/2016	0.12	0.070	120	0.37	0.080	0.080
	2/10/2016	0.12	0.070	99	0.37	0.080	0.080
	3/11/2016	0.12	0.070	160	0.43	0.080	0.080
	6/21/2016	0.12	0.070	630	0.51	0.080	0.080
	10/5/2016	0.12	0.070	220	0.37	0.080	0.080
	11/30/2016	0.12	0.070	140	0.050	0.080	0.080
	4/3/2017	0.12	0.070	180	0.31	0.080	0.080
	7/6/2017	0.12	0.070	89	0.050	0.080	0.080
	10/6/2017	0.12	0.070	130	0.29	0.080	0.080
	12/14/2017	0.12	0.070	8.8	0.050	0.080	0.080
	3/13/2018	0.12	0.070	79	0.050	0.080	0.080
	6/25/2018	0.12	0.070	77	0.21	0.080	0.080
	9/24/2018	0.12	0.070	27	0.050	0.080	0.080
	12/13/2018	0.12	0.070	0.060	0.050	0.080	0.080
TSW-07	7/20/2012	0.12	0.070	0.060	1.5	0.080	0.080
	8/30/2012	0.12	0.070	0.49	3.2	0.080	0.080
	4/16/2013	0.12	0.070	0.060	1.5	0.080	0.080
	6/19/2013	0.12	0.070	0.99	1.7	0.080	0.080
	7/23/2013	0.12	0.070	0.84	3.6	0.080	0.080
	9/17/2013	0.12	0.070	0.98	4.8	0.080	0.080
	11/18/2013	0.12	0.070	0.64	2.0	0.080	0.080
	2/10/2014	0.12	0.070	0.55	2.2	0.080	0.080
	5/14/2014	0.12	0.070	0.39	0.29	0.080	0.080
	8/6/2014	0.12	0.070	1.5	0.86	0.080	0.080
	11/18/2014	0.12	0.070	0.38	0.19	0.080	0.080
	2/18/2015	0.12	0.070	0.060	2.7	0.080	0.080
	5/14/2015	0.12	0.070	0.37	2.9	0.080	0.080
	9/24/2015	0.12	0.070	0.31	1.7	0.080	0.080
	11/30/2015	0.12	0.070	0.91	2.2	0.080	0.080
	1/13/2016	0.12	0.070	0.33	2.2	0.080	0.080
	2/10/2016	0.12	0.070	0.060	2.7	0.080	0.080
	3/10/2016	0.12	0.070	0.24	3.4	0.080	0.080
	6/21/2016	0.12	0.070	0.38	4.2	0.080	0.080
	10/4/2016	0.12	0.070	1.9	4.0	0.080	0.080
	11/29/2016	0.12	0.070	1.2	4.9	0.080	0.080
	3/23/2017	0.12	0.070	1.2	5.0	0.080	0.080
	7/5/2017	0.12	0.070	1.7	8.5	0.080	0.080
	10/5/2017	0.12	0.070	3.1	6.1	0.080	0.080
	12/13/2017	0.12	0.070	0.51	1.9	0.080	0.080
	3/12/2018	0.12	0.070	0.80	1.9	0.080	0.080
	6/25/2018	0.12	0.070	5.6	7.9	0.080	0.080
	9/26/2018	0.12	0.070	4.2	2.6	0.080	0.080
	12/11/2018	0.12	0.070	5.6	6.7	0.080	0.080
VEW-15	7/18/2012	0.12	30	57	11	0.37	0.080
	8/14/2012	0.12	21	24	6.8	0.20	0.080
	8/30/2012	0.12	21	36	9.4	0.29	0.080
	10/1/2012	0.12	19	25	7.7	0.15	0.080

Performance Wells

	4/17/2013	0.12	7.7	19	6.1	0.080	0.080
	6/19/2013	0.12	14	22	8.0	0.25	0.080
	7/23/2013	0.12	15	27	8.3	0.41	0.080
	9/17/2013	0.12	16	49	12	0.30	0.080
	11/18/2013	0.12	16	36	15	0.46	0.080
	2/10/2014	0.12	5.2	13	4.8	0.080	0.080
	5/14/2014	0.12	8.6	25	6.0	0.080	0.080
	8/6/2014	0.12	22	41	12	0.080	0.080
	11/18/2014	0.12	25	40	18	0.30	0.080
	2/18/2015	0.12	5.2	11	4.2	0.21	0.080
	5/14/2015	0.12	11	16	7.7	0.20	0.080
	8/21/2015	0.24	18	10	9.2	0.16	0.16
	9/24/2015	0.24	15	7.5	7.4	0.16	0.16
	12/1/2015	0.12	0.070	16	9.7	0.080	0.080
	1/14/2016	0.12	19	23	15	0.50	0.080
	2/10/2016	0.12	11	13	8.7	0.22	0.080
	3/11/2016	0.12	14	11	8.6	0.34	0.080
	6/21/2016	0.12	30	28	18	0.39	0.080
	10/4/2016	0.12	46	43	25	0.080	0.080
	11/30/2016	0.12	49	44	33	1.1	0.080
	4/3/2017	0.12	14	16	10	0.35	0.080
	10/5/2017	0.12	30	24	14	0.080	0.080
	12/14/2017	0.12	29	28	22	1.5	0.080
	3/12/2018	0.12	9.7	9.9	6.5	0.080	0.080
	6/25/2018	0.12	19	16	14	0.43	0.080
	9/27/2018	0.12	34	30	26	0.72	0.080
	12/13/2018	0.12	0.070	0.060	0.050	0.080	0.080
VEW-19	7/18/2012	0.12	27	89	16	0.80	0.080
	8/30/2012	0.12	24	150	18	1.4	0.080
	1/9/2013	0.12	31	140	22	1.2	0.080
	4/16/2013	0.12	17	100	13	0.69	0.080
	6/19/2013	0.12	3.5	130	2.6	0.080	0.080
	7/23/2013	0.12	2.5	22	0.96	0.080	0.080
	9/17/2013	0.12	5.9	22	2.3	0.27	0.080
	11/18/2013	0.24	21	170	11	0.92	0.16
	2/10/2014	0.12	7.8	57	4.4	0.53	0.080
	8/6/2014	0.12	43	150	20	1.8	0.080
	11/18/2014	0.12	0.070	3.3	0.050	0.080	0.080
	2/19/2015	0.12	0.070	1.5	0.050	0.080	0.080
	5/14/2015	0.60	4.7	24	0.25	1.0	0.40
	9/24/2015	0.12	1.9	9.2	0.38	0.36	0.080
	11/30/2015	0.12	4.1	23	2.7	0.080	0.080
	1/13/2016	0.12	11	37	6.6	0.080	0.080
	2/10/2016	0.12	1.3	6.6	0.39	0.080	0.080
	3/10/2016	0.12	7.9	31	3.4	0.57	0.080
	6/21/2016	0.12	18	59	11	0.43	0.080
	10/4/2016	0.12	30	91	14	0.53	0.080
	11/30/2016	0.12	38	120	19	1.1	0.080
	4/3/2017	0.12	8.2	49	5.7	0.080	0.080
	10/6/2017	0.12	23	42	9.8	0.080	0.080
	12/14/2017	0.12	0.070	0.060	0.050	0.080	0.080
	3/13/2018	0.12	0.070	0.40	0.050	0.080	0.080
	6/25/2018	0.12	0.070	0.75	0.050	0.080	0.080
	9/27/2018	0.12	3.5	13	2.1	0.080	0.080
	12/13/2018	0.12	0.070	0.060	0.050	0.080	0.080
VEW-25	7/18/2012	0.12	0.69	29	1.3	0.080	0.080
	10/1/2012	0.30	5.5	280	15	0.20	0.20
	1/9/2013	0.12	3.8	350	14	0.080	0.080
	6/19/2013	0.12	0.070	28	0.34	0.080	0.080
	7/23/2013	0.12	0.070	5.9	0.050	0.080	0.080
	9/17/2013	0.12	0.070	4.4	0.050	0.080	0.080
	11/18/2013	0.12	2.3	120	5.9	0.080	0.080

	2/10/2014	0.12	2.2	100	4.6	0.080	0.080
	5/14/2014	0.12	1.5	71	3.1	0.080	0.080
	8/6/2014	0.12	3.8	160	7.7	0.24	0.080
	10/2/2014	0.24	1.3	160	2.2	0.16	0.16
	10/15/2014	0.60	0.35	67	0.25	0.40	0.40
	10/29/2014	0.12	0.070	11	0.050	0.080	0.080
	11/18/2014	0.12	0.070	17	0.050	0.080	0.080
	2/19/2015	0.12	0.070	2.0	0.050	0.080	0.080
	5/14/2015	0.12	0.19	4.1	0.28	0.080	0.080
	8/21/2015	0.12	0.070	2.2	0.050	0.080	0.080
	9/24/2015	0.12	0.070	0.93	0.050	0.080	0.080
	11/30/2015	0.12	0.070	0.33	0.050	0.080	0.080
	1/13/2016	0.12	0.070	2.4	0.050	0.080	0.080
	2/10/2016	0.12	0.070	2.4	0.050	0.080	0.080
	3/10/2016	0.12	0.070	1.5	0.050	0.080	0.080
	6/21/2016	0.12	0.070	8.1	0.20	0.080	0.080
	10/4/2016	0.12	0.070	5.3	0.050	0.080	0.080
	11/29/2016	0.12	0.070	6.4	0.050	0.080	0.080
	3/23/2017	0.12	0.070	5.5	0.24	0.080	0.080
	10/4/2017	0.12	0.070	6.2	0.36	0.080	0.080
	12/13/2017	0.12	0.070	3.4	0.19	0.080	0.080
	3/12/2018	0.12	0.070	5.2	0.30	0.080	0.080
	6/25/2018	0.12	0.070	8.7	0.55	0.080	0.080
	9/26/2018	0.12	0.070	5.6	0.22	0.080	0.080
	12/11/2018	0.12	0.070	10	0.48	0.080	0.080
VEW-27	7/18/2012	0.12	7.0	5,000	31	0.30	0.080
	8/30/2012	0.12	53	3,400	57	2.4	0.080
	9/28/2012	0.12	69	2,400	64	3.2	0.080
	10/1/2012	0.24	52	2,400	48	4.9	0.16
	1/9/2013	0.12	82	1,500	66	2.8	0.080
	4/16/2013	0.12	17	540	22	0.77	0.080
	6/19/2013	0.12	0.070	15	0.050	0.080	0.080
	7/23/2013	0.12	0.070	7.8	0.050	0.080	0.080
	9/17/2013	0.12	0.070	7.6	0.050	0.080	0.080
	11/18/2013	0.12	0.070	14	0.050	0.080	0.080
	2/10/2014	0.12	0.070	64	0.050	0.080	0.080
	5/14/2014	0.12	0.070	31	0.050	0.080	0.080
	8/6/2014	0.12	0.070	47	0.47	0.080	0.080
	11/18/2014	0.12	0.070	3.2	0.050	0.080	0.080
	2/19/2015	0.12	0.070	2.0	0.050	0.080	0.080
	5/14/2015	0.24	0.14	68	0.10	0.16	0.16
	8/21/2015	0.24	0.14	21	0.10	0.16	0.16
	9/24/2015	0.12	0.28	59	0.77	0.080	0.080
	11/30/2015	0.12	0.070	0.91	0.050	0.080	0.080
	1/13/2016	0.12	0.25	140	2.8	0.080	0.080
	2/10/2016	0.12	0.070	250	8.9	0.080	0.080
	3/10/2016	0.60	0.35	380	4.7	0.40	0.40
	6/21/2016	0.12	0.070	96	1.7	0.080	0.080
	10/4/2016	0.12	0.070	11	0.050	0.080	0.080
	11/30/2016	0.43	18	550	100	1.7	3.8
	4/3/2017	0.12	26	150	59	1.0	8.3
	10/6/2017	0.12	6.4	57	16	0.080	1.5
	12/14/2017	0.12	0.070	7.3	0.050	0.080	0.080
	3/13/2018	0.12	0.070	0.53	0.050	0.080	0.080
	6/25/2018	0.12	0.070	100	0.050	0.080	0.080
	9/27/2018	0.12	0.070	11	0.050	0.080	0.080
	12/13/2018	0.12	0.070	0.060	0.050	0.080	0.080
VEW-32	7/18/2012	0.12	0.60	1,300	1.7	0.080	0.080
	8/14/2012	0.12	0.48	1,500	2.1	0.080	0.080
	8/30/2012	0.12	0.78	11,000	3.3	0.080	0.080
	9/28/2012	0.12	0.36	1,100	0.97	0.080	0.080
	10/1/2012	0.60	0.35	510	0.25	0.40	0.40

	1/9/2013	0.12	0.070	1,400	8.1	0.080	0.080
	4/18/2013	0.12	0.83	2,600	15	0.080	0.080
	6/19/2013	12	7.0	2,900	5.0	8.0	8.0
	7/23/2013	6.0	3.5	9,900	7.8	4.0	4.0
	9/17/2013	24	14	3,800	12	16	16
	11/18/2013	6.0	3.5	1,600	2.5	4.0	4.0
	2/10/2014	0.12	0.47	1,600	22	0.080	0.080
	5/14/2014	1.2	0.70	2,000	4.5	0.80	0.80
	8/6/2014	0.12	1.1	6,800	2.7	0.080	0.080
	11/18/2014	1.2	0.70	580	0.50	0.80	0.80
	2/18/2015	2.4	1.4	1,300	7.8	1.6	1.6
	5/14/2015	0.12	0.070	78	0.050	0.080	0.080
	8/21/2015	0.24	2.8	21,000	5.4	0.16	0.16
	9/24/2015	12	7.0	11,000	5.0	8.0	8.0
	12/1/2015	0.12	0.070	660	0.24	0.080	0.080
	1/13/2016	1.2	5.5	3,300	33	0.80	0.80
	2/10/2016	12	7.0	5,300	37	8.0	8.0
	3/11/2016	12	17	7,500	43	8.0	8.0
	6/21/2016	0.12	2.0	660	3.5	0.080	0.080
	10/4/2016	0.12	0.61	330	1.6	0.080	0.080
	11/30/2016	0.12	0.81	1,100	3.1	0.080	0.080
	4/3/2017	0.12	0.070	4,900	2.4	0.080	0.080
	10/6/2017	0.12	0.50	2,400	6.7	0.080	0.080
	12/14/2017	0.12	0.070	400	1.2	0.080	0.080
	3/13/2018	0.12	0.070	640	0.84	0.080	0.080
	6/25/2018	0.12	0.95	630	3.6	0.080	0.080
	9/24/2018	0.12	0.070	71	0.27	0.080	0.080
	12/13/2018	0.12	0.070	51	0.29	0.080	0.080
CS-WB01-LGR-01	7/31/2012	0.12	0.070	3.8	0.19	0.080	0.080
	9/4/2012	0.12	0.070	3.5	0.18	0.080	0.080
	4/29/2013	0.12	0.070	2.0	0.18	0.080	0.080
	6/13/2013	0.12	0.070	2.8	0.28	0.080	0.080
	7/22/2013	0.12	0.070	1.6	0.25	0.080	0.080
	9/23/2013	0.12	0.070	1.7	0.21	0.080	0.080
	12/4/2013	0.12	0.070	3.4	0.20	0.080	0.080
	3/20/2014	0.12	0.070	3.3	0.050	0.080	0.080
	6/25/2014	0.12	0.070	3.9	0.30	0.080	0.080
	9/16/2014	0.12	0.070	4.2	0.20	0.080	0.080
	12/9/2014	0.12	0.070	1.7	0.25	0.080	0.080
	3/23/2015	0.12	0.070	1.2	0.45	0.080	0.080
	6/17/2015	0.12	0.070	3.0	0.050	0.080	0.080
	9/16/2015	0.12	0.070	1.3	0.26	0.080	0.080
	12/2/2015	0.12	0.070	0.060	0.050	0.080	0.080
	3/9/2016	0.12	0.070	1.4	0.23	0.080	0.080
	6/8/2016	0.12	0.070	1.4	0.22	0.080	0.080
	9/15/2016	#N/A	0.070	0.93	0.53	#N/A	0.080
	12/14/2016	0.12	0.070	3.3	0.83	0.080	0.080
	3/15/2017	0.12	0.070	1.5	0.45	0.080	0.080
	6/21/2017	#N/A	0.070	1.2	0.43	#N/A	0.080
	10/2/2017	0.12	0.070	1.5	0.42	0.080	0.080
	12/11/2017	0.12	0.070	2.0	0.42	0.080	0.080
	3/7/2018	0.12	0.070	1.8	0.34	0.080	0.080
	6/11/2018	0.12	0.070	3.1	0.45	0.080	0.080
	9/12/2018	#N/A	0.070	2.2	0.050	#N/A	0.080
	12/5/2018	0.12	0.070	3.7	0.40	0.080	0.080
CS-WB02-LGR-01	7/30/2012	0.12	0.070	0.29	0.76	0.080	0.080
	9/4/2012	0.12	0.070	0.55	1.2	0.080	0.080
	4/30/2013	0.12	0.070	0.85	0.81	0.080	0.080
	6/12/2013	0.12	0.070	2.4	0.36	0.080	0.080
	7/22/2013	0.12	0.070	0.73	0.58	0.080	0.080
	9/18/2013	0.12	0.070	14	0.47	0.080	0.080
	12/4/2013	0.12	0.070	5.1	0.35	0.080	0.080

	6/24/2014	0.12	0.070	7.0	0.48	0.080	0.080
	12/10/2014	0.12	0.070	0.70	0.090	0.080	0.080
	3/23/2015	0.12	0.070	0.20	0.050	0.080	0.080
	6/22/2015	0.12	0.070	1.0	0.050	0.080	0.080
	12/2/2015	0.12	0.070	0.32	0.10	0.080	0.080
	6/14/2016	0.12	0.070	0.59	0.050	0.080	0.080
	9/12/2018	#N/A	0.070	1.0	0.050	#N/A	0.080
CS-WB03-LGR-01	7/24/2012	0.12	0.070	640	50	0.080	0.080
	12/4/2013	0.12	0.50	540	15	0.080	0.080
	3/17/2014	0.12	0.64	1,000	23	0.080	0.080
	6/24/2014	0.24	0.65	370	17	0.16	0.16
	12/3/2014	0.60	1.1	530	27	0.40	0.40
	3/24/2015	0.12	1.1	380	36	0.080	0.080
	6/19/2015	1.2	0.70	300	17	0.80	0.80
	9/21/2015	0.12	0.85	620	26	0.080	0.080
	12/2/2015	1.2	0.92	860	31	0.80	0.80
	3/14/2016	0.60	0.35	330	16	0.40	0.40
	6/16/2016	0.12	0.89	310	17	0.080	0.080
	9/19/2016	#N/A	0.71	340	16	#N/A	0.080
	12/15/2016	0.12	0.93	740	30	0.080	0.080
	3/15/2017	0.12	0.65	320	15	0.080	0.080
	6/29/2017	#N/A	0.54	370	17	#N/A	0.080
	10/2/2017	0.12	0.070	740	16	0.080	0.080
	12/11/2017	0.12	0.90	310	17	0.080	0.080
	12/6/2018	0.12	1.2	390	27	0.080	0.080
CS-WB03-UGR-01	7/24/2012	0.12	0.070	5.4	0.64	0.080	0.080
	8/30/2012	0.12	1.5	6,300	85	0.080	0.080
	9/5/2012	0.12	1.5	8,100	99	0.080	0.080
	10/2/2012	0.12	1.2	7,000	78	0.080	0.080
	12/12/2012	0.12	2.1	30,000	180	0.080	0.080
	4/22/2013	0.12	2.7	13,000	140	0.080	0.080
	6/12/2013	3.0	1.8	8,700	71	2.0	2.0
	7/22/2013	24	14	9,100	94	16	16
	9/18/2013	24	14	9,900	100	16	16
	12/4/2013	120	70	21,000	200	80	80
	3/17/2014	0.12	2.9	20,000	110	0.080	0.080
	6/24/2014	6.0	3.5	14,000	110	4.0	4.0
	9/16/2014	24	14	30,000	170	16	16
	10/2/2014	12	7.0	20,000	170	8.0	8.0
	10/15/2014	60	35	21,000	170	40	40
	10/29/2014	60	35	22,000	110	40	40
	11/13/2014	120	70	32,000	260	80	80
	12/3/2014	12	7.0	7,600	90	8.0	8.0
	3/24/2015	120	70	22,000	180	80	80
	6/19/2015	60	35	14,000	100	40	40
	9/21/2015	12	22	24,000	220	8.0	8.0
	12/2/2015	30	22	29,000	250	20	20
	3/14/2016	12	21	9,900	100	8.0	8.0
	6/16/2016	0.12	7.9	7,400	73	0.95	0.080
	9/19/2016	#N/A	17	9,800	130	#N/A	0.080
	12/15/2016	0.12	13	19,000	110	2.5	0.080
	3/15/2017	2.9	7.8	6,500	65	1.4	0.080
	6/29/2017	#N/A	9.6	9,400	100	#N/A	0.080
	10/2/2017	0.12	12	15,000	100	1.5	0.080
	12/11/2017	0.12	11	10,000	94	1.6	0.080
	3/7/2018	0.12	15	19,000	150	1.2	0.080
	6/13/2018	0.12	9.0	22,000	230	0.43	0.080
	9/17/2018	#N/A	11	10,000	150	#N/A	0.080
	12/6/2018	0.12	13	12,000	120	0.080	0.080
PZ-03	7/20/2012	0.12	0.070	1.2	1.6	0.080	0.080
	1/9/2013	0.12	0.070	1.6	1.7	0.080	0.080
	4/16/2013	0.12	0.070	0.79	1.0	0.080	0.080

PZ-04	7/20/2012	0.12	0.070	0.67	0.050	0.080	0.080
	1/9/2013	0.12	0.070	2.0	0.10	0.080	0.080
	4/16/2013	0.12	0.070	2.5	0.050	0.080	0.080
TSW-02	4/16/2013	0.12	0.070	31	2.6	0.080	0.080
	11/18/2014	0.12	0.070	9.9	0.050	0.080	0.080
	9/26/2018	0.12	2.9	110	13	0.27	0.080
	12/11/2018	0.12	2.7	130	16	0.080	0.080
TSW-06	7/20/2012	0.12	0.070	0.060	0.050	0.080	0.080
	4/18/2013	0.12	0.070	1.4	0.27	0.080	0.080
	9/24/2015	0.12	0.070	2.1	0.16	0.080	0.080
	11/30/2015	0.12	0.070	2.3	0.050	0.080	0.080
	1/13/2016	0.12	0.070	2.0	0.24	0.080	0.080
	2/10/2016	0.12	0.070	2.0	0.23	0.080	0.080
	3/10/2016	0.12	0.070	1.8	0.27	0.080	0.080
	6/22/2016	0.12	0.070	1.4	0.050	0.080	0.080
	10/5/2016	0.12	0.070	2.3	0.050	0.080	0.080
	11/30/2016	0.12	0.070	3.0	0.050	0.080	0.080
	4/3/2017	0.12	0.070	2.0	0.050	0.080	0.080
	7/6/2017	0.12	0.070	2.0	0.28	0.080	0.080
	10/5/2017	0.12	0.070	2.3	0.050	0.080	0.080
	12/14/2017	0.12	0.070	2.2	0.22	0.080	0.080
	3/12/2018	0.12	0.070	2.0	0.050	0.080	0.080
	6/25/2018	0.12	0.070	2.4	0.26	0.080	0.080
	9/26/2018	0.12	0.070	2.6	0.22	0.080	0.080
12/12/2018	0.12	0.070	23	0.91	0.080	0.080	
VEW-13	4/16/2013	0.12	0.070	17	0.67	0.080	0.080
	9/26/2018	0.12	0.070	15	0.20	0.080	0.080
	12/12/2018	0.12	0.070	20	0.54	0.080	0.080
VEW-16	7/18/2012	0.12	0.070	0.93	0.050	0.080	0.080
	4/17/2013	0.12	0.070	16	0.22	0.080	0.080
	9/27/2018	0.12	0.070	8.1	0.22	0.080	0.080
	12/12/2018	0.12	0.070	18	0.050	0.080	0.080
VEW-18	7/18/2012	0.12	2.2	6.7	1.1	0.080	0.080
	4/18/2013	0.12	0.23	13	0.42	0.080	0.080
	8/21/2015	0.12	0.070	2.3	0.050	0.080	0.080
	9/24/2015	0.12	0.070	13	0.050	0.080	0.080
	11/30/2015	0.12	0.070	8.8	0.050	0.080	0.080
	1/13/2016	0.12	0.070	2.2	0.050	0.080	0.080
	2/10/2016	0.12	0.070	0.37	0.050	0.080	0.080
	3/11/2016	0.12	0.070	2.4	0.050	0.080	0.080
	3/11/2016	0.12	0.070	1.1	0.050	0.080	0.080
	6/22/2016	0.12	0.070	37	0.050	0.080	0.080
	10/5/2016	0.12	0.070	34	0.050	0.080	0.080
	11/30/2016	0.12	0.070	24	0.050	0.080	0.080
	4/3/2017	0.12	0.070	5.6	0.25	0.080	0.080
	10/5/2017	0.12	0.070	59	0.27	0.080	0.080
	12/14/2017	0.12	0.070	14	0.26	0.080	0.080
	3/12/2018	0.12	0.070	5.0	0.23	0.080	0.080
	6/25/2018	0.12	0.070	83	0.40	0.080	0.080
9/27/2018	0.12	0.070	35	0.30	0.080	0.080	
12/13/2018	0.12	0.070	7.7	0.050	0.080	0.080	
VEW-20	7/18/2012	0.12	96	5.8	190	10	0.080
	4/16/2013	0.12	8.2	0.43	19	0.72	0.080
	9/26/2018	0.12	32	3.7	110	2.1	0.080
	12/12/2018	0.12	21	0.72	120	1.4	0.080
VEW-21	4/16/2013	0.12	0.070	0.060	1.4	0.080	0.080
	9/26/2018	0.12	0.070	1.1	1.3	0.080	0.080
	12/11/2018	0.12	0.070	1.3	1.4	0.080	0.080
VEW-23	4/16/2013	0.12	0.070	7.0	1.6	0.080	0.080
	11/30/2015	0.12	0.90	6.3	2.7	0.080	0.080
	1/13/2016	0.12	1.4	9.3	3.4	0.080	0.080
	10/4/2016	0.12	3.3	16	8.7	0.080	0.080

	11/29/2016	0.12	3.0	24	9.5	0.080	0.080
	10/4/2017	0.12	0.070	1.8	1.4	0.080	0.080
	12/13/2017	0.12	0.37	1.0	0.95	0.080	0.080
	9/26/2018	0.12	3.9	23	4.9	0.080	0.080
	12/11/2018	0.12	4.5	25	7.3	0.080	0.080
VEW-26	7/18/2012	0.12	0.070	1.6	0.40	0.080	0.080
VEW-28A	7/18/2012	0.12	0.070	11	5.2	0.080	0.080
	4/18/2013	0.12	0.070	11	5.1	0.080	0.080
	8/25/2015	0.12	0.070	8.3	3.2	0.080	0.080
	9/27/2018	0.12	0.070	5.6	2.1	0.080	0.080
	12/12/2018	0.12	0.070	3.3	0.77	0.080	0.080
VEW-28B	7/18/2012	0.12	0.070	46	2.1	0.080	0.080
	8/30/2012	0.12	0.070	20	1.6	0.080	0.080
	10/1/2012	0.12	0.070	4.8	0.66	0.080	0.080
	4/18/2013	0.12	0.070	15	1.5	0.080	0.080
	9/27/2018	0.12	0.070	46	1.6	0.080	0.080
	12/12/2018	0.12	0.070	12	0.99	0.080	0.080
VEW-29	7/18/2012	0.12	0.070	4.5	0.19	0.080	0.080
	4/17/2013	0.12	0.41	56	0.32	0.080	0.080
	9/24/2015	0.12	1.2	25	1.5	0.080	0.71
	12/1/2015	0.12	0.070	67	0.050	0.080	0.080
	1/14/2016	0.12	0.070	51	0.35	0.080	0.080
	2/10/2016	0.12	0.070	49	0.42	0.080	0.080
	3/11/2016	0.12	0.070	59	0.49	0.080	0.080
	6/21/2016	0.12	0.070	52	0.18	0.080	0.080
	10/4/2016	0.12	0.27	51	0.26	0.080	0.080
	11/30/2016	0.12	0.23	97	0.79	0.080	0.080
	4/3/2017	0.12	0.070	170	0.55	0.080	0.080
	10/5/2017	0.12	17	9.7	4.9	0.080	0.74
	12/14/2017	0.12	15	34	5.5	1.5	0.080
	3/12/2018	0.12	2.8	33	2.0	0.080	0.080
	6/25/2018	0.12	0.46	74	0.59	0.080	0.080
	9/27/2018	0.12	0.070	21	0.34	0.080	0.080
	12/13/2018	0.12	0.070	32	0.050	0.080	0.080
VEW-31	7/18/2012	0.12	0.070	3.5	0.050	0.080	0.080
	4/17/2013	0.12	0.22	60	0.51	0.080	0.080
	8/21/2015	0.12	2.5	190	19	0.21	0.080
	9/24/2015	0.60	2.7	130	23	0.40	0.40
	12/1/2015	0.12	0.070	64	2.0	0.080	0.080
	1/14/2016	0.12	0.27	49	2.0	0.080	0.080
	2/10/2016	0.12	0.070	39	1.9	0.080	0.080
	3/11/2016	0.12	0.070	32	1.1	0.080	0.080
	6/21/2016	0.12	0.31	83	1.1	0.080	0.080
	10/4/2016	0.12	0.070	64	0.42	0.080	0.080
	11/30/2016	0.12	0.070	37	0.58	0.080	0.080
	4/3/2017	0.12	0.19	70	0.59	0.080	0.080
	10/5/2017	0.12	0.070	170	0.55	0.080	0.080
	12/14/2017	0.12	0.080	51	0.36	0.080	0.080
	3/12/2018	0.12	0.070	40	0.050	0.080	0.080
	6/25/2018	0.12	0.42	280	0.92	0.080	0.080
	9/27/2018	0.12	0.070	120	0.59	0.080	0.080
	12/13/2018	0.12	0.070	6.6	0.24	0.080	0.080
CS-MW35-LGR	3/20/2012	0.12	0.070	1.3	0.050	0.080	0.080
	6/11/2012	0.12	0.070	2.8	0.050	0.080	0.080
	9/12/2012	0.12	0.070	1.2	0.050	0.080	0.080
	12/13/2012	0.12	0.070	1.5	0.050	0.080	0.080
	6/25/2013	0.12	0.070	0.79	0.050	0.080	0.080
	9/5/2013	0.12	0.070	0.69	0.050	0.080	0.080
	3/6/2014	0.12	0.070	0.46	0.050	0.080	0.080
	6/18/2014	0.12	0.070	0.51	0.050	0.080	0.080
	9/9/2014	0.12	0.070	0.35	0.050	0.080	0.080
	3/18/2015	0.12	0.070	0.24	0.050	0.080	0.080

	6/9/2015	0.12	0.070	0.91	0.050	0.080	0.080
	9/12/2016	#N/A	0.070	0.96	0.050	#N/A	0.080
	6/26/2017	#N/A	0.070	0.66	0.050	#N/A	0.080
	9/5/2018	#N/A	0.070	0.58	0.050	#N/A	0.080
CS-MW37-LGR	7/12/2017	0.12	0.070	0.060	0.050	0.080	0.080
	9/22/2017	#N/A	0.070	0.060	0.050	#N/A	0.080
	12/6/2017	#N/A	0.070	0.060	0.050	#N/A	0.080
	3/5/2018	#N/A	0.070	0.060	0.050	#N/A	0.080
	9/5/2018	#N/A	0.070	0.28	0.36	#N/A	0.080
CS-WB01-LGR-02	7/31/2012	0.12	0.070	20	5.3	0.080	0.080
	9/4/2012	0.12	0.070	14	4.0	0.080	0.080
	4/29/2013	0.12	0.070	5.8	1.8	0.080	0.080
	6/13/2013	0.12	0.070	9.3	2.8	0.080	0.080
	3/20/2014	0.12	0.070	11	2.5	0.080	0.080
	12/9/2014	0.12	0.070	13	2.9	0.080	0.080
	6/17/2015	0.12	0.070	6.9	1.6	0.080	0.080
	9/16/2015	0.12	0.070	11	2.3	0.080	0.080
	6/8/2016	0.12	0.070	9.6	2.0	0.080	0.080
	9/15/2016	#N/A	0.070	12	2.5	#N/A	0.080
	6/21/2017	#N/A	0.070	11	2.3	#N/A	0.080
	9/12/2018	#N/A	0.070	8.5	1.8	#N/A	0.080
CS-WB01-LGR-03	7/31/2012	0.12	0.070	2.1	10	0.080	0.080
	9/4/2012	0.12	0.070	2.3	8.5	0.080	0.080
	4/29/2013	0.12	0.070	1.1	3.8	0.080	0.080
	6/13/2013	0.12	0.070	2.5	9.8	0.080	0.080
	3/20/2014	0.12	0.070	2.3	6.5	0.080	0.080
	12/9/2014	0.12	0.070	5.0	15	0.080	0.080
	6/17/2015	0.12	0.070	5.4	16	0.080	0.080
	9/16/2015	0.12	0.070	2.9	8.4	0.080	0.080
	6/8/2016	0.12	0.070	7.1	20	0.080	0.080
	9/15/2016	#N/A	0.070	4.3	13	#N/A	0.080
	6/21/2017	#N/A	0.070	4.0	10	#N/A	0.080
	9/12/2018	#N/A	0.070	4.0	9.8	#N/A	0.080
CS-WB01-LGR-04	7/31/2012	0.12	0.070	0.060	0.050	0.080	0.080
	9/4/2012	0.12	0.070	0.060	0.14	0.080	0.080
	4/25/2013	0.12	0.070	0.060	0.050	0.080	0.080
	6/13/2013	0.12	0.11	0.060	0.13	0.080	0.080
	3/20/2014	0.12	0.23	0.060	0.050	0.080	0.080
	12/9/2014	0.12	0.35	0.060	0.050	0.080	0.080
	6/17/2015	0.12	0.83	0.060	0.050	0.080	0.080
	9/16/2015	0.12	0.61	0.060	0.050	0.080	0.080
	6/8/2016	0.12	0.28	0.060	0.050	0.080	0.080
	9/15/2016	#N/A	0.49	0.060	0.050	#N/A	0.080
	6/21/2017	#N/A	0.070	0.060	0.050	#N/A	0.080
	9/12/2018	#N/A	2.4	0.060	0.050	#N/A	0.080
CS-WB01-LGR-05	7/31/2012	0.12	0.070	0.060	0.050	0.080	0.080
	9/4/2012	0.12	0.070	0.12	0.20	0.080	0.080
	4/25/2013	0.12	0.070	0.18	0.050	0.080	0.080
	6/13/2013	0.12	0.070	0.33	0.050	0.080	0.080
	3/20/2014	0.12	0.070	0.31	0.16	0.080	0.080
	12/9/2014	0.12	0.070	0.51	0.16	0.080	0.080
	6/17/2015	0.12	0.45	0.060	3.0	0.080	0.080
	9/16/2015	0.12	0.24	0.060	0.88	0.080	0.080
	6/8/2016	0.12	0.41	0.060	2.6	0.080	0.080
	9/14/2016	#N/A	0.60	0.060	1.4	#N/A	0.080
	6/21/2017	#N/A	1.5	0.060	0.050	#N/A	0.080
	9/11/2018	#N/A	0.070	0.060	0.050	#N/A	0.080
CS-WB01-LGR-06	7/30/2012	0.12	0.41	0.25	2.4	0.080	0.080
	9/4/2012	0.12	0.31	0.20	1.9	0.080	0.080
	4/25/2013	0.12	0.24	0.70	0.75	0.080	0.080
	6/13/2013	0.12	0.55	0.29	0.82	0.080	0.080
	3/20/2014	0.12	0.30	0.34	0.37	0.080	0.080

	12/9/2014	0.12	0.49	0.29	0.41	0.080	0.080
	6/17/2015	0.12	1.4	0.060	0.80	0.080	0.080
	9/16/2015	0.12	0.92	0.060	1.6	0.080	0.080
	6/8/2016	0.12	1.6	0.060	3.0	0.080	0.080
	9/14/2016	#N/A	2.1	0.060	3.1	#N/A	0.080
	6/21/2017	#N/A	1.6	0.060	4.4	#N/A	0.080
	9/11/2018	#N/A	1.2	0.060	4.1	#N/A	0.080
CS-WB01-LGR-07	7/30/2012	0.12	0.19	18	16	0.080	0.080
	9/4/2012	0.12	0.20	15	12	0.080	0.080
	4/25/2013	0.12	0.18	8.6	8.0	0.080	0.080
	6/13/2013	0.12	0.21	11	12	0.080	0.080
	3/20/2014	0.12	0.18	14	11	0.080	0.080
	12/9/2014	0.12	0.19	16	12	0.080	0.080
	6/17/2015	0.12	0.28	12	11	0.080	0.080
	9/16/2015	0.12	5.2	15	14	0.080	0.080
	6/8/2016	0.12	0.29	14	14	0.080	0.080
	9/14/2016	#N/A	0.23	13	14	#N/A	0.080
	6/21/2017	#N/A	0.070	14	14	#N/A	0.080
	9/11/2018	#N/A	0.22	16	15	#N/A	0.080
CS-WB01-LGR-08	7/30/2012	0.12	1.5	2.3	7.9	0.080	0.080
	9/4/2012	0.12	0.95	3.1	6.8	0.080	0.080
	4/25/2013	0.12	0.87	2.2	4.4	0.080	0.080
	6/13/2013	0.12	1.6	5.6	9.4	0.080	0.080
	3/20/2014	0.12	1.2	5.2	7.0	0.080	0.080
	12/9/2014	0.12	1.3	6.2	7.3	0.080	0.080
	6/17/2015	0.12	4.3	4.1	6.3	0.080	0.080
	9/16/2015	0.12	8.6	0.68	7.9	0.31	0.080
	6/8/2016	0.12	18	0.79	4.6	0.76	0.080
	9/14/2016	#N/A	21	0.060	2.8	#N/A	0.080
	6/21/2017	#N/A	20	0.060	1.2	#N/A	0.080
	9/11/2018	#N/A	16	0.41	1.5	#N/A	0.080
CS-WB02-LGR-03	7/30/2012	0.12	0.070	5.5	0.56	0.080	0.080
	9/4/2012	0.12	0.070	5.0	2.8	0.080	0.080
	4/30/2013	0.12	0.070	5.3	2.5	0.080	0.080
	6/12/2013	0.12	0.070	4.7	1.9	0.080	0.080
	3/19/2014	0.12	0.070	6.1	2.2	0.080	0.080
	12/10/2014	0.12	0.070	8.7	5.5	0.080	0.080
	6/22/2015	0.12	0.070	2.0	0.050	0.080	0.080
	9/23/2015	0.12	0.070	2.5	0.26	0.080	0.080
	6/14/2016	0.12	0.070	3.3	0.47	0.080	0.080
	9/15/2016	#N/A	0.070	2.4	0.050	#N/A	0.080
	6/22/2017	#N/A	0.070	2.9	0.47	#N/A	0.080
	9/12/2018	#N/A	0.070	0.060	0.050	#N/A	0.080
CS-WB02-LGR-04	7/30/2012	0.12	0.070	4.6	13	0.080	0.080
	9/4/2012	0.12	0.070	3.1	9.5	0.080	0.080
	4/30/2013	0.12	0.070	3.6	8.8	0.080	0.080
	6/12/2013	0.12	0.070	4.2	8.8	0.080	0.080
	3/19/2014	0.12	0.070	4.0	8.0	0.080	0.080
	12/10/2014	0.12	0.070	4.8	9.1	0.080	0.080
	6/22/2015	0.12	0.070	2.7	4.3	0.080	0.080
	9/23/2015	0.12	0.070	3.4	5.7	0.080	0.080
	6/14/2016	0.12	0.070	2.9	5.0	0.080	0.080
	9/15/2016	#N/A	0.070	2.8	5.0	#N/A	0.080
	6/22/2017	#N/A	0.070	2.6	4.6	#N/A	0.080
	9/12/2018	#N/A	0.070	2.7	4.6	#N/A	0.080
CS-WB02-LGR-05	7/27/2012	0.12	0.070	1.4	4.4	0.080	0.080
	9/4/2012	0.12	0.070	1.0	3.7	0.080	0.080
	4/29/2013	0.12	0.070	0.44	1.3	0.080	0.080
	6/12/2013	0.12	0.070	2.6	2.7	0.080	0.080
	3/19/2014	0.12	0.070	1.1	2.2	0.080	0.080
	12/10/2014	0.12	0.070	1.3	2.3	0.080	0.080
	6/22/2015	0.12	0.070	2.2	1.6	0.080	0.080

Additional Wells

	9/23/2015	0.12	0.17	0.79	1.8	0.080	0.080
	6/14/2016	0.12	0.23	0.66	1.9	0.25	0.080
	9/15/2016	#N/A	0.28	0.060	1.8	#N/A	0.080
	6/22/2017	#N/A	0.61	0.060	1.7	#N/A	0.080
	9/12/2018	#N/A	0.070	0.85	1.4	#N/A	0.080
CS-WB02-LGR-06	7/27/2012	0.12	0.24	2.2	4.0	0.21	0.080
	9/4/2012	0.12	0.070	1.5	4.0	0.080	0.080
	4/29/2013	0.12	0.070	0.62	1.5	0.080	0.080
	6/12/2013	0.12	0.23	3.0	3.4	0.21	0.080
	3/19/2014	0.12	0.17	1.1	2.1	0.19	0.080
	12/10/2014	0.12	0.30	5.6	3.0	0.24	0.080
	6/22/2015	0.12	0.35	6.6	2.6	0.24	0.080
	9/23/2015	0.12	0.43	4.6	2.4	0.23	0.080
	6/14/2016	0.12	0.070	5.4	2.3	0.080	0.080
	9/15/2016	#N/A	0.070	3.8	1.9	#N/A	0.080
	6/22/2017	#N/A	0.72	4.2	2.3	#N/A	0.080
	9/12/2018	#N/A	0.070	0.93	1.4	#N/A	0.080
CS-WB02-LGR-07	7/27/2012	0.12	0.48	0.35	0.36	0.080	0.080
	9/4/2012	0.12	0.55	0.060	0.47	0.080	0.080
	4/29/2013	0.12	0.60	0.060	0.22	0.080	0.080
	6/12/2013	0.12	0.32	2.1	0.72	0.080	0.080
	3/19/2014	0.12	0.69	0.44	0.55	0.080	0.080
	12/10/2014	0.12	0.47	0.48	0.81	0.080	0.080
	6/22/2015	0.12	0.26	2.5	2.5	0.080	0.080
	9/23/2015	0.12	0.29	0.34	1.2	0.080	0.080
	6/14/2016	0.12	0.31	0.52	1.6	0.080	0.080
	9/15/2016	#N/A	0.40	0.48	1.3	#N/A	0.080
	6/22/2017	#N/A	0.59	0.060	1.1	#N/A	0.080
	9/12/2018	#N/A	0.60	0.060	1.0	#N/A	0.080
CS-WB02-LGR-08	7/27/2012	0.12	3.0	0.45	0.89	0.78	0.080
	9/4/2012	0.12	2.4	0.68	0.89	0.66	0.080
	4/29/2013	0.12	1.2	0.58	0.66	0.23	0.080
	6/12/2013	0.12	2.0	4.0	0.73	0.54	0.080
	3/19/2014	0.12	1.3	0.87	0.66	0.30	0.080
	12/10/2014	0.12	1.5	0.82	0.67	0.26	0.080
	6/22/2015	0.12	2.1	1.6	0.62	0.28	0.080
	9/23/2015	0.12	2.4	0.060	0.54	0.39	0.080
	6/14/2016	0.12	3.1	0.060	0.28	0.36	0.080
	9/15/2016	#N/A	4.4	0.060	0.050	#N/A	0.080
	6/22/2017	#N/A	3.1	0.060	0.050	#N/A	0.080
	9/12/2018	#N/A	2.3	0.060	0.050	#N/A	0.080
CS-WB03-LGR-03	7/24/2012	0.12	0.070	0.060	0.050	0.080	0.080
	9/5/2012	0.12	0.26	18	9.3	0.080	0.080
	4/22/2013	0.12	0.27	35	12	0.080	0.080
	6/12/2013	0.12	0.15	13	7.2	0.080	0.080
	3/17/2014	0.12	0.070	31	8.2	0.080	0.080
	12/3/2014	0.12	0.070	18	8.2	0.080	0.080
	6/19/2015	0.12	0.070	8.7	3.5	0.080	0.080
	9/21/2015	0.12	0.070	7.3	2.0	0.080	0.080
	6/16/2016	0.12	0.070	3.8	1.1	0.080	0.080
	9/19/2016	#N/A	0.070	4.5	1.2	#N/A	0.080
	6/29/2017	#N/A	0.070	3.8	0.52	#N/A	0.080
	9/17/2018	#N/A	0.070	3.9	0.71	#N/A	0.080
CS-WB03-LGR-04	7/24/2012	0.12	0.070	26	8.6	0.080	0.080
	9/5/2012	0.12	0.070	15	8.4	0.080	0.080
	4/22/2013	0.12	0.070	30	10	0.080	0.080
	6/12/2013	0.12	0.070	12	5.9	0.080	0.080
	3/17/2014	0.12	0.070	18	6.5	0.080	0.080
	12/3/2014	0.12	0.070	21	8.2	0.080	0.080
	6/19/2015	0.12	0.070	12	4.5	0.080	0.080
	9/21/2015	0.12	0.070	19	5.7	0.080	0.080
	6/16/2016	0.12	0.25	18	6.6	0.080	0.080

	9/19/2016	#N/A	0.30	15	5.6	#N/A	0.080
	6/29/2017	#N/A	0.070	16	4.9	#N/A	0.080
	9/17/2018	#N/A	0.52	12	4.9	#N/A	0.080
CS-WB03-LGR-05	7/24/2012	0.12	0.070	11	4.3	0.080	0.080
	9/5/2012	0.12	0.070	15	5.5	0.080	0.080
	4/22/2013	0.12	0.070	19	5.1	0.080	0.080
	6/12/2013	0.12	0.070	14	5.3	0.080	0.080
	3/17/2014	0.12	0.070	16	3.8	0.080	0.080
	12/3/2014	0.12	0.070	20	4.8	0.080	0.080
	6/18/2015	0.12	0.070	10	2.6	0.080	0.080
	9/21/2015	0.12	0.070	17	2.4	0.080	0.080
	6/15/2016	0.12	0.070	14	2.5	0.080	0.080
	9/19/2016	#N/A	0.070	16	2.7	#N/A	0.080
	6/22/2017	#N/A	0.070	13	2.2	#N/A	0.080
	9/17/2018	#N/A	5.0	11	3.9	#N/A	0.080
CS-WB03-LGR-06	7/24/2012	0.12	0.070	22	5.3	0.080	0.080
	9/5/2012	0.12	0.71	3.3	0.56	0.080	0.080
	4/23/2013	0.12	0.24	4.3	0.91	0.080	0.080
	6/12/2013	0.12	0.75	1.6	1.2	0.080	0.080
	3/17/2014	0.12	1.3	5.0	0.93	0.080	0.080
	12/3/2014	0.12	2.2	0.060	0.050	0.080	0.080
	6/18/2015	0.12	3.7	0.060	0.050	0.080	0.080
	9/21/2015	0.12	5.5	0.060	0.050	0.080	0.080
	6/15/2016	0.12	6.8	0.060	0.13	0.080	0.080
	9/19/2016	#N/A	8.9	0.060	0.050	#N/A	0.080
	6/22/2017	#N/A	7.0	0.060	0.050	#N/A	0.080
	9/17/2018	#N/A	2.8	0.060	0.050	#N/A	0.080
CS-WB03-LGR-07	7/25/2012	0.12	6.4	1.6	3.0	0.080	0.080
	9/5/2012	0.12	6.5	1.0	2.5	0.080	0.080
	4/23/2013	0.12	9.0	0.52	1.5	0.080	0.080
	6/12/2013	0.12	9.8	0.48	1.9	0.080	0.080
	3/17/2014	0.12	4.6	0.83	0.34	0.080	0.080
	12/3/2014	0.12	2.6	0.060	0.20	0.080	0.45
	6/18/2015	0.12	2.9	9.1	27	0.080	0.080
	9/21/2015	0.12	2.6	1.7	5.4	0.080	0.080
	6/15/2016	0.12	3.1	6.2	22	0.080	0.080
	9/19/2016	#N/A	3.5	2.8	11	#N/A	0.080
	6/22/2017	#N/A	2.4	2.3	5.9	#N/A	0.080
	9/17/2018	#N/A	2.5	1.7	5.0	#N/A	0.080
CS-WB03-LGR-08	7/25/2012	0.12	6.9	1.3	1.7	0.080	0.080
	9/5/2012	0.12	6.1	1.1	2.1	0.080	0.080
	4/23/2013	0.12	5.1	0.95	1.5	0.080	0.37
	6/12/2013	0.12	4.5	0.21	0.96	0.080	0.42
	3/17/2014	0.12	2.0	1.1	0.69	0.080	0.080
	12/3/2014	0.12	1.6	0.060	0.62	0.080	0.33
	6/18/2015	0.12	2.7	0.060	0.47	0.080	0.67
	9/21/2015	0.12	2.4	0.060	0.39	0.080	0.080
	6/15/2016	0.12	2.7	0.060	0.27	0.080	0.81
	9/19/2016	#N/A	3.1	0.060	0.41	#N/A	1.1
	6/22/2017	#N/A	2.0	0.060	0.050	#N/A	0.90
	9/17/2018	#N/A	2.2	0.060	0.050	#N/A	0.080
CS-WB04-BS-01	9/6/2012	0.12	0.070	0.19	0.050	0.080	0.080
	3/6/2014	0.12	0.070	0.060	0.050	0.080	0.080
	5/18/2015	0.12	0.070	0.060	0.050	0.080	0.080
	9/22/2015	0.12	0.070	0.46	0.050	0.080	0.080
	7/10/2017	#N/A	0.070	0.060	0.050	#N/A	0.080
CS-WB04-BS-02	9/6/2012	0.12	0.10	0.33	0.050	0.080	0.080
	3/6/2014	0.12	0.070	0.060	0.050	0.080	0.080
	5/18/2015	0.12	0.070	0.060	0.050	0.080	0.080
	9/22/2015	0.12	0.070	0.94	0.050	0.080	0.080
	7/10/2017	#N/A	0.070	0.060	0.050	#N/A	0.080
CS-WB04-CC-01	9/6/2012	0.12	0.60	0.26	0.050	0.080	0.080

	3/6/2014	0.12	0.69	0.060	0.050	0.080	0.080
	5/18/2015	0.12	1.2	0.060	0.20	0.080	0.080
	9/22/2015	0.12	1.0	0.84	0.050	0.080	0.080
	7/10/2017	#N/A	1.1	0.060	0.050	#N/A	0.080
CS-WB04-CC-02	9/6/2012	0.12	0.070	0.47	0.050	0.080	0.080
	3/6/2014	0.12	0.070	0.060	0.050	0.080	0.080
	5/18/2015	0.12	0.070	0.060	0.050	0.080	0.080
	9/22/2015	0.12	0.21	1.3	0.050	0.080	0.080
	7/10/2017	#N/A	0.070	0.24	0.050	#N/A	0.080
CS-WB04-CC-03	9/6/2012	0.12	0.070	2.7	0.050	0.080	0.080
	3/6/2014	0.12	0.070	0.060	0.050	0.080	0.080
	5/18/2015	0.12	0.070	0.20	0.050	0.080	0.080
	9/22/2015	0.12	0.17	6.7	0.050	0.080	0.080
	7/10/2017	#N/A	0.070	0.44	0.050	#N/A	0.080
CS-WB04-LGR-01	7/26/2012	0.12	0.070	0.37	0.050	0.080	0.080
	9/6/2012	0.12	0.070	0.57	0.050	0.080	0.080
	4/24/2013	0.12	0.070	0.58	0.050	0.080	0.080
	12/2/2013	0.12	0.070	0.31	0.050	0.080	0.080
	3/6/2014	0.12	0.070	0.50	0.050	0.080	0.080
	6/25/2014	0.12	0.070	0.94	0.050	0.080	0.080
	9/17/2014	0.12	0.070	0.89	0.050	0.080	0.080
	12/8/2014	0.12	0.070	1.1	0.050	0.080	0.080
	3/24/2015	0.12	0.070	4.2	0.050	0.080	0.080
	5/19/2015	0.12	0.070	0.57	0.050	0.080	0.080
	9/22/2015	0.12	0.070	1.7	0.050	0.080	0.080
	12/3/2015	0.12	0.070	0.060	0.050	0.080	0.080
	3/8/2016	0.12	0.070	0.060	0.050	0.080	0.080
	6/9/2016	0.12	0.070	0.32	0.050	0.080	0.080
	9/20/2016	#N/A	0.070	1.1	0.050	#N/A	0.080
	12/14/2016	0.12	0.070	0.91	0.050	0.080	0.080
	3/22/2017	0.12	0.070	0.65	0.050	0.080	0.080
	7/10/2017	#N/A	0.070	0.68	0.050	#N/A	0.080
	10/4/2017	0.12	0.070	0.41	0.050	0.080	0.080
	12/13/2017	0.12	0.070	0.81	0.050	0.080	0.080
	3/8/2018	0.12	0.070	0.060	0.050	0.080	0.080
	6/13/2018	0.12	0.070	0.74	0.050	0.080	0.080
	9/17/2018	#N/A	0.070	0.87	0.050	#N/A	0.080
	12/10/2018	0.12	0.070	0.74	0.050	0.080	0.080
CS-WB04-LGR-03	7/26/2012	0.12	0.070	0.060	0.050	0.080	0.080
	9/6/2012	0.12	0.070	0.25	0.050	0.080	0.080
	4/24/2013	0.12	0.070	0.060	0.050	0.080	0.080
	3/6/2014	0.12	0.070	0.060	0.050	0.080	0.080
	5/19/2015	0.12	0.070	0.060	0.050	0.080	0.080
	9/22/2015	0.12	0.070	0.34	0.050	0.080	0.080
	7/10/2017	#N/A	0.070	0.060	0.050	#N/A	0.080
CS-WB04-LGR-04	7/26/2012	0.12	0.19	0.060	0.050	0.080	0.080
	9/6/2012	0.12	0.10	0.41	0.22	0.080	0.080
	4/24/2013	0.12	0.070	0.35	0.24	0.080	0.080
	3/6/2014	0.12	0.070	0.060	0.050	0.080	0.080
	5/19/2015	0.12	0.13	0.23	0.14	0.080	0.080
	9/22/2015	0.12	0.27	0.40	0.16	0.080	0.080
	7/10/2017	#N/A	0.31	0.060	0.050	#N/A	0.080
CS-WB04-LGR-06	3/13/2012	0.12	3.2	35	11	0.080	0.080
	7/26/2012	0.12	2.2	20	6.4	0.080	0.080
	9/6/2012	0.12	2.6	26	8.6	0.20	0.080
	12/12/2012	0.12	3.2	38	11	0.080	0.080
	4/24/2013	0.12	2.9	35	11	0.25	0.080
	6/20/2013	0.12	3.5	39	13	0.40	0.080
	9/23/2013	0.12	2.7	28	9.4	0.25	0.080
	3/6/2014	0.12	2.9	34	10	0.28	0.080
	6/25/2014	0.12	2.6	32	7.8	0.23	0.080
	12/8/2014	0.12	3.1	45	10	0.33	0.080

	3/24/2015	0.12	3.6	55	13	0.40	0.080
	5/18/2015	0.12	3.2	40	11	0.30	0.080
	9/22/2015	0.12	5.1	17	12	0.25	0.080
	6/9/2016	0.12	3.8	14	13	0.24	0.080
	9/20/2016	#N/A	5.5	13	18	#N/A	0.080
	7/10/2017	#N/A	3.7	17	13	#N/A	0.080
	9/17/2018	#N/A	3.0	24	7.2	#N/A	0.080
CS-WB04-LGR-07	3/13/2012	0.12	3.2	32	11	0.080	0.080
	7/26/2012	0.12	1.8	12	5.2	0.080	0.080
	9/6/2012	0.12	2.2	23	8.1	0.20	0.080
	12/12/2012	0.12	2.5	28	9.6	0.27	0.080
	4/24/2013	0.12	2.3	12	4.7	0.080	0.080
	6/20/2013	0.12	2.5	19	7.0	0.23	0.080
	9/23/2013	0.12	2.1	20	7.0	0.18	0.080
	3/6/2014	0.12	2.5	26	9.2	0.21	0.080
	6/25/2014	0.12	2.6	33	8.7	0.22	0.080
	12/8/2014	0.12	2.6	30	8.0	0.26	0.080
	3/24/2015	0.12	3.2	36	11	0.26	0.080
	5/18/2015	0.12	3.6	24	12	0.23	0.080
	9/22/2015	0.12	3.5	2.0	13	0.25	0.080
	6/9/2016	0.12	3.7	0.060	1.1	0.23	0.080
	9/20/2016	#N/A	4.1	0.40	2.1	#N/A	0.080
	7/10/2017	#N/A	3.3	0.060	4.7	#N/A	0.080
	9/17/2018	#N/A	3.4	2.6	1.1	#N/A	0.080
CS-WB04-LGR-08	7/26/2012	0.12	0.070	0.31	1.1	0.080	0.080
	9/6/2012	0.12	0.070	0.38	0.69	0.080	0.080
	4/24/2013	0.12	0.070	0.40	0.65	0.080	0.080
	6/20/2013	0.12	0.070	0.39	0.98	0.080	0.080
	3/6/2014	0.12	0.070	0.33	0.74	0.080	0.080
	12/8/2014	0.12	0.070	0.69	0.81	0.080	0.080
	5/18/2015	0.12	0.070	0.94	1.1	0.080	0.080
	9/22/2015	0.12	0.47	0.82	0.75	0.080	0.080
	6/9/2016	0.12	0.070	0.51	0.86	0.080	0.080
	9/20/2016	#N/A	0.42	1.4	1.3	#N/A	0.080
	7/10/2017	#N/A	0.53	0.74	1.0	#N/A	0.080
	9/17/2018	#N/A	0.070	0.58	1.1	#N/A	0.080
CS-WB04-LGR-09	3/13/2012	0.12	0.070	10	7.8	0.080	0.080
	7/25/2012	0.12	0.070	8.5	7.0	0.080	0.080
	9/6/2012	0.12	0.070	7.3	5.7	0.080	0.080
	12/12/2012	0.12	0.070	8.6	6.4	0.080	0.080
	4/24/2013	0.12	0.070	3.8	3.5	0.080	0.080
	6/20/2013	0.12	0.070	6.0	5.9	0.080	0.080
	9/23/2013	0.12	0.070	8.4	8.3	0.080	0.080
	3/6/2014	0.12	0.070	5.6	4.7	0.080	0.080
	6/25/2014	0.12	0.070	11	7.1	0.080	0.080
	12/8/2014	0.12	0.070	11	7.3	0.080	0.080
	3/24/2015	0.12	0.14	16	10	0.080	0.080
	5/18/2015	0.12	0.070	6.0	5.0	0.080	0.080
	9/22/2015	0.12	0.070	10	6.3	0.080	0.080
	6/9/2016	0.12	0.070	7.6	6.0	0.080	0.080
	9/20/2016	#N/A	0.070	15	7.8	#N/A	0.080
	7/10/2017	#N/A	0.070	8.8	6.9	#N/A	0.080
	9/17/2018	#N/A	0.070	7.4	5.5	#N/A	0.080
CS-WB04-LGR-10	3/13/2012	0.12	0.070	1.1	0.66	0.080	0.080
	7/25/2012	0.12	0.070	1.6	0.63	0.080	0.080
	9/6/2012	0.12	0.070	1.2	0.54	0.080	0.080
	12/12/2012	0.12	0.070	1.4	0.60	0.080	0.080
	4/24/2013	0.12	0.070	1.1	0.51	0.080	0.080
	6/20/2013	0.12	0.070	1.4	0.73	0.080	0.080
	9/23/2013	0.12	0.070	1.2	0.58	0.080	0.080
	3/6/2014	0.12	0.070	1.7	0.65	0.080	0.080
	6/25/2014	0.12	0.070	2.4	0.87	0.080	0.080

	12/8/2014	0.12	0.070	2.5	0.55	0.080	0.080
	3/24/2015	0.12	0.070	7.5	0.54	0.080	0.080
	5/18/2015	0.12	0.070	1.3	0.43	0.080	0.080
	9/22/2015	0.12	0.070	2.2	0.59	0.080	0.080
	6/9/2016	0.12	0.070	1.7	0.73	0.080	0.080
	9/20/2016	#N/A	0.070	4.3	0.57	#N/A	0.080
	7/10/2017	#N/A	0.070	2.0	0.46	#N/A	0.080
	9/17/2018	#N/A	0.070	2.2	0.47	#N/A	0.080
I10-4	3/7/2012	0.12	0.070	4.5	1.9	0.080	0.080
	6/4/2012	0.12	0.070	5.2	2.5	0.080	0.080
	8/3/2012	0.12	0.070	3.8	1.6	0.080	0.080
	8/6/2012	0.12	0.070	5.2	2.0	0.080	0.080
	8/16/2012	0.12	0.070	3.9	1.7	0.080	0.080
	8/30/2012	0.12	0.070	4.5	2.2	0.080	0.080
	12/3/2012	0.12	0.070	4.1	1.9	0.080	0.080
	3/12/2013	0.12	0.070	4.8	2.0	0.080	0.080
	4/23/2013	0.12	0.070	4.3	1.9	0.080	0.080
	6/26/2013	0.12	0.070	3.9	1.6	0.080	0.080
	9/9/2013	0.12	0.070	3.4	1.7	0.080	0.080
	12/9/2013	0.12	0.070	4.0	1.6	0.080	0.080
IIW-01	5/21/2013	0.12	0.070	0.21	0.050	0.080	0.080
	9/26/2018	0.12	4.6	250	5.9	0.18	0.080
	12/12/2018	0.12	0.070	20	0.050	0.080	0.080
IIW-02	5/20/2013	0.12	0.34	15	16	0.080	0.080
	9/26/2018	0.12	0.070	3.1	0.42	0.080	0.080
	12/12/2018	0.12	0.070	3.0	0.15	0.080	0.080
IIW-03	5/20/2013	0.12	0.22	5.9	8.0	0.080	0.080
	9/26/2018	0.12	1.8	110	3.2	0.080	0.080
	12/12/2018	0.12	3.1	100	4.3	0.080	0.080
IIW-04	5/20/2013	0.12	0.48	8.2	23	0.080	0.080
	9/26/2018	0.12	0.070	1.8	5.5	0.080	0.080
	12/12/2018	0.12	0.070	2.4	6.9	0.080	0.080
Middle-IC	8/25/2015	0.12	7.6	1,400	11	0.080	0.080
	9/9/2015	0.24	0.14	0.12	0.10	0.16	0.16
	9/24/2015	0.24	0.14	0.12	0.10	0.16	0.16
	12/1/2015	0.12	0.070	1.4	0.050	0.080	0.080
	1/14/2016	0.24	0.14	1.8	0.10	0.16	0.16
	2/10/2016	0.24	0.14	0.12	0.10	0.16	0.16
	3/11/2016	0.12	0.070	0.060	0.050	0.080	0.080
	6/22/2016	0.12	0.070	0.88	0.050	0.080	0.080
	10/5/2016	0.12	0.070	2.8	0.050	0.080	0.080
	11/30/2016	0.12	0.070	5.8	0.050	0.080	0.080
	4/3/2017	0.12	0.070	6.6	0.050	0.080	0.080
	7/6/2017	0.12	0.070	16	0.49	0.080	0.080
	10/5/2017	0.12	3.7	1,200	9.0	0.080	0.080
	12/28/2017	0.12	1.8	96	3.8	0.080	0.080
	3/13/2018	0.12	5.1	210	6.2	0.080	0.080
	6/25/2018	0.12	57	8,300	180	2.0	0.080
	9/24/2018	0.12	4.7	360	8.8	0.080	0.080
	12/12/2018	0.12	9.8	290	18	0.080	0.080
SIW-01	9/3/2015	0.12	0.070	100	0.050	0.080	0.080
	9/9/2015	0.12	0.070	120	0.050	0.080	0.080
	9/24/2015	0.12	3.5	2,200	10	0.080	0.080
	12/1/2015	0.12	0.070	1,200	1.0	0.080	0.080
	1/14/2016	0.12	0.070	1,800	1.1	0.080	0.080
	2/10/2016	0.24	36	2,300	44	0.31	0.16
	3/11/2016	6.0	22	720	13	4.0	4.0
	6/22/2016	0.12	5.4	400	5.8	0.080	0.080
	10/5/2016	0.12	92	3,200	96	1.4	0.080
	11/30/2016	0.12	6.3	450	5.0	0.080	0.080
	4/3/2017	0.12	0.070	18	0.050	0.080	0.080
	7/6/2017	0.12	0.070	1.8	0.050	0.080	0.080

	10/6/2017	0.12	0.070	0.060	0.050	0.080	0.080
	12/14/2017	0.12	0.070	0.060	0.050	0.080	0.080
	3/13/2018	0.12	0.070	190	0.050	0.080	0.080
	6/25/2018	0.12	0.070	1.5	0.050	0.080	0.080
	9/27/2018	0.12	0.070	0.060	0.050	0.080	0.080
	12/13/2018	0.12	0.070	0.060	0.050	0.080	0.080
South-IC	8/25/2015	0.12	0.070	1,900	1.1	0.080	0.080
	9/9/2015	0.24	0.14	0.12	0.10	0.16	0.16
	9/24/2015	0.24	0.14	0.12	0.10	0.16	0.16
	12/1/2015	0.12	0.070	0.060	0.050	0.080	0.080
	1/14/2016	0.24	0.14	0.97	0.10	0.16	0.16
	2/10/2016	0.24	0.14	0.12	0.10	0.16	0.16
	3/11/2016	0.12	0.070	0.060	0.050	0.080	0.080
	6/22/2016	0.12	0.070	0.060	0.050	0.080	0.080
	10/5/2016	0.12	0.070	0.060	0.050	0.080	0.080
	11/30/2016	0.12	0.070	0.060	0.050	0.080	0.080
	4/3/2017	0.12	0.070	0.060	0.050	0.080	0.080
	7/6/2017	0.12	0.070	0.060	0.050	0.080	0.080
	10/5/2017	0.12	0.070	16	0.25	0.080	0.080
	12/28/2017	0.12	0.070	0.060	0.050	0.080	0.080
	3/13/2018	0.12	0.070	1.1	0.050	0.080	0.080
	6/25/2018	0.12	0.070	3.2	0.050	0.080	0.080
	9/27/2018	0.12	0.070	18	0.34	0.080	0.080
	12/12/2018	0.12	0.070	0.060	0.050	0.080	0.080

Detections are bolded. Results not highlighted are detections above the RL.

Not detected. Reported result is reported as the MDL and flagged U.

Trace value. Reported result is a value between the MDL and the RL and is flagged F.

#N/A indicates that the analyte was not tested.

E		1/14/2016	1.8	58	0.20	0.50	170	15	1.9	3,700	0.20	1.0	10	1.0	1.0	8.0
		2/10/2016	3.7	45	0.20	2.8	150	3.0	1.9	2,500	0.20	1.0	14	1.0	1.0	8.0
		3/11/2016	3.1	110	0.20	0.50	200	3.0	1.9	1,000	0.10	1.0	3.2	1.0	1.0	8.0
		6/22/2016	1.8	19	0.20	0.80	92	3.0	1.9	53	0.10	1.0	3.2	1.0	1.0	8.0
		10/5/2016	2.5	11	0.20	0.50	79	3.0	1.9	40	0.10	1.0	3.2	1.0	1.0	8.0
		11/30/2016	1.8	19	0.20	0.50	62	3.0	1.9	25	0.10	1.0	3.2	1.0	1.0	8.0
		4/3/2017	5.0	16	0.20	0.50	82	3.0	13	130,000	0.10	1.0	3.2	1.0	1.0	12
		7/6/2017	3.7	43	0.20	0.50	170	3.0	1.9	47,000	0.10	1.0	3.2	1.0	1.0	8.0
		10/6/2017	1.8	15	0.20	0.50	77	3.0	1.9	510,000	0.80	1.0	3.2	1.0	1.0	8.0
		12/14/2017	1.8	210	0.20	0.50	190	3.0	1.9	160,000	0.10	1.0	3.2	1.0	1.0	8.0
		3/13/2018	1.8	51	0.20	0.50	240	3.0	3.0	690,000	0.10	1.0	3.2	1.0	1.0	8.0
		6/25/2018	1.8	29	0.20	0.50	290	3.0	1.9	950,000	0.10	1.0	3.2	1.0	1.0	8.0
		9/27/2018	1.8	29	0.20	0.50	180	3.0	1.9	420,000	0.10	1.0	3.2	1.0	1.0	8.0
		12/13/2018	1.8	53	0.40	0.50	200	3.0	1.9	730,000	0.10	1.0	3.2	1.0	1.0	8.0
	South-IC	9/9/2015	1.8	62	0.20	0.50	5.0	3.0	82	790,000	0.40	6.0	19	10	5.0	9.0
		9/24/2015	1.8	0.20	0.20	0.50	230	3.0	24	1,200,000	0.50	1.0	660	1.0	1.0	8.0
		12/1/2015	1.8	6.6	0.20	0.50	8.2	3.0	8.8	330,000	0.10	1.0	170	1.0	1.0	8.0
		1/14/2016	1.8	3.9	0.20	0.50	24	3.0	4.7	270,000	0.10	5.0	140	1.0	5.0	40
		2/10/2016	1.8	42	0.20	0.50	500	15	52	2,300,000	0.10	5.0	960	1.0	5.0	40
		3/11/2016	9.0	66	0.20	0.50	74	3.0	170	1,600,000	0.10	43	160	25	5.0	11
		6/22/2016	1.8	81	0.20	0.50	340	3.0	240	2,700,000	0.10	100	400	35	1.0	19
		10/5/2016	1.8	27	0.20	0.50	370	3.0	52	1,600,000	0.10	1.0	760	1.0	1.0	8.0
		11/30/2016	1.8	98	0.30	0.50	480	19	240	2,600,000	0.10	110	470	48	1.0	35
		4/3/2017	21	42	0.20	0.50	75	4.0	88	820,000	0.10	23	3.2	17	1.0	16
		7/6/2017	1.8	12	0.20	0.50	92	3.0	21	490,000	0.10	1.0	3.2	1.0	1.0	8.0
		10/5/2017	1.8	0.20	0.20	0.50	2.9	3.0	5.1	53,000	0.10	1.0	3.2	1.0	1.0	8.0
		12/28/2017	5.0	0.20	0.20	1.4	17	3.0	3.4	120,000	0.10	1.0	3.2	2.0	1.0	8.0
		3/13/2018	1.8	7.2	0.20	0.50	140	3.0	14	830,000	0.10	1.0	3.2	1.0	1.0	8.0
		6/25/2018	1.8	14	0.20	0.50	190	3.0	79	750,000	0.10	1.0	3.2	1.0	1.0	8.0
		9/27/2018	3.8	4.1	0.20	0.50	64	3.0	18	170,000	0.10	1.0	3.2	1.0	1.0	8.0
		12/12/2018	1.8	21	0.30	0.50	160	3.0	1.9	600,000	0.10	1.0	3.2	1.0	260	8.0

Detections are bolded. Results not highlighted are detections above the RL.
 Not detected. Reported result is reported as the MDL and flagged U.
Trace value. Reported result is a value between the MDL and the RL and is flagged F.
 Red text indicates dissolved metals analysis.
 Black text indicates total metals analysis.
 #N/A indicates that the metal was not tested.

Table A.4 - Anion Concentrations

Well ID	Sample Date	Chloride µg/L	Sulfate µg/L
LS-5	3/7/2012	11	23
	8/3/2012	12	22
	8/6/2012	11	23
	8/16/2012	11	22
	8/30/2012	11	21
	4/23/2013	11	22
	6/19/2013	13	21
	7/19/2013	12	23
	9/17/2013	11	21
	12/9/2013	12	22
	3/5/2014	12	19
	6/2/2014	11	20
	9/3/2014	11	20
	12/1/2014	11	19
	3/2/2015	11	19
	6/1/2015	11	17
	9/8/2015	11	18
	11/30/2015	11	20
	3/7/2016	11	19
	6/6/2016	10	20
	9/6/2016	11	21
	12/5/2016	9.9	18
	3/28/2017	11	19
	6/5/2017	11	17
9/21/2017	11	18	
12/4/2017	12	19	
3/6/2018	12	20	
6/6/2018	11	18	
9/13/2018	10	18	
12/3/2018	10	19	
LS-6	3/7/2012	13	20
	8/3/2012	12	20
	8/6/2012	12	20
	8/16/2012	12	22
	8/30/2012	12	20
	4/23/2013	11	22
	6/19/2013	13	17
	7/19/2013	11	19
9/17/2013	12	20	
12/9/2013	12	20	

	3/5/2014	12	18
	6/2/2014	11	17
	9/3/2014	11	17
	12/1/2014	11	17
	3/2/2015	11	17
	6/1/2015	22	39
	9/8/2015	15	27
	11/30/2015	30	39
	3/7/2016	17	31
	6/6/2016	18	35
	9/6/2016	19	47
	12/5/2016	14	38
	3/28/2017	19	45
	6/5/2017	18	40
	9/21/2017	14	29
	12/4/2017	15	29
	3/6/2018	14	26
	6/6/2018	13	26
	9/13/2018	13	33
	12/3/2018	12	36
LS-7	3/7/2012	9.0	17
	8/3/2012	9.0	17
	8/6/2012	8.8	16
	8/16/2012	8.7	15
	8/30/2012	8.9	16
	4/23/2013	8.2	15
	6/19/2013	9.9	16
	7/19/2013	11	15
	9/17/2013	8.2	15
	12/9/2013	9.1	16
	3/5/2014	9.2	14
	6/2/2014	8.7	15
	9/3/2014	8.7	15
	12/1/2014	8.2	15
	3/2/2015	8.3	15
	6/1/2015	5.6	12
	9/8/2015	9.2	22
	11/30/2015	15	76
	3/7/2016	8.8	25
	6/6/2016	9.6	39
	9/6/2016	9.1	42
	12/5/2016	4.6	25
	3/28/2017	10	31
	6/5/2017	9.0	25
	9/21/2017	8.6	19

	12/4/2017	9.0	19
	3/6/2018	9.6	19
	6/6/2018	8.4	17
	9/13/2018	8.8	46
	12/3/2018	7.6	29
OFR-3	3/8/2012	11	14
	8/3/2012	11	15
	8/6/2012	11	14
	8/16/2012	11	14
	8/30/2012	11	15
	4/23/2013	10	15
	4/3/2015	11	14
	6/1/2015	11	13
	9/8/2015	11	14
	11/30/2015	11	14
	3/7/2016	11	14
	6/6/2016	10	14
	9/6/2016	11	15
	12/5/2016	9.6	14
	3/28/2017	11	16
	6/5/2017	11	20
	9/27/2017	10	13
	12/4/2017	11	14
	3/6/2018	11	16
	6/6/2018	10	15
	9/13/2018	9.6	14
	12/3/2018	9.8	14
RFR-10	3/8/2012	14	17
	8/3/2012	18	54
	8/6/2012	16	15
	8/16/2012	16	15
	8/30/2012	16	25
	4/23/2013	16	27
	6/19/2013	16	16
	7/19/2013	17	46
	9/17/2013	15	15
	12/9/2013	15	17
	3/5/2014	16	14
	6/2/2014	15	14
	9/3/2014	15	15
	12/1/2014	14	15
	3/2/2015	12	17
	5/19/2015	15	15
	6/1/2015	14	14
	9/8/2015	13	28

	11/30/2015	15	16
	3/7/2016	14	20
	6/6/2016	14	17
	9/6/2016	15	23
	12/5/2016	14	15
	3/28/2017	15	48
	6/5/2017	14	18
	9/21/2017	13	29
	12/4/2017	15	19
	3/6/2018	16	17
	6/6/2018	14	18
	9/13/2018	14	15
	12/3/2018	13	38
RFR-11	3/8/2012	12	24
	8/3/2012	11	17
	8/6/2012	11	21
	8/16/2012	11	18
	8/30/2012	11	18
	4/23/2013	11	18
	6/19/2013	13	22
	7/19/2013	11	18
	9/17/2013	19	22
	12/9/2013	12	17
	3/5/2014	12	18
	6/2/2014	12	21
	9/3/2014	11	16
	12/1/2014	11	17
	3/2/2015	11	17
	6/1/2015	42	48
	9/8/2015	17	31
	11/30/2015	15	32
	3/7/2016	15	32
	6/6/2016	22	49
	9/6/2016	21	48
	12/5/2016	14	31
	3/28/2017	17	31
	6/5/2017	13	33
	9/21/2017	12	25
	12/4/2017	13	23
	3/6/2018	15	25
	6/6/2018	11	20
	9/13/2018	24	49
	12/3/2018	30	54
CS-MW6-LGR	3/20/2012	12	16
	8/2/2012	10	17

	8/6/2012	10	17	
	8/16/2012	10	17	
	8/31/2012	9.8	18	
	10/2/2012	12	16	
	4/22/2013	9.9	18	
	6/19/2013	11	17	
	7/19/2013	15	18	
	9/17/2013	9.7	18	
	11/20/2013	10	19	
	2/13/2014	22	7.7	
	6/17/2014	9.6	17	
	9/4/2014	9.9	17	
	11/13/2014	10	17	
	3/10/2015	9.9	17	
	6/10/2015	12	15	
	9/11/2015	10	16	
	12/9/2015	11	15	
	3/8/2016	10	19	
	6/7/2016	11	15	
	9/12/2016	11	20	
	12/12/2016	9.7	16	
	3/6/2017	10	18	
	6/8/2017	10	19	
	9/22/2017	9.9	17	
	12/6/2017	10	18	
	3/5/2018	11	19	
	6/7/2018	9.6	18	
	9/5/2018	12	17	
	12/5/2018	10	16	
Regulatory Wells	CS-MW7-LGR	3/20/2012	19	8.2
		8/2/2012	19	8.0
		8/6/2012	19	7.9
		8/16/2012	19	8.0
		8/31/2012	19	8.0
		4/22/2013	19	8.4
		6/19/2013	22	9.0
		7/19/2013	32	9.6
		9/19/2013	20	11
		11/20/2013	20	8.7
		2/13/2014	22	7.7
		6/20/2014	20	8.2
		9/4/2014	20	8.1
		11/13/2014	21	8.4
		3/10/2015	19	8.1
	6/10/2015	19	7.5	

	9/14/2015	20	6.5
	12/9/2015	20	7.8
	3/8/2016	22	8.8
	6/7/2016	18	7.8
	9/12/2016	22	9.2
	12/12/2016	19	7.8
	3/6/2017	20	8.5
	6/15/2017	20	8.9
	9/22/2017	19	8.1
	12/6/2017	21	8.4
	3/5/2018	21	8.7
	6/7/2018	20	7.9
	9/5/2018	21	8.4
	12/5/2018	19	8.1
CS-MW8-LGR	3/20/2012	18	9.1
	8/2/2012	19	9.2
	8/6/2012	18	9.3
	8/16/2012	18	9.4
	8/30/2012	18	9.7
	4/22/2013	17	9.8
	6/19/2013	20	9.7
	7/19/2013	21	9.3
	9/17/2013	17	10
	11/20/2013	18	9.7
	3/6/2014	18	9.0
	6/17/2014	17	9.0
	9/4/2014	18	9.8
	11/13/2014	18	9.6
	3/10/2015	16	8.0
	6/10/2015	17	8.7
	9/11/2015	17	9.7
	12/9/2015	17	8.2
	3/8/2016	18	9.4
	6/7/2016	16	8.8
	9/12/2016	18	10
	12/12/2016	15	8.7
	3/6/2017	16	9.6
	6/8/2017	3,300	1,900
	9/22/2017	15	8.5
	12/6/2017	17	9.5
	3/5/2018	17	10
	6/7/2018	16	9.3
	9/5/2018	16	9.3
	12/5/2018	16	9.7
CS-MW36-LGR	3/19/2012	15	16

	8/2/2012	14	19
	8/6/2012	13	21
	8/16/2012	13	21
	8/30/2012	14	23
	4/22/2013	13	20
	6/19/2013	17	16
	7/19/2013	17	18
	9/17/2013	13	20
	12/2/2013	16	15
	3/6/2014	14	19
	6/17/2014	15	12
	9/9/2014	14	18
	11/13/2014	14	16
	3/10/2015	14	18
	6/10/2015	13	19
	9/11/2015	13	210
	12/9/2015	15	77
	3/8/2016	14	340
	6/7/2016	12	93
	9/12/2016	14	580
	12/12/2016	14	160
	3/6/2017	13	120
	6/8/2017	14	100
	9/22/2017	13	32
	12/12/2017	14	18
	3/5/2018	14	18
	6/7/2018	13	16
	9/5/2018	13	19
	12/5/2018	11	23
CS-WB01-LGR-09	3/12/2012	12	15
	8/3/2012	13	16
	8/6/2012	12	14
	8/17/2012	12	15
	8/30/2012	12	15
	4/23/2013	13	14
	6/13/2013	14	22
	7/22/2013	13	14
	9/23/2013	12	20
	12/4/2013	13	16
	3/20/2014	13	15
	6/25/2014	12	15
	9/11/2014	13	15
	12/9/2014	12	14
	3/23/2015	17	10
	6/17/2015	13	15

	9/16/2015	13	15
	12/2/2015	13	16
	3/9/2016	13	17
	6/8/2016	11	14
	9/14/2016	13	17
	12/14/2016	11	15
	3/15/2017	12	16
	6/21/2017	29	0.87
	10/2/2017	12	16
	12/11/2017	13	17
	3/7/2018	13	17
	6/11/2018	12	16
	9/11/2018	12	16
	12/5/2018	11	16
CS-WB02-LGR-09	3/12/2012	14	15
	8/3/2012	14	16
	8/6/2012	13	15
	8/17/2012	13	15
	8/30/2012	13	15
	4/29/2013	14	15
	6/12/2013	14	16
	7/22/2013	13	16
	9/18/2013	13	17
	12/4/2013	14	17
	3/19/2014	13	16
	6/24/2014	13	16
	9/11/2014	13	16
	12/10/2014	13	16
	3/23/2015	13	15
	6/22/2015	13	15
	9/23/2015	13	16
	12/2/2015	13	17
	3/14/2016	12	17
	6/14/2016	13	16
	9/15/2016	13	18
	12/15/2016	12	17
	3/15/2017	13	18
	6/22/2017	13	20
	10/2/2017	12	18
	12/11/2017	13	19
	3/7/2018	13	19
	6/11/2018	12	19
	9/12/2018	12	18
	12/5/2018	12	18
CS-WB03-LGR-09	3/13/2012	14	15

	8/2/2012	13	19
	8/6/2012	13	18
	8/16/2012	13	17
	8/30/2012	13	19
	4/23/2013	12	19
	6/12/2013	18	15
	7/22/2013	14	20
	9/18/2013	12	19
	12/4/2013	12	22
	3/17/2014	12	20
	6/24/2014	14	17
	9/10/2014	13	17
	12/3/2014	14	17
	3/24/2015	14	29
	6/18/2015	17	14
	9/17/2015	14	15
	12/2/2015	17	16
	3/14/2016	13	14
	6/15/2016	16	15
	9/19/2016	14	15
	12/15/2016	13	13
	3/15/2017	14	15
	6/22/2017	14	16
	10/2/2017	13	14
	12/11/2017	14	16
	3/7/2018	13	16
	6/13/2018	15	26
	9/17/2018	16	16
	12/6/2018	13	15
CS-WB04-LGR-11	3/13/2012	13	14
	8/2/2012	13	14
	8/6/2012	12	14
	8/16/2012	12	13
	8/30/2012	13	14
	4/24/2013	13	14
	6/20/2013	14	15
	7/22/2013	13	14
	9/23/2013	12	15
	12/2/2013	13	15
	3/6/2014	18	7.6
	6/25/2014	12	14
	9/10/2014	13	14
	12/8/2014	12	13
	3/24/2015	13	13
	5/18/2015	13	13

	9/22/2015	13	14
	12/3/2015	14	15
	3/8/2016	13	14
	6/9/2016	12	13
	9/20/2016	14	15
	12/14/2016	13	14
	3/22/2017	14	15
	7/10/2017	15	16
	10/4/2017	13	14
	12/13/2017	14	14
	3/8/2018	13	15
	6/13/2018	16	25
	9/17/2018	13	15
	12/10/2018	13	14
PZ-01	7/20/2012	14	18
	4/16/2013	13	19
	6/19/2013	15	18
	7/23/2013	15	30
	9/17/2013	13	20
	11/18/2013	15	18
	2/10/2014	14	19
	5/14/2014	13	17
	8/6/2014	13	18
	11/18/2014	14	18
	2/19/2015	13	17
	5/14/2015	15	20
	9/24/2015	14	20
	12/1/2015	14	18
	1/13/2016	14	17
	2/10/2016	13	18
	3/10/2016	13	17
	6/20/2016	13	20
	10/4/2016	14	41
	11/29/2016	12	33
	3/23/2017	13	33
	7/5/2017	14	36
	10/4/2017	13	33
	12/13/2017	14	35
	3/12/2018	13	25
	6/25/2018	13	24
	9/26/2018	13	26
	12/11/2018	12	35
PZ-02	7/20/2012	23	20
	4/16/2013	51	56
	6/19/2013	63	330

	7/23/2013	66	5.2
	11/18/2013	54	860
	2/10/2014	63	1,200
	5/14/2014	73	1,700
	8/6/2014	61	2,100
	11/18/2014	53	3,100
	2/18/2015	41	2,300
	5/14/2015	37	3,000
	9/24/2015	55	3,900
	12/1/2015	32	1,100
	1/13/2016	39	2,800
	2/10/2016	36	3,500
	3/10/2016	31	4,100
	6/20/2016	33	1,900
	10/4/2016	31	18,000
	11/29/2016	30	2,500
	3/23/2017	26	1,700
	7/5/2017	32	2,500
	10/4/2017	29	2,100
	12/13/2017	30	1,900
	3/12/2018	41	2,000
	6/25/2018	23	1,700
	9/26/2018	14	440
	12/11/2018	18	750
PZ-05	7/20/2012	20	19
	4/16/2013	19	19
	6/19/2013	23	63
	7/23/2013	22	27
	9/17/2013	17	51
	11/18/2013	17	63
	2/10/2014	19	84
	5/14/2014	18	52
	8/6/2014	19	35
	11/18/2014	17	69
	2/18/2015	17	200
	5/14/2015	15	360
	9/24/2015	17	78
	12/1/2015	17	140
	1/13/2016	15	280
	2/10/2016	14	110
	3/10/2016	13	88
	6/20/2016	16	92
	10/4/2016	13	150
	11/29/2016	13	110
	3/23/2017	15	110

	7/5/2017	15	94
	10/4/2017	9.6	340
	12/13/2017	17	99
	3/12/2018	15	98
	6/25/2018	15	140
	9/26/2018	7.1	68
	12/11/2018	8.2	69
PZ-06	7/20/2012	6.2	19
	4/16/2013	4.6	17
	6/19/2013	4.7	12
	7/23/2013	5.2	43
	9/17/2013	4.8	25
	11/18/2013	3.8	14
	2/10/2014	5.1	43
	5/14/2014	5.1	31
	8/6/2014	4.5	17
	11/18/2014	4.2	12
	2/19/2015	4.1	12
	5/14/2015	4.0	12
	9/24/2015	4.2	15
	12/1/2015	3.8	8.4
	1/13/2016	4.0	9.1
	2/10/2016	3.8	15
	3/10/2016	3.8	13
	6/20/2016	4.6	10
	10/4/2016	3.4	9.5
	11/29/2016	2.9	9.4
	3/23/2017	3.6	9.7
	7/5/2017	4.0	12
	10/4/2017	3.8	9.2
	12/13/2017	4.2	11
	3/12/2018	3.8	11
	6/25/2018	3.5	11
	9/26/2018	3.3	9.4
	12/11/2018	3.8	10
TSW-01	7/18/2012	15	240
	8/30/2012	14	140
	9/28/2012	14	100
	10/1/2012	12	88
	4/16/2013	10	67
	6/19/2013	24	560
	7/23/2013	31	820
	9/17/2013	31	800
	11/18/2013	29	990
	2/10/2014	24	690

	5/14/2014	20	580
	8/6/2014	21	470
	11/18/2014	68	7,200
	2/19/2015	250	7,400
	5/14/2015	43	6,000
	9/24/2015	30	4,100
	11/30/2015	27	2,500
	1/13/2016	27	3,000
	2/10/2016	21	2,900
	3/10/2016	20	3,500
	6/21/2016	33	2,200
	10/4/2016	19	3,000
	11/29/2016	18	2,800
	4/3/2017	18	2,200
	7/5/2017	24	3,000
	10/6/2017	18	1,900
	12/14/2017	20	2,100
	3/13/2018	19	2,000
	6/25/2018	16	2,100
	9/24/2018	14	1,500
	12/13/2018	16	2,600
TSW-03	7/20/2012	3.9	17
	8/30/2012	55	1,400
	10/1/2012	47	2,000
	1/9/2013	100	6,600
	4/16/2013	120	7,600
	6/19/2013	120	7,100
	7/23/2013	150	9,300
	9/17/2013	120	15,000
	11/18/2013	110	14,000
	2/10/2014	110	12,000
	5/14/2014	100	11,000
	8/6/2014	95	12,000
	11/18/2014	88	11,000
	2/19/2015	270	16,000
	5/14/2015	67	22,000
	9/24/2015	55	20,000
	11/30/2015	82	16,000
	1/13/2016	57	16,000
	2/10/2016	43	16,000
	3/10/2016	35	14,000
	6/21/2016	69	13,000
	10/4/2016	37	23,000
	11/29/2016	40	8,200
	3/23/2017	26	8,000

	7/5/2017	26	7,400
	10/5/2017	16	2,400
	12/13/2017	15	4,300
	3/12/2018	11	3,300
	6/25/2018	15	5,600
	9/26/2018	7.0	1,200
	12/11/2018	7.1	1,600
TSW-04	7/20/2012	7.1	25
	8/30/2012	13	49
	4/16/2013	76	5,000
	6/19/2013	130	6,800
	7/23/2013	120	8,600
	9/17/2013	98	8,700
	11/18/2013	110	24,000
	2/10/2014	150	21,000
	5/14/2014	140	23,000
	8/6/2014	120	19,000
	11/18/2014	87	25,000
	2/18/2015	1,100	37,000
	5/14/2015	43	32,000
	9/24/2015	34	17,000
	11/30/2015	74	18,000
	1/13/2016	44	16,000
	2/10/2016	590	14,000
	3/10/2016	25	13,000
	6/21/2016	62	14,000
	10/4/2016	28	10,000
	11/29/2016	17	4,900
	3/23/2017	18	4,400
	7/5/2017	15	3,900
	10/5/2017	16	4,100
	12/13/2017	18	4,700
	3/12/2018	17	7,700
	6/25/2018	18	10,000
	9/26/2018	19	7,100
	12/11/2018	15	2,800
TSW-05	7/20/2012	8.4	160
	8/14/2012	6.9	58
	8/30/2012	7.0	61
	10/1/2012	6.2	43
	4/18/2013	6.5	29
	6/19/2013	5.7	22
	7/23/2013	6.7	36
	9/17/2013	5.4	45
	11/18/2013	4.4	20

	2/10/2014	6.1	23	
	5/14/2014	5.3	29	
	8/6/2014	6.0	28	
	11/18/2014	6.6	27	
	2/18/2015	8.1	33	
	5/14/2015	7.2	29	
	8/21/2015	7.8	38	
	9/24/2015	8.0	41	
	11/30/2015	7.4	27	
	1/13/2016	12	38	
	2/10/2016	11	45	
	3/11/2016	9.8	40	
	6/21/2016	8.4	31	
	10/5/2016	6.5	29	
	11/30/2016	6.3	30	
	4/3/2017	5.4	26	
	7/6/2017	5.6	33	
	10/6/2017	4.9	24	
	12/14/2017	6.2	45	
	3/13/2018	5.4	29	
	6/25/2018	5.1	28	
	9/24/2018	4.7	41	
	12/13/2018	5.7	1,000	
Performance Wells	TSW-07	7/20/2012	80	27
		8/30/2012	86	24
		10/1/2012	48	18
		4/16/2013	83	33
		6/19/2013	18	850
		7/23/2013	80	1,800
		9/17/2013	36	300
		11/18/2013	68	2,000
		2/10/2014	90	3,800
		5/14/2014	100	7,200
		8/6/2014	93	6,900
		11/18/2014	58	4,700
		2/18/2015	46	5,100
		5/14/2015	44	6,100
		9/24/2015	56	7,400
		11/30/2015	30	2,700
		1/13/2016	50	4,900
		2/10/2016	36	5,600
		3/10/2016	31	3,600
		6/21/2016	44	2,700
	10/4/2016	26	2,800	
	11/29/2016	26	2,800	

	3/23/2017	24	2,500
	7/5/2017	29	2,800
	10/5/2017	19	1,300
	12/13/2017	24	3,700
	3/12/2018	23	3,400
	6/25/2018	22	2,200
	9/26/2018	16	850
	12/11/2018	15	740
VEW-15	7/18/2012	4.1	24
	8/14/2012	4.2	21
	8/30/2012	4.0	20
	4/17/2013	4.7	49
	6/19/2013	5.7	40
	7/23/2013	7.7	47
	9/17/2013	5.0	35
	11/18/2013	4.0	43
	2/10/2014	4.7	50
	5/14/2014	4.6	51
	8/6/2014	4.7	50
	11/18/2014	4.3	38
	2/18/2015	4.5	50
	5/14/2015	4.2	46
	8/21/2015	6.1	42
	9/24/2015	10	46
	12/1/2015	3.8	26
	1/14/2016	7.8	33
	2/10/2016	5.3	32
	3/11/2016	5.0	29
	6/21/2016	5.8	29
	10/4/2016	5.4	34
	11/30/2016	4.2	28
	4/3/2017	5.1	38
	7/6/2017	4.5	33
	10/5/2017	4.4	29
	12/14/2017	5.2	38
	3/12/2018	5.4	39
	6/25/2018	4.3	48
	9/27/2018	4.3	44
	12/13/2018	5.9	1,300
VEW-19	7/18/2012	9.0	29
	8/30/2012	9.5	47
	10/1/2012	10	58
	4/16/2013	11	80
	6/19/2013	130	3,700
	7/23/2013	130	9,600

	9/17/2013	100	10,000
	11/18/2013	16	970
	2/10/2014	30	2,400
	8/6/2014	25	1,500
	11/18/2014	81	30,000
	2/19/2015	1,600	24,000
	5/14/2015	15	3,300
	9/24/2015	26	5,600
	11/30/2015	12	710
	1/13/2016	16	940
	2/10/2016	20	8,400
	3/10/2016	14	1,800
	6/21/2016	13	760
	10/4/2016	14	1,400
	11/30/2016	11	1,100
	4/3/2017	16	1,100
	7/5/2017	18	2,600
	10/6/2017	11	860
	12/14/2017	11	930
	3/13/2018	14	970
	6/25/2018	13	1,100
	9/27/2018	9.6	340
	12/13/2018	9.8	950
VEW-25	7/18/2012	7.9	20
	6/19/2013	120	5,100
	7/23/2013	100	4,500
	9/17/2013	81	3,200
	11/18/2013	22	1,500
	2/10/2014	21	1,300
	5/14/2014	23	1,500
	8/6/2014	20	1,400
	11/18/2014	49	8,700
	2/19/2015	250	12,000
	5/14/2015	30	8,900
	8/21/2015	23	8,800
	9/24/2015	42	8,900
	11/30/2015	8.5	1,100
	1/13/2016	29	6,200
	2/10/2016	23	6,700
	3/10/2016	21	7,000
	6/21/2016	39	4,000
	10/4/2016	19	7,100
	11/29/2016	21	5,200
	3/23/2017	20	4,800
	7/5/2017	17	5,200

	10/4/2017	17	5,300
	12/13/2017	18	6,300
	3/12/2018	31	4,900
	6/25/2018	15	6,600
	9/26/2018	4.2	430
	12/11/2018	10	3,300
VEW-27	7/18/2012	7.6	54
	8/30/2012	8.2	97
	9/28/2012	9.1	140
	10/1/2012	8.4	180
	4/16/2013	9.0	290
	6/19/2013	120	14,000
	7/23/2013	130	37,000
	9/17/2013	14	23,000
	11/18/2013	62	18,000
	2/10/2014	69	11,000
	5/14/2014	63	9,800
	8/6/2014	67	15,000
	11/18/2014	87	19,000
	2/19/2015	250	16,000
	5/14/2015	29	11,000
	8/21/2015	32	9,900
	9/24/2015	53	13,000
	11/30/2015	11	1,600
	1/13/2016	30	4,900
	2/10/2016	26	5,400
	3/10/2016	23	5,800
	6/21/2016	28	2,400
	10/4/2016	9.6	14,000
	11/30/2016	17	3,800
	4/3/2017	14	2,300
	7/5/2017	30	9,400
	10/6/2017	6.2	1,000
	12/14/2017	8.4	1,700
	3/13/2018	21	5,000
	6/25/2018	16	4,000
	9/27/2018	4.5	410
	12/13/2018	11	2,600
VEW-32	7/18/2012	2.7	12
	8/14/2012	3.3	16
	8/30/2012	3.9	20
	9/28/2012	2.8	12
	4/18/2013	4.9	35
	6/19/2013	3.3	15
	7/23/2013	4.2	18

	9/17/2013	4.7	0.26
	11/18/2013	2.2	11
	2/10/2014	4.4	29
	5/14/2014	3.6	20
	8/6/2014	3.0	12
	11/18/2014	3.3	150
	2/18/2015	4.7	220
	5/14/2015	2.3	30
	8/21/2015	3.6	34
	9/24/2015	3.7	26
	12/1/2015	3.3	15
	1/13/2016	4.8	24
	2/10/2016	5.4	28
	3/11/2016	5.9	31
	6/21/2016	5.1	21
	10/4/2016	2.8	19
	11/30/2016	4.1	25
	4/3/2017	9.6	32
	7/6/2017	6.8	34
	10/6/2017	3.1	18
	12/14/2017	4.4	24
	3/13/2018	6.2	30
	6/25/2018	5.7	29
	9/24/2018	8.2	44
	12/13/2018	4.0	45
CS-WB01-LGR-01	7/31/2012	9.2	24
	4/29/2013	9.5	23
	6/13/2013	9.0	28
	7/22/2013	8.3	19
	9/23/2013	8.6	24
	12/4/2013	8.6	22
	3/20/2014	9.2	21
	6/25/2014	8.0	22
	9/11/2014	8.9	22
	12/9/2014	7.6	25
	3/23/2015	8.1	23
	6/17/2015	9.0	53
	9/16/2015	10	32
	12/2/2015	8.9	33
	3/9/2016	11	31
	6/8/2016	8.1	38
	9/15/2016	11	21
	12/14/2016	8.7	22
	3/15/2017	9.3	20
	6/21/2017	10	25

	10/2/2017	9.0	25
	12/11/2017	9.6	27
	3/7/2018	10	26
	6/11/2018	8.9	24
	9/12/2018	5.6	24
	12/5/2018	7.4	38
CS-WB02-LGR-01	7/30/2012	200	31
	4/30/2013	170	3,100
	6/12/2013	160	2,400
	7/22/2013	140	1,800
	9/18/2013	100	1,700
	12/4/2013	86	3,200
	6/24/2014	59	2,400
	12/10/2014	28	1,700
	3/23/2015	25	5,500
	6/22/2015	46	3,100
	12/2/2015	83	1,800
	6/14/2016	65	960
	9/12/2018	62	670
CS-WB03-LGR-01	7/24/2012	13	27
	3/17/2014	13	28
	6/24/2014	12	29
	12/3/2014	13	29
	3/24/2015	12	28
	6/19/2015	13	30
	9/21/2015	12	21
	12/2/2015	13	24
	3/14/2016	11	23
	6/16/2016	12	30
	9/19/2016	12	23
	12/15/2016	11	21
	3/15/2017	12	22
	6/29/2017	13	24
	10/2/2017	12	21
	12/6/2018	11	28
CS-WB03-UGR-01	7/24/2012	8.0	90
	8/30/2012	7.9	79
	10/2/2012	7.7	67
	4/22/2013	7.5	67
	6/12/2013	8.7	72
	7/22/2013	9.5	76
	9/18/2013	7.5	70
	12/4/2013	8.2	75
	3/17/2014	8.1	75
	6/24/2014	7.8	77

	9/10/2014	8.2	77
	3/24/2015	12	100
	6/19/2015	13	99
	9/21/2015	11	140
	12/2/2015	11	160
	3/14/2016	9.4	190
	6/16/2016	14	190
	9/19/2016	11	210
	12/15/2016	16	240
	3/15/2017	12	270
	6/29/2017	13	280
	10/2/2017	12	240
	12/11/2017	12	260
	3/7/2018	11	300
	6/13/2018	13	290
	9/17/2018	8.8	250
	12/6/2018	7.1	200
PZ-03	7/20/2012	13	10
	4/16/2013	13	11
PZ-04	7/20/2012	19	32
	4/16/2013	19	28
TSW-02	4/16/2013	7.4	190
	11/18/2014	39	6,700
	9/26/2018	12	1,500
	12/11/2018	13	1,500
TSW-06	7/20/2012	14	32
	4/18/2013	24	19
	9/24/2015	16	23
	11/30/2015	13	11
	1/13/2016	13	14
	2/10/2016	13	14
	3/10/2016	14	13
	6/22/2016	10.0	11
	10/5/2016	10	13
	11/30/2016	9.1	12
	4/3/2017	8.3	12
	7/6/2017	11	17
	10/5/2017	9.6	20
	12/14/2017	9.5	20
	3/12/2018	10	15
	6/25/2018	10	14
	9/26/2018	6.8	13
	12/12/2018	7.9	14
VEW-13	4/16/2013	4.9	79
	9/26/2018	3.9	12

	12/12/2018	5.2	30
VEW-16	7/18/2012	5.5	24
	4/17/2013	5.3	15
	9/27/2018	3.5	16
	12/12/2018	4.8	11
VEW-18	7/18/2012	5.1	35
	4/18/2013	6.7	140
	8/21/2015	16	9,200
	9/24/2015	18	6,200
	11/30/2015	130	5,400
	1/13/2016	24	5,000
	2/10/2016	18	5,100
	3/11/2016	16	4,900
	6/22/2016	10	2,400
	10/5/2016	11	2,500
	11/30/2016	9.1	3,300
	4/3/2017	9.0	2,400
	7/6/2017	9.4	3,600
	10/5/2017	9.0	2,700
	12/14/2017	9.2	2,900
	3/12/2018	5.6	2,400
	6/25/2018	5.8	26
	9/27/2018	3.8	1,300
	12/13/2018	6.3	980
VEW-20	7/18/2012	11	230
	4/16/2013	11	290
	9/26/2018	11	160
	12/12/2018	9.9	98
VEW-21	4/16/2013	10	110
	9/26/2018	13	81
	12/11/2018	11	76
VEW-23	4/16/2013	10	310
	11/30/2015	8.6	120
	1/13/2016	8.7	160
	10/4/2016	9.9	170
	11/29/2016	8.0	130
	10/4/2017	7.9	750
	12/13/2017	8.0	390
	9/26/2018	5.1	23
	12/11/2018	5.3	32
VEW-26	7/18/2012	6.3	24
VEW-28A	7/18/2012	13	18
	4/18/2013	13	18
	8/25/2015	14	17
	9/27/2018	13	49

Additional Wells

	12/12/2018	15	32
VEW-28B	7/18/2012	11	58
	8/30/2012	11	53
	4/18/2013	13	55
	9/27/2018	12	44
	12/12/2018	15	31
VEW-29	7/18/2012	6.9	110
	4/17/2013	5.3	71
	9/24/2015	6.1	74
	12/1/2015	4.6	41
	1/14/2016	4.9	59
	2/10/2016	4.5	59
	3/11/2016	4.2	57
	6/21/2016	5.1	50
	10/4/2016	3.9	35
	11/30/2016	3.8	42
	4/3/2017	4.3	38
	7/6/2017	5.2	40
	10/5/2017	5.1	37
	12/14/2017	5.1	40
	3/12/2018	5.6	38
	6/25/2018	4.3	40
	9/27/2018	4.0	47
	12/13/2018	18	470
VEW-31	7/18/2012	14	26
	4/17/2013	22	330
	8/21/2015	19	1,600
	9/24/2015	21	1,300
	12/1/2015	20	550
	1/14/2016	25	420
	2/10/2016	25	360
	3/11/2016	24	270
	6/21/2016	19	230
	10/4/2016	17	180
	11/30/2016	16	160
	4/3/2017	14	110
	7/6/2017	15	120
	10/5/2017	12	81
	12/14/2017	12	88
	3/12/2018	13	69
	6/25/2018	5.2	34
	9/27/2018	7.4	48
	12/13/2018	9.5	1,200
CS-MW35-LGR	3/13/2014	26	130
	9/9/2014	21	100

CS-MW37-LGR	7/12/2017	12	21
CS-WB01-LGR-02	7/31/2012	14	17
	4/29/2013	13	16
	6/17/2015	13	26
CS-WB01-LGR-03	7/31/2012	11	19
	4/29/2013	13	17
	6/17/2015	13	15
CS-WB01-LGR-04	7/31/2012	12	41
	4/25/2013	13	37
	6/17/2015	12	34
CS-WB01-LGR-05	7/31/2012	12	42
	4/25/2013	13	41
	6/17/2015	12	32
CS-WB01-LGR-06	7/30/2012	12	40
	4/25/2013	13	39
	6/17/2015	12	37
CS-WB01-LGR-07	7/30/2012	12	16
	4/25/2013	13	15
	6/17/2015	14	17
CS-WB01-LGR-08	7/30/2012	13	26
	4/25/2013	13	25
	6/17/2015	13	28
CS-WB02-LGR-03	7/30/2012	17	23
	4/30/2013	17	20
	6/22/2015	19	44
CS-WB02-LGR-04	7/30/2012	12	23
	4/30/2013	13	22
	6/22/2015	12	23
CS-WB02-LGR-05	7/27/2012	12	26
	4/29/2013	12	24
	6/22/2015	11	23
CS-WB02-LGR-06	7/27/2012	12	27
	4/29/2013	13	24
	6/22/2015	12	21
CS-WB02-LGR-07	7/27/2012	15	39
	4/29/2013	12	36
	6/22/2015	13	31
CS-WB02-LGR-08	7/27/2012	18	32
	4/29/2013	17	29
	6/22/2015	16	27
CS-WB03-LGR-03	7/24/2012	14	17
	4/22/2013	13	16
	6/19/2015	14	240
CS-WB03-LGR-04	7/24/2012	14	24
	4/22/2013	13	24

	6/19/2015	13	41
CS-WB03-LGR-05	7/24/2012	14	39
	4/22/2013	13	37
	6/18/2015	14	35
CS-WB03-LGR-06	7/24/2012	14	51
	4/23/2013	13	48
	6/18/2015	14	50
CS-WB03-LGR-07	7/25/2012	18	59
	4/23/2013	13	52
	6/18/2015	13	45
CS-WB03-LGR-08	7/25/2012	12	37
	4/23/2013	9.8	29
	6/18/2015	11	28
CS-WB04-BS-01	5/18/2015	17	35
CS-WB04-BS-02	5/18/2015	23	60
CS-WB04-CC-01	5/18/2015	20	86
CS-WB04-CC-02	5/18/2015	26	130
CS-WB04-CC-03	5/18/2015	32	140
CS-WB04-LGR-01	7/26/2012	15	75
	4/24/2013	11	68
	12/2/2013	12	77
	3/6/2014	11	0.26
	6/25/2014	11	74
	9/10/2014	11	73
	12/8/2014	11	69
	3/24/2015	11	71
	5/19/2015	11	65
	9/22/2015	12	67
	12/3/2015	11	67
	3/8/2016	11	69
	6/9/2016	9.8	70
	9/20/2016	11	71
	12/14/2016	9.9	65
	3/22/2017	10	62
	7/10/2017	11	78
	10/4/2017	10	69
	12/13/2017	11	73
	3/8/2018	11	72
	6/13/2018	13	72
	9/17/2018	10	69
	12/10/2018	10	55
CS-WB04-LGR-03	7/26/2012	14	54
	4/24/2013	15	49
	5/19/2015	14	50
CS-WB04-LGR-04	7/26/2012	14	50

	4/24/2013	14	46
	5/19/2015	15	49
CS-WB04-LGR-06	7/26/2012	11	22
	4/24/2013	11	21
	5/18/2015	11	21
CS-WB04-LGR-07	7/26/2012	17	47
	4/24/2013	12	22
	5/18/2015	11	22
CS-WB04-LGR-08	7/26/2012	11	26
	4/24/2013	12	23
	5/18/2015	11	25
CS-WB04-LGR-09	7/25/2012	15	16
	4/24/2013	15	16
	5/18/2015	15	15
CS-WB04-LGR-10	7/25/2012	18	15
	4/24/2013	19	14
	5/18/2015	18	13
I10-4	3/7/2012	11	16
	8/3/2012	12	17
	8/6/2012	12	16
	8/16/2012	11	16
	8/30/2012	11	16
	4/23/2013	11	17
IIW-01	5/21/2013	17	91
	9/26/2018	8.8	250
	12/12/2018	8.6	260
IIW-02	5/20/2013	16	25
	9/26/2018	16	3,200
	12/12/2018	15	4,100
IIW-03	5/20/2013	100	7,500
	9/26/2018	7.1	1,800
	12/12/2018	7.8	1,100
IIW-04	5/20/2013	15	22
	9/26/2018	15	1,900
	12/12/2018	16	2,800
Middle-IC	8/25/2015	19	160
	9/9/2015	54	140
	9/24/2015	66	160
	12/1/2015	25	99
	1/14/2016	35	130
	2/10/2016	25	420
	3/11/2016	23	180
	6/22/2016	20	150
	10/5/2016	16	130
	11/30/2016	23	160

Injection Wells		4/3/2017	19	160
		7/6/2017	33	210
		10/5/2017	22	130
		12/28/2017	12	87
		3/13/2018	19	130
		6/25/2018	15	180
		9/24/2018	3.8	44
		12/12/2018	3.1	36
	SIW-01	9/3/2015	66	8,500
		9/9/2015	72	31,000
		9/24/2015	68	17,000
		12/1/2015	86	770
		1/14/2016	69	9,400
		2/10/2016	56	14,000
		3/11/2016	35	8,700
		6/22/2016	89	9,800
		10/5/2016	29	700
		11/30/2016	44	6,100
		4/3/2017	53	4,900
		7/6/2017	88	26,000
		10/6/2017	53	830
		12/14/2017	120	44,000
		3/13/2018	45	10,000
		6/25/2018	38	5,800
		9/27/2018	44	2,900
		12/13/2018	26	2,900
	South-IC	8/25/2015	5.4	38
		9/9/2015	19	25
		9/24/2015	100	120
		12/1/2015	12	27
		1/14/2016	47	140
		2/10/2016	15	87
	3/11/2016	41	190	
	6/22/2016	50	160	
	10/5/2016	21	120	
	11/30/2016	18	95	
	4/3/2017	18	69	
	7/6/2017	27	200	
	10/5/2017	2.3	9.4	
	12/28/2017	33	220	
	3/13/2018	19	100	
	6/25/2018	18	86	
	9/27/2018	2.7	21	
	12/12/2018	24	170	

Detections are bolded. Results not highlighted are detections above the RL.

Not detected. Reported result is reported as the MDL and flagged U.

Trace value. Reported result is a value between the MDL and the RL and is flagged F.