



Technical Memorandum

2019 Groundwater Monitoring Summary (Including Fourth Quarter 2019 Groundwater Sampling Event) National Aeronautics and Space Administration Jet Propulsion Laboratory, Pasadena, California

Final

February 2020

This technical memorandum summarizes the results of the fourth quarter 2019 groundwater sampling event completed as part of the groundwater monitoring program at the National Aeronautics and Space Administration (NASA) Jet Propulsion Laboratory (JPL). The fourth quarter 2019 groundwater sampling event was conducted from October 11 through October 25, 2019.

INTRODUCTION

During the fourth quarter 2019 sampling event, groundwater samples were collected from 25 JPL monitoring wells (MWs), both on- and off-facility and analyzed for volatile organic compounds (VOCs), total chromium, hexavalent chromium [Cr(VI)], and perchlorate. In select wells, chloride, nitrate, sulfate, nitrite, and orthophosphate were also analyzed. Figure 1 shows the locations of the groundwater monitoring wells.

Groundwater samples were shipped to BC Laboratories, Inc., in Bakersfield, California, for chemical analysis. BC Laboratories, Inc. is certified by the SWRCB. Sample collection procedures and sample analyses were conducted in accordance with the approved *Work Plan for Performing a Remedial Investigation/Feasibility Study*¹. No reported data were rejected for non-compliance with method requirements during validation and no reported data were deemed unusable.

Table 1 summarizes analytical results for VOCs and perchlorate and Table 2 summarizes analytical results for metals from the last five sampling events. Table 3 summarizes VOC and perchlorate concentrations in production wells located near the JPL facility from the last five sampling events. No tentatively identified compounds (TICs) were detected in the samples collected during the fourth quarter of 2019.

Figures summarizing the results from the fourth quarter 2019 sampling event are included in this technical memorandum. Figure 2 shows the lateral extent of carbon tetrachloride concentrations in groundwater and Figure 3 provides a cross-section detailing the horizontal and vertical extent of carbon tetrachloride. Figure 4 shows the lateral extent of perchlorate concentrations in groundwater and Figure 5 provides a cross-section detailing the horizontal and vertical extent of perchlorate in groundwater. Figure 6 shows the lateral extent of tetrachloroethene (PCE) concentrations in groundwater. Figure 7 shows the lateral extent of trichloroethene (TCE) concentrations in groundwater and Figure 8 shows groundwater elevation contours from the fourth quarter 2019 event and groundwater flow directions.

Attachment 1 summarizes the field and laboratory quality assurance (QA), data verification and data validation procedures utilized for the JPL groundwater monitoring program. Attachment 2 contains

¹ Ebasco. 1993. *Work Plan for Performing a Remedial Investigation/Feasibility Study*, National Aeronautics and Space Administration Jet Propulsion Laboratory, Pasadena, California. December.

the data validation reports performed by an independent subcontractor, Laboratory Data Consultants, Inc. (LDC). Attachment 3 contains the laboratory analytical reports prepared by BC Laboratories, Inc. Attachment 4 contains the groundwater sample collection field logs for the JPL groundwater monitoring wells. Attachment 5 contains water level field measurement log sheets. Attachment 6 presents time series plots for select wells and analytes. Attachment 7 presents historical perchlorate, VOC and metals concentrations from 1996 to present. A summary of the well construction details for the JPL groundwater monitoring wells is included in Attachment 8.

The groundwater monitoring wells have been grouped into four categories:

- On-facility source area wells (MW-7, MW-13, MW-16 and MW-24);
- Other on-facility wells (MW-6, MW-8, MW-11, MW-22 and MW-23);
- Perimeter off-facility wells (MW-1, MW-3, MW-4, MW-5, MW-9, MW-10, MW-12, MW-14 and MW-15 [MW-1 and MW-9 are only sampled during the second and fourth quarter events]); and
- Off-facility wells (MW-17, MW-18, MW-19, MW-20, MW-21, MW-25 and MW-26).

MW-2 was decommissioned in July 2018. Well MW-2 had not been sampled during the groundwater monitoring program since it was replaced with well MW-14.

ON-FACILITY SOURCE AREA WELLS

On-facility source area wells consist of wells that have historically contained the highest concentration of site-related chemicals. This group of wells is located within the JPL facility (on-facility) and consists of monitoring wells MW-7, MW-13, MW-16 and MW-24.

The source area treatment system has been operating since 2005 and addresses groundwater beneath the JPL facility, which has historically contained the highest concentrations of perchlorate and VOCs (i.e., the source area). Operation of the source area treatment system appears to have resulted in a significant reduction of chemicals of interest in wells MW-7, MW-16 and MW-24, which are located within the treatment zone. Additional details regarding chemical concentrations in the on-facility source area wells are presented below.

It should be noted that during the fourth quarter 2020, MW-13 did not have sufficient water for purging. Therefore, grab samples were collected for all analytes except metals.

PERCHLORATE ANALYTICAL RESULTS

- During the fourth quarter 2019, perchlorate was detected above the state MCL (6.0 µg/L) in wells MW-13 (40.0 µg/L).
- Perchlorate was detected below the state MCL (6.0 µg/L) in MW-7 (0.8J µg/L), MW-16 (1.5J µg/L) and MW-24 (Screens 1, 2 and 4 [2.1J µg/L, 5.6 µg/L and 1.3J µg/L, respectively]). 'J' qualifier indicates an estimated concentration. No other perchlorate detections occurred in the on-facility wells during the fourth quarter 2019 with a reporting limit of 4.0 µg/L.

- Perchlorate concentrations increased from the third quarter 2019 to the fourth quarter 2019 in MW-13 (29.0 µg/L to 40.0 µg/L) and MW-24 (Screen 2 and 4 [4.5 µg/L to 5.6 µg/L and non-detect to 1.3J µg/L, respectively]).
- Perchlorate concentrations decreased from the third quarter 2019 to the fourth quarter 2019 in MW-7 (4.3 µg/L to 0.8J µg/L), MW-16 (2.9J µg/L to 1.5J µ/L) and MW-24 (Screen 1 [17.0 µg/L to 2.1J µg/L]).
- During the fourth quarter 2019, perchlorate concentrations remained non-detect in MW-24 (Screens 3 and 5).
- During 2019, perchlorate concentrations ranged from an estimated 0.8J µg/L to 36.0 µg/L in MW-7, 29.0 µg/L to 210.0 µg/L in MW-13, non-detect to 2.9J µg/L in MW-16, 2.1J µg/L to 110.0 µg/L in MW-24 (Screen 1), 2.3J µg/L to 5.6 µg/L in MW-24 (Screen 2), non-detect to 1.3J µg/L (Screen 4) and non-detect only in MW-24 (Screens 3 and 5).

VOC ANALYTICAL RESULTS

- During the fourth quarter 2019 carbon tetrachloride was not detected in the on-facility wells with a reporting limit of 0.5 µg/L.
- In 2019, carbon tetrachloride was not detected above the state MCL (0.5 µg/L) in any of the on-facility source area wells. Carbon tetrachloride was detected below the state MCL in MW-13 (first quarter [0.3J µg/L]) and MW-16 (first quarter [0.2J µg/L]).
- During the fourth quarter 2019 TCE was not detected in the on-facility wells with a reporting limit of 0.5 µg/L.
- In 2019, TCE was not detected above the state MCL (0.5 µg/L) in any of the on-facility source area wells. TCE was detected below the state MCL in MW-13 (first quarter [0.3J µg/L]).
- During the fourth quarter 2019 PCE was not detected in the on-facility wells with a reporting limit of 0.5 µg/L.
- In 2019, PCE was not detected above the state MCL (0.5 µg/L) in any of the on-facility source area wells. PCE was detected below the state MCL during the first quarter in MW-13 (0.4J µg/L) and MW-24 (Screen 1 [0.3J µg/L]).

OTHER NOTABLE ANALYTICAL RESULTS

- In the October 2014 technical memorandum,² it was recommended that metals analysis would not be performed on the shallow standpipe wells when insufficient water was present for purging. As a result, samples were not collected for metals in MW-13 during the fourth quarter 2020 due to insufficient water for purging.
- During the fourth quarter 2019, Cr(VI)³ was detected below the state MCL (50.0 µg/L) in MW-7 (1.0 µg/L), MW-16 (0.7 µg/L) and MW-24 (Screens 1, 2, 3, 4 and 5 [0.1J µg/L, 2.1

² NASA. 2014. *Technical Memorandum Third Quarter 2014 Groundwater Monitoring Summary, National Aeronautics and Space Administration Jet Propulsion Laboratory, Pasadena, California*. October.

³ On August 1, 2017, the State Water Resources Control Board (SWRCB) removed the previously adopted MCL for Cr(VI). See https://www.waterboards.ca.gov/press_room/press_releases/2017/pr080117_mcl_removal.pdf.

µg/L, 0.04] µg/L, 0.1] µg/L and 2.5 µg/L, respectively]). Cr(VI) results were non-detect in MW-24 (Screen 3) with a reporting limit of 0.2 µg/L.

- In 2019, Cr(VI) was detected below the state MCL (50.0 µg/L) in MW-7 (second through fourth quarters [2.3 µg/L, 1.6 µg/L and 1.0 µg/L, respectively]), MW-13 (first through third quarters [2.9 µg/L, 3.7 µg/L and 3.1 µg/L, respectively]), MW-16 (second through fourth quarters [1.1 µg/L, 1.1 µg/L and 0.7 µg/L, respectively]), and MW-24 (Screen 1 [second through fourth quarters (0.6 µg/L, 0.7 µg/L and 0.1] µg/L, respectively)], Screen 2 [all quarters (2.0 µg/L, 1.9 µg/L, 1.6 µg/L and 2.1 µg/L, respectively)], Screen 3 [fourth quarter (0.04] µg/L), Screen 4 [third and fourth quarters (0.1] µg/L, each)] and Screen 5 [second and fourth quarters (2.5 µg/L, each)]).
- During the fourth quarter 2019, total chromium was detected above the state MCL (50.0 µg/L) and federal MCL (100.0 µg/L) in MW-16 (16,000 µg/L). Total chromium was detected below the state MCL during the fourth quarter 2019 in MW-7 (20.0] µg/L) and MW-24 (Screens 1, 2 and 5 [3.6 µg/L, 2.1] µg/L and 3.1 µg/L, respectively]). Total chromium results were non-detect in MW-24 (Screens 3 and 4) with a reporting limit of 3.0 µg/L.
- Since the fourth quarter 2013 total chromium has been detected in MW-16 above the federal MCL (100.0 µg/L) with four exceptions (second quarter 2017 [4.7] µg/L], third quarter 2017 [76.0 µg/L], second quarter 2019 [1.6] µg/L] and third quarter 2019 [40.0 µg/L], respectively). The total chromium detections above the federal MCL (100.0 µg/L) ranged from 260.0 µg/L (fourth quarter 2013) to 16,000 µg/L (fourth quarter 2019). The detection of 16,000 µg/L during the fourth quarter 2019 is the highest detection in MW-16 since sampling began in 1996. The abnormally high total chromium concentration correlates with the sample collection method in which the well was purged with a bailer prior to sampling instead of collecting a grab sample. This collection method yielded results that are likely not representative of aquifer conditions.
- In 2019, total chromium was detected above the state MCL (50.0 µg/L) and federal MCL (100.0 µg/L) in MW-16 (fourth quarter [16,00.0 µg/L]). Total chromium was detected below the state MCL in MW-7 (second through fourth quarters [7.0 µg/L, 25.0 µg/L and 20.0] µg/L, respectively]), MW-13 (second through third quarters [15.0 µg/L, 5.7 µg/L and 8.5 µg/L, respectively]), MW-16 (second and third quarters [1.6] µg/L and 40.0 µg/L, respectively]) and MW-24 (Screen 1 [second through fourth quarters (6.3 µg/L] 1.7] µg/L and 3.6 µg/L, respectively)], Screen 2 [second through fourth quarters (2.0] µg/L, 1.3] µg/L and 2.1] µg/L, respectively)], Screen 3 [second quarter (0.6] µg/L)] and Screen 5 [fourth quarter (3.1 µg/L)]. Total chromium results in the on-facility source area wells will continue to be closely evaluated during subsequent sampling events.

OTHER ON-FACILITY WELLS

This well group consists of monitoring wells MW-6, MW-8, MW-11, MW-22 and MW-23. These wells are located on the JPL facility but outside the source area.

PERCHLORATE ANALYTICAL RESULTS

- During the fourth quarter 2019, perchlorate was detected above the state MCL (6.0 µg/L) in MW-22 (Screen 1 [170.0 µg/L]).
- During the fourth quarter 2019, perchlorate was detected below the state MCL (6.0 µg/L) in MW-6 (3.4J µg/L), MW-22 (Screens 2 through 4 [2.6J µg/L, 1.8J µg/L and 1.0J µg/L, respectively]) and MW-23 (Screens 1 through 4 [1.3J µg/L, 3.9J µg/L, 2.6J µg/L and 1.2J µg/L, respectively]).
- During the fourth quarter 2019, perchlorate was not detected in MW-8, MW-11 (Screens 1 through 5), MW-22 (Screen 5) and MW-23 (Screen 5) with a reporting limit of 4.0 µg/L.
- Perchlorate concentrations increased from their respective last sampling event to the fourth quarter 2019 in MW-22 (Screen 1 [160.0 µg/L to 170.0 µg/L]) and MW-23 (Screen 4 [0.9J µg/L to 1.2J µg/L]).
- Perchlorate concentrations decreased from their respective last sampling event to the fourth quarter 2019 in MW-6 (3.7J µg/L to 3.4J µg/L), MW-11 (Screen 1 [1.2J µg/L to non-detect]), MW-22 (Screens 2 and 3 [2.9J µg/L to 2.6J µg/L and 2.5J µg/L to 1.8J µg/L, respectively]) and MW-23 (Screens 1 through 3 [1.7J µg/L to 1.3J µg/L, 4.0 µg/L to 3.9J µg/L and 3.1J µg/L to 2.6J µg/L, respectively]).
- Perchlorate concentrations remained unchanged from the second quarter to the fourth quarter 2019 in MW-22 (Screen 4 [1.0J µg/L]).
- During 2019, perchlorate concentrations were detected above the state MCL (6.0 µg/L) in MW-8 (first quarter [15.0 µg/L]) and MW-22 (Screen 1 [first through third quarters (65.0 µg/L, 160.0 µg/L and 170.0. µg/L), respectively])).
- Since the fourth quarter 2013, perchlorate detections in MW-8 have been above the state MCL (6.0 µg/L) ranging from 7.3 µg/L (first quarter 2015) to 180.0 µg/L (third quarter 2014) with 9 exceptions: first quarter 2016 (non-detect), fourth quarter 2016 (4.2 µg/L), second through fourth quarters 2017 (1.2J µg/L, non-detect and 1.2J µg/L, respectively), third quarter 2018 (4.2 J µg/L) and second through fourth quarters 2019 (non-detect).
- Since the third quarter 1997, perchlorate detections in MW-22 (Screen 1) have been either non-detect or below the state MCL (6.0 µg/L) with 10 exceptions: third quarter 1998 (6.4 µg/L), first quarter 1999 (6.4 µg/L), first through fourth quarters 2011 (22.9 µg/L, 40.1 µg/L, 98.7 µg/L and 85.2 µg/L, respectively), second quarter 2012 (6.5 µg/L) and second through fourth quarters 2019 (65.0 µg/L, 160.0 µg/L and 170.0 µg/L, respectively).

VOC ANALYTICAL RESULTS

- During the fourth quarter 2019, carbon tetrachloride was not detected in the other on-facility wells with a reporting limit of 0.5 µg/L.
- Carbon tetrachloride was not detected during 2019 in the other on-facility wells with a reporting limit of 0.5 µg/L.
- During the fourth quarter 2019, TCE was detected below the state and federal MCL (5.0 µg/L) in MW-6 (2.6 µg/L), MW-22 (Screen 1 [0.5J µg/L]) and MW-23 (Screen 2 [1.4 µg/L]). No other TCE detections occurred in the remaining other on-facility wells.

- In 2019, TCE was detected below the state and federal MCL (5.0 µg/L) in MW-6 (first through fourth quarters [4.4 µg/L, 4.8 µg/L, 3.2 µg/L, and 2.6 µg/L, respectively]), MW-11 (Screen 3 [second and fourth quarters (0.3] µg/L and 0.2] µg/L, respectively) and Screen 4 [third quarter (0.2] µg/L)), MW-22 (Screen 1 [all quarters (0.5] µg/L, 0.8 µg/L, 0.2] µg/L and 0.5] µg/L, respectively)) and Screen 2 [third quarter (0.2] µg/L)) and MW-23 (Screen 1 [first through third quarters (1.6 µg/L, 0.4] µg/L and 0.2] µg/L, respectively)) and Screen 2 [all quarters (0.9 µg/L, 2.1 µg/L, 3.0 µg/L and 1.4 µg/L, respectively))). No other TCE detections occurred in the remaining other on-facility wells.
- During the fourth quarter 2019, PCE was detected below the state and federal MCL (5.0 µg/L) in MW-6 (0.5 µg/L) and MW-23 (Screen 2 [0.3] µg/L)). No other PCE detections occurred in the remaining other on-facility wells during the fourth quarter 2019.
- In 2019, PCE was detected below the state and federal MCL (5.0 µg/L) in MW-6 (all quarters [0.90 µg/L, 1.0 µg/L, 0.8 µg/L and 0.5 µg/L, respectively]), MW-22 (Screen 1 [first quarter (0.3] µg/L)) and MW-23 (Screens 1 [first quarter (0.3] µg/L)] and 2 [all quarters (0.3] µg/L, 0.5] µg/L, 0.5] µg/L and 0.3] µg/L, respectively))). No other PCE detections occurred in the remaining other on-facility wells.

OTHER NOTABLE ANALYTICAL RESULTS

- During the fourth quarter 2019, Cr(VI) was detected below the state MCL (50.0 µg/L) in MW-6 (2.1 µg/L), MW- 8 (0.6 µg/L), MW-22 (Screens 1 through 5 [0.6 µg/L, 1.6 µg/L, 0.9 g/L, 2.5 µg/L and 0.1] µg/L, respectively)) and MW-23 (Screens 1 through 4 [0.4 µg/L, 0.9 µg/L, 2.6 µg/L, and 2.9 µg/L, respectively]). No other Cr(VI) detections occurred in the remaining other on-facility wells during the fourth quarter 2019.
- In 2019, detections of Cr(VI) in the other on-facility wells were relatively consistent (low detections or non-detect) and all remained below the state MCL of 50.0 µg/L.
- During the fourth quarter 2019, total chromium was detected below the state MCL (50.0 µg/L) in MW-6 (39.0 µg/L), MW-8 (4.0] µg/L), MW-11 (Screens 1, 3 and 5 [4.5 µg/L, 1.3] µg/L and 1.2] µg/L, respectively]), MW-22 (Screens 2 through 4 [1.6] µg/L, 1.2] µg/L and 2.3] µg/L, respectively)) and MW-23 (Screens 1 through 4 [0.6] µg/L, 0.6] µg/L, 2.6] µg/L and 2.4] µg/L, respectively)). No other total chromium detections occurred in the remaining other on-facility wells during the fourth quarter 2019.
- In 2019, detections of total chromium in the other on-facility wells (MW-8, MW-11, MW-22 and MW-23) were relatively consistent (low detections or non-detect) and all remained below the state MCL of 50.0 µg/L.
- Total chromium in well MW-6 has been detected below the state MCL of 50.0 µg/L seven times since the third quarter 2014 (26.0 µg/L [third quarter 2014], 27.0 µg/L [first quarter 2017], 24.0 µg/L [second quarter 2018], 13.0 µg/L [first quarter 2019], 48.0 [second quarter 2019], 9.9 µg/L [third quarter 2019] and 39.0 [fourth quarter 2019], while all other sampling events since the second quarter 2014 have been above the state MCL of 50.0 µg/L. Total chromium results in the other on-facility wells will continue to be closely evaluated during subsequent sampling events.

PERIMETER OFF-FACILITY WELLS

The perimeter off-facility wells are located near the JPL fence line along the perimeter of the property. This group of wells consists of MW-1, MW-3, MW-4, MW-5, MW-9, MW-10, MW-12, MW-14 and MW-15.

It should be noted that during the fourth quarter 2019, MW-12 (Screen 1) and MW-14 (Screen 1) were dry and no samples were collected.

PERCHLORATE ANALYTICAL RESULTS

- During the fourth quarter 2019, perchlorate was detected above the state MCL (6.0 µg/L) in well MW-4 (Screen 2 [32.0 µg/L]).
- Perchlorate was detected below the state MCL (6.0 µg/L) in MW-3 (Screens 3 through 5 [1.4] µg/L, 1.0] µg/L and 0.9] µg/L, respectively), MW-12 (Screens 2 through 5 [1.0] µg/L, 3.6] µg/L, 2.1] µg/L, and 1.7] µg/L, respectively) and MW-14 (Screens 2 through 4 [3.5] µg/L, 4.0 µg/L and 4.1 µg/L, respectively).
- During the fourth quarter 2019, perchlorate was non-detect in MW-1, MW-3 (Screens 1 and 2), MW-4 (Screens 1, 3, 4 and 5), MW-5, MW-9, MW-10, MW-14 (Screen 5) and MW-15.
- Perchlorate concentrations increased slightly from their respective last sampling event to the fourth quarter 2019 in MW-12 (Screen 2 [non-detect to 1.0] µg/L) and MW-14 (Screen 3 [3.9] µg/L to 4.0 µg/L).
- Perchlorate concentrations decreased slightly from their respective last sampling event to the fourth quarter 2019 in MW-1 (0.9] µg/L to non-detect), MW-3 (Screens 4 and 5 [1.1] µg/L to 1.0] µg/L and 1.1] µg/L to 0.9] µg/L, respectively), MW-4 (Screen 2 [34.0 µg/L to 32.0 µg/L]), MW-12 (Screens 3 through 5 [4.9 µg/L to 3.6 µg/L, 2.6] µg/L to 2.1] µg/L and 2.2] µg/L to 1.7] µg/L, respectively) and MW-14 (Screens 2 and 4 [4.2 µg/L to 3.5] µg/L and 4.6 µg/L to 4.1 µg/L, respectively).
- Perchlorate concentrations remained unchanged in MW-3 (Screen 3 [1.4] µg/L)
- Perchlorate concentrations in MW-3 (Screen 2) have been non-detect or detected below the state MCL (6.0 µg/L) since the second quarter 2018. However, during the period from second quarter 2014 to first quarter 2018, perchlorate was detected in MW-3 (Screen 2) thirteen times at concentrations above the state MCL (6.0 µg/L) ranging from 9.3 µg/L to 68.0 µg/L. Perchlorate concentrations will continue to be closely monitored since MW-3 is within the capture zone of the MHTS.
- The perchlorate concentration of 32.0 µg/L in MW-4 (Screen 2) continues to be down from the high detection of 250.0 µg/L (third quarter 2013). Since the first quarter 2011, concentrations have exceeded the state MCL (6.0 µg/L [ranging from 6.5 µg/L to 250.0 µg/L]) with thirteen exceptions: first, third, and fourth quarters of 2015, all quarters of 2016, all quarters of 2017, and first and third quarters of 2018. MW-4 is within the capture zone of the MHTS.
- Perchlorate concentrations in MW-12 (Screen 2) were detected below the state MCL (6.0 µg/L) from the first quarter 2008 through the third quarter 2010. Since the fourth quarter 2010, the detections have been above the state MCL (6.0 µg/L) during eight of the last thirty-six sampling events. It should be noted that perchlorate concentrations in MW-

12 (Screen 2) have been below the state MCL (6.0 µg/L) since fourth quarter 2013 ranging from non-detect (twelve of the twenty-four quarters) to 5.6 µg/L (fourth quarter 2013). MW-12 is within the capture zone of the MHTS.

- During 2019, perchlorate concentrations in MW-12 and MW-14 remained below the state MCL (6.0 µg/L) for all quarters.

VOC ANALYTICAL RESULTS

- During the fourth quarter 2019, carbon tetrachloride was detected above the state MCL (0.5 µg/L) in MW-12 (Screen 3 [0.8 µg/L]) and below the state MCL (0.5 µg/L) in MW-12 (Screen 4 [0.2] µg/L). No other carbon tetrachloride detections occurred in the perimeter off-facility wells during the fourth quarter 2019.
- In 2019, carbon tetrachloride was detected above the state MCL (0.5 µg/L) in MW-12 (Screen 3 [second through fourth quarters (0.7 µg/L, 2.2 µg/L and 0.8 µg/L, respectively)]) and below the state MCL (0.5 µg/L) in MW-12 (Screen 3 [first quarter (0.5] µg/L)], Screen 4 [all quarters (0.3] µg/L, 0.3] µg/L, 0.4] µg/L and 0.2] µg/L, respectively)], and Screen 5 [first through third quarter (0.4] µg/L, 0.2] µg/L and 0.3] µg/L, respectively)]).
- During the fourth quarter 2019, TCE was detected below the state and federal MCL (5.0 µg/L) in MW-4 (Screens 2 through 5 [0.4] µg/L, 0.6 µg/L, 0.6 µg/L and 0.5 µg/L, respectively)) and MW-14 (Screens 2 and 3 [1.5 µg/L and 0.9 µg/L, respectively]). No other TCE detections occurred in the perimeter off-facility wells during the fourth quarter 2019.
- In 2019, TCE was not detected above the state and federal MCL (5.0 µg/L) in the perimeter off-facility wells. Detections of TCE in the perimeter off-facility wells remained relatively consistent ranging from non-detect to 1.9 µg/L.
- During the fourth quarter 2019, PCE was detected below the state and federal MCL (5.0 µg/L) in wells MW-3 (Screen 3 [0.4] µg/L)) and MW-14 (Screens 2 and 3 [0.3] µg/L and 0.4] µg/L, respectively)). No other PCE detections occurred in the perimeter off-facility wells during the fourth quarter 2019.
- In 2019, PCE was not detected above the state and federal MCL (5.0 µg/L) in the perimeter off-facility wells. Detections of PCE in the perimeter off-facility wells remained relatively consistent ranging from non-detect to 0.5 µg/L.

OTHER NOTABLE ANALYTICAL RESULTS

- During the fourth quarter 2019, Cr(VI) was detected below the state MCL (50.0 µg/L) in MW-3 (Screens 3 through 5 [1.0 µg/L, 0.2] µg/L and 0.1] µg/L, respectively)), MW-4 (Screens 1 and 2 [0.1] µg/L and 0.7 µg/L, respectively)), MW-9 (0.4 µg/L), MW-10 (1.1 µg/L), MW-12 (Screens 2 through 5 [0.1] µg/L, 0.2 µg/L, 0.6 µg/L and 1.0 µg/L, respectively)), MW-14 (Screens 2 through 5 [0.4 µg/L, 0.1] µg/L, 2.1 µg/L and 0.1] µg/L, respectively)) and MW-15 (0.5 µg/L). No other Cr(VI) detections occurred in the perimeter off-facility wells during the fourth quarter 2019.
- In 2019, detections of Cr(VI) in the perimeter off-facility wells were relatively consistent, ranging from non-detect to 2.1 µg/L and remained below the state MCL (50.0 µg/L).

- During the fourth quarter 2019, total chromium was detected above the state MCL (50.0 µg/L) in MW-3 (Screen 4 [95.0 µg/L]) and MW-9 (Screen 3 [80.0] µg/L). Total chromium was detected below the state MCL (50.0 µg/L) in MW-3 (Screens 3 and 5 [2.1] µg/L and 3.6 µg/L, respectively), MW-4 (Screens 2, 3 and 5 [1.4] µg/L, 3.8 µg/L and 9.5 µg/L, respectively), MW-5 (0.7] µg/L), MW-10 (4.1 µg/L), MW-12 (Screens 2 and 5 [0.5] µg/L and 0.6] µg/L, respectively), MW-14 (Screen 4 [1.9] µg/L) and MW-15 (1.7] µg/L). No other total chromium detections occurred in the perimeter off-facility wells during the fourth quarter 2019.
- Total chromium has been detected in MW-3 (Screen 4) twice at concentrations above the state MCL (50.0 µg/L) since the third quarter 1996. The first occurred during the first quarter 2015 (120.0] µg/L) and the second occurred during the fourth quarter 2019 (95.0 µg/L).
- Total chromium has been detected at concentrations above the state MCL (50.0 µg/L) in MW-4 (Screen 3) six times (53.0 µg/L [third quarter 2019], 100.0 µg/L [second quarter 2019], 87.0] µg/L [fourth quarter 2017], 55.0 µg/L [second quarter 2017], 93.0 µg/L [second quarter 2016] and 120.0] µg/L [third quarter 2015] since the third quarter 1996.
- Total chromium has been detected at concentrations above the state MCL (50.0 µg/L) in MW-9 four times (80.0] µg/L [fourth quarter 2019], 130.0 µg/L [fourth quarter 2018], 100.0 µg/L [fourth quarter 2016] and 110.0 µg/L [fourth quarter 2015] since the third quarter 1996.
- In 2019, total chromium remained relatively consistent in the perimeter off-facility wells below the state MCL (50.0 µg/L) and federal MCL (100.0 µg/L) ranging from non-detect to 47.0 µg/L with four exceptions: fourth quarter MW-3 (Screen 4 [95.0 µg/L]), second and third quarters MW-4 (Screen 3 [100.0 µg/L and 53.0 µg/L, respectively]) and fourth quarter MW-9 (80.0] µg/L).

OFF-FACILITY WELLS

The off-facility wells consist of monitoring wells MW-17, MW-18, MW-19, MW-20, MW-21, MW-25 and MW-26. These wells are located near and down gradient of the two off-facility treatment plants: MHTS and Lincoln Avenue Water Company (LAWC) treatment system. Daily operation of the MHTS began in February 2011. Operation of the LAWC system began in July 2004.

PERCHLORATE ANALYTICAL RESULTS

- During the fourth quarter 2019 sampling event, concentrations of perchlorate above the state MCL (6.0 µg/L) were reported in samples collected from wells MW-18 (Screen 4 [16.0 µg/L]) and MW-25 (Screens 1 through 4 [7.1 µg/L, 13.0 µg/L, 9.3 µg/L, and 7.8 µg/L, respectively]).
- Perchlorate was detected below the state MCL (6.0 µg/L) in MW-17 (Screens 3 through 5 [4.6 µg/L, 3.8] µg/L and 4.2 µg/L, respectively), MW-18 (Screen 3 [2.0] µg/L), MW-19 (Screens 2 through 5 [3.7] µg/L, 3.5] µg/L, 3.0] µg/L and 1.7] µg/L, respectively), MW-20 (Screen 2 [2.2] µg/L), MW-21 (Screens 2 through 5 [1.8] µg/L, 2.7] µg/L, 2.7] µg/L, and 2.1] µg/L, respectively) and MW-26 (Screens 1 and 2 [1.8] µg/L and 3.0] µg/L, respectively)).

- During the fourth quarter 2019, concentrations of perchlorate were not detected in MW-17 (Screens 1 and 2), MW-18 (Screens 2 and 5), MW-19 (Screen 1), MW-20 (Screens 3 through 5), and MW-25 (Screen 5) with a reporting limit of 4.0 µg/L.
- Perchlorate concentrations increased slightly from their respective last sampling event to the fourth quarter 2019 in MW-17 (Screen 5 [3.2] µg/L to 4.2 µg/L), MW-20 (Screen 2 [2.0] µg/L to 2.2] µg/L), MW-25 (Screen 1 [6.7 µg/L to 7.1 µg/L]) and MW-26 (Screen 2 [2.9] µg/L to 3.0] µg/L, respectively).
- Perchlorate concentrations decreased from their respective last sampling event to the fourth quarter 2019 in MW-17 (Screens 3 and 4 [5.5 µg/L to 4.6 µg/L and 4.4 µg/L to 3.8] µg/L, respectively), MW-18 (Screen 3 [3.0 µg/L to 2.0 µg/L]), MW-19 (Screens 1 through 5 [1.7] µg/L to non-detect, 3.8] µg/L to 3.7] µg/L, 3.8] µg/L to 3.5] µg/L, 3.7] µg/L to 3.0] µg/L and 2.3] µg/L to 1.7] µg/L, respectively), MW-21 (Screens 2 through 5 [2.9] µg/L to 1.8] µg/L, 3.9] µg/L to 2.7] µg/L, 3.5] µg/L to 2.7] µg/L and 2.8] µg/L to 2.1] µg/L, respectively), MW-25 (Screens 3 and 4 [10.0 µg/L to 9.3 µg/L and 8.4 µg/L to 7.8 µg/L, respectively]) and MW-26 (Screen 1 [3.1] µg/L to 1.8] µg/L).
- Perchlorate concentrations remained unchanged in MW-18 (Screen 4 [16.0 µg/L]) and MW-25 (Screen 2 [13.0 µg/L]).
- In 2019, perchlorate was detected above the state MCL (6.0 µg/L) in MW-17 (Screen 3 [second quarter (6.5 µg/L)] and below the state MCL (6.0 µg/L) in [first, third and fourth quarters (4.6 µg/L, 5.5 µg/L and 4.6 µg/L, respectively)]. Perchlorate concentrations in MW-17 (Screen 3) have remained relatively stable since 2011 with concentrations ranging from non-detect to 8.5 µg/L. MW-17 is located within the capture zone of the LAWC treatment system.
- In 2019, perchlorate was detected below the state MCL (6.0 µg/L) in MW-17 (Screen 4) during all quarters of 2019 (3.9] µg/L, 3.7] µg/L, 4.4 µg/L and 3.8] µg/L, respectively). The perchlorate concentration of 3.8] µg/L in MW-17 (Screen 4) during the fourth quarter 2019 is the twentieth detection below the state MCL (6.0 µg/L) since the first quarter 2015. From the third quarter 2002 to the fourth quarter 2012, the perchlorate concentrations in MW-17 (Screen 4) had been either non-detect or below the state MCL (6.0 µg/L) with only one detection that exceeded the state MCL (second quarter 2003 [6.5 µg/L]). From the first quarter 2013 through the fourth quarter 2014, the perchlorate concentrations in MW-17 (Screen 4) exceeded the state MCL in seven of the eight quarters with exceedances ranging from 6.8 µg/L to 18.0 µg/L. From the first quarter 2015 to the fourth quarter 2019 sampling events, perchlorate in MW-17 (Screen 4) remained below the state MCL (6.0 µg/L) with concentrations ranging from non-detect (first quarter 2017) to 4.9 µg/L (first quarter 2018). The changes in perchlorate concentrations at MW-17 (Screen 4) are believed to be associated with operation of NASA's mid-plume treatment system, which began operation in 2011.
- The perchlorate detection of 2.0] µg/L in MW-18 (Screen 3) during the fourth quarter 2019 is the tenth consecutive detection below the state MCL (6.0 µg/L). From the fourth quarter 2005 to second quarter 2017 perchlorate concentrations in MW-18 (Screen 3) have been above the state MCL (6.0 µg/L) ranging from 6.2 µg/L (second quarter 2017) to 144.0 µg/L (third quarter 2011) with one exception (non-detect [second quarter 2007]).
- During the period from the third quarter 2008 through first quarter 2012, perchlorate was detected in MW-20 (Screen 4) at concentrations exceeding the state MCL (6.0 µg/L) during

seven of fifteen sampling events. Concentrations exceeding the state MCL ranged from 15.1 µg/L to 123.0 µg/L. Perchlorate was not detected during the remaining eight sampling events between third quarter 2008 and first quarter 2012. During the period from second quarter 2012 to fourth quarter 2019 (i.e., thirty-one quarterly sampling events), perchlorate has not been detected in MW-20 (Screen 4).

- During the period from third quarter 2008 through first quarter 2012, perchlorate was detected in MW-20 (Screen 5) at concentrations exceeding the state MCL (6.0 µg/L) during seven of sixteen sampling events. During this time period, perchlorate concentrations exceeding the state MCL ranged from 11.5 µg/L to 56.5 µg/L. Perchlorate was not detected during the remaining nine sampling events during this period with one exception (4.2 µg/L [second quarter 2011]). From the second quarter 2012 to fourth quarter 2019 perchlorate concentrations have remained non-detect in MW-20 (Screen 5).
- In 2019, perchlorate concentrations in the off-facility wells ranged from non-detect to 17.0 µg/L.

VOC ANALYTICAL RESULTS

- During the fourth quarter 2019, carbon tetrachloride was detected above the state MCL (0.5 µg/L) in MW-18 (Screen 4 [2.2 µg/L]) and below the state MCL (0.5 µg/L) in MW-18 (Screen 3 [0.2] µg/L). No other carbon tetrachloride detections occurred in the remaining off-facility wells during the fourth quarter 2019.
- In 2019, carbon tetrachloride was detected above the state MCL (0.5 µg/L) in MW-18 (Screen 4 [all quarters [2.5 µg/L, 2.8 µg/L, 1.0 µg/L and 2.2 µg/L, respectively]]). In 2019, carbon tetrachloride was detected below the state MCL (0.5 µg/L) in MW-18 (Screen 3 [all quarters (0.3] µg/L, 0.2] µg/L, 0.3] µg/L and 0.2] µg/L, respectively])). No other carbon tetrachloride detections occurred in the remaining off-facility wells during the fourth quarter 2019.
- Prior to the last six sampling events, the carbon tetrachloride concentrations in MW-18 (Screen 3) have exceeded the state MCL (0.5 µg/L) since the first quarter 2005 with concentrations ranging from 0.5 µg/L to 43.0 µg/L. During the last six sampling events, carbon tetrachloride in MW-18 (Screen 3) was 0.3] µg/L (third and fourth quarters 2018 and first and third quarters 2019) and 0.2] µg/L (second and fourth quarters 2019).
- Carbon tetrachloride detections in MW-18 (Screen 4) have exceeded the state MCL since the third quarter 1996 with one exception (non-detect [fourth quarter 2010]).
- During the fourth quarter 2019, TCE was detected in MW-17 (Screens 3 through 5 [2.0 µg/L, 0.9 µg/L and 0.9 µg/L, respectively]), MW-18 (Screen 4 [1.1 µg/L]), MW-19 (Screens 2 and 3 [0.8 µg/L and 0.2] µg/L, respectively]), MW-20 (Screen 2 [0.6 µg/L]), MW-21 (Screens 3 and 4 [0.7 µg/L and 1.0 µg/L, respectively]), MW-25 (Screen 1 [1.5 µg/L]) and MW-26 (Screens 1 and 2 [0.5] µg/L and 0.2] µg/L, respectively]); however, no detections exceeded the state and federal MCL (5.0 µg/L). No other TCE detections occurred in the remaining off-facility wells during the fourth quarter 2019.
- In 2019, TCE concentrations in MW-17 (Screens 3 through 5) ranged from 0.6 µg/L to 2.0 µg/L; TCE concentrations in MW-18 (Screen 4) ranged from 0.6 µg/L to 1.1 µg/L; TCE concentrations in MW-19 (Screens 2 and 3) ranged from non-detect to 1.2 µg/L; TCE concentrations in MW-20 (Screen 2) ranged from 0.4] µg/L to 0.6 µg/L; TCE

concentrations in MW-21 (Screens 1 through 4) ranged from non-detect to 1.9 µg/L; TCE concentrations in MW-25 (Screen 1) ranged from 1.5 µg/L to 1.9 µg/L; and TCE concentrations in MW-26 (Screens 1 and 2) ranged from non-detect to 0.5 µg/L. TCE was not detected in MW-17 (Screens 1 and 2), MW-18 (Screens 1, 2, 3 and 5), MW-19 (Screens 1, 4 and 5), MW-20 (Screens 1, 3, 4 and 5), MW-21 (Screen 5) and MW-25 (Screens 2 through 5) during the four quarters of 2019.

- During the fourth quarter 2019, PCE was detected in MW-17 (Screens 3 through 5 [0.3 µg/L, 0.5 µg/L and 0.3 µg/L, respectively]), MW-18 (Screen 4 [0.7 µg/L]), MW-19 (Screens 2 through 4 [1.5 µg/L, 0.6 µg/L and 0.5 µg/L, respectively]), MW-20 (Screens 2 and 3 [0.3 µg/L and 0.4 µg/L, respectively]), MW-21 (Screens 2 through 5 [0.4 µg/L, 0.6 µg/L, 3.0 µg/L, and 0.7 µg/L, respectively]), MW-25 (Screen 3 [1.5 µg/L]), and MW-26 (Screens 1 and 2 [1.6 µg/L and 2.0 µg/L, respectively]); however, no detections exceeded the state and federal MCL (5.0 µg/L). PCE was not detected in the remaining off-facility wells during the fourth quarter 2019.
- In 2019, PCE concentrations in MW-17 (Screens 3, 4 and 5) ranged from 0.2 µg/L to 0.5 µg/L; PCE concentrations in MW-18 (Screen 4) ranged from 0.4 µg/L to 0.7 µg/L; PCE concentrations in MW-19 (Screens 2 through 5) ranged from non-detect to 2.4 µg/L; PCE concentrations in MW-20 (Screens 2 and 3) ranged from non-detect to 0.6 µg/L; PCE concentrations in MW-21 (Screens 1 through 5) ranged from 0.4 µg/L to 3.0 µg/L; PCE concentrations in MW-25 (Screen 3) ranged from 0.3 µg/L to 1.5 µg/L; and PCE concentrations in MW-26 (Screens 1 and 2) ranged from 0.4 µg/L to 2.2 µg/L. PCE was not detected in MW-17 (Screens 1 and 2), MW-18 (Screens 1, 2, 3 and 5), MW-19 (Screen 1), MW-20 (Screens 1, 4 and 5) and MW-25 (Screens 1, 2, 4, and 5) during the four quarters of 2019.

OTHER NOTABLE ANALYTICAL RESULTS

- During the fourth quarter 2019, Cr(VI) was detected below the state MCL (50.0 µg/L) in MW-17 (Screens 1, 4 and 5 [0.1 µg/L, 1.4 µg/L and 1.2 µg/L, respectively]), MW-18 (Screens 3 and 4 [1.7 µg/L and 1.9 µg/L, respectively]), MW-19 (Screens 2 through 5 [0.9 µg/L, 1.9 µg/L, 2.6 µg/L and 1.9 µg/L, respectively]), MW-20 (Screen 4 and 5 [0.1 µg/L, each]), MW-21 (Screens 4 and 5 [1.2 µg/L and 1.1 µg/L, respectively]), MW-25 (Screens 1 through 5 [0.3 µg/L, 1.0 µg/L, 2.5 µg/L, 0.4 µg/L, and 0.05 µg/L, respectively]), and MW-26 (Screen 2 [0.4 µg/L]).
- Cr(VI) was not detected in MW-17 (Screens 2 and 3), MW-18 (Screens 2 and 5), MW-19 (Screen 1), MW-20 (Screens 2 and 3), MW-21 (Screens 2 and 3), and MW-26 (Screen 1).

- In 2019, detections of Cr(VI) in the off-facility wells ranged from non-detect to 3.9 µg/L.
- During the fourth quarter 2019, total chromium was detected below the state MCL (50.0 µg/L) in MW-17 (Screens 4 and 5 [1.5 µg/L and 1.6 µg/L, respectively]), MW-18 (Screens 3 and 4 [1.5 µg/L and 2.3 µg/L, respectively]), MW-19 (Screens 2 through 5 [1.5 µg/L, 2.0 µg/L, 2.4 µg/L and 2.2 µg/L, respectively]), MW-20 (Screen 4 [0.6 µg/L]), MW-21 (Screens 4 and 5 [1.2 µg/L and 1.0 µg/L, respectively]), MW-25 (Screens 1 through 4 [1.3 µg/L, 1.2 µg/L, 3.9 µg/L and 0.9 µg/L, respectively]) and MW-26 (Screen 2 [1.1 µg/L]).
- Total chromium was not detected in MW-17 (Screens 1 through 3), MW-18 (Screens 2 and 5), MW-19 (Screen 1), MW-20 (Screens 2, 3 and 5), MW-21 (Screens 2 and 3), MW-25 (Screen 5) and MW-26 (Screen 1).
- In 2019, total chromium remained below the state MCL (50.0 µg/L) in the off-facility wells, ranging from non-detect to 11.0 µg/L.

ALL WELL CATEGORIES (OTHER RESULTS)

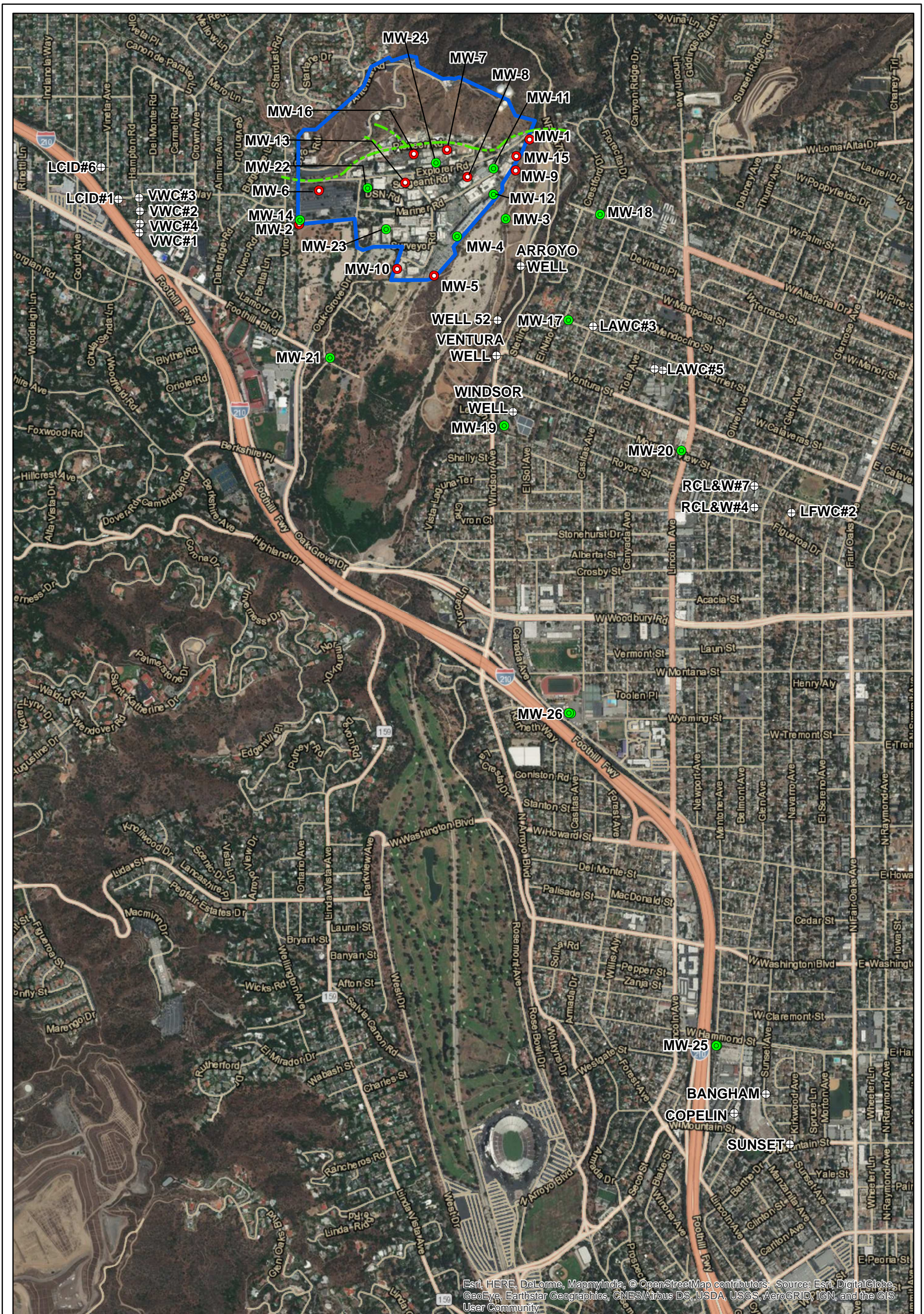
- Comparing the third quarter 2019 to the fourth quarter 2019, groundwater elevations decreased by an average of 13.75 feet.
- A grab sample was collected for the shallow standpipe well MW-13 water level due to insufficient water for purging. The uppermost sampling port (i.e., Screen 1) in multi-port monitoring wells MW-12, MW-14, MW-18, MW-20, and MW-21 were dry and could not be sampled during the fourth quarter 2019.
- It was reported in the May 2019 technical memorandum that there was a bend in MW-16 at a depth of 255 feet below the top of casing preventing the installation of a submersible pump to purge and sample the well. A video survey was conducted by Pacific Surveys on August 2, 2019 which determined that no bend or irregularity existed in the well. The well was sampled successfully during the third and fourth quarter monitoring events.
- Groundwater elevations recorded in the JPL monitoring wells showed a steady decline from the first and second quarters of 2011 through the fourth quarter of 2014 at which time the levels approached and/or exceeded historic lows last recorded in 1996 and 1997. During the time period between first quarter 2015 and fourth quarter 2019, groundwater elevations have fluctuated on a seasonal basis. As of fourth quarter 2019, groundwater levels remain approximately 68 feet below the second quarter 2011 elevations. Groundwater elevations will continue to be closely monitored.
- Groundwater level measurements collected during the fourth quarter 2019 indicate that groundwater gradients and flow directions are generally consistent with previous observations (see Figure 8).

ATTACHMENTS

Attachments to this technical memorandum include the following:

- Attachment 1: Quality Assurance/Quality Control Summary
 - Attachment 2: Data Validation Reports
 - Attachment 3: Laboratory Analytical Reports
 - Attachment 4: Field Logs
 - Attachment 5: Water Level Measurements
 - Attachment 6: Time-Series Concentration Plots
 - Attachment 7: Tables 1A, 2A and 3A (Historical Perchlorate, VOCs and Metals from 1996 to present)
 - Attachment 8: Summary of Construction Details for All JPL Groundwater Wells
-

FIGURES



Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

- Deep Multi-Port Monitoring Well Location
- Shallow Monitoring Well Location
- Municipal Production Well
- Approximate Location of Thrust Fault
- JPL Facility Boundary

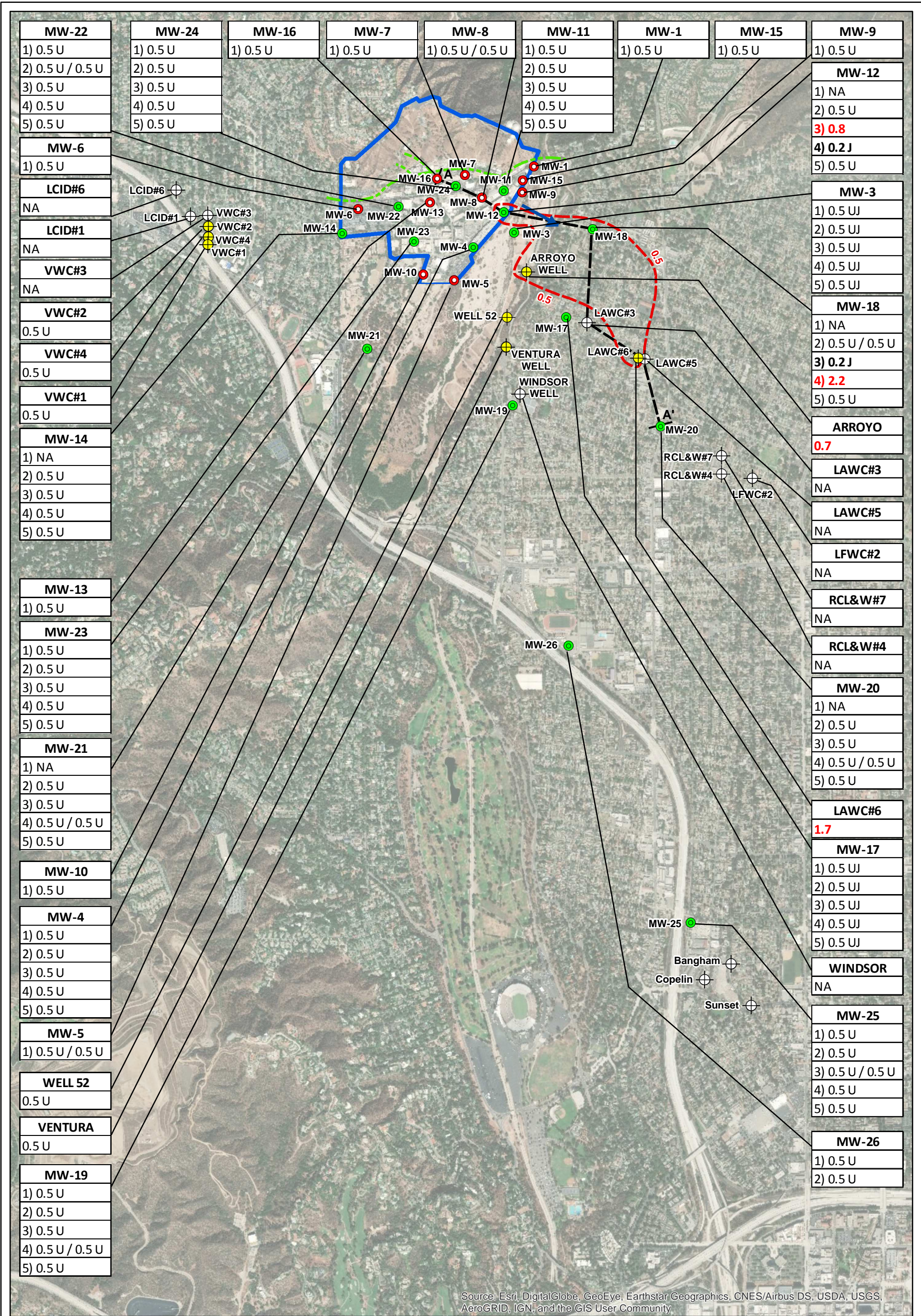


0 500 1,000 1,500
Feet



Locations of JPL Groundwater Monitoring Wells and Nearby Municipal Production Wells

DESIGNED BY JHG	JPL - Pasadena, CA	Figure 1
DRAWN BY JHG		
CHECKED BY DC	Contract No: FA8903-16-D-0049	April 2018



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

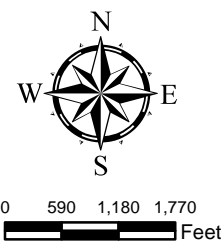
Legend

- Deep Multi-Port Monitoring Well Location
- Shallow Monitoring Well Location
- Municipal Production Well (Data Not Available)
- Municipal Production Well (Data From October 2019)
- Cross-Section Transect A-A'
- Estimated Isoconcentration Line (0.5 µg/L)
- JPL Facility Boundary
- Approximate Location of Thrust Fault
- Groundwater Flow Direction

MW-8
1) 0.5 U

Well ID
Screen number
Concentration in micrograms per liter
J = Detected estimated value
U = Not detected estimated value
NA = Not Analyzed

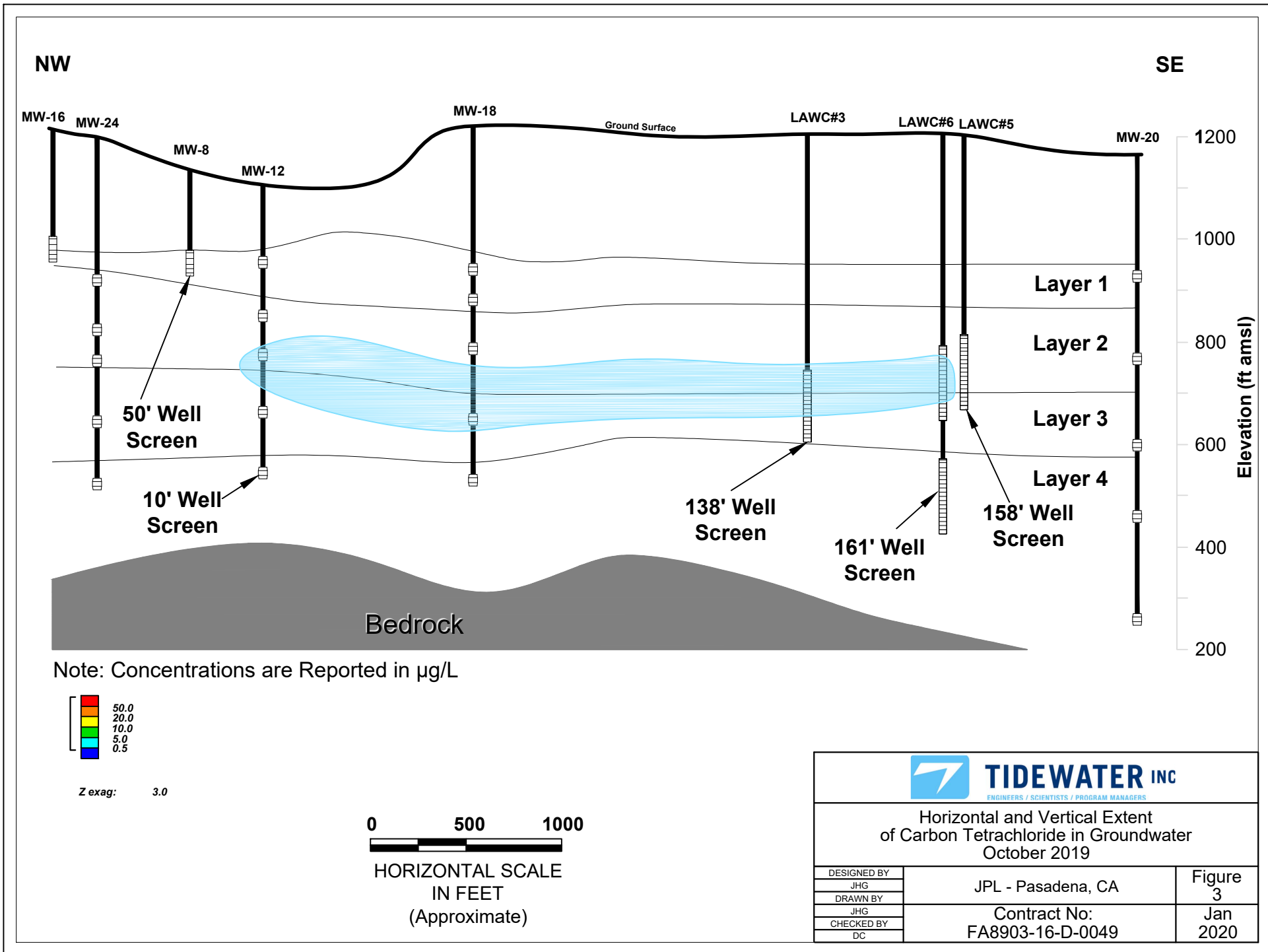
Bold font indicates detected concentration below the State maximum contaminant level (MCL) of 0.5 micrograms per liter; red font indicates concentration exceeds MCL.

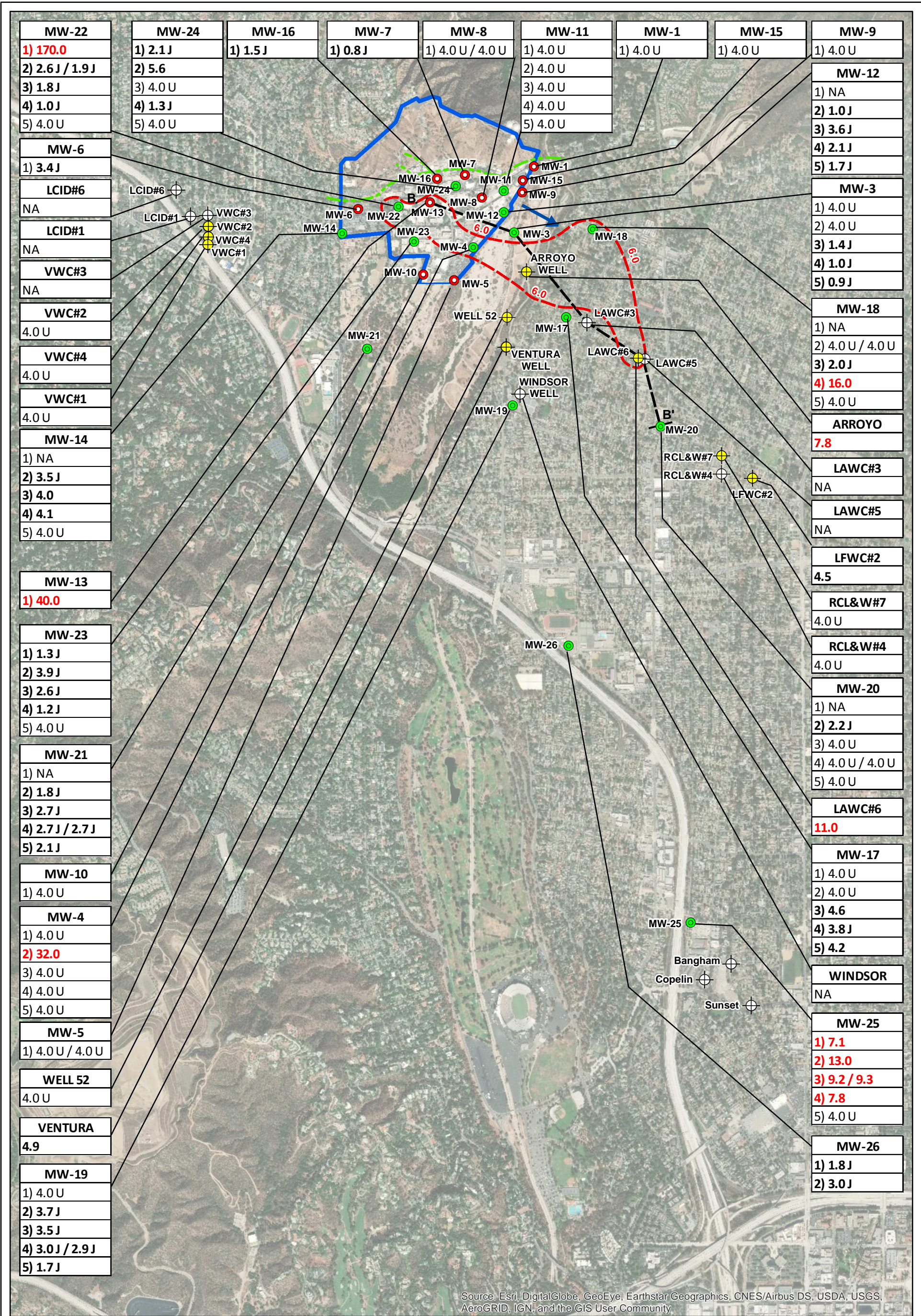


**Carbon Tetrachloride in Groundwater
October 2019**

DESIGNED BY JHG	JPL - Pasadena, CA	Figure 2
DRAWN BY JHG		
CHECKED BY DC	Contract No: FA8903-16-D-0049	Jan 2020

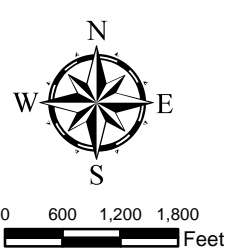
MW-22 1) 0.5 U 2) 0.5 U / 0.5 U 3) 0.5 U 4) 0.5 U 5) 0.5 U	MW-24 1) 0.5 U 2) 0.5 U 3) 0.5 U 4) 0.5 U 5) 0.5 U	MW-16 1) 0.5 U	MW-7 1) 0.5 U	MW-8 1) 0.5 U / 0.5 U	MW-11 1) 0.5 U 2) 0.5 U 3) 0.5 U 4) 0.5 U 5) 0.5 U	MW-1 1) 0.5 U	MW-15 1) 0.5 U	MW-9 1) 0.5 U
MW-6 1) 0.5 U	LCID#6 NA	LCID#1 NA	VWC#3 NA	VWC#2 0.5 U	VWC#4 0.5 U	VWC#1 0.5 U	MW-14 1) NA 2) 0.5 U 3) 0.5 U 4) 0.5 U 5) 0.5 U	MW-13 1) 0.5 U
MW-23 1) 0.5 U 2) 0.5 U 3) 0.5 U 4) 0.5 U 5) 0.5 U	MW-21 1) NA 2) 0.5 U 3) 0.5 U 4) 0.5 U / 0.5 U 5) 0.5 U	MW-10 1) 0.5 U	MW-4 1) 0.5 U 2) 0.5 U 3) 0.5 U 4) 0.5 U 5) 0.5 U	MW-5 1) 0.5 U / 0.5 U	WELL 52 0.5 U	VENTURA 0.5 U	MW-19 1) 0.5 U 2) 0.5 U 3) 0.5 U 4) 0.5 U / 0.5 U 5) 0.5 U	MW-12 1) NA 2) 0.5 U 3) 0.8 4) 0.2 J 5) 0.5 U
MW-3 1) 0.5 UJ 2) 0.5 UJ 3) 0.5 UJ 4) 0.5 UJ 5) 0.5 UJ	MW-18 1) NA 2) 0.5 U / 0.5 U 3) 0.2 J 4) 2.2 5) 0.5 U	ARROYO 0.7	LAWC#3 NA	LAWC#5 NA	LFWC#2 NA	RCL&W#7 NA	RCL&W#4 NA	MW-20 1) NA 2) 0.5 U 3) 0.5 U 4) 0.5 U / 0.5 U 5) 0.5 U
LAWC#6 1.7	MW-17 1) 0.5 UJ 2) 0.5 UJ 3) 0.5 UJ 4) 0.5 UJ 5) 0.5 UJ	WINDSOR NA	MW-25 1) 0.5 U 2) 0.5 U 3) 0.5 U / 0.5 U 4) 0.5 U 5) 0.5 U	MW-26 1) 0.5 U 2) 0.5 U				





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend



- Deep Multi-Port Monitoring Well Location
- Shallow Monitoring Well Location
- Municipal Production Well (Data Not Available)
- Municipal Production Well (Data From October 2019)
- Cross-Section Transect B-B'
- Estimated Isoconcentration Line (6 µg/L)
- Approximate Location of Thrust Fault
- JPL Facility Boundary
- Groundwater Flow Direction

MW-8
1) 0.5 U

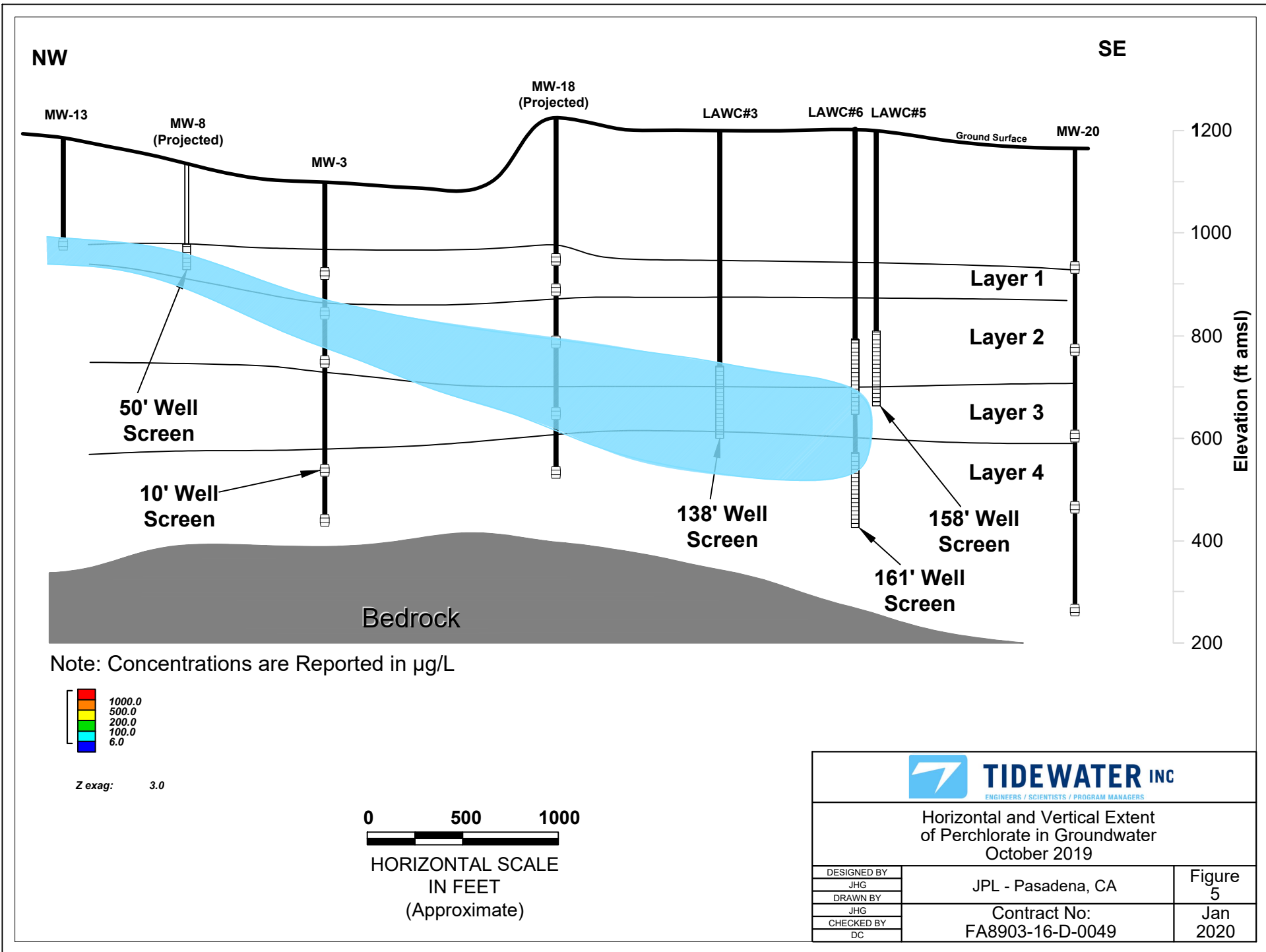
Well ID
 Screen number
 Concentration in micrograms per liter
 J = Detected estimated value
 U = Not detected estimated value
 NA = Not Analyzed

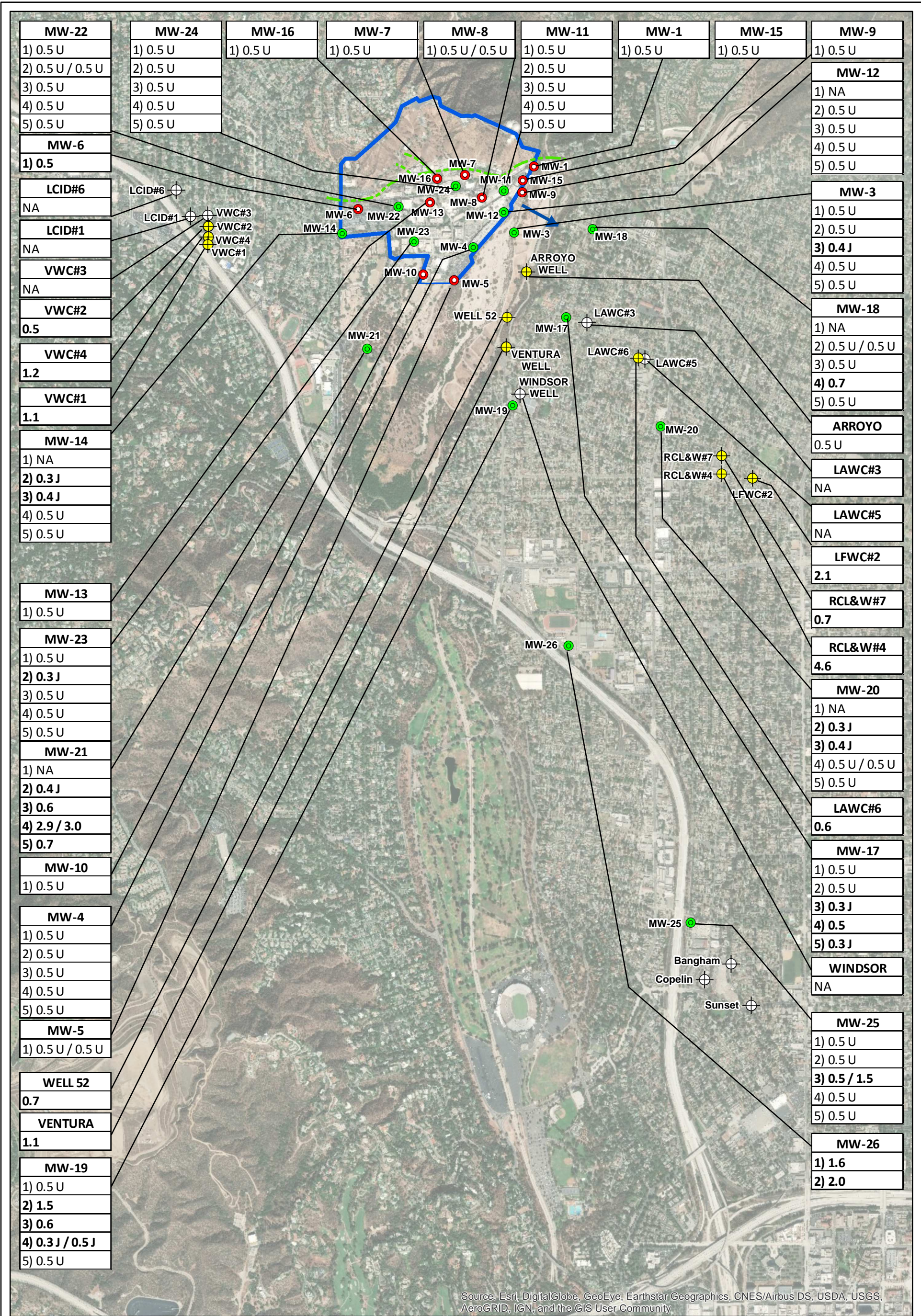
Bold font indicates detected concentration below the State maximum contaminant level (MCL) of 6 micrograms per liter; red font indicates concentration exceeds MCL.



Perchlorate in Groundwater
 October 2019

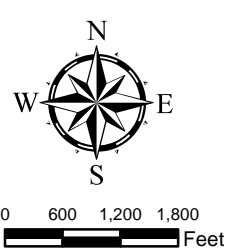
DESIGNED BY JHG	JPL - Pasadena, CA	Figure 4
DRAWN BY JHG		
CHECKED BY DC	Contract No: FA8903-16-D-0049	Jan 2020





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend



- Deep Multi-Port Monitoring Well Location
- Shallow Monitoring Well Location
- Municipal Production Well (Data Not Available)
- Municipal Production Well (Data From October 2019)
- Estimated Isoconcentration Line (5 µg/L)
- JPL Facility Boundary
- Approximate Location of Thrust Fault
- ➔ Groundwater Flow Direction

MW-8
1) 0.5 U

Well ID
Screen number
Concentration in micrograms per liter
J = Detected estimated value
U = Not detected estimated value
NA = Not Analyzed

Bold font indicates detected concentration below the State maximum contaminant level (MCL) of 5 micrograms per liter; red font indicates concentration exceeds MCL.



Tetrachloroethene in Groundwater
October 2019

DESIGNED BY JHG	JPL - Pasadena, CA	Figure 6
DRAWN BY JHG		
CHECKED BY DC	Contract No: FA8903-16-D-0049	Jan 2020

MW-22
1) 0.5 U
2) 0.5 U / 0.5 U
3) 0.5 U
4) 0.5 U
5) 0.5 U

MW-24
1) 0.5 U
2) 0.5 U
3) 0.5 U
4) 0.5 U
5) 0.5 U

MW-16
1) 0.5 U

MW-7
1) 0.5 U

MW-8
1) 0.5 U / 0.5 U

MW-11
1) 0.5 U
2) 0.5 U
3) 0.5 U
4) 0.5 U
5) 0.5 U

MW-1
1) 0.5 U

MW-15
1) 0.5 U

MW-9
1) 0.5 U

MW-6
1) 0.5

LCID#6
NA

LCID#1
NA

VWC#3
NA

VWC#2
0.5

VWC#4
1.2

VWC#1
1.1

MW-14
1) NA
2) 0.3 J
3) 0.4 J
4) 0.5 U
5) 0.5 U

MW-13
1) 0.5 U

MW-23
1) 0.5 U
2) 0.3 J
3) 0.5 U
4) 0.5 U
5) 0.5 U

MW-21
1) NA
2) 0.4 J
3) 0.6
4) 2.9 / 3.0
5) 0.7

MW-10
1) 0.5 U

MW-4
1) 0.5 U
2) 0.5 U
3) 0.5 U
4) 0.5 U
5) 0.5 U

MW-5
1) 0.5 U / 0.5 U

WELL 52
0.7

VENTURA
1.1

MW-19
1) 0.5 U
2) 1.5
3) 0.6
4) 0.3 J / 0.5 J
5) 0.5 U

MW-12
1) NA
2) 0.5 U
3) 0.5 U
4) 0.5 U
5) 0.5 U

MW-3
1) 0.5 U
2) 0.5 U
3) 0.4 J
4) 0.5 U
5) 0.5 U

MW-18
1) NA
2) 0.5 U / 0.5 U
3) 0.5 U
4) 0.7
5) 0.5 U

ARROYO
0.5 U

LAWC#3
NA

LAWC#5
NA

LFWC#2
2.1

RCL&W#7
0.7

RCL&W#4
4.6

MW-20
1) NA
2) 0.3 J
3) 0.4 J
4) 0.5 U / 0.5 U
5) 0.5 U

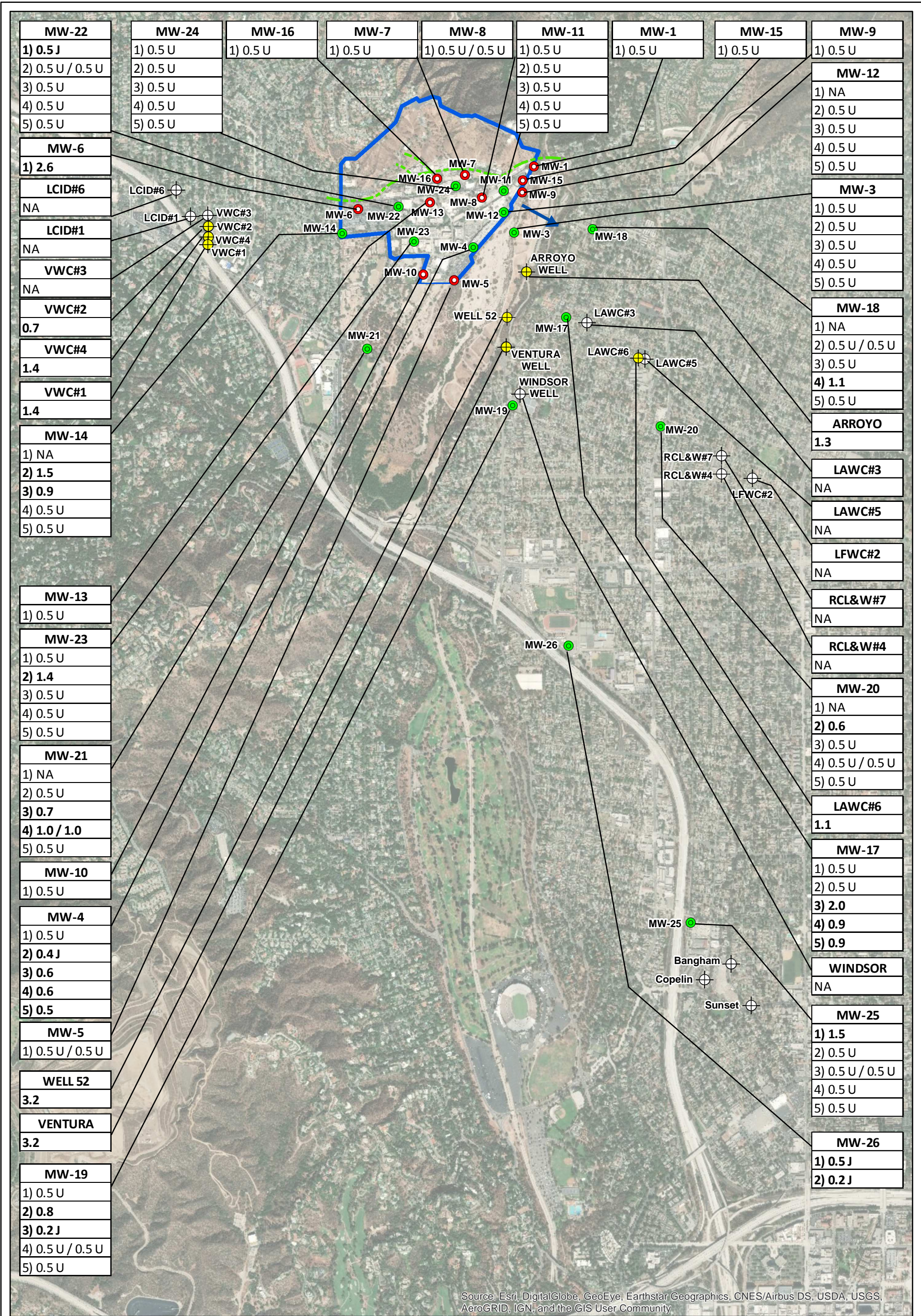
LAWC#6
0.6

MW-17
1) 0.5 U
2) 0.5 U
3) 0.3 J
4) 0.5
5) 0.3 J

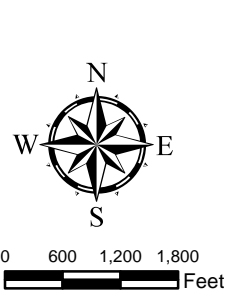
WINDSOR
NA

MW-25
1) 0.5 U
2) 0.5 U
3) 0.5 / 1.5
4) 0.5 U
5) 0.5 U

MW-26
1) 1.6
2) 2.0



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Legend

- Deep Multi-Port Monitoring Well Location
- Shallow Monitoring Well Location
- Municipal Production Well (Data Not Available)
- Municipal Production Well (Data From October 2019)
- Estimated Isoconcentration Line (5 µg/L)
- JPL Facility Boundary
- Approximate Location of Thrust Fault
- Groundwater Flow Direction

MW-8
1) 0.5 U

Well ID
Screen number
Concentration in micrograms per liter
J = Detected estimated value
U = Not detected estimated value
NA = Not Analyzed

Bold font indicates detected concentration below the State maximum contaminant level (MCL) of 5 micrograms per liter; red font indicates concentration exceeds MCL.



Trichloroethene in Groundwater
October 2019

DESIGNED BY JHG	JPL - Pasadena, CA	Figure 7
DRAWN BY JHG		
CHECKED BY DC	Contract No: FA8903-16-D-0049	Jan 2020

MW-22
1) 0.5 J
2) 0.5 U / 0.5 U
3) 0.5 U
4) 0.5 U
5) 0.5 U

MW-24
1) 0.5 U
2) 0.5 U
3) 0.5 U
4) 0.5 U
5) 0.5 U

MW-16
1) 0.5 U

MW-7
1) 0.5 U

MW-8
1) 0.5 U / 0.5 U

MW-11
1) 0.5 U
2) 0.5 U
3) 0.5 U
4) 0.5 U
5) 0.5 U

MW-1
1) 0.5 U

MW-15
1) 0.5 U

MW-9
1) 0.5 U

MW-6
1) 2.6

LCID#6
NA

LCID#1
NA

VWC#3
NA

VWC#2
0.7

VWC#4
1.4

VWC#1
1.4

MW-14
1) NA
2) 1.5
3) 0.9
4) 0.5 U
5) 0.5 U

MW-13
1) 0.5 U

MW-23
1) 0.5 U
2) 1.4
3) 0.5 U
4) 0.5 U
5) 0.5 U

MW-21
1) NA
2) 0.5 U
3) 0.7
4) 1.0 / 1.0
5) 0.5 U

MW-10
1) 0.5 U

MW-4
1) 0.5 U
2) 0.4 J
3) 0.6
4) 0.6
5) 0.5

MW-5
1) 0.5 U / 0.5 U

WELL 52
3.2

VENTURA
3.2

MW-19
1) 0.5 U
2) 0.8
3) 0.2 J
4) 0.5 U / 0.5 U
5) 0.5 U

MW-12
1) NA
2) 0.5 U
3) 0.5 U
4) 0.5 U
5) 0.5 U

MW-3
1) 0.5 U
2) 0.5 U
3) 0.5 U
4) 0.5 U
5) 0.5 U

MW-18
1) NA
2) 0.5 U / 0.5 U
3) 0.5 U
4) 1.1
5) 0.5 U

ARROYO
1.3

LAWC#3
NA

LAWC#5
NA

LFWC#2
NA

RCL&W#7
NA

RCL&W#4
NA

MW-20
1) NA
2) 0.6
3) 0.5 U
4) 0.5 U / 0.5 U
5) 0.5 U

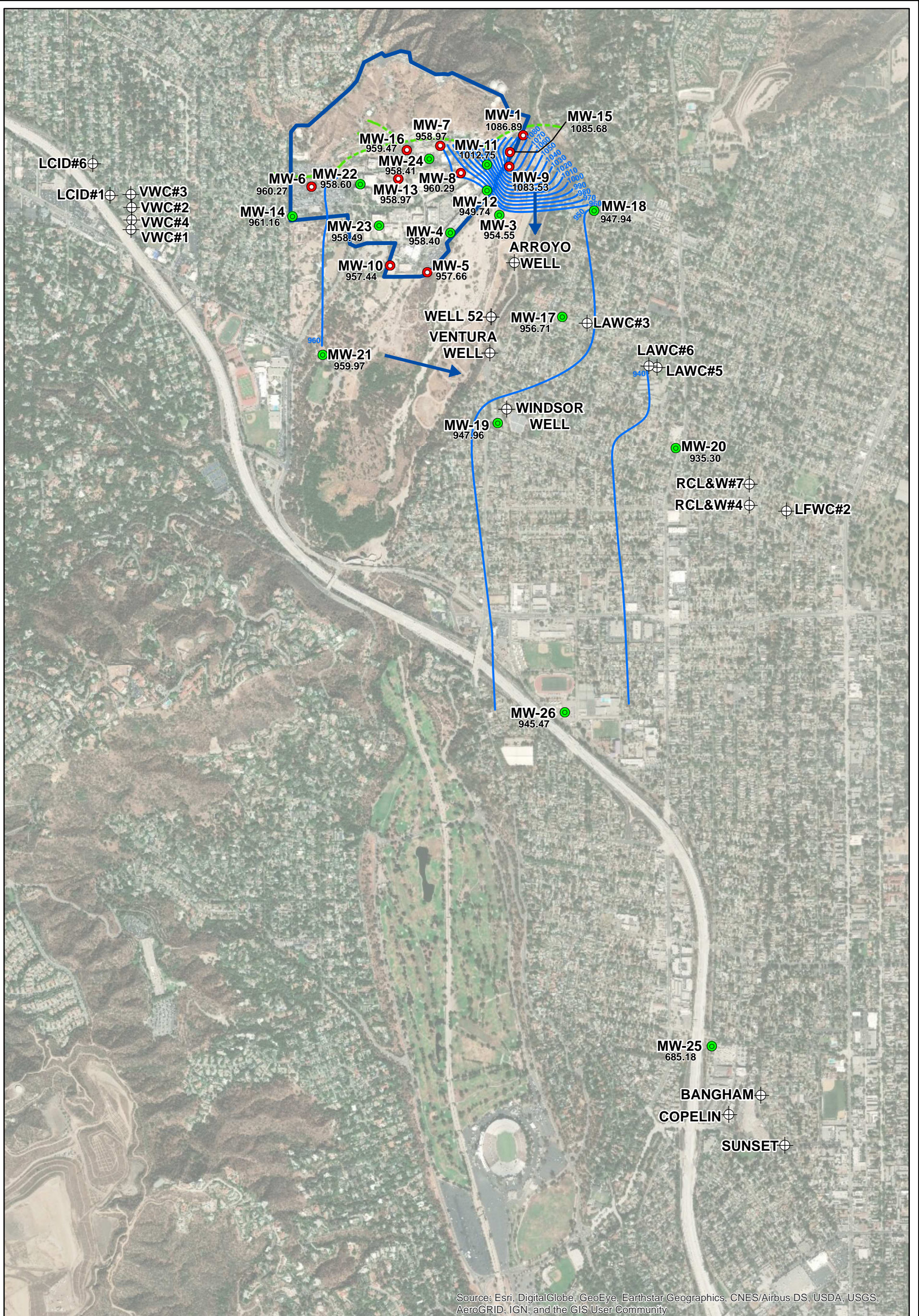
LAWC#6
1.1

MW-17
1) 0.5 U
2) 0.5 U
3) 2.0
4) 0.9
5) 0.9

WINDSOR
NA

MW-25
1) 1.5
2) 0.5 U
3) 0.5 U / 0.5 U
4) 0.5 U
5) 0.5 U

MW-26
1) 0.5 J
2) 0.2 J



Legend

- Shallow Monitoring Well Location
- Deep Multi-Port Monitoring Well Location
- ⊕ Municipal Production Well
- JPL Facility Boundary
- Approximate Location of Thrust Fault
- Groundwater Flow Direction
- Groundwater Elevation Contour (ft amsl)



0 500 1,000 1,500
Feet



**Groundwater Elevation Contours
October 2019**

DESIGNED BY JHG	JPL - Pasadena, CA	Figure 8
DRAWN BY JHG		
CHECKED BY DC	Contract No: W912PL-13-D-0018 TO 001	Jan 2020

TABLES

TABLE 1
SUMMARY OF VOLATILE ORGANIC COMPOUNDS AND PERCHLORATE DETECTED DURING THE
LAST FIVE SAMPLING EVENTS OF THE LONG-TERM QUARTERLY GROUNDWATER SAMPLING PROGRAM

(All concentrations reported in µg/L.)

(Shaded values exceed State or Federal MCL or action levels.)

Sample Location	Sampling Event	Sample Number	Carbon tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Perchlorate	Other Volatile Organic Compounds and 1,4-Dioxane, NDMA, NDPA, 1,2,3-TCP
MW-1												
MW-1	Oct 2018	MW-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	
MW-1	Apr/May 2019	MW-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.9 J	
MW-1	Apr/May 2019	DUP-8-2Q19	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	
MW-1	Oct 2019	MW-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	
MW-3-Screen-1												
MW-3-Screen-1	Oct 2018	MW-3-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	
MW-3-Screen-1	Apr/May 2019	MW-3-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	
MW-3-Screen-1	Oct 2019	MW-3-1	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	
MW-3-Screen-2												
MW-3-Screen-2	Oct 2018	MW-3-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	
MW-3-Screen-2	Feb/Mar 2019	MW-3-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.1	
MW-3-Screen-2	Apr/May 2019	MW-3-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	
MW-3-Screen-2	Jul/Aug 2019	MW-3-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	
MW-3-Screen-2	Oct 2019	MW-3-2	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	
MW-3-Screen-3												
MW-3-Screen-3	Oct 2018	MW-3-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.1 J	
MW-3-Screen-3	Feb/Mar 2019	MW-3-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	
MW-3-Screen-3	Apr/May 2019	MW-3-3	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	1.0 J	
MW-3-Screen-3	Jul/Aug 2019	MW-3-3	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	1.4 J	
MW-3-Screen-3	Jul/Aug 2019	DUP-2-3Q19	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	1.3 J	
MW-3-Screen-3	Oct 2019	MW-3-3	0.5 UJ	0.5 U	0.4 J	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	1.4 J	
MW-3-Screen-4												
MW-3-Screen-4	Oct 2018	MW-3-4	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	1.1 J	
MW-3-Screen-4	Oct 2018	DUP-2-4Q18	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	1.0 J	
MW-3-Screen-4	Feb/Mar 2019	MW-3-4	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	
MW-3-Screen-4	Feb/Mar 2019	DUP-3-1Q19	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	1.0 J	
MW-3-Screen-4	Apr/May 2019	MW-3-4	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	1.2 J	
MW-3-Screen-4	Jul/Aug 2019	MW-3-4	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	1.1 J	
MW-3-Screen-4	Oct 2019	MW-3-4	0.5 UJ	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	1.0 J	
MW-3-Screen-5												
MW-3-Screen-5	Oct 2018	MW-3-5	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	
MW-3-Screen-5	Apr/May 2019	MW-3-5	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	1.1 J	

Sample Location	Sampling Event	Sample Number	Carbon tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Perchlorate	Other Volatile Organic Compounds and 1,4-Dioxane, NDMA, NDPA, 1,2,3-TCP	
MW-3-Screen-5	Oct 2019	MW-3-5	0.5 UJ	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.9 J		
MW-4-Screen-1													
MW-4-Screen-1	Oct 2018	MW-4-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-4-Screen-1	Feb/Mar 2019	MW-4-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-4-Screen-1	Apr/May 2019	MW-4-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-4-Screen-1	Jul/Aug 2019	MW-4-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-4-Screen-1	Oct 2019	MW-4-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-4-Screen-2													
MW-4-Screen-2	Oct 2018	MW-4-2	0.5 U	1.0	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	9.9		
MW-4-Screen-2	Feb/Mar 2019	MW-4-2	0.5 U	0.9	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.6	24.0		
MW-4-Screen-2	Apr/May 2019	MW-4-2	0.5 U	0.9	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.6	31.0		
MW-4-Screen-2	Jul/Aug 2019	MW-4-2	0.5 U	1.2	0.5 J	0.5 U	0.5 U	0.5 U	0.5 U	0.8	34.0		
MW-4-Screen-2	Oct 2019	MW-4-2	0.5 U	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 J	32.0		
MW-4-Screen-3													
MW-4-Screen-3	Oct 2018	MW-4-3	0.5 U	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-4-Screen-3	Feb/Mar 2019	MW-4-3	0.5 U	0.7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-4-Screen-3	Apr/May 2019	MW-4-3	0.5 U	0.8	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	3.9 J		
MW-4-Screen-3	Jul/Aug 2019	MW-4-3	0.5 U	1.2	0.5 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-4-Screen-3	Oct 2019	MW-4-3	0.5 U	0.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-4-Screen-4													
MW-4-Screen-4	Oct 2018	MW-4-4	0.5 U	0.7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-4-Screen-4	Apr/May 2019	MW-4-4	0.5 U	0.8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-4-Screen-4	Oct 2019	MW-4-4	0.5 U	0.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-4-Screen-5													
MW-4-Screen-5	Oct 2018	MW-4-5	0.5 U	0.7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Ethylbenzene	0.2 J
												Styrene	0.2 J
MW-4-Screen-5	Apr/May 2019	MW-4-5	0.5 U	0.8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Ethylbenzene	0.4 J
												Styrene	0.2 J
MW-4-Screen-5	Oct 2019	MW-4-5	0.5 U	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-5													
MW-5	Oct 2018	MW-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-5	Oct 2018	DUP-8-4Q18	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-5	Feb/Mar 2019	MW-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-5	Apr/May 2019	MW-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-5	Jul/Aug 2019	MW-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-5	Oct 2019	MW-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-5	Oct 2019	DUP-6-4Q19	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		

Sample Location	Sampling Event	Sample Number	Carbon tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Perchlorate	Other Volatile Organic Compounds and 1,4-Dioxane, NDMA, NDPA, 1,2,3-TCP	
MW-6													
MW-6	Feb/Mar 2019	MW-6	0.5 U	4.4	0.9	0.2 J	0.5 U	0.5 U	0.5 U	0.8	3.1 J	trans-1,2-Dichloroethene	0.3 J
MW-6	Apr/May 2019	MW-6	0.5 U	4.8	1.0	0.2 J	0.5 U	0.5 U	0.5 U	0.8	6.0	trans-1,2-Dichloroethene	0.2 J
MW-6	Jul/Aug 2019	MW-6	0.5 U	3.2	0.8	0.2 J	0.5 U	0.5 U	0.5 U	0.6	3.7 J	trans-1,2-Dichloroethene	0.2 J
MW-6	Oct 2019	MW-6	0.5 U	2.6	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5	3.4 J		
MW-7													
MW-7	Feb/Mar 2019	MW-7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.2	36.0		
MW-7	Apr/May 2019	MW-7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0	21.0	Bromodichloromethane	2.6
												Dibromochloromethane	0.3 J
MW-7	Jul/Aug 2019	MW-7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.4	4.3	Bromodichloromethane	1.5
MW-7	Oct 2019	MW-7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.8	0.8 J		
MW-8													
MW-8	Oct 2018	MW-8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5	79.0	Trichlorofluoromethane	0.2 J
MW-8	Feb/Mar 2019	MW-8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	15.0	Trichlorofluoromethane	0.2 J
MW-8	Feb/Mar 2019	DUP-7-1Q19	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	14.0	Trichlorofluoromethane	0.3 J
MW-8	Apr/May 2019	MW-8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-8	Apr/May 2019	DUP-6-2Q19	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-8	Jul/Aug 2019	MW-8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-8	Oct 2019	MW-8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-8	Oct 2019	DUP-8-4Q19	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-9													
MW-9	Oct 2018	MW-9	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-9	Apr/May 2019	MW-9	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-9	Oct 2019	MW-9	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-10													
MW-10	Oct 2018	MW-10	0.5 U	5.8	0.7	0.2 J	0.5 U	0.5 U	0.5 U	0.8	5.0	trans-1,2-Dichloroethene	0.2 J
MW-10	Oct 2018	DUP-7-4Q18	0.5 U	6.2	0.8	0.2 J	0.5 U	0.5 U	0.5 U	0.8	5.0	cis-1,2-Dichloroethene	0.4 J
												trans-1,2-Dichloroethene	0.2 J
MW-10	Feb/Mar 2019	MW-10	0.5 U	1.9	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	1.3 J		
MW-10	Apr/May 2019	MW-10	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-10	Jul/Aug 2019	MW-10	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-10	Oct 2019	MW-10	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-11-Screen-1													
MW-11-Screen-1	Oct 2018	MW-11-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-11-Screen-1	Feb/Mar 2019	MW-11-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-11-Screen-1	Apr/May 2019	MW-11-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.3 J		
MW-11-Screen-1	Jul/Aug 2019	MW-11-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.2 J		
MW-11-Screen-1	Oct 2019	MW-11-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		

Sample Location	Sampling Event	Sample Number	Carbon tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Perchlorate	Other Volatile Organic Compounds and 1,4-Dioxane, NDMA, NDPA, 1,2,3-TCP	
MW-11-Screen-2													
MW-11-Screen-2	Oct 2018	MW-11-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-11-Screen-2	Feb/Mar 2019	MW-11-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-11-Screen-2	Apr/May 2019	MW-11-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-11-Screen-2	Jul/Aug 2019	MW-11-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-11-Screen-2	Oct 2019	MW-11-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-11-Screen-3													
												Methyl-tert-butyl ether (MTBE)	0.3 J
MW-11-Screen-3	Oct 2018	MW-11-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Methyl-tert-butyl ether (MTBE)	0.4 J
												Styrene	0.4 J
MW-11-Screen-3	Feb/Mar 2019	MW-11-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Styrene	0.2 J
MW-11-Screen-3	Apr/May 2019	MW-11-3	0.5 U	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Methyl-tert-butyl ether (MTBE)	0.2 J
												Styrene	0.2 J
												Toluene	0.2 J
MW-11-Screen-3	Apr/May 2019	DUP-5-2Q19	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Methyl-tert-butyl ether (MTBE)	0.2 J
												Styrene	0.3 J
MW-11-Screen-3	Jul/Aug 2019	MW-11-3	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Methyl-tert-butyl ether (MTBE)	0.2 J
												Styrene	0.4 J
MW-11-Screen-3	Oct 2019	MW-11-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Carbon disulfide	0.5 J
												Methyl-tert-butyl ether (MTBE)	0.3 J
												Styrene	0.4 J
MW-11-Screen-4													
MW-11-Screen-4	Oct 2018	MW-11-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Styrene	0.1 J
MW-11-Screen-4	Feb/Mar 2019	MW-11-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Styrene	0.2 J
MW-11-Screen-4	Apr/May 2019	MW-11-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Styrene	0.1 J
MW-11-Screen-4	Jul/Aug 2019	MW-11-4	0.5 U	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Styrene	0.2 J
MW-11-Screen-4	Oct 2019	MW-11-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-11-Screen-5													
MW-11-Screen-5	Oct 2018	MW-11-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Styrene	0.1 J
MW-11-Screen-5	Apr/May 2019	MW-11-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-11-Screen-5	Oct 2019	MW-11-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-12-Screen-1													
MW-12-Screen-1	Feb/Mar 2019	MW-12-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Acetone	41.0
MW-12-Screen-1	Apr/May 2019	MW-12-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 J		
MW-12-Screen-1	Jul/Aug 2019	MW-12-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-12-Screen-2													
MW-12-Screen-2	Oct 2018	MW-12-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-12-Screen-2	Feb/Mar 2019	MW-12-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-12-Screen-2	Apr/May 2019	MW-12-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 J		

Sample Location	Sampling Event	Sample Number	Carbon tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Perchlorate	Other Volatile Organic Compounds and 1,4-Dioxane, NDMA, NDPA, 1,2,3-TCP	
MW-12-Screen-2	Jul/Aug 2019	MW-12-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Acrylonitrile	16
												Benzene	0.2 J
												Ethylbenzene	0.2 J
												Methyl-tert-butyl ether (MTBE)	0.5
												Styrene	1.8
												Vinyl chloride	0.4 J
MW-12-Screen-2	Oct 2019	MW-12-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 J		
MW-12-Screen-3													
MW-12-Screen-3	Oct 2018	MW-12-3	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.8	1.2 J		
MW-12-Screen-3	Feb/Mar 2019	MW-12-3	0.5 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5	3.0 J		
MW-12-Screen-3	Feb/Mar 2019	DUP-6-1Q19	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 J	2.8 J		
MW-12-Screen-3	Apr/May 2019	MW-12-3	0.7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5	4.9		
MW-12-Screen-3	Jul/Aug 2019	MW-12-3	2.2	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.9	4.9		
MW-12-Screen-3	Oct 2019	MW-12-3	0.8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.7	3.6 J		
MW-12-Screen-4													
MW-12-Screen-4	Oct 2018	MW-12-4	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	2.2 J		
MW-12-Screen-4	Feb/Mar 2019	MW-12-4	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	2.0 J		
MW-12-Screen-4	Apr/May 2019	MW-12-4	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	2.5 J		
MW-12-Screen-4	Apr/May 2019	DUP-6-2Q19	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	2.0 J		
MW-12-Screen-4	Jul/Aug 2019	MW-12-4	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	2.6 J		
MW-12-Screen-4	Oct 2019	MW-12-4	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	2.1 J		
MW-12-Screen-5													
MW-12-Screen-5	Oct 2018	MW-12-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	2.2 J		
MW-12-Screen-5	Feb/Mar 2019	MW-12-5	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	1.3 J		
MW-12-Screen-5	Apr/May 2019	MW-12-5	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	1.4 J		
MW-12-Screen-5	Jul/Aug 2019	MW-12-5	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	2.2 J	Styrene	0.2 J
MW-12-Screen-5	Oct 2019	MW-12-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	1.7 J		
MW-13													
MW-13	Feb/Mar 2019	MW-13	0.3 J	0.3 J	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	3.2	210.0	Bromodichloromethane	0.3 J
												Trichlorofluoromethane	0.9
MW-13	Apr/May 2019	MW-13	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0	39.0	Trichlorofluoromethane	4.1
MW-13	Jul/Aug 2019	MW-13	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.8	29.0	Trichlorofluoromethane	3.6
MW-13	Oct 2019	MW-13	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.1	40.0	Trichlorofluoromethane	2.8
MW-14-Screen-1													
MW-14-Screen-1	Apr/May 2019	MW-14-1	0.5 U	1.1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	2.4 J		
MW-14-Screen-1	Jul/Aug 2019	MW-14-1	0.5 U	0.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	2.5 J	Methyl-tert-butyl ether (MTBE)	0.3 J
MW-14-Screen-2													
MW-14-Screen-2	Oct 2018	MW-14-2	0.5 U	1.1	0.3 J	0.2 J	0.5 U	0.5 U	0.5 U	0.4 J	3.7 J		
MW-14-Screen-2	Feb/Mar 2019	MW-14-2	0.5 U	1.5	0.5	0.2 J	0.5 U	0.5 U	0.5 U	0.6	3.4 J		

Sample Location	Sampling Event	Sample Number	Carbon tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Perchlorate	Other Volatile Organic Compounds and 1,4-Dioxane, NDMA, NDPA, 1,2,3-TCP	
MW-14-Screen-2	Apr/May 2019	MW-14-2	0.5 U	1.1	0.4 J	0.2 J	0.5 U	0.5 U	0.5 U	0.5 J	3.9 J		
MW-14-Screen-2	Jul/Aug 2019	MW-14-2	0.5 U	1.4	0.3 J	0.2 J	0.5 U	0.5 U	0.5 U	0.5 J	4.2		
MW-14-Screen-2	Oct 2019	MW-14-2	0.5 U	1.5	0.3 J	0.2 J	0.5 U	0.5 U	0.5 U	0.6	3.5 J		
MW-14-Screen-3													
MW-14-Screen-3	Oct 2018	MW-14-3	0.5 U	0.9	0.6	0.3 J	0.5 U	0.5 U	0.5 U	0.4 J	4.7	1,2,3-Trichlorobenzene	0.3 J
MW-14-Screen-3	Feb/Mar 2019	MW-14-3	0.5 U	0.7	0.5 J	0.3 J	0.5 U	0.5 U	0.5 U	0.4 J	4.3		
MW-14-Screen-3	Apr/May 2019	MW-14-3	0.5 U	0.9	0.5 J	0.3 J	0.5 U	0.5 U	0.5 U	0.4 J	4.8		
MW-14-Screen-3	Jul/Aug 2019	MW-14-3	0.5 U	0.7	0.4 J	0.3 J	0.5 U	0.5 U	0.5 U	0.3 J	3.9 J		
MW-14-Screen-3	Oct 2019	MW-14-3	0.5 U	0.9	0.4 J	0.3 J	0.5 U	0.5 U	0.5 U	0.5 J	4.0		
MW-14-Screen-4													
MW-14-Screen-4	Oct 2018	MW-14-4	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	4.2		
MW-14-Screen-4	Feb/Mar 2019	MW-14-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	3.1 J		
MW-14-Screen-4	Feb/Mar 2019	DUP-2-1Q19	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	3.1 J		
MW-14-Screen-4	Apr/May 2019	MW-14-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	3.5 J		
MW-14-Screen-4	Jul/Aug 2019	MW-14-4	0.5 U	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	4.6		
MW-14-Screen-4	Oct 2019	MW-14-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	4.1		
MW-14-Screen-5													
MW-14-Screen-5	Oct 2018	MW-14-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Styrene	0.2 J
MW-14-Screen-5	Feb/Mar 2019	MW-14-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-14-Screen-5	Apr/May 2019	MW-14-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-14-Screen-5	Jul/Aug 2019	MW-14-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Acrylonitrile Styrene	2.3 J 0.2 J
MW-14-Screen-5	Oct 2019	MW-14-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-15													
MW-15	Oct 2018	MW-15	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-15	Apr/May 2019	MW-15	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-15	Oct 2019	MW-15	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-16													
MW-16	Apr/May 2019	MW-16	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.3	4.0 U	Bromodichloromethane	3.0
MW-16	Jul/Aug 2019	MW-16	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.6	2.9 J	Bromodichloromethane	0.8
MW-16	Oct 2019	MW-16	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.5 J		
MW-17-Screen-1													
MW-17-Screen-1	Apr/May 2019	MW-17-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-17-Screen-1	Oct 2019	MW-17-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-17-Screen-2													
MW-17-Screen-2	Oct 2018	MW-17-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-17-Screen-2	Oct 2018	DUP-3-4Q18	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-17-Screen-2	Feb/Mar 2019	MW-17-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-17-Screen-2	Apr/May 2019	MW-17-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		

Sample Location	Sampling Event	Sample Number	Carbon tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Perchlorate	Other Volatile Organic Compounds and 1,4-Dioxane, NDMA, NDPA, 1,2,3-TCP
MW-17-Screen-2	Jul/Aug 2019	MW-17-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	
MW-17-Screen-2	Oct 2019	MW-17-2	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	
MW-17-Screen-3												
MW-17-Screen-3	Oct 2018	MW-17-3	0.5 U	1.5	0.3 J	0.2 J	0.5 U	0.5 U	0.5 U	0.4 J	5.1	
MW-17-Screen-3	Feb/Mar 2019	MW-17-3	0.5 U	1.7	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	4.6	
MW-17-Screen-3	Apr/May 2019	MW-17-3	0.5 U	2.0	0.4 J	0.2 J	0.5 U	0.5 U	0.5 U	0.3 J	6.5	
MW-17-Screen-3	Jul/Aug 2019	MW-17-3	0.5 U	1.9	0.3 J	0.2 J	0.5 U	0.5 U	0.5 U	0.4 J	5.5	
MW-17-Screen-3	Oct 2019	MW-17-3	0.5 UJ	2.0	0.3 J	0.2 J	0.5 U	0.5 U	0.5 U	0.4 J	4.6	
MW-17-Screen-4												
MW-17-Screen-4	Oct 2018	MW-17-4	0.5 U	0.7	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	4.2	
MW-17-Screen-4	Feb/Mar 2019	MW-17-4	0.5 U	0.7	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	3.9 J	
MW-17-Screen-4	Apr/May 2019	MW-17-4	0.5 U	0.8	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	3.7 J	
MW-17-Screen-4	Jul/Aug 2019	MW-17-4	0.5 U	0.6	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	4.4	
MW-17-Screen-4	Oct 2019	MW-17-4	0.5 UJ	0.9	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.7	3.8 J	
MW-17-Screen-5												
MW-17-Screen-5	Oct 2018	MW-17-5	0.5 U	0.8	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 J	4.0	
MW-17-Screen-5	Apr/May 2019	MW-17-5	0.5 U	0.7	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	3.2 J	
MW-17-Screen-5	Oct 2019	MW-17-5	0.5 UJ	0.9	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 J	4.2	
MW-18-Screen-1												
MW-18-Screen-1	Apr/May 2019	MW-18-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	5.0	
MW-18-Screen-2												
MW-18-Screen-2	Oct 2018	MW-18-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	
MW-18-Screen-2	Feb/Mar 2019	MW-18-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	
MW-18-Screen-2	Apr/May 2019	MW-18-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	
MW-18-Screen-2	Jul/Aug 2019	MW-18-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	
MW-18-Screen-2	Jul/Aug 2019	DUP-3-3Q19	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	
MW-18-Screen-2	Oct 2019	MW-18-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	
MW-18-Screen-2	Oct 2019	DUP-7-4Q19	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	
MW-18-Screen-3												
MW-18-Screen-3	Oct 2018	MW-18-3	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.6 J	
MW-18-Screen-3	Feb/Mar 2019	MW-18-3	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.8 J	
MW-18-Screen-3	Apr/May 2019	MW-18-3	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.6 J	
MW-18-Screen-3	Apr/May 2019	DUP-3-2Q19	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 J	
MW-18-Screen-3	Jul/Aug 2019	MW-18-3	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	3.0 J	
MW-18-Screen-3	Oct 2019	MW-18-3	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 J	
MW-18-Screen-4												
MW-18-Screen-4	Oct 2018	MW-18-4	1.5	0.8	0.6	0.5 U	0.5 U	0.5 U	0.5 U	0.7	16.0	
MW-18-Screen-4	Feb/Mar 2019	MW-18-4	2.5	0.8	0.6	0.5 U	0.5 U	0.5 U	0.5 U	0.9	15.0	
MW-18-Screen-4	Apr/May 2019	MW-18-4	2.8	0.7	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	1.0	17.0	

Sample Location	Sampling Event	Sample Number	Carbon tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Perchlorate	Other Volatile Organic Compounds and 1,4-Dioxane, NDMA, NDPA, 1,2,3-TCP	
MW-18-Screen-4	Jul/Aug 2019	MW-18-4	1.0	0.6	0.5 J	0.5 U	0.5 U	0.5 U	0.5 U	0.6	16.0		
MW-18-Screen-4	Oct 2019	MW-18-4	2.2	1.1	0.7	0.5 U	0.5 U	0.5 U	0.5 U	0.9	16.0		
MW-18-Screen-5													
MW-18-Screen-5	Oct 2018	MW-18-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Styrene	0.1 J
MW-18-Screen-5	Feb/Mar 2019	MW-18-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-18-Screen-5	Apr/May 2019	MW-18-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-18-Screen-5	Jul/Aug 2019	MW-18-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Acrylonitrile	1.6 J
												Styrene	0.2 J
MW-18-Screen-5	Oct 2019	MW-18-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Styrene	0.1 J
MW-19-Screen-1													
MW-19-Screen-1	Oct 2018	MW-19-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.4	4.0 U	Methyl-tert-butyl ether (MTBE)	0.7
MW-19-Screen-1	Feb/Mar 2019	MW-19-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.1	4.0 U	Methyl-tert-butyl ether (MTBE)	0.2 J
MW-19-Screen-1	Apr/May 2019	MW-19-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	4.0 U		
MW-19-Screen-1	Jul/Aug 2019	MW-19-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 J	1.7 J		
MW-19-Screen-1	Oct 2019	MW-19-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	4.0 U		
MW-19-Screen-2													
MW-19-Screen-2	Oct 2018	MW-19-2	0.5 U	0.8	1.3	0.5 U	0.5 U	0.5 U	0.5 U	1.7	3.6 J	cis-1,2-Dichloroethene	0.3 J
MW-19-Screen-2	Feb/Mar 2019	MW-19-2	0.5 U	1.2	2.2	0.5 U	0.5 U	0.5 U	0.5 U	2.0	2.7 J	cis-1,2-Dichloroethene	0.4 J
MW-19-Screen-2	Apr/May 2019	MW-19-2	0.5 U	0.9	1.7	0.5 U	0.5 U	0.5 U	0.5 U	1.9	2.6 J	cis-1,2-Dichloroethene	0.3 J
MW-19-Screen-2	Jul/Aug 2019	MW-19-2	0.5 U	0.9	2.4	0.2 J	0.5 U	0.5 U	0.5 U	2.2	3.8 J	cis-1,2-Dichloroethene	0.4 J
												Methyl-tert-butyl ether (MTBE)	0.1 J
MW-19-Screen-2	Oct 2019	MW-19-2	0.5 U	0.8	1.5	0.5 U	0.5 U	0.5 U	0.5 U	1.9	3.7 J	cis-1,2-Dichloroethene	0.3 J
MW-19-Screen-3													
MW-19-Screen-3	Oct 2018	MW-19-3	0.5 U	0.5 U	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	1.7	3.2 J		
MW-19-Screen-3	Feb/Mar 2019	MW-19-3	0.5 U	0.2 J	0.7	0.5 U	0.5 U	0.5 U	0.5 U	2.6	2.9 J		
MW-19-Screen-3	Apr/May 2019	MW-19-3	0.5 U	0.5 U	0.6	0.5 U	0.5 U	0.5 U	0.5 U	2.7	2.3 J		
MW-19-Screen-3	Jul/Aug 2019	MW-19-3	0.5 U	0.3 J	0.8	0.5 U	0.5 U	0.5 U	0.5 U	3.3	3.8 J		
MW-19-Screen-3	Oct 2019	MW-19-3	0.5 U	0.2 J	0.6	0.5 U	0.5 U	0.5 U	0.5 U	2.5	3.5 J		
MW-19-Screen-4													
MW-19-Screen-4	Oct 2018	MW-19-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	2.9 J		
MW-19-Screen-4	Feb/Mar 2019	MW-19-4	0.5 U	0.5 U	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.8	2.5 J		
MW-19-Screen-4	Feb/Mar 2019	DUP-4-1Q19	0.5 U	0.5 U	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.7	2.6 J		
MW-19-Screen-4	Apr/May 2019	MW-19-4	0.5 U	0.5 U	0.5	0.5 U	0.5 U	0.5 U	0.5 U	1.0	2.7 J		
MW-19-Screen-4	Jul/Aug 2019	MW-19-4	0.5 U	0.5 U	0.5 J	0.5 U	0.5 U	0.5 U	0.5 U	0.8	3.7 J		
MW-19-Screen-4	Oct 2019	MW-19-4	0.5 U	0.5 U	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.7	3.0 J		
MW-19-Screen-4	Oct 2019	DUP-2-4Q19	0.5 U	0.5 U	0.5 J	0.5 U	0.5 U	0.5 U	0.5 U	0.9	2.9 J		
MW-19-Screen-5													
MW-19-Screen-5	Oct 2018	MW-19-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.1	1.9 J	Bromodichloromethane	0.2 J
MW-19-Screen-5	Oct 2018	DUP-1-4Q18	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0	1.9 J	Bromodichloromethane	0.2 J

Sample Location	Sampling Event	Sample Number	Carbon tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Perchlorate	Other Volatile Organic Compounds and 1,4-Dioxane, NDMA, NDPA, 1,2,3-TCP	
MW-19-Screen-5	Feb/Mar 2019	MW-19-5	0.5 U	0.5 U	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	3.5	1.5 J	Bromodichloromethane	0.2 J
MW-19-Screen-5	Apr/May 2019	MW-19-5	0.5 U	0.5 U	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	2.5	1.9 J	Bromodichloromethane	0.2 J
MW-19-Screen-5	Jul/Aug 2019	MW-19-5	0.5 U	0.5 U	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	2.8	2.3 J	Bromodichloromethane	0.2 J
MW-19-Screen-5	Oct 2019	MW-19-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.8	1.7 J		
MW-20-Screen-1													
MW-20-Screen-1	Jul/Aug 2019	MW-20-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	4.0 U		
MW-20-Screen-2													
MW-20-Screen-2	Oct 2018	MW-20-2	0.5 U	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	2.0 J		
MW-20-Screen-2	Feb/Mar 2019	MW-20-2	0.5 U	0.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	1.5 J		
MW-20-Screen-2	Apr/May 2019	MW-20-2	0.5 U	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	0.9 J		
MW-20-Screen-2	Jul/Aug 2019	MW-20-2	0.5 U	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	2.0 J		
MW-20-Screen-2	Oct 2019	MW-20-2	0.5 U	0.6	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.9	2.2 J		
MW-20-Screen-3													
MW-20-Screen-3	Oct 2018	MW-20-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Acrylonitrile Ethylbenzene Styrene	1.9 J 0.2 J 0.4 J
MW-20-Screen-3	Feb/Mar 2019	MW-20-3	0.5 U	0.5 U	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Acrylonitrile Carbon disulfide Styrene	2.7 J 0.6 J 0.3 J
MW-20-Screen-3	Apr/May 2019	MW-20-3	0.5 U	0.5 U	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Acrylonitrile Styrene	2 J 0.3 J
MW-20-Screen-3	Apr/May 2019	DUP-4-2Q19	0.5 U	0.5 U	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Acrylonitrile Styrene	1.7 J 0.3 J
MW-20-Screen-3	Jul/Aug 2019	MW-20-3	0.5 U	0.5 U	0.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Acrylonitrile Ethylbenzene Styrene	1.8 J 0.2 J 0.5
MW-20-Screen-3	Oct 2019	MW-20-3	0.5 U	0.5 U	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Acrylonitrile Carbon disulfide Styrene	1.9 J 0.6 J 0.3 J
MW-20-Screen-4													
MW-20-Screen-4	Oct 2018	MW-20-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-20-Screen-4	Feb/Mar 2019	MW-20-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-20-Screen-4	Apr/May 2019	MW-20-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-20-Screen-4	Jul/Aug 2019	MW-20-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Styrene	0.1 J
MW-20-Screen-4	Oct 2019	MW-20-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Carbon disulfide	0.7 J
MW-20-Screen-4	Oct 2019	DUP-1-4Q19	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Carbon disulfide	0.5 J
MW-20-Screen-5													
MW-20-Screen-5	Oct 2018	MW-20-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Styrene	0.2 J
MW-20-Screen-5	Feb/Mar 2019	MW-20-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Styrene	0.1 J

Sample Location	Sampling Event	Sample Number	Carbon tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Perchlorate	Other Volatile Organic Compounds and 1,4-Dioxane, NDMA, NDPA, 1,2,3-TCP	
MW-20-Screen-5	Apr/May 2019	MW-20-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Styrene	0.2 J
MW-20-Screen-5	Jul/Aug 2019	MW-20-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Carbon disulfide	0.5 J
												Styrene	0.2 J
MW-20-Screen-5	Oct 2019	MW-20-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Carbon disulfide	0.6 J
												Styrene	0.2 J
MW-21-Screen-1													
MW-21-Screen-1	Apr/May 2019	MW-21-1	0.5 U	0.3 J	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	1.1	7.0		
MW-21-Screen-1	Jul/Aug 2019	MW-21-1	0.5 U	0.6	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	1.4	7.5		
MW-21-Screen-2													
MW-21-Screen-2	Oct 2018	MW-21-2	0.5 U	0.5 U	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	1.6 J		
MW-21-Screen-2	Oct 2018	DUP-4-4Q18	0.5 U	0.5 U	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	1.4 J		
MW-21-Screen-2	Feb/Mar 2019	MW-21-2	0.5 U	0.5 U	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	1.3 J		
MW-21-Screen-2	Apr/May 2019	MW-21-2	0.5 U	0.5 U	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	1.8 J		
MW-21-Screen-2	Jul/Aug 2019	MW-21-2	0.5 U	0.5 U	0.9	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	2.9 J	Methyl-tert-butyl ether (MTBE)	0.2 J
MW-21-Screen-2	Jul/Aug 2019	DUP-6-3Q19	0.5 U	0.3 J	1.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 J	2.2 J	Methyl-tert-butyl ether (MTBE)	0.1 J
MW-21-Screen-2	Oct 2019	MW-21-2	0.5 U	0.5 U	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	1.8 J		
MW-21-Screen-3													
MW-21-Screen-3	Oct 2018	MW-21-3	0.5 U	0.8	0.8	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	3.0 J		
MW-21-Screen-3	Feb/Mar 2019	MW-21-3	0.5 U	0.7	0.9	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	2.6 J		
MW-21-Screen-3	Apr/May 2019	MW-21-3	0.5 U	0.8	0.7	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	2.3 J		
MW-21-Screen-3	Jul/Aug 2019	MW-21-3	0.5 U	1.3	1.0	0.2 J	0.5 U	0.5 U	0.5 U	0.4 J	3.9 J	Methyl-tert-butyl ether (MTBE)	0.4 J
												Styrene	0.3 J
MW-21-Screen-3	Jul/Aug 2019	DUP-5-3Q19	0.5 U	1.9	1.8	0.3 J	0.5 U	0.5 U	0.5 U	0.6	3.3 J	Methyl-tert-butyl ether (MTBE)	0.2 J
MW-21-Screen-3	Oct 2019	MW-21-3	0.5 U	0.7	0.6	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	2.7 J		
MW-21-Screen-4													
MW-21-Screen-4	Oct 2018	MW-21-4	0.5 U	0.3 J	1.0	0.5 U	0.5 U	0.5 U	0.5 U	4.0	2.6 J		
MW-21-Screen-4	Feb/Mar 2019	MW-21-4	0.5 U	0.5 U	0.5	0.5 U	0.5 U	0.5 U	0.5 U	4.3	2.0 J		
MW-21-Screen-4	Apr/May 2019	MW-21-4	0.5 U	0.3 J	0.9	0.5 U	0.5 U	0.5 U	0.5 U	4.9	2.4 J		
MW-21-Screen-4	Jul/Aug 2019	MW-21-4	0.5 U	0.7	2.0	0.2 J	0.5 U	0.5 U	0.5 U	4.2	3.5 J	cis-1,2-Dichloroethene	0.4 J
MW-21-Screen-4	Oct 2019	MW-21-4	0.5 U	1.0	2.9	0.2 J	0.5 U	0.5 U	0.5 U	5.3	2.7 J	cis-1,2-Dichloroethene	0.3 J
MW-21-Screen-4	Oct 2019	DUP-5-4Q19	0.5 U	1.0	3.0	0.2 J	0.5 U	0.5 U	0.5 U	6.1	2.7 J	cis-1,2-Dichloroethene	0.5 J
MW-21-Screen-5													
MW-21-Screen-5	Oct 2018	MW-21-5	0.5 U	0.5 U	0.7	0.5 U	0.5 U	0.5 U	0.5 U	5.9	2.5 J		
MW-21-Screen-5	Feb/Mar 2019	MW-21-5	0.5 U	0.5 U	0.8	0.5 U	0.5 U	0.5 U	0.5 U	5.3	1.9 J		
MW-21-Screen-5	Feb/Mar 2019	DUP-5-1Q19	0.5 U	0.5 U	0.7	0.5 U	0.5 U	0.5 U	0.5 U	4.5	1.9 J		
MW-21-Screen-5	Apr/May 2019	MW-21-5	0.5 U	0.5 U	0.8	0.5 U	0.5 U	0.5 U	0.5 U	5.8	1.6 J		

Sample Location	Sampling Event	Sample Number	Carbon tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Perchlorate	Other Volatile Organic Compounds and 1,4-Dioxane, NDMA, NDPA, 1,2,3-TCP	
MW-21-Screen-5	Jul/Aug 2019	MW-21-5	0.5 U	0.5 U	0.7	0.5 U	0.5 U	0.5 U	0.5 U	3.0	2.8 J	Acrylonitrile	7.3
												Benzene	0.1 J
												Ethylbenzene	0.3 J
												Methyl-tert-butyl ether (MTBE)	1.7
												Styrene	1.5
												Vinyl chloride	0.4 J
MW-21-Screen-5	Oct 2019	MW-21-5	0.5 U	0.5 U	0.7	0.5 U	0.5 U	0.5 U	0.5 U	5.4	2.1 J		
MW-22-Screen-1													
MW-22-Screen-1	Oct 2018	MW-22-1	0.5 U	0.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	2.6 J		
MW-22-Screen-1	Feb/Mar 2019	MW-22-1	0.5 U	0.5 J	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	2.2 J		
MW-22-Screen-1	Apr/May 2019	MW-22-1	0.5 U	0.7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.6	65.0		
MW-22-Screen-1	Apr/May 2019	DUP-2-2Q19	0.5 U	0.8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.6	64.0		
MW-22-Screen-1	Jul/Aug 2019	MW-22-1	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0	160.0		
MW-22-Screen-1	Oct 2019	MW-22-1	0.5 U	0.5 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.7	170.0		
MW-22-Screen-2													
MW-22-Screen-2	Oct 2018	MW-22-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5 J		
MW-22-Screen-2	Feb/Mar 2019	MW-22-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.1 J		
MW-22-Screen-2	Apr/May 2019	MW-22-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	2.7 J		
MW-22-Screen-2	Jul/Aug 2019	MW-22-2	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	2.9 J		
MW-22-Screen-2	Jul/Aug 2019	MW-22-2	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	2.9 J		
MW-22-Screen-2	Oct 2019	MW-22-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.6 J		
MW-22-Screen-2	Oct 2019	DUP-4-4Q19	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.9 J		
MW-22-Screen-3													
MW-22-Screen-3	Oct 2018	MW-22-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.9 J		
MW-22-Screen-3	Feb/Mar 2019	MW-22-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.9 J		
MW-22-Screen-3	Apr/May 2019	MW-22-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.6 J		
MW-22-Screen-3	Jul/Aug 2019	MW-22-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5 J		
MW-22-Screen-3	Oct 2019	MW-22-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.8 J		
MW-22-Screen-4													
MW-22-Screen-4	Oct 2018	MW-22-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 J		
MW-22-Screen-4	Apr/May 2019	MW-22-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 J		
MW-22-Screen-4	Oct 2019	MW-22-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 J		
MW-22-Screen-5													
MW-22-Screen-5	Oct 2018	MW-22-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-22-Screen-5	Apr/May 2019	MW-22-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-22-Screen-5	Oct 2019	MW-22-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-23-Screen-1													
MW-23-Screen-1	Oct 2018	MW-23-1	0.5 U	1.2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 J	4.0		
MW-23-Screen-1	Feb/Mar 2019	MW-23-1	0.5 U	1.6	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	3.1 J		

Sample Location	Sampling Event	Sample Number	Carbon tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Perchlorate	Other Volatile Organic Compounds and 1,4-Dioxane, NDMA, NDPA, 1,2,3-TCP	
MW-23-Screen-1	Apr/May 2019	MW-23-1	0.5 U	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	1.9 J		
MW-23-Screen-1	Jul/Aug 2019	MW-23-1	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.7 J		
MW-23-Screen-1	Oct 2019	MW-23-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.3 J		
MW-23-Screen-2													
MW-23-Screen-2	Oct 2018	MW-23-2	0.5 U	1.0	0.3 J	0.2 J	0.5 U	0.5 U	0.5 U	0.4 J	4.9		
MW-23-Screen-2	Feb/Mar 2019	MW-23-2	0.5 U	0.9	0.3 J	0.2 J	0.5 U	0.5 U	0.5 U	0.4 J	3.7 J		
MW-23-Screen-2	Apr/May 2019	MW-23-2	0.5 U	1.5	0.3 J	0.2 J	0.5 U	0.5 U	0.5 U	0.5	3.1 J		
MW-23-Screen-2	Apr/May 2019	DUP-1-2Q19	0.5 U	2.1	0.5 J	0.2 J	0.5 U	0.5 U	0.5 U	0.6	3.4 J		
MW-23-Screen-2	Jul/Aug 2019	MW-23-2	0.5 U	3.0	0.5 J	0.2 J	0.5 U	0.5 U	0.5 U	0.7	4.0		
MW-23-Screen-2	Oct 2019	MW-23-2	0.5 U	1.4	0.3 J	0.2 J	0.5 U	0.5 U	0.5 U	0.5 J	3.9 J		
MW-23-Screen-3													
MW-23-Screen-3	Oct 2018	MW-23-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.9 J		
MW-23-Screen-3	Oct 2018	DUP-5-4Q18	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.0 J		
MW-23-Screen-3	Feb/Mar 2019	MW-23-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.0 J		
MW-23-Screen-3	Apr/May 2019	MW-23-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.6 J		
MW-23-Screen-3	Jul/Aug 2019	MW-23-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.1 J		
MW-23-Screen-3	Oct 2019	MW-23-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.6 J		
MW-23-Screen-4													
MW-23-Screen-4	Oct 2018	MW-23-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.4 J		
MW-23-Screen-4	Apr/May 2019	MW-23-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.9 J		
MW-23-Screen-4	Oct 2019	MW-23-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.2 J		
MW-23-Screen-5													
MW-23-Screen-5	Oct 2018	MW-23-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Styrene	0.3 J
MW-23-Screen-5	Apr/May 2019	MW-23-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Styrene	0.3 J
MW-23-Screen-5	Oct 2019	MW-23-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Styrene	0.3 J
MW-24-Screen-1													
MW-24-Screen-1	Oct 2018	MW-24-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.8	4.4	Bromodichloromethane	0.2 J
MW-24-Screen-1	Feb/Mar 2019	MW-24-1	0.5 U	0.5 U	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	2.2	110.0		
MW-24-Screen-1	Apr/May 2019	MW-24-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.8	9.3		
MW-24-Screen-1	Jul/Aug 2019	MW-24-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.3	17.0		
MW-24-Screen-1	Oct 2019	MW-24-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.4	2.1 J		
MW-24-Screen-2													
MW-24-Screen-2	Oct 2018	MW-24-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	2.4 J		
MW-24-Screen-2	Feb/Mar 2019	MW-24-2	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	0.5 U	0.5 U	0.2 J	2.3 J		
MW-24-Screen-2	Apr/May 2019	MW-24-2	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.4 J	3.0 J	Bromodichloromethane	0.3 J
MW-24-Screen-2	Jul/Aug 2019	MW-24-2	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 J	4.5	Bromodichloromethane	0.3 J
MW-24-Screen-2	Oct 2019	MW-24-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 J	5.6	Bromodichloromethane	0.2 J
MW-24-Screen-3													
MW-24-Screen-3	Oct 2018	MW-24-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		

Sample Location	Sampling Event	Sample Number	Carbon tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Perchlorate	Other Volatile Organic Compounds and 1,4-Dioxane, NDMA, NDPA, 1,2,3-TCP	
MW-24-Screen-3	Feb/Mar 2019	MW-24-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-24-Screen-3	Apr/May 2019	MW-24-3	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-24-Screen-3	Jul/Aug 2019	MW-24-3	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-24-Screen-3	Oct 2019	MW-24-3	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-24-Screen-4													
MW-24-Screen-4	Oct 2018	MW-24-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Ethylbenzene	0.2 J
												Styrene	0.2 J
MW-24-Screen-4	Apr/May 2019	MW-24-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Styrene	0.2 J
MW-24-Screen-4	Oct 2019	MW-24-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.3 J	Carbon disulfide	0.6 J
												Styrene	0.2 J
MW-24-Screen-5													
MW-24-Screen-5	Oct 2018	MW-24-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-24-Screen-5	Apr/May 2019	MW-24-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-24-Screen-5	Oct 2019	MW-24-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-25-Screen-1													
MW-25-Screen-1	Oct 2018	MW-25-1	0.5 U	1.2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	7.5	Methyl-tert-butyl ether (MTBE)	0.5
MW-25-Screen-1	Feb/Mar 2019	MW-25-1	0.5 U	1.9	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	6.6	Methyl-tert-butyl ether (MTBE)	0.5
MW-25-Screen-1	Apr/May 2019	MW-25-1	0.5 U	1.7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 J	7.1	Methyl-tert-butyl ether (MTBE)	0.4 J
MW-25-Screen-1	Jul/Aug 2019	MW-25-1	0.5 U	1.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	6.7	Methyl-tert-butyl ether (MTBE)	0.5
MW-25-Screen-1	Oct 2019	MW-25-1	0.5 U	1.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 J	7.1	Methyl-tert-butyl ether (MTBE)	0.4 J
MW-25-Screen-2													
MW-25-Screen-2	Oct 2018	MW-25-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	13.0		
MW-25-Screen-2	Feb/Mar 2019	MW-25-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	12.0		
MW-25-Screen-2	Apr/May 2019	MW-25-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	14.0		
MW-25-Screen-2	Jul/Aug 2019	MW-25-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	13.0		
MW-25-Screen-2	Oct 2019	MW-25-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	13.0		
MW-25-Screen-3													
MW-25-Screen-3	Oct 2018	MW-25-3	0.5 U	0.5 U	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	9.8		
MW-25-Screen-3	Feb/Mar 2019	MW-25-3	0.5 U	0.5 U	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	8.8		
MW-25-Screen-3	Apr/May 2019	MW-25-3	0.5 U	0.5 U	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	8.6		
MW-25-Screen-3	Jul/Aug 2019	MW-25-3	0.5 U	0.5 U	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	10.0		
MW-25-Screen-3	Oct 2019	MW-25-3	0.5 U	0.5 U	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	9.2		
MW-25-Screen-3	Oct 2019	DUP-3-4Q19	0.5 U	0.5 U	1.5	0.5 U	0.5 U	0.5 U	0.5 U	0.8	9.3		
MW-25-Screen-4													
MW-25-Screen-4	Oct 2018	MW-25-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	8.5		
MW-25-Screen-4	Feb/Mar 2019	MW-25-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	7.7		
MW-25-Screen-4	Apr/May 2019	MW-25-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	8.8		
MW-25-Screen-4	Jul/Aug 2019	MW-25-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	6.2		
MW-25-Screen-4	Jul/Aug 2019	DUP-1-3Q19	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	8.4		

Sample Location	Sampling Event	Sample Number	Carbon tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Perchlorate	Other Volatile Organic Compounds and 1,4-Dioxane, NDMA, NDPA, 1,2,3-TCP	
MW-25-Screen-4	Oct 2019	MW-25-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	7.8		
MW-25-Screen-5													
MW-25-Screen-5	Oct 2018	MW-25-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-25-Screen-5	Feb/Mar 2019	MW-25-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-25-Screen-5	Feb/Mar 2019	DUP-1-1Q19	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-25-Screen-5	Apr/May 2019	MW-25-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-25-Screen-5	Jul/Aug 2019	MW-25-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-25-Screen-5	Oct 2019	MW-25-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Carbon disulfide	0.7 J
MW-26-Screen-1													
MW-26-Screen-1	Oct 2018	MW-26-1	0.5 U	0.5 U	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	2.5 J		
MW-26-Screen-1	Feb/Mar 2019	MW-26-1	0.5 U	0.5 U	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	1.8 J		
MW-26-Screen-1	Apr/May 2019	MW-26-1	0.5 U	0.5 U	0.7	0.5 U	0.5 U	0.5 U	0.5 U	0.6	1.8 J		
MW-26-Screen-1	Jul/Aug 2019	MW-26-1	0.5 U	0.3 J	0.9	0.5 U	0.5 U	0.5 U	0.5 U	0.7	3.1 J		
MW-26-Screen-1	Oct 2019	MW-26-1	0.5 U	0.5 J	1.6	0.5 U	0.5 U	0.5 U	0.5 U	0.8	1.8 J		
MW-26-Screen-2													
MW-26-Screen-2	Oct 2018	MW-26-2	0.5 U	0.5 U	1.9	0.5 U	0.5 U	0.5 U	0.5 U	1.9	3.1 J		
MW-26-Screen-2	Oct 2018	DUP-6-4Q18	0.5 U	0.5 U	1.4	0.5 U	0.5 U	0.5 U	0.5 U	1.6	3.2 J		
MW-26-Screen-2	Feb/Mar 2019	MW-26-2	0.5 U	0.3 J	2.1	0.5 U	0.5 U	0.5 U	0.5 U	1.9	2.2 J	cis-1,2-Dichloroethene	0.3 J
MW-26-Screen-2	Apr/May 2019	MW-26-2	0.5 U	0.2 J	1.8	0.5 U	0.5 U	0.5 U	0.5 U	1.9	2.0 J		
MW-26-Screen-2	Jul/Aug 2019	MW-26-2	0.5 U	0.3 J	2.2	0.5 U	0.5 U	0.5 U	0.5 U	2.1	2.9 J	cis-1,2-Dichloroethene	0.3 J
MW-26-Screen-2	Oct 2019	MW-26-2	0.5 U	0.2 J	2.0	0.5 U	0.5 U	0.5 U	0.5 U	1.8	3.0 J		
Analyte concentration exceeds the standard for:													
CA MCL			0.5	5.0	5.0	5.0	0.5	6.0	1200.0	TTHM	6.0		
EPA REGION IX MCL			5.0	5.0	5.0	NE	5.0	7.0	NE	TTHM	NE		
Notes													
DUP(E)	Field Duplicate												
NA	Not analyzed												
NE	Not established												
TTHM	Chloroform is regulated under the state and federal MCL of 80 µg/L for Total Trihalomethanes (TTHMs); the MCL applies to the sum of all four THMs (Bromodichloromethane, Bromoform, Dibromochloromethane, and Chloroform) as an annual average												
J	Analyte concentration is an estimated value												
U	Analyte was analyzed for but not detected at or above the stated limit												
UJ	Analyte was analyzed for but not detected; analyte concentration is an estimated value												

TABLE 2
SUMMARY OF METALS DETECTED DURING THE LAST FIVE
SAMPLING EVENTS OF THE LONG-TERM QUARTERLY GROUNDWATER SAMPLING PROGRAM

(Shaded values exceed State or Federal MCLs or action levels.)

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
MW-1						
MW-1	Oct 2018	MW-1	NA	NA	0.7 J	2.0 U
MW-1	Apr/May 2019	MW-1	2.0 U	1.0 U	3.0 U	0.2 U
MW-1	Apr/May 2019	DUP-8-2Q19	0.9 J	1.0 U	3.0 U	0.2 U
MW-1	Oct 2019	MW-1	NA	NA	3.0 U	0.2 U
MW-3-Screen-1						
MW-3-Screen-1	Oct 2018	MW-3-1	NA	NA	3.0 U	2.0 U
MW-3-Screen-1	Apr/May 2019	MW-3-1	2.0 U	1.0 U	3.0 U	0.2
MW-3-Screen-1	Oct 2019	MW-3-1	NA	NA	3.0 U	0.2 U
MW-3-Screen-2						
MW-3-Screen-2	Oct 2018	MW-3-2	NA	NA	3.0 U	2.0 U
MW-3-Screen-2	Feb/Mar 2019	MW-3-2	NA	NA	1.1 J	2.0 U
MW-3-Screen-2	Apr/May 2019	MW-3-2	2.0 U	1.0 U	3.0 U	0.2 U
MW-3-Screen-2	Jul/Aug 2019	MW-3-2	NA	NA	3.0 U	0.2 U
MW-3-Screen-2	Oct 2019	MW-3-2	NA	NA	3.0 U	0.2 U
MW-3-Screen-3						
MW-3-Screen-3	Oct 2018	MW-3-3	NA	NA	3.0	0.8 J
MW-3-Screen-3	Feb/Mar 2019	MW-3-3	NA	NA	2.7 J	1.6 J
MW-3-Screen-3	Apr/May 2019	MW-3-3	3.0	1.0 U	1.6 J	2.0
MW-3-Screen-3	Jul/Aug 2019	MW-3-3	NA	NA	1.2 J	1.4
MW-3-Screen-3	Jul/Aug 2019	DUP-2-3Q19	NA	NA	1.2 J	1.4
MW-3-Screen-3	Oct 2019	MW-3-3	NA	NA	2.1 J	1.0
MW-3-Screen-4						
MW-3-Screen-4	Oct 2018	MW-3-4	NA	NA	19.0	2.0 U
MW-3-Screen-4	Oct 2018	DUP-2-4Q18	NA	NA	27.0	2.0 U
MW-3-Screen-4	Feb/Mar 2019	MW-3-4	NA	NA	25.0	2.0 U
MW-3-Screen-4	Feb/Mar 2019	DUP-3-1Q19	NA	NA	22.0	2.0 U
MW-3-Screen-4	Apr/May 2019	MW-3-4	14.0	1.0 U	24.0	0.3
MW-3-Screen-4	Jul/Aug 2019	MW-3-4	NA	NA	47.0 J	0.1 J
MW-3-Screen-4	Oct 2019	MW-3-4	NA	NA	95.0	0.2 J
MW-3-Screen-5						
MW-3-Screen-5	Oct 2018	MW-3-5	NA	NA	3.0 U	2.0 U
MW-3-Screen-5	Apr/May 2019	MW-3-5	1.6 J	1.0 U	1.8 J	0.1 J
MW-3-Screen-5	Oct 2019	MW-3-5	NA	NA	3.6	0.1 J
MW-4-Screen-1						
MW-4-Screen-1	Oct 2018	MW-4-1	NA	NA	0.6 J	0.7 J
MW-4-Screen-1	Feb/Mar 2019	MW-4-1	NA	NA	0.9 J	2.0 U
MW-4-Screen-1	Apr/May 2019	MW-4-1	2.0 U	1.0 U	3.0 U	0.1 J
MW-4-Screen-1	Jul/Aug 2019	MW-4-1	NA	NA	3.0 U	0.1 J
MW-4-Screen-1	Oct 2019	MW-4-1	NA	NA	3.0 U	0.1 J

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
MW-4-Screen-2						
MW-4-Screen-2	Oct 2018	MW-4-2	NA	NA	4.1	2.0 U
MW-4-Screen-2	Feb/Mar 2019	MW-4-2	NA	NA	1.4 J	2.0 U
MW-4-Screen-2	Apr/May 2019	MW-4-2	2.0 U	1.0 U	3.0 U	0.3
MW-4-Screen-2	Jul/Aug 2019	MW-4-2	NA	NA	3.0 U	1.1
MW-4-Screen-2	Oct 2019	MW-4-2	NA	NA	1.4 J	0.7
MW-4-Screen-3						
MW-4-Screen-3	Oct 2018	MW-4-3	NA	NA	3.0 U	2.0 U
MW-4-Screen-3	Feb/Mar 2019	MW-4-3	NA	NA	0.7 J	2.0 U
MW-4-Screen-3	Apr/May 2019	MW-4-3	2.0 U	1.0 U	100.0	0.2 U
MW-4-Screen-3	Jul/Aug 2019	MW-4-3	NA	NA	53.0	0.2 U
MW-4-Screen-3	Oct 2019	MW-4-3	NA	NA	3.8	0.2 U
MW-4-Screen-4						
MW-4-Screen-4	Oct 2018	MW-4-4	NA	NA	3.0 U	0.9 J
MW-4-Screen-4	Apr/May 2019	MW-4-4	2.0 U	1.0 U	3.0 U	0.2 U
MW-4-Screen-4	Oct 2019	MW-4-4	NA	NA	3.0 U	0.2 U
MW-4-Screen-5						
MW-4-Screen-5	April 2018	MW-4-5	2.0 U	1.0 U	0.7 J	2.0 U
MW-4-Screen-5	Oct 2018	MW-4-5	NA	NA	5.6	2.0 U
MW-4-Screen-5	Apr/May 2019	MW-4-5	2.0 U	1.0 U	3.0 U	0.2 U
MW-4-Screen-5	Oct 2019	MW-4-5	NA	NA	9.5	0.2 U
MW-5						
MW-5	Feb/Mar 2019	MW-5	NA	NA	3.0 U	2.0 U
MW-5	Apr/May 2019	MW-5	2.0 U	1.0 U	3.0 U	0.2 J
MW-5	Jul/Aug 2019	MW-5	NA	NA	0.8 J	0.2 J
MW-5	Oct 2019	MW-5	NA	NA	0.7 J	0.2 U
MW-5	Oct 2019	DUP-6-4Q19	NA	NA	0.7 J	0.2 U
MW-6						
MW-6	Feb/Mar 2019	MW-6	NA	NA	13.0	2.0
MW-6	Apr/May 2019	MW-6	2.0 U	1.0 U	48.0	1.6
MW-6	Jul/Aug 2019	MW-6	NA	NA	9.9	1.5
MW-6	Oct 2019	MW-6	NA	NA	39.0	2.1
MW-7						
MW-7	Apr/May 2019	MW-7	2.0 U	1.0 U	7.0	2.3
MW-7	Jul/Aug 2019	MW-7	NA	NA	25.0	1.6
MW-7	Oct 2019	MW-7	NA	NA	20.0 J	1.0
MW-8						
MW-8	Feb/Mar 2019	MW-8	NA	NA	16.0	2.0 U
MW-8	Feb/Mar 2019	DUP-7-1Q19	NA	NA	16.0	0.8 J
MW-8	Apr/May 2019	MW-8	2.0 U	1.0 U	1.0 J	0.3
MW-8	Apr/May 2019	DUP-6-2Q19	2.0 U	1.0 U	0.7 J	0.3
MW-8	Jul/Aug 2019	MW-8	NA	NA	3.4	0.2 J
MW-8	Oct 2019	MW-8	NA	NA	2.1 J	0.6
MW-8	Oct 2019	DUP-8-4Q19	NA	NA	4.0 J	0.6

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
MW-9						
MW-9	Oct 2018	MW-9	NA	NA	130.0	2.0 U
MW-9	Apr/May 2019	MW-9	2.0 U	0.2 J	6.3	0.6
MW-9	Oct 2019	MW-9	NA	NA	80.0 J	0.4
MW-10						
MW-10	Feb/Mar 2019	MW-10	NA	NA	20.0	1.7 J
MW-10	Apr/May 2019	MW-10	2.0 U	1.0 U	4.0	1.2
MW-10	Jul/Aug 2019	MW-10	NA	NA	7.8	1.0
MW-10	Oct 2019	MW-10	NA	NA	4.1	1.1
MW-11-Screen-1						
MW-11-Screen-1	Oct 2018	MW-11-1	NA	NA	3.0 U	2.0 U
MW-11-Screen-1	Feb/Mar 2019	MW-11-1	NA	NA	3.0 U	0.7 J
MW-11-Screen-1	Apr/May 2019	MW-11-1	2.0 U	1.0 U	3.0 U	0.1 J
MW-11-Screen-1	Jul/Aug 2019	MW-11-1	NA	NA	3.0 U	0.1 J
MW-11-Screen-1	Oct 2019	MW-11-1	NA	NA	4.5	0.2 U
MW-11-Screen-2						
MW-11-Screen-2	Oct 2018	MW-11-2	NA	NA	3.0 U	2.0 U
MW-11-Screen-2	Feb/Mar 2019	MW-11-2	NA	NA	3.0 U	2.0 U
MW-11-Screen-2	Apr/May 2019	MW-11-2	2.0 U	1.0 U	3.0 U	0.2 U
MW-11-Screen-2	Jul/Aug 2019	MW-11-2	NA	NA	3.0 U	0.2 U
MW-11-Screen-2	Oct 2019	MW-11-2	NA	NA	3.0 U	0.2 U
MW-11-Screen-3						
MW-11-Screen-3	Oct 2018	MW-11-3	NA	NA	0.8 J	2.0 U
MW-11-Screen-3	Feb/Mar 2019	MW-11-3	NA	NA	3.0 U	0.7 J
MW-11-Screen-3	Apr/May 2019	MW-11-3	1.8 J	1.0 U	4.8	0.2 U
MW-11-Screen-3	Apr/May 2019	DUP-5-2Q19	1.6 J	1.0 U	3.6	0.2 U
MW-11-Screen-3	Jul/Aug 2019	MW-11-3	NA	NA	4.0	0.2 U
MW-11-Screen-3	Oct 2019	MW-11-3	NA	NA	1.3 J	0.2 U
MW-11-Screen-4						
MW-11-Screen-4	Oct 2018	MW-11-4	NA	NA	3.0 U	2.0 U
MW-11-Screen-4	Apr/May 2019	MW-11-4	2.0 U	1.0 U	3.0 U	0.1 J
MW-11-Screen-4	Oct 2019	MW-11-4	NA	NA	3.0 U	0.2 U
MW-11-Screen-5						
MW-11-Screen-5	Oct 2018	MW-11-5	NA	NA	1.3 J	2.0 U
MW-11-Screen-5	Apr/May 2019	MW-11-5	6.4	0.3 J	1.6 J	0.3
MW-11-Screen-5	Oct 2019	MW-11-5	NA	NA	1.2 J	0.2 U
MW-12-Screen-1						
MW-12-Screen-1	Feb/Mar 2019	MW-12-1	NA	NA	2.2 J	1.7 J
MW-12-Screen-1	Apr/May 2019	MW-12-1	2.0 U	1.0 U	1.7 J	1.0
MW-12-Screen-1	Jul/Aug 2019	MW-12-1	NA	NA	3.0 U	0.5
MW-12-Screen-2						
MW-12-Screen-2	Oct 2018	MW-12-2	NA	NA	1.4 J	2.0 U
MW-12-Screen-2	Feb/Mar 2019	MW-12-2	NA	NA	1.2 J	2.0 U
MW-12-Screen-2	Apr/May 2019	MW-12-2	0.9 J	1.0 U	0.7 J	0.2 U
MW-12-Screen-2	Jul/Aug 2019	MW-12-2	NA	NA	3.0 U	0.2 U

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
MW-12-Screen-2	Oct 2019	MW-12-2	NA	NA	0.5 J	0.1 J
MW-12-Screen-3						
MW-12-Screen-3	Oct 2018	MW-12-3	NA	NA	1.7 J	2.0 U
MW-12-Screen-3	Feb/Mar 2019	MW-12-3	NA	NA	1.0 J	0.9 J
MW-12-Screen-3	Feb/Mar 2019	DUP-6-1Q19	NA	NA	1.1 J	2.0 U
MW-12-Screen-3	Apr/May 2019	MW-12-3	1.1 J	1.0 U	1.0 J	0.5
MW-12-Screen-3	Jul/Aug 2019	MW-12-3	NA	NA	3.0 U	0.3
MW-12-Screen-3	Oct 2019	MW-12-3	NA	NA	3.0 U	0.2
MW-12-Screen-4						
MW-12-Screen-4	Oct 2018	MW-12-4	NA	NA	2.0 J	0.8 J
MW-12-Screen-4	Apr/May 2019	MW-12-4	1.7 J	1.0 U	3.0 U	0.6
MW-12-Screen-4	Apr/May 2019	DUP-6-2Q19	1.5 J	1.0 U	0.7 J	0.6
MW-12-Screen-4	Oct 2019	MW-12-4	NA	NA	3.0 U	0.6
MW-12-Screen-5						
MW-12-Screen-5	Oct 2018	MW-12-5	NA	NA	0.8 J	1.4 J
MW-12-Screen-5	Apr/May 2019	MW-12-5	1.8 J	1.0 U	1.0 J	0.9
MW-12-Screen-5	Oct 2019	MW-12-5	NA	NA	0.6 J	1.0
MW-13						
MW-13	Feb/Mar 2019	MW-13	NA	NA	15.0	2.9
MW-13	Apr/May 2019	MW-13	2.0 U	1.0 U	5.7	3.7
MW-13	Jul/Aug 2019	MW-13	NA	NA	8.5	3.1
MW-14-Screen-1						
MW-14-Screen-1	Apr/May 2019	MW-14-1	2.0 U	1.0 U	1.2 J	2.0
MW-14-Screen-1	Jul/Aug 2019	MW-14-1	NA	NA	1.2 J	0.2 U
MW-14-Screen-2						
MW-14-Screen-2	Oct 2018	MW-14-2	NA	NA	3.0 U	2.0 U
MW-14-Screen-2	Feb/Mar 2019	MW-14-2	NA	NA	3.0 U	0.9 J
MW-14-Screen-2	Apr/May 2019	MW-14-2	2.0 U	1.0 U	3.0 U	0.2 J
MW-14-Screen-2	Jul/Aug 2019	MW-14-2	NA	NA	1.0 J	0.6
MW-14-Screen-2	Oct 2019	MW-14-2	NA	NA	3.0 U	0.4
MW-14-Screen-3						
MW-14-Screen-3	Oct 2018	MW-14-3	NA	NA	3.0 U	2.0 U
MW-14-Screen-3	Feb/Mar 2019	MW-14-3	NA	NA	3.0 U	2.0 U
MW-14-Screen-3	Apr/May 2019	MW-14-3	2.0 U	1.0 U	3.0 U	0.4
MW-14-Screen-3	Jul/Aug 2019	MW-14-3	NA	NA	3.0 U	0.4
MW-14-Screen-3	Oct 2019	MW-14-3	NA	NA	3.0 U	0.1 J
MW-14-Screen-4						
MW-14-Screen-4	Oct 2018	MW-14-4	NA	NA	3.0 U	2.4
MW-14-Screen-4	Apr/May 2019	MW-14-4	2.0 U	1.0 U	3.0 U	0.7
MW-14-Screen-4	Oct 2019	MW-14-4	NA	NA	1.9 J	2.1
MW-14-Screen-5						
MW-14-Screen-5	Oct 2018	MW-14-5	NA	NA	3.0 U	2.0 U
MW-14-Screen-5	Apr/May 2019	MW-14-5	2.0 U	1.0 U	3.0 U	0.2 U
MW-14-Screen-5	Oct 2019	MW-14-5	NA	NA	3.0 U	0.1 J

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
MW-15						
MW-15	Oct 2018	MW-15	NA	NA	19.0	2.0 U
MW-15	Feb/Mar 2019	MW-15	NA	NA	9.7	0.1 J
MW-15	Apr/May 2019	MW-15	2.0 U	1.0 U	2.4 J	0.6
MW-15	Jul/Aug 2019	MW-15	NA	NA	2.6 J	0.5
MW-15	Jul/Aug 2019	DUP-7-3Q19	NA	NA	1.9 J	0.5
MW-15	Oct 2019	MW-15	NA	NA	1.7 J	0.5
MW-16						
MW-16	Apr/May 2019	MW-16	5.1	1.0 U	1.6 J	1.1
MW-16	Jul/Aug 2019	MW-16	NA	NA	40.0	1.1
MW-16	Oct 2019	MW-16	NA	NA	16000.0	0.7
MW-17-Screen-1						
MW-17-Screen-1	Apr/May 2019	MW-17-1	2.0 U	1.0 U	3.0 U	0.1 J
MW-17-Screen-1	Oct 2019	MW-17-1	NA	NA	3.0 U	0.1 J
MW-17-Screen-2						
MW-17-Screen-2	Oct 2018	MW-17-2	NA	NA	3.0 U	2.0 U
MW-17-Screen-2	Oct 2018	DUP-3-4Q18	NA	NA	3.0 U	2.0 U
MW-17-Screen-2	Feb/Mar 2019	MW-17-2	NA	NA	0.8 J	2.0 U
MW-17-Screen-2	Apr/May 2019	MW-17-2	2.0 U	1.0 U	3.0 U	0.2 U
MW-17-Screen-2	Jul/Aug 2019	MW-17-2	NA	NA	3.0 U	0.1 J
MW-17-Screen-2	Oct 2019	MW-17-2	NA	NA	3.0 U	0.2 U
MW-17-Screen-3						
MW-17-Screen-3	Oct 2018	MW-17-3	NA	NA	3.0 U	2.0 U
MW-17-Screen-3	Feb/Mar 2019	MW-17-3	NA	NA	0.8 J	2.0 U
MW-17-Screen-3	Apr/May 2019	MW-17-3	2.0 U	1.0 U	3.0 U	0.2 J
MW-17-Screen-3	Jul/Aug 2019	MW-17-3	NA	NA	3.0 U	0.2 U
MW-17-Screen-3	Oct 2019	MW-17-3	NA	NA	3.0 U	0.2 U
MW-17-Screen-4						
MW-17-Screen-4	Oct 2018	MW-17-4	NA	NA	4.0	2.4
MW-17-Screen-4	Feb/Mar 2019	MW-17-4	NA	NA	2.3 J	2.1
MW-17-Screen-4	Apr/May 2019	MW-17-4	2.0 U	1.0 U	1.2 J	1.0
MW-17-Screen-4	Jul/Aug 2019	MW-17-4	NA	NA	0.8 J	1.4
MW-17-Screen-4	Oct 2019	MW-17-4	NA	NA	1.5 J	1.4
MW-17-Screen-5						
MW-17-Screen-5	Oct 2018	MW-17-5	NA	NA	3.1	1.7 J
MW-17-Screen-5	Apr/May 2019	MW-17-5	2.0 U	0.7 J	1.4 J	0.5
MW-17-Screen-5	Oct 2019	MW-17-5	NA	NA	1.6 J	1.2
MW-18-Screen-1						
MW-18-Screen-1	Apr/May 2019	MW-18-1	2.0 U	1.0 U	0.5 J	0.1 J
MW-18-Screen-1	Apr/May 2019	MW-18-1	2.0 U	1.0 U	0.5 J	0.1 J
MW-18-Screen-2						
MW-18-Screen-2	Oct 2018	MW-18-2	NA	NA	3.0 U	2.0 U
MW-18-Screen-2	Feb/Mar 2019	MW-18-2	NA	NA	0.6 J	2.0 U
MW-18-Screen-2	Apr/May 2019	MW-18-2	0.9 J	1.0 U	3.0 U	0.1 J
MW-18-Screen-2	Jul/Aug 2019	MW-18-2	NA	NA	3.0 U	0.05 J

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
MW-18-Screen-2	Jul/Aug 2019	DUP-3-3Q19	NA	NA	3.0 U	0.04 J
MW-18-Screen-2	Oct 2019	MW-18-2	NA	NA	3.0 U	0.2 U
MW-18-Screen-2	Oct 2019	DUP-7-4Q19	NA	NA	3.0 U	0.2 U
MW-18-Screen-3						
MW-18-Screen-3	Oct 2018	MW-18-3	NA	NA	1.1 J	1.8 J
MW-18-Screen-3	Feb/Mar 2019	MW-18-3	NA	NA	2.9 J	2.1
MW-18-Screen-3	Apr/May 2019	MW-18-3	1.4 J	1.0 U	2.2 J	1.8
MW-18-Screen-3	Apr/May 2019	DUP-3-2Q19	1.1 J	1.0 U	2.1 J	1.8
MW-18-Screen-3	Jul/Aug 2019	MW-18-3	NA	NA	1.6 J	1.5
MW-18-Screen-3	Oct 2019	MW-18-3	NA	NA	1.5 J	1.7
MW-18-Screen-4						
MW-18-Screen-4	Oct 2018	MW-18-4	NA	NA	2.8 J	2.3
MW-18-Screen-4	Feb/Mar 2019	MW-18-4	NA	NA	9.2	1.7 J
MW-18-Screen-4	Apr/May 2019	MW-18-4	1.1 J	1.0 U	2.0 J	0.9
MW-18-Screen-4	Jul/Aug 2019	MW-18-4	NA	NA	3.2	2.1
MW-18-Screen-4	Oct 2019	MW-18-4	NA	NA	2.3 J	1.9
MW-18-Screen-5						
MW-18-Screen-5	Oct 2018	MW-18-5	NA	NA	3.0 U	2.0 U
MW-18-Screen-5	Apr/May 2019	MW-18-5	1.8 J	1.0 U	3.0 U	0.1 J
MW-18-Screen-5	Oct 2019	MW-18-5	NA	NA	3.0 U	0.2 U
MW-19-Screen-1						
MW-19-Screen-1	Oct 2018	MW-19-1	NA	NA	3.0 U	2.0 U
MW-19-Screen-1	Apr/May 2019	MW-19-1	2.0 U	1.0 U	3.0 U	0.2 U
MW-19-Screen-1	Oct 2019	MW-19-1	NA	NA	3.0 U	0.2 U
MW-19-Screen-2						
MW-19-Screen-2	Oct 2018	MW-19-2	NA	NA	2.8 J	2.0 U
MW-19-Screen-2	Apr/May 2019	MW-19-2	2.0 U	1.0 U	2.0 J	0.3
MW-19-Screen-2	Oct 2019	MW-19-2	NA	NA	1.5 J	0.9
MW-19-Screen-3						
MW-19-Screen-3	Oct 2018	MW-19-3	NA	NA	3.2	2.0 U
MW-19-Screen-3	Apr/May 2019	MW-19-3	2.0 U	1.0 U	2.8 J	1.5
MW-19-Screen-3	Oct 2019	MW-19-3	NA	NA	2.0 J	1.9
MW-19-Screen-4						
MW-19-Screen-4	Oct 2018	MW-19-4	NA	NA	2.1 J	2.5
MW-19-Screen-4	Apr/May 2019	MW-19-4	1.4 J	1.0 U	1.5 J	1.6
MW-19-Screen-4	Oct 2019	MW-19-4	NA	NA	2.2 J	2.6
MW-19-Screen-4	Oct 2019	DUP-2-4Q19	NA	NA	2.4 J	2.6
MW-19-Screen-5						
MW-19-Screen-5	Oct 2018	MW-19-5	NA	NA	1.9 J	2.4
MW-19-Screen-5	Oct 2018	DUP-1-4Q18	NA	NA	1.8 J	2.7
MW-19-Screen-5	Apr/May 2019	MW-19-5	1.9 J	1.0 U	2.2 J	1.7
MW-19-Screen-5	Oct 2019	MW-19-5	NA	NA	2.2 J	1.9
MW-20-Screen-1						
MW-20-Screen-1	Jul/Aug 2019	MW-20-1	NA	NA	0.6 J	0.2 J

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
MW-20-Screen-2						
MW-20-Screen-2	Oct 2018	MW-20-2	NA	NA	3.0 U	2.0 U
MW-20-Screen-2	Feb/Mar 2019	MW-20-2	NA	NA	3.0 U	2.0 U
MW-20-Screen-2	Apr/May 2019	MW-20-2	2.0 U	1.0 U	3.0 U	0.2 U
MW-20-Screen-2	Jul/Aug 2019	MW-20-2	NA	NA	0.6 J	0.2 U
MW-20-Screen-2	Oct 2019	MW-20-2	NA	NA	3.0 U	0.2 U
MW-20-Screen-3						
MW-20-Screen-3	Oct 2018	MW-20-3	NA	NA	3.0 U	2.0 U
MW-20-Screen-3	Feb/Mar 2019	MW-20-3	NA	NA	3.0 U	2.0 U
MW-20-Screen-3	Apr/May 2019	MW-20-3	2.0 U	1.0 U	3.0 U	0.2 U
MW-20-Screen-3	Apr/May 2019	DUP-4-2Q19	0.7 J	1.0 U	3.0 U	0.2 U
MW-20-Screen-3	Jul/Aug 2019	MW-20-3	NA	NA	3.0 U	0.2 U
MW-20-Screen-3	Oct 2019	MW-20-3	NA	NA	3.0 U	0.2 U
MW-20-Screen-4						
MW-20-Screen-4	Oct 2018	MW-20-4	NA	NA	3.0 U	2.0 U
MW-20-Screen-4	Feb/Mar 2019	MW-20-4	NA	NA	3.0 U	1.1 J
MW-20-Screen-4	Apr/May 2019	MW-20-4	1.3 J	1.0 U	3.0 U	0.2 U
MW-20-Screen-4	Jul/Aug 2019	MW-20-4	NA	NA	3.0 U	0.1 J
MW-20-Screen-4	Oct 2019	MW-20-4	NA	NA	3.0 U	0.1 J
MW-20-Screen-4	Oct 2019	Dup-1-4Q19	NA	NA	0.6 J	0.1 J
MW-20-Screen-5						
MW-20-Screen-5	Oct 2018	MW-20-5	NA	NA	3.0 U	2.0 U
MW-20-Screen-5	Feb/Mar 2019	MW-20-5	NA	NA	3.0 U	0.8 J
MW-20-Screen-5	Apr/May 2019	MW-20-5	1.7 J	1.0 U	3.0 U	0.1 J
MW-20-Screen-5	Jul/Aug 2019	MW-20-5	NA	NA	3.0 U	0.1 J
MW-20-Screen-5	Oct 2019	MW-20-5	NA	NA	3.0 U	0.1 J
MW-21-Screen-1						
MW-21-Screen-1	Apr/May 2019	MW-21-1	2.0 U	1.0 U	2.2 J	0.7
MW-21-Screen-1	Jul/Aug 2019	MW-21-1	NA	NA	2.3 J	1.3
MW-21-Screen-2						
MW-21-Screen-2	Oct 2018	MW-21-2	NA	NA	3.0 U	2.0 U
MW-21-Screen-2	Oct 2018	DUP-4-4Q18	NA	NA	3.0 U	2.0 U
MW-21-Screen-2	Feb/Mar 2019	MW-21-2	NA	NA	3.0 U	2.0 U
MW-21-Screen-2	Apr/May 2019	MW-21-2	2.0 U	1.0 U	0.9 J	0.2 J
MW-21-Screen-2	Jul/Aug 2019	MW-21-2	NA	NA	1.4 J	0.1 J
MW-21-Screen-2	Jul/Aug 2019	DUP-6-3Q19	NA	NA	1.0 J	0.2
MW-21-Screen-2	Oct 2019	MW-21-2	NA	NA	3.0 U	0.2 U
MW-21-Screen-3						
MW-21-Screen-3	Oct 2018	MW-21-3	NA	NA	3.0 U	2.0 U
MW-21-Screen-3	Feb/Mar 2019	MW-21-3	NA	NA	3.0 U	2.0 U
MW-21-Screen-3	Apr/May 2019	MW-21-3	1.1 J	1.0 U	0.7 J	0.2
MW-21-Screen-3	Jul/Aug 2019	MW-21-3	NA	NA	1.6 J	0.1 J
MW-21-Screen-3	Jul/Aug 2019	DUP-5-3Q19	NA	NA	1.2 J	0.1 J
MW-21-Screen-3	Oct 2019	MW-21-3	NA	NA	3.0 U	0.2 U

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
MW-21-Screen-4						
MW-21-Screen-4	Oct 2018	MW-21-4	NA	NA	0.8 J	1.6 J
MW-21-Screen-4	Feb/Mar 2019	MW-21-4	NA	NA	3.0 U	1.2 J
MW-21-Screen-4	Apr/May 2019	MW-21-4	1.4 J	1.0 U	3.0 U	1.2
MW-21-Screen-4	Jul/Aug 2019	MW-21-4	NA	NA	11.0 J	1.3
MW-21-Screen-4	Oct 2019	MW-21-4	NA	NA	1.2 J	1.2
MW-21-Screen-4	Oct 2019	DUP-5-4Q19	NA	NA	1.2 J	1.2
MW-21-Screen-5						
MW-21-Screen-5	Oct 2018	MW-21-5	NA	NA	0.6 J	1.4 J
MW-21-Screen-5	Feb/Mar 2019	MW-21-5	NA	NA	3.0 U	1.8 J
MW-21-Screen-5	Feb/Mar 2019	DUP-5-1Q19	NA	NA	3.0 U	1.5 J
MW-21-Screen-5	Apr/May 2019	MW-21-5	1.2 J	1.0 U	1.2 J	0.9
MW-21-Screen-5	Jul/Aug 2019	MW-21-5	NA	NA	1.8 J	0.2 U
MW-21-Screen-5	Oct 2019	MW-21-5	NA	NA	1.0 J	1.1
MW-22-Screen-1						
MW-22-Screen-1	Oct 2018	MW-22-1	NA	NA	3.0 U	0.9 J
MW-22-Screen-1	Feb/Mar 2019	MW-22-1	NA	NA	3.0 U	1.7 J
MW-22-Screen-1	Apr/May 2019	MW-22-1	2.0 U	1.0 U	3.0 U	0.8
MW-22-Screen-1	Apr/May 2019	DUP-2-2Q19	2.0 U	1.0 U	0.5 J	0.7
MW-22-Screen-1	Jul/Aug 2019	MW-22-1	NA	NA	3.0 U	0.6
MW-22-Screen-1	Oct 2019	MW-22-1	NA	NA	3.0 U	0.6
MW-22-Screen-2						
MW-22-Screen-2	Oct 2018	MW-22-2	NA	NA	3.0 U	2.4
MW-22-Screen-2	Feb/Mar 2019	MW-22-2	NA	NA	3.0 U	2.2
MW-22-Screen-2	Apr/May 2019	MW-22-2	2.0 U	1.0 U	3.0 U	0.3
MW-22-Screen-2	Jul/Aug 2019	MW-22-2	NA	NA	3.0 U	0.5
MW-22-Screen-2	Oct 2019	MW-22-2	NA	NA	1.6 J	1.6
MW-22-Screen-2	Oct 2019	DUP-4-4Q19	NA	NA	0.8 J	0.9
MW-22-Screen-3						
MW-22-Screen-3	Oct 2018	MW-22-3	NA	NA	3.0 U	1.8 J
MW-22-Screen-3	Feb/Mar 2019	MW-22-3	NA	NA	3.0 U	1.9 J
MW-22-Screen-3	Apr/May 2019	MW-22-3	0.9 J	1.0 U	0.5 J	0.9
MW-22-Screen-3	Jul/Aug 2019	MW-22-3	NA	NA	3.0 U	1.2
MW-22-Screen-3	Oct 2019	MW-22-3	NA	NA	1.2 J	0.9
MW-22-Screen-4						
MW-22-Screen-4	Oct 2018	MW-22-4	NA	NA	3.0 U	3.0
MW-22-Screen-4	Apr/May 2019	MW-22-4	0.9 J	1.0 U	2.0 J	2.4
MW-22-Screen-4	Oct 2019	MW-22-4	NA	NA	2.3 J	2.5
MW-22-Screen-5						
MW-22-Screen-5	Oct 2018	MW-22-5	NA	NA	3.0 U	2.0 U
MW-22-Screen-5	Apr/May 2019	MW-22-5	2.0 U	1.0 U	3.0 U	0.2 U
MW-22-Screen-5	Oct 2019	MW-22-5	NA	NA	3.0 U	0.1 J
MW-23-Screen-1						
MW-23-Screen-1	Oct 2018	MW-23-1	NA	NA	3.0 U	1.6 J
MW-23-Screen-1	Feb/Mar 2019	MW-23-1	NA	NA	3.0 U	2.0 U

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
MW-23-Screen-1	Apr/May 2019	MW-23-1	0.8 J	1.0 U	3.0 U	0.5
MW-23-Screen-1	Jul/Aug 2019	MW-23-1	NA	NA	0.7 J	0.2 J
MW-23-Screen-1	Oct 2019	MW-23-1	NA	NA	0.6 J	0.4
MW-23-Screen-2						
MW-23-Screen-2	Oct 2018	MW-23-2	NA	NA	3.0 U	1.7 J
MW-23-Screen-2	Feb/Mar 2019	MW-23-2	NA	NA	3.0 U	1.3 J
MW-23-Screen-2	Apr/May 2019	MW-23-2	2.0 U	1.0 U	3.0 U	1.4
MW-23-Screen-2	Apr/May 2019	DUP-1-2Q19	2.0 U	1.0 U	3.0 U	1.3
MW-23-Screen-2	Jul/Aug 2019	MW-23-2	NA	NA	1.1 J	0.9
MW-23-Screen-2	Oct 2019	MW-23-2	NA	NA	0.6 J	0.9
MW-23-Screen-3						
MW-23-Screen-3	Oct 2018	MW-23-3	NA	NA	3.0	3.7
MW-23-Screen-3	Oct 2018	DUP-5-4Q18	NA	NA	3.1	3.6
MW-23-Screen-3	Feb/Mar 2019	MW-23-3	NA	NA	3.0 U	3.3
MW-23-Screen-3	Apr/May 2019	MW-23-3	1.0 J	1.0 U	3.0 U	2.8
MW-23-Screen-3	Jul/Aug 2019	MW-23-3	NA	NA	3.1	2.7
MW-23-Screen-3	Oct 2019	MW-23-3	NA	NA	2.6 J	2.6
MW-23-Screen-4						
MW-23-Screen-4	Oct 2018	MW-23-4	NA	NA	4.3	3.9
MW-23-Screen-4	Feb/Mar 2019	MW-23-4	NA	NA	3.0 U	3.6
MW-23-Screen-4	Apr/May 2019	MW-23-4	1.7 J	1.0 U	3.4	3.1
MW-23-Screen-4	Jul/Aug 2019	MW-23-4	NA	NA	3.2	2.9
MW-23-Screen-4	Oct 2019	MW-23-4	NA	NA	2.4 J	2.9
MW-23-Screen-5						
MW-23-Screen-5	Oct 2018	MW-23-5	NA	NA	3.0 U	2.0 U
MW-23-Screen-5	Apr/May 2019	MW-23-5	2.4	0.3 J	3.0 U	0.2 U
MW-23-Screen-5	Oct 2019	MW-23-5	NA	NA	3.0 U	0.2 U
MW-24-Screen-1						
MW-24-Screen-1	Oct 2018	MW-24-1	NA	NA	3.0 U	2.0 U
MW-24-Screen-1	Feb/Mar 2019	MW-24-1	NA	NA	3.0 U	2.0 U
MW-24-Screen-1	Apr/May 2019	MW-24-1	2.0 U	1.0 U	6.3	0.6
MW-24-Screen-1	Jul/Aug 2019	MW-24-1	NA	NA	1.7 J	0.7
MW-24-Screen-1	Oct 2019	MW-24-1	NA	NA	3.6	0.1 J
MW-24-Screen-2						
MW-24-Screen-2	Oct 2018	MW-24-2	NA	NA	3.0 U	2.5
MW-24-Screen-2	Feb/Mar 2019	MW-24-2	NA	NA	3.0 U	2.0
MW-24-Screen-2	Apr/May 2019	MW-24-2	1.6 J	1.0 U	2.0 J	1.9
MW-24-Screen-2	Jul/Aug 2019	MW-24-2	NA	NA	1.3 J	1.6
MW-24-Screen-2	Oct 2019	MW-24-2	NA	NA	2.1 J	2.1
MW-24-Screen-3						
MW-24-Screen-3	Oct 2018	MW-24-3	NA	NA	3.0 U	0.8 J
MW-24-Screen-3	Feb/Mar 2019	MW-24-3	NA	NA	3.0 U	2.0 U
MW-24-Screen-3	Apr/May 2019	MW-24-3	2.0	1.0 U	0.6 J	0.2 U
MW-24-Screen-3	Jul/Aug 2019	MW-24-3	NA	NA	3.0 U	0.2 U
MW-24-Screen-3	Oct 2019	MW-24-3	NA	NA	3.0 U	0.04 J

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
MW-24-Screen-4						
MW-24-Screen-4	Oct 2018	MW-24-4	NA	NA	3.0 U	2.0 U
MW-24-Screen-4	Feb/Mar 2019	MW-24-4	NA	NA	3.0 U	10.0 U
MW-24-Screen-4	Apr/May 2019	MW-24-4	1.4 J	1.0 U	3.0 U	0.2 U
MW-24-Screen-4	Jul/Aug 2019	MW-24-4	NA	NA	3.0 U	0.1 J
MW-24-Screen-4	Jul/Aug 2019	DUP-4-3Q19	NA	NA	3.0 U	0.1 J
MW-24-Screen-4	Oct 2019	MW-24-4	NA	NA	3.0 U	0.1 J
MW-24-Screen-5						
MW-24-Screen-5	Oct 2018	MW-24-5	NA	NA	3.0 U	3.0
MW-24-Screen-5	Apr/May 2019	MW-24-5	2.7	0.2 J	3.0 U	2.5
MW-24-Screen-5	Oct 2019	MW-24-5	NA	NA	3.1	2.5
MW-25-Screen-1						
MW-25-Screen-1	Oct 2018	MW-25-1	NA	NA	3.0 U	2.0 U
MW-25-Screen-1	Feb/Mar 2019	MW-25-1	NA	NA	1.9 J	2.0 U
MW-25-Screen-1	Apr/May 2019	MW-25-1	1.1 J	1.0 U	2.1 J	0.6
MW-25-Screen-1	Jul/Aug 2019	MW-25-1	NA	NA	2.0 J	0.3
MW-25-Screen-1	Oct 2019	MW-25-1	NA	NA	1.3 J	0.3
MW-25-Screen-2						
MW-25-Screen-2	Oct 2018	MW-25-2	NA	NA	3.0 U	3.6
MW-25-Screen-2	Feb/Mar 2019	MW-25-2	NA	NA	3.2	3.7
MW-25-Screen-2	Apr/May 2019	MW-25-2	1.0 J	1.0 U	3.2	2.9
MW-25-Screen-2	Jul/Aug 2019	MW-25-2	NA	NA	3.1	1.0
MW-25-Screen-2	Oct 2019	MW-25-2	NA	NA	1.2 J	1.0
MW-25-Screen-3						
MW-25-Screen-3	Oct 2018	MW-25-3	NA	NA	3.0 U	3.3
MW-25-Screen-3	Feb/Mar 2019	MW-25-3	NA	NA	3.6	3.9
MW-25-Screen-3	Apr/May 2019	MW-25-3	0.9 J	1.0 U	3.7	3.3
MW-25-Screen-3	Jul/Aug 2019	MW-25-3	NA	NA	2.4 J	1.9
MW-25-Screen-3	Oct 2019	MW-25-3	NA	NA	1.9 J	2.5
MW-25-Screen-3	Oct 2019	DUP-3-4Q19	NA	NA	3.9	2.5
MW-25-Screen-4						
MW-25-Screen-4	Oct 2018	MW-25-4	NA	NA	3.0 U	2.0 U
MW-25-Screen-4	Feb/Mar 2019	MW-25-4	NA	NA	1.9 J	1.0 J
MW-25-Screen-4	Apr/May 2019	MW-25-4	2.0 U	1.0 U	0.9 J	0.6
MW-25-Screen-4	Jul/Aug 2019	MW-25-4	NA	NA	1.8 J	0.5
MW-25-Screen-4	Jul/Aug 2019	DUP-1-3Q19	NA	NA	1.7 J	0.4
MW-25-Screen-4	Oct 2019	MW-25-4	NA	NA	0.9 J	0.4
MW-25-Screen-5						
MW-25-Screen-5	Oct 2018	MW-25-5	NA	NA	3.0 U	2.0 U
MW-25-Screen-5	Feb/Mar 2019	MW-25-5	NA	NA	0.7 J	2.0 U
MW-25-Screen-5	Feb/Mar 2019	DUP-1-1Q19	NA	NA	0.8 J	2.0 U
MW-25-Screen-5	Apr/May 2019	MW-25-5	0.7 J	1.0 U	3.0 U	0.2 U
MW-25-Screen-5	Jul/Aug 2019	MW-25-5	NA	NA	0.5 J	0.1 J
MW-25-Screen-5	Oct 2019	MW-25-5	NA	NA	3.0 U	0.05 J

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
MW-26-Screen-1						
MW-26-Screen-1	Oct 2018	MW-26-1	NA	NA	3.0 U	0.8 J
MW-26-Screen-1	Feb/Mar 2019	MW-26-1	NA	NA	1.1 J	2.0 U
MW-26-Screen-1	Apr/May 2019	MW-26-1	2.0 U	1.0 U	3.0 U	0.5
MW-26-Screen-1	Jul/Aug 2019	MW-26-1	NA	NA	3.0 U	0.5
MW-26-Screen-1	Oct 2019	MW-26-1	NA	NA	3.0 U	0.2 U
MW-26-Screen-2						
MW-26-Screen-2	Oct 2018	MW-26-2	NA	NA	3.0 U	1.1 J
MW-26-Screen-2	Oct 2018	DUP-6-4Q18	NA	NA	3.0 U	1.4 J
MW-26-Screen-2	Feb/Mar 2019	MW-26-2	NA	NA	2.1 J	1.5 J
MW-26-Screen-2	Apr/May 2019	MW-26-2	1.0 J	1.0 U	3.0 U	0.8
MW-26-Screen-2	Jul/Aug 2019	MW-26-2	NA	NA	2.6 J	0.9
MW-26-Screen-2	Oct 2019	MW-26-2	NA	NA	1.1 J	0.4
Analyte concentration exceeds the standard for:						
CA MCL			10.0	15.0*	50.0	50.0**
EPA REGION IX MCL			10.0	15.0*	100.0	NE
Notes						
DUP(E)	Field Duplicate					
NA	Not analyzed					
NE	Not established					
*	Regulatory Action Level					
**	Due to a court ruling, the State Water Resources Control Board adopted a resolution on August 1, 2017 to remove the current maximum contaminant level (MCL[10.0 µg/L]) for CrVI. CrVI is regulated under the 50.0 µg/L MCL for total chromium.					
J	Analyte concentration is an estimated value					
U	Analyte was analyzed for but not detected at or above the stated limit					
UJ	Analyte was analyzed for but not detected; analyte concentration is an estimated value					

TABLE 3
SUMMARY OF VOLATILE ORGANIC COMPOUNDS AND PERCHLORATE REPORTED IN MUNICIPAL
PRODUCTION WELLS NEAR JPL DURING THE LAST FIVE SAMPLING EVENTS OF THE
LONG-TERM QUARTERLY GROUNDWATER SAMPLING PROGRAM

(All concentrations reported in µg/L.)

(Shaded values exceed State or Federal MCLs or action levels.)

Purveyor, Well Name	Sample Date	Perchlorate	Carbon tetrachloride	PCE	TCE
LA CANADA IRRIGATION DIST. WELL 01					
LA CANADA IRRIGATION DIST. WELL 06					
	3/26/2018	4.0 U	0.5 U	0.5 U	1.0
	3/31/2019	4.0 U	0.5 U	0.5 U	0.8
LAS FLORES WATER CO. WELL 02					
	7/3/2018	4.7	NA	0.8	NA
	7/9/2018	5.5	NA	2.1	NA
	7/16/2018	4.3	NA	1.2	NA
	7/23/2018	5.3	NA	1.0	NA
	7/30/2018	4.5	NA	1.1	NA
	8/6/2018	5.0	NA	1.3	NA
	8/13/2018	5.3	NA	1.6	NA
	8/20/2018	5.6	NA	1.6	NA
	8/27/2018	5.0	NA	1.5	NA
	9/4/2018	5.0	NA	0.9	NA
	9/10/2018	5.1	0.5 U	0.6	0.5 U
	9/17/2018	5.0	NA	1.2	NA
	9/24/2018	4.5	NA	1.1	NA
	10/1/2018	4.0 U	0.5 U	0.7	0.5 U
	10/15/2018	4.5	0.5 U	0.7	0.5 U
	11/12/2018	4.0	NA	1.0	NA
	11/19/2018	4.6	NA	0.8	NA
	11/26/2018	4.0 U	NA	1.0	NA
	12/3/2018	4.5	NA	1.5	NA
	12/10/2018	4.5	NA	1.7	NA
	12/19/2018	4.0 U	NA	0.9	NA
	12/26/2018	4.5	NA	1.4	NA
	1/2/2019	4.3	NA	1.0	NA
	1/7/2019	4.5	NA	1.6	NA
	1/14/2019	4.0 U	NA	1.0	NA
	1/21/2019	4.0 U	NA	0.9	NA
	1/28/2019	4.6	NA	1.2	NA
	2/4/2019	4.0 U	NA	0.8	NA
	2/11/2019	4.2	NA	1.3	NA
	2/19/2019	4.0 U	NA	1.0	NA
	2/25/2019	4.0 U	NA	1.0	NA
	3/4/2019	4.0 U	NA	1.2	NA
	3/12/2019	4.0 U	NA	0.6	NA
	3/18/2019	4.0 U	NA	1.2	NA

Purveyor, Well Name	Sample Date	Perchlorate	Carbon tetrachloride	PCE	TCE
	3/25/2019	4.0 U	NA	1.0	NA
	4/1/2019	4.0 U	NA	0.9	NA
	4/8/2019	4.0 U	NA	0.7	NA
	4/15/2019	4.0	NA	1.4	NA
	4/22/2019	5.6	NA	1.7	NA
	4/29/2019	4.0	NA	1.0	NA
	5/6/2019	4.3	NA	1.8	NA
	5/13/2019	4.4	NA	1.8	NA
	5/20/2019	4.2	NA	1.8	NA
	5/28/2019	4.0 U	NA	1.0	NA
	6/10/2019	4.5	NA	1.8	NA
	6/17/2019	4.3	NA	0.9	NA
	6/24/2019	4.2	NA	1.9	NA
	7/1/2019	4.7	NA	2.1	NA
	7/8/2019	4.0 U	NA	1.7	NA
	7/15/2019	4.4	NA	1.9	NA
	7/22/2019	4.3	NA	1.1	NA
	7/29/2019	4.6	NA	1.8	NA
	8/5/2019	4.4	NA	2.1	NA
	8/12/2019	4.0 U	NA	1.7	NA
	8/19/2019	4.0 U	NA	1.8	NA
	9/3/2019	4.2	NA	2.1	NA
	9/9/2019	4.1	NA	1.4	NA
	9/16/2019	4.7	NA	1.4	NA
	9/23/2019	4.2	NA	1.2	NA
	9/30/2019	4.1	NA	1.0	NA
	10/7/2019	4.6	NA	2.4	NA
	10/14/2019	4.5	NA	2.1	NA
	10/21/2019	4.5	NA	1.6	NA
	10/28/2019	4.4	NA	1.8	NA
	11/4/2019	4.0 U	NA	1.1	NA
	11/11/2019	4.3	NA	1.8	NA
	11/18/2019	4.7	NA	2.1	NA
	11/25/2019	4.3	NA	2.1	NA
LINCOLN AVENUE WATER CO. WELL 03					
LINCOLN AVENUE WATER CO. WELL 05					
	10/17/2018	6.7	5.3	0.5 U	0.5 U
	2/25/2019	6.2	4.9	0.2	0.4
	4/26/2019	5.5	3.7	0.5 U	0.5
	4/30/2019	8.1	NA	NA	NA
	5/7/2019	10.0	2.1	0.6	1.4
	5/14/2019	12.0	NA	NA	NA
	5/21/2019	10.0	NA	NA	NA
	5/28/2019	12.0	NA	NA	NA
	6/4/2019	12.0	2.1	0.8	1.9
	6/11/2019	11.0	NA	NA	NA

Purveyor, Well Name	Sample Date	Perchlorate	Carbon tetrachloride	PCE	TCE
	6/18/2019	11.0	NA	NA	NA
	6/25/2019	12.0	NA	NA	NA
	7/2/2019	11.0	1.9	0.7	2.0
	7/9/2019	11.0	NA	NA	NA
LINCOLN AVENUE WATER CO. WELL #6					
	7/3/2018	14.0	2.6	0.5	1.2
	7/10/2018	14.0	NA	NA	NA
	7/17/2018	14.0	NA	NA	NA
	7/24/2018	15.0	NA	NA	NA
	7/31/2018	14.0	NA	NA	NA
	8/7/2018	13.0	2.7	0.6	1.1
	8/14/2018	13.0	NA	NA	NA
	8/21/2018	13.0	NA	NA	NA
	8/27/2018	NA	2.6	0.7	1.5
	8/28/2018	13.0	NA	NA	NA
	9/4/2018	13.0	2.0	0.6	1.3
	9/11/2018	14.0	NA	NA	NA
	9/18/2018	13.0	NA	NA	NA
	9/25/2018	13.0	NA	NA	NA
	10/2/2018	13.0	2.3	0.7	1.5
	10/9/2018	13.0	NA	NA	NA
	10/16/2018	12.0	NA	NA	NA
	10/23/2018	12.0	NA	NA	NA
	10/30/2018	12.0	NA	NA	NA
	11/6/2018	13.0	2.4	0.6	1.3
	11/12/2018	NA	2.7	0.6	1.6
	11/13/2018	12.0	NA	NA	NA
	11/20/2018	12.0	NA	NA	NA
	11/27/2018	12.0	NA	NA	NA
	12/4/2018	12.0	2.1	0.6	1.2
	12/11/2018	12.0	NA	NA	NA
	12/18/2018	12.0	NA	NA	NA
	12/26/2018	12.0	NA	NA	NA
	1/2/2019	12.0	2.0	0.6	1.4
	1/8/2019	11.0	NA	NA	NA
	1/15/2019	11.0	NA	NA	NA
	1/22/2019	12.0	NA	NA	NA
	1/29/2019	11.0	NA	NA	NA
	2/5/2019	11.0	2.1	0.6	1.3
	2/12/2019	11.0	NA	NA	NA
	2/19/2019	12.0	NA	NA	NA
	2/26/2019	13.0	NA	NA	NA
	3/5/2019	11.0	1.8	0.7	1.5
	3/12/2019	11.0	NA	NA	NA
	3/19/2019	10.0	NA	NA	NA
	3/26/2019	10.0	NA	NA	NA

Purveyor, Well Name	Sample Date	Perchlorate	Carbon tetrachloride	PCE	TCE
	4/2/2019	11.0	1.6	0.7	1.7
	4/10/2019	10.0	NA	NA	NA
	4/16/2019	11.0	NA	NA	NA
	4/23/2019	12.0	NA	NA	NA
	7/11/2019	7.5	0.5 U	0.7	1.9
	7/16/2019	11.0	NA	NA	NA
	7/23/2019	11.0	NA	NA	NA
	7/30/2019	11.0	NA	NA	NA
	8/6/2019	11.0	2.1	0.7	1.7
	8/13/2019	11.0	NA	NA	NA
	8/20/2019	11.0	NA	NA	NA
	9/3/2019	10.0	2.3	0.7	1.4
	9/10/2019	12.0	NA	NA	NA
	9/17/2019	10.0	NA	NA	NA
	9/24/2019	11.0	NA	NA	NA
	10/1/2019	11.0	1.7	0.6	1.1
	10/8/2019	10.0	NA	NA	NA
	10/15/2019	10.0	NA	NA	NA
	10/21/2019	9.8	NA	NA	NA
	10/29/2019	9.8	NA	NA	NA
	11/5/2019	9.7	1.8	0.7	1.2
	11/12/2019	9.6	NA	NA	NA
	11/19/2019	9.9	NA	NA	NA
	11/26/2019	9.5	NA	NA	NA
PASADENA-CITY, WATER DEPT. ARROYO					
	7/3/2018	9.9	0.9	0.6	1.8
	7/10/2018	10.4	0.9	0.6	1.9
	7/17/2018	11.0	1.0	0.6	1.8
	7/24/2018	11.4	1.1	0.6	2.0
	7/31/2018	10.8	1.0	0.6	2.0
	8/7/2018	10.4	1.0	0.6	2.1
	8/14/2018	10.8	0.9	0.5	1.8
	8/21/2018	10.4	1.1	0.6	2.0
	8/28/2018	10.8	1.1	0.5	2.0
	9/4/2018	9.9	1.1	0.7	2.1
	9/11/2018	10.1	0.8	0.5	1.4
	9/18/2018	11.2	1.2	0.6	2.0
	9/25/2018	10.6	1.2	0.5	2.1
	10/2/2018	10.1	1.2	0.6	2.2
	10/9/2018	9.8	1.0	0.5	2.0
	10/15/2018	10.0	1.0	0.6	2.0
	10/23/2018	9.5	1.1	0.6	2.1
	10/30/2018	10.0	1.1	0.6	2.2
	11/6/2018	9.9	1.1	0.6	2.1
	11/13/2018	10.6	0.9	0.5	1.9
	11/20/2018	10.7	0.9	0.6	1.9

Purveyor, Well Name	Sample Date	Perchlorate	Carbon tetrachloride	PCE	TCE
	11/27/2018	10.6	1.0	0.6	2.0
	12/4/2018	10.2	1.1	0.6	2.1
	12/11/2018	11.1	1.0	0.6	1.9
	12/18/2018	10.4	0.9	0.5	1.9
	12/26/2018	10.2	0.9	0.5	1.9
	1/2/2019	9.5	1.0	0.5	2.0
	1/8/2019	9.8	1.0	0.5	2.0
	1/15/2019	9.0	0.9	0.5	1.8
	1/22/2019	8.4	0.8	0.5 U	1.6
	1/29/2019	8.8	0.9	0.5	1.9
	2/5/2019	8.5	0.9	0.6	1.9
	2/13/2019	8.1	1.0	0.6	1.9
	2/19/2019	7.8	1.0	0.5	1.9
	2/26/2019	7.9	1.0	0.6	2.0
	3/5/2019	8.0	1.0	0.5	2.0
	3/12/2019	7.3	0.7	0.5 U	1.5
	3/19/2019	7.1	0.6	0.5	1.3
	3/26/2019	6.7	0.6	0.6	1.3
	4/2/2019	7.5	0.6	0.6	1.4
	4/8/2019	7.3	0.7	0.5	1.6
	4/16/2019	6.6	0.6	0.6	1.6
	4/23/2019	8.8	0.8	0.5	1.7
	4/30/2019	7.1	0.7	0.5	1.6
	5/7/2019	6.9	0.8	0.5	1.6
	5/14/2019	7.2	0.9	0.6	1.7
	5/21/2019	7.2	0.8	0.5 U	1.6
	5/28/2019	7.7	0.9	0.5 U	1.7
	6/4/2019	7.0	0.9	0.5 U	1.6
	6/11/2019	7.0	0.8	0.5 U	1.5
	6/18/2019	7.0	0.8	0.5 U	1.6
	6/25/2019	7.2	0.8	0.5 U	1.6
	7/2/2019	7.5	0.7	0.5 U	1.4
	7/9/2019	7.5	0.8	0.5 U	1.4
	7/16/2019	7.9	0.9	0.6	1.7
	7/22/2019	7.4	0.8	0.5 U	1.3
	7/30/2019	8.4	0.8	0.5 U	1.5
	9/3/2019	8.6	0.8	0.5 U	1.4
	9/10/2019	8.8	0.7	0.5 U	1.2
	9/17/2019	8.5	1.0	0.5 U	1.6
	9/24/2019	8.7	0.8	0.5 U	1.4
	10/1/2019	7.9	0.8	0.5 U	1.5
	10/7/2019	NA	0.5 U	0.7	3.2
	10/8/2019	8.1	0.9	0.5 U	1.5
	10/15/2019	7.8	0.7	0.5 U	1.3
	10/21/2019	7.1	0.6	0.5 U	1.0
	10/29/2019	6.2	0.8	0.5 U	1.4

Purveyor, Well Name	Sample Date	Perchlorate	Carbon tetrachloride	PCE	TCE
	11/5/2019	8.0	0.7	0.5 U	1.4
	11/12/2019	6.1	0.8	0.5 U	1.3
	11/19/2019	6.8	0.8	0.5 U	1.5
	11/26/2019	7.9	0.8	0.5	1.6
PASADENA-CITY, WATER DEPT. VENTURA					
	7/9/2018	4.2	0.5 U	1.4	3.3
	7/23/2018	4.3	0.5 U	1.5	3.5
	8/6/2018	4.3	0.5	1.6	3.9
	8/20/2018	4.4	0.5	1.6	3.4
	9/5/2018	4.0	0.5	1.6	3.3
	9/17/2018	4.2	0.5	1.4	2.8
	10/1/2018	4.1	0.5	1.8	3.6
	10/29/2018	4.2	0.5	1.7	3.4
	11/19/2018	4.9	0.5 U	1.5	3.3
	12/3/2018	4.3	0.5 U	1.8	3.5
	12/17/2018	5.4	0.5 U	1.8	3.5
	1/14/2019	5.0	0.5 U	1.5	3.1
	1/28/2019	4.7	0.5 U	1.7	3.1
	3/4/2019	4.0 U	0.5 U	1.5	3.4
	4/15/2019	4.1	0.5 U	1.4	3.7
	5/20/2019	4.0 U	0.5 U	1.4	3.9
	7/1/2019	4.1	0.5 U	1.2	3.4
	7/15/2019	4.4	0.5 U	1.3	3.4
	9/16/2019	4.5	0.5 U	1.1	2.9
	9/23/2019	4.4	0.5 U	1.3	3.5
	9/30/2019	NA	0.5 U	1.3	3.3
	10/14/2019	4.9	0.5 U	1.1	3.2
	10/28/2019	4.0 U	0.5 U	1.3	3.2
	11/18/2019	4.0 U	0.5 U	1.4	3.3
PASADENA-CITY, WATER DEPT. WELL 52					
	7/2/2018	4.1	0.5 U	0.8	4.5
	7/16/2018	4.2	0.5 U	0.9	4.5
	7/30/2018	4.0 U	0.5 U	1.0	4.8
	8/13/2018	4.2	0.5	0.9	4.2
	8/27/2018	4.0	0.5	1.0	4.7
	9/10/2018	4.0	0.5	0.9	4.4
	9/24/2018	4.0	0.5	1.1	5.0
	10/8/2018	4.0	0.5	0.8	4.0
	10/22/2018	4.0	0.5	0.9	4.5
	11/5/2018	4.3	0.5 U	0.9	4.7
	11/26/2018	4.7	0.5 U	0.8	4.5
	12/10/2018	5.1	0.5 U	0.9	4.8
	1/7/2019	4.5	0.5 U	0.8	4.8
	1/23/2019	5.4	0.5 U	0.8	4.5
	2/4/2019	4.4	0.5 U	1.0	4.9
	2/25/2019	4.4	0.5 U	0.9	4.8

Purveyor, Well Name	Sample Date	Perchlorate	Carbon tetrachloride	PCE	TCE
	3/11/2019	4.0	0.5 U	1.0	4.8
	4/22/2019	4.0 U	0.5 U	0.8	4.0
	5/6/2019	4.0 U	0.5 U	0.8	3.6
	6/24/2019	4.0 U	0.5 U	0.6	3.1
	7/8/2019	4.0 U	0.5 U	0.7	3.1
	7/24/2019	4.0 U	0.5 U	0.7	3.2
	9/9/2019	5.0	0.5 U	0.7	3.1
	10/7/2019	4.0 U	0.5 U	0.7	3.2
	11/25/2019	4.3	0.5 U	0.8	3.1
PASADENA-CITY, WATER DEPT. WINDSOR					
RUBIO CANON LAND & WATER ASSOCIATION WELL 04					
	7/2/2018	4.0 U	NA	3.7	NA
	7/9/2018	4.0 U	NA	NA	NA
	7/16/2018	4.0 U	NA	NA	NA
	7/23/2018	4.0 U	NA	NA	NA
	7/30/2018	4.0 U	NA	NA	NA
	8/6/2018	4.0 U	NA	NA	NA
	8/13/2018	4.0 U	NA	NA	NA
	8/20/2018	4.0 U	NA	NA	NA
	8/27/2018	4.0 U	NA	NA	NA
	9/4/2018	4.0 U	NA	NA	NA
	9/10/2018	4.0 U	NA	NA	NA
	9/17/2018	4.0 U	NA	NA	NA
	9/24/2018	4.0 U	NA	NA	NA
	10/1/2018	4.0 U	NA	NA	NA
	10/8/2018	4.0 U	NA	3.1	NA
	10/17/2018	4.0 U	NA	NA	NA
	10/22/2018	4.0 U	NA	NA	NA
	10/29/2018	4.0 U	NA	NA	NA
	11/5/2018	4.0 U	NA	NA	NA
	11/13/2018	4.0 U	NA	NA	NA
	11/20/2018	4.0 U	NA	NA	NA
	11/26/2018	4.0 U	NA	NA	NA
	12/3/2018	4.0 U	NA	NA	NA
	12/10/2018	4.0 U	NA	NA	NA
	12/17/2018	4.0 U	NA	NA	NA
	12/26/2018	4.0 U	NA	NA	NA
	1/2/2019	4.0 U	NA	NA	NA
	1/8/2019	4.0 U	NA	2.1	NA
	1/14/2019	4.0 U	NA	NA	NA
	1/22/2019	4.0 U	NA	NA	NA
	1/28/2019	4.0 U	NA	NA	NA
	2/5/2019	4.0 U	0.5 U	3.7	0.5 U
	2/11/2019	4.0 U	NA	NA	NA
	2/19/2019	4.0 U	NA	NA	NA
	2/25/2019	4.0 U	NA	NA	NA

Purveyor, Well Name	Sample Date	Perchlorate	Carbon tetrachloride	PCE	TCE
	3/4/2019	4.0 U	NA	NA	NA
	3/11/2019	4.0 U	NA	NA	NA
	3/18/2019	4.0 U	NA	NA	NA
	3/25/2019	4.0 U	NA	NA	NA
	4/2/2019	4.0 U	NA	3.1	NA
	4/8/2019	4.0 U	NA	NA	NA
	4/15/2019	4.0 U	NA	NA	NA
	4/22/2019	4.0 U	NA	NA	NA
	4/29/2019	4.0 U	NA	NA	NA
	5/6/2019	4.0 U	NA	NA	NA
	5/13/2019	4.0 U	NA	NA	NA
	5/20/2019	4.0 U	NA	NA	NA
	5/28/2019	4.0 U	NA	NA	NA
	6/3/2019	4.0 U	NA	NA	NA
	6/10/2019	4.0 U	NA	NA	NA
	6/17/2019	4.0 U	NA	NA	NA
	6/24/2019	4.0 U	NA	NA	NA
	7/1/2019	4.0 U	NA	NA	NA
	7/8/2019	4.0 U	NA	NA	NA
	7/15/2019	4.0 U	NA	3.4	NA
	7/22/2019	4.0 U	NA	NA	NA
	7/29/2019	4.0 U	NA	NA	NA
	8/5/2019	4.0 U	NA	NA	NA
	8/12/2019	4.0 U	NA	NA	NA
	8/19/2019	4.0 U	NA	NA	NA
	9/3/2019	4.0 U	NA	NA	NA
	9/9/2019	4.0 U	NA	NA	NA
	9/16/2019	4.0 U	NA	NA	NA
	9/23/2019	4.0 U	NA	NA	NA
	9/30/2019	4.0 U	NA	NA	NA
	10/7/2019	4.0 U	NA	4.6	NA
	10/14/2019	4.0 U	NA	NA	NA
	10/21/2019	4.0 U	NA	NA	NA
	10/28/2019	4.0 U	NA	NA	NA
	11/4/2019	4.0 U	NA	NA	NA
	11/12/2019	4.0 U	NA	NA	NA
	11/18/2019	4.0 U	NA	NA	NA
	11/25/2019	4.0 U	NA	NA	NA
RUBIO CANON LAND & WATER ASSOCIATION WELL 07					
	7/2/2018	4.0 U	NA	0.7	NA
	7/9/2018	4.0 U	NA	NA	NA
	7/16/2018	4.0 U	NA	NA	NA
	7/23/2018	4.0 U	NA	NA	NA
	7/30/2018	4.0 U	NA	NA	NA
	8/6/2018	4.0 U	NA	NA	NA
	8/13/2018	4.0 U	NA	NA	NA

Purveyor, Well Name	Sample Date	Perchlorate	Carbon tetrachloride	PCE	TCE
	8/20/2018	4.0 U	NA	NA	NA
	8/27/2018	4.0 U	NA	NA	NA
	9/4/2018	4.0 U	NA	NA	NA
	9/10/2018	4.0 U	NA	NA	NA
	9/17/2018	4.0 U	NA	NA	NA
	9/24/2018	4.0 U	NA	NA	NA
	10/1/2018	4.0 U	NA	NA	NA
	10/8/2018	4.0 U	NA	0.5	NA
	10/17/2018	4.0 U	NA	NA	NA
	10/22/2018	4.0 U	NA	NA	NA
	10/29/2018	4.0 U	NA	NA	NA
	11/5/2018	4.0 U	NA	NA	NA
	11/13/2018	4.0 U	NA	NA	NA
	11/20/2018	4.0 U	NA	NA	NA
	11/26/2018	4.0 U	NA	NA	NA
	12/3/2018	4.0 U	NA	NA	NA
	12/10/2018	4.0 U	NA	NA	NA
	12/17/2018	4.0 U	NA	NA	NA
	12/26/2018	4.0 U	NA	NA	NA
	1/2/2019	4.0 U	NA	NA	NA
	1/8/2019	4.0 U	NA	0.6	NA
	1/14/2019	4.0 U	NA	NA	NA
	1/22/2019	4.0 U	NA	NA	NA
	1/28/2019	4.0 U	NA	NA	NA
	2/5/2019	4.0 U	0.5 U	0.5	0.5 U
	2/11/2019	4.0 U	NA	NA	NA
	2/19/2019	4.0 U	NA	NA	NA
	2/25/2019	4.0 U	NA	NA	NA
	3/4/2019	4.0 U	NA	NA	NA
	3/11/2019	4.0 U	NA	NA	NA
	3/18/2019	4.0 U	NA	NA	NA
	3/25/2019	4.0 U	NA	NA	NA
	4/2/2019	4.0 U	NA	0.7	NA
	4/8/2019	4.0 U	NA	NA	NA
	4/15/2019	4.0 U	NA	NA	NA
	4/22/2019	4.0 U	NA	NA	NA
	4/29/2019	4.0 U	NA	NA	NA
	5/6/2019	4.0 U	NA	NA	NA
	5/13/2019	4.0 U	NA	NA	NA
	5/20/2019	4.0 U	NA	NA	NA
	5/28/2019	4.0 U	NA	NA	NA
	6/3/2019	4.0 U	NA	NA	NA
	6/10/2019	4.0 U	NA	NA	NA
	6/17/2019	4.0 U	NA	NA	NA
	6/24/2019	4.0 U	NA	NA	NA
	7/1/2019	4.0 U	NA	NA	NA

Purveyor, Well Name	Sample Date	Perchlorate	Carbon tetrachloride	PCE	TCE
	7/8/2019	4.0 U	NA	NA	NA
	7/15/2019	4.0 U	NA	0.6	NA
	7/22/2019	4.0 U	NA	NA	NA
	7/29/2019	4.0 U	NA	NA	NA
	8/5/2019	4.0 U	NA	NA	NA
	8/12/2019	4.0 U	NA	NA	NA
	8/19/2019	4.0 U	NA	NA	NA
	9/3/2019	4.0 U	NA	NA	NA
	9/9/2019	4.0 U	NA	NA	NA
	9/16/2019	4.0 U	NA	NA	NA
	9/23/2019	4.0 U	NA	NA	NA
	9/30/2019	4.0 U	NA	NA	NA
	10/7/2019	4.0 U	NA	0.7	NA
	10/14/2019	4.0 U	NA	NA	NA
	10/21/2019	4.0 U	NA	NA	NA
	10/28/2019	4.0 U	NA	NA	NA
	11/4/2019	4.0 U	NA	NA	NA
	11/12/2019	4.0 U	NA	NA	NA
	11/18/2019	4.0 U	NA	NA	NA
	11/25/2019	4.0 U	NA	NA	NA
VALLEY WATER CO. WELL 01					
	7/3/2018	4.0 U	0.5 U	1.1	1.4
	8/1/2018	4.0 U	0.5 U	1.1	1.3
	9/4/2018	4.0 U	0.5 U	1.3	1.6
	10/3/2018	4.0 U	0.5 U	1.2	1.6
	11/6/2018	4.6	0.5 U	1.0	1.2
	5/7/2019	4.0 U	0.5 U	0.9	1.2
	6/4/2019	4.0 U	0.5 U	1.1	1.3
	7/2/2019	4.0 U	0.5 U	1.1	1.3
	9/3/2019	4.0 U	0.5 U	0.9	1.2
	10/2/2019	4.0 U	0.5 U	1.1	1.4
VALLEY WATER CO. WELL 02					
	7/3/2018	4.0 U	0.5 U	0.6	0.7
	8/1/2018	4.0 U	0.5 U	0.6	0.7
	9/4/2018	4.0	0.5 U	0.6	0.7
	10/3/2018	4.2	0.5 U	0.6	0.8
	11/6/2018	4.0 U	0.5 U	0.5	0.7
	5/7/2019	4.0 U	0.5 U	0.6	0.5 U
	6/4/2019	4.0 U	0.5 U	0.8	0.8
	7/2/2019	4.0 U	0.5 U	0.8	0.7
	9/3/2019	4.0 U	0.5 U	0.5 U	0.6
	10/2/2019	4.0 U	0.5 U	0.5	0.7
VALLEY WATER CO. WELL 03					
	7/3/2018	4.0 U	0.5 U	1.0	0.5 U
	7/3/2018	4.0 U	0.5 U	1.0	0.5 U
	8/1/2018	4.0 U	0.5 U	1.0	0.5 U

Purveyor, Well Name	Sample Date	Perchlorate	Carbon tetrachloride	PCE	TCE
	10/3/2018	5.2	NA	NA	NA
	5/7/2019	4.0 U	0.5 U	0.7	0.5 U
	6/4/2019	4.0 U	0.5 U	0.6	0.5 U
	7/2/2019	4.0 U	0.5 U	0.5 U	0.5 U
	9/3/2019	4.0 U	NA	NA	NA
VALLEY WATER CO. WELL 04					
	7/3/2018	4.0 U	0.5 U	1.4	1.4
	7/3/2018	4.0 U	0.5 U	1.4	1.4
	8/1/2018	4.0 U	0.5 U	1.3	1.3
	10/3/2018	4.0 U	NA	NA	NA
	5/7/2019	4.0 U	0.5 U	0.7	0.5 U
	6/4/2019	4.0 U	0.5 U	1.0	0.9
	9/3/2019	4.0 U	0.5 U	1.5	1.3
	10/2/2019	4.0 U	0.5 U	1.2	1.4
Analyte concentration exceeds the standard for:					
CA MCL		6.0	0.5	5.0	5.0
EPA REGION IX MCL		NE	5.0	5.0	5.0
Notes					
NA	Not analyzed				
NE	Not established				
Source	State Water Resources Control Board (Division of Drinking Water) Water Quality Index Database				
U	Analyte was analyzed for but not detected at or above the stated limit				