Technical Memorandum

2018 Groundwater Monitoring Summary
(Including Fourth Quarter 2018 Groundwater Sampling Event)
National Aeronautics and Space Administration
Jet Propulsion Laboratory, Pasadena, California

Final **January** 2019

This technical memorandum summarizes the results of the fourth quarter 2018 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 2018 groundwater sampling event was conducted from October 13 through October 27, 2018.

INTRODUCTION

During the fourth quarter 2018 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 State Water Resources Control Board (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 2018.

Figures summarizing the results from the fourth quarter 2018 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 2018 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 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.

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

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); 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. It should be noted that during the fourth quarter 2018 wells MW-7, MW-13 and MW-16 were not sampled. MW-7 was dry, MW-16 lacked sufficient water volume to purge or collect a sample and MW-13 was inaccessible due to construction activities. MW-7 and MW-16 insufficient water volume is due to declining water levels associated with the drought in California.

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.

PERCHLORATE ANALYTICAL RESULTS

- During the fourth quarter 2018, perchlorate was not detected above the state MCL (6.0 µg/L) in the other on-facility source area wells.
- Perchlorate was detected below the state MCL (6.0 µg/L) in MW-24 (Screens 1 and 2 [4.4 µg/L and 2.4J µg/L, respectively]). 'J' qualifier indicates an estimated concentration. No other perchlorate detections occurred in well MW-24 (3 through 5) during the fourth quarter 2018 with a reporting limit of 4.0 µg/L.
- Perchlorate concentrations increased slightly in MW-24 (Screens 1 and 2 [0.7J µg/L to 4.4 µg/L and 1.5J µg/L to 2.4J µg/L, respectively]) from the third quarter 2018 to the fourth quarter 2018.
- Perchlorate concentrations remained the same in MW-24 (Screens 3 through 5 [non-detect]) from their respective last sampling event to the fourth quarter 2018.

- During 2018, perchlorate concentrations ranged from an estimated non-detect to 9.6 µg/L in MW-7, 83.0 µg/L to 230.0 µg/L in MW-13, non-detect to 0.6J µg/L in MW-16, 0.6J µg/L to 36.0 µg/L in MW-24 (Screen 1), 1.5J µg/L to 3.7J µg/L in MW-24 (Screen 2) and non-detect only in MW-24 (Screens 3, 4 and 5).

VOC ANALYTICAL RESULTS

- During the fourth quarter 2018 carbon tetrachloride was not detected in any of the on-facility wells that were sampled.
- In 2018, 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 and second quarter [0.4J µg/L]).
- During the fourth quarter 2018, TCE was not detected in the on-facility source area wells that were sampled.
- In 2018, TCE was not detected in the on-facility source area wells that were sampled.
- During the fourth quarter 2018, PCE was not detected in the on-facility source area wells that were sampled.
- In 2018, PCE was detected below the state MCL (5.0 µg/L) in MW-13 (second quarter [0.6 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 there was insufficient water for purging. During the fourth quarter 2018 sampling event, there was not sufficient water for metals analysis in the on-facility source area wells MW-7 and MW-16.
- During the fourth quarter 2018, Cr(VI)[3] was detected below the state MCL (10.0 µg/L) in MW-24 (Screens 2, 3 and 5 [2.5 µg/L, 0.8J µg/L and 3.0 µg/L, respectively]). All other Cr(VI) results were non-detect in the on-facility source area wells.
- In 2018, Cr(VI) was detected below the state MCL (10.0 µg/L) in MW-7 (first quarter [0.7J µg/L]), MW-13 (first quarter [4.6 µg/L), MW-16 (first quarter [1.9J µg/L]), and MW-24 (Screen 2 [first, second, and fourth quarter (1.9J µg/L, 2.3 µg/L and 2.5 µg/L, respectively)], Screen 3 [fourth quarter (0.8J µg/L] and Screen 5 [second and fourth quarter (2.9 µg/L and 3.0 µg/L, respectively)]).
- During the fourth quarter 2018, total chromium was not detected in the on-facility source area wells that were sampled.

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

[3] On July 1, 2014, the State Water Resources Control Board (SWRCB) adopted an MCL for Cr(VI) of 10.0 µg/L. See http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Chromium6.shtml.

- In 2018, total chromium was detected above the state MCL (50.0 µg/L) in MW-7 (first through third quarter [200.0 µg/L, 54.0 µg/L, and 670.0 µg/L, respectively), MW-13 (first and second quarter [3,500.0 µg/L, and 170.0 µg/L, respectively), and MW-16 (first quarter [4,600.0 µg/L]). Total chromium was detected below the state MCL in MW-24 (Screen 1 [second (1.7J µg/L), and third (3.1 µg/L) quarter], Screen 2 [second (1.3J µg/L), and third (2.4J µg/L) quarter], Screen 3 [second (0.9J µg/L) and third (1.9J µg/L) quarter], Screen 4 [second (0.8J µg/L) and third (2.1J µg/L) quarter], and Screen 5 [second quarter (3.9 µg/L)]). Total chromium results in the on-facility source area wells will continue to be 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. It should be noted that during the fourth quarter 2018 MW-6 was dry and no sample was collected. This well was dry due to declining water levels associated with the drought in California.

PERCHLORATE ANALYTICAL RESULTS

- During the fourth quarter 2018, perchlorate was detected above the state MCL (6.0 µg/L) in well MW-8 (79.0 µg/L).
- During the fourth quarter 2018, perchlorate was detected below the state MCL (6.0 µg/L) in MW-22 (Screens 1 through 4 [2.6J µg/L, 2.5J µg/L, 1.9J µg/L, and 1.0J µg/L, respectively]), and MW-23 (Screens 1 through 4 [4.0 µg/L, 4.9 µg/L, 3.0J µg/L, and 1.4J µg/L, respectively]).
- During the fourth quarter 2018, perchlorate was not detected in 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 2018 in MW-8 (4.2J µg/L to 79.0 µg/L), MW-22 (Screens 2 through 4 [2.1J µg/L to 2.5J µg/L, 1.5J µg/L to 1.9J µg/L and 0.8J µg/L to 1.0J µg/L, respectively]) and MW-23 (Screens 1 through 3 [2.5J µg/L to 4.0 µg/L, 3.6J µg/L to 4.9 µg/L and 2.0J µg/L to 3.0J µg/L, respectively]).
- Perchlorate concentrations decreased from their respective last sampling event to the fourth quarter 2018 in MW-11 (Screen 1 [1.3J µg/L to non-detect]) and MW-22 (Screen 1 [2.7J µg/L to 2.6J µg/L]).
- The perchlorate concentration in MW-23 (Screen 4) remained unchanged from the third to fourth quarter 2018 sampling event at a concentration of 1.4J µg/L.
- During 2018, perchlorate concentrations were detected above the state MCL (6.0 µg/L) in MW-8 (first, second and fourth [21.0 µg/L, 23.0 µg/L and 79.0 µg/L, respectively] quarter). Perchlorate concentrations in MW-8 ranged from 3.9 µg/L to 79.0 µg/L in 2018. Since the third 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 6 exceptions: first quarter 2016 (non-detect), fourth quarter 2016 (4.2 µg/L), second through fourth quarter 2017 (1.2J µg/L, non-detect and 1.2J µg/L, respectively) and third quarter 2018 (4.2 J µg/L).
- No other perchlorate concentrations were detected above the state MCL in the other on-facility wells during 2018.

VOC ANALYTICAL RESULTS

- During the fourth quarter 2018, carbon tetrachloride was not detected in the other on-facility wells with a reporting limit of 0.5 µg/L.
- In 2018, carbon tetrachloride was detected during the second quarter in MW-11 (Screen 3 [0.2J µg/L]). No other carbon tetrachloride detections occurred in the remaining other on-facility wells.
- During the fourth quarter 2018, TCE was not detected above the state and federal MCL (5.0 µg/L). TCE was detected below the state and federal MCL (5.0 µg/L) in MW-22 (Screen 1 [0.6 µg/L]), and MW-23 (Screens 1 and 2 [1.2 µg/L and 1.0 µg/L, respectively]). No other TCE detections occurred in the remaining other on-facility wells.
- In 2018, TCE was detected below the state and federal MCL (5.0 µg/L) in MW-6 (first through third [1.6 µg/L, 4.5 µg/L, and 0.5J µg/L, respectively] quarter), MW-22 (Screen 1 [first, second and fourth [0.6 µg/L, 0.7 µg/L and 0.6 µg/L, respectively] quarter), MW-23 (Screen 1 [first, second and fourth [1.5 µg/L, 1.8 µg/L and 1.2 µg/L, respectively] quarters) and MW-23 (Screen 2 all quarters [1.3 µg/L, 1.1 µg/L, 0 .3J µg/L and 1.0 µg/L, respectively]). No other TCE detections occurred in the remaining other on-facility wells.
- During the fourth quarter 2018, PCE was detected below the state and federal MCL (5.0 µg/L) in MW-23 (Screen 2 [0.3J µg/L]). No other PCE detections occurred in the remaining other on-facility wells during the fourth quarter 2018.
- In 2018, PCE was detected below the state and federal MCL (5.0 µg/L) in MW-6 (first through third [0.3J µg/L, 1.0 µg/L, and 2.3 µg/L, respectively] quarter), MW-22 (Screen 1 [second (0.2J µg/L) and third (0.6 µg/L) quarter]), MW-23 (Screen 1 [second (0.3J µg/L) and third (1.3 µg/L) quarter]) and MW-23 (Screen 2 all quarters [0.3J µg/L, 0.4J µg/L, 0.8 µg/L and 0.3J µg/L, respectively]). No other PCE detections occurred in the remaining other on-facility wells.

OTHER NOTABLE ANALYTICAL RESULTS

- During the fourth quarter 2018, Cr(VI) was detected below the state MCL (10.0 µg/L) in MW-22 (Screens 1 through 4 [0.9J µg/L, 2.4 µg/L, 1.8J µg/L, and 3.0 µg/L, respectively]), and MW-23 (Screens 1 through 4 [1.6J µg/L, 1.7J µg/L, 3.7 µg/L, and 3.9 µg/L, respectively]). No other Cr(VI) detections occurred in the remaining other on-facility wells during the fourth quarter 2018.
- In 2018, 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 10.0 µg/L.
- During the fourth quarter 2018, total chromium was detected below the state MCL (50.0 µg/L) in MW-11 (Screens 3 [0.8J µg/L] and 5 [1.3J µg/L]) and MW-23 (Screens 3 and 4 [3.1 µg/L, and 4.3 µg/L, respectively]). No other total chromium detections occurred in the remaining other on-facility wells during the third quarter 2018.
- In 2018, 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 at or above the state MCL of 50.0 µg/L nineteen times (third quarter 1996 [50.0 µg/L], third quarter 1999 [310.0 µg/L], second quarter 2000 [82.0 µg/L], third quarter 2000 [51.0 µg/L], second quarter 2012 [83.0 µg/L], second quarter 2014 [190.0 µg/L], fourth quarter 2014 [270.0 µg/L], first quarter 2015 [78.0 µg/L], second quarter 2015 [820.0 µg/L], third quarter 2015 [250.0J µg/L], fourth quarter 2015 [65.0 µg/L], first quarter 2016 [73.0 µg/L], second quarter 2016 [60.0 µg/L], third quarter 2016 [53.0 µg/L], second quarter 2017 [80.0 µg/L], third quarter 2017 [120.0 µg/L], fourth quarter 2017 [1,100.0 µg/L], first quarter 2018 [90.0 µg/L] and fourth quarter 2018 [52.0 µg/L]) since it was first monitored for total chromium in 1996. 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 2018, grab samples were collected in well MW-5 and MW-10 due to insufficient water volume available to purge. In addition, MW-12 (Screen 1) and MW-14 (Screen 1) were dry and no samples were collected. The declining water levels in these wells are associated with the drought in California.

PERCHLORATE ANALYTICAL RESULTS

- During the fourth quarter 2018, perchlorate was detected above the state MCL (6.0 µg/L) in well MW-4 (Screen 2 [9.9 µg/L]).
- Perchlorate was detected below the state MCL (6.0 µg/L) in MW-3 (Screens 3 [1.1J µg/L] and 4 [1.1J µg/L]), MW-10 (5.0 µg/L), MW-12 (Screens 3 through 5 [1.2J µg/L, 2.2J µg/L, and 2.2J µg/L, respectively]) and MW-14 (Screens 2 through 4 [3.7J µg/L, 4.7 µg/L, and 4.2 µg/L, respectively]).
- During the fourth quarter 2018, perchlorate was non-detect in MW-1, MW-3 (Screens 1, 2 and 5), MW-4 (Screens 1, 3, 4, and 5), MW-5, MW-9, MW-12 (Screen 2), MW-14 (Screen 5) and MW-15.
- Perchlorate concentrations increased slightly from their respective last sampling event to the fourth quarter 2018 in MW-3 (Screen 4 [0.8J µg/L to 1.1J µg/L]), MW-4 (Screen 2 [4.7 µg/L to 9.9 µg/L]), MW-10 (3.1J µg/L to 5.0 µg/L), MW-12 (Screens 4 [1.5J µg/L to 2.2J µg/L] and 5 [1.2J µg/L to 2.2J µg/L]) and MW-14 (Screens 2 through 4 [3.4J µg/L to 3.7J µg/L, 4.1 µg/L to 4.7 µg/L and 3.5J µg/L to 4.2 µg/L, respectively]).
- Perchlorate concentrations decreased slightly from their respective last sampling event to the fourth quarter 2018 in MW-3 (Screen 2 [1.9J µg/L to non-detect] and 3 [1.2J µg/L to 1.1J µg/L]), MW-4 (Screens 1 [2.1J µg/L to non-detect] and 4 [1.4J µg/L to non-detect]), MW-12 (Screens 2 [1.8J µg/L to non-detect] and 3 [1.8J µg/L to 1.2J µg/L]) and MW-15 (2.2J µg/L to non-detect]).
- Since the second quarter 2014, there have been thirteen detections of perchlorate above the state MCL (6.0 µg/L) in MW-3 (Screen 2) ranging from 9.3 µg/L to 68.0 µg/L. MW-3 is within the capture zone of the MHTS.
- The perchlorate concentration of 9.9 µg/L in MW-4 (Screen 2) continues to be down from the high detection of 250.0 µg/L (third quarter 2013). During 2018, perchlorate detections in MW-4

(Screen 2) have ranged from non-detect (first quarter) to 9.9 µg/L (fourth quarter). 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 33 sampling events. It should be noted that perchlorate concentrations in MW-12 (Screen 2) been below the state MCL (6.0 µg/L) since fourth quarter 2013 ranging from non-detect (ten of the twenty-one quarters) to 5.6 µg/L (fourth quarter 2013). MW-12 is within the capture zone of the MHTS.
- During 2018, 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 2018, carbon tetrachloride was detected below the state MCL (0.5 µg/L) in MW-12 (0.2J µg/L [Screens 3 and 4]). No other carbon tetrachloride detections occurred in the perimeter off-facility wells during the fourth quarter 2018.
- In 2018, carbon tetrachloride was detected below the state MCL (0.5 µg/L) in MW-12 (Screens 3 [third (0.3J µg/L]) and fourth (0.2J µg/L) quarter], 4 [all quarters (0.4J µg/L, 0.3J µg/L, 0.3J µg/L and 0.2J µg/L, respectively)], and 5 [first quarter (0.4J µg/L)]).
- During the fourth quarter 2018, TCE was detected above the state and federal MCL (5.0 µg/L) in MW-10 (6.2 µg/L). TCE was detected below the state and federal MCL (5.0 µg/L) during the fourth quarter in MW-4 (Screens 2 through 5 [1.0 µg/L, 0.5 µg/L, 0.7 µg/L, and 0.7 µg/L, respectively]) and MW-14 (Screens 2 through 4 [1.1 µg/L, 0.9 µg/L, and 0.2J µg/L, respectively]). No other TCE detections occurred in the perimeter off-facility wells during the fourth quarter 2018.
- In 2018, TCE was detected above the state and federal MCL (5.0 µg/L) in MW-10 (second and fourth quarter [6.1 µg/L and 6.2 µg/L, respectively]). Detections of TCE in MW-1, MW-3, MW-4, MW-5, MW-9, MW-12, MW-14 and MW-15 remained relatively consistent (non-detect to low concentrations).
- During the fourth quarter 2018, PCE was detected below the state and federal MCL (5.0 µg/L) in wells MW-4 (Screen 2 [0.3J µg/L]), MW-10 (0.8 µg/L) and MW-14 (Screens 2 and 3 [0.3J µg/L and 0.6 µg/L, respectively]). No other PCE detections occurred in the perimeter off-facility wells during the fourth quarter 2018.
- In 2018, 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 2.3 µg/L.

OTHER NOTABLE ANALYTICAL RESULTS

- During the fourth quarter 2018, Cr(VI) was detected below the state MCL (10.0 µg/L) in MW-3 (Screen 3 [0.8J µg/L]), MW-4 (Screens 1 and 4 [0.7J µg/L and 0.9J µg/L, respectively]), MW-12 (Screens 4 and 5 [0.8J µg/L and 1.4J µg/L, respectively]), and MW-14 (Screen 4 [2.4 µg/L]). No

other Cr(VI) detections occurred in the perimeter off-facility wells during the fourth quarter 2018.

- In 2018, detections of Cr(VI) in the perimeter off-facility wells were relatively consistent, ranging from non-detect to 2.8 µg/L and remained below the state MCL (10.0 µg/L).
- During the fourth quarter 2018, total chromium was detected above the state MCL (50.0 µg/L) in MW-9 (130.0 µg/L). Total chromium was detected below the state MCL in MW-1 (0.7J µg/L), MW-3 (Screens 3 and 4 [3.0 µg/L and 27.0 µg/L, respectively]), MW-4 (Screens 1, 2, and 5 [0.6J µg/L, 4.1 µg/L, and 5.6 µg/L, respectively]), MW-12 (Screens 2 through 5 [1.4J µg/L, 1.7J µg/L, 2.0J µg/L, and 0.8J µg/L, respectively]), and MW-15 (19.0 µg/L). No other total chromium detections occurred in the perimeter off-facility wells during the fourth quarter 2018.
- In 2018, total chromium remained relatively consistent in the perimeter off-facility wells and below the state MCL (50.0 µg/L) and federal MCL (100.0 µg/L) ranging from non-detect to 31.0 µg/L with one exception: fourth quarter MW-9 (130.0 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.

It should be noted that during the fourth quarter 2018, MW-17 (Screen 1), MW-18 (Screen 1), MW-20 (Screen 1), and MW-21 (Screen 1) were dry and no samples were collected. The declining water levels in these wells are associated with the drought in California.

PERCHLORATE ANALYTICAL RESULTS

- During the fourth quarter 2018 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 [7.5 µg/L, 13.0 µg/L, 9.8 µg/L, and 8.5 µg/L, respectively]).
- Perchlorate was detected below the state MCL (6.0 µg/L) in MW-17 (Screens 3 through 5 [5.1 µg/L, 4.2 µg/L, and 4.0 µg/L, respectively]), MW-18 (Screen 3 [2.6J µg/L]), MW-19 (Screens 2 through 5 [3.6J µg/L, 3.2J µg/L, 2.9J µg/L, and 1.9J µg/L, respectively]), MW-20 (Screen 2 [2.0J µg/L]), MW-21 (Screens 2 through 5 [1.6J µg/L, 3.0J µg/L, 2.6J µg/L, and 2.5J µg/L, respectively]), and MW-26 (Screens 1 and 2 [2.5J µg/L and 3.2J µg/L, respectively]).
- During the fourth quarter 2018, concentrations of perchlorate were not detected in MW-17 (Screen 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 from their respective last sampling event to the fourth quarter 2018 in MW-17 (Screens 3 and 4 [3.5J µg/L to 5.1 µg/L and 3.1J µg/L to 4.2 µg/L, respectively]), MW-18 (Screens 3 and 4 [2.3J µg/L to 2.6J µg/L and 14.0 µg/L to 16.0 µg/L, respectively]), MW-19 (Screens 2 and 3 [3.0J µg/L to 3.6J µg/L and 2.5J µg/L to 3.2J µg/L, respectively]), MW-20 (Screen 2 [1.5J µg/L to 2.0J µg/L]), MW-21 (Screens 2 through 5 [1.3J µg/L to 1.6J µg/L, 2.3J µg/L to 3.0J µg/L, 1.5J µg/L to 2.6J µg/L and 1.3J µg/L to 2.5J µg/L, respectively]), MW-25 (Screens 1, 3 and 4 [7.1 µg/L to 7.5 µg/L, 8.8 µg/L to 9.8 µg/L

and 8.3 µg/L to 8.5 µg/L, respectively]) and MW-26 (Screens 1 and 2 [non-detect to 2.5J µg/L and non-detect to 3.2J µg/L, respectively]).

- Perchlorate concentrations decreased from their respective last sampling event to the fourth quarter 2018 in MW-17 (Screen 5 [4.3 µg/L to 4.0 µg/L]) and MW-19 (Screens 1 and 4 [1.3 µg/L to non-detect and 3.0J µg/L to 2.9J µg/L, respectively]).
- Perchlorate was detected below the state MCL (6.0 µg/L) in MW-17 (Screen 3) during the all quarters of 2018 (5.1 µg/L, 5.0 µg/L, 3.5J µg/L and 5.1 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.
- The perchlorate concentration of 4.2 µg/L in MW-17 (Screen 4) is the fifteenth 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 2016 sampling events, perchlorate was detected in MW-17 (Screen 4) at estimated concentrations ranging from 1.2J µg/L (second quarter 2016) to 3.0J µg/L (first quarter 2015). During 2018, perchlorate was detected in MW-17 (Screen 4) at concentrations ranging from 3.1J µg/L to 4.9 µg/L. The changes in perchlorate concentrations at MW-17 (Screen 4) are believed to be associated with changes in groundwater flow associated with operation of NASA's mid-plume treatment system, which began operation in 2011.
- In 2018, perchlorate was detected at concentrations below the state MCL (6.0 µg/L) in MW-20 (Screen 2 during the second, third, and fourth quarters of 2018 [1.7J µg/L, 1.5J µg/L, and 2.0J µg/L, respectively] and Screen 3 during the second quarter [1.4J µg/L]) 2018. Perchlorate was not detected in MW-20 (Screens 4, and 5) during the four quarters of 2018. MW-20 is located just downgradient of the LAWC system extraction wells.
- 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 123.0J 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 2018 (i.e., twenty-seven 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 six of fifteen 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 2018 perchlorate concentrations have remained non-detect in MW-20 (Screen 5).
- In 2018, perchlorate concentrations in the off-facility wells ranged from non-detect to 18.0 µg/L.

VOC ANALYTICAL RESULTS

- During the fourth quarter 2018, carbon tetrachloride was detected above the state MCL (0.5 µg/L) in MW-18 (Screen 4 [1.5 µg/L]) and below the state MCL (0.5 µg/L) in MW-18 (Screens 3 [0.3J µg/L]). No other carbon tetrachloride detections occurred in the remaining off-facility wells during the fourth quarter 2018.
- In 2018, carbon tetrachloride was detected above the state MCL (0.5 µg/L) in MW-18 (Screens 3 [first and second quarter [0.7 µg/L and 0.5 µg/L, respectively] and 4 [all quarters [3.5 µg/L, 7.7 µg/L, 1.4 µg/L and 1.5 µg/L, respectively]). In 2018, carbon tetrachloride was detected below the state MCL (0.5 µg/L) in MW-18 (Screen 3 [third and fourth quarter (0.3 µg/L)]). No other carbon tetrachloride detections occurred in the remaining off-facility wells during the fourth quarter 2018.
- Prior to the last two sampling events, the carbon tetrachloride concentrations in MW-18 (Screen 3) have exceeded the state MCL (0.5 µg/L) since the third quarter 2007. During the last two sampling events, carbon tetrachloride in MW-18 (Screen 3) was 0.3J µg/L (third and fourth quarter 2018). 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 2018, TCE was detected in MW-17 (Screens 3 through 5 [1.5 µg/L, 0.7 µg/L, and 0.8 µg/L, respectively]), MW-18 (Screen 4 [0.8 µg/L]), MW-19 (Screens 2 [0.8 µg/L]), MW-20 (Screen 2 [0.3J µg/L]), MW-21 (Screens 3 and 4 [0.8 µg/L and 0.3J µg/L, respectively]) and MW-25 (Screen 1 [1.2 µg/L]); 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 2018.
- In 2018, TCE concentrations in MW-17 (Screens 3 through 5) ranged from 0.3J µg/L to 3.2 µg/L; TCE concentrations in MW-18 (Screen 4) ranged from 0.5J µg/L to 1.6 µg/L; TCE concentrations in MW-19 (Screens 2 through 4) ranged from non-detect to 1.6 µg/L; TCE concentrations in MW-20 (Screen 2) ranged from non-detect to 0.9 µg/L; TCE concentrations in MW-21 (Screens 2 through 5) ranged from non-detect to 1.1 µg/L; TCE concentrations in MW-25 (Screens 1 through 3) ranged from non-detect to 1.2 µg/L; and TCE concentrations in MW-26 (Screens 1 and 2) ranged from non-detect to 1.8 µg/L. TCE was not detected in MW-17 (Screens 1 and 2), MW-18 (Screens 2, 3 and 5), MW-19 (Screens 1 and 5), MW-20 (Screens 3, 4 and 5), and MW-25 (Screens 4 and 5) during the four quarters of 2018.
- During the fourth quarter 2018, PCE was detected in MW-17 (Screens 3 through 5 [0.3J µg/L, 0.3J µg/L, and 0.3J µg/L, respectively]), MW-18 (Screen 4 [0.6 µg/L]), MW-19 (Screens 2 and 3 [1.3 µg/L and 0.3J µg/L, respectively]), MW-21 (Screens 2 through 5 [0.4J µg/L, 0.8 µg/L, 1.0 µg/L, and 0.7 µg/L, respectively]), MW-25 (Screen 3 [0.5 µg/L]), and MW-26 (Screens 1 and 2 [0.4J µg/L and 1.9 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 2018.
- In 2018, PCE concentrations in MW-17 (Screens 3, 4 and 5) ranged from 0.3J µg/L to 1.2 µg/L; PCE concentrations in MW-18 (Screens 4) ranged from 0.6 µg/L to 0.7 µg/L; PCE concentrations in MW-19 (Screens 2 through 5) ranged from non-detect to 1.8 µg/L; PCE concentrations in MW-20 (Screens 2 and 3) ranged from non-detect to 0.5J µg/L; PCE concentrations in MW-21 (Screens 2 through 5) ranged from non-detect to 1.4 µg/L; PCE concentrations in MW-25 (Screens 1and 3) ranged from non-detect to 1.0 µg/L; and PCE concentrations in MW-26 (Screens 1 and 2) ranged from non-detect to 2.7 µg/L. PCE was not

detected in MW-17 (Screens 1 and 2), MW-18 (Screens 2, 3 and 5), MW-19 (Screen 1), MW-20 (Screens 4 and 5) and MW-25 (Screens 2, 4, and 5) during the four quarters of 2018.

OTHER NOTABLE ANALYTICAL RESULTS

- During the fourth quarter 2018, Cr(VI) was detected below the state MCL (10.0 µg/L) in MW-17 (Screens 4 and 5 [2.4 µg/L and 1.7J µg/L, respectively]), MW-18 (Screens 3 and 4 [1.8J µg/L and 2.3 µg/L, respectively]), MW-19 (Screens 4 and 5 [2.5 µg/L and 2.7 µg/L, respectively]), MW-21 (Screens 4 and 5 [1.6J µg/L and 1.4J µg/L, respectively]), MW-25 (Screens 2 and 3 [3.6 µg/L and 3.3 µg/L, respectively]), and MW-26 (Screens 1 and 2 [0.8J µg/L and 1.4J]). Cr(VI) was not detected in the remaining off-facility wells.
- In 2018, detections of Cr(VI) in the off-facility wells ranged from non-detect to 3.6 µg/L.
- During the fourth quarter 2018, total chromium was detected below the state MCL (50.0 µg/L) in MW-17 (Screens 4 and 5 [4.0 µg/L and 3.1 µg/L, respectively]), MW-18 (Screens 3 and 4 [1.1J µg/L and 2.8J µg/L, respectively]), MW-19 (Screens 2 through 5 [2.8J µg/L, 3.2 µg/L, 2.1J µg/L, and 1.9J µg/L, respectively]) and MW-21 (Screens 4 and 5 [0.8J µg/L and 0.6J µg/L, respectively]). Total chromium was not detected in the remaining off-facility wells.
- In 2018, total chromium remained below the state MCL (50.0 µg/L) in the off-facility wells, ranging from non-detect to 8.8 µg/L.

ALL WELL CATEGORIES (OTHER RESULTS)

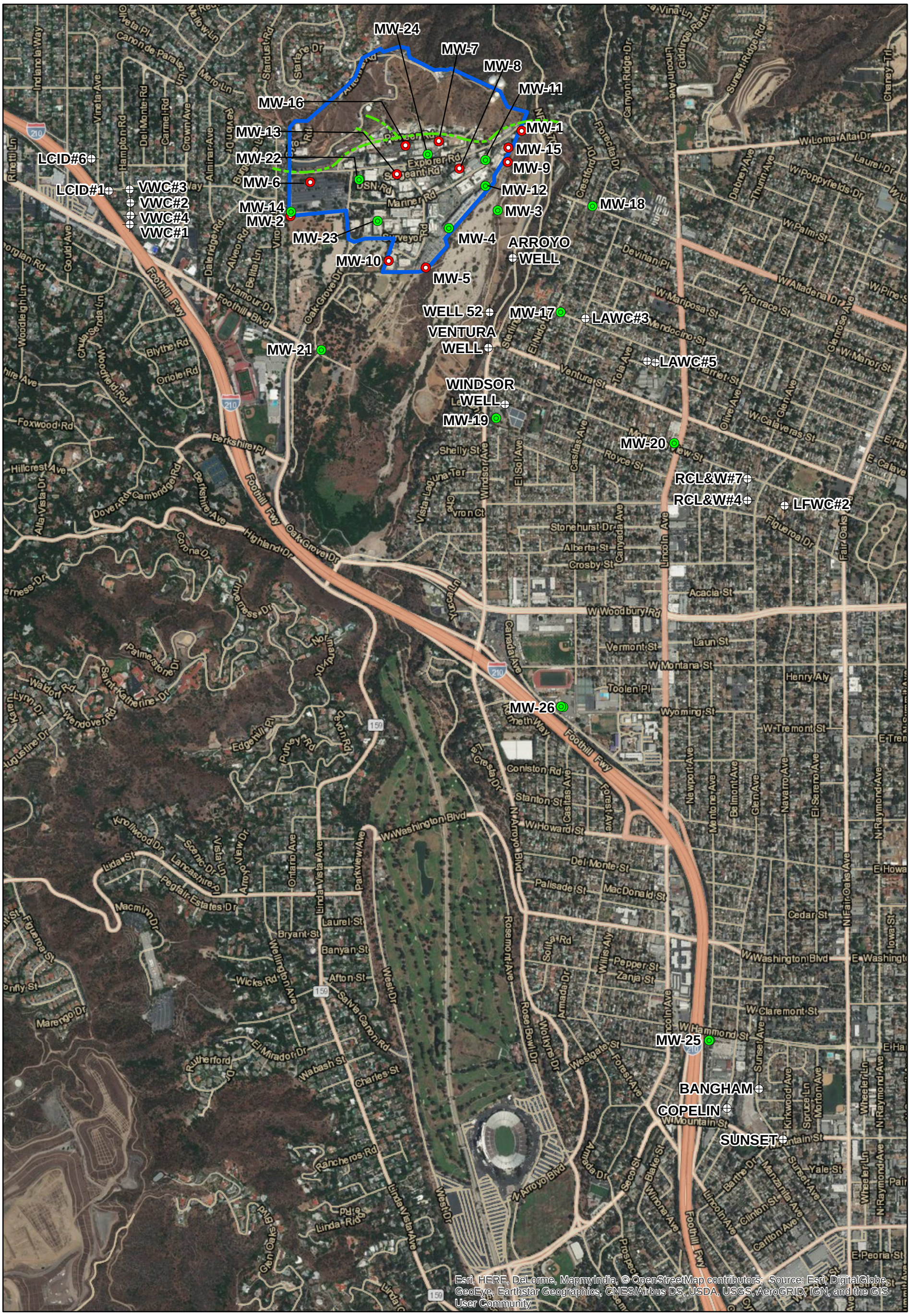
- Comparing the third quarter 2018 to the fourth quarter 2018, groundwater elevations decreased by an average of 11.77 feet.
- The shallow standpipe wells MW-6, MW-7 and MW-16 were dry and could not be sampled during the fourth quarter 2018. The uppermost sampling port (i.e., Screen 1) in multi-port monitoring wells MW-12, MW-14, MW-17, MW-18, MW-20, and MW-21 were dry and could not be sampled during the fourth quarter 2018. This is the second consecutive quarter in which the uppermost screen in MW-12 and MW-14 were dry. This is the fifth consecutive quarter in which MW-18 (Screen 1), MW-20 (Screen 1), and MW-21 (Screen 1) were dry.
- 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. Groundwater elevations fluctuated between fourth quarter 2014 and first quarter 2017, but increased by an average of approximately 25 feet between first and second quarters of 2017. Groundwater elevations dropped by an average of 36 feet between second quarter 2017 and fourth quarter 2018. As of fourth quarter 2018 groundwater levels remain approximately 81.0 feet below the second quarter 2011 elevations. Groundwater elevations will continue to be closely monitored.
- Groundwater level measurements collected during the fourth quarter 2018 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 Monitoring Wells

FIGURES



Legend

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

N W E S

0 500 1,000 1,500 Feet

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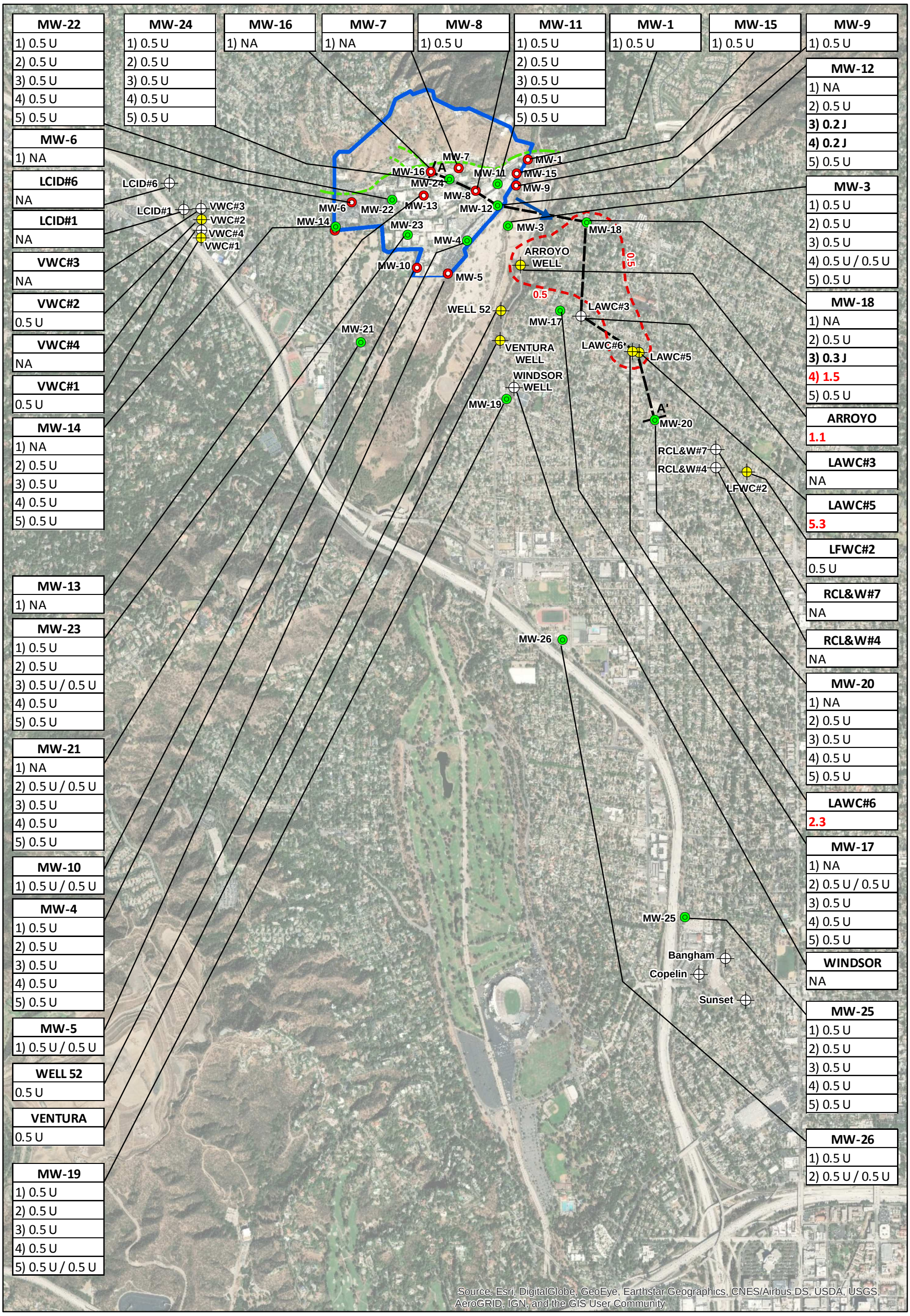
Locations of JPL Groundwater Monitoring Wells and Nearby Municipal Production Wells

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



Legend

- Deep Multi-Port Monitoring Well Location
- Shallow Monitoring Well Location
- Municipal Production Well (Data Not Available)
- Municipal Production Well (Data From October 2018)
- Cross-Section Transect A-
- Estimated Isoconcentration Line (0.5 µg/L)
- JPL Facility Boundary
- Approximate Location of Thrust Fault
- Groundwater Flow Direction

N W E S

0 600 1,200 1,800 Feet

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.

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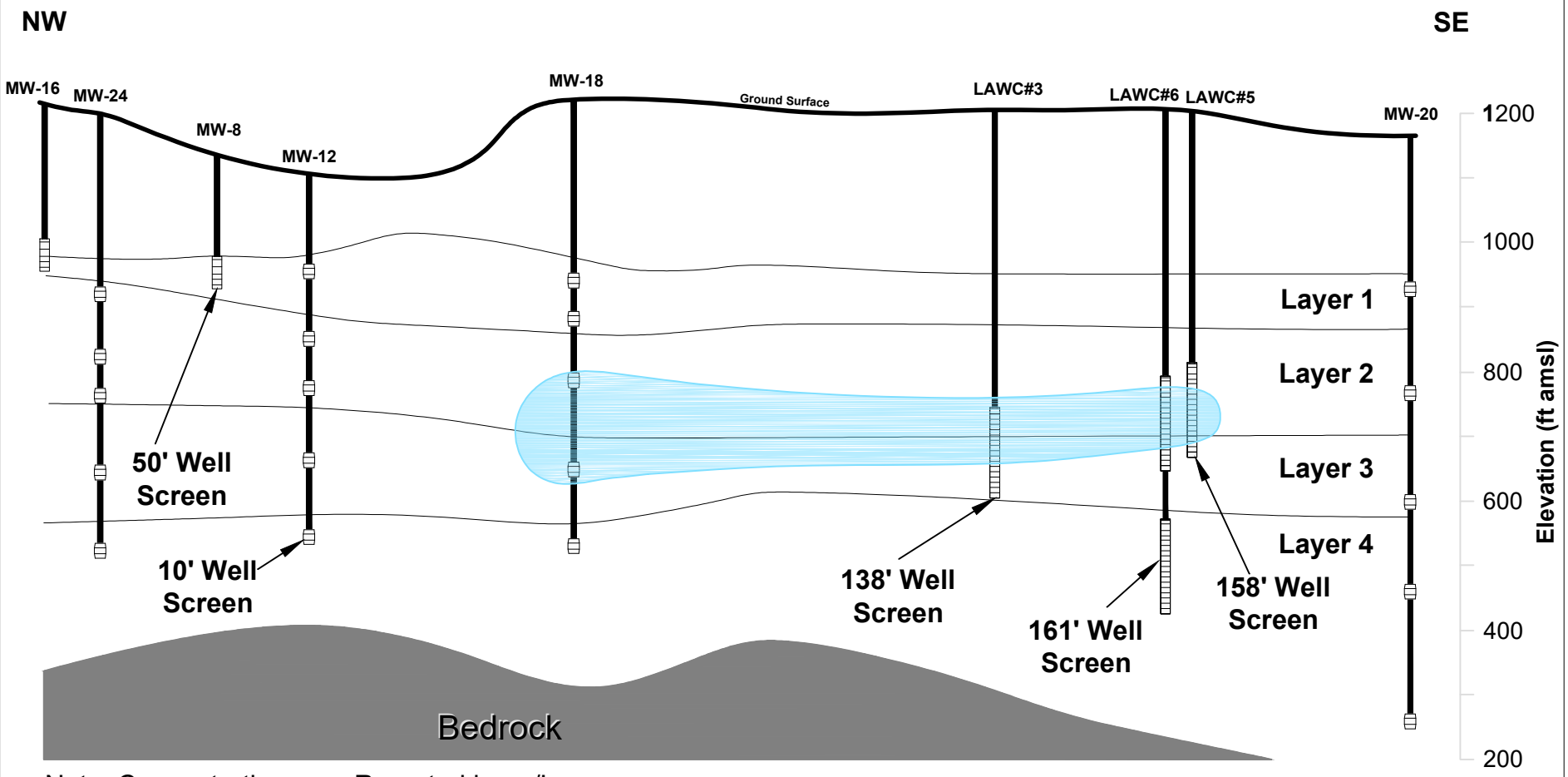
Carbon Tetrachloride in Groundwater October 2018

DESIGNED BY JHG DRAWN BY JHG CHECKED BY DC	JPL - Pasadena, CA Contract No: FA8903-16-D-0049	Figure 2 January 2019



Note: Concentrations are Reported in µg/L

50.0
20.0
10.0
5.0
0.5

Z exag: 3.0

0 500 1000

HORIZONTAL SCALE IN FEET (Approximate)

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Horizontal and Vertical Extent of Carbon Tetrachloride in Groundwater October 2018

DESIGNED BY JHG DRAWN BY JHG CHECKED BY DC	JPL - Pasadena, CA Contract No: FA8903-16-D-0049	Figure 3 January 2019

MW-22
1) 2.6 J
2) 2.5 J
3) 1.9 J
4) 1.0 J
5) 4.0 U

MW-24
1) 4.4
2) 2.4 J
3) 4.0 U
4) 4.0 U
5) 4.0 U

MW-16
1) NA

MW-7
1) NA

MW-8
1) 79.0

MW-11
1) 4.0 U
2) 4.0 U
3) 4.0 U
4) 4.0 U
5) 4.0 U

MW-1
1) 4.0 U

MW-15
1) 4.0 U

MW-9
1) 4.0 U

MW-6
1) NA

LCID#6
NA

LCID#1
NA

VWC#3
5.2

VWC#2
4.2

VWC#4
4.0 U

VWC#1
4.0 U

MW-14
1) NA
2) 3.7 J
3) 4.7
4) 4.2
5) 4.0 U

MW-13
1) NA

MW-23
1) 4.0
2) 4.9
3) 2.9 J / 3.0 J
4) 1.4 J
5) 4.0 U

MW-21
1) NA
2) 1.6 J / 1.4 J
3) 3.0 J
4) 2.6 J
5) 2.5 J

MW-10
1) 5.0 / 5.0

MW-4
1) 4.0 U
2) 9.9
3) 4.0 U
4) 4.0 U
5) 4.0 U

MW-5
1) 4.0 U /4.0 U

WELL 52
0.5 U

VENTURA
4.3

MW-19
1) 4.0 U
2) 3.6 J
3) 3.2 J
4) 2.9 J
5) 1.9 J / 1.9 J

MW-12
1) NA
2) 4.0 U
3) 1.2 J
4) 2.2 J
5) 2.2 J

MW-3
1) 4.0 U
2) 4.0 U
3) 1.1 J
4) 1.1 J / 1.0 J
5) 4.0 U

MW-18
1) NA
2) 4.0 U
3) 2.6 J
4) 16.0
5) 4.0 U

ARROYO
10.0

LAWC#3
NA

LAWC#5
6.7

LFWC#2
4.5

RCL&W#7
4.0 U

RCL&W#4
4.0 U

MW-20
1) NA
2) 2.0 J
3) 4.0 U
4) 4.0 U
5) 4.0 U

LAWC#6
13.0

MW-17
1) NA
2) 4.0 U / 4.0 U
3) 5.1
4) 4.2
5) 4.0

WINDSOR
NA

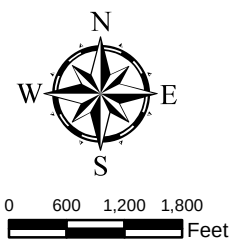
MW-25
1) 7.5
2) 13.0
3) 9.8
4) 8.5
5) 4.0 U

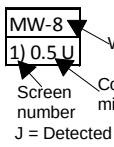
MW-26
1) 2.5 J
2) 3.1 J / 3.2 J

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 2018)
- Cross-Section Transect B-B'
- Estimated Isoconcentration Line (6 µg/L)
- Approximate Location of Thrust Fault
- JPL Facility Boundary
- Groundwater Flow Direction





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.

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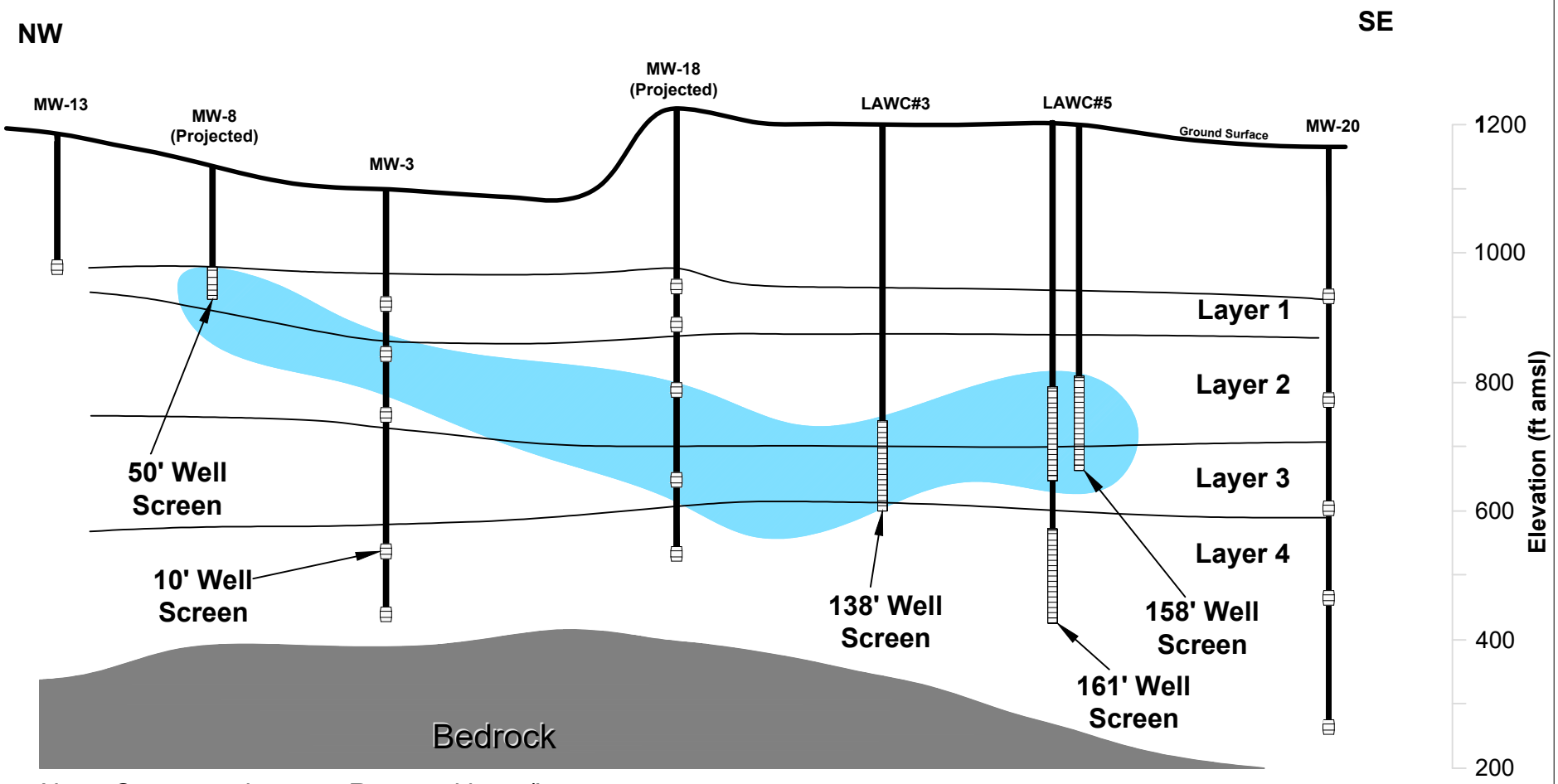
Perchlorate in Groundwater October 2018

DESIGNED BY JHG DRAWN BY JHG CHECKED BY DC	JPL - Pasadena, CA Contract No: FA8903-16-D-0049	Figure 4 January 2019



Note: Concentrations are Reported in µg/L

1000.0
500.0
200.0
100.0
6.0

Z exag: 3.0

0 500 1000

HORIZONTAL SCALE
IN FEET
(Approximate)

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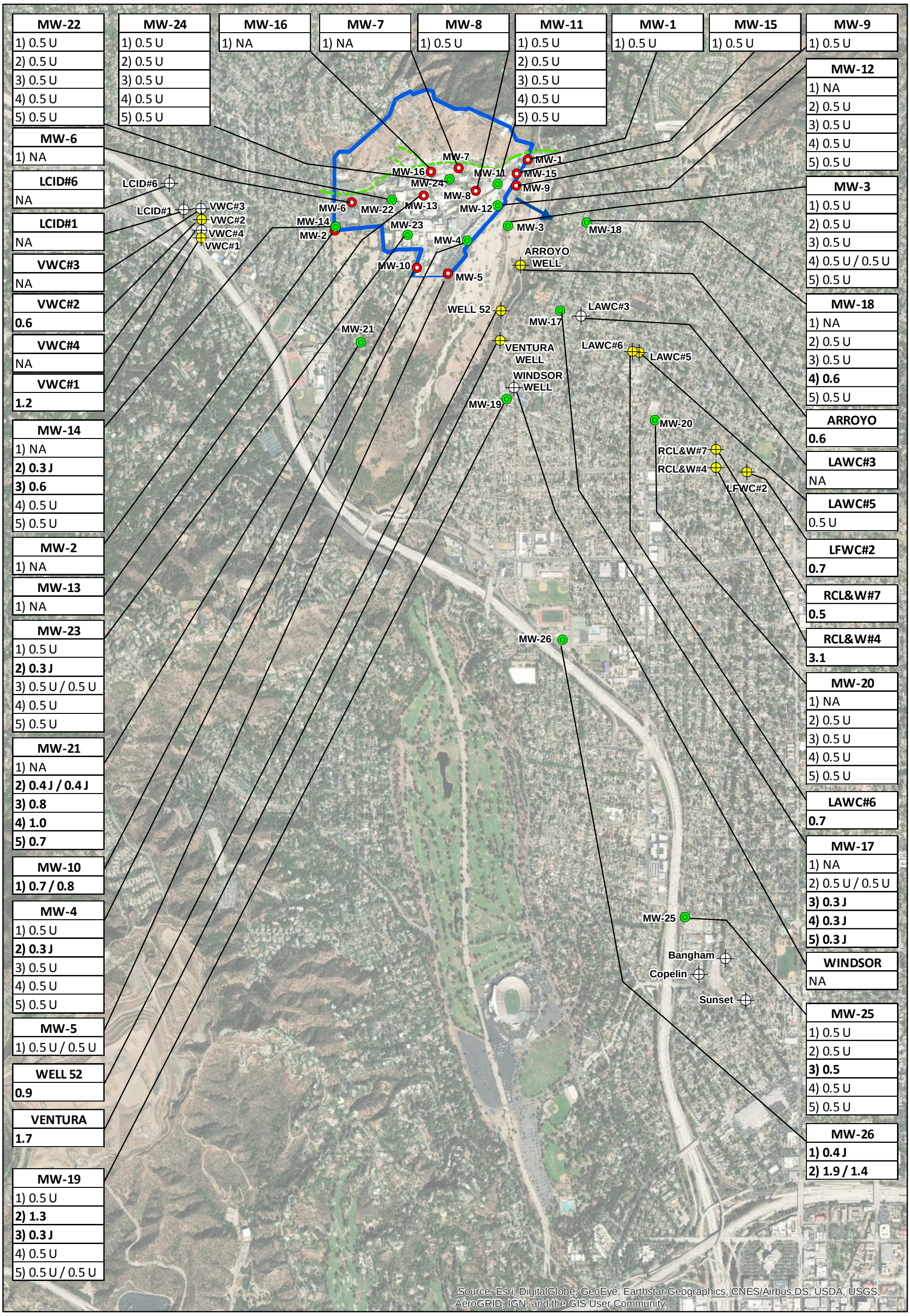
Horizontal and Vertical Extent
of Perchlorate in Groundwater
October 2018

DESIGNED BY JHG DRAWN BY JHG CHECKED BY DC	JPL - Pasadena, CA Contract No: FA8903-16-D-0049	Figure 5 January 2019



Legend

- Deep Multi-Port Monitoring Well Location
- Shallow Monitoring Well Location
- Municipal Production Well (Data Not Available)
- Municipal Production Well (Data From October 2018)
- Estimated Isoconcentration Line (5 µg/L)
- JPL Facility Boundary
- Approximate Location of Thrust Fault
- Groundwater Flow Direction

N W E S

0 600 1,200 1,800 Feet

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.

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Tetrachloroethene in Groundwater October 2018

DESIGNED BY: JHG DRAWN BY: JHG CHECKED BY: DC	JPL - Pasadena, CA Contract No: FA8903-16-D-0049	Figure 6 January 2019

MW-22
1) 0.6
2) 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) NA

MW-7
1) NA

MW-8
1) 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-12
1) NA
2) 0.5 U
3) 0.5 U
4) 0.5 U
5) 0.5 U

MW-6
1) NA

LCID#6
NA

LCID#1
NA

VWC#3
NA

VWC#2
0.8

VWC#4
NA

VWC#1
1.6

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

MW-18
1) NA
2) 0.5 U
3) 0.5 U
4) 0.8
5) 0.5 U

MW-14
1) NA
2) 1.1
3) 0.9
4) 0.2 J
5) 0.5 U

ARROYO
2.2

LAWC#3
NA

LAWC#5
0.5 U

LFWC#2
0.5 U

RCL&W#7
NA

RCL&W#4
NA

MW-13
1) NA

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

MW-23
1) 1.2
2) 1.0
3) 0.5 U / 0.5 U
4) 0.5 U
5) 0.5 U

LAWC#6
1.5

MW-21
1) NA
2) 0.5 U / 0.5 U
3) 0.8
4) 0.3 J
5) 0.5 U

MW-17
1) NA
2) 0.5 U / 0.5 U
3) 1.5
4) 0.7
5) 0.8

MW-10
1) 5.8 / 6.2

WINDSOR
NA

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

MW-25
1) 1.2
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
4.5

VENTURA
3.4

MW-26
1) 0.5 U
2) 0.5 U / 0.5 U

MW-19
1) 0.5 U
2) 0.8
3) 0.5 U
4) 0.5 U
5) 0.5 U / 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 2018)
- Estimated Isoconcentration Line (5 µg/L)
- JPL Facility Boundary
- Approximate Location of Thrust Fault
- Groundwater Flow Direction

N W E S

0 600 1,200 1,800 Feet

MW-8
1) 0.5 U

Well ID
Concentration in micrograms per liter
Screen number

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.

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Trichloroethene in Groundwater October 2018

DESIGNED BY: JHG DRAWN BY: JHG CHECKED BY: DC	JPL - Pasadena, CA Contract No: FA8903-16-D-0049	Figure 7 January 2019

MW-15
1073.28
MW-1
1075.09
MW-7
MW-16
MW-11
1004.81
MW-24
942.56
MW-8
942.79
MW-9
1069.29
MW-6
MW-22
944.97
MW-13
LCID#6
LCID#1
VWC#3
VWC#2
VWC#4
VWC#1
MW-14
949.90
MW-12
934.05
MW-18
933.08
MW-23
943.28
MW-4
938.35
MW-3
935.98
ARROYO
WELL
MW-10
941.56
MW-5
940.50
WELL 52
MW-17
926.27
LAWC#3
VENTURA
WELL
MW-21
947.33
LAWC#5
WINDSOR
WELL
MW-19
931.72
MW-20
914.75
RCL&W#7
RCL&W#4
LFWC#2
MW-26
932.45
MW-25
682.30
BANGHAM
COPELIN
SUNSET
1070
1050
1030
1010
990
970
950
930
930

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

Legend

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

N W E S

0 500 1,000 1,500 Feet

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Groundwater Elevation Contours October 2018

DESIGNED BY JHG DRAWN BY JHG CHECKED BY DC	JPL - Pasadena, CA	Figure 8
	Contract No: FA8903-16-D-0049	Dec 2018

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-17	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	Oct-17	DUP-8-4Q17	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	April 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	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-3-Screen-1													
MW-3-Screen-1	Oct-17	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	April 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	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-2													
MW-3-Screen-2	Oct-17	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	Jan/Feb 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 J**	**9.3**		
MW-3-Screen-2	April 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	**0.6 J**		
MW-3-Screen-2	Jul/Aug 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	**1.9 J**		
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-3													
MW-3-Screen-3	Oct-17	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	Jan/Feb 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	**1.4 J**		
MW-3-Screen-3	April 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	**0.6 J**		
MW-3-Screen-3	Jul/Aug 2018	MW-3-3	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.2 J**		
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-4													
MW-3-Screen-4	Oct-17	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	**1.0 J**		
MW-3-Screen-4	Jan/Feb 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	**0.6 J**		
MW-3-Screen-4	April 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	**1.0 J**		
MW-3-Screen-4	Jul/Aug 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	**0.8 J**		
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-5													
MW-3-Screen-5	Oct-17	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	**0.8 J**		
MW-3-Screen-5	April 2018	MW-3-5	0.5 U	0.5 U	**0.3 J**	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
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		

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-4-Screen-1													
MW-4-Screen-1	Oct-17	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	Jan/Feb 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	**Acetone**	**14.0**
MW-4-Screen-1	April 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	**0.6 J**		
MW-4-Screen-1	Jul/Aug 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	**2.1 J**		
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-2													
MW-4-Screen-2	Oct-17	MW-4-2	0.5 U	**1.3**	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**3.8 J**		
MW-4-Screen-2	Jan/Feb 2018	MW-4-2	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	**Acetone**	**14.0**
MW-4-Screen-2	April 2018	MW-4-2	0.5 U	**1.3**	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.5 J**	**6.5**		
MW-4-Screen-2	Jul/Aug 2018	MW-4-2	0.5 U	0.5 U	**1.0**	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**4.7**		
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-3													
MW-4-Screen-3	Oct-17	MW-4-3	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-3	Jan/Feb 2018	MW-4-3	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-4-Screen-3	April 2018	MW-4-3	0.5 U	**0.9**	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-4-Screen-3	Jul/Aug 2018	MW-4-3	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		
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-4													
MW-4-Screen-4	Oct-17	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	**Styrene**	**0.1 J**
MW-4-Screen-4	April 2018	MW-4-4	0.5 U	**0.4 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.4 J**		
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-5													
MW-4-Screen-5	Oct-17	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** **Styrene**	**0.3 J** **0.2 J**
MW-4-Screen-5	April 2018	MW-4-5	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	**Ethylbenzene** **Styrene**	**0.2 J** **0.2 J**
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** **Styrene**	**0.2 J** **0.2 J**
MW-5													
MW-5	Oct-17	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-17	DUP-6-4Q17	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	Jan/Feb 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	April 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	**0.9 J**		
MW-5	Jul/Aug 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 UJ		
MW-5	Jul/Aug 2018	DUP-5-3Q18	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 UJ		
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		

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	Oct-17	MW-6	0.5 U	**1.8**	**0.4 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**	**3.3 J**		
MW-6	Jan/Feb 2018	MW-6	0.5 U	**1.6**	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.5 J**	**3.9 J**		
MW-6	Jan/Feb 2018	DUP-6-1Q18	0.5 U	**1.5**	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**	**3.6 J**		
MW-6	April 2018	MW-6	0.5 U	**4.5**	**1.0**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.8**	**2.2 J**	**trans-1,2-Dichloroethene**	**0.2 J**
MW-6	Jul/Aug 2018	MW-6	0.5 U	**0.4 J**	**2.3**	0.5 U	0.5 U	0.5 U	0.5 U	**0.6**	**3.1 J**		
MW-6	Jul/Aug 2018	DUP-6-3Q18	0.5 U	**0.5 J**	**2.1**	0.5 U	0.5 U	0.5 U	0.5 U	**0.6**	4.0 UJ		
MW-7													
MW-7	Oct-17	MW-7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**2.0**	**4.2**		
MW-7	Jan/Feb 2018	MW-7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**5.0**	**9.6**	**Bromodichloromethane**	**0.6**
MW-7	April 2018	MW-7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**3.7**	**5.0**	**Bromodichloromethane**	**0.4 J**
MW-7	Jul/Aug 2018	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**	4.0 UJ		
MW-8													
MW-8	Oct-17	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	**1.2 J**	**Trichlorofluoromethane**	**0.3 J**
MW-8	Jan/Feb 2018	MW-8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**21.0**	**Trichlorofluoromethane**	**0.6**
MW-8	April 2018	MW-8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**23.0**	**Trichlorofluoromethane**	**0.7**
MW-8	Jul/Aug 2018	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	**3.9 J**	**Trichlorofluoromethane**	**0.3 J**
MW-8	Jul/Aug 2018	DUP-7-3Q18	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**4.2 J**	**Trichlorofluoromethane**	**0.3 J**
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-9													
MW-9	Oct-17	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	April 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	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-10													
MW-10	Oct-17	MW-10	0.5 U	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**2.1 J**		
MW-10	Jan/Feb 2018	MW-10	0.5 U	**3.8**	**0.5 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.5 J**	**5.3**	**trans-1,2-Dichloroethene**	**0.2 J**
MW-10	April 2018	MW-10	0.5 U	**6.1**	**0.8**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.8**	**4.6**	**cis-1,2-Dichloroethene** **trans-1,2-Dichloroethene**	**0.3 J** **0.3 J**
MW-10	Jul/Aug 2018	MW-10	0.5 U	**0.3 J**	**2.3**	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**	**3.1 J**		
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** **trans-1,2-Dichloroethene**	**0.4 J** **0.2 J**
MW-11-Screen-1													
MW-11-Screen-1	Oct-17	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	Jan/Feb 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	April 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	Jul/Aug 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	**1.3 J**		
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		

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-17	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	Jan/Feb 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	April 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	**0.9 J**		
MW-11-Screen-2	Jul/Aug 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	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-3													
MW-11-Screen-3	Oct-17	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		
MW-11-Screen-3	Jan/Feb 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	**1.5 J**	**Styrene**	**0.2 J**
MW-11-Screen-3	April 2018	MW-11-3	**0.2 J**	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-11-Screen-3	April 2018	DUP-6-2Q18	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	**0.8 J**		
MW-11-Screen-3	Jul/Aug 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	**0.1 J**	4.0 U	**Carbon disulfide** **Methyl-tert-butyl ether (MTBE)** **Styrene**	**0.5 J** **0.3 J** **0.4 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)** **Styrene**	**0.4 J** **0.4 J**
MW-11-Screen-4													
MW-11-Screen-4	Oct-17	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	Jan/Feb 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**	**0.2 J**
MW-11-Screen-4	April 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	Jul/Aug 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		
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-5													
MW-11-Screen-5	Oct-17	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**	**0.2 J**
MW-11-Screen-5	April 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	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-12-Screen-1													
MW-12-Screen-1	Apr/May 2017	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-1	Jul/Aug 2017	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-1	April 2018	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-17	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	Jan/Feb 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	April 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	Jul/Aug 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	**1.8 J**		
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-3													
MW-12-Screen-3	Oct-17	MW-12-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.0**	**0.7 J**		
MW-12-Screen-3	Jan/Feb 2018	MW-12-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.4**	**0.7 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-3	April 2018	MW-12-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.6**	**0.8 J**		
MW-12-Screen-3	April 2018	DUP-8-2Q18	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.5 J**	**0.8 J**		
MW-12-Screen-3	Jul/Aug 2018	MW-12-3	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.6**	**1.8 J**		
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-4													
MW-12-Screen-4	Oct-17	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**	**2.1 J**		
MW-12-Screen-4	Oct-17	DUP-5-4Q17	**0.4 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**2.2 J**		
MW-12-Screen-4	Jan/Feb 2018	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**	4.0 U		
MW-12-Screen-4	April 2018	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**	**1.4 J**		
MW-12-Screen-4	Jul/Aug 2018	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**	**1.5 J**		
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-5													
MW-12-Screen-5	Oct-17	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**	**1.5 J**		
MW-12-Screen-5	Jan/Feb 2018	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**	4.0 U		
MW-12-Screen-5	April 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	**0.3 J**	**1.3 J**		
MW-12-Screen-5	Jul/Aug 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**	**1.2 J**		
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-13													
MW-13	Oct-17	MW-13	**0.4 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**4.0**	**69.0**	**Bromodichloromethane**	**0.2 J**
MW-13	Jan/Feb 2018	MW-13	**0.4 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**3.1**	**83.0**	**Bromodichloromethane**	**0.4 J**
MW-13	April 2018	MW-13	**0.4 J**	0.5 U	**0.6**	**0.2 J**	**0.2 J**	0.5 U	0.5 U	**3.9**	**230.0**	**Bromodichloromethane**	**0.5 J**
MW-14-Screen-1													
MW-14-Screen-1	Jul/Aug 2017	MW-14-1	0.5 U	**0.5**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**	**2.7 J**		
MW-14-Screen-1	Jan/Feb 2018	MW-14-1	0.5 U	**0.7**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**3.7 J**	**Methyl-tert-butyl ether (MTBE**	**0.2 J**
MW-14-Screen-1	April 2018	MW-14-1	0.5 U	**1.2**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**	**3.0 J**		
MW-14-Screen-2													
MW-14-Screen-2	Oct-17	MW-14-2	0.5 U	**1.3**	**0.3 J**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.4 J**	**3.5 J**		
MW-14-Screen-2	Jan/Feb 2018	MW-14-2	0.5 U	**1.4**	**0.3 J**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.4 J**	**4.9**		
MW-14-Screen-2	April 2018	MW-14-2	0.5 U	**1.2**	**0.5 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**3.8 J**		
MW-14-Screen-2	Jul/Aug 2018	MW-14-2	0.5 U	**0.3 J**	**1.2**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.4 J**	**3.4 J**		
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-3													
MW-14-Screen-3	Oct-17	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**	**4.5**		
MW-14-Screen-3	Jan/Feb 2018	MW-14-3	0.5 U	**2.1**	**1.1**	**0.6**	0.5 U	0.5 U	0.5 U	**0.9**	**5.8**		
MW-14-Screen-3	April 2018	MW-14-3	0.5 U	**1.0**	**0.6**	**0.4 J**	0.5 U	0.5 U	0.5 U	**0.5 J**	**4.3**		
MW-14-Screen-3	Jul/Aug 2018	MW-14-3	0.5 U	**0.5**	**1.0**	**0.3 J**	0.5 U	0.5 U	0.5 U	**0.5 J**	**4.1**		
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-4													
MW-14-Screen-4	Oct-17	MW-14-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**4.0**		

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-14-Screen-4	Jan/Feb 2018	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**	**4.6**		
MW-14-Screen-4	April 2018	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**	**4.4**		
MW-14-Screen-4	April 2018	DUP-1-2Q18	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	**3.0 J**		
MW-14-Screen-4	Jul/Aug 2018	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	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-5													
MW-14-Screen-5	Oct-17	MW-14-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.1 J**	4.0 U		
MW-14-Screen-5	Jan/Feb 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	**Acetone** **Acrylonitrile** **Methyl-tert-butyl ether (MTBE** **Styrene**	**15** **6.3** **0.5 J** **0.6**
MW-14-Screen-5	April 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		
MW-14-Screen-5	Jul/Aug 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		
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-15													
MW-15	Oct-17	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	**0.6 J**		
MW-15	April 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	**2.2 J**		
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-16													
MW-16	Oct-17	MW-16	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.9**	**0.8 J**	**Bromodichloromethane**	**0.4 J**
MW-16	Oct-17	DUP-7-4Q17	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.9**	**0.8 J**	**Bromodichloromethane**	**0.5 J**
MW-16	Jan/Feb 2018	MW-16	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.7**	**0.6 J**	**Bromodichloromethane** **Bromoform** **Dibromochloromethane**	**1.1** **1.7** **1.5**
MW-16	April 2018	MW-16	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**3.0**	4.0 U	**Bromodichloromethane** **Bromoform** **Dibromochloromethane**	**3.6** **2.4** **2.2**
MW-16	Jul/Aug 2018	MW-16	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.0**	4.0 UJ	**Bromodichloromethane**	**0.5**
MW-17-Screen-1													
MW-17-Screen-1	Apr/May 2017	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-17	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	April 2018	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-17	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	Jan/Feb 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	April 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	April 2018	DUP-5-2Q18	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	Jul/Aug 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	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	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-3													
MW-17-Screen-3	Oct-17	MW-17-3	0.5 U	**1.3**	**0.3 J**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.4 J**	**4.9**		
MW-17-Screen-3	Jan/Feb 2018	MW-17-3	0.5 U	**1.3**	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**	**5.1**		
MW-17-Screen-3	April 2018	MW-17-3	0.5 U	**3.2**	**0.8**	**0.4 J**	0.5 U	0.5 U	0.5 U	**0.6**	**5.0**		
MW-17-Screen-3	Jul/Aug 2018	MW-17-3	0.5 U	**0.3 J**	**1.2**	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**	**3.5 J**		
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-4													
MW-17-Screen-4	Oct-17	MW-17-4	0.5 U	**0.6**	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**4.7**		
MW-17-Screen-4	Jan/Feb 2018	MW-17-4	0.5 U	**0.8**	**0.5 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.6**	**4.9**		
MW-17-Screen-4	Jan/Feb 2018	Dup-3-IQ18	0.5 U	**0.5**	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**4.0**		
MW-17-Screen-4	April 2018	MW-17-4	0.5 U	**0.6**	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**4.2**		
MW-17-Screen-4	Jul/Aug 2018	MW-17-4	0.5 U	**0.3 J**	**0.6**	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**3.1 J**		
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-5													
MW-17-Screen-5	Oct-17	MW-17-5	0.5 U	**0.9**	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**4.3**		
MW-17-Screen-5	April 2018	MW-17-5	0.5 U	**0.9**	**0.4 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.5 J**	**4.3**		
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-18-Screen-2													
MW-18-Screen-2	Oct-17	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	Jan/Feb 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	April 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	Jul/Aug 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	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-3													
MW-18-Screen-3	Oct-17	MW-18-3	**0.5**	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-18-Screen-3	Oct-17	DUP-3-4Q17	**0.5 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	**3.8 J**		
MW-18-Screen-3	Jan/Feb 2018	MW-18-3	**0.7**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**3.9 J**		
MW-18-Screen-3	April 2018	MW-18-3	**0.5**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**4.6**		
MW-18-Screen-3	Jul/Aug 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	**2.3 J**		
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-4													
MW-18-Screen-4	Oct-17	MW-18-4	**4.3**	**2.2**	**2.0**	0.5 U	0.5 U	0.5 U	0.5 U	**1.4**	**14.0**		
MW-18-Screen-4	Jan/Feb 2018	MW-18-4	**3.5**	**0.9**	**0.6**	0.5 U	0.5 U	0.5 U	0.5 U	**1.0**	**18.0**		
MW-18-Screen-4	April 2018	MW-18-4	**7.7**	**1.6**	**0.7**	0.5 U	0.5 U	0.5 U	0.5 U	**1.7**	**16.0**		
MW-18-Screen-4	Jul/Aug 2018	MW-18-4	**1.4**	**0.5 J**	**0.7**	0.5 U	0.5 U	0.5 U	0.5 U	**0.6**	**14.0**		
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-5													
MW-18-Screen-5	Oct-17	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		

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-5	Jan/Feb 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		
MW-18-Screen-5	April 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		
MW-18-Screen-5	Jul/Aug 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		
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-19-Screen-1													
MW-19-Screen-1	Oct-17	MW-19-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.0**	4.0 U		
MW-19-Screen-1	Jan/Feb 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	**0.9**	4.0 U		
MW-19-Screen-1	April 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	**0.6**	4.0 U		
MW-19-Screen-1	Jul/Aug 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	**3.4**	**1.3 J**		
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-2													
MW-19-Screen-2	April 2018	MW-19-2	0.5 U	**0.9**	**1.8**	0.5 U	0.5 U	0.5 U	0.5 U	**2.2**	**3.0 J**	**cis-1,2-Dichloroethene**	**0.4 J**
												Methyl-tert-butyl ether (MTBE	**0.2 J**
MW-19-Screen-2	Jul/Aug 2018	MW-19-2	0.5 U	**1.6**	**0.9**	**0.2 J**	0.5 U	0.5 U	0.5 U	**2.3**	**3.0 J**	**cis-1,2-Dichloroethene**	**0.4 J**
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-3													
MW-19-Screen-3	Oct-17	MW-19-3	0.5 U	**0.2 J**	**0.4 J**	0.5 U	0.5 U	0.5 U	0.5 U	**1.7**	**3.9 J**		
MW-19-Screen-3	Jan/Feb 2018	MW-19-3	0.5 U	**0.2 J**	**0.5 J**	0.5 U	0.5 U	0.5 U	0.5 U	**1.4**	**4.1 J**		
MW-19-Screen-3	April 2018	MW-19-3	0.5 U	0.5 U	**0.4 J**	0.5 U	0.5 U	0.5 U	0.5 U	**1.4**	**4.7**		
MW-19-Screen-3	Jul/Aug 2018	MW-19-3	0.5 U	**0.6**	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	**2.6**	**2.2 J**		
MW-19-Screen-3	Jul/Aug 2018	DUP-1-3Q18	0.5 U	**0.5 J**	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	**2.2**	**2.5 J**	**Bromodichloromethane**	**0.2 J**
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-4													
MW-19-Screen-4	Oct-17	MW-19-4	0.5 U	0.5 U	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.5**	**3.4 J**		
MW-19-Screen-4	Jan/Feb 2018	MW-19-4	0.5 U	**0.2 J**	**0.8**	0.5 U	0.5 U	0.5 U	0.5 U	**1.0**	**2.4 J**		
MW-19-Screen-4	April 2018	MW-19-4	0.5 U	0.5 U	**0.4 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.5**	**2.6 J**		
MW-19-Screen-4	Jul/Aug 2018	MW-19-4	0.5 U	**0.4 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.7**	**3.0 J**		
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-5													
MW-19-Screen-5	Oct-17	MW-19-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**2.0**	**2.0 J**		
MW-19-Screen-5	Jan/Feb 2018	MW-19-5	0.5 U	0.5 U	**0.4 J**	0.5 U	0.5 U	0.5 U	0.5 U	**3.0**	**2.1 J**	**Bromodichloromethane**	**0.2 J**
MW-19-Screen-5	April 2018	MW-19-5	0.5 U	0.5 U	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	**2.4**	**2.5 J**		
MW-19-Screen-5	Jul/Aug 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	**1.7**	**2.1 J**	**Bromodichloromethane**	**0.2 J**
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**
MW-20-Screen-2													
MW-20-Screen-2	Oct-17	MW-20-2	0.5 U	**0.7**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	**3.2 J**	**Carbon disulfide**	**0.6 J**
MW-20-Screen-2	Jan/Feb 2018	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**	4.0 UJ		
MW-20-Screen-2	April 2018	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**	**1.7 J**	**Carbon disulfide**	**0.8 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-2	April 2018	DUP-7-2Q18	0.5 U	**0.9**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	4.0 U	**Carbon disulfide**	**0.7 J**
MW-20-Screen-2	Jul/Aug 2018	MW-20-2	0.5 U	0.5 U	**0.5 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	**1.5 J**		
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-3													
MW-20-Screen-3	Oct-17	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** **Ethylbenzene** **Styrene**	**1.6 J** **0.6 J** **0.2 J** **0.4 J**
MW-20-Screen-3	Oct-17	DUP-1-4Q17	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** **Carbon disulfide** **Styrene**	**1.8 J** **0.7 J** **0.3 J**
MW-20-Screen-3	Jan/Feb 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 UJ	**Styrene**	**0.3 J**
MW-20-Screen-3	April 2018	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	**1.4 J**	**Carbon disulfide** **Styrene**	**0.9 J** **0.3 J**
MW-20-Screen-3	Jul/Aug 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** **Carbon disulfide** **Styrene**	**1.7 J** **0.5 J** **0.2 J**
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-4													
MW-20-Screen-4	Oct-17	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	Jan/Feb 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 UJ		
MW-20-Screen-4	April 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	Jul/Aug 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	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-5													
MW-20-Screen-5	Oct-17	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	Jan/Feb 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 UJ	**Styrene**	**0.2 J**
MW-20-Screen-5	Jan/Feb 2018	DUP-1-1Q18	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 UJ	**Styrene**	**0.2 J**
MW-20-Screen-5	April 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	Jul/Aug 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**	**0.1 J**
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-21-Screen-2													
MW-21-Screen-2	Oct-17	MW-21-2	0.5 U	0.5 U	**0.8**	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	**1.3 J**		
MW-21-Screen-2	Jan/Feb 2018	MW-21-2	0.5 U	0.5 U	**0.5 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	**1.6 J**		
MW-21-Screen-2	April 2018	MW-21-2	0.5 U	**0.2 J**	**0.5**	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**	**1.7 J**		
MW-21-Screen-2	Jul/Aug 2018	MW-21-2	0.5 U	**0.5**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.3 J**		
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**		

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-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-3													
MW-21-Screen-3	Oct-17	MW-21-3	0.5 U	**0.9**	**0.8**	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**2.0 J**		
MW-21-Screen-3	Jan/Feb 2018	MW-21-3	0.5 U	**0.7**	**0.8**	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**2.4 J**		
MW-21-Screen-3	April 2018	MW-21-3	0.5 U	**0.9**	**1.1**	0.5 U	0.5 U	0.5 U	0.5 U	**0.5 J**	4.0 U		
MW-21-Screen-3	April 2018	DUP-2-2Q18	0.5 U	**1.1**	**1.4**	0.5 U	0.5 U	0.5 U	0.5 U	**0.5**	**3.8 J**		
MW-21-Screen-3	Jul/Aug 2018	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**	**2.3 J**		
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-4													
MW-21-Screen-4	Oct-17	MW-21-4	0.5 U	**0.2 J**	**1.2**	0.5 U	0.5 U	0.5 U	0.5 U	**4.6**	**1.4 J**		
MW-21-Screen-4	Jan/Feb 2018	MW-21-4	0.5 U	0.5 U	**0.6**	0.5 U	0.5 U	0.5 U	0.5 U	**4.6**	**4.2**		
MW-21-Screen-4	April 2018	MW-21-4	0.5 U	0.5 U	**0.7**	0.5 U	0.5 U	0.5 U	0.5 U	**5.2**	**2.6 J**		
MW-21-Screen-4	Jul/Aug 2018	MW-21-4	0.5 U	**0.9**	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	**5.0**	**1.5 J**		
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-5													
MW-21-Screen-5	Oct-17	MW-21-5	0.5 U	0.5 U	**0.7**	0.5 U	0.5 U	0.5 U	0.5 U	**5.7**	**1.5 J**		
MW-21-Screen-5	Jan/Feb 2018	MW-21-5	0.5 U	0.5 U	**0.6**	0.5 U	0.5 U	0.5 U	0.5 U	**5.3**	**2.3 J**		
MW-21-Screen-5	April 2018	MW-21-5	0.5 U	0.5 U	**0.8**	0.5 U	0.5 U	0.5 U	0.5 U	**5.1**	**2.5 J**		
MW-21-Screen-5	Jul/Aug 2018	MW-21-5	0.5 U	**0.6**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**5.6**	**1.3 J**		
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-22-Screen-1													
MW-22-Screen-1	Oct-17	MW-22-1	0.5 U	**0.8**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**	**3.0 J**		
MW-22-Screen-1	Jan/Feb 2018	MW-22-1	0.5 U	**0.5**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**	**2.5 J**		
MW-22-Screen-1	Jan/Feb 2018	Dup-4-1Q18	0.5 U	**0.6**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**	**2.2 J**		
MW-22-Screen-1	April 2018	MW-22-1	0.5 U	**0.7**	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**2.6 J**		
MW-22-Screen-1	Jul/Aug 2018	MW-22-1	0.5 U	0.5 U	**0.6**	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**	**2.7 J**		
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-2													
MW-22-Screen-2	Oct-17	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	**2.7 J**		
MW-22-Screen-2	Jan/Feb 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	**2.8 J**		
MW-22-Screen-2	April 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	**2.1 J**		
MW-22-Screen-2	Jul/Aug 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	**2.1 J**		
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-3													
MW-22-Screen-3	Oct-17	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	**2.1 J**		
MW-22-Screen3	Oct-17	DUP-4-4Q17	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**2.3 J**		
MW-22-Screen-3	Jan/Feb 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	**2.5 J**		
MW-22-Screen-3	April 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	**1.2 J**	**Carbon disulfide**	**0.5 J**
MW-22-Screen-3	April 2018	DUP-3-2Q18	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**2.0 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-22-Screen-3	Jul/Aug 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	**1.5 J**		
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-4													
MW-22-Screen-4	Oct-17	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	**0.6 J**		
MW-22-Screen-4	April 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	**0.8 J**	**Carbon disulfide**	**0.6 J**
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-5													
MW-22-Screen-5	Oct-17	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	April 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	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-23-Screen-1													
MW-23-Screen-1	Oct-17	MW-23-1	0.5 U	**3.4**	**0.4 J**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.9**	**3.8 J**		
MW-23-Screen-1	Jan/Feb 2018	MW-23-1	0.5 U	**1.5**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**4.3**		
MW-23-Screen-1	April 2018	MW-23-1	0.5 U	**1.8**	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**3.4 J**		
MW-23-Screen-1	Jul/Aug 2018	MW-23-1	0.5 U	0.5 U	**1.3**	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**2.2 J**		
MW-23-Screen-1	Jul/Aug 2018	Dup-4-3Q18	0.5 U	0.5 U	**1.1**	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**2.5 J**		
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-2													
MW-23-Screen-2	Oct-17	MW-23-2	0.5 U	**1.1**	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**4.2**		
MW-23-Screen-2	Jan/Feb 2018	MW-23-2	0.5 U	**1.3**	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**5.1**		
MW-23-Screen-2	April 2018	MW-23-2	0.5 U	**1.1**	**0.4 J**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.4 J**	**3.5 J**		
MW-23-Screen-2	Jul/Aug 2018	MW-23-2	0.5 U	**0.3 J**	**0.8**	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**3.6 J**		
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-3													
MW-23-Screen-3	Oct-17	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	**2.8 J**		
MW-23-Screen-3	Jan/Feb 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	**3.2 J**		
MW-23-Screen-3	April 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	**2.2 J**		
MW-23-Screen-3	Jul/Aug 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	**2.0 J**		
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-4													
MW-23-Screen-4	Oct-17	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-4	April 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	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-5													
MW-23-Screen-5	Oct-17	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	April 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	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**

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-1													
MW-24-Screen-1	Oct-17	MW-24-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.0**	**3.1 J**	**Bromodichloromethane**	**0.3 J**
MW-24-Screen-1	Jan/Feb 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	**2.3**	**16.0**		
MW-24-Screen-1	April 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	**2.1**	**36.0**		
MW-24-Screen-1	Jul/Aug 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	**2.6**	**0.6 J**		
MW-24-Screen-1	Jul/Aug 2018	Dup-3-3Q18	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.4**	**0.7 J**		
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-2													
MW-24-Screen-2	Oct-17	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**	**2.2 J**		
MW-24-Screen-2	Jan/Feb 2018	MW-24-2	0.5 U	0.5 U	0.5 U	**0.2 J**	**1.0**	0.5 U	0.5 U	0.5 U	**2.2 J**		
MW-24-Screen-2	April 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	0.5 U	**3.7 J**		
MW-24-Screen-2	Jul/Aug 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**	**1.5 J**		
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-3													
MW-24-Screen-3	Oct-17	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	Jan/Feb 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		
MW-24-Screen-3	April 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	**Carbon disulfide**	**0.9 J**
MW-24-Screen-3	Jul/Aug 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		
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		
MW-24-Screen-4													
MW-24-Screen-4	Oct-17	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	April 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	**Styrene**	**0.2 J**
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** **Styrene**	**0.2 J** **0.2 J**
MW-24-Screen-5													
MW-24-Screen-5	Oct-17	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	April 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	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-25-Screen-1													
MW-25-Screen-1	Oct-17	MW-25-1	0.5 U	**0.9**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**7.1**	**Methyl-tert-butyl ether (MTBE**	**0.5 J**
MW-25-Screen-1	Jan/Feb 2018	MW-25-1	0.5 U	**0.9**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**6.0**	**Methyl-tert-butyl ether (MTBE**	**0.4 J**
MW-25-Screen-1	April 2018	MW-25-1	0.5 U	**1.0**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**9.1**	**Methyl-tert-butyl ether (MTBE**	**0.4 J**
MW-25-Screen-1	Jul/Aug 2018	MW-25-1	0.5 U	0.5 U	**1.0**	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**7.1**	**Methyl-tert-butyl ether (MTBE**	**0.5 J**
MW-25-Screen-1	Jul/Aug 2018	DUP-2-3Q18	0.5 U	0.5 U	**0.9**	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**6.1**	**Methyl-tert-butyl ether (MTBE**	**0.4 J**
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-2													
MW-25-Screen-2	Oct-17	MW-25-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.1 J**	**12.0**		
MW-25-Screen 2	Oct-17	DUP-2-4Q17	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.1 J**	**12.0**		
MW-25-Screen-2	Jan/Feb 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	**12.0**		

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-25-Screen-2	April 2018	MW-25-2	0.5 U	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	**12.0**		
MW-25-Screen-2	Jul/Aug 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	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-3													
MW-25-Screen-3	Oct-17	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**	**9.8**		
MW-25-Screen-3	Jan/Feb 2018	MW-25-3	0.5 U	0.5 U	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**9.1**		
MW-25-Screen-3	April 2018	MW-25-3	0.5 U	0.5 U	**0.4 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.5**	**9.0**	**Carbon disulfide**	**0.9 J**
MW-25-Screen-3	Jul/Aug 2018	MW-25-3	0.5 U	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**	**8.8**		
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-4													
MW-25-Screen-4	Oct-17	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	**8.1**		
MW-25-Screen-4	Jan/Feb 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	**6.9**		
MW-25-Screen-4	April 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	**9.0**	**Carbon disulfide**	**0.7 J**
MW-25-Screen-4	Jul/Aug 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	**8.3**	**Carbon disulfide**	**0.9 J**
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-5													
MW-25-Screen-5	Oct-17	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	Jan/Feb 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	April 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	Jul/Aug 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	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-26-Screen-1													
MW-26-Screen-1	Oct-17	MW-26-1	0.5 U	**0.2 J**	**0.4 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	**1.7 J**		
MW-26-Screen-1	Jan/Feb 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	**0.2 J**	**1.3 J**		
MW-26-Screen-1	April 2018	MW-26-1	0.5 U	**0.5 J**	**1.2**	0.5 U	0.5 U	0.5 U	0.5 U	**0.5**	**1.6 J**		
MW-26-Screen-1	April 2018	DUP-4-2Q18	0.5 U	0.5 U	**0.5**	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	**1.7 J**		
MW-26-Screen-1	Jul/Aug 2018	MW-26-1	0.5 U	**0.4 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	4.0 U		
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-2													
MW-26-Screen-2	Oct-17	MW-26-2	0.5 U	0.5 U	**1.5**	0.5 U	0.5 U	0.5 U	0.5 U	**1.3**	**2.5 J**	**Bromodichloromethane** **cis-1,2-Dichloroethene**	**0.2 J** **0.3 J**
MW-26-Screen-2	Jan/Feb 2018	MW-26-2	0.5 U	**0.4 J**	**2.7**	0.5 U	0.5 U	0.5 U	0.5 U	**2.0**	**3.2 J**	**cis-1,2-Dichloroethene**	**0.3 J**
MW-26-Screen-2	Jan/Feb 2018	DUP-2-1Q18	0.5 U	**0.2 J**	**2.3**	0.5 U	0.5 U	0.5 U	0.5 U	**1.4**	**3.0 J**		
MW-26-Screen-2	April 2018	MW-26-2	0.5 U	**0.3 J**	**2.3**	0.5 U	0.5 U	0.5 U	0.5 U	**1.9**	**2.1 J**	**cis-1,2-Dichloroethene**	**0.3 J**
MW-26-Screen-2	Jul/Aug 2018	MW-26-2	0.5 U	**1.8**	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	**1.8**	4.0 U	**Bromodichloromethane** **cis-1,2-Dichloroethene**	**0.2 J** **0.3 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-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**		
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-17	MW-1	NA	NA	3.0 J	2.0 U
MW-1	Oct-17	DUP-8-4Q17	NA	NA	3.0 J	2.0 U
MW-1	April 2018	MW-1	2.0 U	1.0 U	3.0 U	2.0 U
MW-1	Oct 2018	MW-1	NA	NA	**0.7 J**	2.0 U
MW-3-Screen-1						
MW-3-Screen-1	Oct-17	MW-3-1	NA	NA	3.0 U	2.0 U
MW-3-Screen-1	April 2018	MW-3-1	2.0 U	1.0 U	3.0 U	2.0 U
MW-3-Screen-1	Oct 2018	MW-3-1	NA	NA	3.0 U	2.0 U
MW-3-Screen-2						
MW-3-Screen-2	Oct-17	MW-3-2	NA	NA	3.0 U	2.0 U
MW-3-Screen-2	Jan/Feb 2018	MW-3-2	NA	NA	**1.4 J**	2.0 U
MW-3-Screen-2	April 2018	MW-3-2	2.0 U	1.0 UJ	3.0 U	2.0 U
MW-3-Screen-2	Jul/Aug 2018	MW-3-2	NA	NA	3.0 U	2.0 U
MW-3-Screen-2	Oct 2018	MW-3-2	NA	NA	3.0 U	2.0 U
MW-3-Screen-3						
MW-3-Screen-3	Oct-17	MW-3-3	NA	NA	**2.4 J**	**2.1**
MW-3-Screen-3	Jan/Feb 2018	MW-3-3	NA	NA	**2.1 J**	**0.9 J**
MW-3-Screen-3	April 2018	MW-3-3	2.0 U	1.0 UJ	3.0 U	2.0 U
MW-3-Screen-3	Jul/Aug 2018	MW-3-3	NA	NA	3.0 U	**1.1 J**
MW-3-Screen-3	Oct 2018	MW-3-3	NA	NA	**3.0**	**0.8 J**
MW-3-Screen-4						
MW-3-Screen-4	Oct-17	MW-3-4	NA	NA	**20.0**	2.0 U
MW-3-Screen-4	Jan/Feb 2018	MW-3-4	NA	NA	**31.0**	2.0 U
MW-3-Screen-4	April 2018	MW-3-4	**6.0**	1.0 UJ	**11.0**	2.0 U
MW-3-Screen-4	Jul/Aug 2018	MW-3-4	NA	NA	**12.0**	2.0 U
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-5						
MW-3-Screen-5	Oct-17	MW-3-5	NA	NA	**11.0**	2.0 U
MW-3-Screen-5	April 2018	MW-3-5	2.0 U	1.0 UJ	3.0 U	2.0 U
MW-3-Screen-5	Oct 2018	MW-3-5	NA	NA	3.0 U	2.0 U
MW-4-Screen-1						
MW-4-Screen-1	Oct-17	MW-4-1	NA	NA	3.0 UJ	2.0 U
MW-4-Screen-1	Jan/Feb 2018	MW-4-1	NA	NA	3.0 U	2.0 U
MW-4-Screen-1	April 2018	MW-4-1	2.0 U	1.0 U	3.0 U	2.0 U
MW-4-Screen-1	Jul/Aug 2018	MW-4-1	NA	NA	3.0 U	2.0 U
MW-4-Screen-1	Oct 2018	MW-4-1	NA	NA	**0.6 J**	**0.7 J**
MW-4-Screen-2						
MW-4-Screen-2	Oct-17	MW-4-2	NA	NA	**1.6 J**	2.0 U

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
MW-4-Screen-2	Jan/Feb 2018	MW-4-2	NA	NA	3.0 U	2.0 U
MW-4-Screen-2	April 2018	MW-4-2	2.0 U	1.0 U	**1.9 J**	**1.8 J**
MW-4-Screen-2	Jul/Aug 2018	MW-4-2	NA	NA	**1.5 J**	2.0 U
MW-4-Screen-2	Oct 2018	MW-4-2	NA	NA	**4.1**	2.0 U
MW-4-Screen-3						
MW-4-Screen-3	Oct-17	MW-4-3	NA	NA	**87.0 J**	2.0 U
MW-4-Screen-3	Jan/Feb 2018	MW-4-3	NA	NA	3.0 U	2.0 U
MW-4-Screen-3	April 2018	MW-4-3	2.0 U	1.0 U	**2.8 J**	2.0 U
MW-4-Screen-3	Jul/Aug 2018	MW-4-3	NA	NA	**0.6 J**	2.0 U
MW-4-Screen-3	Oct 2018	MW-4-3	NA	NA	3.0 U	2.0 U
MW-4-Screen-4						
MW-4-Screen-4	Oct-17	MW-4-4	NA	NA	**0.6 J**	2.0 U
MW-4-Screen-4	April 2018	MW-4-4	2.0 U	1.0 U	**0.6 J**	2.0 U
MW-4-Screen-4	Oct 2018	MW-4-4	NA	NA	3.0 U	**0.9 J**
MW-4-Screen-5						
MW-4-Screen-5	Oct-17	MW-4-5	NA	NA	**1.3 J**	2.0 U
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-5						
MW-5	Oct-17	MW-5	NA	NA	**1.0 J**	2.0 U
MW-5	Oct-17	DUP-6-4Q17	NA	NA	**1.2 J**	2.0 U
MW-5	Jan/Feb 2018	MW-5	NA	NA	3.0 U	2.0 U
MW-5	April 2018	MW-5	2.0 U	1.0 U	**0.7 J**	2.0 U
MW-5	Jul/Aug 2018	MW-5	NA	NA	3.0 U	2.0 U
MW-5	Jul/Aug 2018	DUP-5-3Q18	NA	NA	3.0 U	2.0 U
MW-6						
MW-6	Oct-17	MW-6	NA	NA	**1100.0**	**1.2 J**
MW-6	Jan/Feb 2018	MW-6	NA	NA	**90.0**	**1.5 J**
MW-6	Jan/Feb 2018	DUP-6-1Q18	NA	NA	**32.0**	**1.7 J**
MW-6	April 2018	MW-6	2.0 U	1.0 U	**24.0**	**1.6 J**
MW-6	Jul/Aug 2018	MW-6	NA	NA	**24.0**	**1.1 J**
MW-6	Jul/Aug 2018	DUP-6-3Q18	NA	NA	**52.0**	**1.3 J**
MW-7						
MW-7	Oct-17	MW-7	NA	NA	**1200.0 J**	**1.3 J**
MW-7	Jan/Feb 2018	MW-7	NA	NA	**200.0**	**0.7 J**
MW-7	April 2018	MW-7	**1.0 J**	1.0 U	**54.0**	4.0 U
MW-7	Jul/Aug 2018	MW-7	NA	NA	**670.0**	2.0 U
MW-8						
MW-8	Oct-17	MW-8	NA	NA	**14.0 J**	2.0 U
MW-8	Jan/Feb 2018	MW-8	NA	NA	3.0 U	**1.4 J**
MW-8	April 2018	MW-8	**0.9 J**	1.0 U	**4.6**	**1.2 J**
MW-8	Jul/Aug 2018	MW-8	NA	NA	**7.3**	**0.9 J**
MW-8	Jul/Aug 2018	DUP-7-3Q18	NA	NA	**5.3**	**0.8 J**
MW-9						
MW-9	Oct-17	MW-9	NA	NA	**8.9 J**	2.0 U

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
MW-9	April 2018	MW-9	2.0 U	**0.1 J**	**3.0**	2.0 U
MW-9	Oct 2018	MW-9	NA	NA	**130.0**	2.0 U
MW-10						
MW-10	Oct-17	MW-10	NA	NA	**2.6 J**	**2.0**
MW-10	Jan/Feb 2018	MW-10	NA	NA	**4.9**	**2.3**
MW-10	April 2018	MW-10	2.0 U	1.0 U	**10.0**	**1.3 J**
MW-10	Jul/Aug 2018	MW-10	NA	NA	**18.0**	**2.8**
MW-11-Screen-1						
MW-11-Screen-1	Oct-17	MW-11-1	NA	NA	3.0 U	2.0 UJ
MW-11-Screen-1	Jan/Feb 2018	MW-11-1	NA	NA	3.0 U	2.0 U
MW-11-Screen-1	April 2018	MW-11-1	2.0 U	**0.1 J**	**0.9 J**	2.0 U
MW-11-Screen-1	Jul/Aug 2018	MW-11-1	NA	NA	3.0 U	2.0 U
MW-11-Screen-1	Oct 2018	MW-11-1	NA	NA	3.0 U	2.0 U
MW-11-Screen-2						
MW-11-Screen-2	Oct-17	MW-11-2	NA	NA	3.0 U	2.0 U
MW-11-Screen-2	Jan/Feb 2018	MW-11-2	NA	NA	3.0 U	2.0 U
MW-11-Screen-2	April 2018	MW-11-2	2.0 U	1.0 U	3.0 U	2.0 U
MW-11-Screen-2	Jul/Aug 2018	MW-11-2	NA	NA	3.0 U	2.0 U
MW-11-Screen-2	Oct 2018	MW-11-2	NA	NA	3.0 U	2.0 U
MW-11-Screen-3						
MW-11-Screen-3	Oct-17	MW-11-3	NA	NA	3.0 U	2.0 U
MW-11-Screen-3	Jan/Feb 2018	MW-11-3	NA	NA	3.0 U	2.0 U
MW-11-Screen-3	April 2018	MW-11-3	2.0 U	**0.1 J**	**1.9 J**	2.0 U
MW-11-Screen-3	April 2018	DUP-6-2Q18	2.0 U	1.0 U	**0.8 J**	2.0 U
MW-11-Screen-3	Jul/Aug 2018	MW-11-3	NA	NA	3.0 U	2.0 U
MW-11-Screen-3	Oct 2018	MW-11-3	NA	NA	**0.8 J**	2.0 U
MW-11-Screen-4						
MW-11-Screen-4	Oct-17	MW-11-4	NA	NA	3.0 U	2.0 U
MW-11-Screen-4	April 2018	MW-11-4	2.0 U	1.0 U	3.0 U	2.0 U
MW-11-Screen-4	Oct 2018	MW-11-4	NA	NA	3.0 U	2.0 U
MW-11-Screen-5						
MW-11-Screen-5	Oct-17	MW-11-5	NA	NA	**1.3 J**	2.0 U
MW-11-Screen-5	April 2018	MW-11-5	**7.4**	**0.9 J**	3.0 U	2.0 U
MW-11-Screen-5	Oct 2018	MW-11-5	NA	NA	**1.3 J**	2.0 U
MW-12-Screen-1						
MW-12-Screen-1	Apr/May 2017	MW-12-1	2.0 U	1.0 U	**1.8 J**	2.0 U
MW-12-Screen-1	Jul/Aug 2017	MW-12-1	NA	NA	2.9 U	2.0 U
MW-12-Screen-1	April 2018	MW-12-1	2.0 U	1.0 U	3.0 U	2.0 U
MW-12-Screen-2						
MW-12-Screen-2	Oct-17	MW-12-2	NA	NA	**0.7 J**	2.0 U
MW-12-Screen-2	Jan/Feb 2018	MW-12-2	NA	NA	3.0 U	2.0 U
MW-12-Screen-2	April 2018	MW-12-2	2.0 U	1.0 U	**1.0 J**	2.0 U
MW-12-Screen-2	Jul/Aug 2018	MW-12-2	NA	NA	3.0 U	2.0 U
MW-12-Screen-2	Oct 2018	MW-12-2	NA	NA	**1.4 J**	2.0 U

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
MW-12-Screen-3						
MW-12-Screen-3	Oct-17	MW-12-3	NA	NA	3.0 UJ	2.0 U
MW-12-Screen-3	Jan/Feb 2018	MW-12-3	NA	NA	3.0 U	2.0 U
MW-12-Screen-3	April 2018	MW-12-3	**1.0 J**	1.0 U	3.0 U	2.0 U
MW-12-Screen-3	April 2018	DUP-8-2Q18	2.0 U	1.0 U	**0.5 J**	2.0 U
MW-12-Screen-3	Jul/Aug 2018	MW-12-3	NA	NA	3.0 U	2.0 U
MW-12-Screen-3	Oct 2018	MW-12-3	NA	NA	**1.7 J**	2.0 U
MW-12-Screen-4						
MW-12-Screen-4	Oct-17	MW-12-4	NA	NA	**1.0 J**	2.0 U
MW-12-Screen-4	Oct-17	DUP-5-4Q17	NA	NA	**0.8 J**	**0.7 J**
MW-12-Screen-4	April 2018	MW-12-4	**0.9 J**	1.0 U	**0.7 J**	2.0 U
MW-12-Screen-4	Oct 2018	MW-12-4	NA	NA	**2.0 J**	**0.8 J**
MW-12-Screen-5						
MW-12-Screen-5	Oct-17	MW-12-5	NA	NA	**1.3 J**	**1.0 J**
MW-12-Screen-5	April 2018	MW-12-5	**1.9 J**	**0.2 J**	**1.4 J**	2.0 U
MW-12-Screen-5	Oct 2018	MW-12-5	NA	NA	**0.8 J**	**1.4 J**
MW-13						
MW-13	Oct-17	MW-13	NA	NA	**1500.0 J**	**3.6**
MW-13	Jan/Feb 2018	MW-13	NA	NA	**3500.0**	**4.6**
MW-13	April 2018	MW-13	2.0 U	**0.5 J**	**170.0**	2.0 U
MW-14-Screen-1						
MW-14-Screen-1	Jul/Aug 2017	MW-14-1	NA	NA	1.8 U	**0.9 J**
MW-14-Screen-1	Jan/Feb 2018	MW-14-1	NA	NA	3.0 U	2.0 U
MW-14-Screen-1	April 2018	MW-14-1	**1.0 J**	1.0 U	**2.3 J**	**1.8 J**
MW-14-Screen-2						
MW-14-Screen-2	Oct-17	MW-14-2	NA	NA	3.0 UJ	2.0 U
MW-14-Screen-2	Jan/Feb 2018	MW-14-2	NA	NA	3.0 U	**0.9 J**
MW-14-Screen-2	April 2018	MW-14-2	2.0 U	1.0 U	3.0 U	**0.9 J**
MW-14-Screen-2	Jul/Aug 2018	MW-14-2	NA	NA	3.0 U	2.0 U
MW-14-Screen-2	Oct 2018	MW-14-2	NA	NA	3.0 U	2.0 U
MW-14-Screen-3						
MW-14-Screen-3	Oct-17	MW-14-3	NA	NA	3.0 UJ	2.0 U
MW-14-Screen-3	Jan/Feb 2018	MW-14-3	NA	NA	3.0 U	2.0 U
MW-14-Screen-3	April 2018	MW-14-3	2.0 U	1.0 U	**0.7 J**	2.0 U
MW-14-Screen-3	Jul/Aug 2018	MW-14-3	NA	NA	3.0 U	2.0 U
MW-14-Screen-3	Oct 2018	MW-14-3	NA	NA	3.0 U	2.0 U
MW-14-Screen-4						
MW-14-Screen-4	Oct-17	MW-14-4	NA	NA	**2.3 J**	**1.8 J**
MW-14-Screen-4	April 2018	MW-14-4	2.0 U	1.0 U	**2.0 J**	**2.8**
MW-14-Screen-4	April 2018	DUP-1-2Q18	2.0 U	1.0 U	**3.7**	**2.8**
MW-14-Screen-4	Oct 2018	MW-14-4	NA	NA	3.0 U	**2.4**
MW-14-Screen-5						
MW-14-Screen-5	Oct-17	MW-14-5	NA	NA	**0.9 J**	2.0 U
MW-14-Screen-5	April 2018	MW-14-5	2.0 U	1.0 U	**0.7 J**	2.0 U
MW-14-Screen-5	Oct 2018	MW-14-5	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-15						
MW-15	Oct-17	MW-15	NA	NA	**29.0 J**	2.0 U
MW-15	Jan/Feb 2018	MW-15	NA	NA	**6.8**	2.0 U
MW-15	Jan/Feb 2018	DUP-7-1Q18	NA	NA	**5.0**	2.0 U
MW-15	April 2018	MW-15	**1.0 J**	1.0 U	**2.8 J**	2.0 U
MW-15	Jul/Aug 2018	MW-15	NA	NA	3.0 U	2.0 U
MW-15	Oct 2018	MW-15	NA	NA	**19.0**	2.0 U
MW-16						
MW-16	Oct-17	MW-16	NA	NA	**490.0 J**	**1.7 J**
MW-16	Oct-17	DUP-7-4Q17	NA	NA	**1100.0 J**	**1.9 J**
MW-16	Jan/Feb 2018	MW-16	NA	NA	**4600.0**	**1.9 J**
MW-16	April 2018	MW-16	NA	NA	NA	NA
MW-17-Screen-1						
MW-17-Screen-1	Oct-17	MW-17-1	NA	NA	3.0 U	2.0 U
MW-17-Screen-1	April 2018	MW-17-1	2.0 U	1.0 U	3.0 U	2.0 U
MW-17-Screen-2						
MW-17-Screen-2	Oct-17	MW-17-2	NA	NA	3.0 U	2.0 U
MW-17-Screen-2	Jan/Feb 2018	MW-17-2	NA	NA	3.0 U	2.0 U
MW-17-Screen-2	April 2018	MW-17-2	2.0 U	1.0 U	3.0 U	2.0 U
MW-17-Screen-2	April 2018	DUP-5-2Q18	2.0 U	1.0 U	3.0 U	2.0 U
MW-17-Screen-2	Jul/Aug 2018	MW-17-2	NA	NA	3.0 U	**0.7 J**
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-3						
MW-17-Screen-3	Oct-17	MW-17-3	NA	NA	3.0 U	2.0 U
MW-17-Screen-3	Jan/Feb 2018	MW-17-3	NA	NA	3.0 U	2.0 U
MW-17-Screen-3	April 2018	MW-17-3	2.0 U	1.0 U	3.0 U	2.0 U
MW-17-Screen-3	Jul/Aug 2018	MW-17-3	NA	NA	3.0 U	2.0 U
MW-17-Screen-3	Oct 2018	MW-17-3	NA	NA	3.0 U	2.0 U
MW-17-Screen-4						
MW-17-Screen-4	Oct-17	MW-17-4	NA	NA	**1.3 J**	**1.9 J**
MW-17-Screen-4	Jan/Feb 2018	MW-17-4	NA	NA	**1.7 J**	**2.1**
MW-17-Screen-4	Jan/Feb 2018	Dup-3-IQ18	NA	NA	**1.8 J**	**1.8 J**
MW-17-Screen-4	April 2018	MW-17-4	**1.3 J**	1.0 U	3.0 U	**1.7 J**
MW-17-Screen-4	Jul/Aug 2018	MW-17-4	NA	NA	3.0 U	**0.8 J**
MW-17-Screen-4	Oct 2018	MW-17-4	NA	NA	**4.0**	**2.4**
MW-17-Screen-5						
MW-17-Screen-5	Oct-17	MW-17-5	NA	NA	**1.4 J**	**1.3 J**
MW-17-Screen-5	April 2018	MW-17-5	**2.4**	**0.5 J**	3.0 U	**1.3 J**
MW-17-Screen-5	Oct 2018	MW-17-5	NA	NA	**3.1**	**1.7 J**
MW-18-Screen-2						
MW-18-Screen-2	Oct-17	MW-18-2	NA	NA	3.0 U	2.0 U
MW-18-Screen-2	Jan/Feb 2018	MW-18-2	NA	NA	3.0 U	2.0 U
MW-18-Screen-2	April 2018	MW-18-2	2.0 U	**0.1 J**	**1.1 J**	2.0 U
MW-18-Screen-2	Jul/Aug 2018	MW-18-2	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-18-Screen-2	Oct 2018	MW-18-2	NA	NA	3.0 U	2.0 U
MW-18-Screen-3						
MW-18-Screen-3	Oct-17	MW-18-3	NA	NA	**1.5 J**	**1.2 J**
MW-18-Screen-3	Oct-17	DUP-3-4Q17	NA	NA	**1.5 J**	**1.9 J**
MW-18-Screen-3	Jan/Feb 2018	MW-18-3	NA	NA	**2.1 J**	**1.1 J**
MW-18-Screen-3	April 2018	MW-18-3	2.0 U	1.0 U	**2.6 J**	**1.8 J**
MW-18-Screen-3	Jul/Aug 2018	MW-18-3	NA	NA	3.0 U	**1.7 J**
MW-18-Screen-3	Oct 2018	MW-18-3	NA	NA	**1.1 J**	**1.8 J**
MW-18-Screen-4						
MW-18-Screen-4	Oct-17	MW-18-4	NA	NA	**1.7 J**	**1.8 J**
MW-18-Screen-4	Jan/Feb 2018	MW-18-4	NA	NA	**1.6 J**	**1.3 J**
MW-18-Screen-4	April 2018	MW-18-4	2.0 U	1.0 U	**2.6 J**	**2.2**
MW-18-Screen-4	Jul/Aug 2018	MW-18-4	NA	NA	3.0 U	**2.0**
MW-18-Screen-4	Oct 2018	MW-18-4	NA	NA	**2.8 J**	**2.3**
MW-18-Screen-5						
MW-18-Screen-5	Oct-17	MW-18-5	NA	NA	3.0 U	2.0 U
MW-18-Screen-5	April 2018	MW-18-5	2.0 U	1.0 U	3.0 U	2.0 U
MW-18-Screen-5	Oct 2018	MW-18-5	NA	NA	3.0 U	2.0 U
MW-19-Screen-1						
MW-19-Screen-1	Oct-17	MW-19-1	NA	NA	3.0 U	2.0 U
MW-19-Screen-1	April 2018	MW-19-1	2.0 U	1.0 U	**0.7 J**	2.0 U
MW-19-Screen-1	Oct 2018	MW-19-1	NA	NA	3.0 U	2.0 U
MW-19-Screen-2						
MW-19-Screen-2	Oct-17	MW-19-2	NA	NA	**2.4 J**	**0.7 J**
MW-19-Screen-2	April 2018	MW-19-2	2.0 U	1.0 U	**2.0 J**	2.0 U
MW-19-Screen-2	Oct 2018	MW-19-2	NA	NA	**2.8 J**	2.0 U
MW-19-Screen-3						
MW-19-Screen-3	Oct-17	MW-19-3	NA	NA	**2.5 J**	**1.2 J**
MW-19-Screen-3	April 2018	MW-19-3	2.0 U	1.0 U	**2.6 J**	**2.0**
MW-19-Screen-3	Oct 2018	MW-19-3	NA	NA	**3.2**	2.0 U
MW-19-Screen-4						
MW-19-Screen-4	Oct-17	MW-19-4	NA	NA	**1.9 J**	**1.5 J**
MW-19-Screen-4	April 2018	MW-19-4	2.0 U	1.0 U	**1.8 J**	**1.8 J**
MW-19-Screen-4	Oct 2018	MW-19-4	NA	NA	**2.1 J**	**2.5**
MW-19-Screen-5						
MW-19-Screen-5	Oct-17	MW-19-5	NA	NA	**3.7**	**2.0**
MW-19-Screen-5	April 2018	MW-19-5	**1.7 J**	1.0 U	**2.4 J**	**1.9 J**
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-20-Screen-2						
MW-20-Screen-2	Oct-17	MW-20-2	NA	NA	3.0 U	2.0 U
MW-20-Screen-2	Jan/Feb 2018	MW-20-2	NA	NA	3.0 U	2.0 U
MW-20-Screen-2	April 2018	MW-20-2	2.0 U	1.0 U	**0.6 J**	2.0 U
MW-20-Screen-2	April 2018	DUP-7-2Q18	2.0 U	1.0 U	3.0 U	2.0 U
MW-20-Screen-2	Jul/Aug 2018	MW-20-2	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-20-Screen-2	Oct 2018	MW-20-2	NA	NA	3.0 U	2.0 U
MW-20-Screen-3						
MW-20-Screen-3	Oct-17	MW-20-3	NA	NA	3.0 U	2.0 U
MW-20-Screen-3	Oct-17	DUP-1-4Q17	NA	NA	**0.7 J**	2.0 U
MW-20-Screen-3	Jan/Feb 2018	MW-20-3	NA	NA	3.0 U	2.0 U
MW-20-Screen-3	April 2018	MW-20-3	**1.3 J**	1.0 U	**0.7 J**	2.0 U
MW-20-Screen-3	Jul/Aug 2018	MW-20-3	NA	NA	3.0 U	2.0 U
MW-20-Screen-3	Oct 2018	MW-20-3	NA	NA	3.0 U	2.0 U
MW-20-Screen-4						
MW-20-Screen-4	Oct-17	MW-20-4	NA	NA	3.0 U	2.0 U
MW-20-Screen-4	Jan/Feb 2018	MW-20-4	NA	NA	3.0 U	2.0 U
MW-20-Screen-4	April 2018	MW-20-4	**1.4 J**	1.0 U	3.0 U	2.0 U
MW-20-Screen-4	Jul/Aug 2018	MW-20-4	NA	NA	3.0 U	2.0 U
MW-20-Screen-4	Oct 2018	MW-20-4	NA	NA	3.0 U	2.0 U
MW-20-Screen-5						
MW-20-Screen-5	Oct-17	MW-20-5	NA	NA	3.0 U	2.0 U
MW-20-Screen-5	Jan/Feb 2018	MW-20-5	NA	NA	3.0 U	2.0 U
MW-20-Screen-5	Jan/Feb 2018	DUP-1-1Q18	NA	NA	3.0 U	2.0 U
MW-20-Screen-5	April 2018	MW-20-5	**1.7 J**	1.0 U	3.0 U	2.0 U
MW-20-Screen-5	Jul/Aug 2018	MW-20-5	NA	NA	3.0 U	2.0 U
MW-20-Screen-5	Oct 2018	MW-20-5	NA	NA	3.0 U	2.0 U
MW-21-Screen-2						
MW-21-Screen-2	Oct-17	MW-21-2	NA	NA	3.0 U	2.0 U
MW-21-Screen-2	Jan/Feb 2018	MW-21-2	NA	NA	3.0 U	2.0 U
MW-21-Screen-2	April 2018	MW-21-2	2.0 U	1.0 UJ	3.0 U	2.0 U
MW-21-Screen-2	Jul/Aug 2018	MW-21-2	NA	NA	3.0 U	2.0 U
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-3						
MW-21-Screen-3	Oct-17	MW-21-3	NA	NA	3.0 U	2.0 U
MW-21-Screen-3	Jan/Feb 2018	MW-21-3	NA	NA	3.0 U	2.0 U
MW-21-Screen-3	April 2018	MW-21-3	2.0 U	1.0 U	3.0 U	2.0 U
MW-21-Screen-3	April 2018	DUP-2-2Q18	2.0 U	1.0 U	3.0 U	2.0 U
MW-21-Screen-3	Jul/Aug 2018	MW-21-3	NA	NA	3.0 U	2.0 U
MW-21-Screen-3	Oct 2018	MW-21-3	NA	NA	3.0 U	2.0 U
MW-21-Screen-4						
MW-21-Screen-4	Oct-17	MW-21-4	NA	NA	**1.0 J**	**1.1 J**
MW-21-Screen-4	Jan/Feb 2018	MW-21-4	NA	NA	**7.6**	**1.2 J**
MW-21-Screen-4	April 2018	MW-21-4	2.0 U	**0.2 J**	3.0 U	**1.3 J**
MW-21-Screen-4	Jul/Aug 2018	MW-21-4	NA	NA	3.0 U	**1.0 J**
MW-21-Screen-4	Oct 2018	MW-21-4	NA	NA	**0.8 J**	**1.6 J**
MW-21-Screen-5						
MW-21-Screen-5	Oct-17	MW-21-5	NA	NA	**1.2 J**	**1.2 J**
MW-21-Screen-5	Jan/Feb 2018	MW-21-5	NA	NA	3.0 U	**1.4 J**
MW-21-Screen-5	April 2018	MW-21-5	2.0 U	1.0 U	3.0 U	**2.0**

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
MW-21-Screen-5	Jul/Aug 2018	MW-21-5	NA	NA	3.0 U	**1.3 J**
MW-21-Screen-5	Oct 2018	MW-21-5	NA	NA	**0.6 J**	**1.4 J**
MW-22-Screen-1						
MW-22-Screen-1	Oct-17	MW-22-1	NA	NA	**0.8 J**	2.0 U
MW-22-Screen-1	Jan/Feb 2018	MW-22-1	NA	NA	3.0 U	2.0 U
MW-22-Screen-1	Jan/Feb 2018	Dup-4-1Q18	NA	NA	3.0 U	2.0 U
MW-22-Screen-1	April 2018	MW-22-1	2.0 U	1.0 U	**1.0 J**	2.0 U
MW-22-Screen-1	Jul/Aug 2018	MW-22-1	NA	NA	3.0 U	**0.9 J**
MW-22-Screen-1	Oct 2018	MW-22-1	NA	NA	3.0 U	**0.9 J**
MW-22-Screen-2						
MW-22-Screen-2	Oct-17	MW-22-2	NA	NA	**1.6 J**	**1.7 J**
MW-22-Screen-2	Jan/Feb 2018	MW-22-2	NA	NA	3.0 U	**2.4**
MW-22-Screen-2	April 2018	MW-22-2	2.0 U	1.0 U	**2.0 J**	**1.8 J**
MW-22-Screen-2	Jul/Aug 2018	MW-22-2	NA	NA	3.0 U	**2.0**
MW-22-Screen-2	Oct 2018	MW-22-2	NA	NA	3.0 U	**2.4**
MW-22-Screen-3						
MW-22-Screen-3	Oct-17	MW-22-3	NA	NA	**2.4 J**	**2.4**
MW-22-Screen-3	Oct-17	DUP-4-4Q17	NA	NA	**2.4 J**	**2.5**
MW-22-Screen-3	Jan/Feb 2018	MW-22-3	NA	NA	3.0 U	**2.8**
MW-22-Screen-3	April 2018	MW-22-3	2.0 U	1.0 U	**2.2 J**	**2.0**
MW-22-Screen-3	April 2018	DUP-3-2Q18	2.0 U	1.0 U	**2.6 J**	**1.6 J**
MW-22-Screen-3	Jul/Aug 2018	MW-22-3	NA	NA	3.0 U	**1.9 J**
MW-22-Screen-3	Oct 2018	MW-22-3	NA	NA	3.0 U	**1.8 J**
MW-22-Screen-4						
MW-22-Screen-4	Oct-17	MW-22-4	NA	NA	**2.4 J**	**2.5**
MW-22-Screen-4	April 2018	MW-22-4	2.0 U	1.0 U	**3.1**	**2.6**
MW-22-Screen-4	Oct 2018	MW-22-4	NA	NA	3.0 U	**3.0**
MW-22-Screen-5						
MW-22-Screen-5	Oct-17	MW-22-5	NA	NA	3.0 U	2.0 U
MW-22-Screen-5	April 2018	MW-22-5	2.0 U	1.0 U	3.0 U	2.0 U
MW-22-Screen-5	Oct 2018	MW-22-5	NA	NA	3.0 U	2.0 U
MW-23-Screen-1						
MW-23-Screen-1	Oct-17	MW-23-1	NA	NA	**0.9 J**	2.0 U
MW-23-Screen-1	Jan/Feb 2018	MW-23-1	NA	NA	3.0 U	**0.7 J**
MW-23-Screen-1	April 2018	MW-23-1	2.0 U	1.0 U	3.0 U	2.0 U
MW-23-Screen-1	Jul/Aug 2018	MW-23-1	NA	NA	**1.3 J**	2.0 U
MW-23-Screen-1	Jul/Aug 2018	Dup-4-3Q18	NA	NA	**1.5 J**	**1.1 J**
MW-23-Screen-1	Oct 2018	MW-23-1	NA	NA	3.0 U	**1.6 J**
MW-23-Screen-2						
MW-23-Screen-2	Oct-17	MW-23-2	NA	NA	**1.1 J**	**1.0 J**
MW-23-Screen-2	Jan/Feb 2018	MW-23-2	NA	NA	3.0 U	**0.8 J**
MW-23-Screen-2	April 2018	MW-23-2	2.0 U	1.0 U	3.0 U	**0.8 J**
MW-23-Screen-2	Jul/Aug 2018	MW-23-2	NA	NA	**1.6 J**	**0.9 J**
MW-23-Screen-2	Oct 2018	MW-23-2	NA	NA	3.0 U	**1.7 J**

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
MW-23-Screen-3						
MW-23-Screen-3	Oct-17	MW-23-3	NA	NA	**3.0**	**3.0**
MW-23-Screen-3	Jan/Feb 2018	MW-23-3	NA	NA	**3.4**	2.0 U
MW-23-Screen-3	April 2018	MW-23-3	2.0 U	1.0 U	3.0 U	**3.2**
MW-23-Screen-3	Jul/Aug 2018	MW-23-3	NA	NA	**3.6**	**3.3**
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-4						
MW-23-Screen-4	Oct-17	MW-23-4	NA	NA	**3.2**	**3.5**
MW-23-Screen-4	Jan/Feb 2018	MW-23-4	NA	NA	**3.1**	**3.0**
MW-23-Screen-4	Jan/Feb 2018	DUP-5-1Q18	NA	NA	**3.4**	**2.8**
MW-23-Screen-4	April 2018	MW-23-4	2.0 U	1.0 U	3.0 U	**3.9**
MW-23-Screen-4	Jul/Aug 2018	MW-23-4	NA	NA	**3.4**	**3.1**
MW-23-Screen-4	Oct 2018	MW-23-4	NA	NA	**4.3**	**3.9**
MW-23-Screen-5						
MW-23-Screen-5	Oct-17	MW-23-5	NA	NA	3.0 UJ	2.0 U
MW-23-Screen-5	April 2018	MW-23-5	**1.7 J**	**0.2 J**	3.0 U	2.0 U
MW-23-Screen-5	Oct 2018	MW-23-5	NA	NA	3.0 U	2.0 U
MW-24-Screen-1						
MW-24-Screen-1	Oct-17	MW-24-1	NA	NA	**1.1 J**	2.0 U
MW-24-Screen-1	Jan/Feb 2018	MW-24-1	NA	NA	3.0 U	2.0 U
MW-24-Screen-1	April 2018	MW-24-1	2.0 U	1.0 U	**1.7 J**	2.0 U
MW-24-Screen-1	Jul/Aug 2018	MW-24-1	NA	NA	**2.8 J**	2.0 U
MW-24-Screen-1	Jul/Aug 2018	Dup-3-3Q18	NA	NA	**3.1**	2.0 U
MW-24-Screen-1	Oct 2018	MW-24-1	NA	NA	3.0 U	2.0 U
MW-24-Screen-2						
MW-24-Screen-2	Oct-17	MW-24-2	NA	NA	**1.9 J**	**1.9 J**
MW-24-Screen-2	Jan/Feb 2018	MW-24-2	NA	NA	3.0 U	**1.9 J**
MW-24-Screen-2	April 2018	MW-24-2	**2.3**	1.0 U	**1.3 J**	**2.3**
MW-24-Screen-2	Jul/Aug 2018	MW-24-2	NA	NA	**2.4 J**	2.0 U
MW-24-Screen-2	Oct 2018	MW-24-2	NA	NA	3.0 U	**2.5**
MW-24-Screen-3						
MW-24-Screen-3	Oct-17	MW-24-3	NA	NA	**0.6 J**	2.0 U
MW-24-Screen-3	Jan/Feb 2018	MW-24-3	NA	NA	3.0 U	2.0 U
MW-24-Screen-3	April 2018	MW-24-3	**2.4**	1.0 U	**0.9 J**	2.0 U
MW-24-Screen-3	Jul/Aug 2018	MW-24-3	NA	NA	**1.9 UJ**	2.0 U
MW-24-Screen-3	Oct 2018	MW-24-3	NA	NA	3.0 U	**0.8 J**
MW-24-Screen-4						
MW-24-Screen-4	Oct-17	MW-24-4	NA	NA	**0.5 J**	**2.5**
MW-24-Screen-4	Jan/Feb 2018	MW-24-4	NA	NA	3.0 U	10.0 U
MW-24-Screen-4	April 2018	MW-24-4	**1.1 J**	1.0 U	**0.8 J**	2.0 U
MW-24-Screen-4	Jul/Aug 2018	MW-24-4	NA	NA	**2.1 UJ**	2.0 U
MW-24-Screen-4	Oct 2018	MW-24-4	NA	NA	3.0 U	2.0 U
MW-24-Screen-5						
MW-24-Screen-5	Oct-17	MW-24-5	NA	NA	**3.0**	2.0 U

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
MW-24-Screen-5	April 2018	MW-24-5	**1.7 J**	**0.2 J**	**3.9**	**2.9**
MW-24-Screen-5	Oct 2018	MW-24-5	NA	NA	3.0 U	**3.0**
MW-25-Screen-1						
MW-25-Screen-1	Oct-17	MW-25-1	NA	NA	**1.8 J**	2.0 U
MW-25-Screen-1	Oct-17	DUP-2-4Q17	NA	NA	**2.6 J**	**2.1**
MW-25-Screen-1	Jan/Feb 2018	MW-25-1	NA	NA	3.0 U	2.0 U
MW-25-Screen-1	April 2018	MW-25-1	**0.9 J**	**0.1 J**	**2.4 J**	2.0 U
MW-25-Screen-1	Jul/Aug 2018	MW-25-1	NA	NA	3.0 U	2.0 U
MW-25-Screen-1	Jul/Aug 2018	DUP-2-3Q18	NA	NA	3.0 U	2.0 U
MW-25-Screen-1	Oct 2018	MW-25-1	NA	NA	3.0 U	2.0 U
MW-25-Screen-2						
MW-25-Screen-2	Oct-17	MW-25-2	NA	NA	**3.0 J**	**2.7**
MW-25-Screen-2	Jan/Feb 2018	MW-25-2	NA	NA	**8.8**	**1.5 J**
MW-25-Screen-2	April 2018	MW-25-2	**0.8 J**	1.0 U	**2.4 J**	**2.1**
MW-25-Screen-2	Jul/Aug 2018	MW-25-2	NA	NA	3.0 U	**3.5**
MW-25-Screen-2	Oct 2018	MW-25-2	NA	NA	3.0 U	**3.6**
MW-25-Screen-3						
MW-25-Screen-3	Oct-17	MW-25-3	NA	NA	**3.1 J**	**3.2**
MW-25-Screen-3	Jan/Feb 2018	MW-25-3	NA	NA	3.0 U	**2.5**
MW-25-Screen-3	April 2018	MW-25-3	**1.4 J**	**0.2 J**	**3.9**	**2.2**
MW-25-Screen-3	Jul/Aug 2018	MW-25-3	NA	NA	3.0 U	**3.5**
MW-25-Screen-3	Oct 2018	MW-25-3	NA	NA	3.0 U	**3.3**
MW-25-Screen-4						
MW-25-Screen-4	Oct-17	MW-25-4	NA	NA	**1.7 J**	**1.6 J**
MW-25-Screen-4	Jan/Feb 2018	MW-25-4	NA	NA	3.0 U	**0.9 J**
MW-25-Screen-4	April 2018	MW-25-4	2.0 U	1.0 U	**1.7 J**	**0.8 J**
MW-25-Screen-4	Jul/Aug 2018	MW-25-4	NA	NA	3.0 U	**1.1 J**
MW-25-Screen-4	Oct 2018	MW-25-4	NA	NA	3.0 U	2.0 U
MW-25-Screen-5						
MW-25-Screen-5	Oct-17	MW-25-5	NA	NA	3.0 UJ	2.0 U
MW-25-Screen-5	Jan/Feb 2018	MW-25-5	NA	NA	3.0 U	2.0 U
MW-25-Screen-5	April 2018	MW-25-5	**0.9 J**	1.0 U	3.0 U	2.0 U
MW-25-Screen-5	Jul/Aug 2018	MW-25-5	NA	NA	3.0 U	2.0 U
MW-25-Screen-5	Oct 2018	MW-25-5	NA	NA	3.0 U	2.0 U
MW-26-Screen-1						
MW-26-Screen-1	Oct-17	MW-26-1	NA	NA	3.0 U	2.0 U
MW-26-Screen-1	Jan/Feb 2018	MW-26-1	NA	NA	3.0 U	2.0 U
MW-26-Screen-1	April 2018	MW-26-1	2.0 U	1.0 U	**0.7 J**	2.0 U
MW-26-Screen-1	April 2018	DUP-4-2Q18	2.0 U	1.0 U	**0.8 J**	2.0 U
MW-26-Screen-1	Jul/Aug 2018	MW-26-1	NA	NA	3.0 U	2.0 U
MW-26-Screen-1	Oct 2018	MW-26-1	NA	NA	3.0 U	**0.8 J**
MW-26-Screen-2						
MW-26-Screen-2	Oct-17	MW-26-2	NA	NA	**1.4 J**	**1.5 J**
MW-26-Screen-2	Jan/Feb 2018	MW-26-2	NA	NA	3.0 U	2.0 U
MW-26-Screen-2	Jan/Feb 2018	DUP-2-1Q18	NA	NA	3.0 U	**0.8 J**

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
MW-26-Screen-2	April 2018	MW-26-2	2.0 U	1.0 U	**0.6 J**	**2.0**
MW-26-Screen-2	Jul/Aug 2018	MW-26-2	NA	NA	3.0 U	**1.5 J**
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**
Analyte concentration exceeds the standard for:						
CA MCL			10.0	15.0*	50.0	10.0**
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
**	On July 1, 2014 the State Water Resources Control board (SWRCB) adopted an MCL for Cr(VI) of 10.0 µg/L
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**
LAS FLORES WATER CO. WELL 02					
	7/3/2017	**5.2**	NA	**1.3**	NA
	7/10/2017	**4.7**	NA	**1.2**	NA
	7/17/2017	**4.6**	NA	**1.2**	NA
	7/24/2017	**4.3**	NA	**1.3**	NA
	8/7/2017	**6.0**	NA	**1.8**	NA
	8/14/2017	**4.1**	NA	**1.7**	NA
	8/21/2017	**5.2**	NA	**0.9**	NA
	8/28/2017	**5.5**	NA	**1.1**	NA
	9/5/2017	**4.8**	NA	**1.4**	NA
	9/11/2017	**5.1**	NA	**0.8**	NA
	9/18/2017	**5.2**	NA	**1.2**	NA
	9/25/2017	**4.8**	NA	**1.3**	NA
	10/2/2017	**5.1**	NA	**1.3**	NA
	10/9/2017	**4.9**	NA	**1.3**	NA
	10/16/2017	**5.3**	NA	**1.1**	NA
	10/23/2017	**5.0**	NA	**1.6**	NA
	10/30/2017	**5.6**	NA	**1.2**	NA
	2/5/2018	**4.0**	NA	**1.2**	NA
	2/12/2018	**4.0**	NA	**1.2**	NA
	2/20/2018	4.0 U	NA	**1.1**	NA
	2/26/2018	**4.4**	NA	**1.0**	NA
	3/5/2018	**4.5**	NA	**0.8**	NA
	3/12/2018	**4.3**	NA	**1.3**	NA
	3/19/2018	4.0 U	NA	**1.5**	NA
	3/26/2018	4.0 U	NA	**1.1**	NA
	4/2/2018	4.0 U	NA	**1.0**	NA
	4/9/2018	**4.0**	NA	**1.4**	NA
	4/16/2018	4.0 U	NA	**1.3**	NA
	4/23/2018	4.0 U	NA	**1.2**	NA
	4/30/2018	4.0 U	NA	0.5 U	NA
	5/7/2018	4.0 U	NA	**0.8**	NA
	5/14/2018	4.0 U	NA	**1.1**	NA
	5/21/2018	**4.7**	NA	**1.6**	NA
	5/29/2018	4.0 U	NA	**1.0**	NA
	6/4/2018	**4.2**	NA	**0.8**	NA

Purveyor, Well Name	Sample Date	Perchlorate	Carbon tetrachloride	PCE	TCE
	6/11/2018	**4.1**	NA	**1.6**	NA
	6/18/2018	4.0 U	NA	**1.2**	NA
	6/25/2018	4.0 U	NA	**0.6**	NA
	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
LINCOLN AVENUE WATER CO. WELL 03					
	7/3/2017	4.0 U	0.5 U	0.5 U	**1.0**
	7/11/2017	4.0 U	NA	NA	NA
	8/8/2017	NA	0.5 U	0.5 U	0.5 U
	4/20/2018	4.0 U	NA	NA	NA
	4/24/2018	4.0 U	0.5 U	0.5 U	0.5 U
LINCOLN AVENUE WATER CO. WELL 05					
	7/11/2017	**8.8**	**0.5**	**0.8**	**2.0**
	7/18/2017	**17.0**	NA	NA	NA
	7/25/2017	**18.0**	NA	NA	NA
	8/8/2017	**16.0**	**1.6**	**0.8**	**2.2**
	2/27/2018	**6.6**	**2.6**	0.5 U	**0.6**
	3/16/2018	**8.1**	**5.8**	0.5 U	**0.9**
	4/20/2018	**7.5**	NA	NA	NA
	4/24/2018	**8.7**	**2.1**	**0.6**	**1.1**
	5/29/2018	**5.7**	**3.2**	0.5 U	**0.5**
	10/17/2018	**6.7**	**5.3**	0.5 U	0.5 U
LINCOLN AVENUE WATER CO. WELL #6					
	9/5/2017	**17.0**	**2.1**	**0.8**	**1.9**
	9/12/2017	**18.0**	**1.9**	**0.8**	**1.8**
	9/19/2017	**17.0**	NA	NA	NA
	9/26/2017	**17.0**	NA	NA	NA
	10/3/2017	**18.0**	**1.9**	**0.6**	**1.5**
	10/10/2017	**18.0**	NA	NA	NA
	10/17/2017	**16.0**	NA	NA	NA
	10/24/2017	**17.0**	NA	NA	NA
	2/6/2018	**14.0**	**2.0**	**0.7**	**1.6**
	2/13/2018	**15.0**	NA	NA	NA

Purveyor, Well Name	Sample Date	Perchlorate	Carbon tetrachloride	PCE	TCE
	2/20/2018	**14.0**	NA	NA	NA
	2/27/2018	**18.0**	**1.8**	**0.7**	**1.9**
	3/6/2018	**18.0**	**1.3**	**0.8**	**1.7**
	3/13/2018	**16.0**	NA	NA	NA
	3/20/2018	**17.0**	NA	NA	NA
	3/29/2018	**16.0**	NA	NA	NA
	4/3/2018	**15.0**	**1.9**	**0.7**	**1.5**
	4/10/2018	**16.0**	NA	NA	NA
	4/17/2018	**15.0**	NA	NA	NA
	4/24/2018	**11.0**	NA	NA	NA
	5/1/2018	**14.0**	**1.6**	0.5 U	**1.2**
	5/8/2018	**14.0**	**1.8**	**0.6**	**1.4**
	5/15/2018	**12.0**	NA	NA	NA
	5/22/2018	**14.0**	NA	NA	NA
	5/29/2018	**16.0**	NA	NA	NA
	6/5/2018	**15.0**	**2.1**	**0.8**	**1.7**
	6/12/2018	**14.0**	NA	NA	NA
	6/19/2018	**13.0**	NA	NA	NA
	6/26/2018	**14.0**	NA	NA	NA
	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
PASADENA-CITY, WATER DEPT. ARROYO					
	7/5/2017	**9.6**	**2.1**	**0.5**	**2.0**
	7/11/2017	**9.7**	**0.9**	**0.6**	**2.2**
	7/18/2017	**9.8**	**0.9**	**0.6**	**2.3**
	7/25/2017	**9.9**	**0.8**	**0.6**	**2.1**
	8/8/2017	**10.7**	**0.7**	**0.0**	**2.1**
	8/15/2017	**10.0**	**0.8**	**0.0**	**2.2**
	8/22/2017	**10.6**	**0.7**	**0.5**	**2.1**

Purveyor, Well Name	Sample Date	Perchlorate	Carbon tetrachloride	PCE	TCE
	8/29/2017	**10.0**	**0.8**	**0.5**	**2.1**
	9/5/2017	**10.8**	**0.7**	**0.0**	**2.1**
	9/12/2017	**10.9**	**0.8**	**0.5**	**2.2**
	9/26/2017	**10.1**	**1.0**	**0.7**	**2.3**
	10/3/2017	**10.6**	**0.8**	**0.6**	**2.3**
	10/10/2017	**11.5**	**0.7**	0.5 U	**1.9**
	10/17/2017	**11.6**	**0.8**	**0.6**	**2.4**
	10/24/2017	**11.7**	**0.9**	**0.5**	**2.2**
	2/6/2018	**10.7**	**0.7**	0.5 U	**2.1**
	2/13/2018	**10.7**	**0.6**	**0.5**	**1.9**
	2/20/2018	**11.1**	**0.7**	**0.5**	**2.0**
	2/27/2018	**11.3**	**0.7**	0.5 U	**1.9**
	3/6/2018	**12.1**	**0.7**	**0.5**	**2.0**
	3/13/2018	**11.0**	**0.7**	0.5 U	**1.8**
	3/20/2018	**10.8**	**0.6**	**0.5**	**2.0**
	3/27/2018	**10.8**	**0.7**	0.5 U	**1.8**
	4/3/2018	**10.7**	**0.6**	0.5 U	**1.7**
	4/9/2018	**10.3**	**0.7**	0.5 U	**1.9**
	6/19/2018	**10.3**	**0.6**	**0.7**	**1.9**
	6/26/2018	**9.6**	**0.6**	**0.6**	**1.6**
	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**
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**

Purveyor, Well Name	Sample Date	Perchlorate	Carbon tetrachloride	PCE	TCE
	10/29/2018	**4.2**	0.5	**1.7**	**3.4**
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**
PASADENA-CITY, WATER DEPT. WINDSOR					
RUBIO CANON LAND & WATER ASSOCIATION WELL 04					
	7/5/2017	4.0 U	NA	**1.5**	NA
	7/10/2017	4.0 U	NA	NA	NA
	7/17/2017	4.0 U	NA	NA	NA
	7/24/2017	4.0 U	NA	NA	NA
	8/7/2017	4.0 U	NA	NA	NA
	8/14/2017	4.0 U	NA	NA	NA
	8/21/2017	4.0 U	NA	NA	NA
	8/28/2017	4.0 U	NA	NA	NA
	9/6/2017	4.0 U	NA	NA	NA
	9/11/2017	4.0 U	NA	NA	NA
	9/18/2017	4.0 U	NA	NA	NA
	9/25/2017	4.0 U	NA	NA	NA
	10/2/2017	4.0 U	NA	NA	NA
	10/10/2017	4.0 U	NA	**2.1**	NA
	10/17/2017	4.0 U	NA	NA	NA
	10/23/2017	4.0 U	NA	NA	NA
	2/5/2018	4.0 U	0.5 U	**1.3**	0.5 U
	2/12/2018	4.0 U	NA	NA	NA
	2/20/2018	4.0 U	NA	NA	NA
	2/26/2018	4.0 U	NA	NA	NA
	3/5/2018	4.0 U	NA	NA	NA
	3/12/2018	4.0 U	NA	NA	NA
	3/19/2018	4.0 U	NA	NA	NA
	3/26/2018	4.0 U	NA	NA	NA
	4/2/2018	4.0 U	NA	**1.3**	NA
	4/9/2018	4.0 U	NA	NA	NA
	4/16/2018	4.0 U	NA	NA	NA
	4/23/2018	4.0 U	NA	NA	NA
	4/30/2018	4.0 U	NA	NA	NA
	5/7/2018	4.0 U	NA	NA	NA
	5/14/2018	4.0 U	NA	NA	NA
	5/21/2018	4.0 U	NA	NA	NA
	5/29/2018	4.0 U	NA	NA	NA

Purveyor, Well Name	Sample Date	Perchlorate	Carbon tetrachloride	PCE	TCE
	6/4/2018	4.0 U	NA	NA	NA
	6/11/2018	4.0 U	NA	NA	NA
	6/18/2018	4.0 U	NA	NA	NA
	6/25/2018	4.0 U	NA	NA	NA
	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
RUBIO CANON LAND & WATER ASSOCIATION WELL 07					
	7/5/2017	4.0 U	NA	0.5 U	NA
	7/10/2017	4.0 U	NA	NA	NA
	7/17/2017	4.0 U	NA	NA	NA
	7/24/2017	4.0 U	NA	NA	NA
	8/7/2017	4.0 U	NA	NA	NA
	8/14/2017	4.0 U	NA	NA	NA
	8/21/2017	4.0 U	NA	NA	NA
	8/28/2017	4.0 U	NA	NA	NA
	9/6/2017	4.0 U	NA	NA	NA
	9/11/2017	4.0 U	NA	NA	NA
	9/18/2017	4.0 U	NA	NA	NA
	9/25/2017	4.0 U	NA	NA	NA
	10/2/2017	4.0 U	NA	NA	NA
	10/10/2017	4.0 U	NA	**0.6**	NA
	10/17/2017	4.0 U	NA	NA	NA
	10/23/2017	4.0 U	NA	NA	NA
	2/5/2018	4.0 U	0.5 U	**0.5**	0.5 U
	2/12/2018	4.0 U	NA	NA	NA
	2/20/2018	4.0 U	NA	NA	NA
	2/26/2018	4.0 U	NA	NA	NA
	3/5/2018	4.0 U	NA	NA	NA
	3/12/2018	4.0 U	NA	NA	NA
	3/19/2018	4.0 U	NA	NA	NA

Purveyor, Well Name	Sample Date	Perchlorate	Carbon tetrachloride	PCE	TCE
	3/26/2018	4.0 U	NA	NA	NA
	4/2/2018	4.0 U	NA	**0.6**	NA
	4/9/2018	4.0 U	NA	NA	NA
	4/16/2018	4.0 U	NA	NA	NA
	4/23/2018	4.0 U	NA	NA	NA
	4/30/2018	4.0 U	NA	NA	NA
	5/7/2018	4.0 U	NA	NA	NA
	5/14/2018	4.0 U	NA	NA	NA
	5/21/2018	4.0 U	NA	NA	NA
	5/29/2018	4.0 U	NA	NA	NA
	6/4/2018	4.0 U	NA	NA	NA
	6/11/2018	4.0 U	NA	NA	NA
	6/18/2018	4.0 U	NA	NA	NA
	6/25/2018	4.0 U	NA	NA	NA
	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
	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
VALLEY WATER CO. WELL 01					
	7/11/2017	4.0 U	0.5 U	**1.2**	**1.5**
	8/2/2017	4.0 U	0.5 U	**0.7**	**0.9**
	9/6/2017	4.0 U	NA	NA	NA
	9/28/2017	NA	0.5 U	**0.7**	**0.9**
	10/3/2017	4.0 U	0.5 U	**0.6**	**0.7**
	3/12/2018	4.0 U	0.5 U	0.5 U	**0.6**
	5/2/2018	4.0 U	0.5 U	**0.8**	**1.0**
	6/5/2018	4.0 U	0.5 U	**0.9**	**1.1**
	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**
VALLEY WATER CO. WELL 02					

Purveyor, Well Name	Sample Date	Perchlorate	Carbon tetrachloride	PCE	TCE
	9/6/2017	4.0 U	NA	NA	NA
	9/28/2017	NA	0.5 U	**0.7**	**0.9**
	10/3/2017	4.0 U	0.5 U	**0.6**	**0.7**
	3/12/2018	4.0 U	0.5 U	0.5 U	0.5 U
	5/2/2018	4.0 U	0.5 U	0.5 U	0.5 U
	6/5/2018	4.0 U	0.5 U	**0.5**	0.5 U
	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**
VALLEY WATER CO. WELL 03					
	7/13/2017	4.0 U	0.5 U	0.5 U	0.5 U
	8/2/2017	4.0 U	0.5 U	0.5 U	0.5 U
	8/8/2017	NA	0.5 U	0.5 U	0.5 U
	9/6/2017	4.0 U	NA	NA	NA
	5/2/2018	**4.4**	0.5 U	**1.2**	**0.7**
	6/5/2018	4.0 U	0.5 U	**0.5**	0.5 U
	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
	10/3/2018	**5.2**	NA	NA	NA
VALLEY WATER CO. WELL 04					
	7/11/2017	4.0 U	0.5 U	**1.0**	**0.8**
	8/2/2017	4.0 U	0.5 U	**1.3**	**1.2**
	9/6/2017	4.0 U	NA	NA	NA
	5/2/2018	**4.8**	0.5 U	**1.2**	**0.9**
	6/5/2018	4.0 U	0.5 U	**1.2**	**1.1**
	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
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