CLEAR CREEK ASSOCIATES

Practical Solutions
In Groundwater Science

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Via Electronic Mail

January 13, 2016

Mr. Darryl Crossman, City Manager
City of Litchfield Park
214 W. Wigwam Boulevard
Litchfield Park, AZ 85340

Re: Monthly Update, PGA-North Superfund Site

Dear Mr. Crossman:

As requested, following is a brief update on activities at the Phoenix-Goodyear Airport (PGA) North Superfund Site for the period from November 2015 through early December 2015.

LITCHFIELD PARK WELL & TIERRA VERDE LAKE SAMPLING

Crane Co. sampled the City supply well on November 10th. Clear Creek Associates collected split samples from the well and a sample from Tierra Verde lake as part of the November sampling event. Clear Creek's results were non-detect (<1 ug/L) for TCE from the well and lake, and 1.02 ug/L and non-detect (<0.50) for perchlorate from the well and lake, respectively. Crane Co.'s results indicated an estimated perchlorate detection of 1.0 ug/L and a TCE value of <0.19 ug/L. These results are consistent with prior sampling results.

As previously reported, Crane Co has conducted a long-term monitoring optimization evaluation of its existing groundwater monitoring program. As part of this effort, Crane Co. will be reducing its monitoring of the Litchfield Park supply well from quarterly to annual. The next sampling event of the City's well by Crane Co. is scheduled for February 2016. As previously recommended to the City, Clear Creek plans on modifying its approach from collecting "split samples" with Crane Co and will sample to supply well in August to provide an additional data point in the year.

RECENT MONITOR WELL RESULTS

Figure 1, attached, is a summary of recent monitoring results for the northern portion of the Site. The results from the November 2015 sampling event are generally consistent with prior results. Other than seasonal variations that are observed at the Site, plume conditions in the northern portion of the Site are relatively stable as a result of sustained operation of the groundwater remediation systems. As part

of Crane Co.'s long-term monitoring optimization effort, water quality monitoring will be conducted at a reduced frequency in a number of monitoring wells in the northern portion of the Site. The emphasis of the revised monitoring program will be on regular water level monitoring to verify hydraulic containment is being maintained. Changes to the monitoring program will be implemented in February 2016. Notable findings or exceptions for the November results are summarized below.

- At EPA MW-63A, located on the west side of Litchfield Road, approximately 500 feet north of Van Buren, TCE concentrations were observed at 28.4 ug/L, down from the previous months' concentration of 38.9 ug/L. Overall, the trend at this location remains an increasing trend. New extraction well EA-10 has been installed along Van Buren in the vicinity of former extraction well EA-04 to enhance on-site capture. EA-10 has been integrated into the MTS automated control system.
- At EPA MW-48A, located on the east side of Litchfield Road, approximately ¼-mile south of Interstate 10, TCE concentrations were observed at 156 ug/L, down from the prior month's result of 186 ug/L. Although seasonal variability has been observed in EPA MW-48A, historical trends have shown a gradual decline in peak concentrations since 2013.
- At EPA MW-51A, located in the Pebble Creek community located along W Robson Circle North, northwest of 147th Lane, TCE concentrations were at 5.2 ug/L, up from the prior month's result of 4.6 ug/L. Recent concentrations had declined to below the aquifer water quality standard of 5 ug/L. Minor variations in sampling results are not uncommon; however, decreases are expected to result from injection being conducted in the northwest portion of the Site. Monitoring will continue on a quarterly, rather than monthly, basis at this well.
- At EPA MW-10A, located approximately 850 north of EPA MW-7A, TCE concentrations were 5.4 ug/L down from the prior month's result of 11 ug/L. Seasonal variations related to regional pumping patterns are observed in this well, however, an overall decreasing trend is observed in this well from its peak concentration of 130 ug/L observed in December 2012.

Figure 2 is an updated plume boundary map based on November 2015 results. Most notable are the results from recently installed monitoring wells EPA MW-15A (15.9 ug/L TCE) and EPA MW-22A (50.6 ug/L TCE). These concentrations indicate that the footprint of the TCE plume in the southeast portion of the site that resulted from the inadvertent discharge of partially treated water is larger than

previously thought. Crane Co. will be installing additional monitor wells in the area to define the extent of the plume.

CONDUIT WELL UPDATE

Monitoring results for irrigation well 27C collected from Subunit A sample (above the inflatable packer) were 2.9 ug/L, down from the prior months' result of 3.8 ug/L. Concentrations in Subunit A have been below the aquifer water quality standard of 5 ug/L for several months and continue to decline slightly. TCE concentrations in the deeper (Subunit C) sample were 4.7 ug/L in November, consistent with the prior months' result of 4.9 ug/L. TCE concentrations in the deeper port appear to have stabilized near to slightly below the aquifer water quality standard or 5 ug/L.

SOURCE AREA INVESTIGATION & REMEDIATION

EPA is expected to approve Crane' Co.s response to comments on the source area laboratory treatability study work plan. A call to discuss the installation of the initial soil brings is expected to occur in early January.

During the November technical meeting, Crane Co. reported that they had initiated work to install an additional infiltration gallery on the former Unidynamics property. Crane Co.'s objective is to increase the lateral distribution of recharge water on-site in an effort to reduce the downward vertical gradient for Subunit A to Subunit C. It was also noted that perchlorate concentrations in on-site monitor wells in the vicinity of the existing vegetated plots have increased suggesting that the surficial recharge associated with the vegetated plots / infiltration gallery is flushing residual perchlorate from the unsaturated zone. The surficial recharge is being conducted up-gradient of the on-site extraction system so the perchlorate is expected to be captured and removed by the Main Treatment System.

GROUNDWATER INVESTIGATION

Work to install new monitor well EPA MW-66A is scheduled to begin the week of January 11, 2016.

PLUME CONTAINMENT

A water level contour map for November 2015 is included as Figure 3. Hydraulic containment in the north and northeast portions of the Site is being maintained by the combined operation of the groundwater extraction and reinjection systems. Approximately 3% of the water extracted from the EA-06/EA-07 treatment system was utilized by Goodyear for park irrigation; this is consistent with the usage seen last year. Average flow rates in the injection wells for November were 189 gpm, 249 gpm, and 154

gpm in IA-11, IA-12 and IA-15, respectively, (Figure 2). The average reported flow rates for IA-07 and IA-08 for November were 163 and 156 gpm, respectively, which are generally consistent with the previous months' rates (Figure 2). Groundwater elevations in the vicinity of injection well IA-12 varied from the previous month's monitoring event, with water level increases noted in wells EPA MW-35A, EPA MW-45A, and EPA MW-59A and water level decreases in wells EPA MW-39A, EPA MW-40A, and EPA MW-53A (Figure 3). Average flow rates, based on operational uptime, for the off-site extraction wells are shown on Figure 4. The operational uptime for the EA-06/EA-07 treatment system was consistent with the prior month. The average reported flow rates for EA-06, EA-07, and EA-08 for November were 406 gpm, 206 gpm, and 325 gpm, respectively, consistent with the previous months' flow rates.

Operation of new on-site extraction well EA-10 and new injection well IA-09, located in Loma Linda Park, have been transitioned to automated mode from manual mode. The average reported flow rate for EA-10 for November was 195 gpm.

* * * * *

Sincerely,
Clear Creek Associates, PLC

Thomas R. Suriano, R.G.
Principal Hydrogeologist

Attachments:

Figure 1:	Recent Analytical Results
Figure 2:	TCE Plume in Subunit A, November 2015
Figure 3:	Groundwater Elevation Contour Map, November 2015
Figure 4:	Average Injection Rates
Figure 5:	Groundwater Elevations in Monitor Wells near IA-12
Figure 6:	Average Extraction Rates

cc: (e-copies)
Sonny Culbreth – City of Litchfield Park
Carla Reece – City of Litchfield Park

Terri Roth – City of Litchfield Park
Susan Goodwin – City Attorney
Woody Scoutten – EPS Group

EPA MW-32A		
Sep	Oct	Nov
-	-	<0.20

EPA MW-37A		
Sep	Oct	Nov
-	-	<0.20

EPA MW-50A		
Sep	Oct	Nov
3.5	4.9	3.0

EPA MW-18A		
Sep	Oct	Nov
-	-	0.75

Tierra Verde Lake Well		
Sep	Oct	Nov
-	-	<0.19

EPA MW-23A		
Sep	Oct	Nov
-	-	150

EPA MW-34A		
Sep	Oct	Nov
-	-	0.54

EPA MW-51A		
Sep	Oct	Nov
4.1	4.6	5.2

MW-16		
Sep	Oct	Nov
54.2	50.3	40.2 (41.5)

EA-08		
Sep	Oct	Nov
43.7	40.0	39.6

EPA MW-31A		
Sep	Oct	Nov
-	-	0.90

Liberty Water TW-2		
Sep	Oct	Nov
-	-	-

EPA MW-20A		
Sep	Oct	Nov
<0.20	<0.20	<0.20

EPA MW-38A		
Sep	Oct	Nov
87.2	119	84.1

EA-06		
Sep	Oct	Nov
-	-	81 (84)

EA-07		
Sep	Oct	Nov
6.2	7.1	6.7

EPA MW-42A		
Sep	Oct	Nov
24.7	-	21.9 (22.3)

EPA MW-60A		
Sep	Oct	Nov
-	-	<0.20

MW-24		
Sep	Oct	Nov
-	-	1.6

EPA MW-54A		
Sep	Oct	Nov
-	-	<0.20

33A		
Sep	Oct	Nov
39.8	36.6	35.6

EPA MW-43A		
Sep	Oct	Nov
-	-	<0.20

EPA MW-16A		
Sep	Oct	Nov
-	-	75.2

EPA MW-61A		
Sep	Oct	Nov
-	-	<0.20

EPA MW-62A		
Sep	Oct	Nov
15.4	122	140

EPA MW-30A		
Sep	Oct	Nov
-	-	<0.20

EPA MW-17A		
Sep	Oct	Nov
-	-	<0.17

EPA MW-52A		
Sep	Oct	Nov
-	-	<0.20

EPA MW-25A		
Sep	Oct	Nov
-	-	11.4

EPA MW-55A		
Sep	Oct	Nov
-	-	<0.20

MW-19		
Sep	Oct	Nov
-	-	6.33

EPA MW-53A		
Sep	Oct	Nov
-	-	<0.20

MW-25		
Sep	Oct	Nov
-	-	38.6

EPA MW-39A		
Sep	Oct	Nov
-	-	<0.20

MW-17		
Sep	Oct	Nov
-	-	<0.20

EPA MW-59A		
Sep	Oct	Nov
-	-	<0.20

EPA MW-44A		
Sep	Oct	Nov
-	-	<0.20

EPA MW-45A		
Sep	Oct	Nov
-	-	<0.20

EPA-MW-26A		
Sep	Oct	Nov
-	-	11.6

EPA MW-40A		
Sep	Oct	Nov
-	-	<0.20

EPA-MW-12A		
Sep	Oct	Nov
-	-	<0.19

EPA MW-11A		
Sep	Oct	Nov
0.19	<0.19	<0.19

EPA MW-47A		
Sep	Oct	Nov
74.5	83.9	86.2

EPA MW-35A		
Sep	Oct	Nov
-	-	<0.20

MW-15		
Sep	Oct	Nov
8.6 (10)	-	10.5

EPA MW-56A		
Sep	Oct	Nov
-	-	28.3 (28.1)

EPA MW-46A		
Sep	Oct	Nov
-	-	<0.19

EPA MW-41A		
Sep	Oct	Nov
-	-	<0.20

MW-12		
Sep	Oct	Nov
59	49	38

MW-13		
Sep	Oct	Nov
-	-	<0.20

EA-05		
Sep	Oct	Nov
63.9	55.7	47.6

EPA MW-57A		
Sep	Oct	Nov
-	-	<0.19

EPA MW-36A		
Sep	Oct	Nov
-	-	<0.20

EPA MW-13A		
Sep	Oct	Nov
708	740	723 (727)

EPA MW-48A		
Sep	Oct	Nov
136	186	156 (154)

MW-18		
Sep	Oct	Nov
-	-	47.7

EXPLANATION

- Monitoring well location
- Production well location
- Extraction well location
- Injection well location

Sep — Sample Date (Month)

20 — TCE concentration in µg/L by EPA Method 8260B.

Notes: Duplicate samples in parentheses. Results in Red are in excess of 5 µg/L. Results in Blue are less than 5 µg/L.

N

Recent Analytical Results
PGA-North Site

Goodyear, Arizona

Figure 1

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PGA North Superfund Site

Goodyear, Arizona

Legend

- Extraction Well
- Injection Well
- Monitor Well Subunit A
- Supply Well

TCE Contours, 5, 100, and 1,000 ug/L

MW-19
6.33
Well Name
TCE Concentration (in ug/L)

ND - Non Detect
NS - Not Sampled

0 0.5 1
Miles

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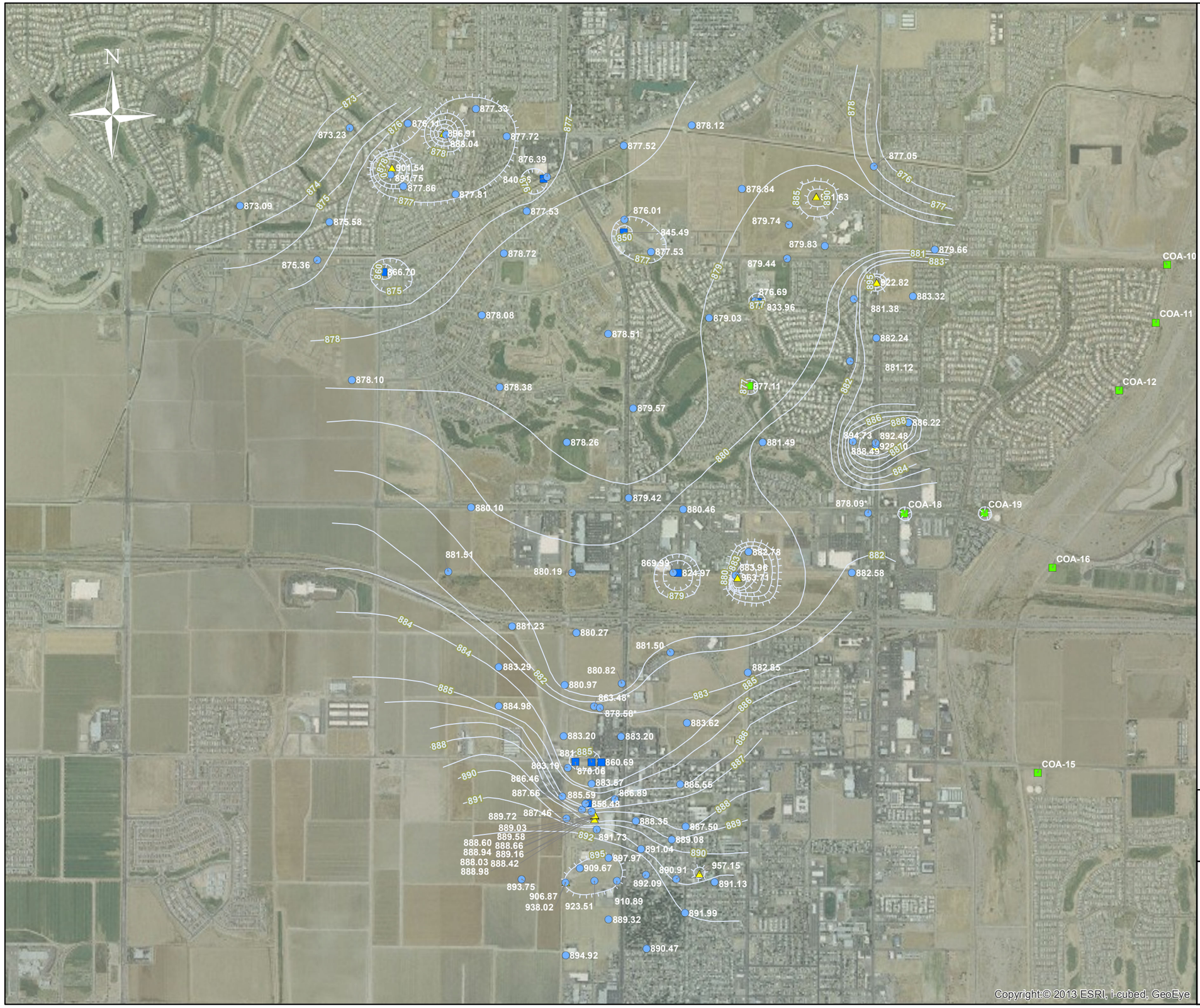
Figure 2

November 2015

January 2016



PGA North Superfund Site

Goodyear, Arizona

Legend

- Extraction Well
- Injection Well
- Monitor Well
- Supply Well
- Groundwater Elevation Contours (feet above mean sea level) 1-foot Interval

* indicates value not used for contouring

0 1,000 2,000 3,000 4,000 Feet

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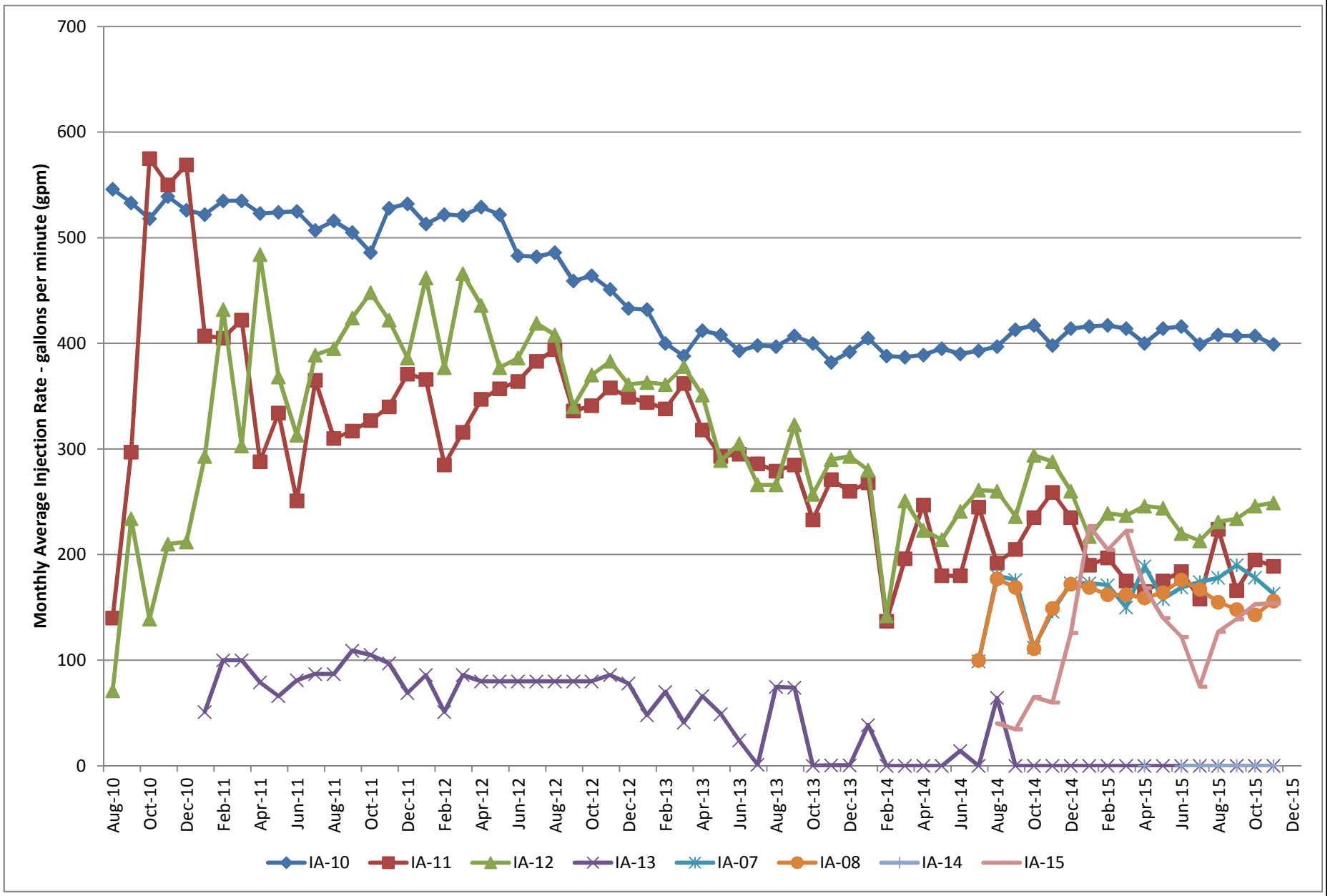
Figure 3
Groundwater Elevation Contour Map November 2015

January 2016



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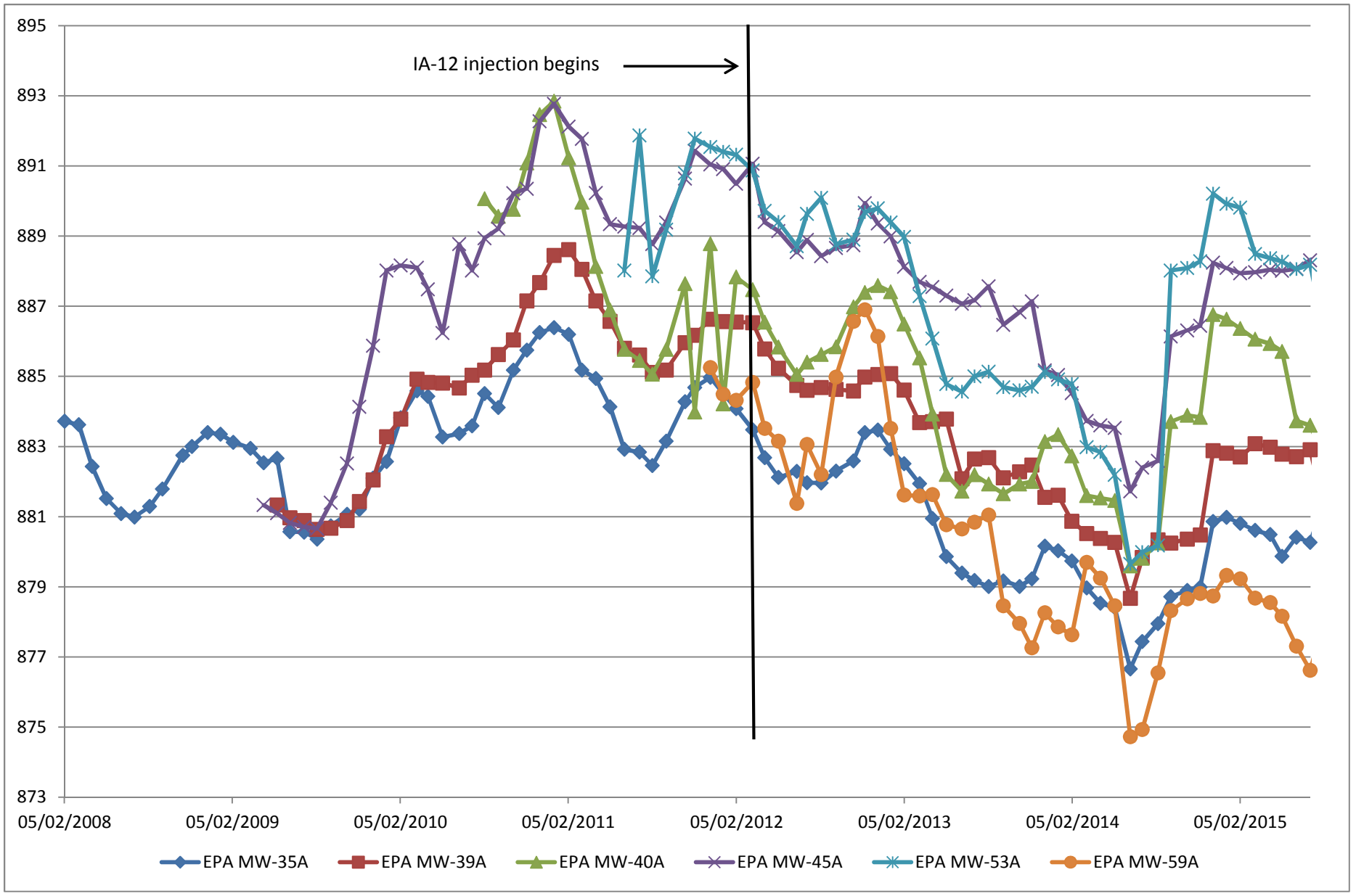
PGA-North Average Injection Rates

Approved	Date	Author	Date	File Name	Figure
TRS		GJM	12/23/15	Injection Rates_2	4



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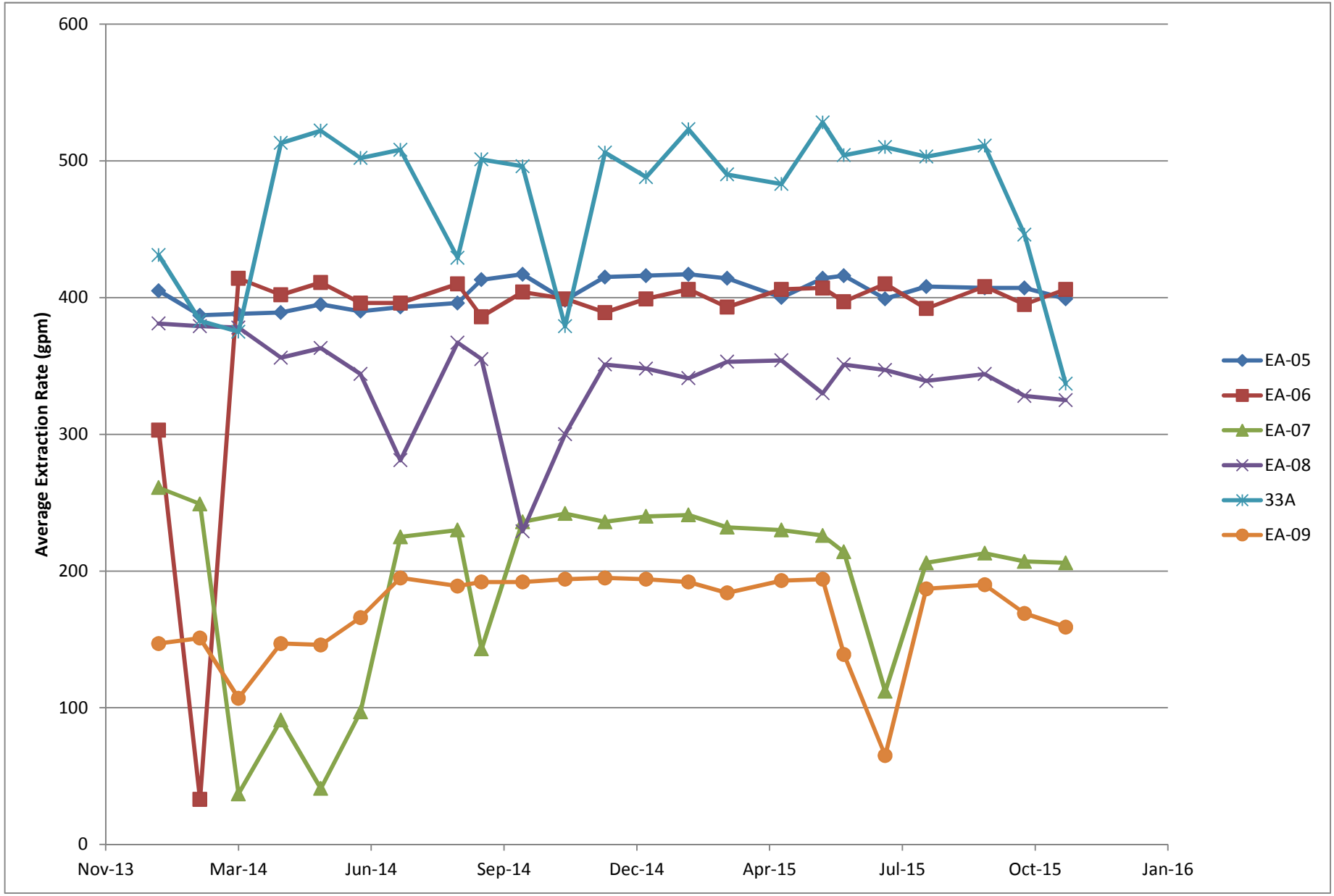
Groundwater Elevations in Monitor Wells Near IA-12

Approved	Date	Author	Date	File Name	Figure
TRS		GJM	12/23/15	Injection Rates_2	5



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PGA-North Avereage Extraction Rates

Approved	Date	Author	Date	File Name	Figure
TRS		GJM	12/23/15	Injection Rates_2	6

Dear Mayor Schoaf and Mr. Crossman,

In accordance with the agreement between the City of Litchfield Park and Crane Co., please find relevant portions of the November 2015 Groundwater Monthly Report and Remediation System Performance Summary as it pertains to the northeast and northwest portions of the Subunit A trichloroethene (TCE) plume associated with the Phoenix-Goodyear Airport-North (PGA-North) Superfund Site in Goodyear, Arizona.

The northeast area Subunit A TCE plume groundwater remediation systems consist of three groundwater extraction wells (EA-05, EA-06, and EA-07), and six groundwater injection wells (IA-10, IA-11, IA-12, IA-13, IA-14, and IA-15). These remediation systems were installed to remove TCE mass from groundwater, maintain an effective hydraulic barrier west of Dysart Road, protect the water supply wells in the area, reduce TCE concentrations in the area, and ultimately restore the Subunit A aquifer. The groundwater pumped from extraction well EA-05 is treated at the EA-05 groundwater treatment system (GTS) and re-injected into injection well IA-10. The groundwater pumped from extraction wells EA-06 and EA-07 is treated at the EA-06 GTS and currently re-injected into injection wells IA-11, IA-12, and IA-15. Injection wells IA-11 and IA-12 came online in August 2010, injection well IA-13 came online in January 2011, and injection well IA-15 came online August 2014 with all flow from IA-13 diverted to this well. Injection well IA-14 is installed and connected to the system, but currently is not being used due to the effective hydraulic barrier that is currently being provided by primarily three injection wells IA-11, IA-12, and IA-15.

The northwest area Subunit A TCE plume groundwater remediation systems consist of two groundwater extraction wells (33A and EA-08) and two groundwater injection wells (IA-07 and IA-08). Extraction well 33A came online in 1997, and extraction well EA-08 came online in December 2011. The groundwater pumped from 33A is treated at the 33A GTS, and is used for irrigation by the Palm Valley Lakes Golf Course, or is discharged to the Roosevelt Irrigation District (RID) canal. The groundwater pumped from EA-08 is treated at the EA-08 GTS, and is conveyed to injection wells IA-07 and IA-08 to provide a hydraulic barrier in the northwest area, protect water supply wells, and reduce the size of the plume.

The average groundwater extraction and injection rates for the northeast and northwest area remediation system wells during November 2015 are summarized below:

Northeast Area

- EA-05 – 399 gallons per minute (gpm)
- EA-06 – 406 gpm
- EA-07 – 206 gpm
- IA-10 – 399 gpm
- IA-11 – 189 gpm
- IA-12 – 249 gpm
- IA-15 – 154 gpm

Northwest Area

- EA-08 – 325 gpm
- 33A – 337 gpm
- IA-07 – 163 gpm
- IA-08 – 156 gpm

A. Treatment Systems and TCE Mass Removal

EA-05 GTS

During this reporting period, approximately 20.1 million gallons (Mgals) of groundwater was extracted and treated at the EA-05 GTS; removing 8.0 pounds of TCE.

EA-06 GTS

During this reporting period, approximately 30.8 Mgals of groundwater was extracted from extraction wells EA-06 and EA-07, and treated at the EA-06 GTS; removing 16.1 pounds of TCE.

EA-08 GTS

During this reporting period, approximately 16.4 Mgals of groundwater was extracted and treated at the EA-08 GTS; removing 5.4 pounds of TCE.

33A GTS

During this reporting period, approximately 17.0 Mgals of groundwater was extracted and treated at the 33A GTS; removing approximately 5.1 pounds of TCE.

B. Northeast Area Subunit A Groundwater Quality and Plume Extent

The November 2015 analytical results indicate that the northeast portion of the Subunit A TCE plume continues to be delineated by monitor wells EPA MW-18A, EPA MW-30A, EPA MW-31A, EPA MW-34A, EPA MW-35A, EPA MW-36A, EPA MW-39A, EPA MW-40A, EPA MW-41A, EPA MW-43A, EPA MW-45A, EPA MW-52A, EPA MW-53A, EPA MW-54A, EPA MW-55A, EPA MW-59A, EPA MW-60A, EPA MW-61A, and IR-34B (Figure 1). Groundwater samples collected from these wells continue to exhibit TCE concentrations that are either below the laboratory detection limit or are less than the United States Environmental Protection Agency (EPA) Maximum Contaminant Level (MCL) of 5 µg/L.

In the IA-12 area, since injection of treated groundwater commenced in August 2010, TCE concentration trends for key performance monitor wells continue to indicate that the Subunit A plume continues to be reduced in size. For example:

- Historically, TCE concentrations in EPA MW-35A, (Figure 2) typically peaked during the winter and spring months in response to rising groundwater levels related to the reduced pumping schedules from local irrigation and supply wells. In February 2010, TCE was reported at a concentration of 48 µg/L in EPA MW-35A. However, since the injection of treated water began into injection wells IA-12, IA-13, and most recently IA-15 (August 2014), TCE concentrations have been reduced by two orders of magnitude in this well, and continue to remain low; the most recent (November 2015) TCE concentration for this well was below the laboratory detection limit of 0.20 µg/L.
- In IR-34B TCE was reported at a concentration of 180 µg/L in July 2009. However since the initiation of injection of treated water into wells IA-11, IA-12, IA-13, and most recently IA-15, TCE concentrations have been reduced. The most recent (November 2015) TCE concentration for this well is 3.2 µg/L, which is below the MCL.

- In monitor wells EPA MW-39A, EPA MW-40A, EPA MW-45A, EPA MW-55A and EPA MW-59A the most recent (November 2015) TCE concentrations have remained below the laboratory detection limit of 0.20 µg/L.

Similarly, in the area of injection well IA-11 and IA-15, TCE concentrations have decreased in monitor wells EPA MW-30A, EPA MW-43A, and EPA MW-54A. For example:

- In monitor well EPA MW-30A, concentrations have decreased from 29 µg/L in August 2010 to below the laboratory detection limit of 0.20 µg/L in November 2015;
- In monitor well EPA MW-43A, concentrations have decreased from 6.3 µg/L in August 2010 to below the laboratory detection limit of 0.20 µg/L in November 2015.
- In monitor well EPA MW-54A, concentrations have decreased from 28 µg/L in October 2010 to below the laboratory detection limit of 0.20 µg/L in November 2015.

The TCE concentration trends for northeast area wells continue to demonstrate that the plume in this area is defined and has continued to decrease in size as a result of the extraction operations at EA-05, EA-06, and EA-07 and the reinjection of treated groundwater into injection wells IA-10, IA-11, IA-12, and IA-15.

C. Northwest Area Subunit A Groundwater Quality and Plume Extent

The November 2015 analytical results indicate that the northwest portion of the Subunit A TCE plume is delineated by monitor wells MW-17, EPA MW-17A, EPA MW-20A, EPA MW-21A, EPA MW-32A, EPA MW-37A, EPA MW-50A, and MW-24 (Figure 1). Groundwater samples collected from these wells exhibit TCE concentrations that are either below the laboratory detection limit or are less than the EPA MCL of 5 µg/L.

In the EA-08 GTS area, since the startup of extraction well EA-08 in December 2011, TCE concentrations in key performance monitor well (EPA MW-50A) continue to indicate TCE mass in the area has been reduced. For example:

- In sentinel monitor well EPA MW-50A, TCE concentrations have decreased from 19 µg/L in October 2010 to 3.0 µg/L in November 2015 (Figure 1).

In the 33A GTS area, northwest area sentinel wells continue to indicate that the plume is defined to concentrations less than the laboratory reporting limit, or less than the MCL.

- In monitor well EPA MW-51A, TCE concentration was 5.2 µg/L in November 2015 (Figure 1). Based on concentration trend data, as the injection of treated water to injection wells IA-07 and IA-08 continue, TCE concentrations in this well may occasionally increase to levels slightly above the MCL, but over time concentrations are expected to be reduced.
- In interior monitor well MW-16, the November 2015 TCE concentration was 41.5 µg/L (Figure 1). Due to the interior location of the well, the aquifer dynamics in this area, and the historic high TCE mass in the area, TCE concentrations may remain above the MCL and may occasionally spike as shown in Figure 3.

D. Groundwater Elevations and Flow Directions

Northeast Area

The November 2015 groundwater elevations in key northeast area monitor wells (EPA MW-30A, EPA MW-34A, EPA MW-35A, EPA MW-39A, EPA MW- 43A, EPA MW-45A, EPA MW-54A, and EPA MW-55A) continue to indicate an effective hydraulic barrier and groundwater mound west of Dysart Road that is maintained by the injection of treated groundwater into injection wells IA-11, IA-12, and IA-15 (Figure 4 and Figure 5). Additionally, groundwater elevations and the local potentiometric surface calculated for November 2015 continue to demonstrate that the operation of the extraction and injection wells in this area are maintaining groundwater flow directions away from the Litchfield Park and COA water supply wells in the area and toward extraction wells EA-06 and EA-07 (Figure 6).

Northwest Area

In the northwest area, the extraction operations at 33A, EA-08, and injection wells IA-07 and IA-08 are the dominant potentiometric features. Groundwater elevations in key monitor wells PZ-16, PZ-17, EPA MW-3A, EPA MW-20A, EPA MW-32A, and EPA MW-37A continue to indicate that an effective hydraulic barrier has been developed in the northwest area by the injection of treated water into IA-07 and IA-08 (Figure 7). The small gap in hydraulic capture that had previously existed between extraction wells 33A and EA-08 has been eliminated by the injection of treated water into these wells.

E. Activities Planned for January 2016

- Continued operation and maintenance of the existing groundwater treatment systems.
- Monthly groundwater sampling and water level measurements of key performance and plume delineation monitor wells north of I-10.
- Continue to evaluate water levels, TCE concentrations, and groundwater flow directions in the northeast area. Make flow rate adjustments to the injection wells as necessary to maintain hydraulic control and protect water supply wells.
- Monitor and evaluate the mounding from the injection of treated water from extraction well EA-08 to new injection wells IA-07 and IA-08.

Please feel free to contact me if you have any questions or if you need additional information.

Regards,

Harry Brenton, RG

Director of Hydrogeological Services

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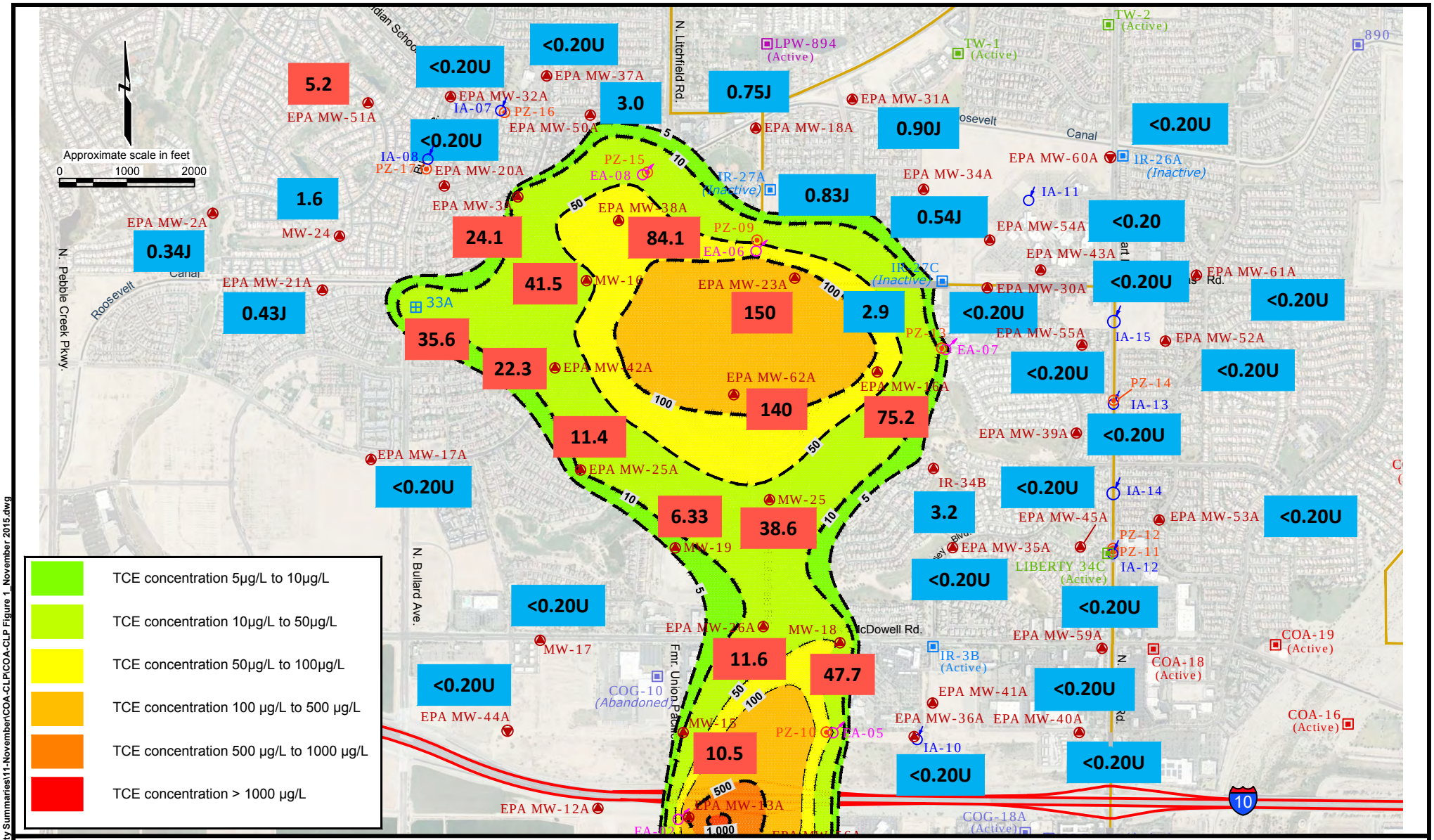

Explanation

Isocontour showing TCE concentration in µg/L.
Dashed where inferred.
Based on November 2015 data.

3.2 TCE Concentration < 5 µg/L

11.6 TCE Concentration ≥ 5 µg/L

PHOENIX - GOODYEAR AIRPORT - NORTH SUPERFUND SITE
404 S. LITCHFIELD ROAD GOODYEAR
MARICOPA COUNTY, ARIZONA

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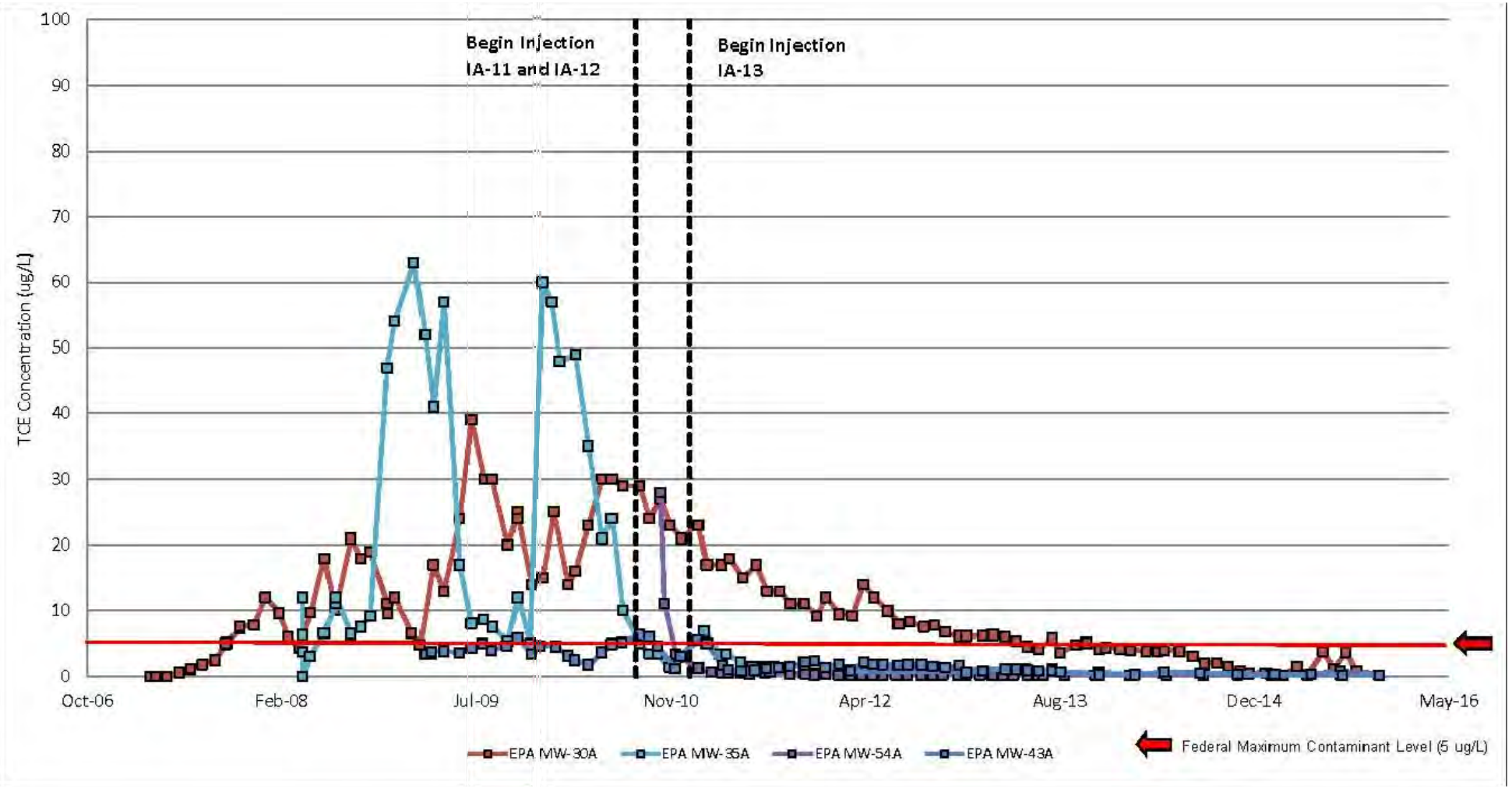
SUBUNIT A TCE CONCENTRATIONS AND GROUNDWATER CONTOURS NORTH OF I-10 NOVEMBER 2015

DRAWN BY:	DESIGNED BY:	APPROVED BY:	PROJECT NUMBER:
AR	JLM	HB	15-100E
DATE: 12-30-15	DATE: 12-30-15	DATE: 12-30-15	SCALE: 1" = 2000'

FIGURE NUMBER: 1

TCE Concentrations EPA MW-30A, EPA MW-35A, EPA MW-43A, and EPA MW-54A
Phoenix-Goodyear Airport-North
Goodyear, AZ



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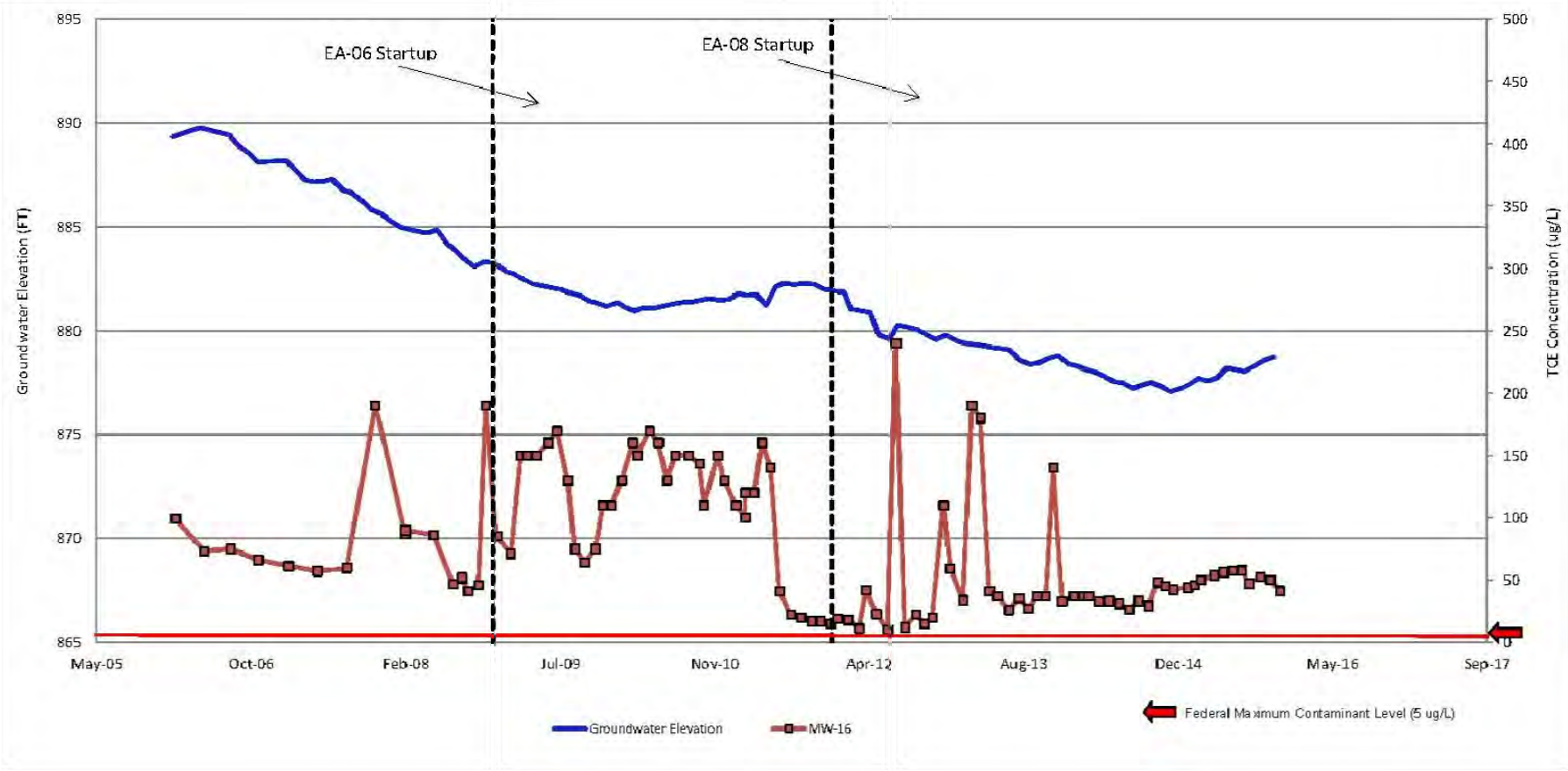
TCE TREND GRAPHS-PERFORMANCE
MONITOR WELLS - SUBUNIT A
NORTHEAST AREA

DRAWN BY:	DESIGNED BY:	APPROVED BY:	PROJECT NUMBER:
AR	JLM	HB	15-100E
DATE: 12-30-15	DATE: 12-30-15	DATE: 12-30-15	SCALE: NONE

FIGURE NUMBER: 2

MW-16 GROUNDWATER LEVELS and TCE CONCENTRATIONS (2006 - 2015)
Phoenix-Goodyear Airport-North
Goodyear, AZ



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MARICOPA COUNTY, ARIZONA

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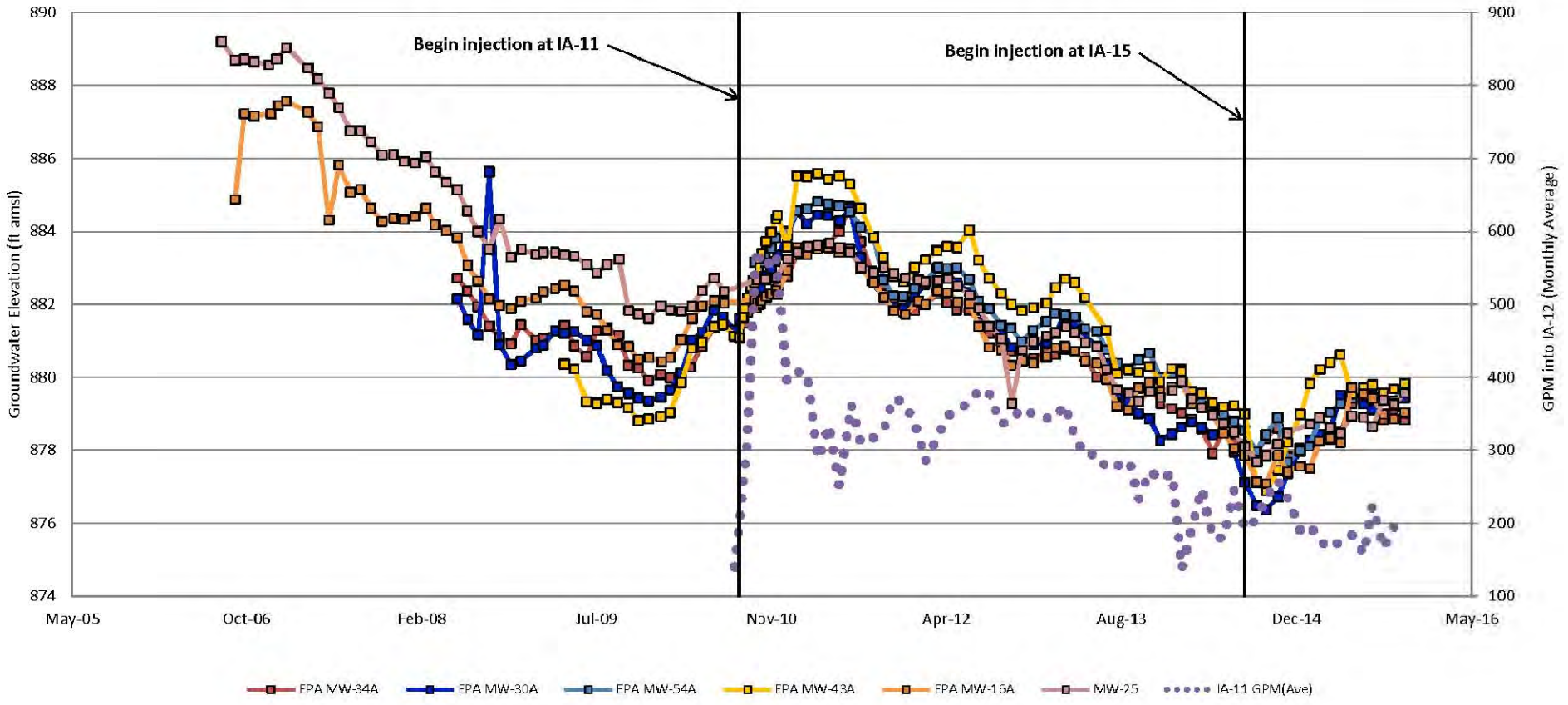
GROUNDWATER ELEVATION & TCE CONCENTRATION TRENDS
MW-16

DRAWN BY:	DESIGNED BY:	APPROVED BY:	PROJECT NUMBER:
AR	JLM	HB	15-100E
DATE: 12-30-15	DATE: 12-30-15	DATE: 12-30-15	SCALE: NONE

FIGURE NUMBER: 3

Hydrograph - IA-11 Area Wells
Phoenix-Goodyear Airport-North
Goodyear, AZ



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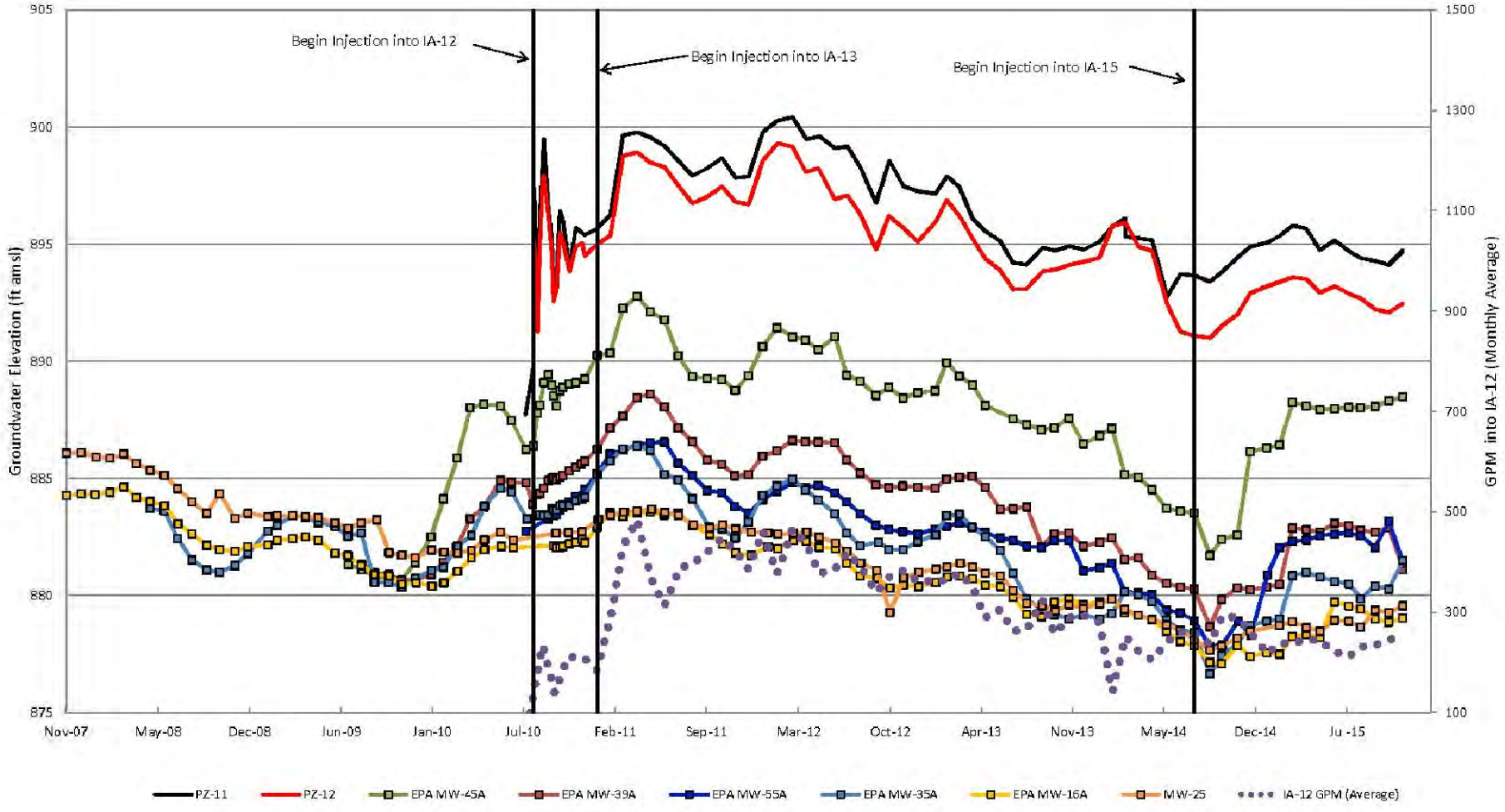
NE AREA SUBUNIT A GROUNDWATER
ELEVATION TRENDS
INJECTION WELL IA-11 AREA

DRAWN BY:	DESIGNED BY:	APPROVED BY:	PROJECT NUMBER:
AR	JLM	HB	15-100E
DATE: 12-30-15	DATE: 12-30-15	DATE: 12-30-15	SCALE: NONE

FIGURE NUMBER: 4

Hydrograph - IA-12 and IA-13 Area Wells
Phoenix-Goodyear Airport-North
Goodyear, AZ



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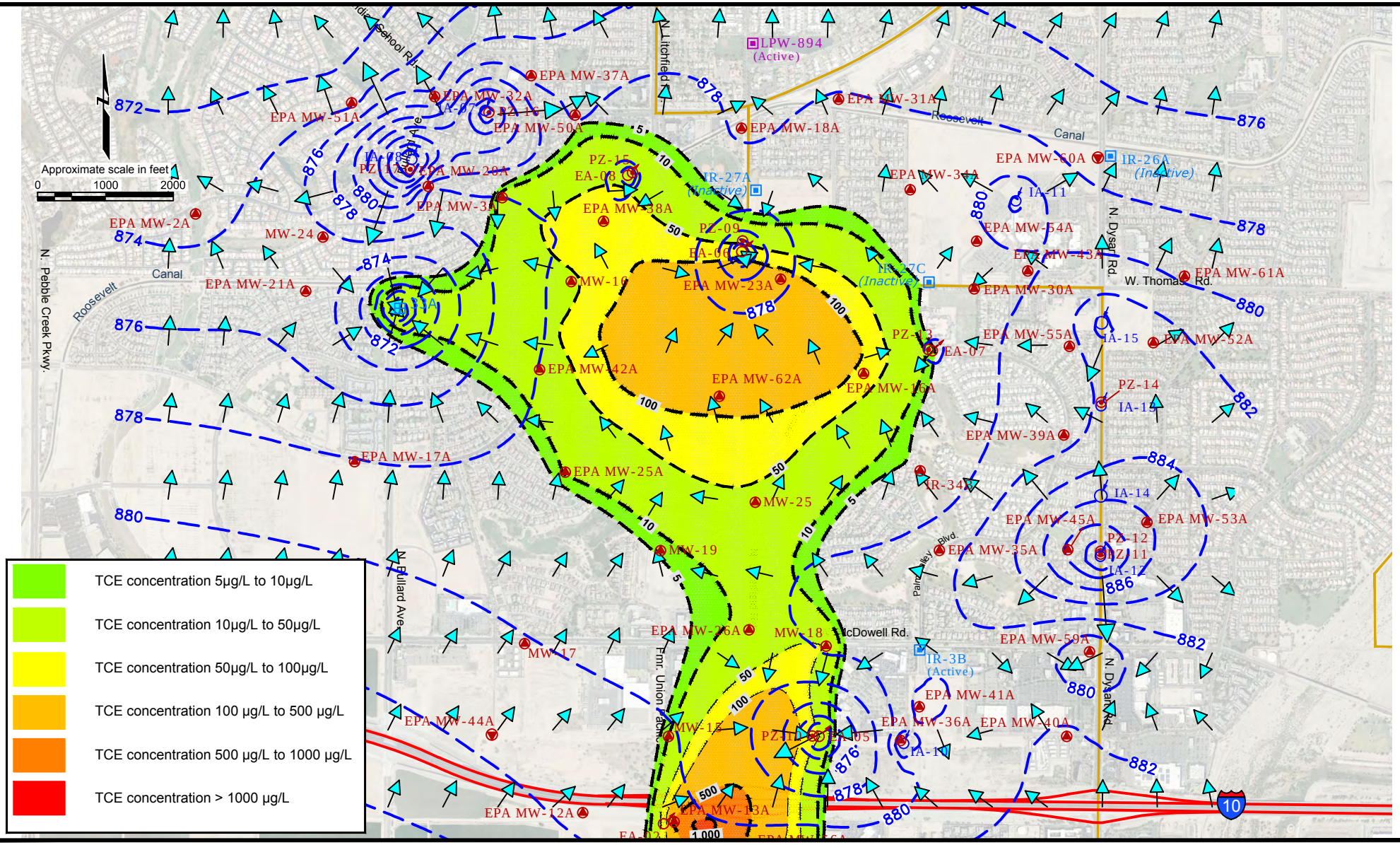
NE AREA SUBUNIT A GROUNDWATER
ELEVATION TRENDS
INJECTION WELL IA-12 and IA-13 AREA

DRAWN BY:	DESIGNED BY:	APPROVED BY:	PROJECT NUMBER:
AR	JLM	HB	15-100E
DATE: 12-30-15	DATE: 12-30-15	DATE: 12-30-15	SCALE: NONE

FIGURE NUMBER:
5



Explanation

882 — Potentiometric Isocontour showing groundwater elevation in feet above MSL; dashed where inferred

Isocontour showing TCE concentration in µg/L. Dashed where inferred. Based on November 2015 data.

Groundwater Flow Vector based on potentiometric surface.

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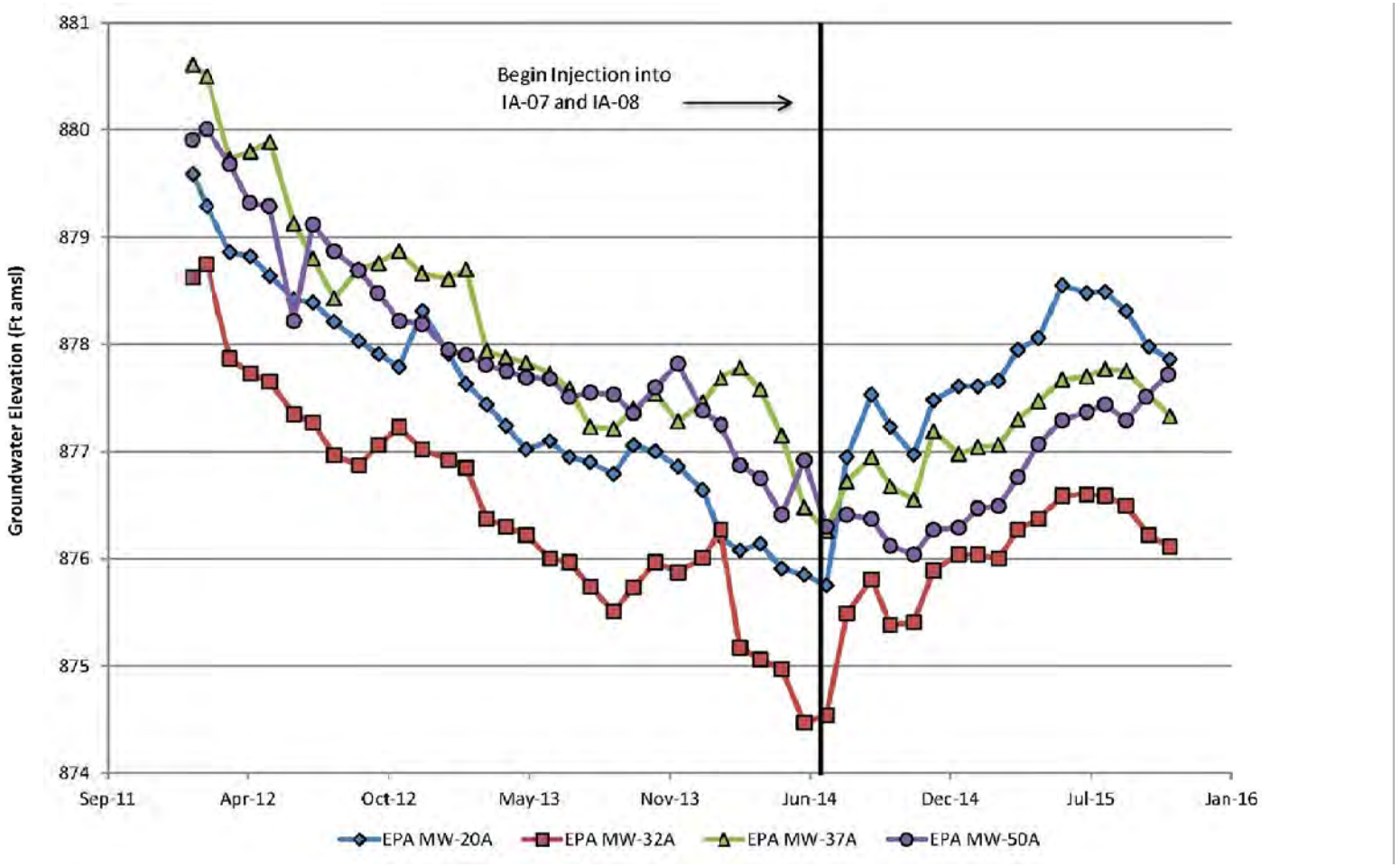
SUBUNIT A GROUNDWATER CONTOURS AND TCE PLUME NORTH OF I-10 NOVEMBER

DRAWN BY:	DESIGNED BY:	APPROVED BY:	PROJECT NUMBER:
AR	JLM	HB	15-100E
DATE: 12-30-15	DATE: 12-30-15	DATE: 12-30-15	SCALE: 1" = 2000'

FIGURE NUMBER: 6

Hydrograph - IA-07 and IA-08 Area Wells
Phoenix-Goodyear Airport-North
Goodyear, AZ



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NW AREA SUBUNIT A GROUNDWATER ELEVATION TRENDS
INJECTION WELL IA-07 and IA-08 AREA

DRAWN BY:	DESIGNED BY:	APPROVED BY:	PROJECT NUMBER:
AR	JLM	HB	15-100E
DATE: 12-30-15	DATE: 12-30-15	DATE: 12-30-15	SCALE: NONE

FIGURE NUMBER: 7