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**2015 ANNUAL MONITORING PROGRESS REPORT FOR THE  
NPBA EXTRACTION SYSTEM SHUTDOWN  
Former York Naval Ordnance Plant  
1425 Eden Road, Springettsbury Township  
York, Pennsylvania**

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**Prepared for:**

**Harley-Davidson Motor Company Operations, Inc.**

**1425 Eden Road**

**York, Pennsylvania**

**April 2016**

**Prepared by:**

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## LIST OF ACRONYMS AND ABBREVIATIONS

µg/L	microgram per liter
amsl	above mean sea level
bgs	below ground surface
cis12DCE	cis-1,2-dichloroethene
COC	chemicals of concern
FSP	Field Sampling Plan
fYNOP	former York Naval Ordnance Plant
GSC	Groundwater Sciences Corporation
Harley-Davidson	Harley-Davidson Motor Company Operations, Inc.
mg/L	milligrams per liter
MSC	Medium-Specific Concentration
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NPBA	Northern Property Boundary Area
PADEP	Pennsylvania Department of Environmental Protection
Part 2 SRI	Part 2 Supplemental Groundwater Remedial Investigation
PCE	tetrachloroethene
TCE	trichloroethene
U	undetected
USEPA	United States Environmental Protection Agency
VOCs	volatile organic compounds

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# 1 INTRODUCTION

Groundwater Sciences Corporation (GSC) has prepared this progress report of the results of the 2015 annual groundwater monitoring of the Northern Property Boundary Area (NPBA) groundwater extraction system shutdown at the former York Naval Ordnance Plant (fYNOP or Site) located at 1425 Eden Road, Springettsbury Township, York, Pennsylvania (**Figure 1**). The Site is divided into the East Campus, owned by Harley-Davidson Motor Operations, Inc. (Harley-Davidson), and the West Campus, owned by NP York 58, LLC. The groundwater extraction system at the NPBA, operated since November 1990, has been shut down since June 19, 2013 to monitor the effects on groundwater flow patterns and chemistry during a period of non-pumping. The monitored shutdown test was performed as a component of the Part 2 Supplemental Groundwater Remedial Investigation (Part 2 SRI), and resulted in continued shutdown, annual monitoring and reporting. This second year progress report includes the annual monitoring data for 2015. Results are described in Section 2 and the work plan for 2016 is described in Section 3. References are provided in Section 4.

The rationale and plan for deactivation and evaluation of the NPBA groundwater extraction system are described in Section 8.7.5 of the Supplemental Remedial Investigation Groundwater Report (Part 1) (GSC, 2011) and Section 4.3.4 of the Field Sampling Plan (FSP) for the Part 2 SGWRI (GSC, 2012) and Addendum #6 to the FSP (GSC, 2013). Results of the monitored shutdown test were included in a report titled “Results of NPBA Extraction System and Bldg3 Footer Drain Monitored Shutdown Tests for Part 2 of the Supplemental Groundwater Remedial Investigation” (GSC, 2014). The report was submitted to the United States Environmental Protection Agency (USEPA) and the Pennsylvania Department of Environmental Protection (PADEP) on April 11, 2014 and included recommendations for monitoring of the groundwater in the NPBA area. The USEPA approved the shutdown of active pumping of the NPBA groundwater extraction system and annual monitoring in an email reply to Mr. Stephen Snyder of GSC, dated April 17, 2014.

The approved monitoring plan involves the monitoring and reporting of groundwater levels and chemistry at the NPBA on an annual basis for a period of five years from 27 locations in and north of the NPBA. Monitoring results from six additional on-Site wells located down-gradient of the NPBA (wells MW-3, MW-82, MW-102S&D and MW-103S&D) are included in this 2015 annual

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NPBA report to track the potential migration of chemicals of concern (COCs) in the down-gradient direction on-Site. After five years of monitoring (i.e. 2018), long-term shutdown of the NPBA groundwater extraction system will be re-evaluated.

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## 2 2015 ANNUAL MONITORING PROGRESS

Second year (2015) monitoring results are discussed in this section, followed by a discussion of the primary concerns (the potential for off-site migration of Site-related COCs). Groundwater locations monitored in 2015 are shown on **Figure 2** and are summarized below:

NPBA and Off-Site Locations				Additional Down-gradient Locations
CW-1	CW-7	MW-18S	MW-143S	MW-3
CW-1A	CW-7A	MW-18D	MW-143D	MW-82
CW-2	MW-9	MW-20S	RW-2	MW-102S
CW-3	MW-11	MW-20M	RW-4 (Folk)	MW-102D
CW-4	MW-12	MW-20D	Tate (S-6)	MW-103S
CW-5	MW-16S	MW-142S		MW-103D
CW-6	MW-16D	MW-142D		

### 2.1 Groundwater Elevations and Gradient

Groundwater elevation measurements at the NPBA were collected on September 2 and 3, 2015 by Leidos Engineering, LLC and GSC personnel as part of the Site-wide water level monitoring event. Elevation measurements collected in 2015, plus elevations from prior to and during the NPBA groundwater extraction system shutdown testing period are listed in **Table 1**. In the 2015 monitoring event, the groundwater elevations, excluding wells under artesian pressure, ranged from a high of 530 feet above mean sea level (amsl) in the northeast to 370 feet amsl in the southwest (**Figure 3**). Wells MW-16D, MW-18S&D exhibit artesian conditions and contain packers to seal the flow of groundwater to the surface. Wells MW-20M&D do not contain packers, but the water elevations are high in these wells suggesting that the groundwater is under pressure at those locations. It should be noted that the water level in the unused residential well RW-2 was measured on September 16, 2015 and the water level in private non-potable well RW-4 (Folk) was measured on September 26, 2015 when the homeowners allowed access. In addition, wells RW-1, RW-3 and the spring Herman (S-7) shown on **Figure 2** are not accessible for monitoring because property owners have denied access to RW-3 and Herman (S-7). As a result of a search of the property and discussion with the current resident, RW-1 is believed to be abandoned.

Groundwater elevation contours of measurements collected on September 2 and 3, 2015 are shown on **Figure 3**. These contours represent the shallow groundwater elevation under natural flow

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conditions (non-pumping conditions) and show a lateral gradient that slopes toward the southwest. As interpreted and under isotropic conditions, groundwater flow is theoretically perpendicular to contours and would indicate that groundwater from a very small portion of the NPBA near wells MW-18D&S may minimally flow off-Site to the west of wells MW-142D&S, but flows back onto the Site west of MW-143D&S. A groundwater flow direction arrow is shown on **Figure 3** illustrating the theoretical groundwater flow path if the aquifer were isotropic. It is noted that the flow path, as drawn, is essentially parallel to the property line. However, factors such as a small change to the groundwater contour orientation, the consideration of anisotropic and heterogeneous aquifer permeability, combined with the lack of water level observation points to the north and west of MW-18 add uncertainty to the flow path interpretation.

Groundwater elevations and potentiometric contours from September 2 and 3, 2015 are shown in the cross section on **Figure 4**. Vertical groundwater gradients can be observed on the figure for nested wells MW-18S&D; MW-20S, I, & D; MW-142S&D; and MW-143S&D. In each of these wells except MW-142S&D, the groundwater elevation of the deeper well is higher than the elevation in the shallower well pair. This indicates that vertical groundwater flow is upward at these well locations under non-pumping conditions. Given this vertically upward flow gradient, dissolved COCs would not migrate deeper into the aquifer under natural (non-pumping) conditions.

Comparing the September 2015 groundwater elevations and potentiometric contours to the September 2013 post-shutdown and October 2014 elevations and contours, there is essentially no change in groundwater flow in the NPBA area.

## 2.2 Groundwater Chemistry

Groundwater sample collection occurred from September 21 through October 6, 2015, coincident with the annual comprehensive well sampling across the Site. Samples were submitted to TestAmerica Pittsburgh for analysis of volatile organic compounds (VOCs) by Method 8260C. Recent chemistry data for the NPBA wells are summarized in **Table 2**. Isoconcentration contours for trichloroethene (TCE), the most common COC at the NPBA, are shown on **Figure 5** for wells screened or open to the top 110 feet below ground surface (bgs). **Figure 5** illustrates that the highest TCE concentrations in 2015 were centered around wells CW-7A and MW-12, and that TCE



concentrations of 5 micrograms per liter ( $\mu\text{g/L}$ ) or more were interpreted to exist in the groundwater beneath most of the NPBA.

Historical chemistry data are shown on the graphs in **Appendix A**. **Figure 5** (plan view) and **Figure 6** (cross sectional view) show posted TCE and tetrachloroethene (PCE) chemistry data from pre-shutdown and post-shutdown in 2013, annual post-shutdown sampling in 2014, and the second annual post-shutdown sampling in 2015 for these primary COCs. Small changes between the September 2013 post-shutdown, October 2014, and the 2015 annual sampling chemistry are noted at most of the sample locations, with the majority of samples (24 of 26) decreasing or remaining about the same with respect to COCs. Locations that exhibited increases in PCE concentrations compared to the post-shutdown September 2013 concentrations were at former extraction wells CW-5 and CW-7A, where pumping had likely caused dilution while the extraction system was operating. Reference to graphs of time vs. concentration for these two wells in **Appendix A** illustrate the following:

- Prior to system shutdown, detections of PCE in CW-5 showed a declining trend. After pumping ceased, the PCE concentration increased from 2.5 to 7.4  $\mu\text{g/L}$  in 2013. In 2014, PCE increased to 24  $\mu\text{g/L}$ , and then dropped to 15  $\mu\text{g/L}$  in 2015.
- Prior to system shutdown, detections of PCE in CW-7A showed a declining trend. After pumping ceased, the PCE concentration increased from 1.4J to 4.3J  $\mu\text{g/L}$  in 2013. In 2014, PCE increased to 5.5J  $\mu\text{g/L}$ , and then to 8.6  $\mu\text{g/L}$  in 2015. (Note that “J” refers to results that are less than the laboratory’s reporting limit, but greater than or equal to the method detection limit; the concentration is an approximate value).

In addition to the 26 wells listed above for annual monitoring, groundwater chemistry data from MW-3, MW-82, MW-102D&S and MW-103D&S also have been compared to historical data. These wells are located downgradient of the former extraction wells in the NPBA, theoretically receiving groundwater flow from the NPBA. TCE, PCE and cis-1,2-dichloroethene (cis12DCE) concentrations were similar to the historical groundwater data in MW-3, MW-82 and MW-102D&S, while TCE concentrations in MW-103D&S have declined (see graphs in **Appendix A**).

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An additional downgradient well, MW-77, was sampled in 2014, but was not sampled in 2015 because it is located in an area of hydrocarbon release and has been part of a separate study.

The following bulleted text is taken from the monitored shutdown report (GSC, 2014), which explains the chemistry trends seen 12 weeks (September 2013) after extraction system shutdown. Added to that text is a brief summary of observations of changes approximately one year later in 2014 (provided in the 2014 annual shutdown report [GSC, 2015]) and two years later in 2015. The added text for 2015 is included in *italics*. Refer to **Figures 5 and 6** for plan view and cross section maps, to **Table 2** for a summary of chemistry data, and to chemistry concentration graphs included in **Appendix A**.

- Five wells are located in the eastern-most extent of the NPBA. MW-20S, M, D and CW-7 and CW-7A are within 20 feet of each other, and sample different depths in the aquifer, from 28 feet – 61 feet (MW-20S) to 153 feet – 165 feet (MW-20D). CW-7 is open to the bedrock aquifer from 61 feet – 150 feet, while CW-7A screens residuum and saprolite (decomposed bedrock maintaining the structural features of the bedrock) from 34 feet – 66 feet bgs. Concentrations of TCE are highest near the surface, and decrease with depth, with groundwater from MW-20S showing the highest concentrations during pumping. MW-20S concentrations dropped after cessation of pumping, suggesting TCE was being pulled through that well by pumping, and potentially indicating the location of higher concentrations of TCE to be to the east of MW-20S. CW-7A concentrations increased after cessation of pumping, indicating portions of the flow drawn in by pumping most likely had been diluting the concentrations. CW-7 TCE concentrations dropped after pumping ceased, indicating pumping of that well was likely drawing mass from the shallow portion of the aquifer.

2014 sample results suggest no significant changes from the description above. Concentrations of TCE in CW-7A decreased to a level closer to the pre-shutdown concentration.

*2015 sample results are similar to the descriptions above with the exception that the PCE concentration in CW-7A increased to a high of 8.6 µg/L.*

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- Pumping wells CW-1 and CW-1A are open to a depth of 68 feet – 175 feet and 29 feet – 74 feet, respectively. TCE concentrations in these wells prior to cessation of pumping were nearly the same at 33 and 35 µg/L, respectively. With the pumps off, concentrations in both wells dropped to 9.4 µg/L in CW-1 and 26 µg/L in CW-1A.

One year later, the TCE concentration in CW-1 reduced to 1.8 µg/L, while the TCE concentration in CW-1A remained nearly unchanged (31 µg/L).

*Two years later, the TCE concentration in CW-1 reduced to 1.1 µg/L, while the TCE concentration in CW-1A remained nearly unchanged (28 µg/L).*

- Monitoring well MW-11, which lies west of CW-1 and CW-1A and east of CW-2 showed no change in pre- and post-shutdown TCE concentrations (pre-shutdown = 4.5 µg/L vs. post-shutdown = 4.9 µg/L). The water level in this well is higher than wells on either side of it, and there was no apparent recovery (rise) in water level when the extraction wells were shut down. The lack of response in both chemistry and water level, combined with the higher water level than in adjacent wells indicates that water from well MW-11 is not sufficiently hydraulically connected to the pumped portion of the aquifer or that it is being supported by an artesian condition below the pumping wells (deeper water sourced from the elevated area to the east).

2014 sample results suggest no significant changes from the description above. Well MW-3, located down-gradient of and about 600 feet southwest of MW-11, showed no change in concentrations compared to 2013 data.

*2015 sample results suggest no significant changes from the descriptions above.*

- Pumping well CW-2 and adjacent monitoring well MW-9 decreased in TCE concentrations after cessation of pumping. Since the groundwater flow direction at MW-9 while pumping was toward the northwest, and that flow direction would have changed to southwestward when CW-2 stopped pumping, the change in chemistry probably indicates higher concentrations of TCE in groundwater being pulled from the southeast of MW-9. With the cessation of pumping, the concentration of PCE in CW-2 went from undetected (U) to 3

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µg/L. PCE was detected in this well prior to initiation of the extraction system at 2 to 4 µg/L. The reappearance suggests the concentration of PCE was being diluted by pulling groundwater from a greater distance away from CW-2. These pre- and post-shutdown results suggest that PCE is adsorbed onto the aquifer material at a location close to or discretely connected to CW-2.

2014 sample results suggest no significant changes from the description above. CW-2 TCE concentrations increased slightly to a level similar to pre-shutdown conditions.

*2015 sample results suggest no significant changes from the description above; however, the TCE concentration in CW-2 decreased to the lowest level to date (4.9 µg/L).*

- The TCE concentration in off-Site former residential supply well RW-2, located 150 feet northwest of CW-2 rose slightly between pre- (1.2 µg/L) and post- (1.9 µg/L) shutdown sampling, but the change is within its normal range of TCE concentrations during pumping. This well has been below applicable PADEP Medium Specific Concentrations (MSCs) for Residential Used Aquifers with total dissolved solids less than or equal to 2,500 milligrams per liter (mg/L) for all site-related COCs since 2003 and the TCE concentrations have ranged from 1.4 (in 2006) to 3.9 (in 2009) over the last seven years of annual sampling.

2014 sample results suggest no significant changes from the description above. The TCE concentration measured one year later was 3.1 µg/L.

*2015 sample results suggest no significant changes from the description above. The TCE concentration measured in 2015 was 3.8 µg/L. Concentrations of TCE and PCE continue to remain undetected (U) in the other former residential supply well, RW-4 (Folk), currently connected to an outdoor spigot, but not used as a potable supply.*

- TCE and PCE concentrations decreased in pumping well CW-4 after cessation of pumping. Adjacent monitoring well MW-12, southwest of CW-4 more than doubled in TCE and PCE concentrations after pumping stopped. This suggests that higher concentrations of these COCs may be located south or southeast of CW-4 and northeast of MW-12, in a position

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that is upgradient from MW-12 under the static post-shutdown groundwater potentiometric surface conditions.

2014 sample results suggest no significant changes from the description above. Concentrations of TCE and PCE continued to drop significantly, while MW-12 levels moderated.

*2015 sample results suggest no significant changes from the description above. Concentrations of TCE and PCE continued to drop in CW-4, while the concentration of PCE in MW-12 slightly increased to 6.4 µg/L (an increase of 1 µg/L above the 2014 value).*

- Pumping well CW-3 and adjacent well pair MW-16S and MW-16D are located near the center of the row of extraction wells along the NPBA. The groundwater chemistry in MW-16S is notable in that it shows the highest concentration of PCE in the NPBA, where TCE is the dominant COC. CW-3 concentrations of TCE increased slightly, with the cessation of pumping, but remained in single digits. A pre-shutdown sample of MW-16S could not be analyzed due to excessive turbidity. However, compared to previous samples collected during pumping, the concentration appears to have reduced significantly under post-shutdown conditions. MW-16D, screened at a depth bgs of 190 feet – 201 feet, is artesian, and groundwater quality is minimally influenced by the COCs in the shallower zones in the immediate vicinity, indicated by PCE concentrations being undetected (U).

2014 sample results suggest no significant changes from the description above.

*In 2015, TCE and PCE both decreased significantly to below 10 µg/L in MW-16S, whereas concentrations in MW-16D have remained consistent. TCE and PCE were undetected (U) in CW-3 in 2015, compared to 1.4J and 0.41J µg/L in 2014. CW-3 also contained 460 µg/L of acetone, a common laboratory contaminant, and there was a laboratory issue with the recovery criteria for TCE and PCE in an associated Matrix Spike / Matrix Spike Duplicate (MS/MSD) sample, suggesting that the data at CW-3 may be suspect.*

- Pumping wells CW-5 and CW-6 are west and down-gradient of the CW-3/MW-16 cluster of wells. After cessation of pumping, TCE and PCE concentrations in CW-6 dropped,

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suggesting during pumping this well was pulling COCs sourced some distance away from the pumping well. Since the reduction in PCE concentrations was disproportionately high, CW-6 was probably pulling in groundwater with PCE from the MW-16S area. After cessation of pumping, TCE and PCE concentrations in CW-5 increased slightly.

2014 sample results suggest no significant changes from the description above. After one year, CW-6 concentrations continued to drop, while CW-5 concentrations continued to increase slightly.

*2015 sample results suggest no significant changes from the descriptions above. CW-6 concentrations remained stable with respect to 2013 post-shutdown concentrations, while CW-5 concentrations remained stable compared to 2014.*

- Well pair MW-18S and MW-18D are open from 45 feet – 65 feet and 130 feet – 140 feet bgs, respectively. When sampled in 1988, MW-18S had a relatively low concentration of TCE at 50 µg/L, and MW-18D had no detections of VOCs. At the time, this data was considered an indication of the western limit of the plume. These wells were resampled in 2008, and showed concentrations of TCE exceeding 1,000 µg/L in both wells. It was assumed that VOCs were mobilized by the extraction system and pulled through these wells, suggesting a source to the west of this well pair, with VOCs transported by groundwater being pulled eastward toward CW-5 and the other groundwater extraction system wells. As indicated by time vs. concentration graphs in **Appendix A**, concentrations of VOCs in wells MW-18S and MW-18D have generally declined over the last 4 to 6 years. The pre-shutdown concentration of TCE in MW-18S was 220 µg/L while the post-shutdown concentration was 45 µg/L. The pre-shutdown concentration of TCE in MW-18D was 560 µg/L while the post-shutdown concentration was 42 µg/L. Changes that large suggest the pumping of the extraction wells was pulling VOCs through the MW-18 well pair from a source located west of the well pair.

2014 sample results suggest no significant changes from the description above. Continued reductions of TCE concentrations in MW-18S (5.5 µg/L) and MW-18D (8.1 µg/L) support the opinion regarding the reason for the observed concentration changes. Wells MW-

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142S&D and MW-143S&D, located down-gradient of MW-18S&D, continued to exhibit undetected or very low COC concentrations (TCE concentration of 1.9 µg/L at MW-143S).

*2015 sample results suggest no significant changes from the descriptions above, with concentrations slightly higher than in 2014 in wells MW-18D, MW-142S and MW-143S, but lower than the post-shutdown concentrations from 2013. The TCE concentration in MW-18S increased from 5.5 µg/L in 2014 to 11 µg/L in 2015, which is still well below the pre- and post-shutdown concentrations detected in 2013.*

## **2.3 Potential for Off-Site Plume Migration in the NPBA**

The two primary potential groundwater flow paths for off-Site plume migration in the NPBA are 1) the potential for migration to the north toward former residential water supply wells and, 2) potential for migration to the west across the Site property line in the vicinity of monitoring well pair MW-18S&D.

### **2.3.1 Potential for Migration to the North**

The monitored shutdown report (GSC, 2014) concluded that “natural migration of COCs northward from the NPBA appears to be unlikely” based on the groundwater level contours developed from water levels in wells under non-pumping conditions after shutdown.

Groundwater level contours in plan (**Figure 3**) and profile (**Figure 4**) views are essentially the same as the post-shutdown conditions in 2013 and 2014. No modification to the previous evaluation is warranted by the water level data. Similarly, groundwater chemistry results are consistent with the post-shutdown results, and show no indications of northward migration. Specifically, Site-related COCs continue to remain undetected or detected at concentrations below MSCs in off-Site locations north of the Site at RW-2, RW-4 and Tate (S-6).

### **2.3.2 Potential for Migration to the West**

The monitored shutdown report (GSC, 2014) described the existence of a natural (non-pumping) gradient to the south-southwest in the area of MW-18S&D. This gradient is essentially parallel to the Site property line with groundwater west of the property likely flowing back onto the Site west

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of the well pair MW-143S&D. The gradient from the September 2015 water levels in this area is consistent with that previous condition.

Groundwater chemistry in down-gradient wells MW-142S&D, MW-143S&D, MW-82 and MW-102S&D two years after shutdown is essentially unchanged, and TCE and PCE concentrations in downgradient wells MW-103S&D have decreased.

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### 3 SUMMARY

Groundwater levels and chemical analyses from the September 2015 annual monitoring of the NPBA area indicate stable (essentially unchanged) conditions from the initial post-shutdown conditions.

The work plan for 2016 is to continue the monitoring of the NPBA groundwater extraction system shutdown, with annual collection of water level measurements and groundwater samples for analysis of VOCs. No changes to the plan are recommended. The annual groundwater level and sampling will coincide with the larger-scope 2016 comprehensive event which is planned for late summer or early fall. The 2016 water level data chemistry data will be analyzed and a progress report will be prepared during the first quarter of 2017. Analysis of the chemistry data will also include wells MW-3, MW-82, MW-102D&S and MW-103D&S located downgradient from the NPBA. The plan is to continue annual monitoring for three more years for a total of five years and then evaluate the possibility of decommissioning the NPBA groundwater extraction system. However, if data indicate migration off-Site of elevated concentrations of COCs, the operational status of the groundwater extraction system will be evaluated sooner.

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## 4 REFERENCES

- GSC, 2011. Supplemental Remedial Investigation Groundwater Report (Part 1) Former York Naval Ordnance Plant, September.
- GSC, 2012. Field Sampling Plan For Part 2 of the Supplemental Groundwater Remedial Investigation at the former York Naval Ordnance Plant in York, Pennsylvania, April.
- GSC, 2013. Addendum #6, to Field Sampling Plan for Part 2 of the Supplemental Groundwater Remedial Investigation Former York Naval Ordnance Plant, March 20.
- GSC, 2014. Results of NPBA Extraction System and Bldg3 Footer Drain Monitored Shutdown Tests for Part 2 of the Supplemental Groundwater Remedial Investigation Former York Naval Ordnance Plant, April.
- GSC, 2015. 2014 Annual Monitoring Progress Report for the NPBA Extraction System Shutdown Former York Naval Ordnance Plant, April.
- USEPA Region 3, Email from Mr. Griff Miller to Mr. Stephen Snyder (GSC), dated April 17, 2014.

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# Tables

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Table 1  
Former York Naval Ordnance Plant- York, PA  
Groundwater Elevations  
NPBA Extraction System Shutdown Monitoring

Location	6/6/13			6/11/13			6/12/13			6/17/13			6/27/13			7/5/13		
	NPBA Shutdown Test Pre Shutdown			NPBA Shutdown Test Event 1			NPBA Shutdown Test Event 2			NPBA Shutdown Test Event 3			NPBA Shutdown Test Event 4			NPBA Shutdown Test Event 5		
	MPE	DTW	WL Elev	MPE	DTW	WL Elev	MPE	DTW	WL Elev	MPE	DTW	WL Elev	MPE	DTW	WL Elev	MPE	DTW	WL Elev
<b>Collection Wells</b>																		
CW-1	570.07	72.12	497.95	NM	NM	NM	570.07	72.08	497.99	570.07	75.16	494.91	570.07	41.99	528.08	570.07	41.74	528.33
CW-1A	568.28	60.60	507.68	NM	NM	NM	568.28	61.53	506.75	568.28	61.12	507.16	568.28	38.17	530.11	568.28	38.72	529.56
CW-2	556.95	68.66	488.29	NM	NM	NM	556.95	71.17	485.78	556.95	75.50	481.45	556.95	31.54	525.41	556.95	31.02	525.93
CW-3	518.66	80.80	437.86	518.66	81.57	437.09	NM	NM	NM	518.66	81.33	437.33	518.66	21.68	496.98	518.66	20.81	497.85
CW-4	541.55	85.70	455.85	541.55	15.32 AN	526.23	NM	NM	NM	541.55	84.84	456.71	541.55	27.75	513.80	541.55	26.94	514.61
CW-5	470.34	NM	NM	NM	NM	NM	NM	NM	NM	470.34	47.49	422.85	470.34	19.49	450.85	470.34	19.38	450.96
CW-6	484.67	70.70	413.97	484.67	70.67	414.00	NM	NM	NM	484.67	73.48	411.19	484.67	10.33	474.34	484.67	9.30	475.37
CW-7	573.78	86.40	487.38	NM	NM	NM	573.78	86.66	487.12	573.78	81.60	492.18	573.78	40.08	533.70	573.78	39.98	533.80
CW-7A	573.91	48.90	525.01	NM	NM	NM	573.91	48.55	525.36	573.91	50.10	523.81	573.91	41.88	532.03	573.91	41.87	532.04
<b>Monitoring Wells</b>																		
MW-3	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-9	558.78	47.34	511.44	NM	NM	NM	558.78	47.22	511.56	558.78	46.32	512.46	558.78	34.23	524.55	558.78	33.45	525.33
MW-10	567.80	51.94	515.86	NM	NM	NM	NM	NM	NM	567.80	51.45	516.35	567.80	40.92	526.88	567.80	40.77	527.03
MW-11	563.08	27.84	535.24	NM	NM	NM	563.08	25.84	537.24	563.08	26.49	536.59	563.08	27.47	535.61	563.08	27.83	535.25
MW-12	535.93	37.43	498.50	535.93	37.32	498.61	NM	NM	NM	535.93	37.59	498.34	535.93	35.55	500.38	535.93	34.95	500.98
MW-16D	516.51	8.63	507.88	516.51	7.96	508.55	NM	NM	NM	516.51	7.73	508.78	521.59	4.00	517.59	521.59	1.85	519.74
MW-16S	516.60	35.87	480.73	516.60	37.90	478.70	NM	NM	NM	516.60	36.43	480.17	516.60	23.30	493.30	516.60	22.10	494.50
MW-18D	464.19	16.75	447.44	464.19	16.88	447.31	NM	NM	NM	464.19	16.56	447.63	469.20	A	A	469.20	0.75	468.45
MW-18S	464.12	16.98	447.14	464.12	26.70	437.42	NM	NM	NM	464.12	16.27	447.85	464.12	A	A	464.12	0.98	463.14
MW-20D	573.85	38.59	535.26	NM	NM	NM	573.85	38.12	535.73	573.85	38.21	535.64	573.85	31.76	542.09	573.85	31.86	541.99
MW-20M	574.19	46.59	527.60	NM	NM	NM	574.19	46.39	527.80	574.19	45.98	528.21	574.19	41.47	532.72	574.19	41.37	532.82
MW-20S	574.05	46.53	527.52	NM	NM	NM	574.05	46.10	527.95	574.05	46.08	527.97	574.05	42.24	531.81	574.05	42.13	531.92
MW-31D	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-31S	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-70D	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-70S	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-82	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-102D	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-102S	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-142D	437.78	16.20	421.58	437.78	15.58	422.20	NM	NM	NM	437.78	15.72	422.06	437.78	16.11	421.67	437.78	16.31	421.47
MW-142S	437.44	4.57	432.87	437.44	3.60	433.84	NM	NM	NM	437.44	3.95	433.49	437.44	3.89	433.55	437.44	3.75	433.69
MW-143D	403.71	9.44	394.27	403.71	8.65	395.06	NM	NM	NM	403.71	8.70	395.01	408.81	14.89	393.92	408.81	15.17	393.64
MW-143S	403.56	31.72	371.84	403.56	30.93	372.63	NM	NM	NM	403.56	30.77	372.79	403.56	31.57	371.99	403.56	32.04	371.52
<b>Residential Wells</b>																		
RW-4 (Folk)	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
RW-2	NM	NM	NM	548.27	28.21	520.06	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
<b>Staff Gauge</b>																		
TATE (S-6) Staff Gauge	NM	NM	NM	NM	NM	NM	488.86	1.10	488.96	488.86	0.90	488.76	488.86	1.05	488.91	488.86	1.30	489.16

MPE: Measuring Point Elevation  
DTW: Depth to Water  
WL Elev: Water level Elevation  
NM: Not Measured  
A: Artesian  
D: Dry  
\*: RW-4 Measurement collected on 10/11/2014  
AN: Anomalous Reading

Table 1  
Former York Naval Ordnance Plant- York, PA  
Groundwater Elevations  
NPBA Extraction System Shutdown Monitoring

Location	7/12/13			7/16/13			7/25/13			7/31/13			8/8/13		
	NPBA Shutdown Test Event 6			NPBA Shutdown Test Event 7			NPBA Shutdown Test Event 8			NPBA Shutdown Test Event 9			NPBA Shutdown Test Event 10		
	MPE	DTW	WL Elev	MPE	DTW	WL Elev	MPE	DTW	WL Elev	MPE	DTW	WL Elev	MPE	DTW	WL Elev
<b>Collection Wells</b>															
CW-1	570.07	41.69	528.38	570.07	41.69	528.38	570.07	41.19	528.88	570.07	41.30	528.77	570.07	41.43	528.64
CW-1A	568.28	38.65	529.63	568.28	38.05	530.23	568.28	37.38	530.90	568.28	37.78	530.50	568.28	38.05	530.23
CW-2	556.95	29.80	527.15	NM	NM	NM	556.95	26.18	530.77	556.95	28.71	528.24	556.95	29.96	526.99
CW-3	518.66	20.39	498.27	518.66	20.28	498.38	518.66	19.79	498.87	518.66	19.74	498.92	518.66	19.65	499.01
CW-4	541.55	27.20	514.35	NM	NM	NM	541.55	26.30	515.25	541.55	26.34	515.21	541.55	26.28	515.27
CW-5	NM	NM	NM	470.34	19.60	450.74	470.34	19.35	450.99	470.34	19.50	450.84	470.34	19.42	450.92
CW-6	484.67	9.10	475.57	484.67	9.03	475.64	484.67	8.91	475.76	484.67	9.22	475.45	484.67	8.65	476.02
CW-7	573.78	42.02	531.76	573.78	40.10	533.68	573.78	39.80	533.98	573.78	39.85	533.93	573.78	39.95	533.83
CW-7A	573.91	41.85	532.06	573.91	41.88	532.03	573.91	41.60	532.31	573.91	41.74	532.17	573.91	41.98	531.93
<b>Monitoring Well</b>															
MW-3	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-9	558.78	32.90	525.88	NM	NM	NM	558.78	32.20	526.58	558.78	32.49	526.29	558.78	32.66	526.12
MW-10	567.80	40.75	527.05	NM	NM	NM	567.80	40.21	527.59	567.80	40.35	527.45	567.80	40.42	527.38
MW-11	563.08	27.11	535.97	NM	NM	NM	563.08	24.64	538.44	563.08	25.83	537.25	563.08	26.73	536.35
MW-12	535.93	34.26	501.67	NM	NM	NM	535.93	34.04	501.89	535.93	34.20	501.73	535.93	34.29	501.64
MW-16D	521.59	1.11	520.48	521.59	1.13	520.46	521.59	0.84	520.75	521.59	0.86	520.73	521.59	0.89	520.70
MW-16S	516.60	21.39	495.21	516.60	21.22	495.38	516.60	21.02	495.58	516.60	21.08	495.52	516.60	21.07	495.53
MW-18D	469.20	0.81	468.39	469.20	0.70	468.50	469.20	0.88	468.32	469.20	A	A	479.46	8.14	471.32
MW-18S	469.14	0.90	468.24	469.14	0.85	468.29	469.14	1.90	467.24	469.14	3.18	465.96	469.14	0.77	468.37
MW-20D	573.85	32.00	541.85	573.85	32.10	541.75	573.85	31.36	542.49	573.85	31.53	542.32	573.85	31.80	542.05
MW-20M	574.19	41.32	532.87	574.19	41.35	532.84	574.19	41.33	532.86	574.19	41.22	532.97	574.19	41.33	532.86
MW-20S	574.05	42.19	531.86	574.05	42.25	531.80	574.05	41.93	532.12	574.05	42.10	531.95	574.05	42.30	531.75
MW-31D	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	369.30	17.56	351.74
MW-31S	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	369.28	17.20	352.08
MW-70D	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	416.31	23.20	393.11
MW-70S	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	416.21	23.20	393.01
MW-82	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	382.18	36.23	345.95
MW-102D	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	405.23	12.91	392.32
MW-102S	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	405.41	39.14	366.27
MW-142D	437.78	16.30	421.48	437.78	16.27	421.51	437.78	15.78	422.00	437.78	16.09	421.69	437.78	16.36	421.42
MW-142S	437.44	3.84	433.60	437.44	3.55	433.89	437.44	2.74	434.70	437.44	3.29	434.15	437.44	3.38	434.06
MW-143D	408.81	15.24	393.57	408.81	15.29	393.52	408.81	14.88	393.93	403.71	9.79	393.92	403.71	10.25	393.46
MW-143S	403.56	32.05	371.51	403.56	32.05	371.51	403.56	31.99	371.57	403.56	31.85	371.71	403.56	32.25	371.31
<b>Residential Well</b>															
RW-4 (Folk)	NM	NM	NM	NM	NM	NM	575.93	43.47	532.46	575.93	43.58	532.35	575.93	43.74	532.19
RW-2	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	548.46	21.79	526.67
<b>Staff Gauge</b>															
TATE (S-6) Staff Gauge	488.86	1.40	489.26	488.86	1.40	489.26	488.86	1.09	488.95	488.86	1.04	488.90	488.86	1.05	488.91

MPE: Measuring Point Elevation  
DTW: Depth to Water  
WL Elev: Water level Elevation  
NM: Not Measured  
A: Artesian  
D: Dry  
\*: RW-4 Measurement collected on 10/11/2014  
AN: Anomalous Reading

Table 1  
Former York Naval Ordnance Plant- York, PA  
Groundwater Elevations  
NPBA Extraction System Shutdown Monitoring

Location	8/28/13			11/22/13			1/16/14			5/5/14			10/7/14			9/3/15		
	August 2013 Site Wide Water Levels			November 2013 Site Wide Water Levels			January 2014 Site Wide Water Levels			May 2014 Site Wide Water Levels			October 2014 Site Wide Water Levels *			September 2015 Site Wide Water Levels		
	MPE	DTW	WL Elev	MPE	DTW	WL Elev	MPE	DTW	WL Elev	MPE	DTW	WL Elev	MPE	DTW	WL Elev	MPE	DTW	WL Elev
<b>Collection Wells</b>																		
CW-1	570.07	40.60	529.47	570.07	40.80	529.27	570.07	36.71	533.36	570.07	32.90	537.17	570.07	43.15	526.92	570.07	40.90	529.17
CW-1A	568.28	37.39	530.89	568.28	37.90	530.38	568.28	30.52	537.76	568.28	26.83	541.45	568.28	40.21	528.07	568.28	28.23	540.05
CW-2	556.95	28.97	527.98	556.95	30.75	526.20	556.95	16.28	540.67	556.95	16.81	540.14	556.95	32.32	524.63	556.95	30.20	526.75
CW-3	518.66	19.23	499.43	518.66	19.90	498.76	518.66	17.11	501.55	518.66	15.58	503.08	518.66	18.92	499.74	518.66	16.60	502.06
CW-4	541.55	25.50	516.05	541.55	25.25	516.30	541.55	21.93	519.62	541.55	28.47	513.08	541.55	26.50	515.05	541.55	24.80	516.75
CW-5	470.34	19.42	450.92	470.34		NM	470.34	16.70	453.64	470.34	15.30	455.04	470.34	19.47	450.87	470.34	18.73	451.61
CW-6	484.67	8.00	476.67	484.67	8.00	476.67	484.67	5.33	479.34	484.67	4.46	480.21	484.67	8.51	476.16	484.67	7.75	476.92
CW-7	573.78	39.06	534.72	573.78	39.20	534.58	573.78	32.61	541.17	573.78	20.58	553.20	573.78	41.77	532.01	573.78	39.05	534.73
CW-7A	573.91	41.28	532.63	573.91	41.55	532.36	573.91	35.25	538.66	573.91	31.44	542.47	573.91	44.15	529.76	573.91	42.07	531.84
<b>Monitoring Well</b>																		
MW-3	541.10	65.30	475.80	541.10	65.74	475.36	541.10	58.91	482.19	541.10	53.75	487.35	541.10	67.75	473.35	541.10	66.03	475.07
MW-9	558.78	31.82	526.96	558.78	32.32	526.46	558.78	26.93	531.85	558.78	24.44	534.34	558.78	33.66	525.12	558.78	31.74	527.04
MW-10	567.80	39.60	528.20	567.80	39.77	528.03	567.80	34.52	533.28	567.80	31.61	536.19	567.80	42.03	525.77	567.80	39.85	527.95
MW-11	563.08	26.75	536.33	563.08	28.50	534.58	563.08	18.70	544.38	563.08	19.08	544.00	563.08	30.18	532.90	563.08	27.55	535.53
MW-12	535.93	34.12	501.81	535.93	34.98	500.95	535.93	29.34	506.59	535.93	25.47	510.46	535.93	35.72	500.21	535.93	34.93	501.00
MW-16D	516.51	0.00	516.51	516.51	A	A	516.51	NM	NM	516.51	NM	NM	516.51	NM	NM	516.74	-4.86A	521.60A
MW-16S	516.60	20.85	495.75	516.60	19.25	497.35	516.60	16.65	499.95	516.60	15.31	501.29	516.60	20.83	495.77	516.60	18.75	497.85
MW-18D	479.46	8.91	470.55	464.19	NM	NM	464.19	NM	NM	464.19	NM	NM	464.19	0.53	463.66	464.57	-4.35A	468.92A
MW-18S	469.14	NM	NM	464.12	NM	NM	464.12	NM	NM	464.12	NM	NM	464.12	A	A	464.58	-6.39A	470.97A
MW-20D	573.85	30.43	543.42	573.85	31.10	542.75	573.85	23.18	550.67	573.85	18.87	554.98	573.85	34.43	539.42	573.85	30.45	543.40
MW-20M	574.19	40.62	533.57	574.19	40.80	533.39	574.19	35.00	539.19	574.19	39.40	534.79	574.19	43.59	530.60	574.19	41.86	532.33
MW-20S	574.05	41.65	532.40	574.05	42.08	531.97	574.05	35.30	538.75	574.05	31.39	542.66	574.05	44.55	529.50	574.05	42.38	531.67
MW-31D	369.30	17.47	351.83	369.30	19.27	350.03	369.30	12.86	356.44	369.30	10.43	358.87	369.30	19.53	349.77	369.30	17.94	351.36
MW-31S	369.28	17.06	352.22	369.28	18.98	350.30	369.28	12.52	356.76	369.28	10.41	358.87	369.28	19.26	350.02	369.28	17.56	351.72
MW-70D	416.31	23.50	392.81	416.31	23.87	392.44	416.31	16.45	399.86	416.31	11.40	404.91	416.31	26.24	390.07	416.31	24.28	392.03
MW-70S	416.21	23.14	393.07	416.21	23.50	392.71	416.21	16.70	399.51	416.21	11.64	404.57	416.21	25.75	390.46	416.21	23.97	392.24
MW-82	382.18	36.74	345.44	382.18	37.91	344.27	382.18	31.56	350.62	382.18	29.06	353.12	382.18	37.04	345.14	382.18	36.83	345.35
MW-102D	405.23	12.74	392.49	405.23	13.20	392.03	405.23	5.75	399.48	405.23	0.71	404.52	405.23	42.53	362.70	405.23	13.60	391.63
MW-102S	405.41	38.54	366.87	405.41	40.33	365.08	405.41	31.90	373.51	405.41	26.83	378.58	405.41	15.60	389.81	405.41	40.17	365.24
MW-142D	437.78	16.30	421.48	437.78	16.75	421.03	437.78	12.75	425.03	437.78	11.05	426.73	437.78	17.82	419.96	437.78	15.90	421.88
MW-142S	437.44	3.52	433.92	437.44	3.70	433.74	437.44	0.82	436.62	437.44	0.00	437.44	437.44	4.24	433.20	437.44	2.97	434.47
MW-143D	403.71	10.01	393.70	403.71	10.70	393.01	403.71	3.17	400.54	403.71	0.05	403.66	403.71	12.04	391.67	403.71	9.40	394.31
MW-143S	403.56	34.57	368.99	403.56	33.65	369.91	403.56	25.03	378.53	403.56	21.73	381.83	403.56	36.54	367.02	403.56	33.30	370.26
<b>Residential Well</b>																		
RW-4 (Folk)	575.93	NM	NM	575.93	NM	NM	575.93	NM	NM	575.93	NM	NM	575.93	46.51*	529.42	575.93	44.58*	531.35
RW-2	548.46	21.13	527.33	548.46	NM	NM	548.46	NM	NM	548.46	14.44	534.02	548.46	22.54	525.92	548.46	21.47*	526.99
<b>Staff Gauge</b>																		
TATE (S-6) Staff Gauge	488.86	NM	NM	488.86	NM	NM	488.86	NM	NM	488.86	1.32	489.18	488.86	NM	NM	488.86	NM	NM

MPE: Measuring Point Elevation  
DTW: Depth to Water  
WL Elev: Water level Elevation  
NM: Not Measured  
A: Artesian  
D: Dry

\*: RW-4 Measurement collected on 10/11/2014 and 9/26/2015. RW-2 Measurement collected on 9/16/2015.  
AN: Anomalous Reading

**Table 2**  
**Groundwater Data Summary - NPBA**  
**Former York Naval Ordnance Plant - York, PA**

Location/ID Depth (ft.) Sample Date	PA MSC	PA MSC	Federal	EPA	CW-1	CW-1	CW-1	CW-1	CW-1A	CW-1A	CW-1A	CW-1A	CW-2	CW-2	CW-2	CW-2	CW-3	CW-3	CW-3	CW-3
	UA R (ug/L)	UA NR (ug/L)	MCL (ug/L)	RSL (ug/L)	5/29/13	9/16/13	10/13/14	10/6/15	5/30/13	9/16/13	10/14/14	10/6/15	5/29/13	9/16/13	10/14/14	10/7/15	5/29/13	9/16/13	10/15/14	10/6/15
<b>TOTAL VOC</b>					44	15	3.6	2.49	37.3	28.39	34.75	30.21	15.1	10.17	18	8.88	34.6	120.19	118.03	512.05
<b>Volatile Organic Compound</b>																				
1,1,1,2-Tetrachloroethane	70	70		0.57	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U
1,1,1-Trichloroethane	200	200	200	8000	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U
1,1,2,2-Tetrachloroethane	0.84	4.3		0.076	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U
1,1,2-Trichloroethane	5	5	5	0.28	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U
1,1-Dichloroethane	31	160		2.7	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U
1,1-Dichloroethene	7	7	7	280	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U
1,2-Dibromoethane	0.05	0.05	0.05	0.0075	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U
1,2-Dichloroethane	5	5	5	0.17	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U
1,2-Dichloropropane	5	5	5	0.44	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U
1,4-Dioxane	6.4	32		0.78	200 U	200 U	R	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
2-Butanone	4000	4000		5600	5 U	5 U	5.0 U	5 U	5 U	5 U	5.0 U	5 U	5 U	5 U	5.0 U	5 U	5 U	5 U	5.0 U	5 U
2-Hexanone	11	44		38	5 U	5 U	5.0 U	5 U	5 U	5 U	5.0 U	5 U	5 U	5 U	5.0 U	5 U	5 U	5 U	5.0 U	5 U
4-Methyl-2-Pentanone	2900	8200		1200	5 U	5 U	5.0 U	5 U	5 U	5 U	5.0 U	5 U	5 U	5 U	5.0 U	5 U	5 U	5 U	5.0 U	5 U
Acetone	33000	92000		14000	5 U	5 U	5.0 U	5 U	5 U	5 U	5.0 U	5 U	5 U	5 U	5.0 U	5 U	5.6	74	76	460 J
Acrylonitrile	0.72	3.7		0.052	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Benzene	5	5	5	0.45	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U
Bromochloromethane	90	90		83	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U
Bromodichloromethane	80	80		0.13	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U
Bromoform	80	80		9.2	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	0.88 J	3.1	12
Bromomethane	10	10		7.5	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	0.55 J
Carbon Disulfide	1500	6200		810	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U
Carbon Tetrachloride	5	5	5	0.45	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U
Chlorobenzene	100	100	100	78	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U
Chlorodibromomethane	80	80		0.17	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	0.54 J	1.7
Chloroethane	230	900		21000	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U
Chloroform	80	80		0.22	1 U	1 U	1.0 U	1 U	0.27 J	0.38 J	0.44 J	0.31 J	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U
Chloromethane				190	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U
cis-1,2-Dichloroethene	70	70	70	36	11	5.6	1.8	1.2	1.2	0.31 J	0.51 J	1 U	4.1	0.87 J	2.6	0.78 J	21	32	36	36
cis-1,3-Dichloropropene	6.6	26		0.47	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U
Ethylbenzene	700	700	700	1.5	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U
Methyl tert-butyl ether	20	20		14	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U
Methylene chloride	5	5		11	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U
Styrene	100	100	100	1200	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U
Tetrachloroethene	5	5	5	11	1 U	1 U	1.0 U	0.19 J	0.83 J	1.7	2.8	1.9	1 U	3	1.4	3.2	1.3	2.5	0.41 J	1 U
Toluene	1000	1000	1000	1100	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U
trans-1,2-Dichloroethene	100	100	100	360	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	0.91 J	0.58 J	1.8
trans-1,3-Dichloropropene	6.6	26		0.47	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U
Trichloroethene	5	5	5	0.49	33	9.4	1.8	1.1	35	26	31	28	11	6.3	14	4.9	6.7	9.9	1.4	1 U
Vinyl Chloride	2	2	2	0.019	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U
Xylenes (Total)	10000	10000	10000	190	3 U	3 U	3.0 U	3 U	3 U	3 U	3.0 U	3 U	3 U	3 U	3.0 U	3 U	3 U	3 U	3.0 U	3 U

Blank results = analyte not analyzed. U = Not detected. J = Organics; estimated. B = Organics; blank contamination

**Table 2**  
**Groundwater Data Summary - NPBA**  
**Former York Naval Ordnance Plant - York, PA**

Location/ID Depth (ft.) Sample Date	PA MSC	PA MSC	Federal	EPA	CW-4	CW-4	CW-4	CW-4	CW-5	CW-5	CW-5	CW-5	CW-6	CW-6	CW-6	CW-6	CW-7	CW-7	CW-7	CW-7
	UA R (ug/L)	UA NR (ug/L)	MCL (ug/L)	RSL (ug/L)	5/29/13	9/16/13	10/14/14	10/7/15	5/29/13	9/16/13	10/16/14	10/7/15	5/30/13	9/16/13	10/16/14	10/7/15	5/30/13	9/16/13	10/15/14	10/7/15
<b>TOTAL VOC</b>					82	62.5	42.8	35.66	8.5	14.9	36.7	24.9	170	77.73	47.5	71.5	5.7	2.1	2.53	2.87
<b>Volatile Organic Compound</b>																				
1,1,1,2-Tetrachloroethane	70	70		0.57	1 U	2 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	8 U	1 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U
1,1,1-Trichloroethane	200	200	200	8000	1 U	2 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	8 U	1 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U
1,1,2,2-Tetrachloroethane	0.84	4.3		0.076	1 U	2 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	8 U	1 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U
1,1,2-Trichloroethane	5	5	5	0.28	1 U	2 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	8 U	1 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U
1,1-Dichloroethane	31	160		2.7	1 U	2 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	8 U	1 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U
1,1-Dichloroethene	7	7	7	280	1 U	2 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	8 U	1 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U
1,2-Dibromoethane	0.05	0.05	0.05	0.0075	1 U	2 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	8 U	1 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U
1,2-Dichloroethane	5	5	5	0.17	1 U	2 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	8 U	1 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U
1,2-Dichloropropane	5	5	5	0.44	1 U	2 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	8 U	1 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U
1,4-Dioxane	6.4	32		0.78	200 U	400 U	200 U	200 U	200 U	200 U	200 U	200 U	1600 U	200 U	200 UJ	200 UJ	200 U	200 U	200 U	200 U
2-Butanone	4000	4000		5600	5 U	10 U	5.0 U	5 U	5 U	5 U	5.0 U	5 U	40 U	5 U	5.0 UJ	5 U	5 U	5 U	5.0 U	5 U
2-Hexanone	11	44		38	5 U	10 U	5.0 U	5 U	5 U	5 U	5.0 U	5 U	40 U	5 U	5.0 UJ	5 U	5 U	5 U	5.0 U	5 U
4-Methyl-2-Pentanone	2900	8200		1200	5 U	10 U	5.0 U	5 U	5 U	5 U	5.0 U	5 U	40 U	5 U	5.0 UJ	5 U	5 U	5 U	5.0 U	5 U
Acetone	33000	92000		14000	5 U	10 U	5.0 U	5 U	5 U	5 U	5.0 U	5 U	40 U	14	5.0 UJ	5 UJ	5 U	5 U	5.0 U	5 U
Acrylonitrile	0.72	3.7		0.052	20 U	40 U	20 U	20 U	20 U	20 U	20 U	20 U	160 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Benzene	5	5	5	0.45	1 U	2 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	8 U	1 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U
Bromochloromethane	90	90		83	1 U	2 U	1.0 U	1 UJ	1 U	1 U	1.0 U	1 UJ	8 U	1 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U
Bromodichloromethane	80	80		0.13	1 U	2 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	8 U	1 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U
Bromoform	80	80		9.2	1 U	2 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	8 U	1.44 J	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U
Bromomethane	10	10		7.5	1 U	2 U	1.0 U	1 UJ	1 U	1 U	1.0 U	1 UJ	8 U	1 U	1.0 UJ	1 UJ	1 U	1 U	1.0 U	1 UJ
Carbon Disulfide	1500	6200		810	1 U	2 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	8 U	1 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U
Carbon Tetrachloride	5	5	5	0.45	1 U	2 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	8 U	1 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U
Chlorobenzene	100	100	100	78	1 U	2 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	8 U	1 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U
Chlorodibromomethane	80	80		0.17	1 U	2 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	8 U	1 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U
Chloroethane	230	900		21000	1 U	2 U	1.0 U	1 UJ	1 U	1 U	1.0 U	1 UJ	8 U	1 U	1.0 UJ	1 UJ	1 U	1 U	1.0 U	1 UJ
Chloroform	80	80		0.22	1 U	2 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	8 U	1 U	1.0 UJ	1 U	1.4	1 U	0.92 J	0.83 J
Chloromethane				190	1 U	2 U	1.0 U	0.3 J	1 U	1 U	1.0 U	1 U	8 U	1 U	1.0 UJ	1 U	1 U	1 U	1.0 U	0.28 J
cis-1,2-Dichloroethene	70	70	70	36	29	40	36	31	1.9	2.1	4.5	4.6	32	19	20 J	24 J	1 U	1 U	1.0 U	1 U
cis-1,3-Dichloropropene	6.6	26		0.47	1 U	2 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	8 U	1 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U
Ethylbenzene	700	700	700	1.5	1 U	2 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	8 U	1 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U
Methyl tert-butyl ether	20	20		14	1 U	2 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	8 U	1 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U
Methylene chloride	5	5		11	1 U	2 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	8 U	1 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U
Styrene	100	100	100	1200	1 U	2 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	8 U	1 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U
Tetrachloroethene	5	5	5	11	6	3.5	1.2	0.86 J	2.5	7.4	24	15	120	36	22 J	40 J	1 U	0.6 J	0.85 J	1
Toluene	1000	1000	1000	1100	1 U	2 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	8 U	1 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U
trans-1,2-Dichloroethene	100	100	100	360	1 U	2 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	8 U	0.89 J	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U
trans-1,3-Dichloropropene	6.6	26		0.47	1 U	2 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	8 U	1 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U
Trichloroethene	5	5	5	0.49	47	19	5.6	3.5	4.1	5.4	8.2	5.3	18	7.4	5.5 J	7.5 J	4.3	1.5	0.76 J	0.76 J
Vinyl Chloride	2	2	2	0.019	1 U	2 U	1.0 U	1 UJ	1 U	1 U	1.0 U	1 UJ	8 U	1 U	1.0 UJ	1 UJ	1 U	1 U	1.0 U	1 UJ
Xylenes (Total)	10000	10000	10000	190	3 U	6 U	3.0 U	3 U	3 U	3 U	3.0 U	3 U	24 U	3 U	3.0 UJ	3 U	3 U	3 U	3.0 U	3 U

Blank results = analyte not analyzed. U = Not detected. J = Organics; estimated. B = Organics; blank contamination



**Table 2**  
**Groundwater Data Summary - NPBA**  
**Former York Naval Ordnance Plant - York, PA**

Location/ID Depth (ft.) Sample Date	PA MSC	PA MSC	Federal	EPA	CW-7A	CW-7A	CW-7A	CW-7A	CW-7A Dup	MW-3	MW-3	MW-3	MW-9	MW-9	MW-9	MW-9	MW-11	MW-11	MW-11	MW-11
	UA R (ug/L)	UA NR (ug/L)	MCL (ug/L)	RSL (ug/L)	5/29/13	9/16/13	10/15/14	10/6/15	10/6/15	9/11/13	10/14/14	9/21/15	6/10/13	9/12/13	10/16/14	9/22/15	6/10/13	9/10/13	10/16/14	9/23/15
<b>TOTAL VOC</b>					84.2	165.8	99.4	142	132.5	36.29	34.91	34.41	110	76	71.22	70	5.07	5.69	4.05	3.4
<b>Volatile Organic Compound</b>																				
1,1,1,2-Tetrachloroethane	70	70		0.57	5 U	5 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U	5 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1.0 U	1.0 U
1,1,1-Trichloroethane	200	200	200	8000	5 U	5 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U	5 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	0.84	4.3		0.076	5 U	5 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U	5 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1.0 U	1.0 U
1,1,2-Trichloroethane	5	5	5	0.28	5 U	5 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U	5 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1.0 U	1.0 U
1,1-Dichloroethane	31	160		2.7	5 U	5 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U	5 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1.0 U	1.0 U
1,1-Dichloroethene	7	7	7	280	5 U	5 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U	5 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1.0 U	1.0 U
1,2-Dibromoethane	0.05	0.05	0.05	0.0075	5 U	5 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U	5 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	5	0.17	5 U	5 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U	5 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1.0 U	1.0 U
1,2-Dichloropropane	5	5	5	0.44	5 U	5 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U	5 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1.0 U	1.0 U
1,4-Dioxane	6.4	32		0.78	1000 U	1000 U	200 UJ	200 U	200 U	200 U	200 U	200 U	1000 U	1000 U	200 UJ	200 U	200 U	200 U	200 U	200 U
2-Butanone	4000	4000		5600	25 U	25 U	5.0 UJ	5 U	5 U	5 U	5.0 U	5 U	25 U	25 U	5.0 UJ	5.0 U	5 U	5 U	5.0 U	5.0 U
2-Hexanone	11	44		38	25 U	25 U	5.0 UJ	5 U	5 U	5 U	5.0 U	5 UJ	25 U	25 U	5.0 UJ	5 UJ	5 U	5 U	5.0 U	5 UJ
4-Methyl-2-Pentanone	2900	8200		1200	25 U	25 U	5.0 UJ	5 U	5 U	5 U	5.0 U	5 U	25 U	25 U	5.0 UJ	5 UJ	5 U	5 U	5.0 U	5 UJ
Acetone	33000	92000		14000	25 U	25 U	5.0 UJ	5 U	5 U	5 U	5.0 U	5 U	25 U	25 U	5.0 UJ	5.0 U	5 U	5 U	5.0 U	5.0 U
Acrylonitrile	0.72	3.7		0.052	100 U	100 U	20 UJ	20 U	20 U	20 U	20 U	20 U	100 U	100 U	20 UJ	20 U	20 U	20 U	20 U	20 U
Benzene	5	5	5	0.45	5 U	5 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U	5 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1.0 U	1.0 U
Bromochloromethane	90	90		83	5 U	5 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U	5 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1.0 U	1.0 U
Bromodichloromethane	80	80		0.13	5 U	5 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U	5 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1.0 U	1.0 U
Bromoform	80	80		9.2	5 U	5 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U	5 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1.0 U	1.0 U
Bromomethane	10	10		7.5	5 U	5 U	1.0 UJ	1 UJ	1 UJ	1 U	1.0 U	1 U	5 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1.0 U	1.0 U
Carbon Disulfide	1500	6200		810	5 U	5 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U	5 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1.0 U	1.0 U
Carbon Tetrachloride	5	5	5	0.45	5 U	5 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U	5 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1.0 U	1.0 U
Chlorobenzene	100	100	100	78	5 U	5 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U	5 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1.0 U	1.0 U
Chlorodibromomethane	80	80		0.17	5 U	5 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U	5 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1.0 U	1.0 U
Chloroethane	230	900		21000	5 U	5 U	1.0 UJ	1 UJ	1 UJ	1 U	1.0 U	1 U	5 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1.0 U	1.0 U
Chloroform	80	80		0.22	5 U	5 U	1.2 J	1.4	1.3	2.9	2.6	2.2	5 U	5 U	1.0 UJ	1.0 U	0.31 J	0.45 J	0.41 J	0.43 J
Chloromethane				190	5 U	5 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U	5 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	70	70	70	36	5 U	1.5 J	3.7 J	2	2	0.66 J	0.75 J	0.63 J	34	32	30 J	36	1 U	1 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	6.6	26		0.47	5 U	5 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U	5 U	5 U	1.0 UJ	1 UJ	1 U	1 U	1.0 U	1 UJ
Ethylbenzene	700	700	700	1.5	5 U	5 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U	5 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1.0 U	1.0 U
Methyl tert-butyl ether	20	20		14	5 U	5 U	1.0 UJ	1 U	1 U	0.26 J	0.23 J	0.19 J	5 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1.0 U	1.0 U
Methylene chloride	5	5		11	1.8 J	5 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U	5 U	1 U	1.0 UJ	1.0 U	1 U	1 U	1.0 U	1.0 U
Styrene	100	100	100	1200	5 U	5 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U	5 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1.0 U	1.0 U
Tetrachloroethene	5	5	5	11	1.4 J	4.3 J	5.5 J	8.6	9.2	0.47 J	0.33 J	0.39 J	5 U	5 U	0.22 J	1.0 U	0.26 J	0.34 J	0.24 J	0.37 J
Toluene	1000	1000	1000	1100	5 U	5 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U	5 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	100	100	100	360	5 U	5 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U	5 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	6.6	26		0.47	5 U	5 U	1.0 UJ	1 U	1 U	1 U	1.0 U	1 U	5 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1.0 U	1.0 U
Trichloroethene	5	5	5	0.49	81	160	89	130	120	32	31	31	76	44	41 J	29	4.5	4.9	3.4	2.6
Vinyl Chloride	2	2	2	0.019	5 U	5 U	1.0 UJ	1 UJ	1 UJ	1 U	1.0 U	1 U	5 U	5 U	1.0 UJ	5	1 U	1 U	1.0 U	1.0 U
Xylenes (Total)	10000	10000	10000	190	15 U	15 U	3.0 UJ	3 U	3 U	3 U	3.0 U	3 U	15 U	15 U	3.0 UJ	3.0 U	3 U	3 U	3.0 U	3.0 U

Blank results = analyte not analyzed. U = Not detected. J = Organics; estimated. B = Organics; blank contamination

**Table 2**  
**Groundwater Data Summary - NPBA**  
**Former York Naval Ordnance Plant - York, PA**

Location/ID Depth (ft.) Sample Date	PA MSC	PA MSC	Federal	EPA	MW-12	MW-12 Dup	MW-12	MW-12	MW-12	MW-12	MW-16D	MW-16D	MW-16D Dup	MW-16D	MW-16D	MW-16S	MW-16S	MW-16S	MW-18D
	UA R (ug/L)	UA NR (ug/L)	MCL (ug/L)	RSL (ug/L)	5/31/13	5/31/13	9/12/13	10/17/14	9/22/15	6/11/13	9/10/13	9/10/13	9/10/13	10/16/14	9/23/15	9/10/13	10/22/14	9/23/15	6/11/13
<b>TOTAL VOC</b>					116.8	84.8	179	142.4	178.4	23.9	23.8	25.8	18.4	24.1	527.2	157.3	54.58	937	
<b>Volatile Organic Compound</b>																			
1,1,1,2-Tetrachloroethane	70	70		0.57	4 U	2 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	25 U	1.0 U	1.0 U	40 U	
1,1,1-Trichloroethane	200	200	200	8000	4 UJ	2 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	25 U	1.0 U	1.0 U	40 U	
1,1,2,2-Tetrachloroethane	0.84	4.3		0.076	4 U	2 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	25 U	1.0 U	1.0 U	40 U	
1,1,2-Trichloroethane	5	5	5	0.28	4 U	2 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	25 U	1.0 U	1.0 U	40 U	
1,1-Dichloroethane	31	160		2.7	4 U	2 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	25 U	1.0 U	1.0 U	40 U	
1,1-Dichloroethene	7	7	7	280	4 UJ	2 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	25 U	1.0 U	1.0 U	40 U	
1,2-Dibromoethane	0.05	0.05	0.05	0.0075	4 U	2 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	25 U	1.0 U	1.0 U	40 U	
1,2-Dichloroethane	5	5	5	0.17	4 UJ	2 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	25 U	1.0 U	1.0 U	40 U	
1,2-Dichloropropane	5	5	5	0.44	4 U	2 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	25 U	1.0 U	1.0 U	40 U	
1,4-Dioxane	6.4	32		0.78	800 U	400 U	1000 U	200 UJ	200 U	200 U	200 U	200 U	200 U	200 U	5000 U	200 U	200 U	8000 U	
2-Butanone	4000	4000		5600	20 U	10 U	25 U	5.0 UJ	5 UJ	5 U	5 U	5 U	5.0 U	5.0 U	130 U	5.0 U	5.0 U	200 U	
2-Hexanone	11	44		38	20 UJ	10 U	25 U	5.0 UJ	5 UJ	5 U	5 U	5 U	5.0 U	5 UJ	130 U	5.0 U	5.0 U	200 U	
4-Methyl-2-Pentanone	2900	8200		1200	20 UJ	10 U	25 U	5.0 UJ	5 UJ	5 U	5 U	5 U	5.0 U	5 UJ	130 U	5.0 U	5.0 U	200 U	
Acetone	33000	92000		14000	20 UJ	10 U	25 U	5.0 UJ	5 UJ	5 U	5 U	5 U	5.0 U	5 UJ	130 U	5.0 U	5.0 U	200 U	
Acrylonitrile	0.72	3.7		0.052	80 U	40 U	100 U	20 UJ	20 U	20 U	20 U	20 U	20 U	20 U	500 U	20 U	20 U	800 U	
Benzene	5	5	5	0.45	4 U	2 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	25 U	1.0 U	1.0 U	40 U	
Bromochloromethane	90	90		83	4 U	2 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	25 U	1.0 U	1.0 U	40 U	
Bromodichloromethane	80	80		0.13	4 U	2 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	25 U	1.0 U	1.0 U	40 U	
Bromoform	80	80		9.2	4 U	2 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	25 U	1.0 U	1 UJ	40 U	
Bromomethane	10	10		7.5	4 U	2 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	25 U	1.0 U	1.0 U	40 U	
Carbon Disulfide	1500	6200		810	4 UJ	2 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	25 U	1.0 U	1.0 U	40 U	
Carbon Tetrachloride	5	5	5	0.45	4 UJ	2 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	25 U	1.0 U	1.0 U	40 U	
Chlorobenzene	100	100	100	78	4 U	2 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	25 U	1.0 U	1.0 U	40 U	
Chlorodibromomethane	80	80		0.17	4 U	2 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	25 U	1.0 U	1.0 U	40 U	
Chloroethane	230	900		21000	4 U	2 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	25 U	1.0 U	1.0 U	40 U	
Chloroform	80	80		0.22	4 U	2 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	6.2 J	10 U	1.0 U	40 U	
Chloromethane				190	4 U	2 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	25 U	1.0 U	0.28 J	40 U	
cis-1,2-Dichloroethene	70	70	70	36	47 J	25	42	47 J	52	3.9	7.8	6.8	3.4	5.1	40	38	42	350	
cis-1,3-Dichloropropene	6.6	26		0.47	4 U	2 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1 U	1.0 U	1 UJ	25 U	1.0 U	1 UJ	40 U	
Ethylbenzene	700	700	700	1.5	4 U	2 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	25 U	1.0 U	1.0 U	40 U	
Methyl tert-butyl ether	20	20		14	4 UJ	2 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	25 U	1.0 U	1.0 U	40 U	
Methylene chloride	5	5		11	1.1 J	2 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	12 J	1.0 U	1.0 U	17 J	
Styrene	100	100	100	1200	4 U	2 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	25 U	1.0 U	1.0 U	40 U	
Tetrachloroethene	5	5	5	11	1.9 J	1.4 J	4.7 J	5.4 J	6.4	1 U	1 U	1 U	1.0 U	1.0 U	450	110	6.7	40 U	
Toluene	1000	1000	1000	1100	4 U	2 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	25 U	1.0 U	1.0 U	40 U	
trans-1,2-Dichloroethene	100	100	100	360	4 UJ	0.47 J	2.3 J	1.0 UJ	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	25 U	1.0 U	1.0 U	40 U	
trans-1,3-Dichloropropene	6.6	26		0.47	4 U	2 U	5 U	1.0 UJ	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	25 U	1.0 U	1.0 U	40 U	
Trichloroethene	5	5	5	0.49	63	57	130	90 J	120	20	16	19	15	19	19 J	9.3	5.6	560	
Vinyl Chloride	2	2	2	0.019	3.8 J	0.93 J	5 U	1.0 UJ	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	25 U	1.0 U	1.0 U	10 J	
Xylenes (Total)	10000	10000	10000	190	12 U	6 U	15 U	3.0 UJ	3.0 U	3 U	3 U	3 U	3.0 U	3.0 U	75 U	3.0 U	3.0 U	120 U	

Blank results = analyte not analyzed. U = Not detected. J = Organics; estimated. B = Organics; blank contamination

**Table 2**  
**Groundwater Data Summary - NPBA**  
**Former York Naval Ordnance Plant - York, PA**

Location/ID Depth (ft.) Sample Date	PA MSC	PA MSC	Federal	EPA	MW-18D	MW-18D	MW-18D	MW-18S	MW-18S	MW-18S	MW-18S	MW-20D	MW-20D	MW-20D	MW-20D	MW-20M	MW-20M	MW-20M
	UA R (ug/L)	UA NR (ug/L)	MCL (ug/L)	RSL (ug/L)	9/10/13	10/23/14	9/24/15	6/11/13	9/9/13	10/23/14	9/25/15	6/18/13	9/11/13	10/23/14	10/1/15	9/13/13	10/29/14	9/30/15
<b>TOTAL VOC</b>					112.9	22.68	30.1	333.8	119.7	12.84	33.85	0.61	0.8	0.34	0.36	21.6	0.85	14.3
<b>Volatiles Organic Compound</b>																		
1,1,1,2-Tetrachloroethane	70	70		0.57	5 U	1.0 U	1.0 U	10 U	5 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1 U
1,1,1-Trichloroethane	200	200	200	8000	5 U	1.0 U	1.0 U	10 U	5 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	0.84	4.3		0.076	5 U	1.0 U	1.0 U	10 U	5 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
1,1,2-Trichloroethane	5	5	5	0.28	5 U	1.0 U	1.0 U	10 U	5 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
1,1-Dichloroethane	31	160		2.7	5 U	1.0 U	1.0 U	10 U	5 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
1,1-Dichloroethene	7	7	7	280	5 U	1.0 U	1.0 U	10 U	5 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
1,2-Dibromoethane	0.05	0.05	0.05	0.0075	5 U	1.0 U	1.0 U	10 U	5 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	5	0.17	5 U	1.0 U	1.0 U	10 U	5 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
1,2-Dichloropropane	5	5	5	0.44	5 U	1.0 U	1.0 U	10 U	5 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
1,4-Dioxane	6.4	32		0.78	1000 U	200 U	200 U	2000 U	1000 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
2-Butanone	4000	4000		5600	25 U	5.0 U	5.0 U	50 U	25 U	5.0 U	5 U	5 U	5 U	5.0 U	5 U	5 U	5.0 U	5.0 U
2-Hexanone	11	44		38	25 U	5.0 U	5.0 U	50 U	25 U	5.0 U	5 U	5 U	5 U	5.0 U	5 U	5 U	5.0 U	5.0 U
4-Methyl-2-Pentanone	2900	8200		1200	25 U	5.0 U	5.0 U	50 U	25 U	5.0 U	5 U	5 U	5 U	5.0 U	5 U	5 U	5.0 U	5.0 U
Acetone	33000	92000		14000	25 U	5.0 U	5.0 U	50 U	25 U	5.0 U	5 U	5 U	5 U	5.0 U	5 U	5 U	5.0 U	5.0 U
Acrylonitrile	0.72	3.7		0.052	100 U	20 U	20 U	200 U	100 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Benzene	5	5	5	0.45	5 U	1.0 U	1.0 U	10 U	5 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Bromochloromethane	90	90		83	5 U	1.0 U	1.0 U	10 U	5 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Bromodichloromethane	80	80		0.13	5 U	1.0 U	1.0 U	10 U	5 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Bromoform	80	80		9.2	5 U	1.0 U	1.0 U	10 U	5 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Bromomethane	10	10		7.5	5 U	1.0 U	1.0 U	10 U	5 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Carbon Disulfide	1500	6200		810	5 U	1.0 U	1.0 U	10 U	5 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Carbon Tetrachloride	5	5	5	0.45	5 U	1.0 U	1.0 U	10 U	5 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Chlorobenzene	100	100	100	78	5 U	1.0 U	1.0 U	10 U	5 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Chlorodibromomethane	80	80		0.17	5 U	1.0 U	1.0 U	10 U	5 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Chloroethane	230	900		21000	5 U	1.0 U	1 U	10 U	5 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Chloroform	80	80		0.22	1.2 J	10 U	1.0 U	10 U	5 U	1.0 U	1 U	0.45 J	0.46 J	0.34 J	0.36 J	1.4	1.0 U	1
Chloromethane				190	5 U	1.0 U	1.0 U	10 U	5 U	1.0 U	0.28 J	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	70	70	70	36	66	14	20	110	71	7	22	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	6.6	26		0.47	5 U	1.0 U	1.0 U	10 U	5 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Ethylbenzene	700	700	700	1.5	5 U	1.0 U	1.0 U	10 U	5 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Methyl tert-butyl ether	20	20		14	5 U	1.0 U	1.0 U	10 U	5 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Methylene chloride	5	5		11	2.1 J	1.0 U	1.0 U	10 U	2 J	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Styrene	100	100	100	1200	5 U	1.0 U	1.0 U	10 U	5 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Tetrachloroethene	5	5	5	11	5 U	1.0 U	1.0 U	10 U	5 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	0.30 J
Toluene	1000	1000	1000	1100	5 U	1.0 U	1.0 U	10 U	5 U	1.0 U	1 U	0.16 J	0.34 J	1.0 U	1 U	2.2	1.0 U	1.0 U
trans-1,2-Dichloroethene	100	100	100	360	5 U	1.0 U	1.0 U	10 U	5 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	6.6	26		0.47	5 U	1.0 U	1.0 U	10 U	5 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Trichloroethene	5	5	5	0.49	42	8.1	9.5	220	45	5.5	11	1 U	1 U	1.0 U	1 U	18	0.85 J	13
Vinyl Chloride	2	2	2	0.019	1.6 J	0.58 J	0.60 J	3.8 J	1.7 J	0.34 J	0.57 J	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Xylenes (Total)	10000	10000	10000	190	15 U	3.0 U	3.0 U	30 U	15 U	3.0 U	3 U	3 U	3 U	3.0 U	3 U	3 U	3.0 U	3.0 U

Blank results = analyte not analyzed. U = Not detected. J = Organics; estimated. B = Organics; blank contamination

**Table 2**  
**Groundwater Data Summary - NPBA**  
**Former York Naval Ordnance Plant - York, PA**

Location/ID Depth (ft.) Sample Date	PA MSC	PA MSC	Federal	EPA	MW-20S	MW-20S	MW-20S	MW-20S	MW-77	MW-77	MW-82	MW-82	MW-82 Dup	MW-82	MW-102D	MW-102D	MW-102D	MW-102S
	UA R (ug/L)	UA NR (ug/L)	MCL (ug/L)	RSL (ug/L)	6/6/13	9/11/13	10/17/14	9/24/15	9/9/13	10/17/14	9/3/13	10/23/14	10/23/14	9/28/15	9/11/13	10/21/14	10/2/15	9/12/13
<b>TOTAL VOC</b>					237.4	95.5	119.1	87.8	1968	1748.8	32.68	32.19	30.39	30.09	158	162.35	141.45	70.9
<b>Volatile Organic Compound</b>																		
1,1,1,2-Tetrachloroethane	70	70		0.57	5 U	5 U	1.0 UJ	1.0 U	50 U	5.0 UJ	1 U	1.0 U	1.0 U	1.0 U	10 U	1 U	1.0 U	1 U
1,1,1-Trichloroethane	200	200	200	8000	5 U	5 U	1.0 UJ	1.0 U	50 U	5.0 UJ	1 U	1.0 U	1.0 U	1.0 U	10 U	1 U	1.0 U	14
1,1,2,2-Tetrachloroethane	0.84	4.3		0.076	5 U	5 U	1.0 UJ	1.0 U	50 U	5.0 UJ	1 U	1.0 U	1.0 U	1.0 U	10 U	1 U	1.0 U	1 U
1,1,2-Trichloroethane	5	5	5	0.28	5 U	5 U	1.0 UJ	1.0 U	50 U	5.0 UJ	1 U	1.0 U	1.0 U	1.0 U	10 U	1 U	1.0 U	1 U
1,1-Dichloroethane	31	160		2.7	5 U	5 U	1.0 UJ	1.0 U	50 U	5.0 UJ	0.48 J	0.58 J	1.0 U	0.50 J	10 U	1 U	1.0 U	1.6
1,1-Dichloroethene	7	7	7	280	5 U	5 U	1.0 UJ	1.0 U	50 U	5.0 UJ	1 U	0.41 J	0.39 J	0.39 J	10 U	1 U	1.0 U	9.1
1,2-Dibromoethane	0.05	0.05	0.05	0.0075	5 U	5 U	1.0 UJ	1.0 U	50 U	5.0 UJ	1 U	1.0 U	1.0 U	1.0 U	10 U	1 U	1.0 U	1 U
1,2-Dichloroethane	5	5	5	0.17	5 U	5 U	1.0 UJ	1.0 U	50 U	5.0 UJ	1 U	1.0 U	1.0 U	1.0 U	10 U	1 U	1.0 U	1 U
1,2-Dichloropropane	5	5	5	0.44	5 U	5 U	1.0 UJ	1.0 U	50 U	5.0 UJ	1 U	1.0 U	1.0 U	1.0 U	10 U	1 U	1.0 U	1 U
1,4-Dioxane	6.4	32		0.78	1000 U	1000 U	200 UJ	200 U	10000 U	1000 UJ	200 U	200 U	200 U	200 U	2000 U	200 U	200 UJ	200 U
2-Butanone	4000	4000		5600	25 U	25 U	5.0 UJ	5.0 U	250 U	25 UJ	5 U	5.0 U	5.0 U	5.0 U	50 U	5 U	5.0 U	5 U
2-Hexanone	11	44		38	25 U	25 U	5.0 UJ	5.0 U	250 U	25 UJ	5 U	5.0 U	5.0 U	5.0 U	50 U	5 U	5.0 U	5 U
4-Methyl-2-Pentanone	2900	8200		1200	25 U	25 U	5.0 UJ	5.0 U	250 U	25 UJ	5 U	5.0 U	5.0 U	5.0 U	50 U	5 U	5.0 U	5 U
Acetone	33000	92000		14000	25 U	25 U	5.0 UJ	5.0 U	250 U	25 UJ	5 U	5.0 U	5.0 U	5.0 U	50 U	5 U	5 UJ	5 U
Acrylonitrile	0.72	3.7		0.052	100 U	100 U	20 UJ	20 U	1000 U	100 UJ	20 U	20 U	20 U	20 U	200 U	20 U	20 U	20 U
Benzene	5	5	5	0.45	5 U	5 U	1.0 UJ	1.0 U	1300	1200 J	1 U	1.0 U	1.0 U	1.0 U	10 U	1 U	1.0 U	1 U
Bromochloromethane	90	90		83	5 U	5 U	1.0 UJ	1.0 U	50 U	5.0 UJ	1 U	1.0 U	1.0 U	1.0 U	10 U	1 U	1.0 U	1 U
Bromodichloromethane	80	80		0.13	5 U	5 U	1.0 UJ	1.0 U	50 U	5.0 UJ	1 U	1.0 U	1.0 U	1.0 U	10 U	1 U	1.0 U	1 U
Bromoform	80	80		9.2	5 U	5 U	1.0 UJ	1.0 U	50 U	5.0 UJ	1 U	1.0 U	1.0 U	1.0 U	10 U	1 U	1.0 U	1 U
Bromomethane	10	10		7.5	5 U	5 U	1.0 UJ	1.0 U	50 U	5.0 UJ	1 U	1.0 U	1.0 U	1.0 U	10 U	1 U	1 UJ	1 U
Carbon Disulfide	1500	6200		810	5 U	5 U	1.0 UJ	1.0 U	50 U	5.0 UJ	1 U	1.0 U	1.0 U	1.0 U	10 U	1 U	1.0 U	1 U
Carbon Tetrachloride	5	5	5	0.45	5 U	5 U	1.0 UJ	1.0 U	50 U	5.0 UJ	1 U	1.0 U	1.0 U	1.0 U	10 U	1 U	1.0 U	1 U
Chlorobenzene	100	100	100	78	5 U	5 U	1.0 UJ	1.0 U	50 U	5.0 UJ	1 U	1.0 U	1.0 U	1.0 U	10 U	1 U	1.0 U	1 U
Chlorodibromomethane	80	80		0.17	5 U	5 U	1.0 UJ	1.0 U	50 U	5.0 UJ	1 U	1.0 U	1.0 U	1.0 U	10 U	1 U	1.0 U	1 U
Chloroethane	230	900		21000	5 U	5 U	1.0 UJ	1.0 U	50 U	5.0 UJ	1 U	1.0 U	1.0 U	1 UJ	10 U	1 U	1 UJ	1 U
Chloroform	80	80		0.22	1.1 J	2.8 J	1.7 J	1.8	50 U	5.0 UJ	1 U	1.0 U	1.0 U	1.0 U	10 U	0.35 J	0.45 J	1 U
Chloromethane				190	5 U	5 U	1.0 UJ	1.0 U	50 U	9.8 J	1 U	1.0 U	1.0 U	1.0 U	10 U	1 U	1.0 U	1 U
cis-1,2-Dichloroethene	70	70	70	36	4.1 J	5 U	1.6 J	1.2	50 U	5.0 UJ	22	22	21	19 J	9.2 J	11	10	5.2
cis-1,3-Dichloropropene	6.6	26		0.47	5 U	5 U	1.0 UJ	1.0 U	50 U	5.0 UJ	1 U	1.0 U	1.0 U	1.0 U	10 U	1 U	1.0 U	1 U
Ethylbenzene	700	700	700	1.5	5 U	5 U	1.0 UJ	1.0 U	99	92 J	1 U	1.0 U	1.0 U	1.0 U	10 U	1 U	1.0 U	1 U
Methyl tert-butyl ether	20	20		14	5 U	5 U	1.0 UJ	1.0 U	380	350 J	1 U	1.0 U	1.0 U	1.0 U	10 U	1 U	1.0 U	1 U
Methylene chloride	5	5		11	2.2 J	3.8 U	1.0 UJ	1.0 U	41 J	5.0 UJ	1 U	1.0 U	1.0 U	1.0 U	2.3 U	1 U	1.0 U	1 U
Styrene	100	100	100	1200	5 U	5 U	1.0 UJ	1.0 U	50 U	5.0 UJ	1 U	1.0 U	1.0 U	1.0 U	10 U	1 U	1.0 U	1 U
Tetrachloroethene	5	5	5	11	10	2.7 J	5.8 J	3.8	50 U	5.0 UJ	1.7	1.9	1.7	1.9	8.8 J	11	11	12
Toluene	1000	1000	1000	1100	5 U	5 U	1.0 UJ	1.0 U	70	45 J	1 U	1.0 U	1.0 U	1.0 U	10 U	1 U	1.0 U	1 U
trans-1,2-Dichloroethene	100	100	100	360	5 U	5 U	1.0 UJ	1.0 U	50 U	5.0 UJ	1 U	1.0 U	1.0 U	1.0 U	10 U	1 U	1.0 U	1 U
trans-1,3-Dichloropropene	6.6	26		0.47	5 U	5 U	1.0 UJ	1.0 U	50 U	5.0 UJ	1 U	1.0 U	1.0 U	1.0 U	10 U	1 U	1.0 U	1 U
Trichloroethene	5	5	5	0.49	220	90	110 J	81	50 U	5.0 UJ	8.5	7.3	7.3	8.3	140	140	120	29
Vinyl Chloride	2	2	2	0.019	5 U	5 U	1.0 UJ	1.0 U	50 U	5.0 UJ	1 U	1.0 U	1.0 U	1.0 U	10 U	1 U	1 UJ	1 U
Xylenes (Total)	10000	10000	10000	190	15 U	15 U	3.0 UJ	3.0 U	78 J	52 J	3 U	3.0 U	3.0 U	3.0 U	30 U	3 U	3.0 U	3 U

Blank results = analyte not analyzed. U = Not detected. J = Organics; estimated. B = Organics; blank contamination

**Table 2**  
**Groundwater Data Summary - NPBA**  
**Former York Naval Ordnance Plant - York, PA**

Location/ID Depth (ft.) Sample Date	PA MSC	PA MSC	Federal	EPA	MW-102S	MW-102S Dup	MW-102S	MW-103D	MW-103D	MW-103D Dup	MW-103D	MW-103S	MW-103S	MW-103S	MW-142D	MW-142D
	UA R (ug/L)	UA NR (ug/L)	MCL (ug/L)	RSL (ug/L)	10/21/14	10/21/14	10/2/15	9/10/13	10/17/14	10/17/14	10/2/15	9/11/13	10/17/14	10/2/15	5/31/13	9/10/13
<b>TOTAL VOC</b>					64.32	70.3	52.82	92.07	86.89	86.87	30.04	194.7	169.93	130.44	9.8	5.39
<b>Volatile Organic Compound</b>																
1,1,1,2-Tetrachloroethane	70	70		0.57	1 U	1 U	1.0 U	5 U	1.0 UJ	1.0 UJ	1.0 U	10 U	1.0 UJ	1.0 U	1 U	1 U
1,1,1-Trichloroethane	200	200	200	8000	9.5	11	3.8	5 U	1.0 UJ	1.0 UJ	1.0 U	10 U	1.3 J	1.1	1 UJ	1 U
1,1,2,2-Tetrachloroethane	0.84	4.3		0.076	1 U	1 U	1.0 U	5 U	1.0 UJ	1.0 UJ	1.0 U	10 U	1.0 UJ	1.0 U	1 U	1 U
1,1,2-Trichloroethane	5	5	5	0.28	1 U	1 U	1.0 U	5 U	1.0 UJ	1.0 UJ	1.0 U	10 U	1.0 UJ	1.0 U	1 U	1 U
1,1-Dichloroethane	31	160		2.7	0.92 J	1	0.62 J	5 U	1.0 UJ	1.0 UJ	1.0 U	10 U	0.22 J	0.16 J	1 U	1 U
1,1-Dichloroethene	7	7	7	280	8.9	9.8	5.7	5 U	1.0 UJ	1.0 UJ	1.0 U	10 U	1.7 J	1.3	1 UJ	1 U
1,2-Dibromoethane	0.05	0.05	0.05	0.0075	1 U	1 U	1.0 U	5 U	1.0 UJ	1.0 UJ	1.0 U	10 U	1.0 UJ	1.0 U	1 U	1 U
1,2-Dichloroethane	5	5	5	0.17	1 U	1 U	1.0 U	5 U	1.0 UJ	1.0 UJ	1.0 U	10 U	1.0 UJ	1.0 U	1 U	1 U
1,2-Dichloropropane	5	5	5	0.44	1 U	1 U	1.0 U	5 U	1.0 UJ	1.0 UJ	1.0 U	10 U	1.0 UJ	1.0 U	1 U	1 U
1,4-Dioxane	6.4	32		0.78	200 U	200 U	200 U	1000 U	200 UJ	200 UJ	200 U	2000 U	200 UJ	200 UJ	200 U	200 U
2-Butanone	4000	4000		5600	5 U	5 U	5.0 U	25 U	5.0 UJ	5.0 UJ	5.0 U	50 U	5.0 UJ	5.0 U	5 UJ	5 U
2-Hexanone	11	44		38	5 U	5 U	5 UJ	25 U	5.0 UJ	5.0 UJ	5.0 U	50 U	5.0 UJ	5.0 U	5 UJ	5 U
4-Methyl-2-Pentanone	2900	8200		1200	5 U	5 U	5.0 U	25 U	5.0 UJ	5.0 UJ	5.0 U	50 U	5.0 UJ	5.0 U	5 UJ	5 U
Acetone	33000	92000		14000	5 U	5 U	5.0 U	25 U	5.0 UJ	5.0 UJ	5.0 U	50 U	5.0 UJ	5 UJ	5 UJ	5 U
Acrylonitrile	0.72	3.7		0.052	20 U	20 U	20 U	100 U	20 UJ	20 UJ	20 U	200 U	20 UJ	20 U	20 U	20 U
Benzene	5	5	5	0.45	1 U	1 U	1.0 U	5 U	1.0 UJ	1.0 UJ	1.0 U	10 U	1.0 UJ	1.0 U	1 U	1 U
Bromochloromethane	90	90		83	1 U	1 U	1.0 U	5 U	1.0 UJ	1.0 UJ	1.0 U	10 U	1.0 UJ	1.0 U	1 U	1 U
Bromodichloromethane	80	80		0.13	1 U	1 U	1.0 U	5 U	1.0 UJ	1.0 UJ	1.0 U	10 U	1.0 UJ	1.0 U	1 U	1 U
Bromoform	80	80		9.2	1 U	1 U	1 UJ	5 U	1.0 UJ	1.0 UJ	1.0 U	10 U	1.0 UJ	1.0 U	1 U	1 U
Bromomethane	10	10		7.5	1 U	1 U	1 UJ	5 U	1.0 UJ	1.0 UJ	1.0 U	10 U	1.0 UJ	1 UJ	1 U	1 U
Carbon Disulfide	1500	6200		810	1 U	1 U	1.0 U	5 U	1.0 UJ	1.0 UJ	1.0 U	10 U	1.0 UJ	1.0 U	1 UJ	1 U
Carbon Tetrachloride	5	5	5	0.45	1 U	1 U	1.0 U	5 U	1.0 UJ	1.0 UJ	1.0 U	10 U	1.0 UJ	1.0 U	1 UJ	1 U
Chlorobenzene	100	100	100	78	1 U	1 U	1.0 U	5 U	1.0 UJ	1.0 UJ	1.0 U	10 U	1.0 UJ	1.0 U	1 U	1 U
Chlorodibromomethane	80	80		0.17	1 U	1 U	1.0 U	5 U	1.0 UJ	1.0 UJ	1.0 U	10 U	1.0 UJ	1.0 U	1 U	1 U
Chloroethane	230	900		21000	1 U	1 U	1 UJ	5 U	1.0 UJ	1.0 UJ	1.0 U	10 U	1.0 UJ	1 UJ	1 U	1 U
Chloroform	80	80		0.22	1 U	1 U	1.0 U	0.97 J	0.59 J	0.57 J	0.44 J	2.6 J	0.51 J	0.48 J	1 U	1 U
Chloromethane				190	1 U	1 U	1.0 U	5 U	1.0 UJ	1.0 UJ	1.0 U	10 U	1.0 UJ	1.0 U	1 U	1 U
cis-1,2-Dichloroethene	70	70	70	36	4	4.5	3.7	2.8 J	6.3 J	5.5 J	2	7.1 J	7.2 J	5.4	9.8	5.1
cis-1,3-Dichloropropene	6.6	26		0.47	1 U	1 U	1.0 U	5 U	1.0 UJ	1.0 UJ	1.0 U	10 U	1.0 UJ	1.0 U	1 U	1 U
Ethylbenzene	700	700	700	1.5	1 U	1 U	1.0 U	5 U	1.0 UJ	1.0 UJ	1.0 U	10 U	1.0 UJ	1.0 U	1 U	1 U
Methyl tert-butyl ether	20	20		14	1 U	1 U	1.0 U	5 U	1.0 UJ	1.0 UJ	1.0 U	10 U	1.0 UJ	1.0 U	1 UJ	1 U
Methylene chloride	5	5		11	1 U	1 U	1.0 U	2.3 J	1.0 UJ	1.0 UJ	1.0 U	9.7 U	1.0 UJ	1.0 U	1 UJ	1 U
Styrene	100	100	100	1200	1 U	1 U	1.0 U	5 U	1.0 UJ	1.0 UJ	1.0 U	10 U	1.0 UJ	1.0 U	1 U	1 U
Tetrachloroethene	5	5	5	11	13	14	12	7	11 J	9.8 J	9.6	25	29 J	28	1 U	1 U
Toluene	1000	1000	1000	1100	1 U	1 U	1.0 U	5 U	1.0 UJ	1.0 UJ	1.0 U	10 U	1.0 UJ	1.0 U	1 U	0.29 J
trans-1,2-Dichloroethene	100	100	100	360	1 U	1 U	1.0 U	5 U	1.0 UJ	1.0 UJ	1.0 U	10 U	1.0 UJ	1.0 U	1 UJ	1 U
trans-1,3-Dichloropropene	6.6	26		0.47	1 U	1 U	1.0 U	5 U	1.0 UJ	1.0 UJ	1.0 U	10 U	1.0 UJ	1.0 U	1 U	1 U
Trichloroethene	5	5	5	0.49	28	30	27	79	69 J	71 J	18	160	130 J	94	1 U	1 U
Vinyl Chloride	2	2	2	0.019	1 U	1 U	1.0 U	5 U	1.0 UJ	1.0 UJ	1.0 U	10 U	1.0 UJ	1 UJ	1 U	1 U
Xylenes (Total)	10000	10000	10000	190	3 U	3 U	3.0 U	15 U	3.0 UJ	3.0 UJ	3.0 U	30 U	3.0 UJ	3.0 U	3 U	3 U

Blank results = analyte not analyzed. U = Not detected. J = Organics; estimated. B = Organics; blank contamination

**Table 2**  
**Groundwater Data Summary - NPBA**  
**Former York Naval Ordnance Plant - York, PA**

Location/ID Depth (ft.) Sample Date	PA MSC	PA MSC	Federal	EPA	MW-142D	MW-142D	MW-142S	MW-142S	MW-142S	MW-142S	MW-142S	MW-143D	MW-143D	MW-143D	MW-143D	MW-143S	MW-143S
	UA R (ug/L)	UA NR (ug/L)	MCL (ug/L)	RSL (ug/L)	10/13/14	10/1/15	5/30/13	9/10/13	10/13/14	10/1/15	5/31/13	9/9/13	10/13/14	9/30/15	5/30/13	9/9/13	
<b>TOTAL VOC</b>					6.2	2.6	1.82	1.25	1.6	2.05	0	0.25	0.34	0.39	2.67	4.1	
<b>Volatile Organic Compound</b>																	
1,1,1,2-Tetrachloroethane	70	70		0.57	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	
1,1,1-Trichloroethane	200	200	200	8000	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 UJ	1 U	1.0 U	1.0 U	1 U	1 U	
1,1,2,2-Tetrachloroethane	0.84	4.3		0.076	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	
1,1,2-Trichloroethane	5	5	5	0.28	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	
1,1-Dichloroethane	31	160		2.7	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	
1,1-Dichloroethene	7	7	7	280	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 UJ	1 U	1.0 U	1.0 U	1 U	1 U	
1,2-Dibromoethane	0.05	0.05	0.05	0.0075	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	
1,2-Dichloroethane	5	5	5	0.17	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	
1,2-Dichloropropane	5	5	5	0.44	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	
1,4-Dioxane	6.4	32		0.78	R	200 UJ	200 U	200 U	R	200 UJ	200 U	200 U	R	200 UJ	200 U	200 U	
2-Butanone	4000	4000		5600	5.0 U	5 U	5 U	5 U	5.0 U	5 U	5 UJ	5 U	5.0 U	5.0 U	5 U	5 U	
2-Hexanone	11	44		38	5.0 U	5 U	5 U	5 U	5.0 U	5 U	5 UJ	5 U	5.0 U	5.0 U	5 U	5 U	
4-Methyl-2-Pentanone	2900	8200		1200	5.0 U	5 U	5 U	5 U	5.0 U	5 U	5 UJ	5 U	5.0 U	5.0 U	5 U	5 U	
Acetone	33000	92000		14000	5.0 U	5 U	5 U	5 U	5.0 U	5 U	5 UJ	5 U	5.0 U	5.0 U	5 U	5 U	
Acrylonitrile	0.72	3.7		0.052	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 UJ	20 U	20 U	
Benzene	5	5	5	0.45	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	
Bromochloromethane	90	90		83	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	
Bromodichloromethane	80	80		0.13	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	
Bromoform	80	80		9.2	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	
Bromomethane	10	10		7.5	1.0 U	1 UJ	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1.0 U	1 UJ	1 U	1 U	
Carbon Disulfide	1500	6200		810	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 UJ	1 U	1.0 U	1.0 U	1 U	1 U	
Carbon Tetrachloride	5	5	5	0.45	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 UJ	1 U	1.0 U	1.0 U	1 U	1 U	
Chlorobenzene	100	100	100	78	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	
Chlorodibromomethane	80	80		0.17	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	
Chloroethane	230	900		21000	1.0 U	1 UJ	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1.0 U	1.0 U	1 U	1 U	
Chloroform	80	80		0.22	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	
Chloromethane				190	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	
cis-1,2-Dichloroethene	70	70	70	36	6.2	2.6	1.5	1.1	1.6	1.9	1 U	0.25 J	0.34 J	0.39 J	1 U	1 U	
cis-1,3-Dichloropropene	6.6	26		0.47	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	
Ethylbenzene	700	700	700	1.5	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	
Methyl tert-butyl ether	20	20		14	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 UJ	1 U	1.0 U	1.0 U	1 U	1 U	
Methylene chloride	5	5		11	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 UJ	1 U	1.0 U	1.0 U	1 U	1 U	
Styrene	100	100	100	1200	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	
Tetrachloroethene	5	5	5	11	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	0.77 J	1.1	
Toluene	1000	1000	1000	1100	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	
trans-1,2-Dichloroethene	100	100	100	360	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 UJ	1 U	1.0 U	1.0 U	1 U	1 U	
trans-1,3-Dichloropropene	6.6	26		0.47	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	
Trichloroethene	5	5	5	0.49	1.0 U	1 U	0.32 J	0.15 J	1.0 U	0.15 J	1 U	1 U	1.0 U	1.0 U	1.9	3	
Vinyl Chloride	2	2	2	0.019	1.0 U	1 UJ	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1.0 U	1.0 U	1 U	1 U	
Xylenes (Total)	10000	10000	10000	190	3.0 U	3 U	3 U	3 U	3.0 U	3 U	3 U	3 U	3.0 U	3.0 U	3 U	3 U	

Blank results = analyte not analyzed. U = Not detected. J = Organics; estimated. B = Organics; blank contamination

**Table 2**  
**Groundwater Data Summary - NPBA**  
**Former York Naval Ordnance Plant - York, PA**

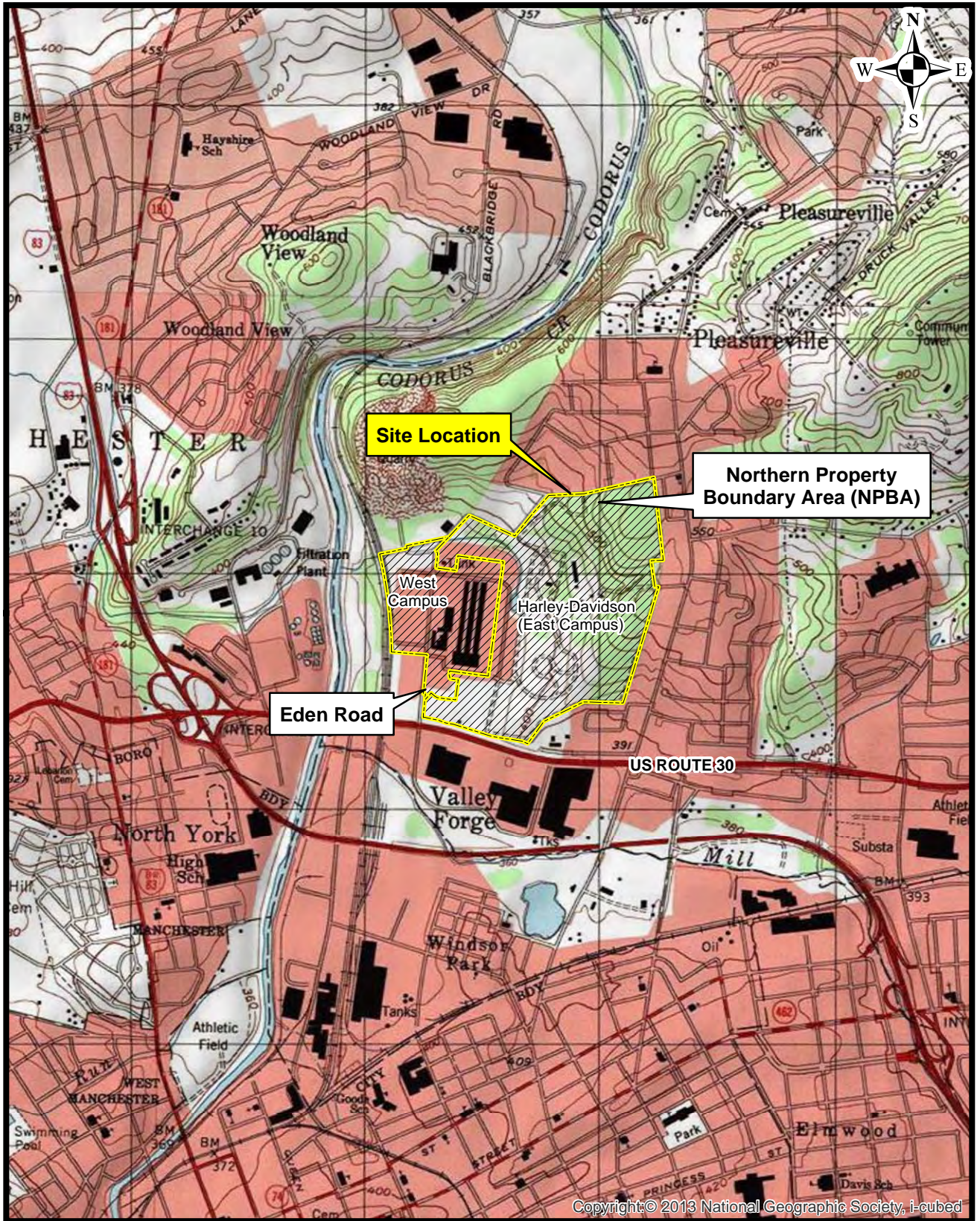
Location/ID Depth (ft.) Sample Date	PA MSC	PA MSC	Federal	EPA	MW-143S	MW-143S	RW-2	RW-2	RW-2	RW-2	RW-4 Folk	RW-4 Folk	RW-4 Folk	RW-4 Folk	TATE (S-6)	TATE (S-6)	TATE (S-6)	TATE (S-6)	
	UA R (ug/L)	UA NR (ug/L)	MCL (ug/L)	RSL (ug/L)	10/15/14	9/30/15	5/29/13	9/10/13	10/20/14	9/16/15	5/30/13	9/11/13	10/24/14	9/16/15	5/29/13	9/11/13	10/22/14	10/2/15	
<b>TOTAL VOC</b>					2.74	2.2	1.2	2.16	3.27	4.03	0.24	0.53	0	0.5	0.25	0.47	0	0.23	
<b>Volatiles Organic Compound</b>																			
1,1,1,2-Tetrachloroethane	70	70		0.57	1.0 U	1 UJ	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1.0 U	
1,1,1-Trichloroethane	200	200	200	8000	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1.0 U	
1,1,2,2-Tetrachloroethane	0.84	4.3		0.076	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1.0 U	
1,1,2-Trichloroethane	5	5	5	0.28	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1.0 U	
1,1-Dichloroethane	31	160		2.7	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1.0 U	
1,1-Dichloroethene	7	7	7	280	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1.0 U	
1,2-Dibromoethane	0.05	0.05	0.05	0.0075	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1.0 U	
1,2-Dichloroethane	5	5	5	0.17	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1.0 U	
1,2-Dichloropropane	5	5	5	0.44	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1.0 U	
1,4-Dioxane	6.4	32		0.78	200 U	200 UJ	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	
2-Butanone	4000	4000		5600	5.0 U	5.0 U	5 U	5 U	5.0 U	5.0 U	5 U	5 U	5.0 U	5 UJ	5 U	5 U	5 U	5.0 U	
2-Hexanone	11	44		38	5.0 U	5 UJ	5 U	5 U	5.0 U	5.0 U	5 U	5 U	5.0 U	5.0 U	5 U	5 U	5 U	5 UJ	
4-Methyl-2-Pentanone	2900	8200		1200	5.0 U	5.0 U	5 U	5 U	5.0 U	5.0 U	5 U	5 U	5.0 U	5.0 U	5 U	5 U	5 U	5.0 U	
Acetone	33000	92000		14000	5.0 U	5.0 U	5 U	5 U	5.0 U	5.0 U	5 U	5 U	5.0 U	5 UJ	5 U	5 U	5 U	5.0 U	
Acrylonitrile	0.72	3.7		0.052	20 U	20 UJ	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	
Benzene	5	5	5	0.45	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1.0 U	
Bromochloromethane	90	90		83	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1.0 U	
Bromodichloromethane	80	80		0.13	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1.0 U	
Bromoform	80	80		9.2	1.0 U	1 UJ	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	
Bromomethane	10	10		7.5	1.0 U	1 UJ	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	
Carbon Disulfide	1500	6200		810	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1.0 U	
Carbon Tetrachloride	5	5	5	0.45	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1.0 U	
Chlorobenzene	100	100	100	78	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1.0 U	
Chlorodibromomethane	80	80		0.17	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1.0 U	
Chloroethane	230	900		21000	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	
Chloroform	80	80		0.22	1.0 U	1.0 U	1 U	1 U	0.17 J	0.23 J	0.24 J	0.53 J	1.0 U	0.50 J	0.25 J	0.47 J	1 U	0.23 J	
Chloromethane				190	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1.0 U	
cis-1,2-Dichloroethene	70	70	70	36	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1.0 U	
cis-1,3-Dichloropropene	6.6	26		0.47	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1.0 U	
Ethylbenzene	700	700	700	1.5	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1.0 U	
Methyl tert-butyl ether	20	20		14	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1.0 U	
Methylene chloride	5	5		11	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1.0 U	
Styrene	100	100	100	1200	1.0 U	1 UJ	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1.0 U	
Tetrachloroethene	5	5	5	11	0.84 J	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1.0 U	
Toluene	1000	1000	1000	1100	1.0 U	1.0 U	1 U	0.26 J	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1.0 U	
trans-1,2-Dichloroethene	100	100	100	360	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1.0 U	
trans-1,3-Dichloropropene	6.6	26		0.47	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1.0 U	
Trichloroethene	5	5	5	0.49	1.9	2.2	1.2	1.9	3.1	3.8	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1.0 U	
Vinyl Chloride	2	2	2	0.019	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1.0 U	
Xylenes (Total)	10000	10000	10000	190	3.0 U	3.0 U	3 U	3 U	3.0 U	3.0 U	3 U	3 U	3.0 U	3.0 U	3 U	3 U	3 U	3.0 U	

Blank results = analyte not analyzed. U = Not detected. J = Organics; estimated. B = Organics; blank contamination

# Figures

*April 2016*





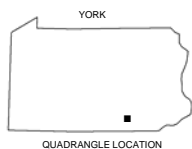
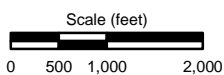
Portion of the York and York Haven PA  
7.5-minute USGS Quadrangles  
(2001)

Figure 1

**Former York Naval Ordnance Plant**

1425 Edin Road, York, PA 17402

**Site Location Map**



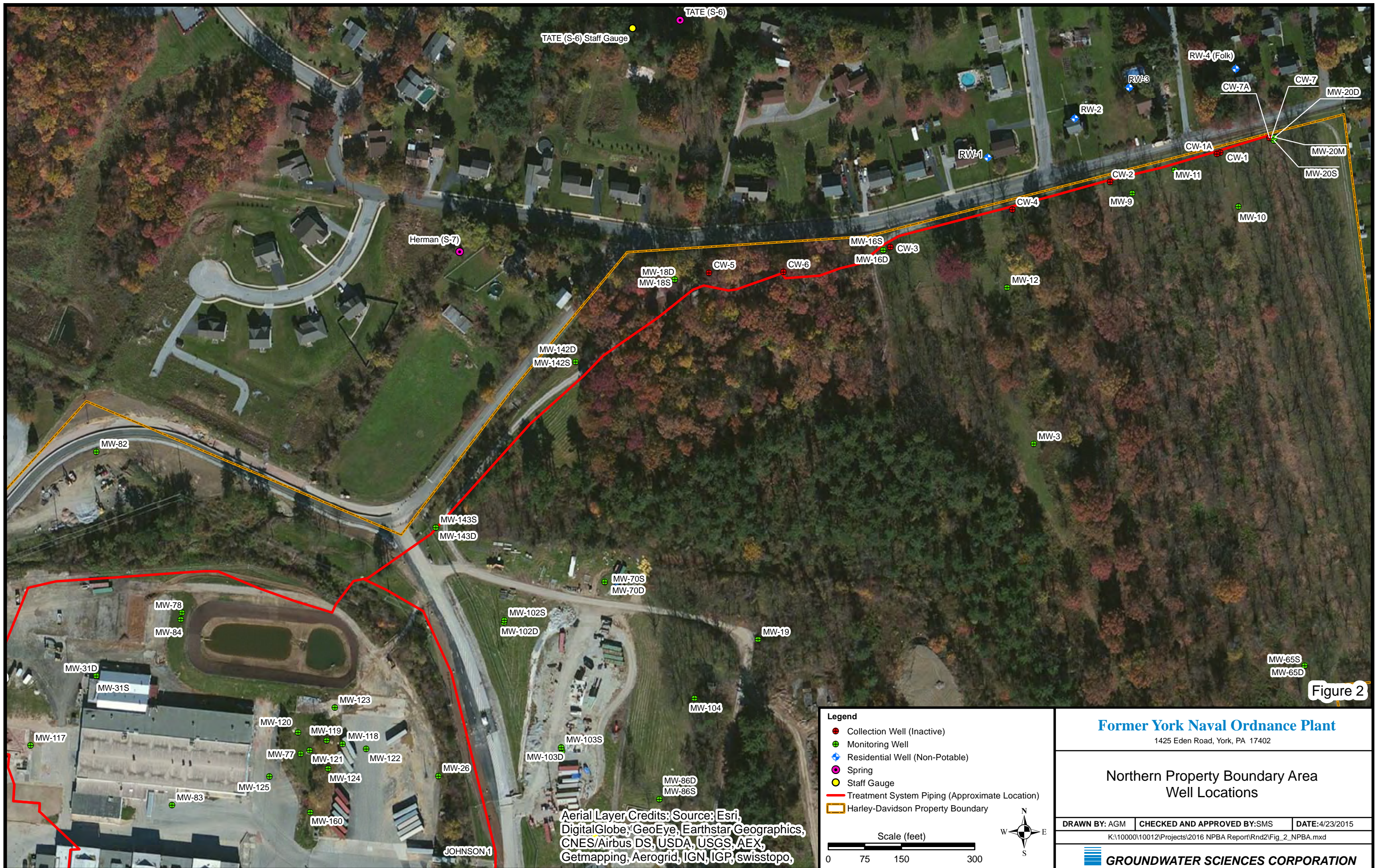


Figure 2

**Legend**

- Collection Well (Inactive)
- Monitoring Well
- ◆ Residential Well (Non-Potable)
- Spring
- Staff Gauge
- Treatment System Piping (Approximate Location)
- Harley-Davidson Property Boundary

Scale (feet)

0 75 150 300

**Former York Naval Ordnance Plant**  
 1425 Eden Road, York, PA 17402

**Northern Property Boundary Area  
 Well Locations**

<b>DRAWN BY:</b> AGM	<b>CHECKED AND APPROVED BY:</b> SMS	<b>DATE:</b> 4/23/2015
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**GROUNDWATER SCIENCES CORPORATION**

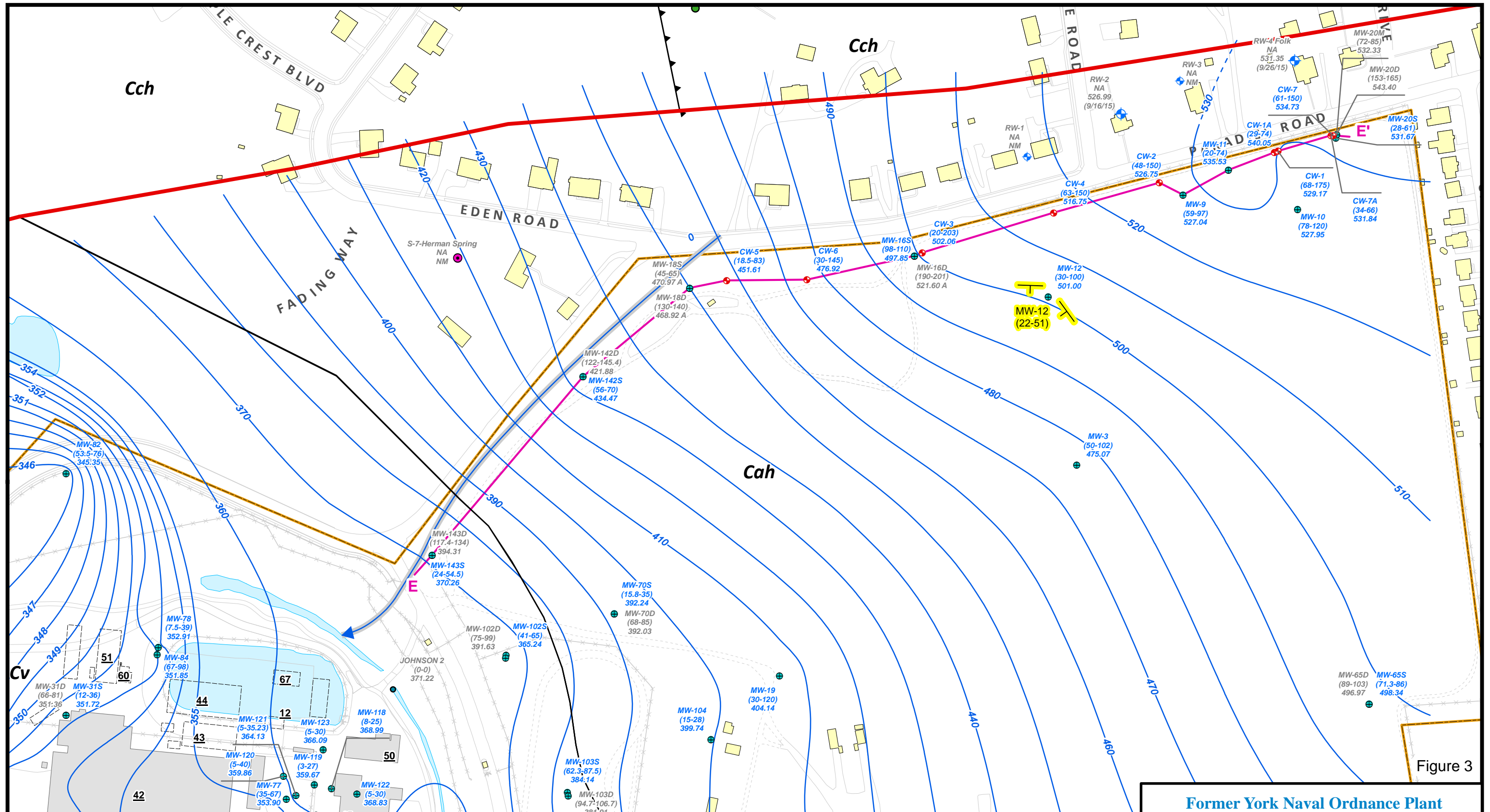
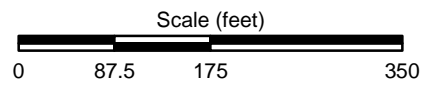


Figure 3

<b>Legend</b> Strike and Dip (with Degree of Dip Angle) Unused Residential Well Active Collection Well Monitoring Well Spring Cross Section Transect		Block Fault Thrust Fault Groundwater Contour Depression (Feet AMSL) Regular Inferred, Groundwater Contour (Feet AMSL) Flow Direction Harley-Davidson Property Boundary		(Cah) Antietam & Harpers Formation, undiv. (Cch) Chickies Formation (Cv) Vintage Formation Existing Building Demolished Demolished/Slab Removed Road (Unpaved) Walkway Fenceline Existing Water Feature		<b>MW-20S</b> (28-61) 531.67  <b>MW-20M</b> (72-85) 532.33  Location ID Screened or Open Interval (Feet BGS) Groundwater Elevation (Feet AMSL) Used in Contouring  Location ID Screened or Open Interval (Feet BGS) Groundwater Elevation (Feet AMSL) Not Used in Contouring		<b>NOTES:</b> AMSL= Above mean sea level. Cch= Chickies Formation Cah= Antietam and Harpers Formations, undivided Cv= Vintage Formation BGS= Below Ground Surface A= Artesian	
--	--	--	--	--	--	--	--	---	--



**Former York Naval Ordnance Plant**  
1425 Eden Road, York, PA 17402

**Groundwater Elevation Contour Map**  
September 2 and 3, 2015

<b>DRAWN BY:</b> AGM	<b>CHECKED AND APPROVED BY:</b> SMS	<b>DATE:</b> 2/3/2014
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**GROUNDWATER SCIENCES CORPORATION**

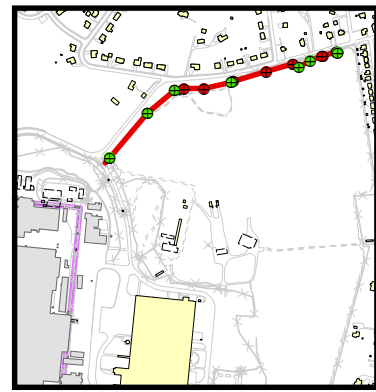
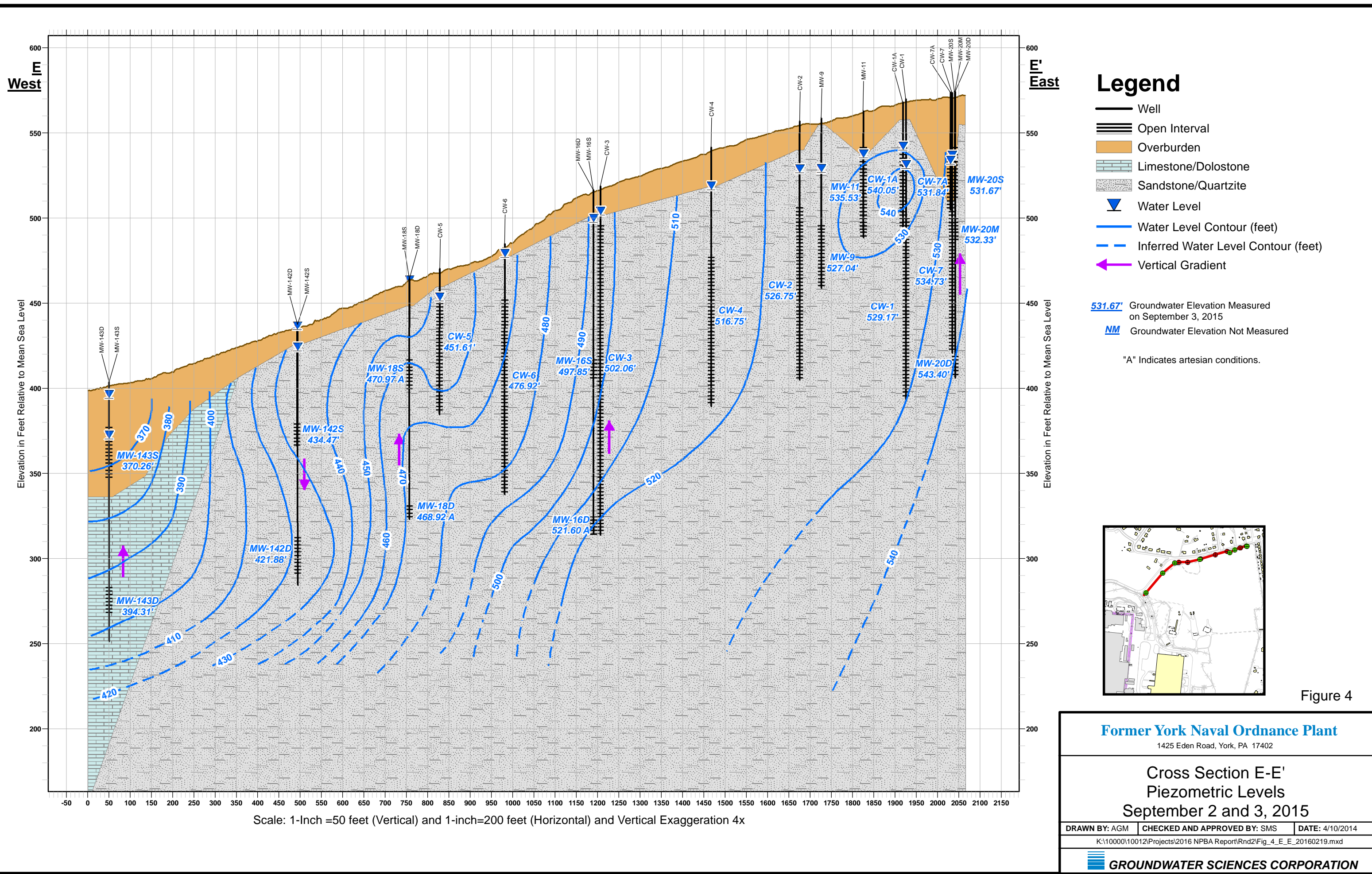
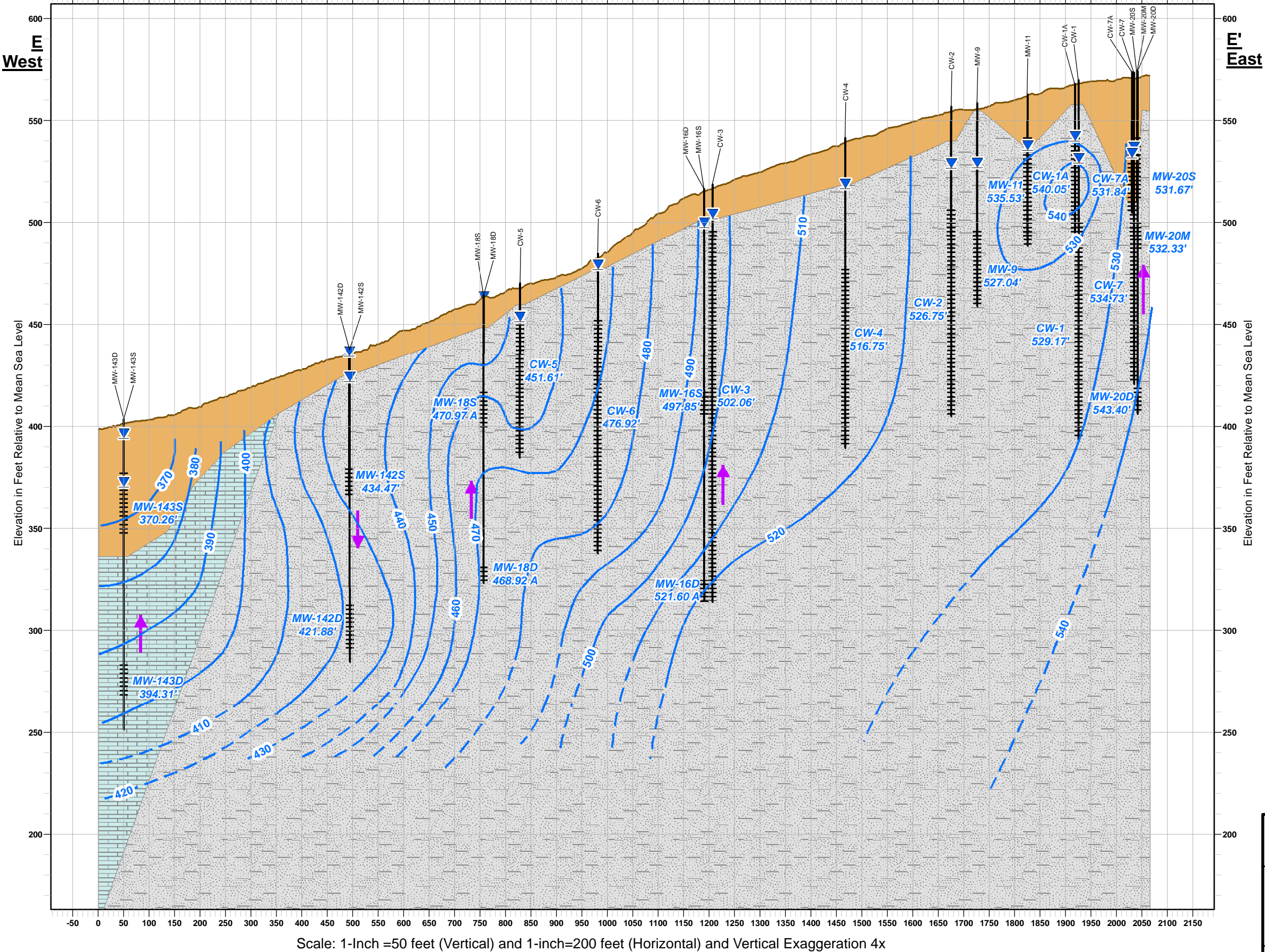
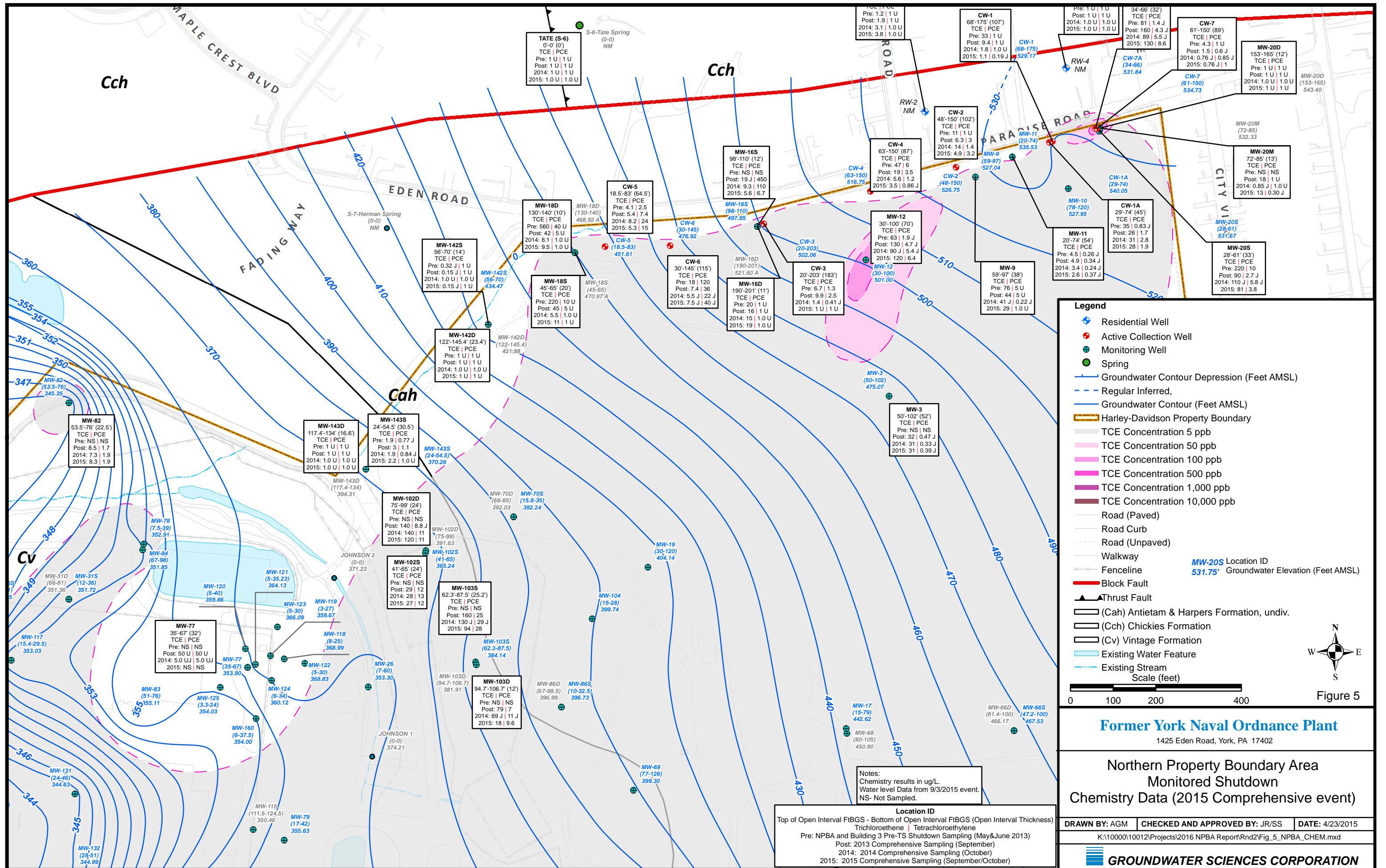
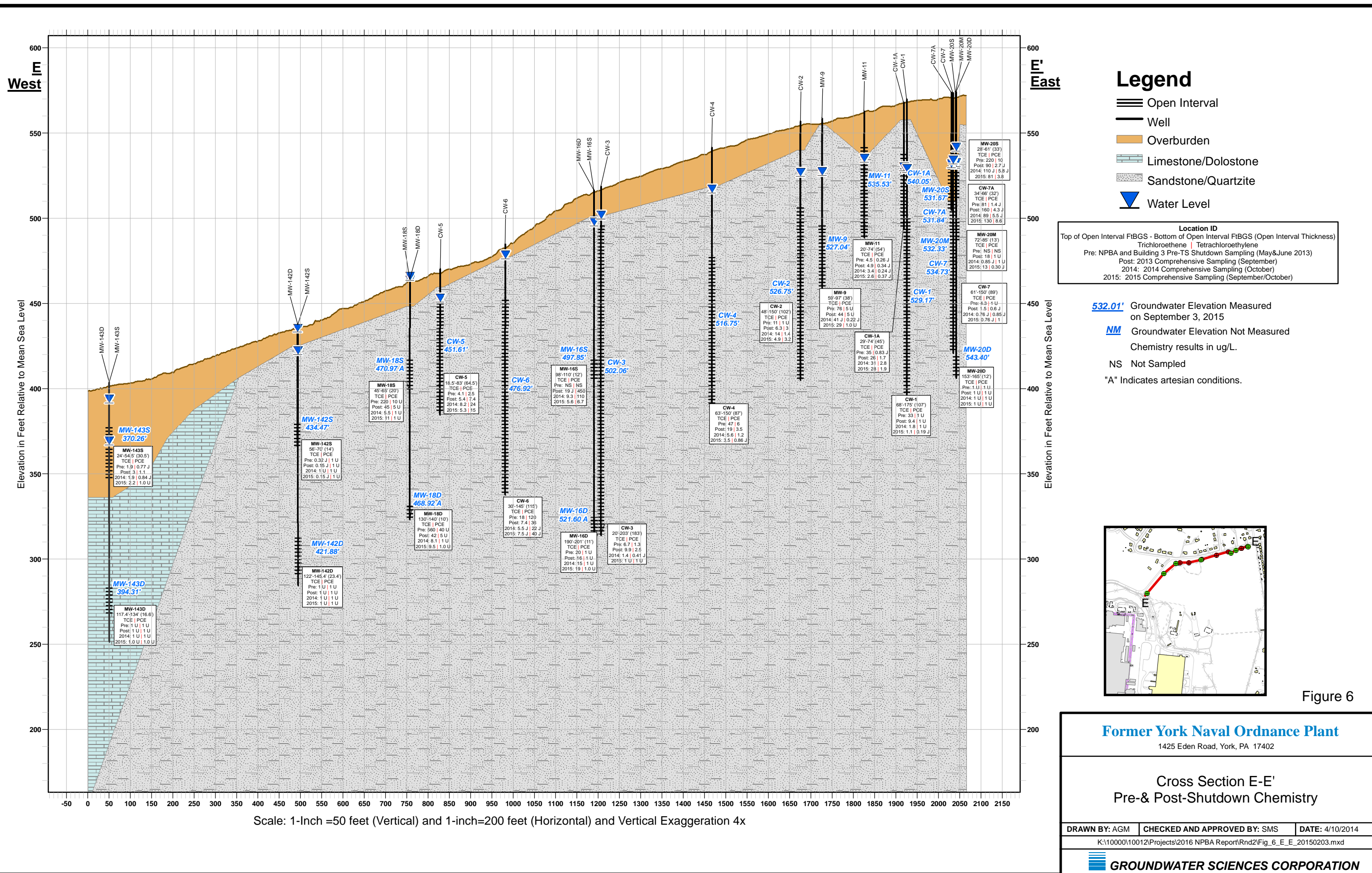


Figure 4



Scale: 1-Inch =50 feet (Vertical) and 1-inch=200 feet (Horizontal) and Vertical Exaggeration 4x





### Legend

- Open Interval
- Well
- Overburden
- Limestone/Dolostone
- Sandstone/Quartzite
- Water Level

Location ID	
Top of Open Interval FtBGS - Bottom of Open Interval FtBGS (Open Interval Thickness)	Trichloroethene   Tetrachloroethylene
Pre: NPBA and Building 3 Pre-TS Shutdown Sampling (May&June 2013)	Post: 2013 Comprehensive Sampling (September)
	2014: 2014 Comprehensive Sampling (October)
	2015: 2015 Comprehensive Sampling (September/October)

**532.01'** Groundwater Elevation Measured on September 3, 2015

**NM** Groundwater Elevation Not Measured  
Chemistry results in ug/L.

NS Not Sampled

"A" Indicates artesian conditions.

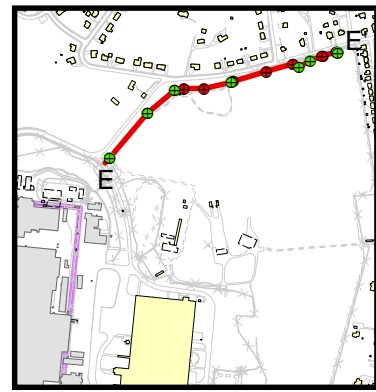


Figure 6

**Former York Naval Ordnance Plant**  
1425 Eden Road, York, PA 17402

**Cross Section E-E'**  
Pre- & Post-Shutdown Chemistry

DRAWN BY: AGM	CHECKED AND APPROVED BY: SMS	DATE: 4/10/2014
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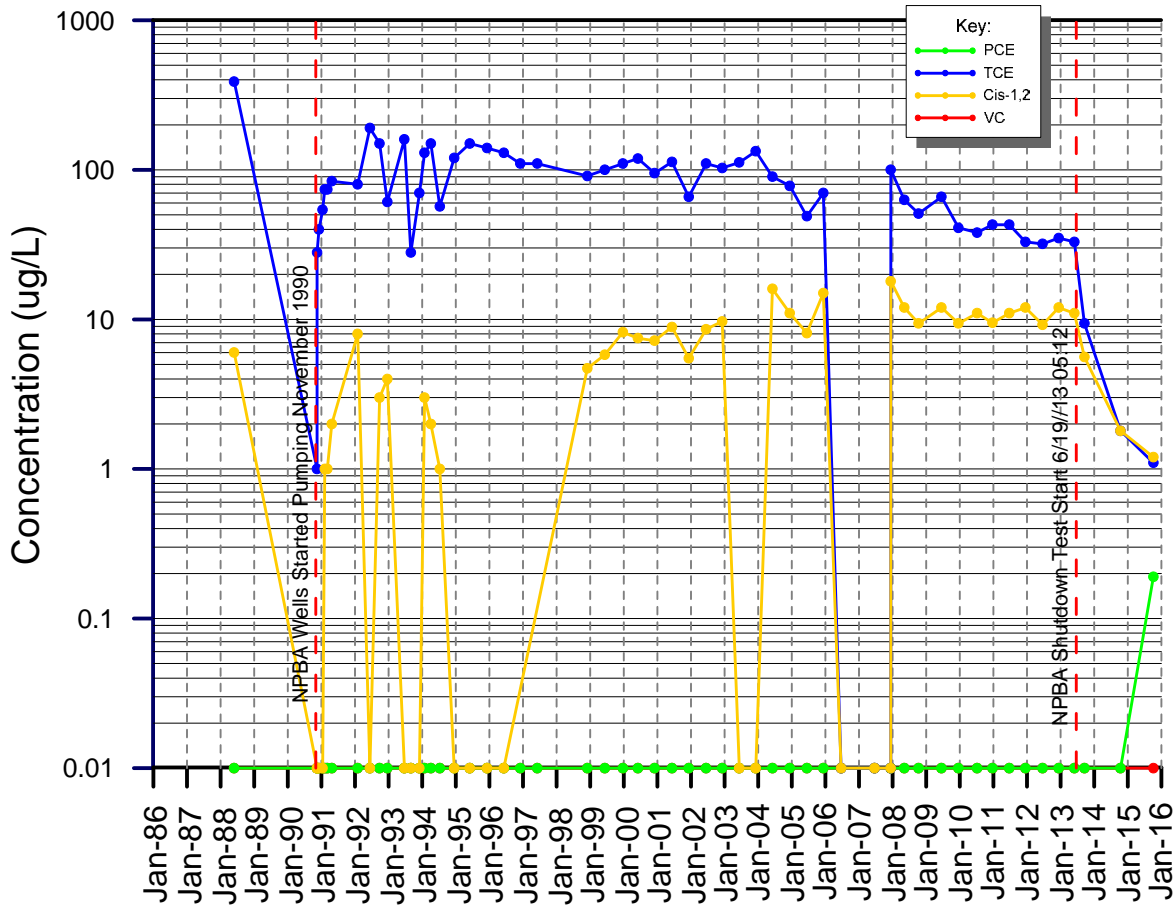
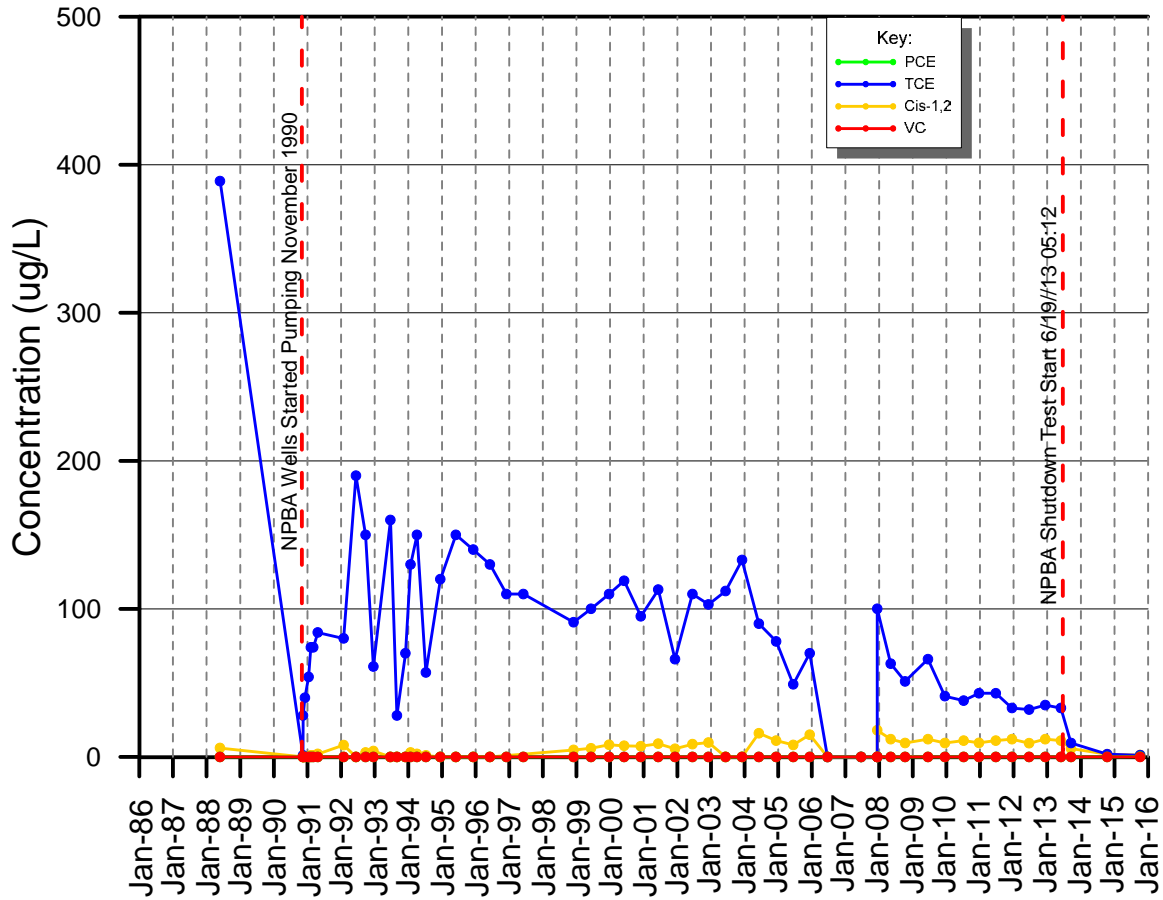
**GROUNDWATER SCIENCES CORPORATION**

## Appendix A

*Undetected laboratory results are represented on the semi-log graphs as a concentration of 0.01 µg/L, regardless of method detection limit or laboratory reporting limit. “J” qualified (estimated) results were plotted as actual values.*

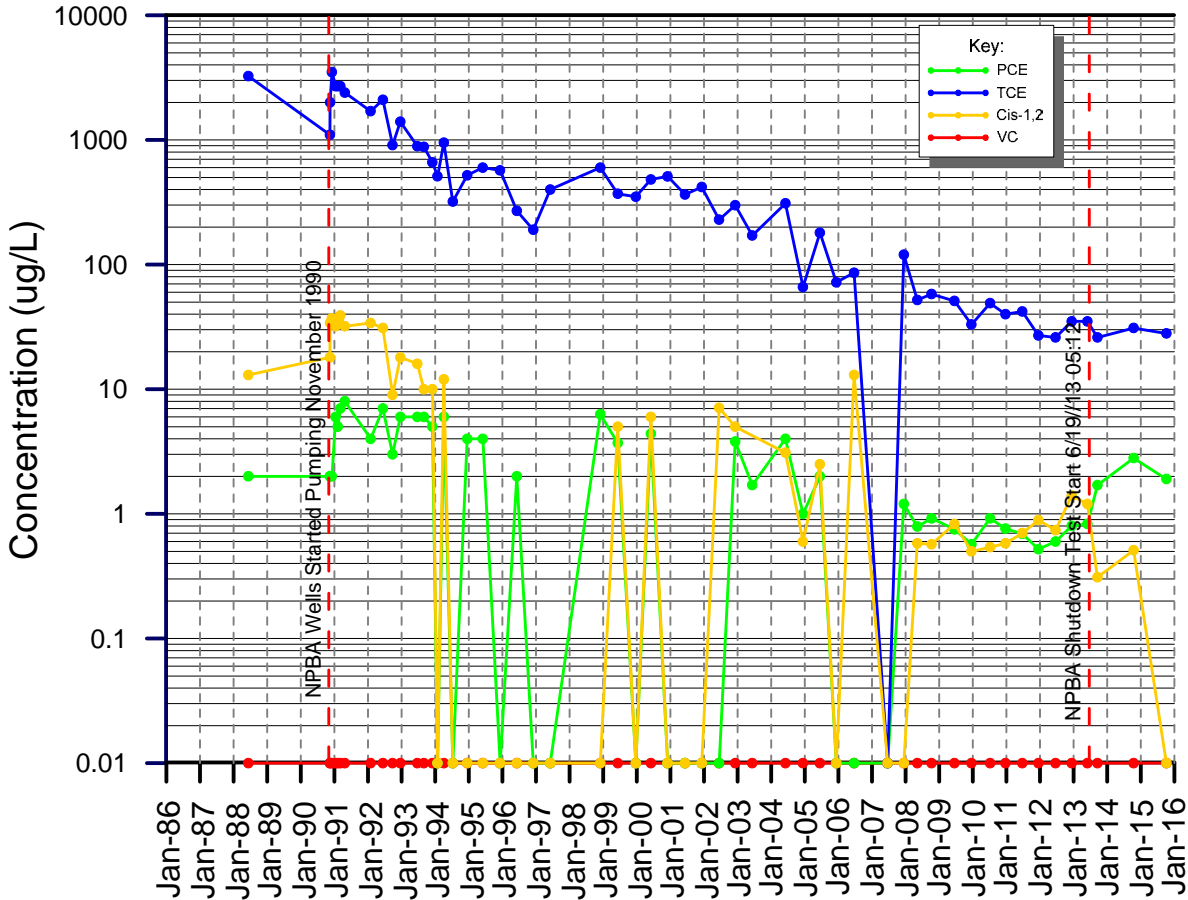
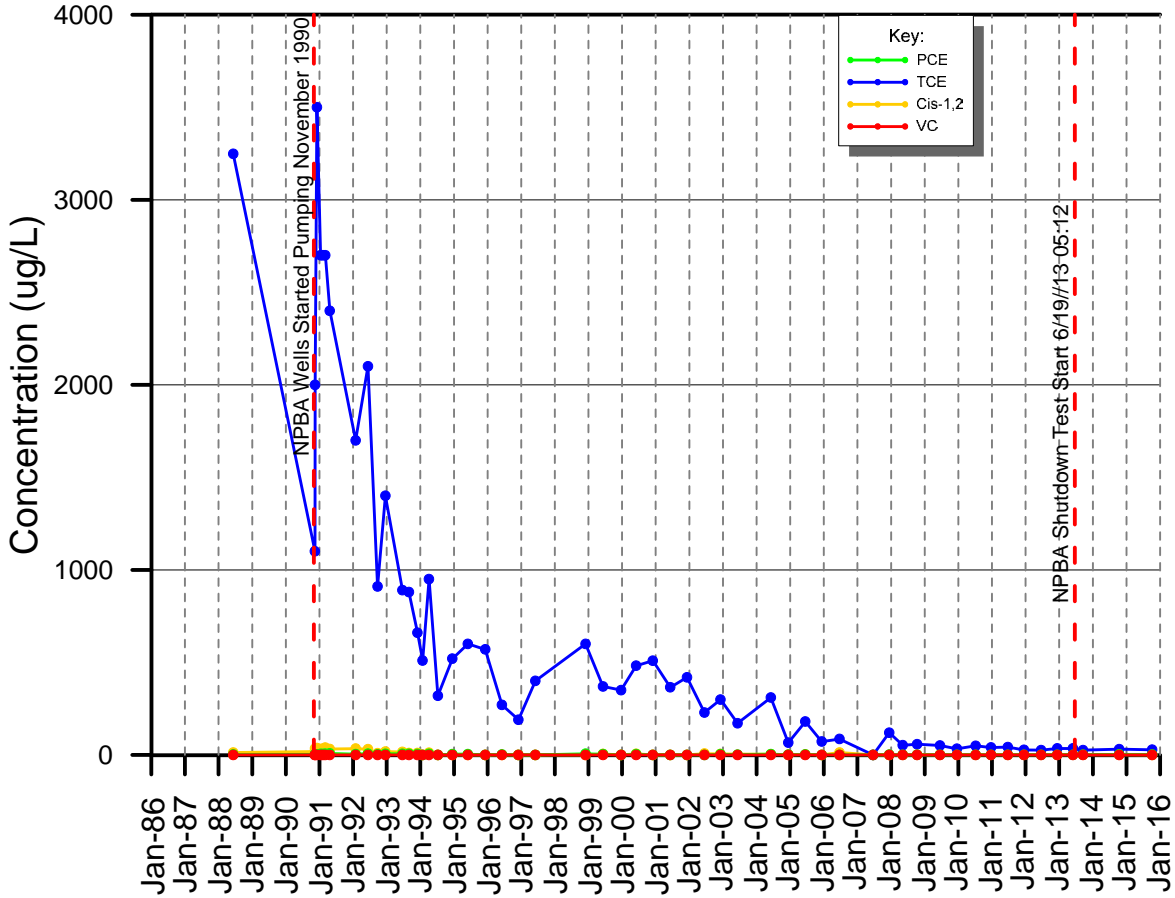
*April 2016*

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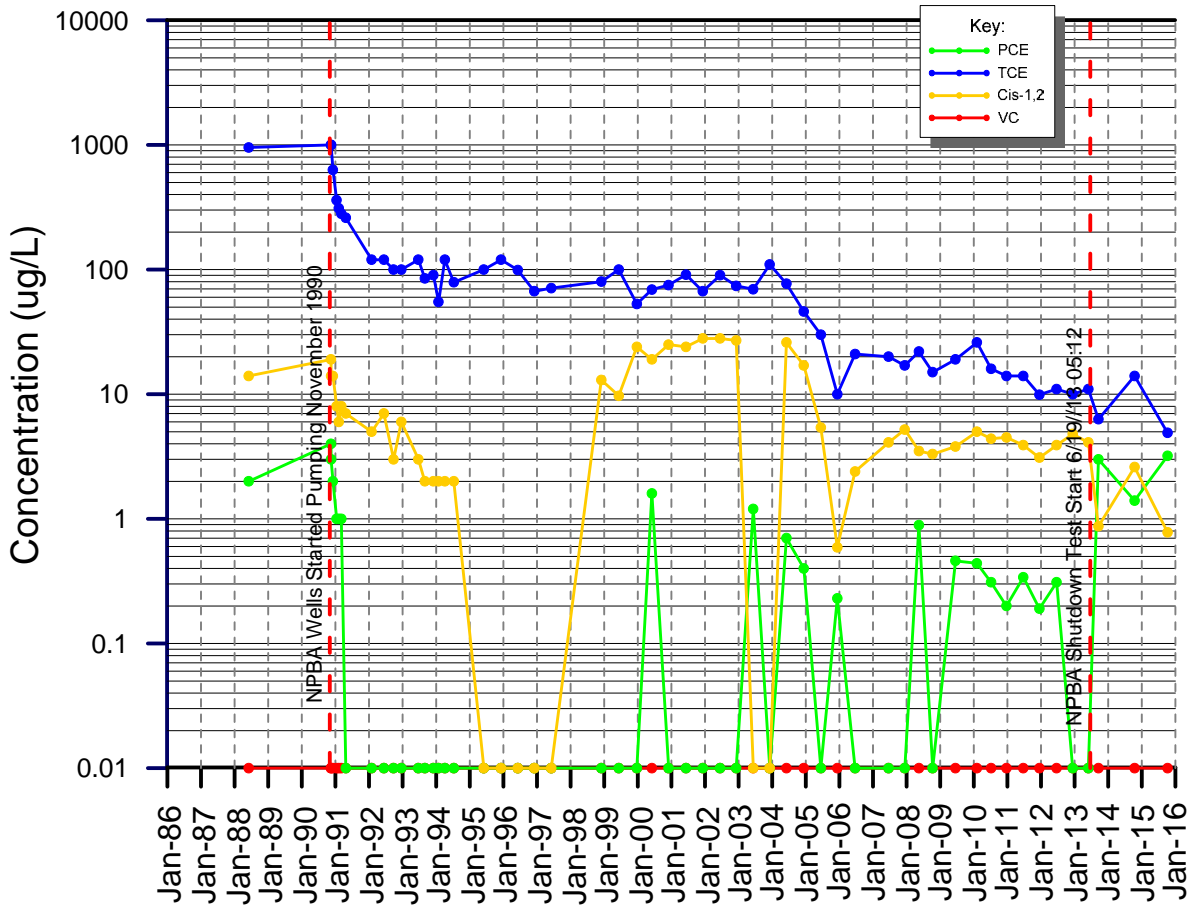
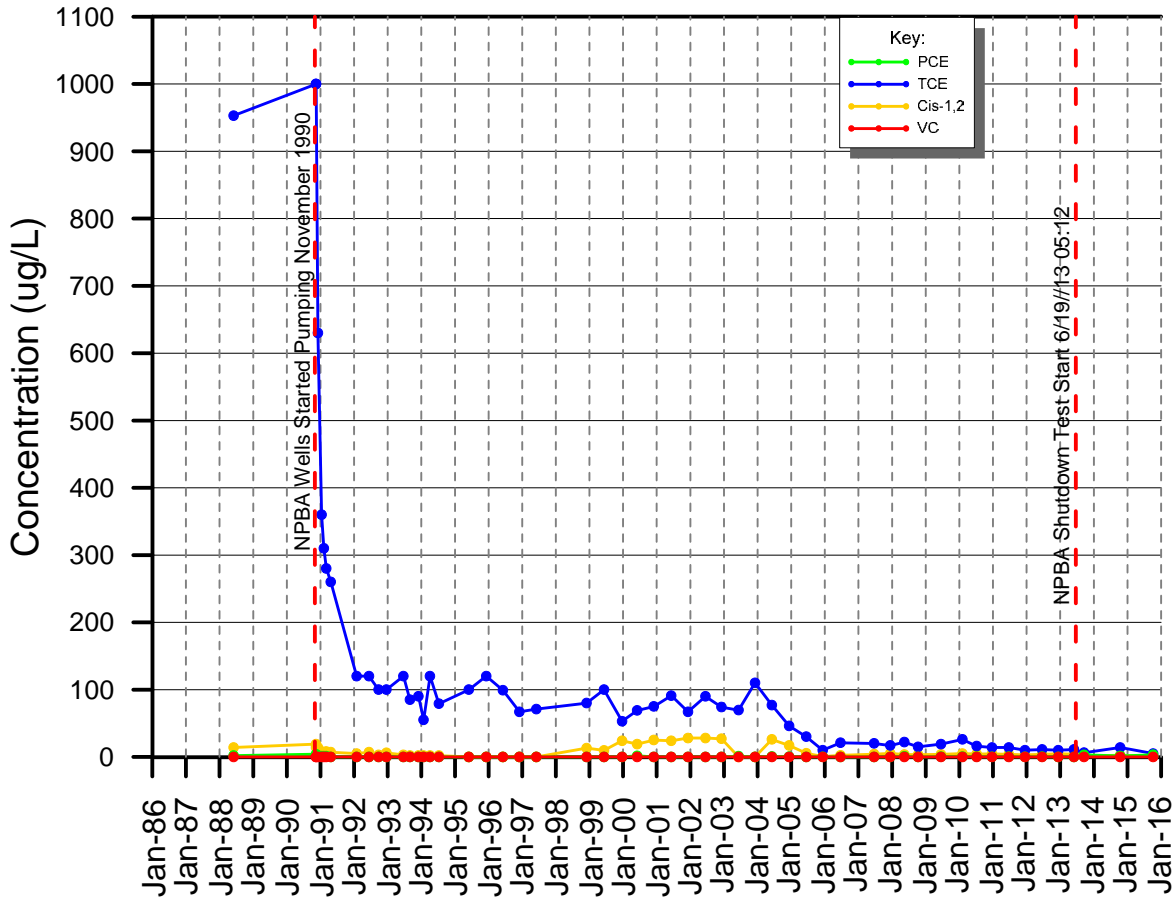




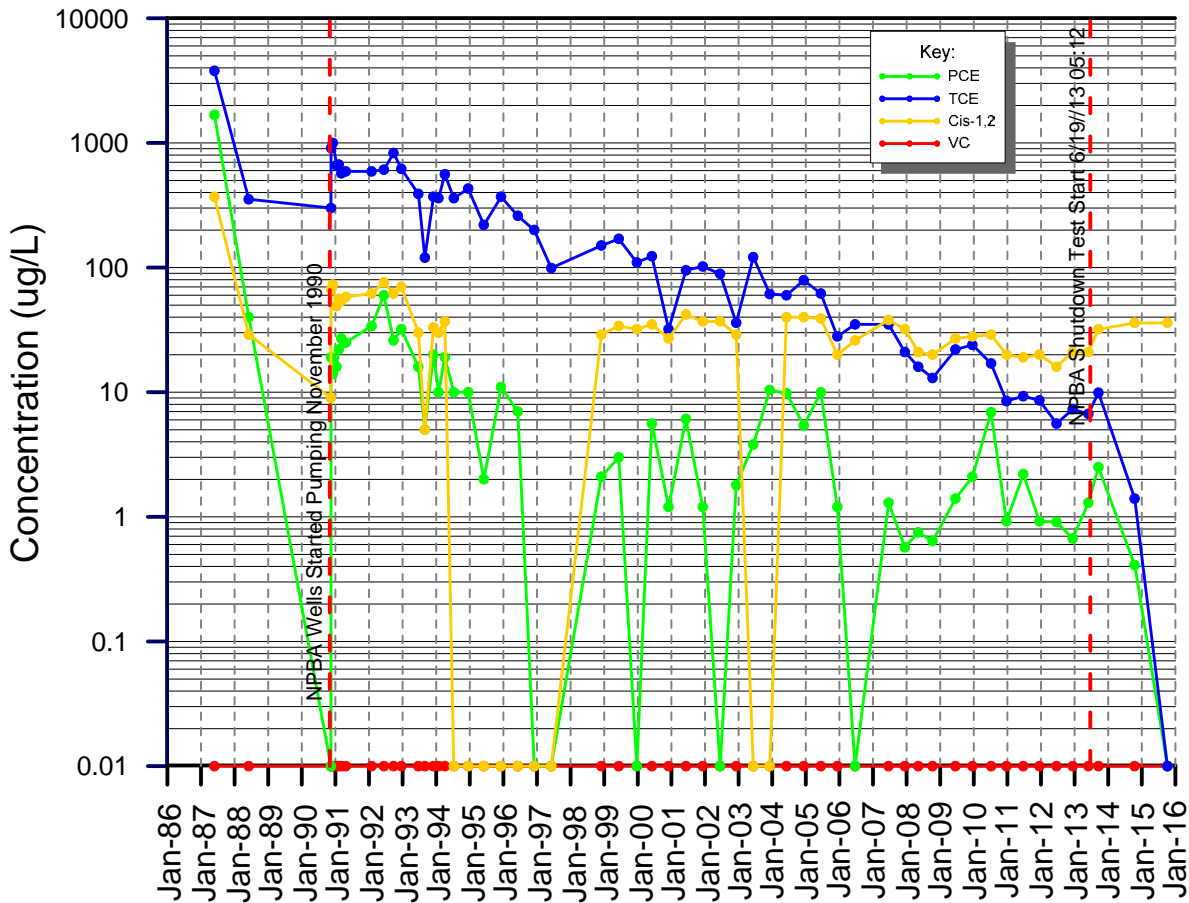
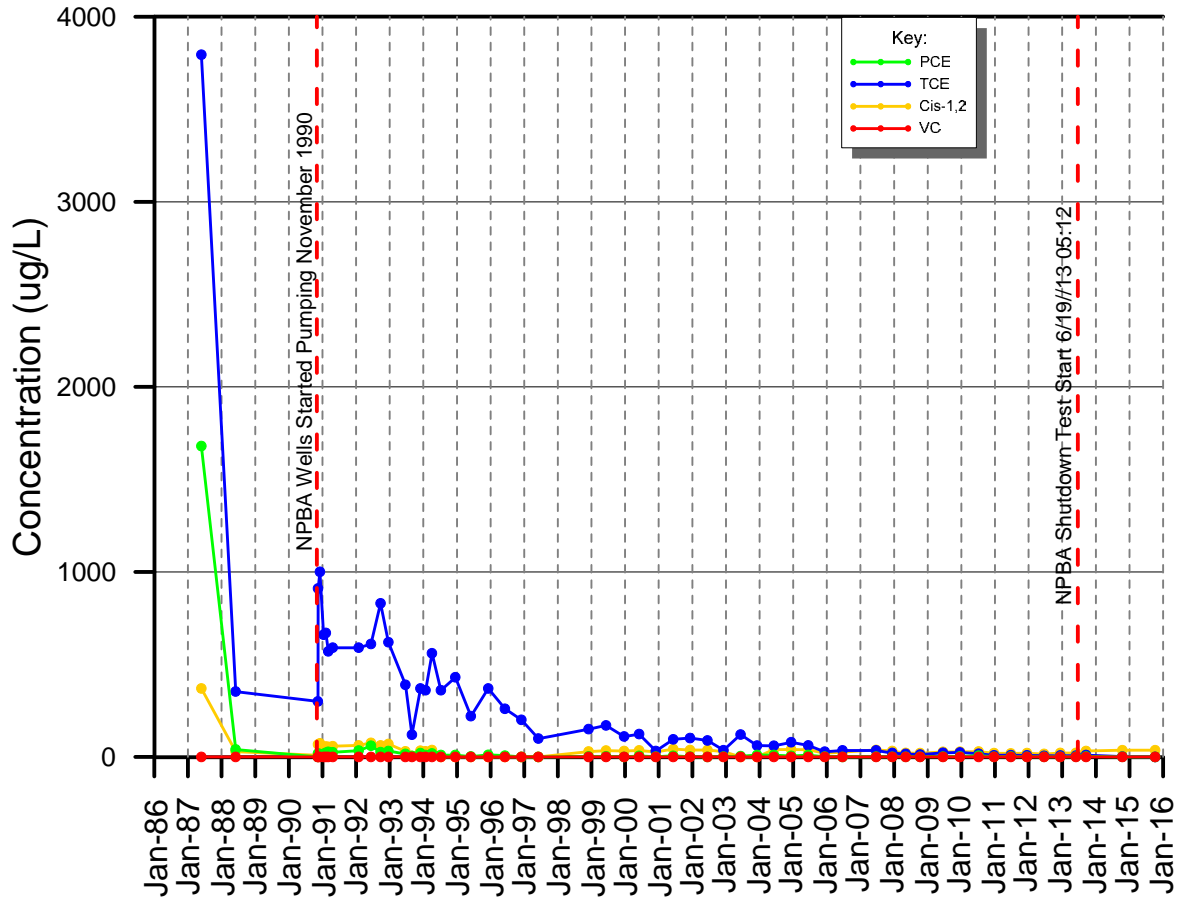
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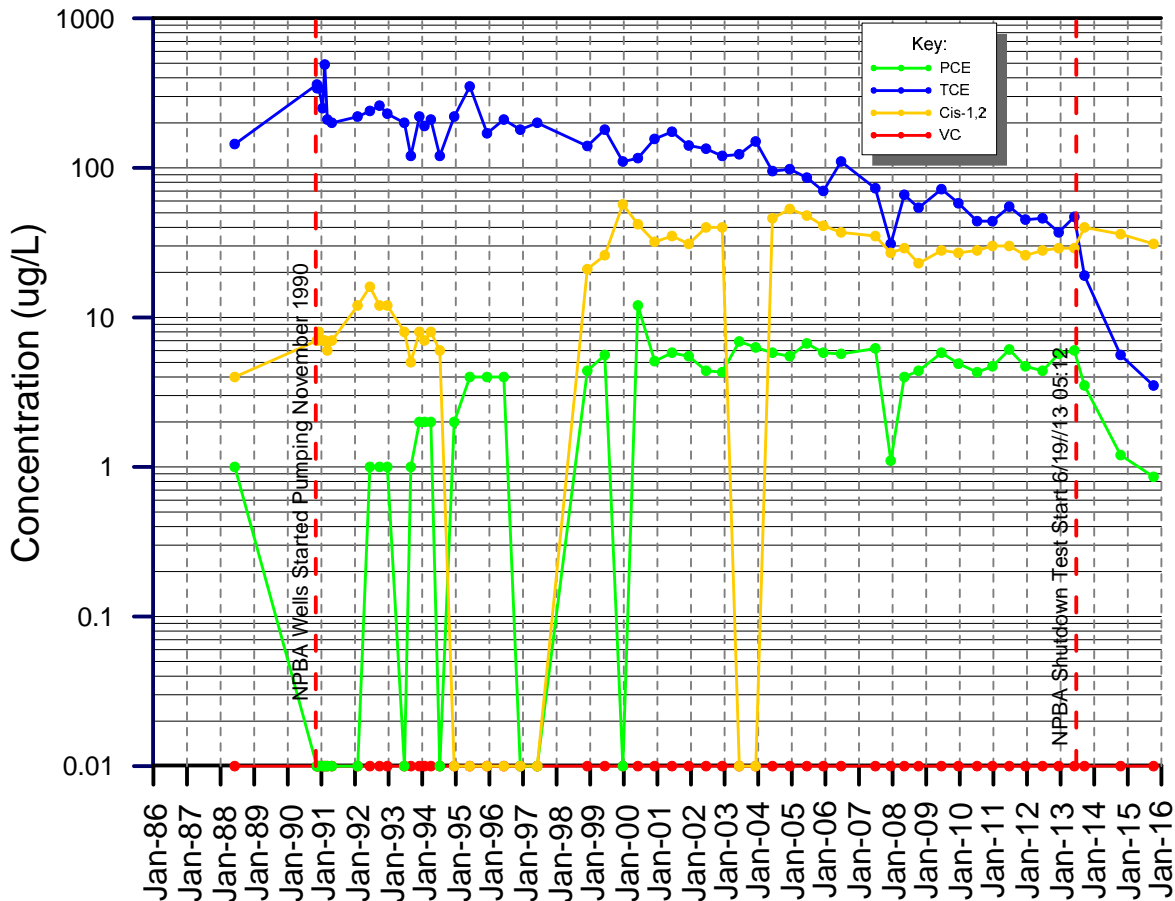
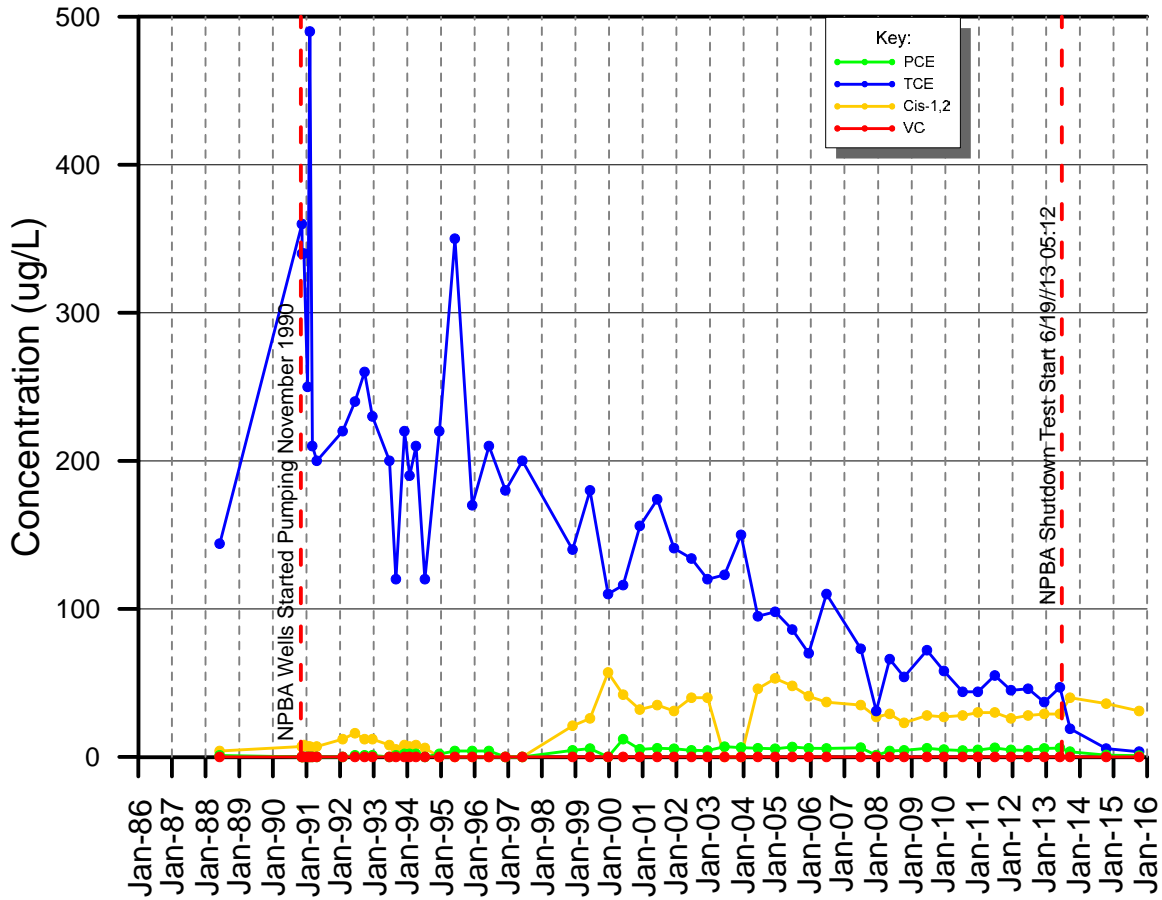
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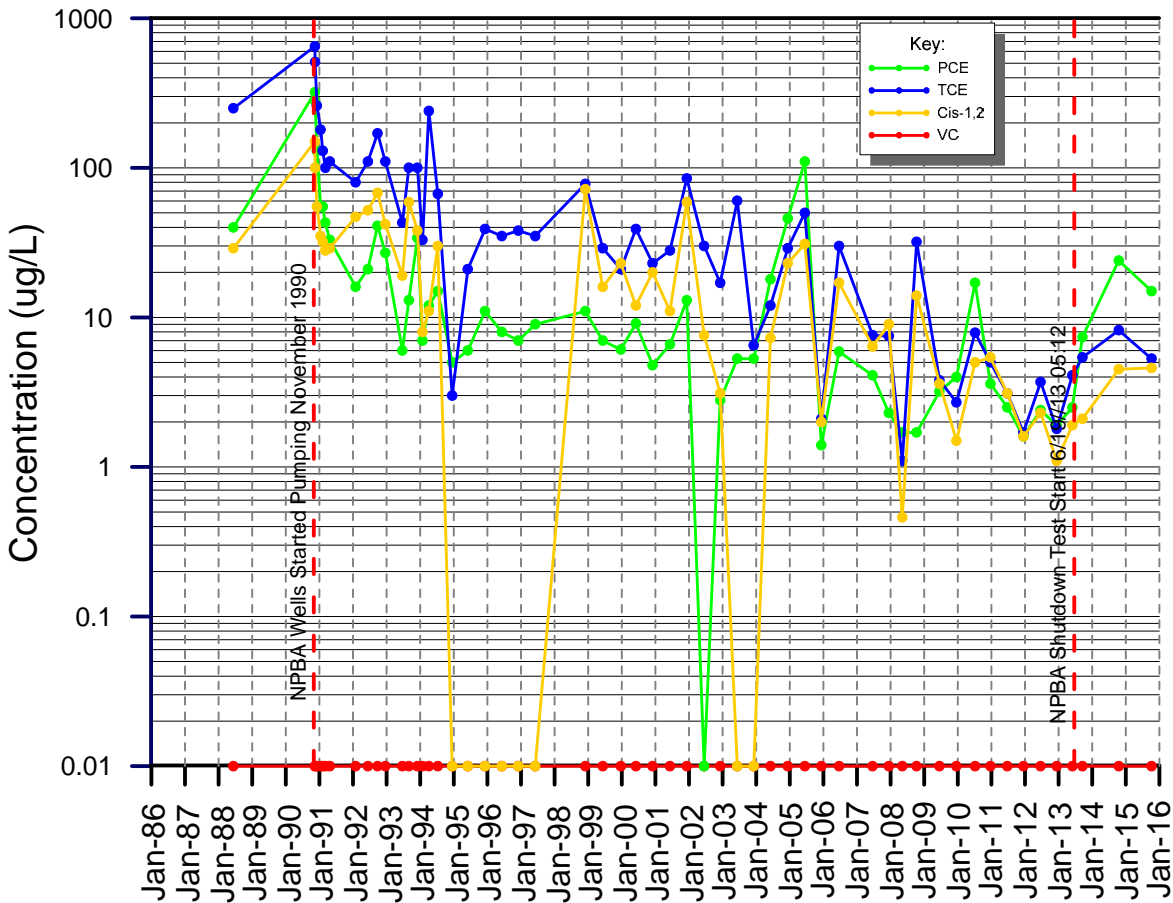
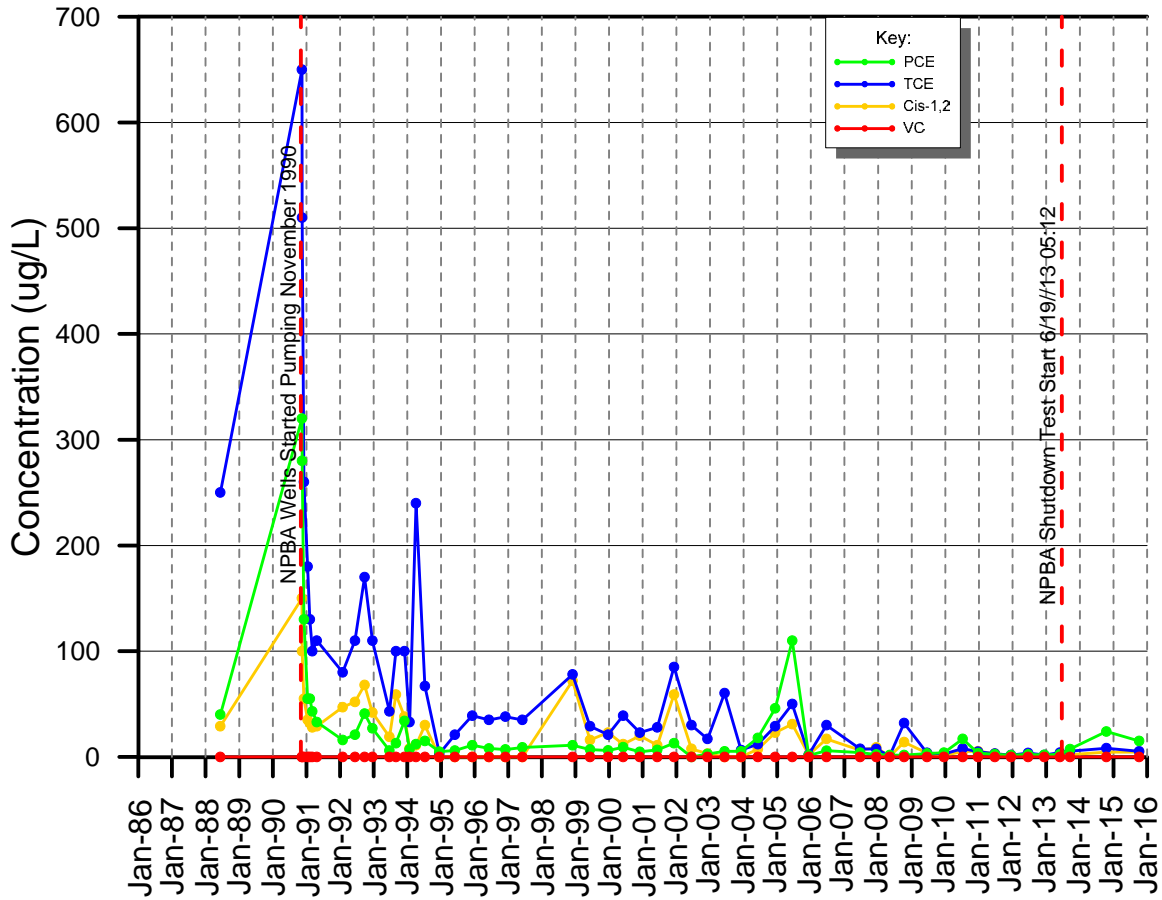
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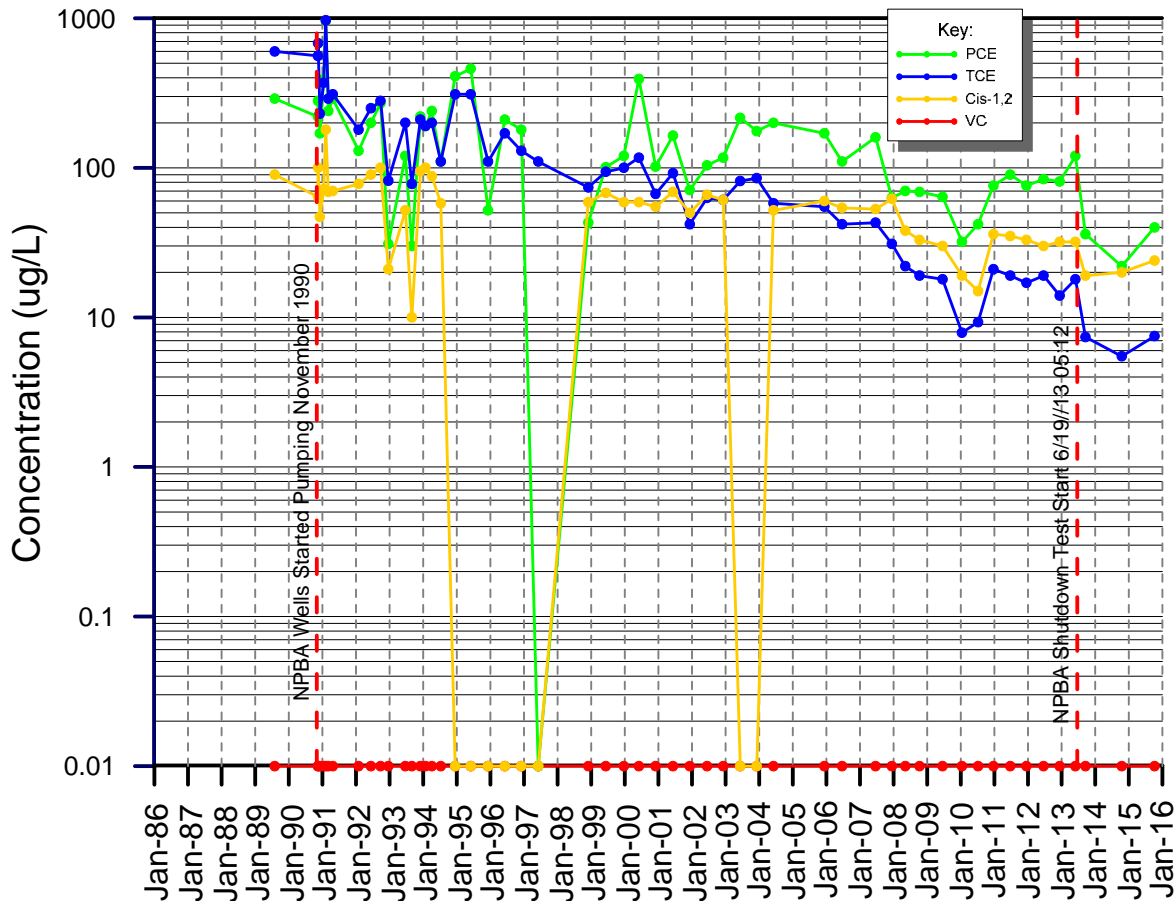
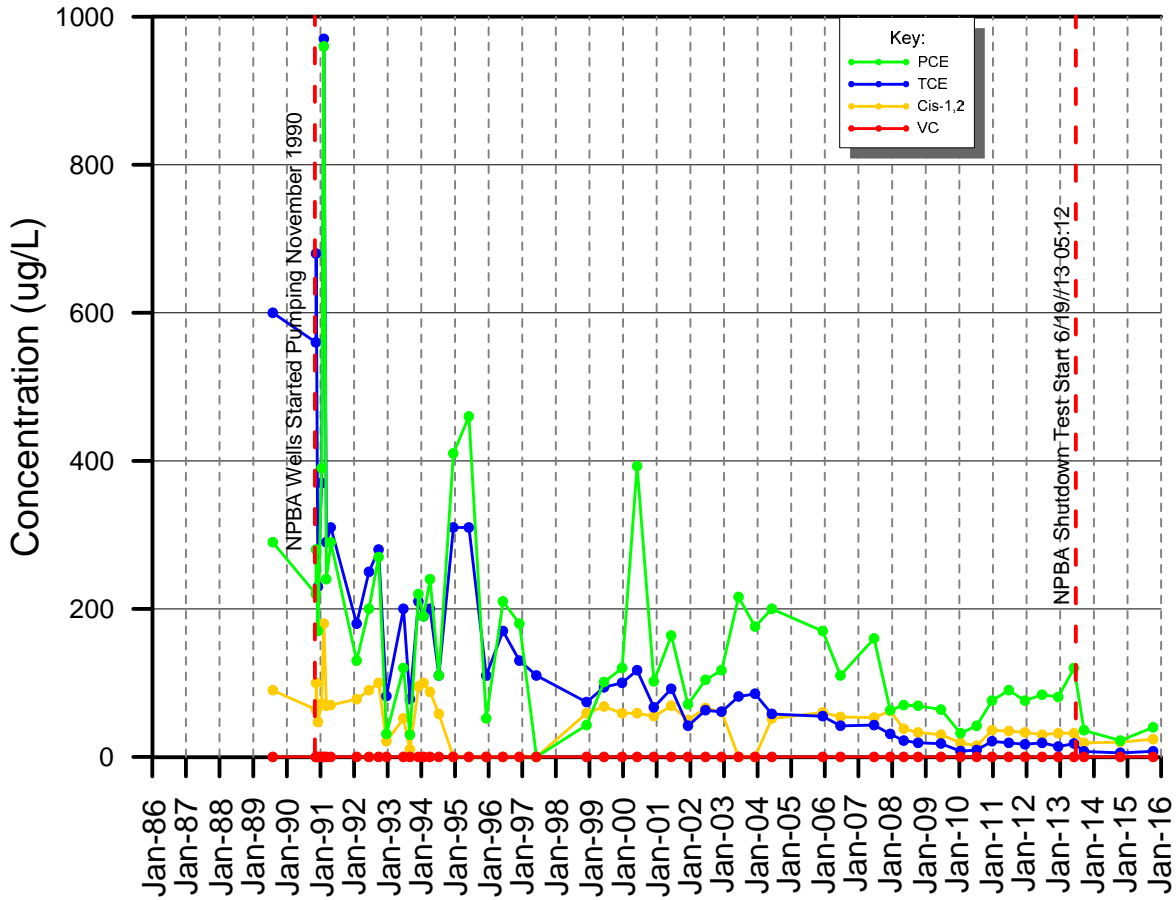
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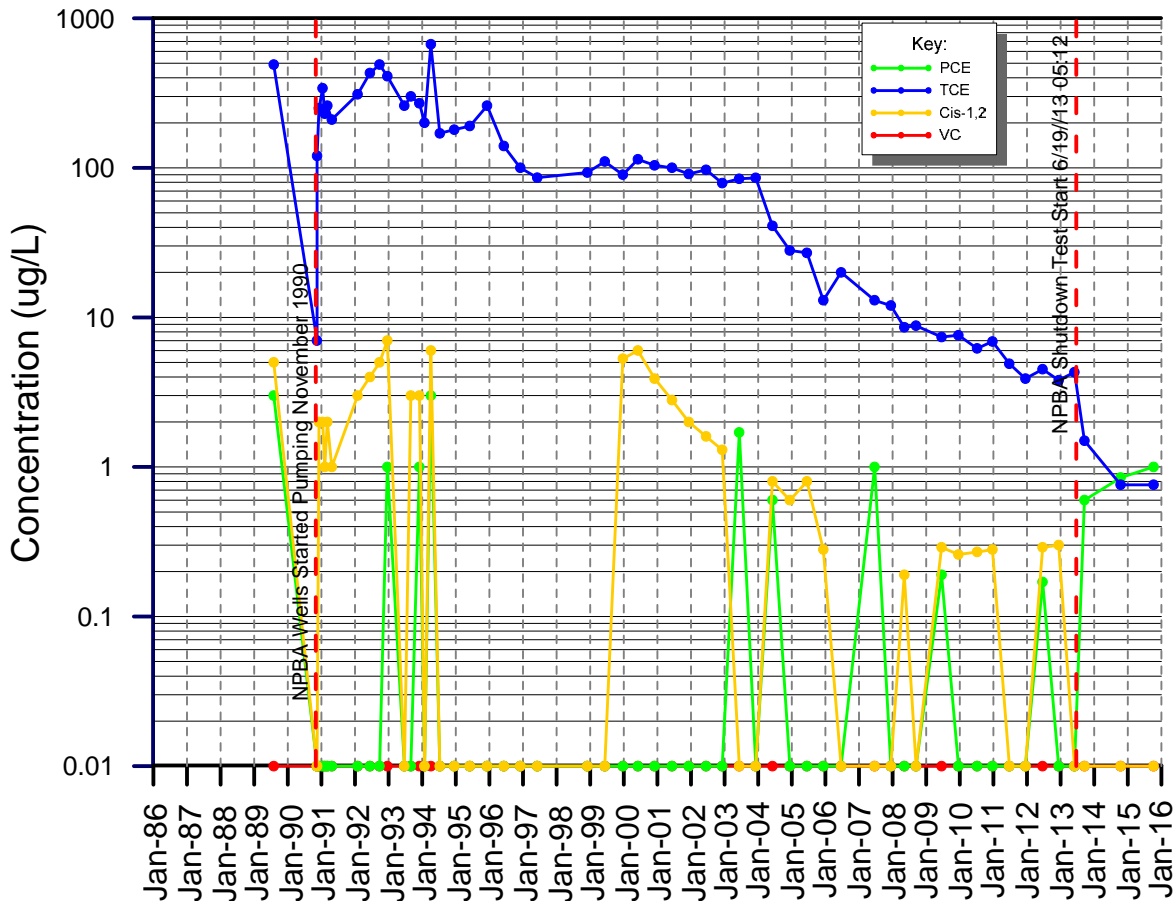
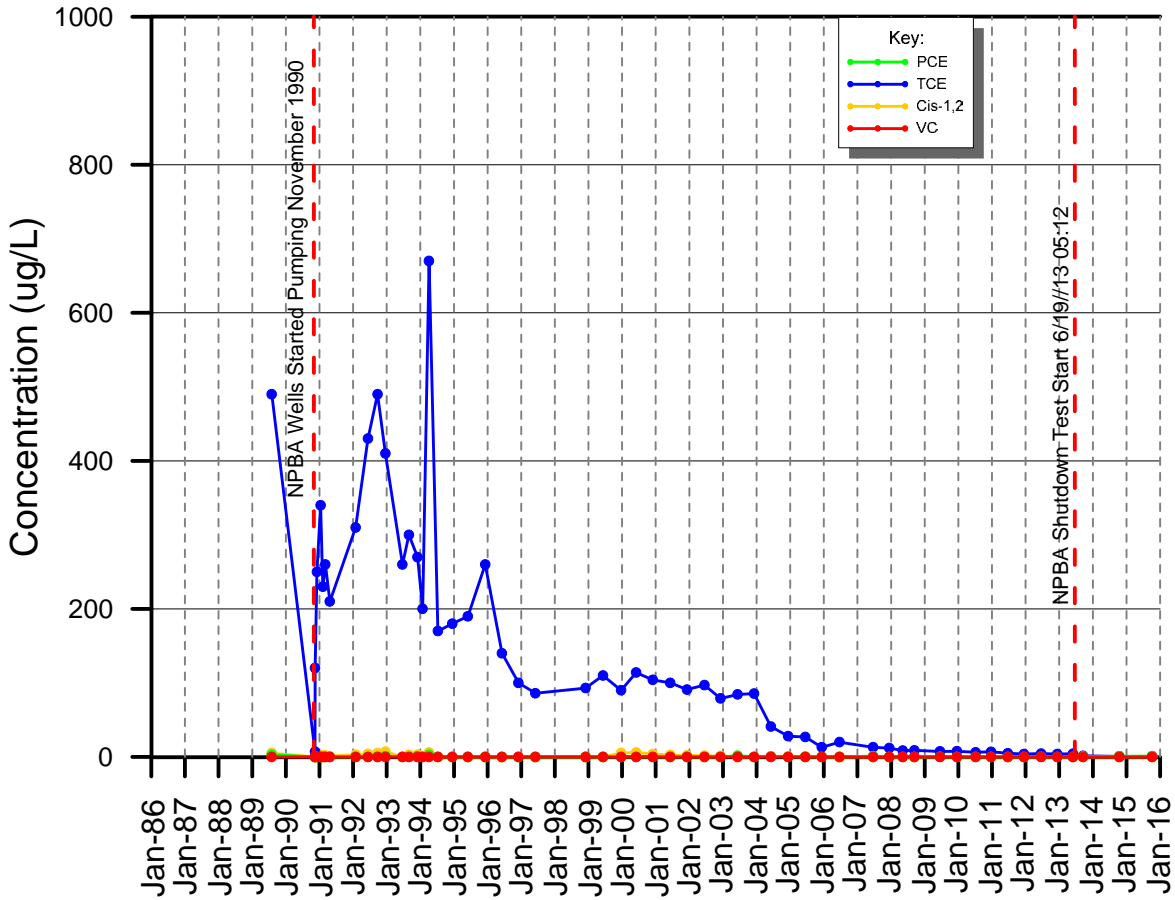
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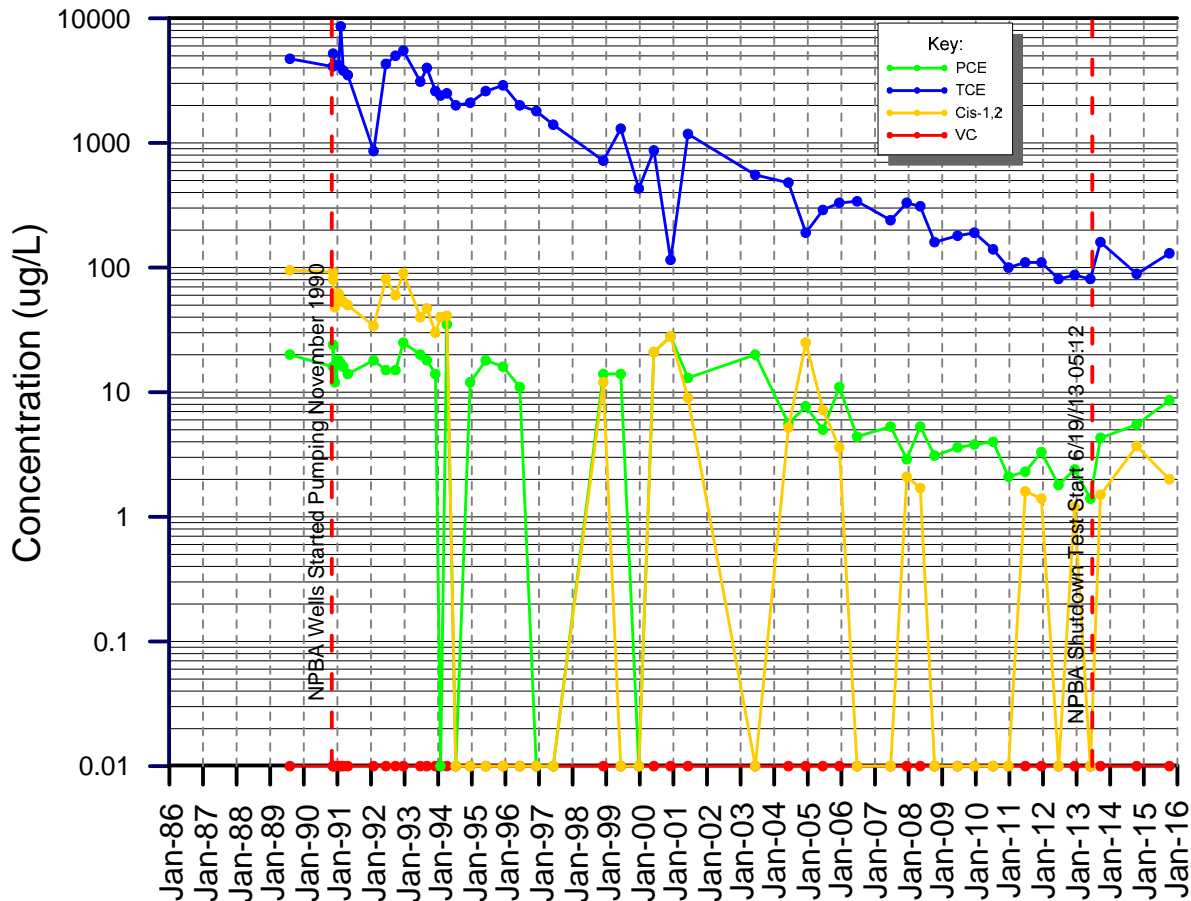
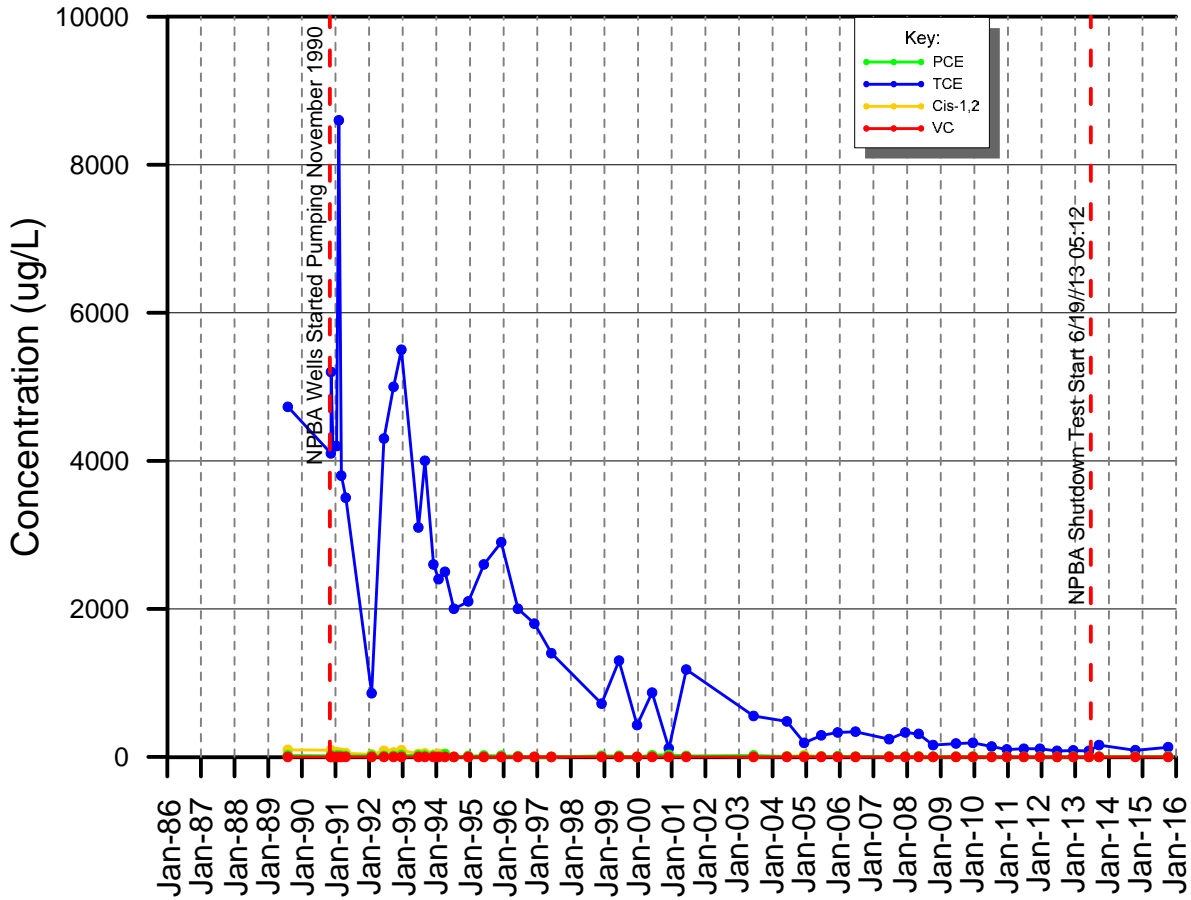
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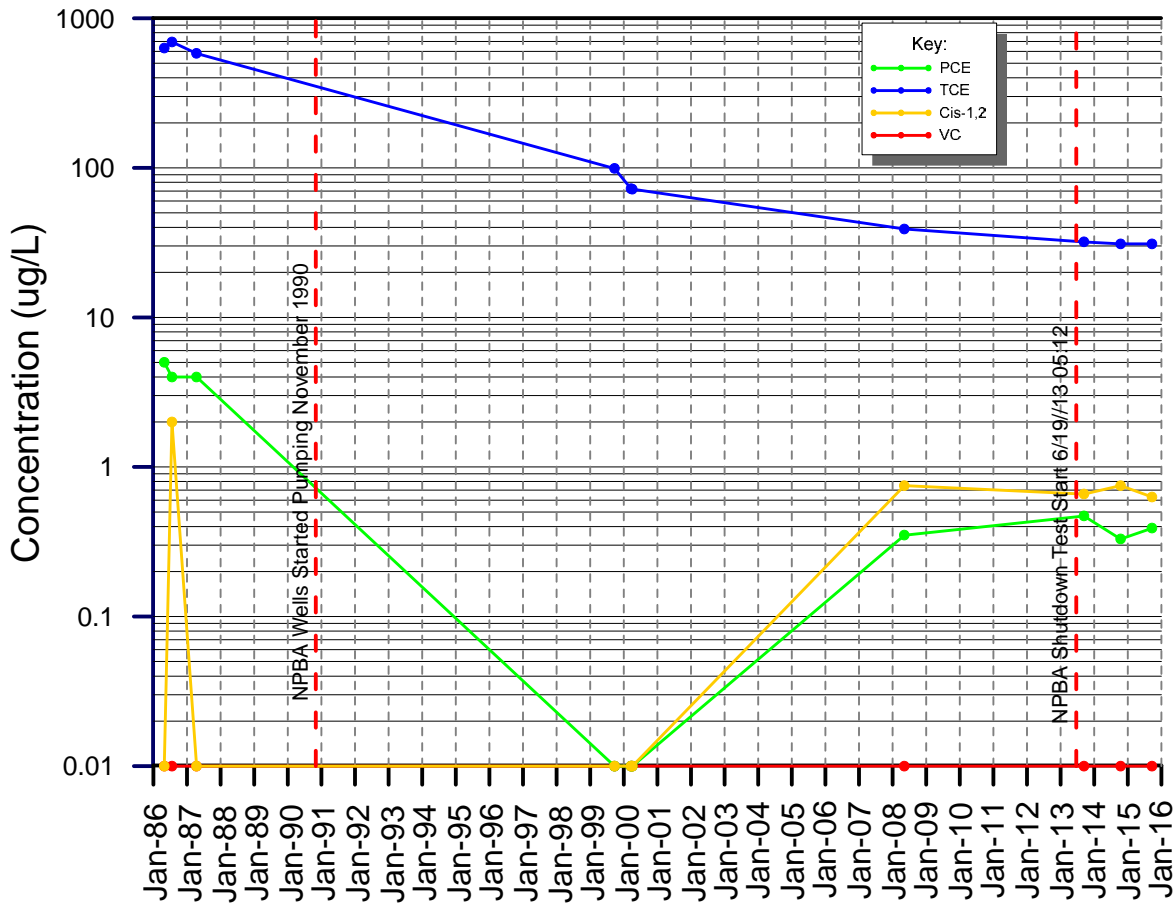
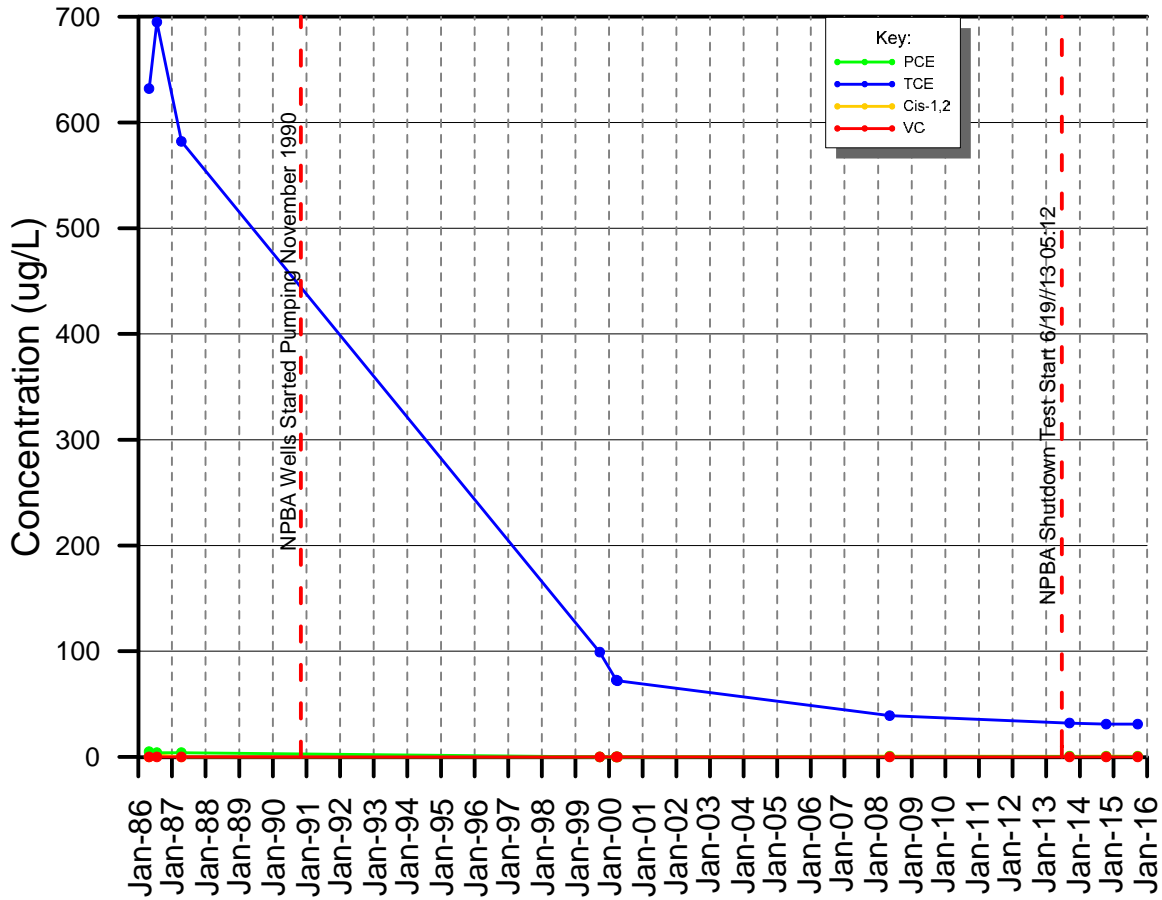


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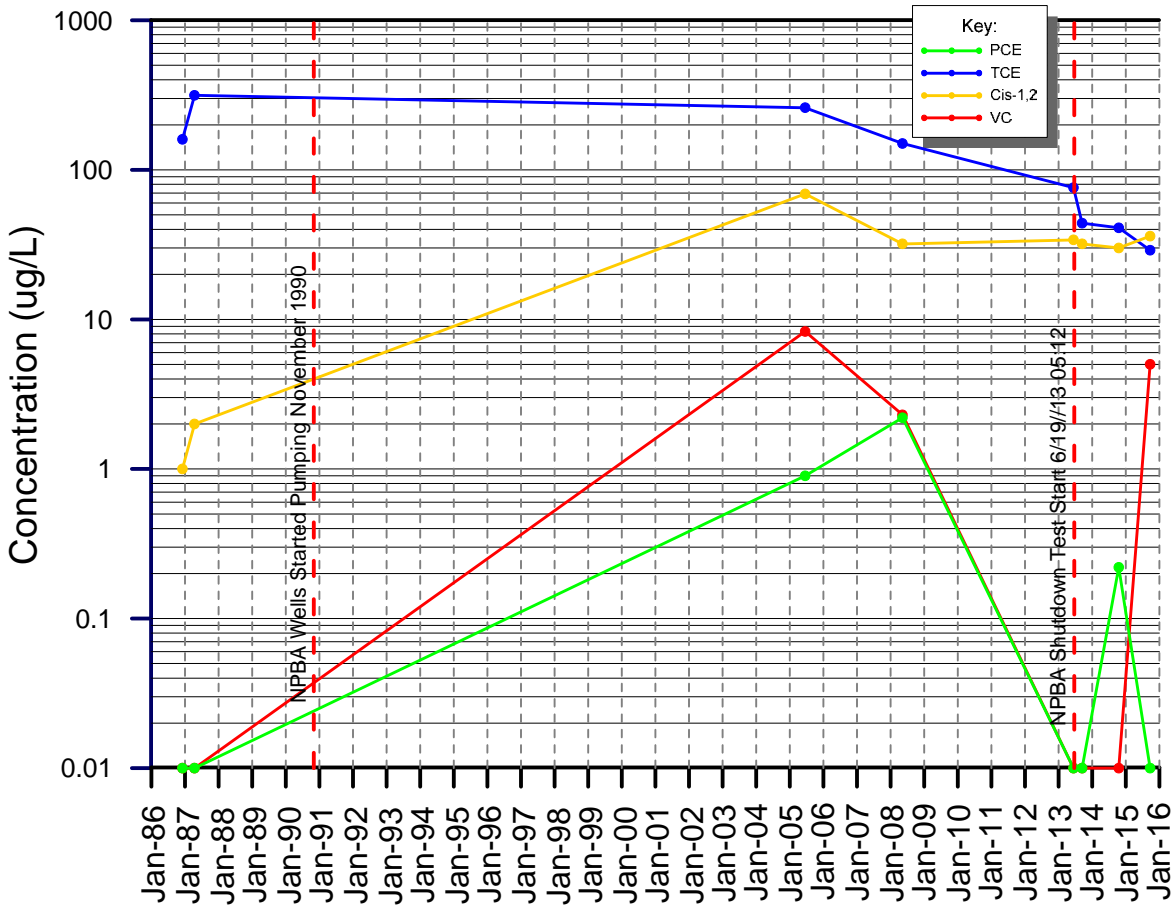
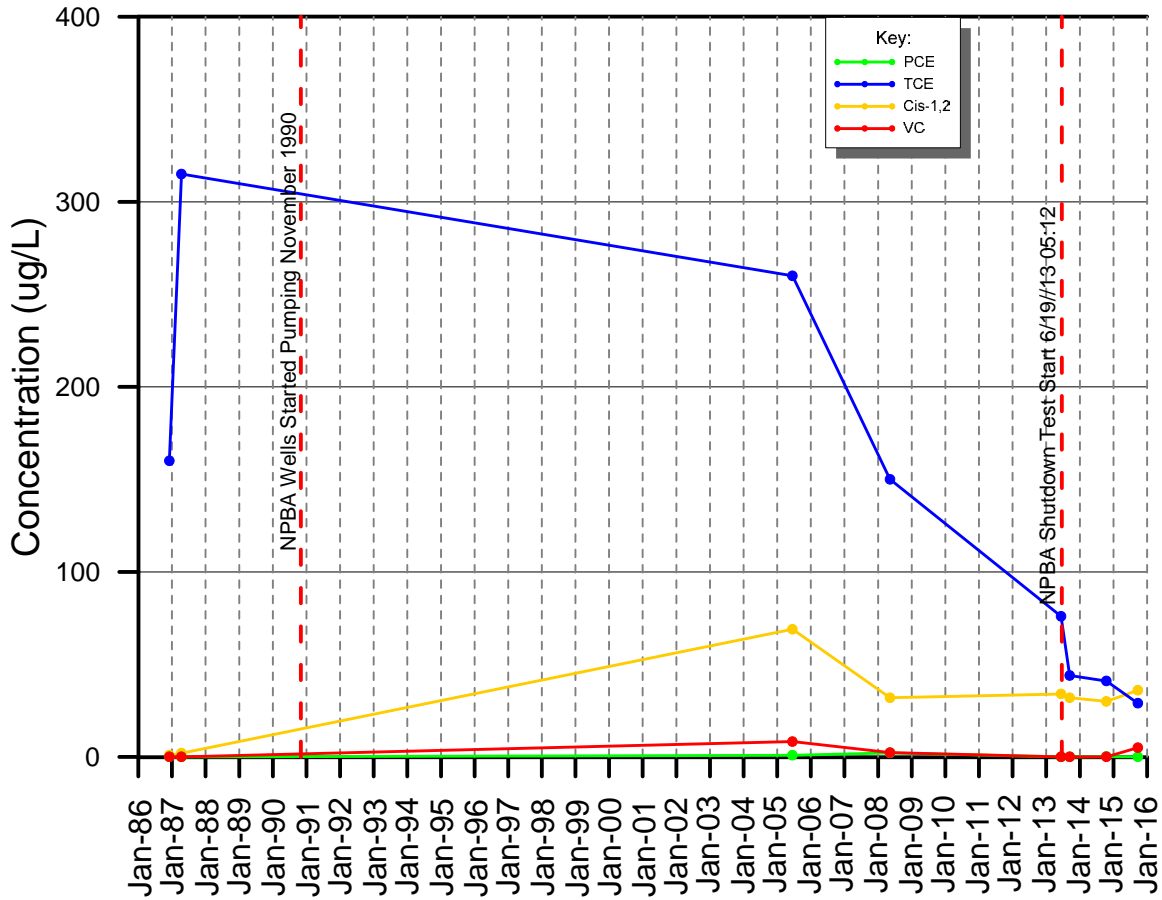




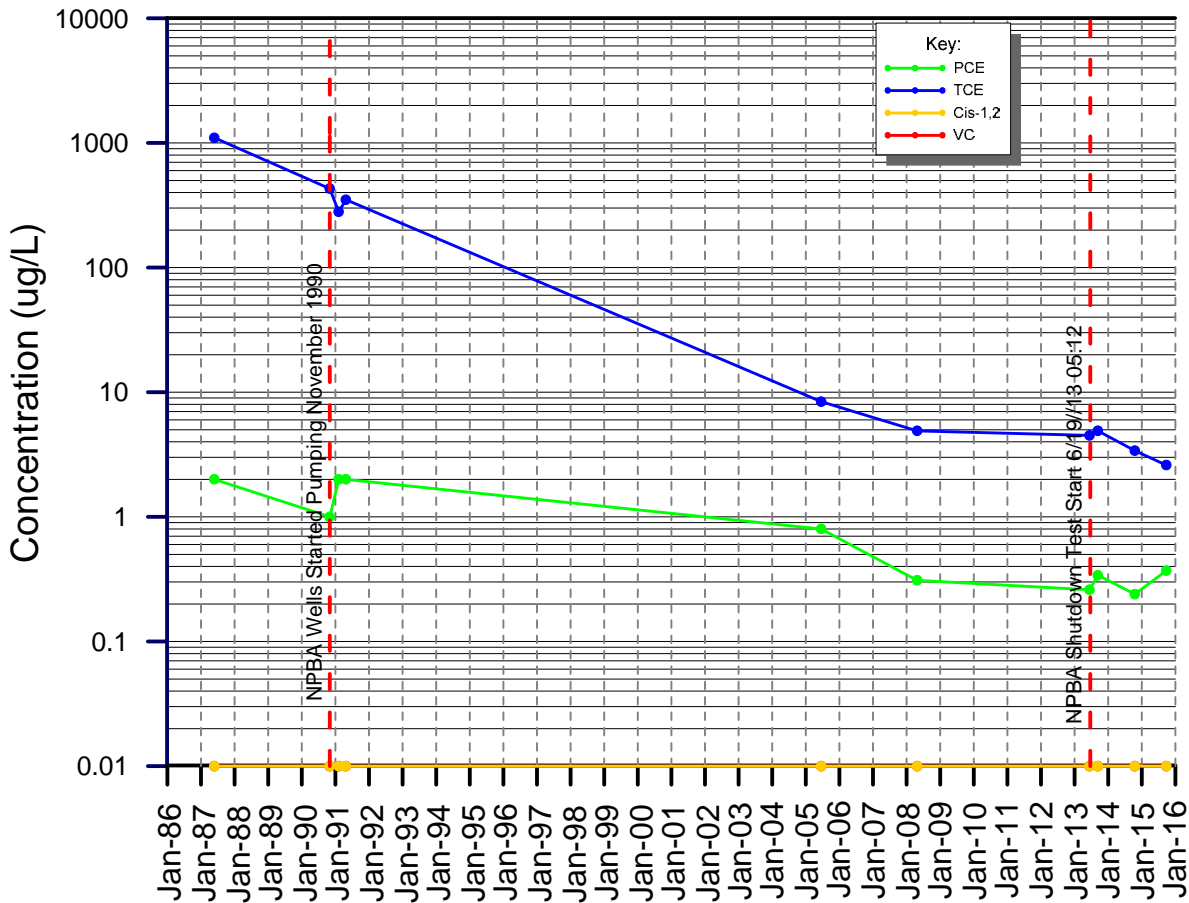
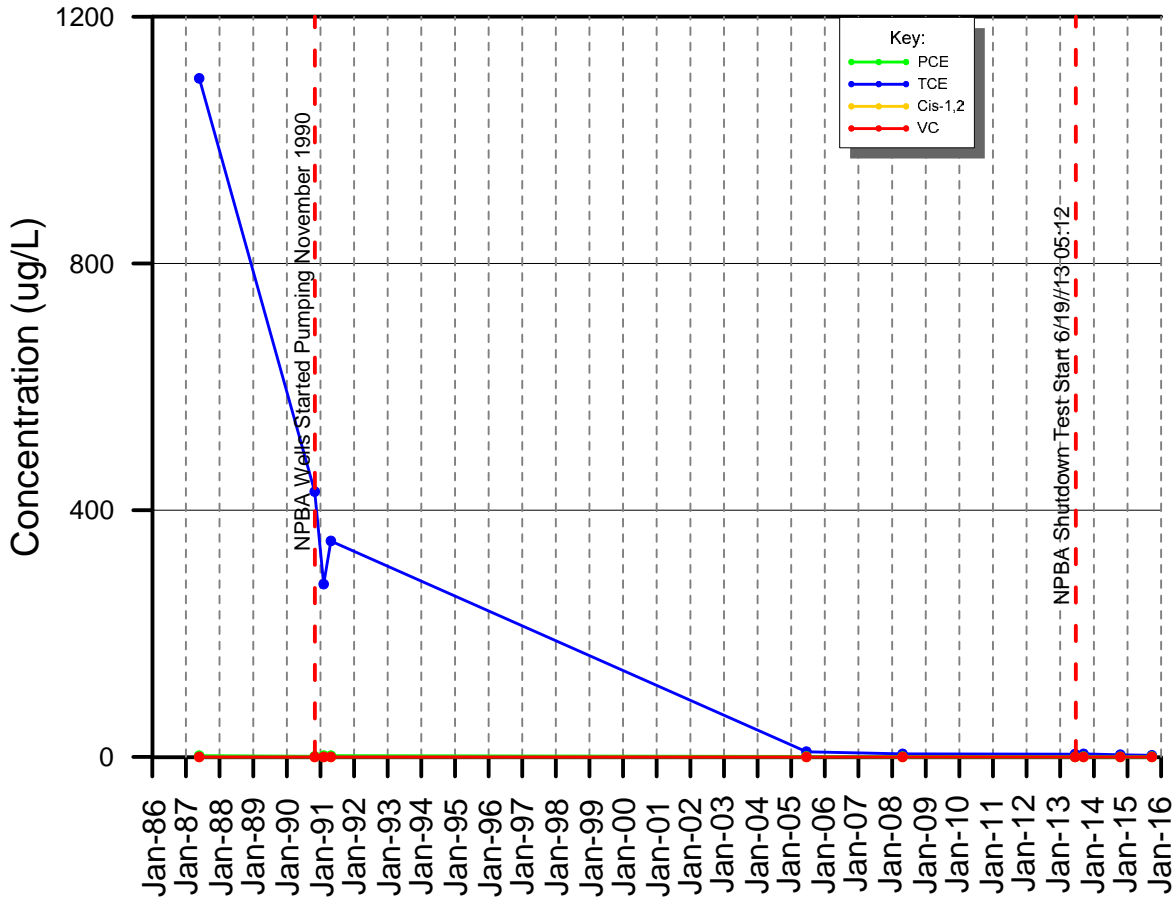
### MW-3



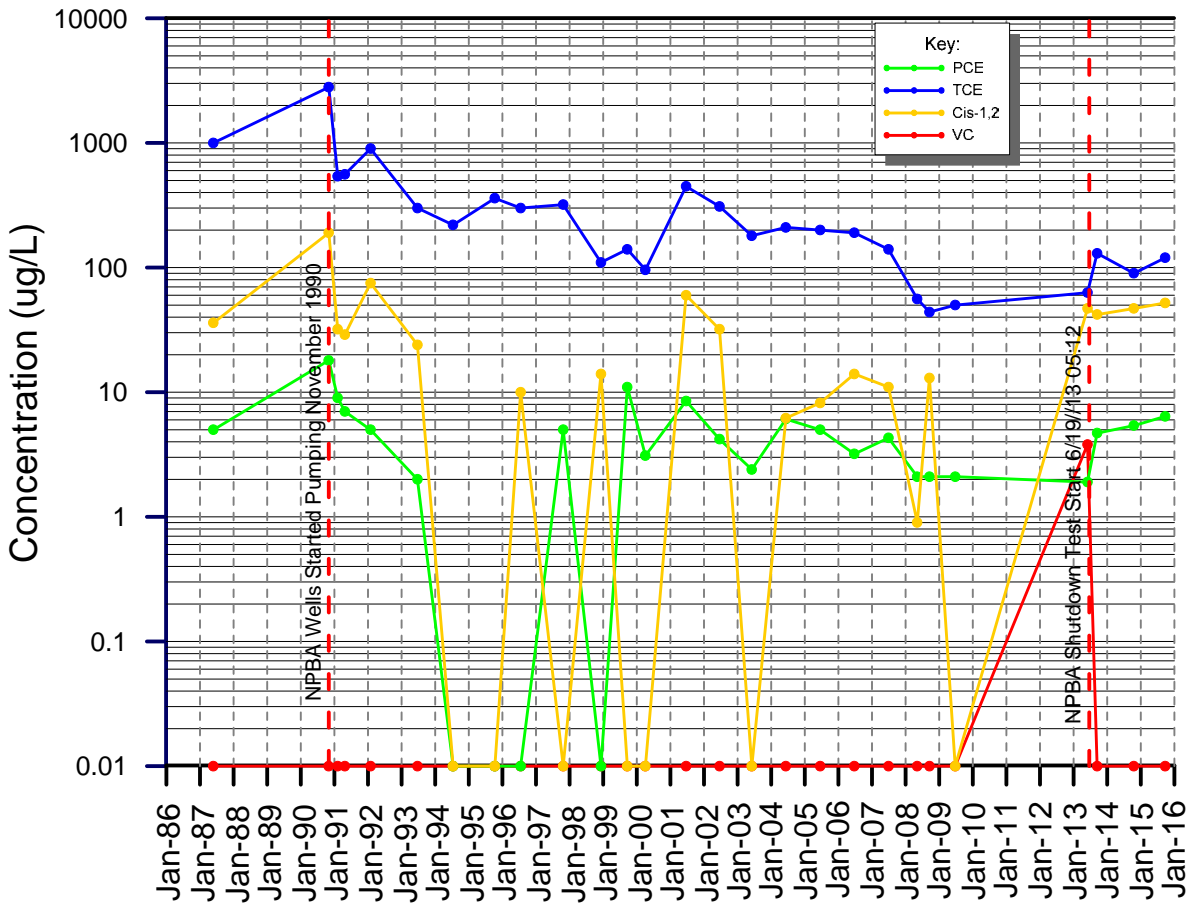
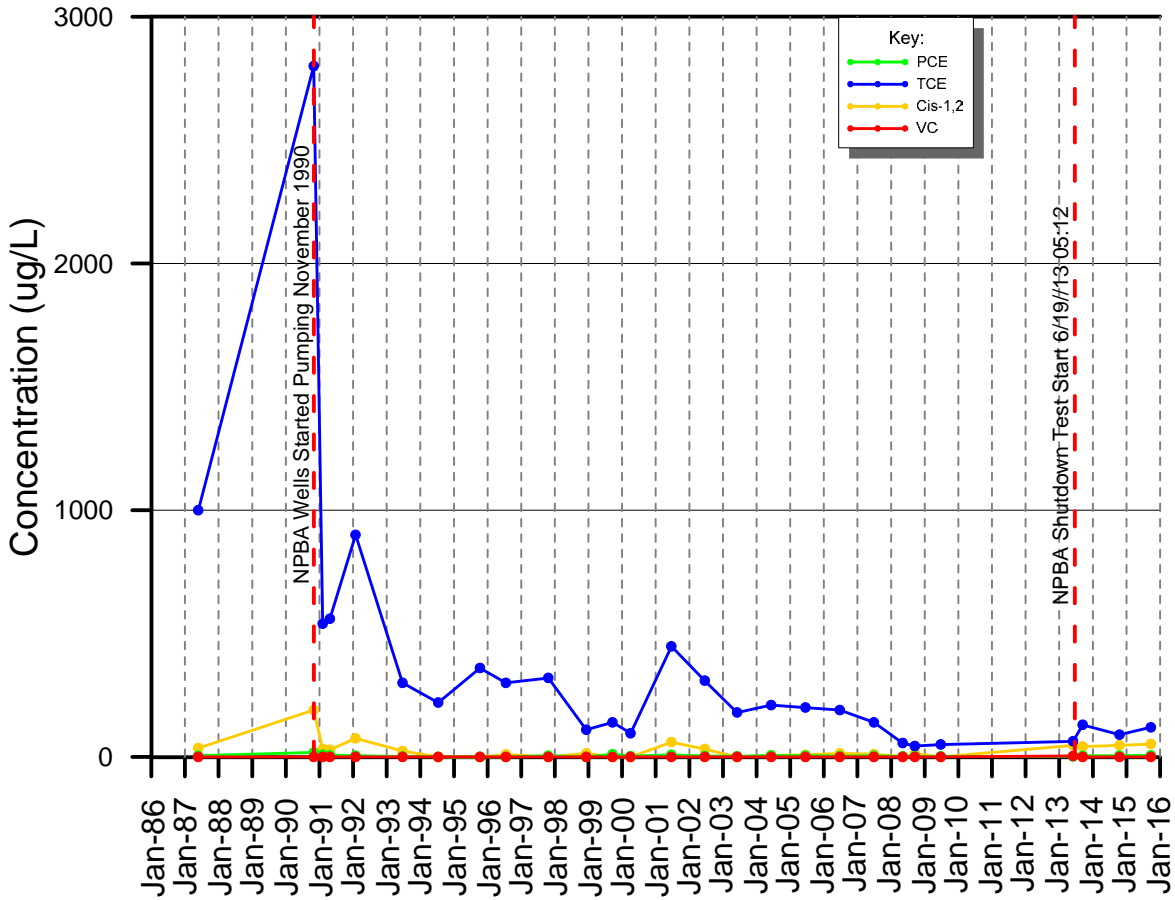
# MW-9



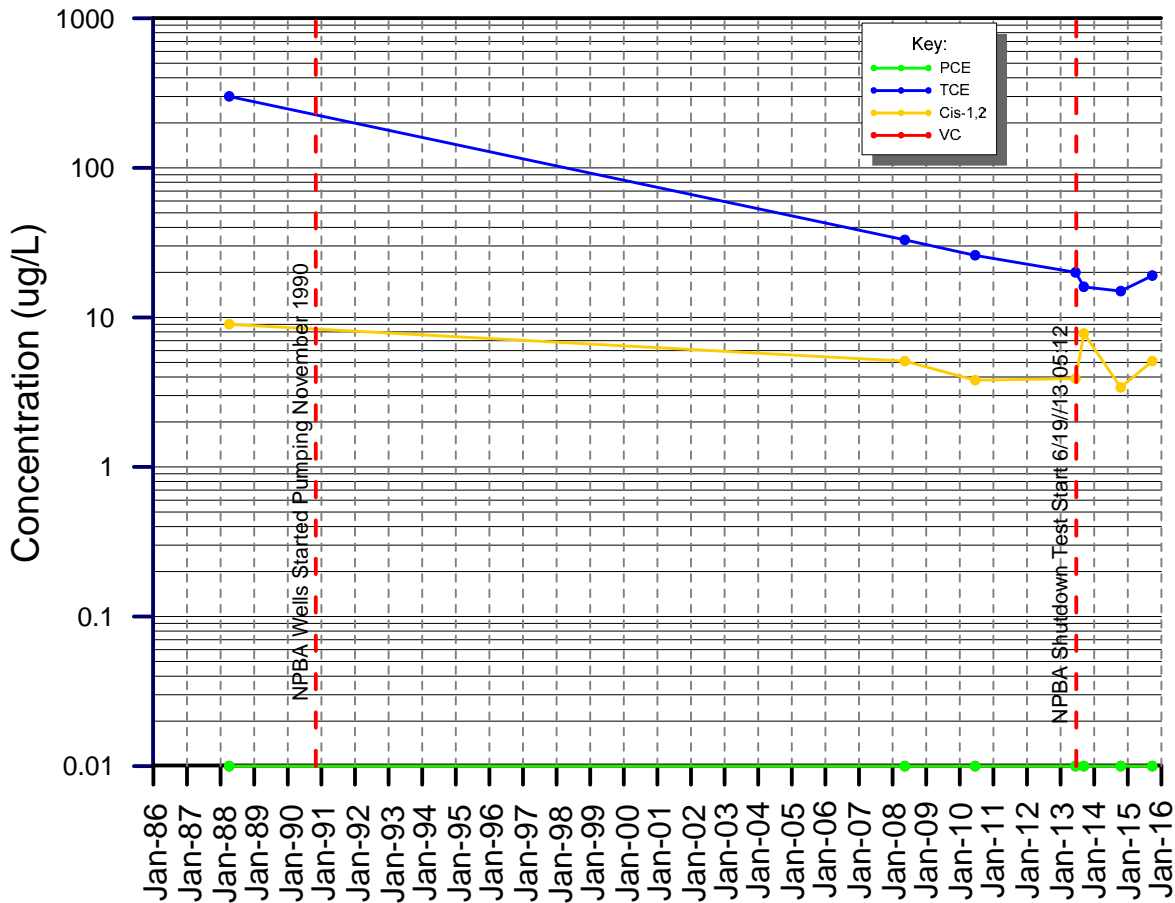
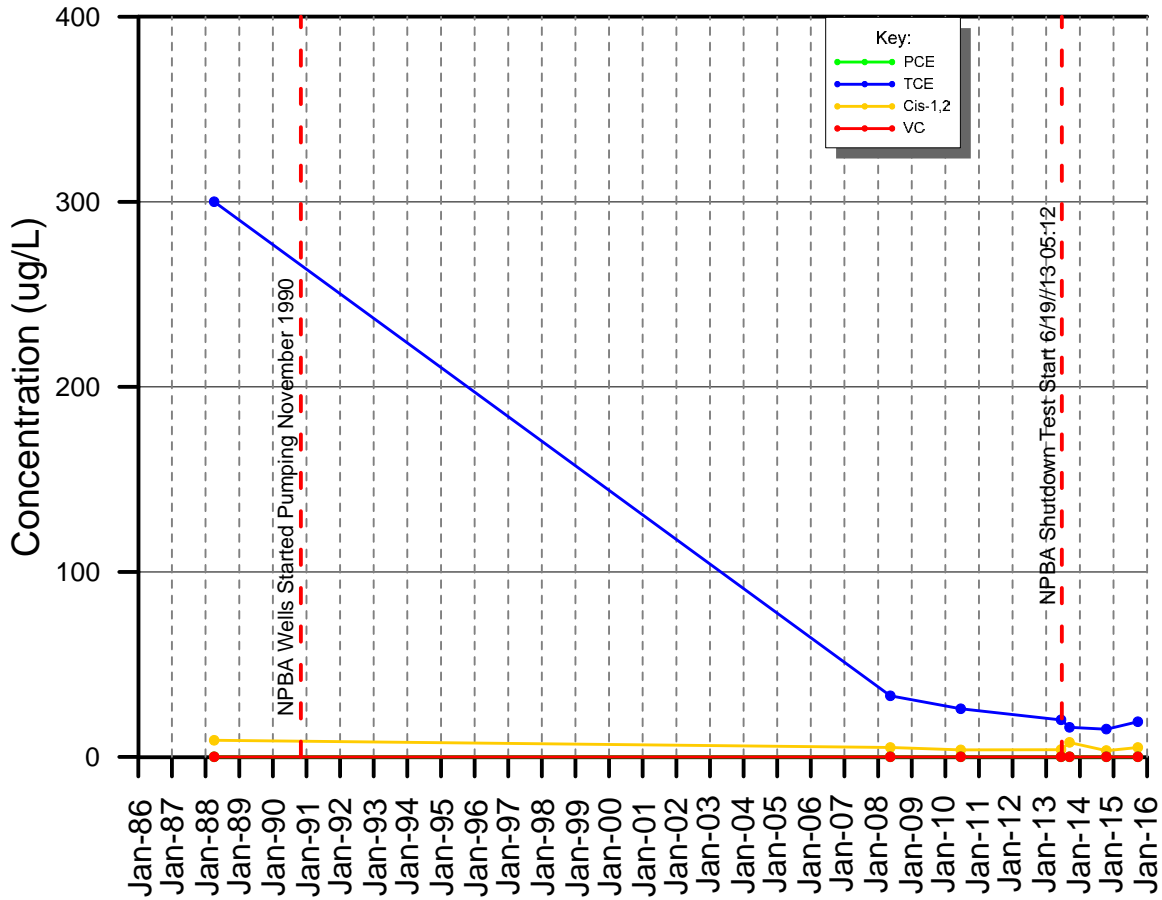
# MW-11



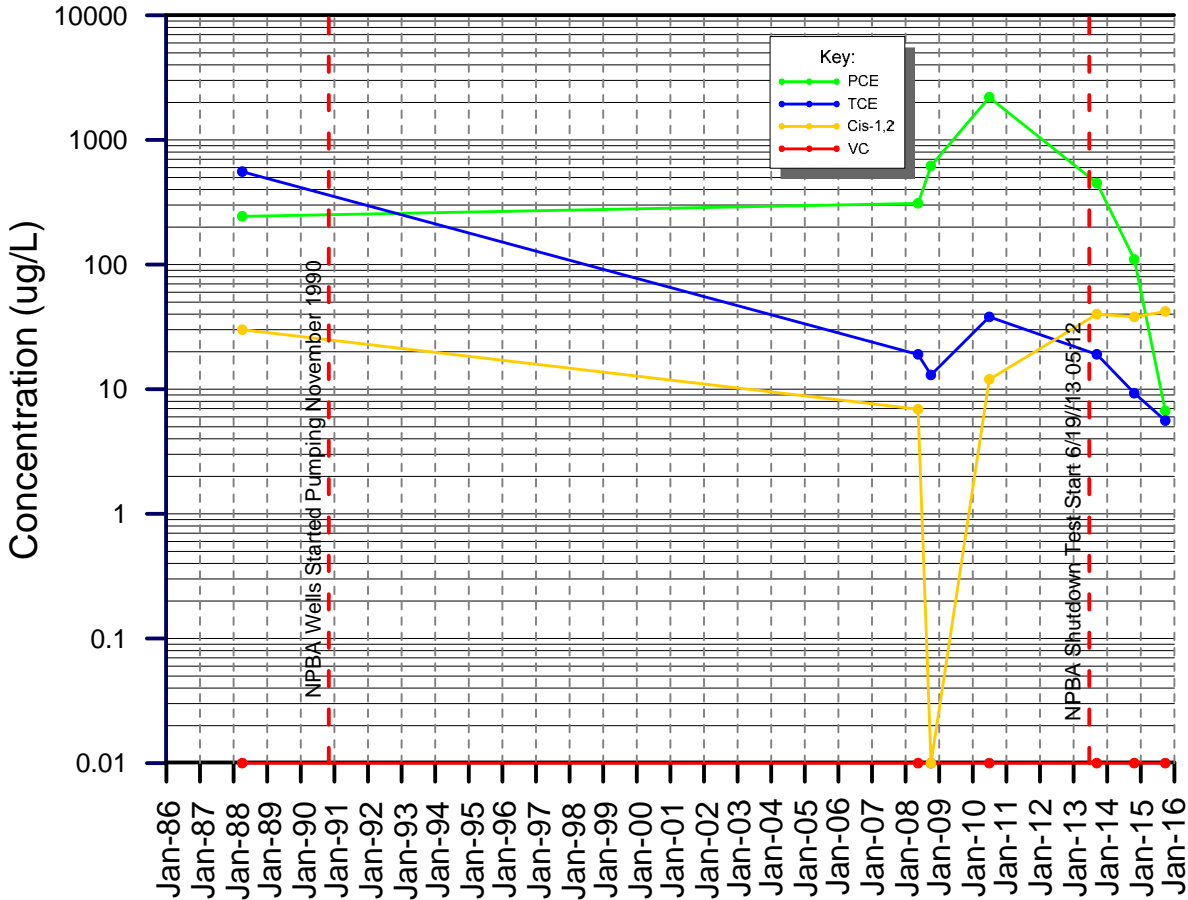
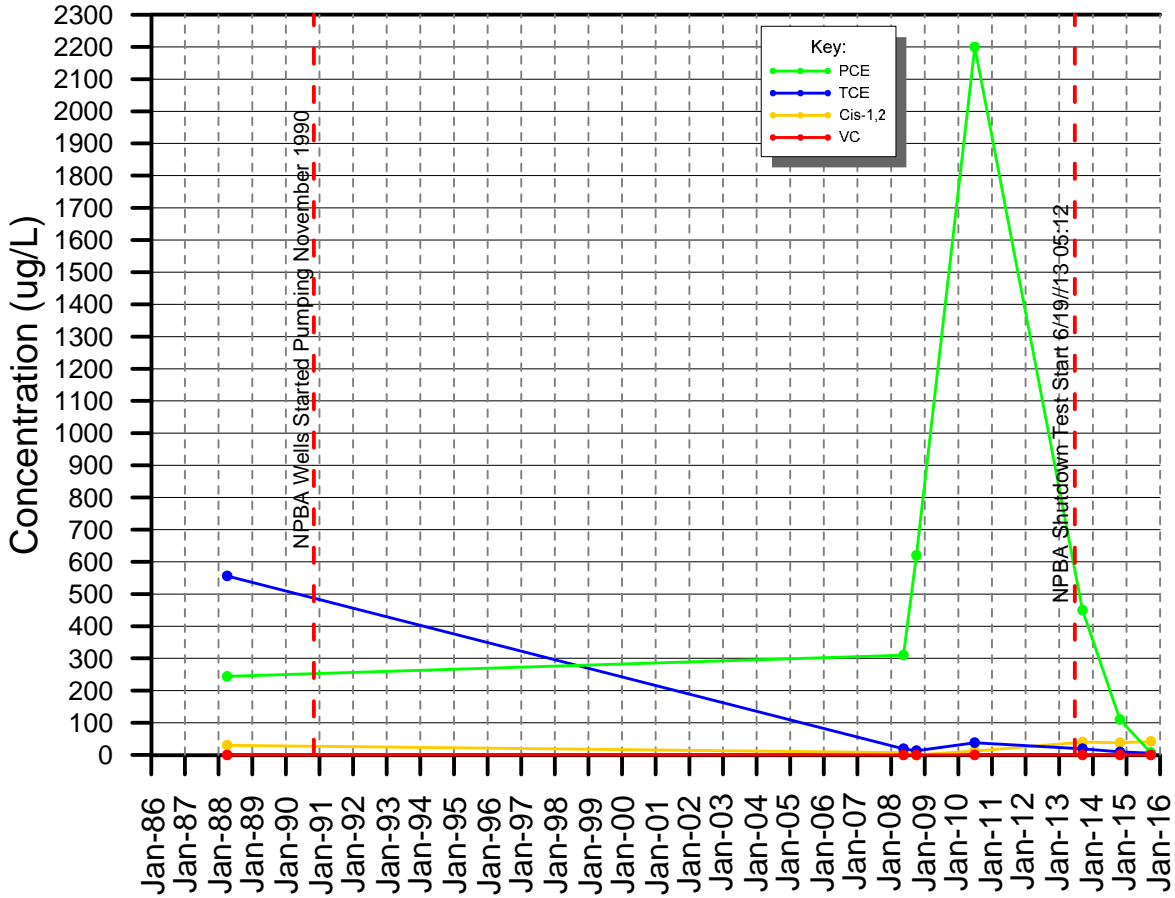
# MW-12



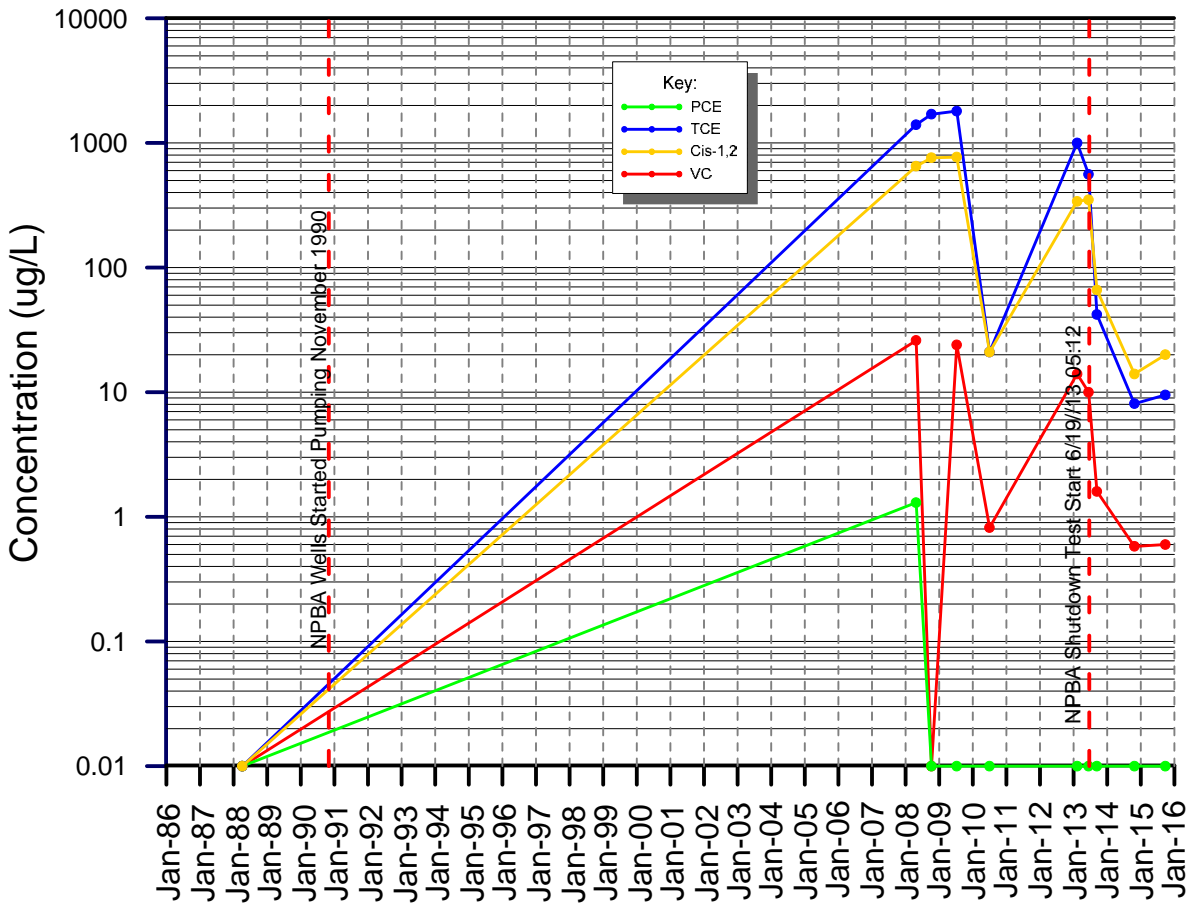
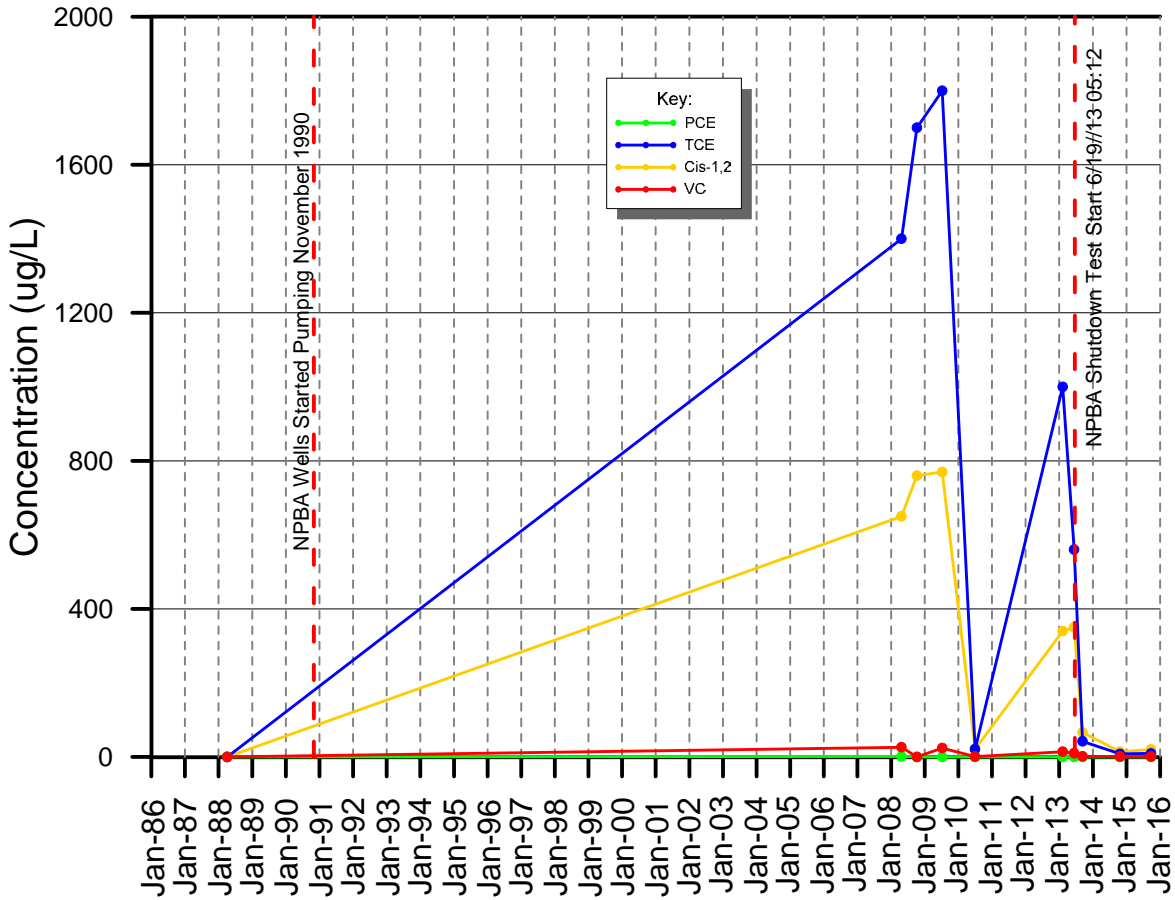
# MW-16D



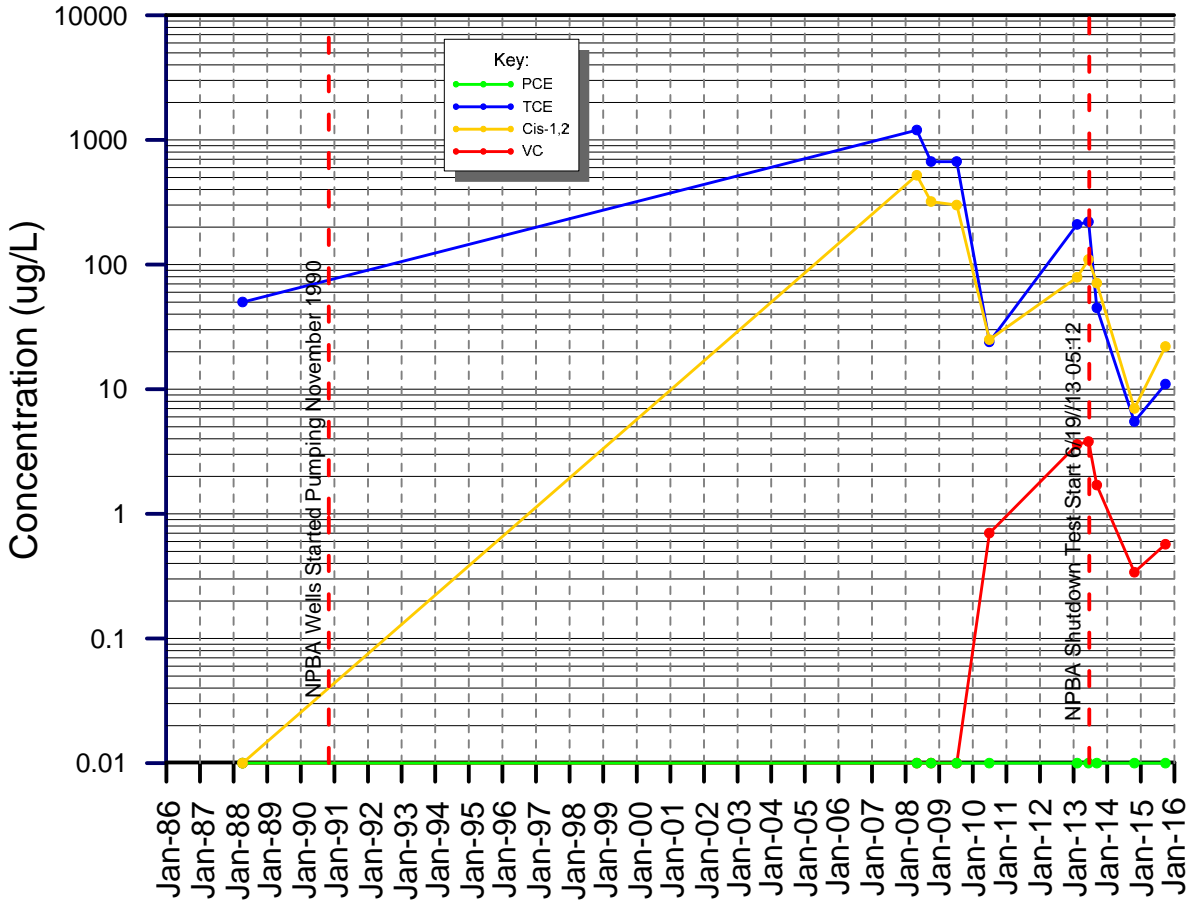
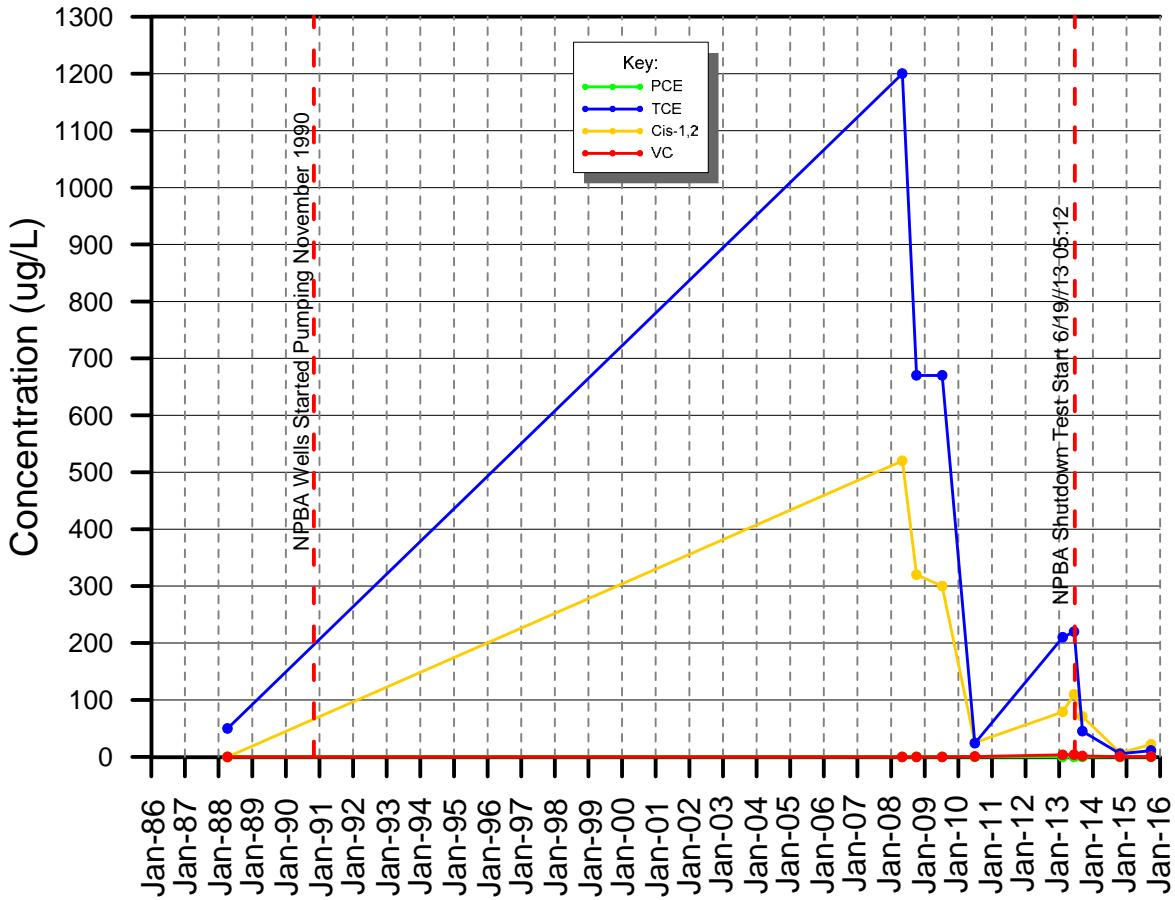
# MW-16S



# MW-18D

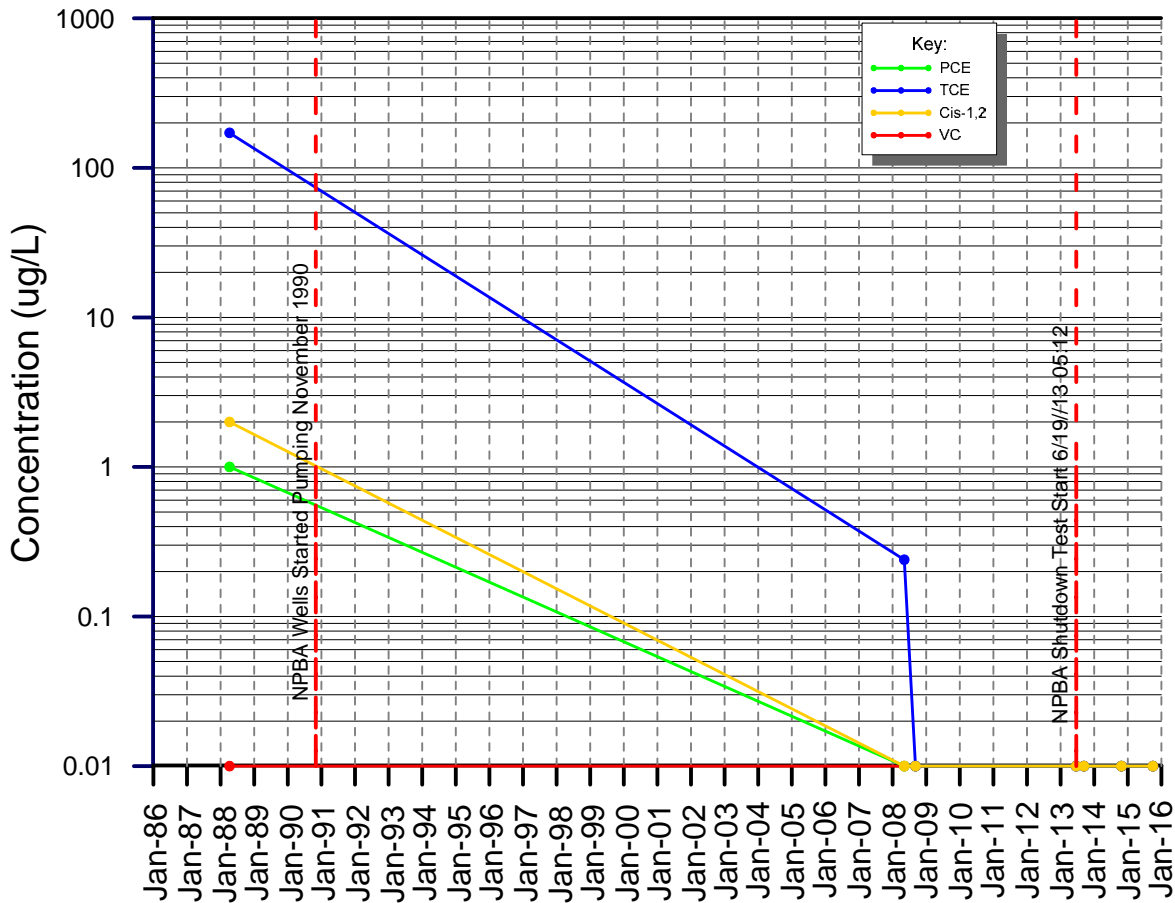
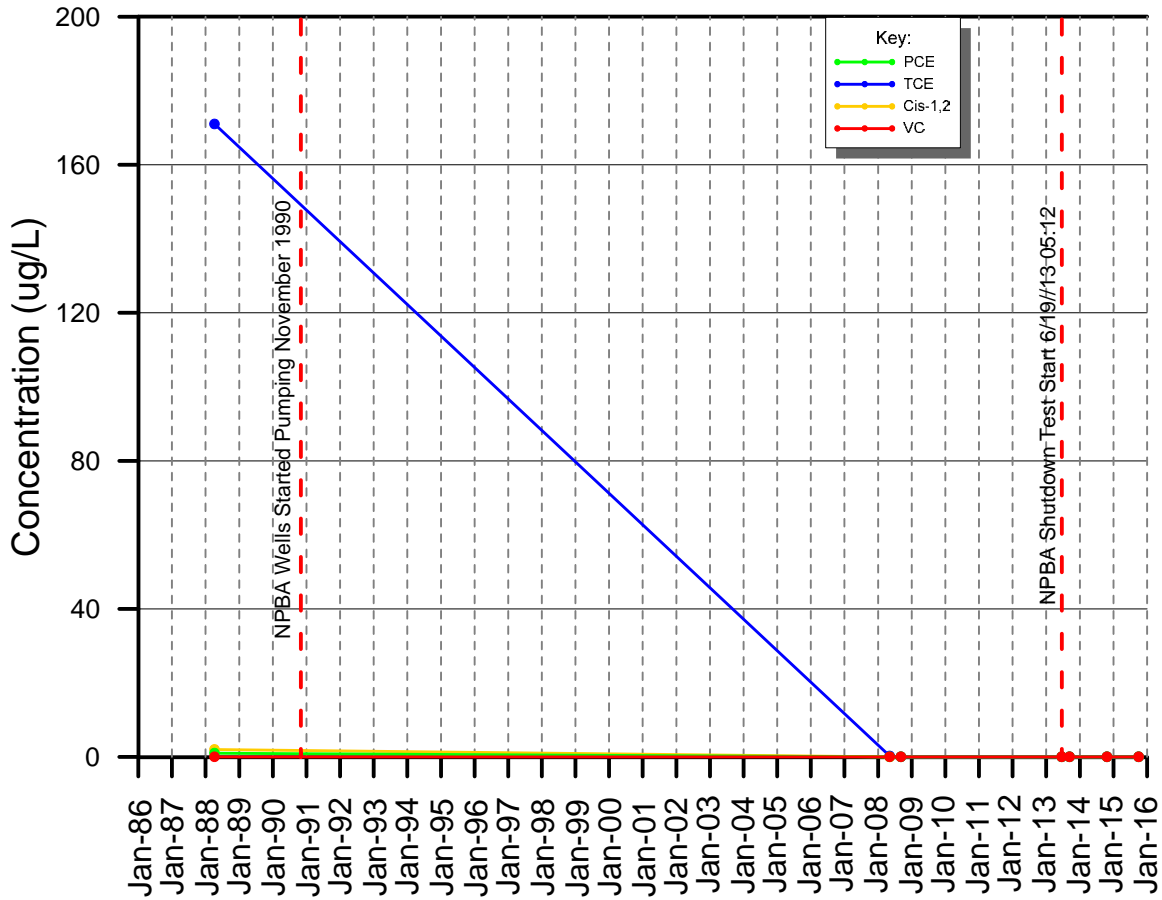


### MW-18S

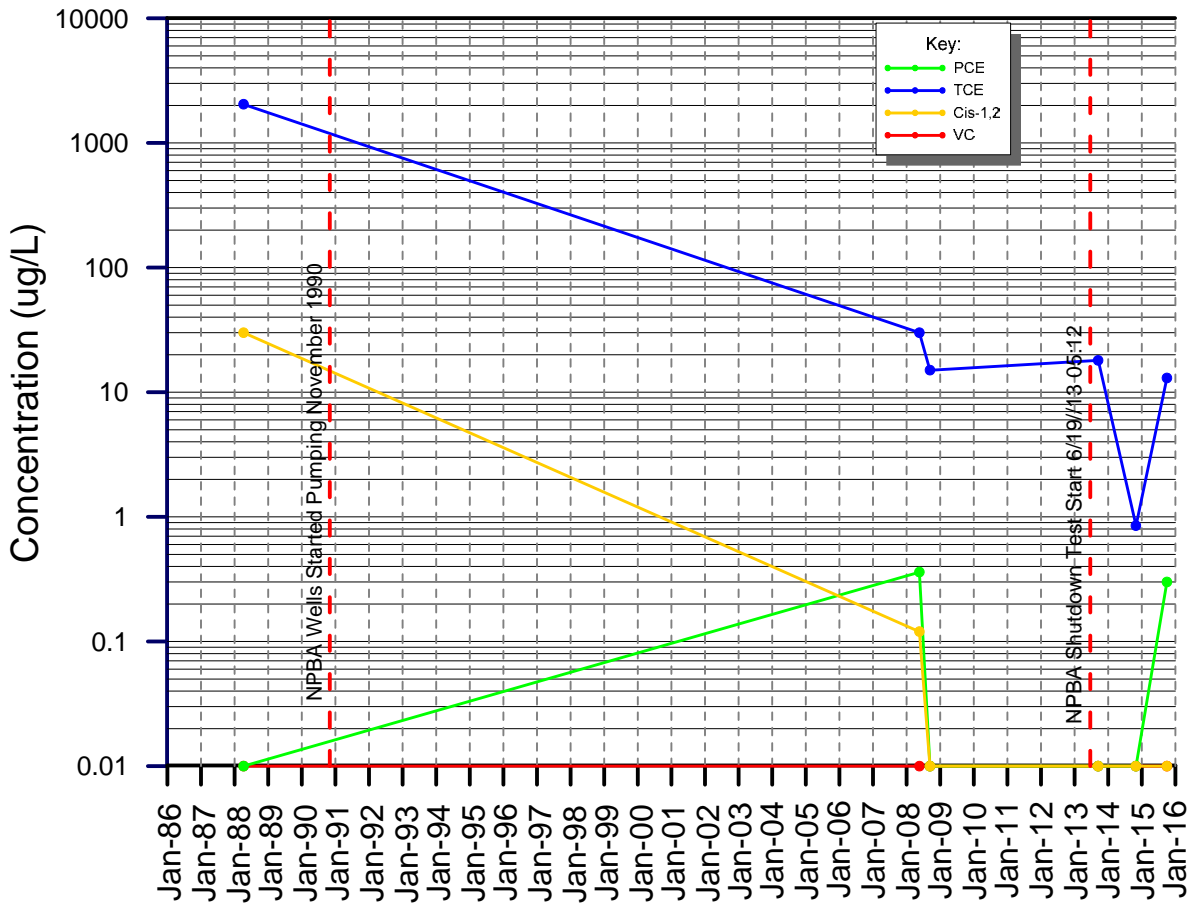
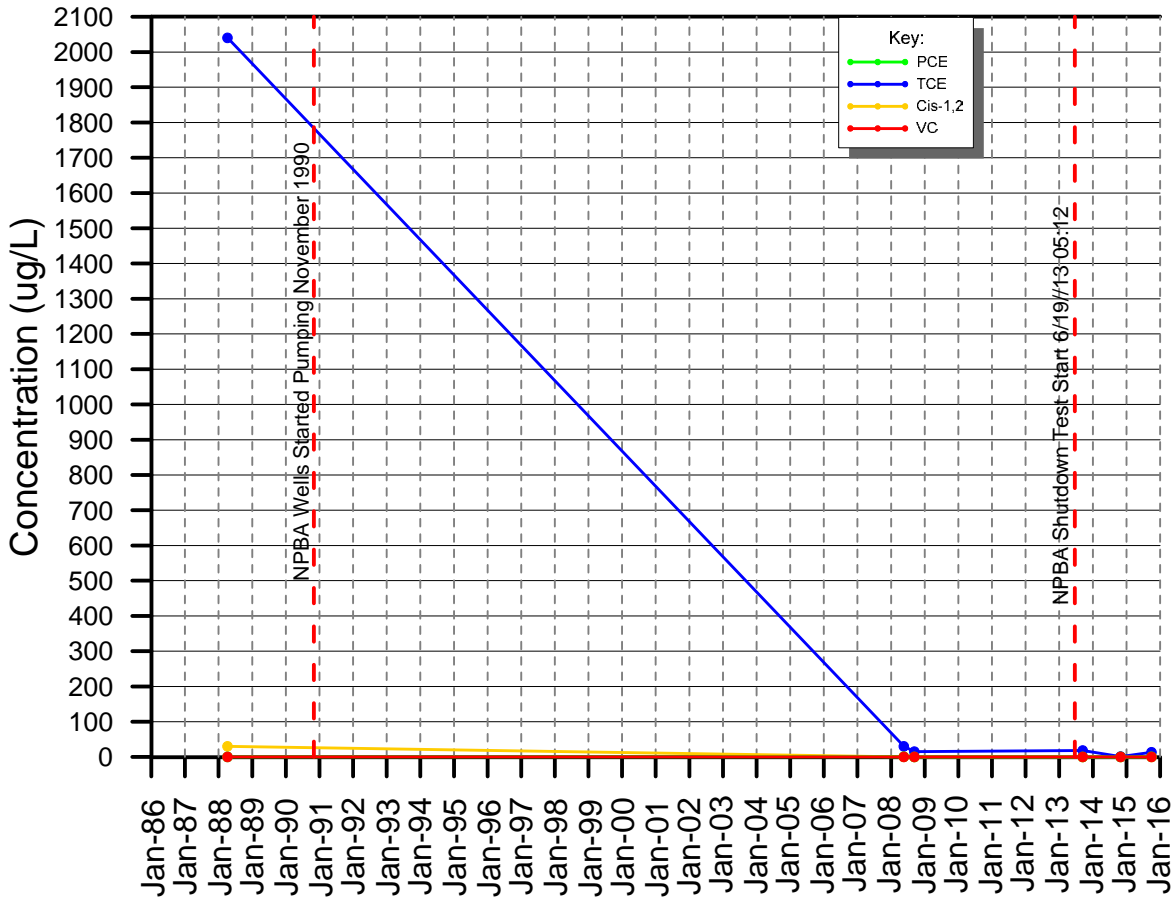




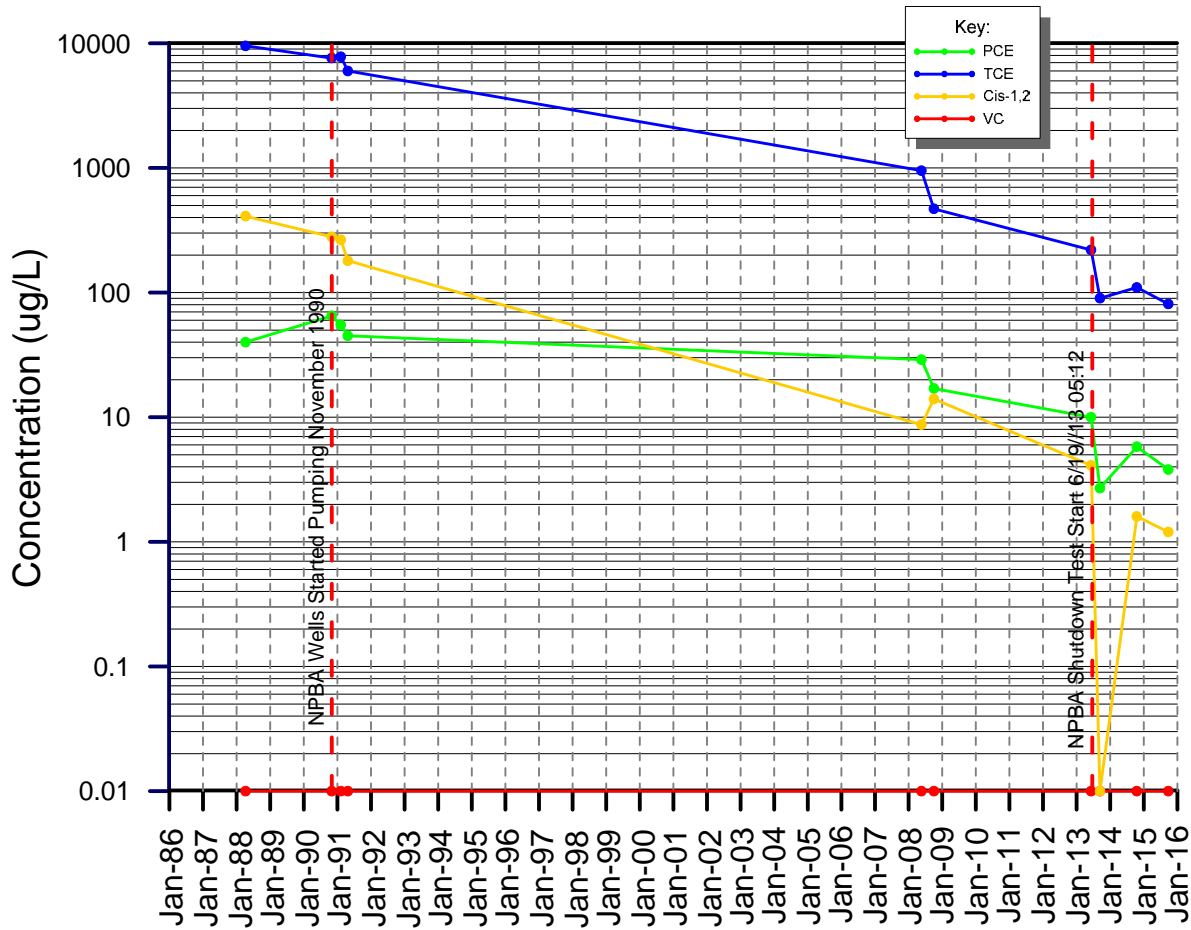
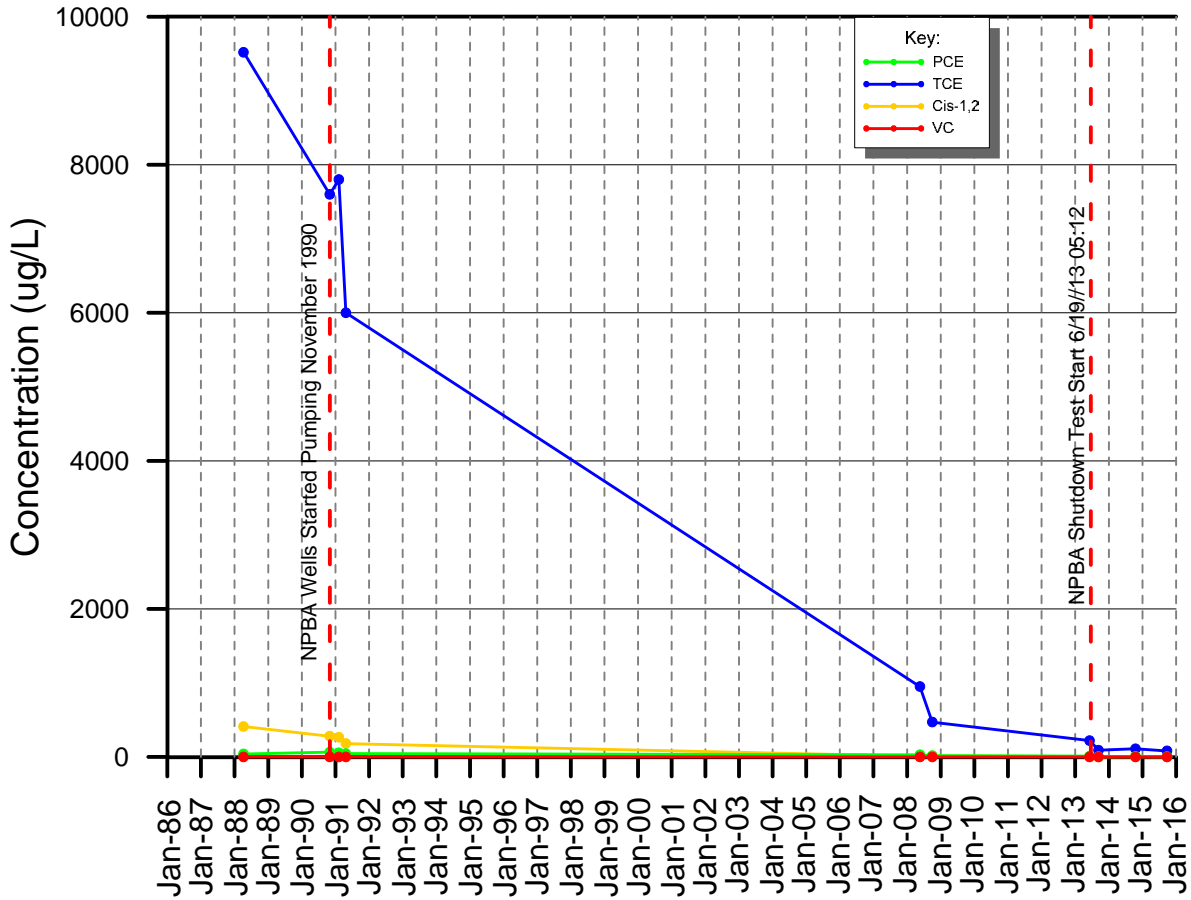
# MW-20D



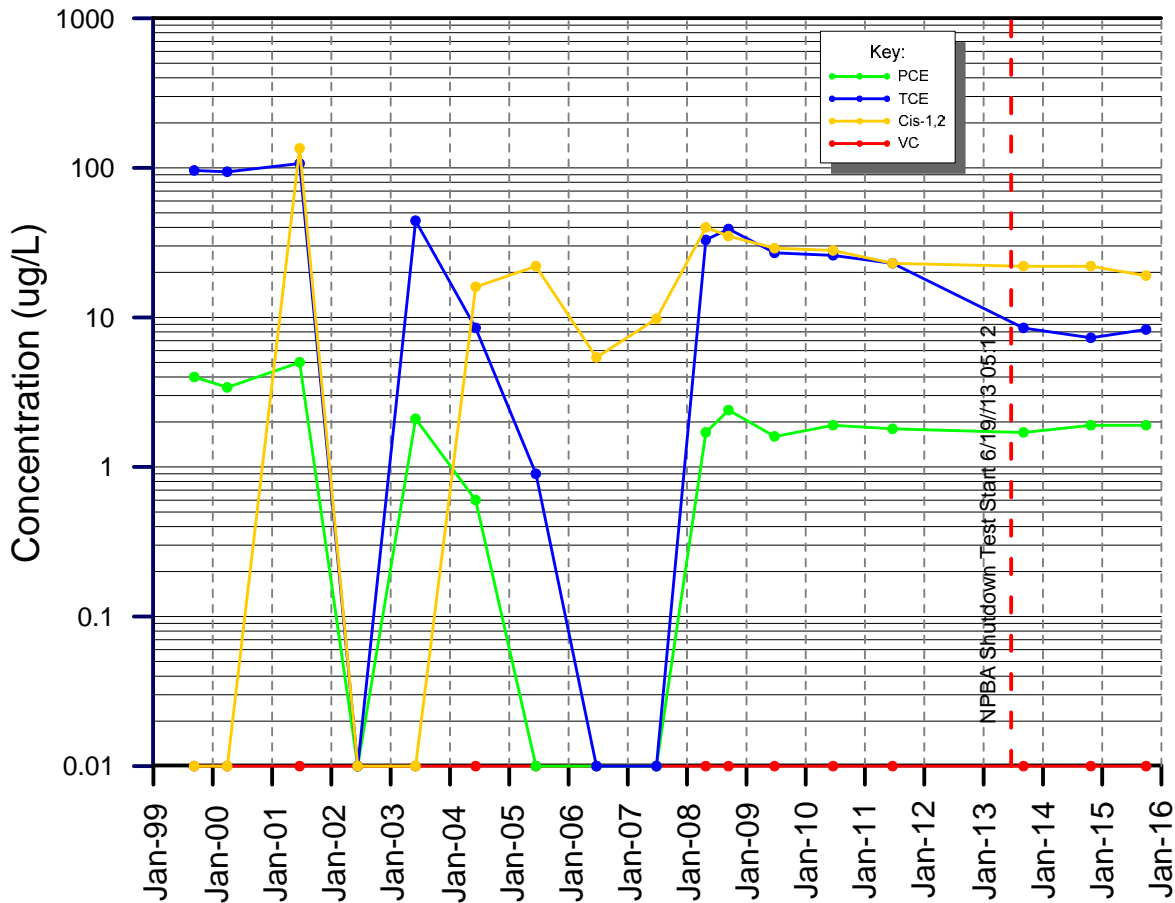
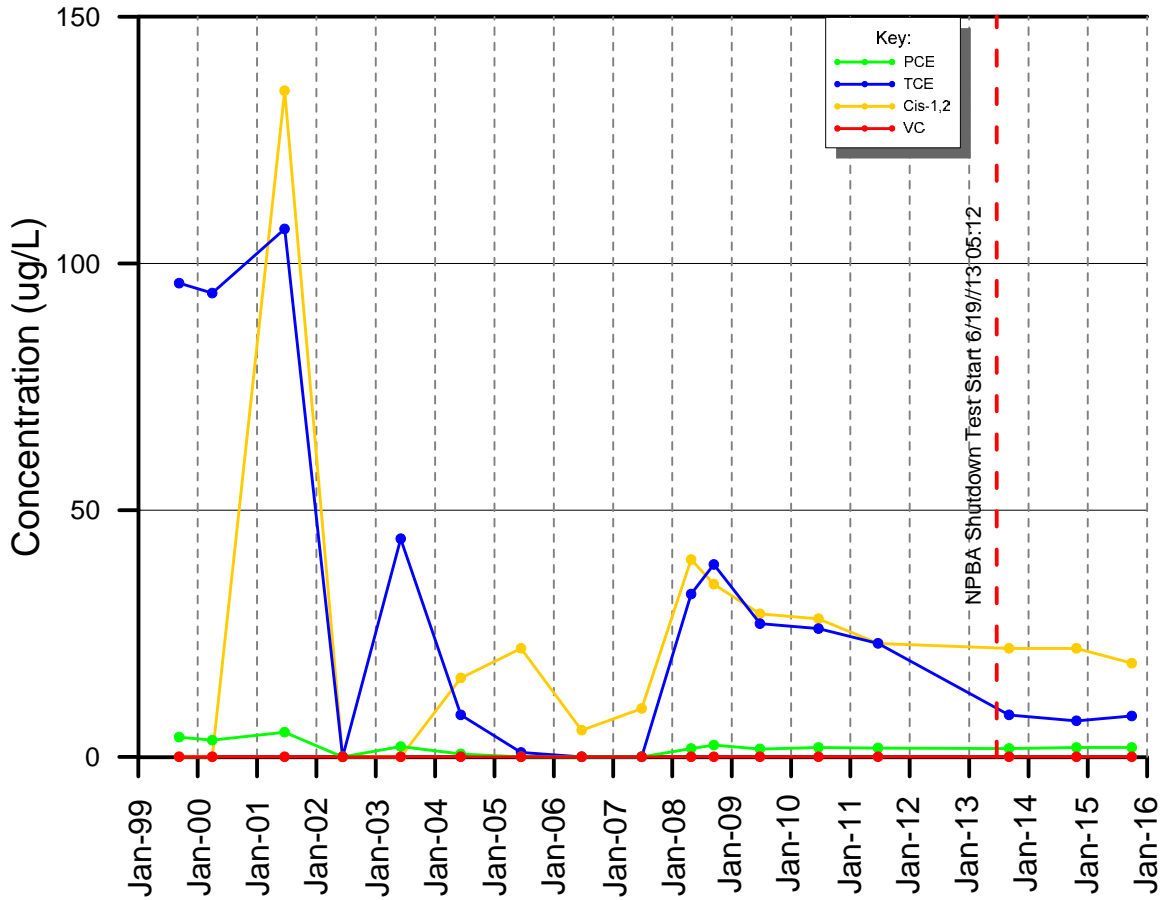
### MW-20M



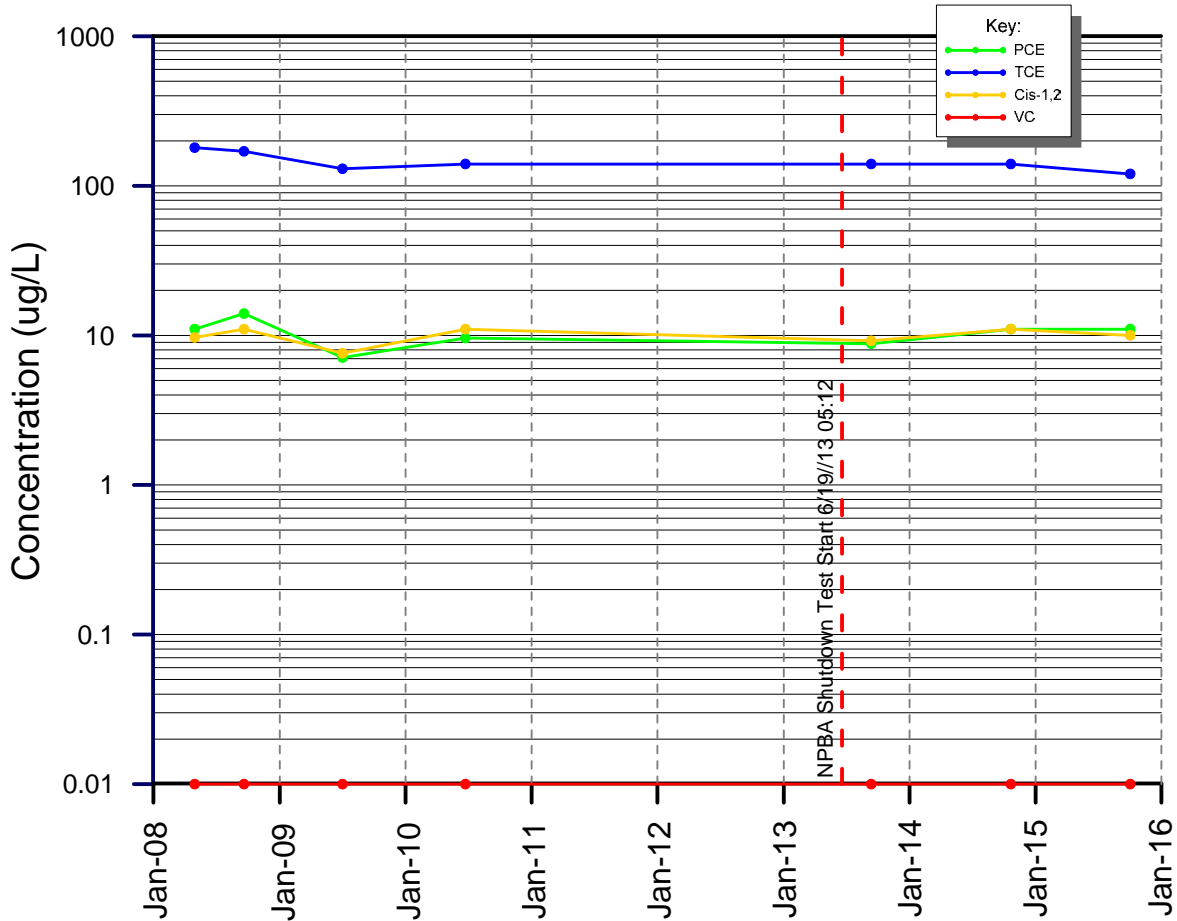
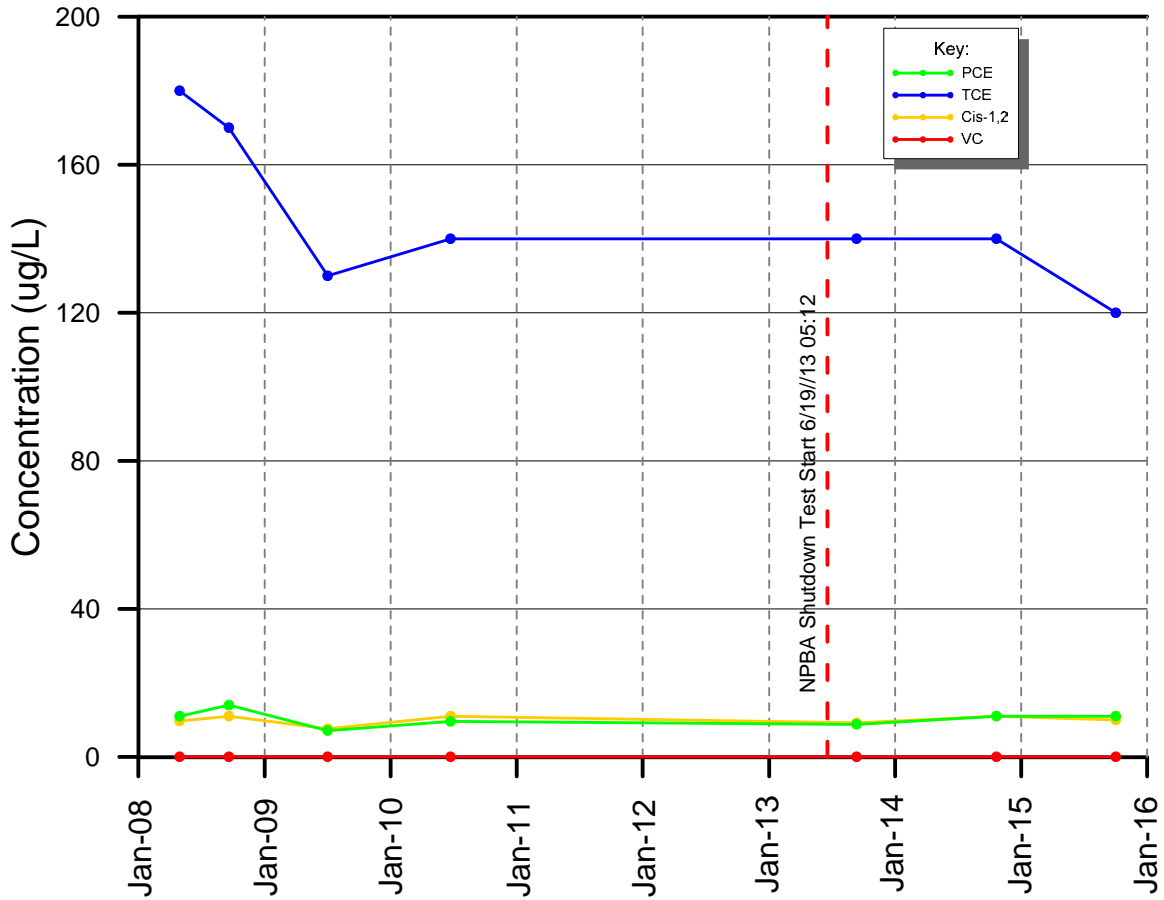
# MW-20S



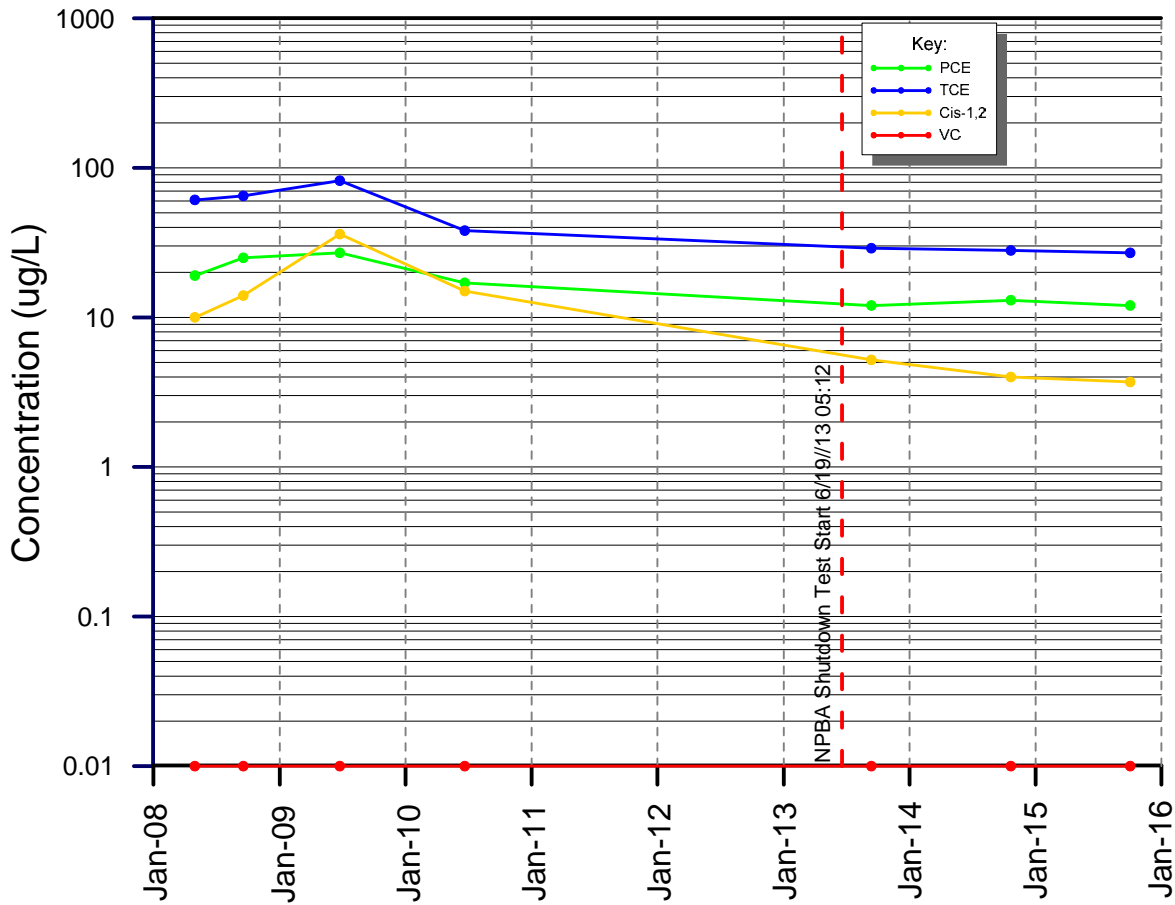
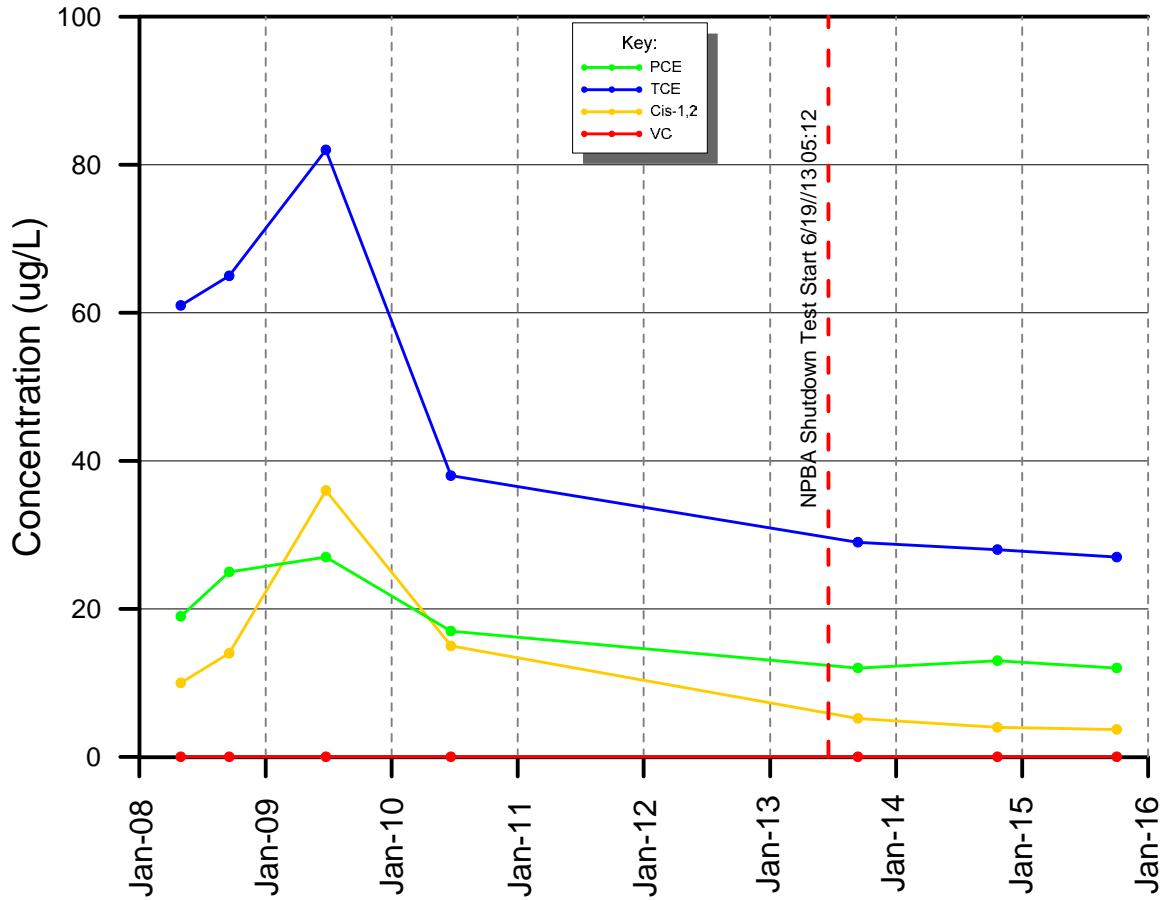
# MW-82



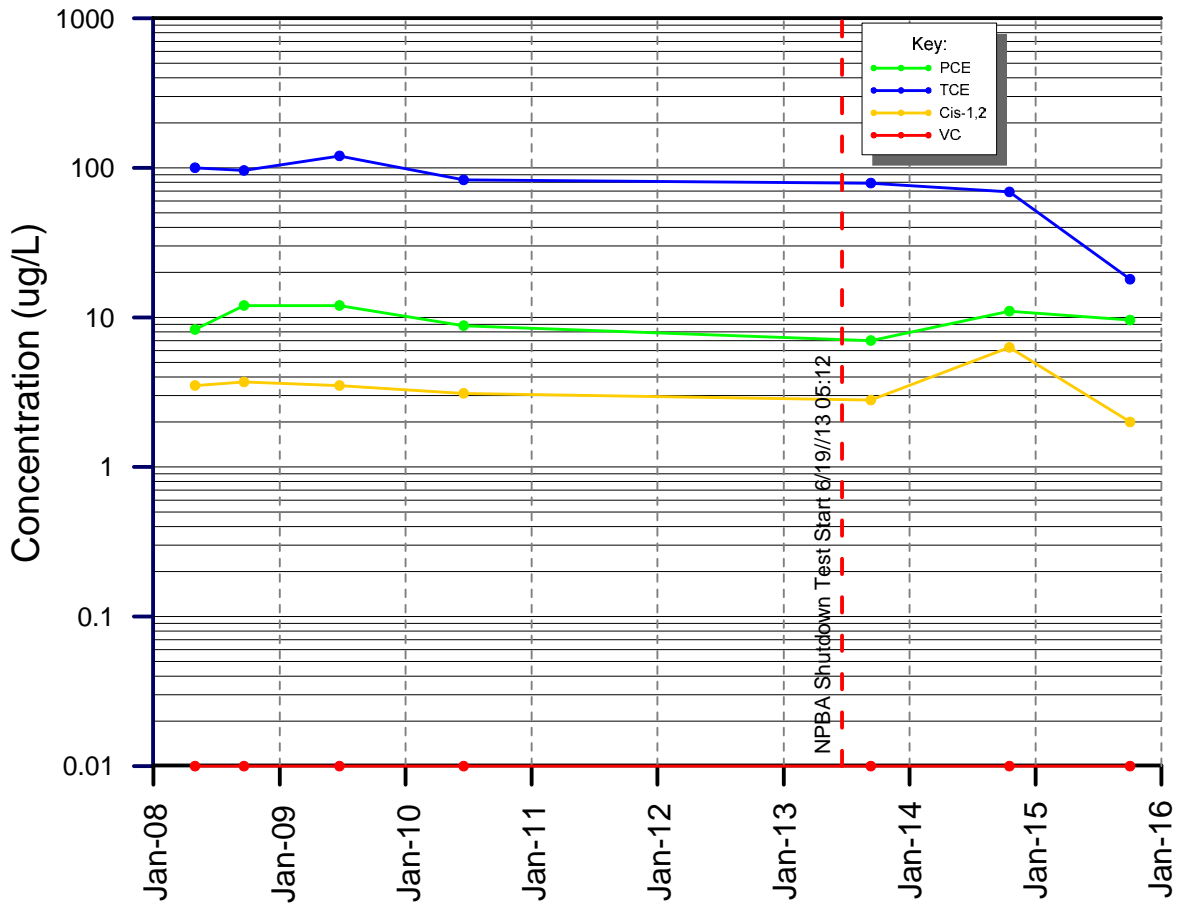
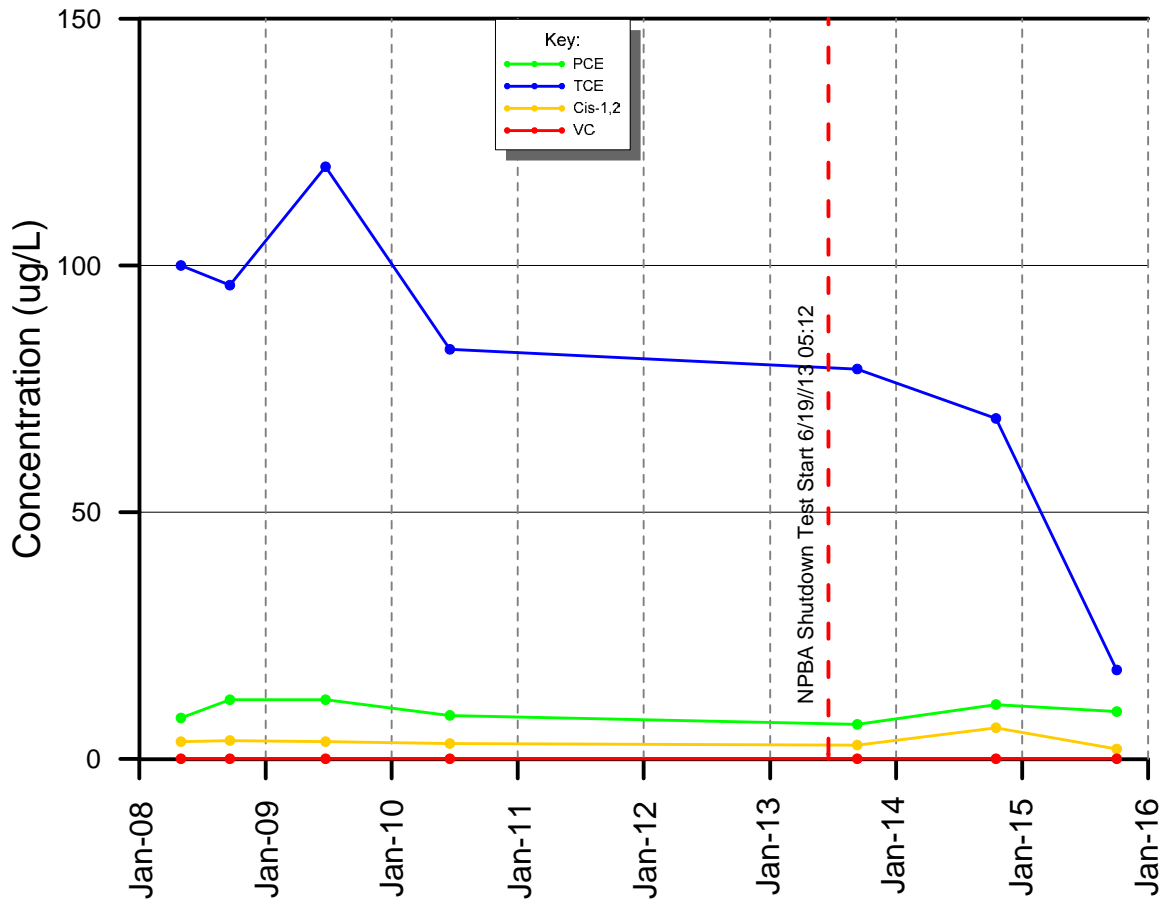
# MW-102D



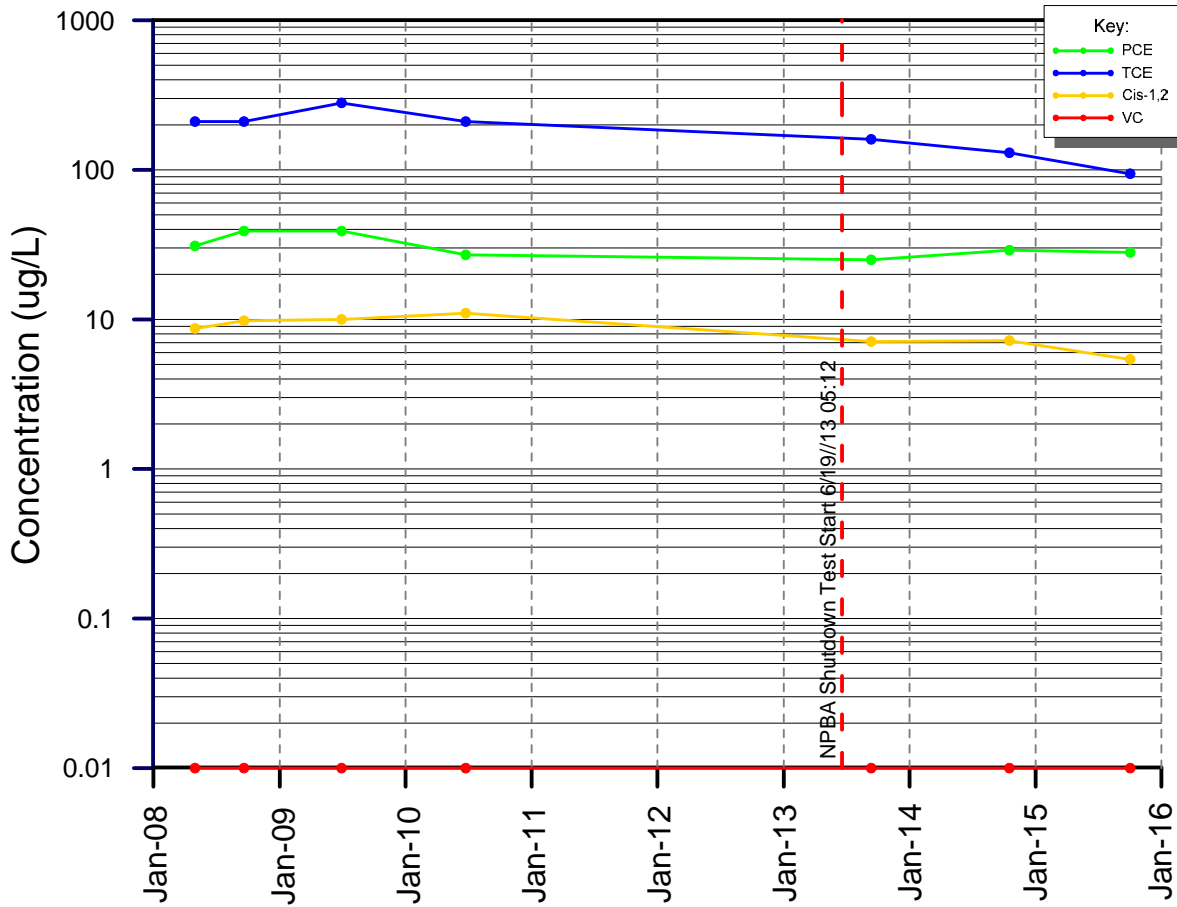
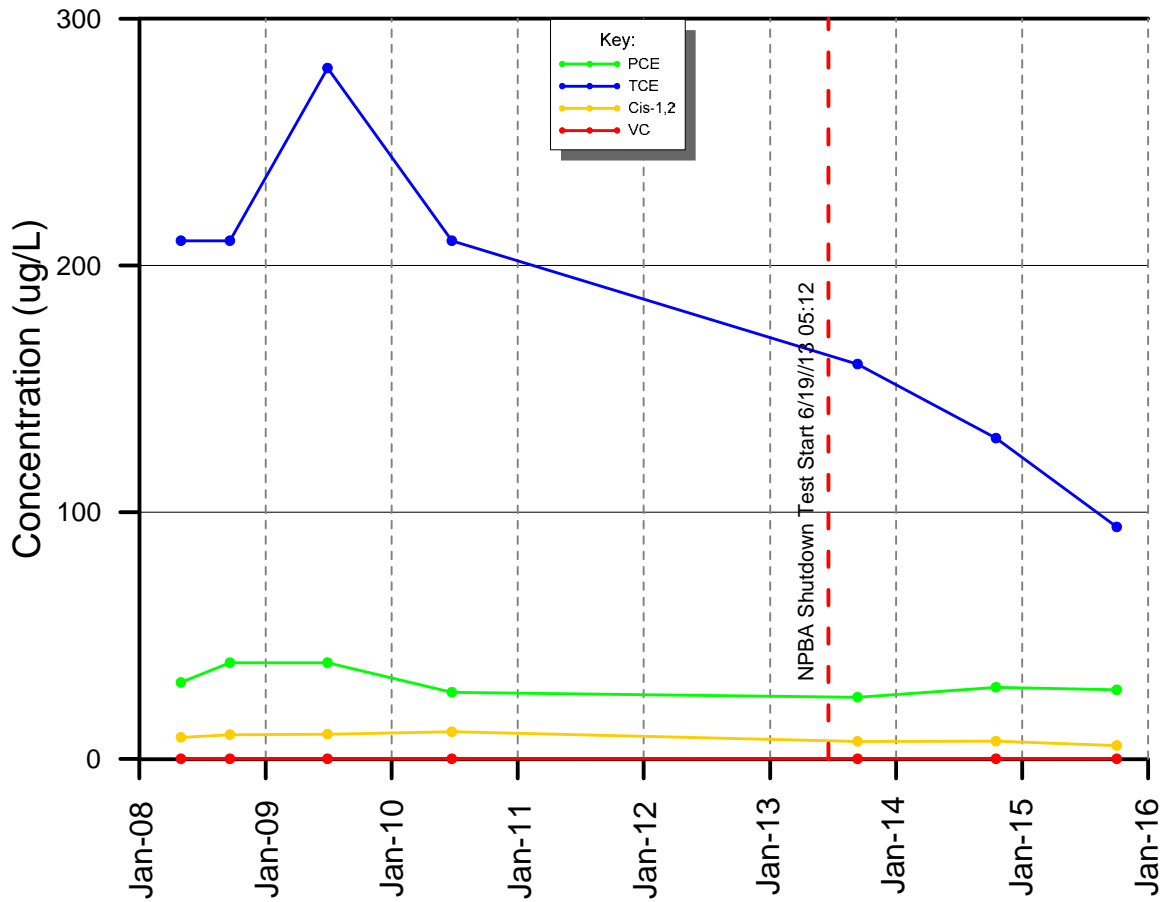
# MW-102S



# MW-103D

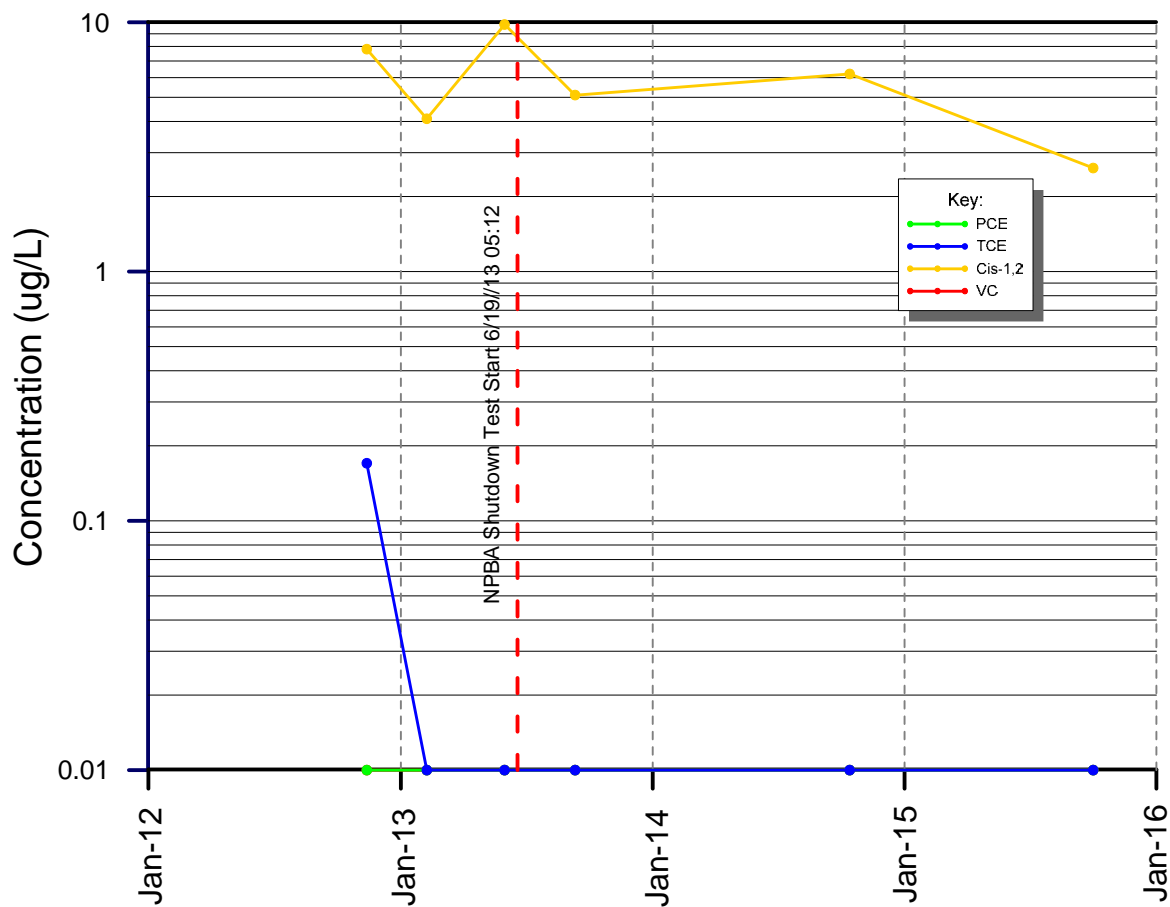
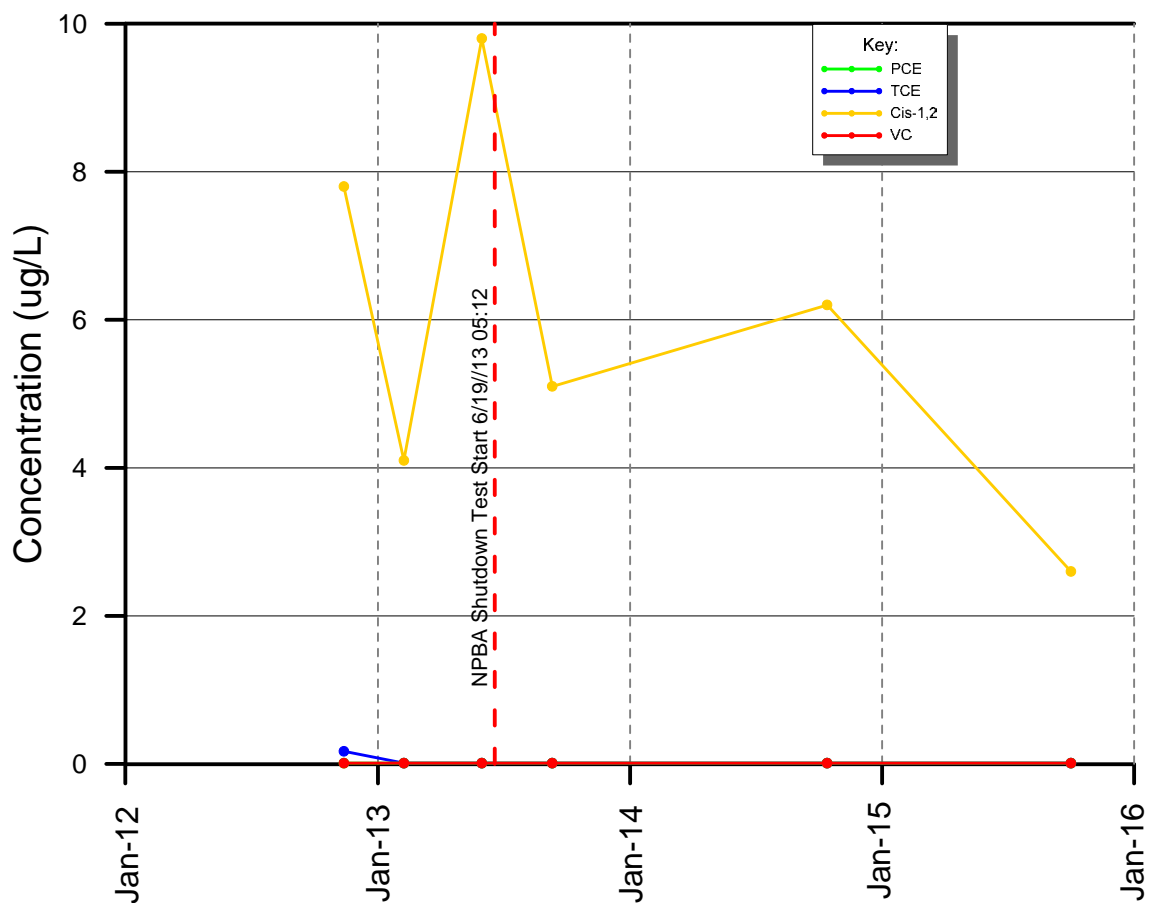


# MW-103S

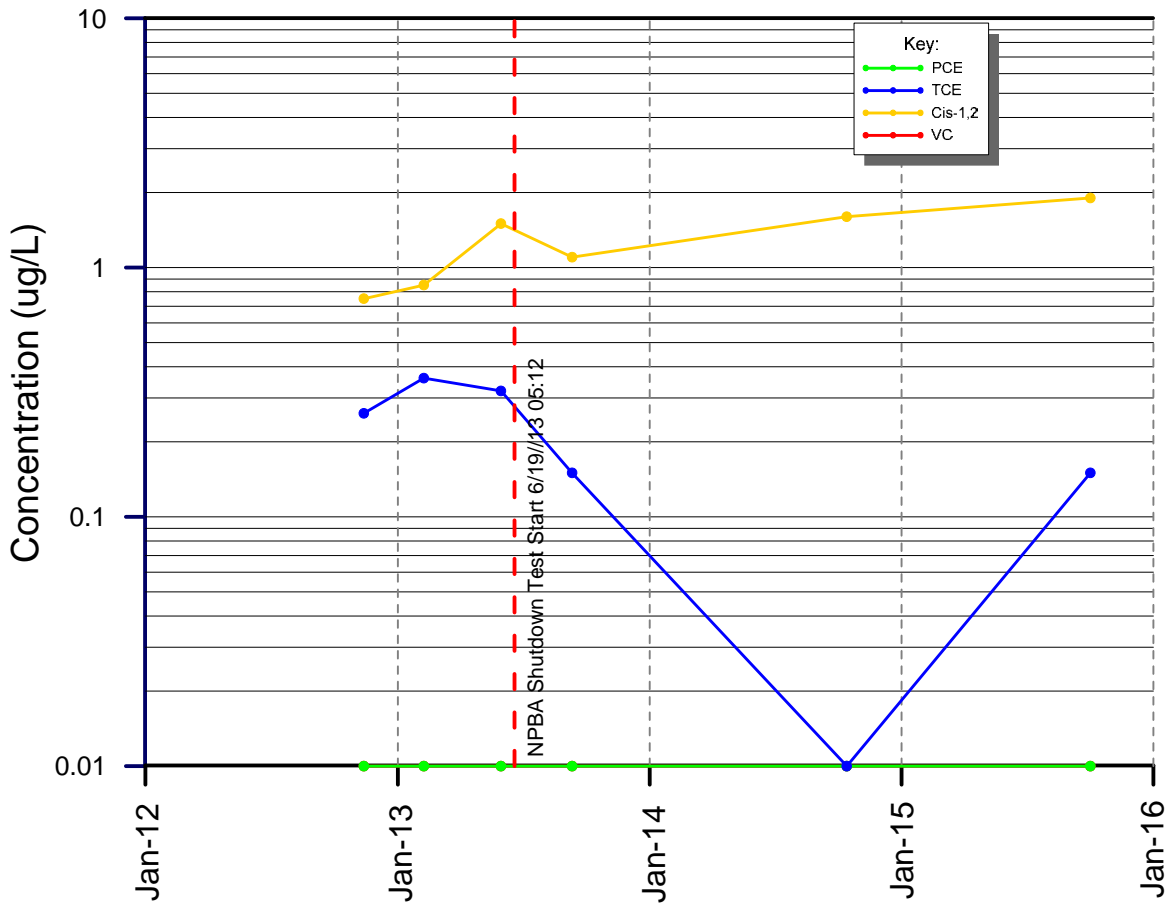
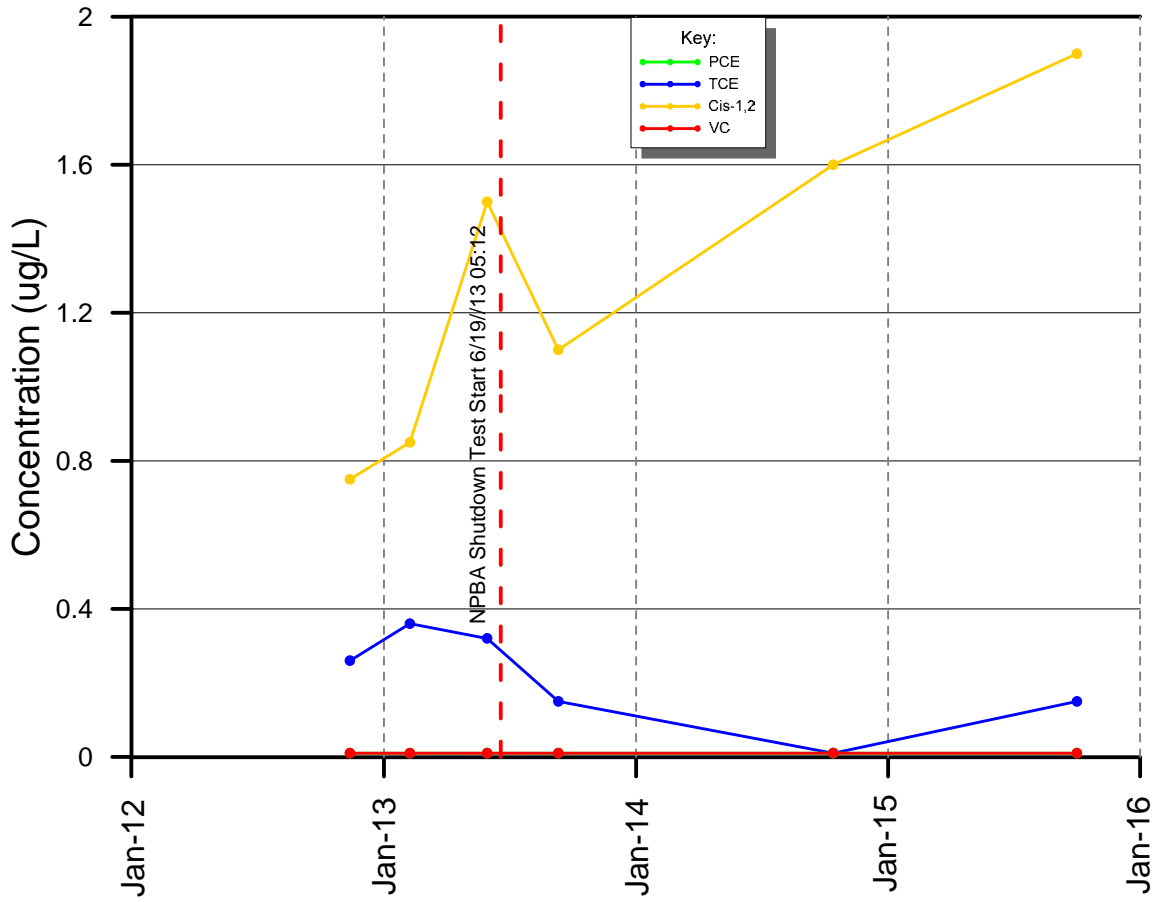




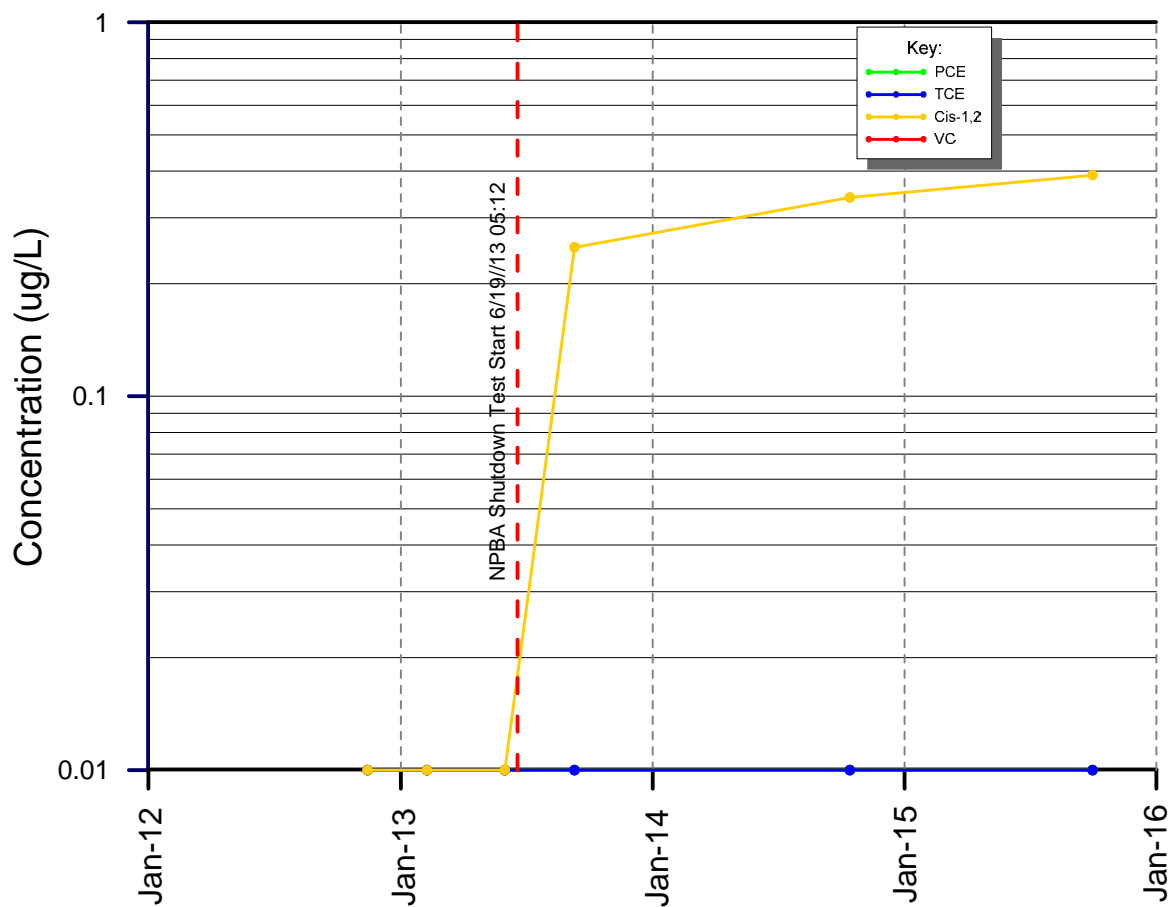
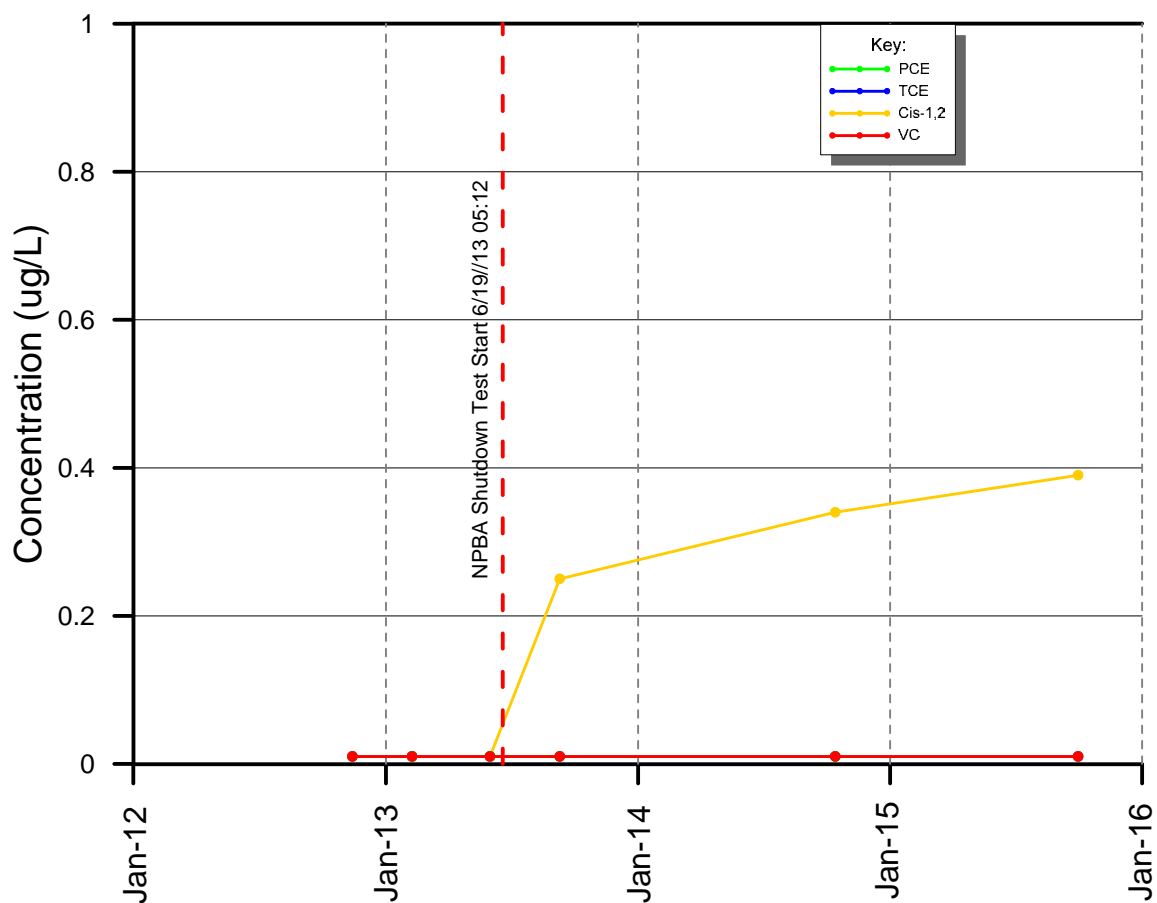
# MW-142D



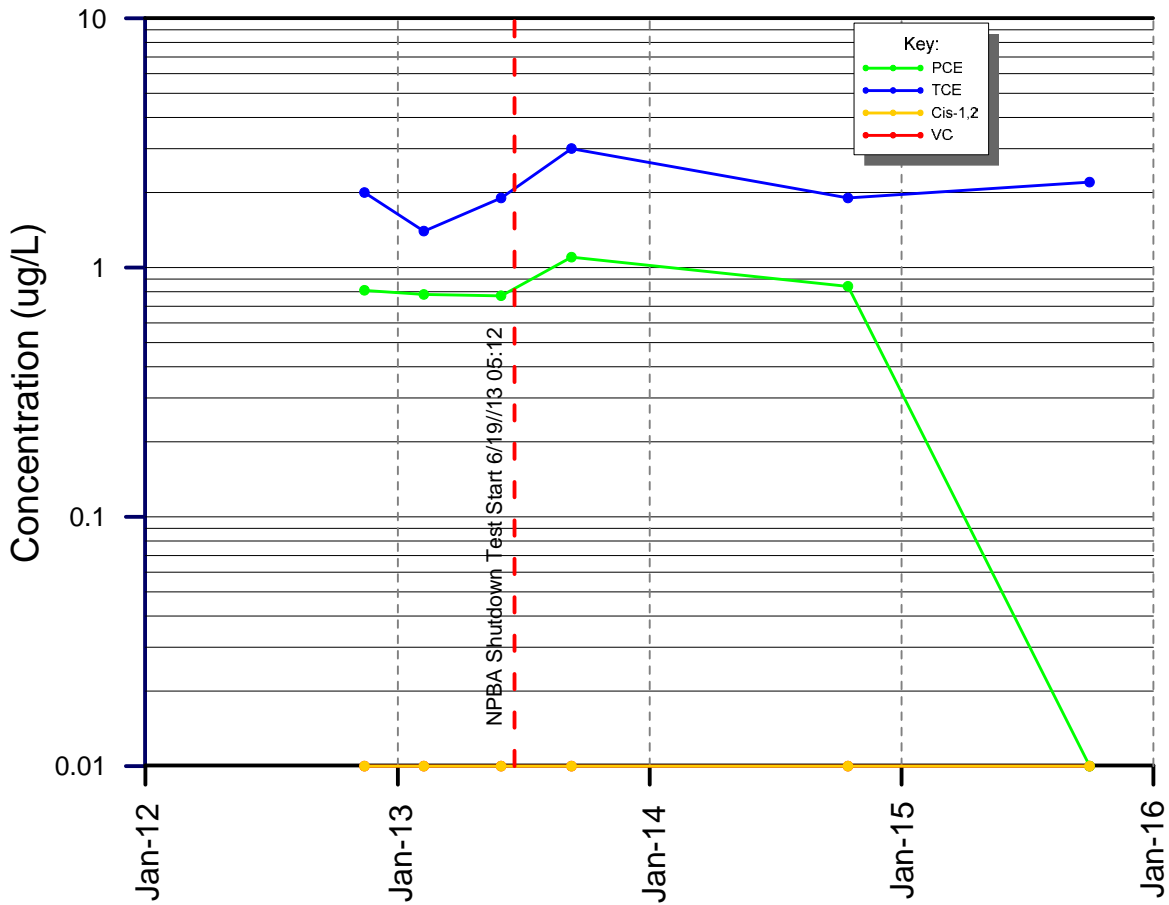
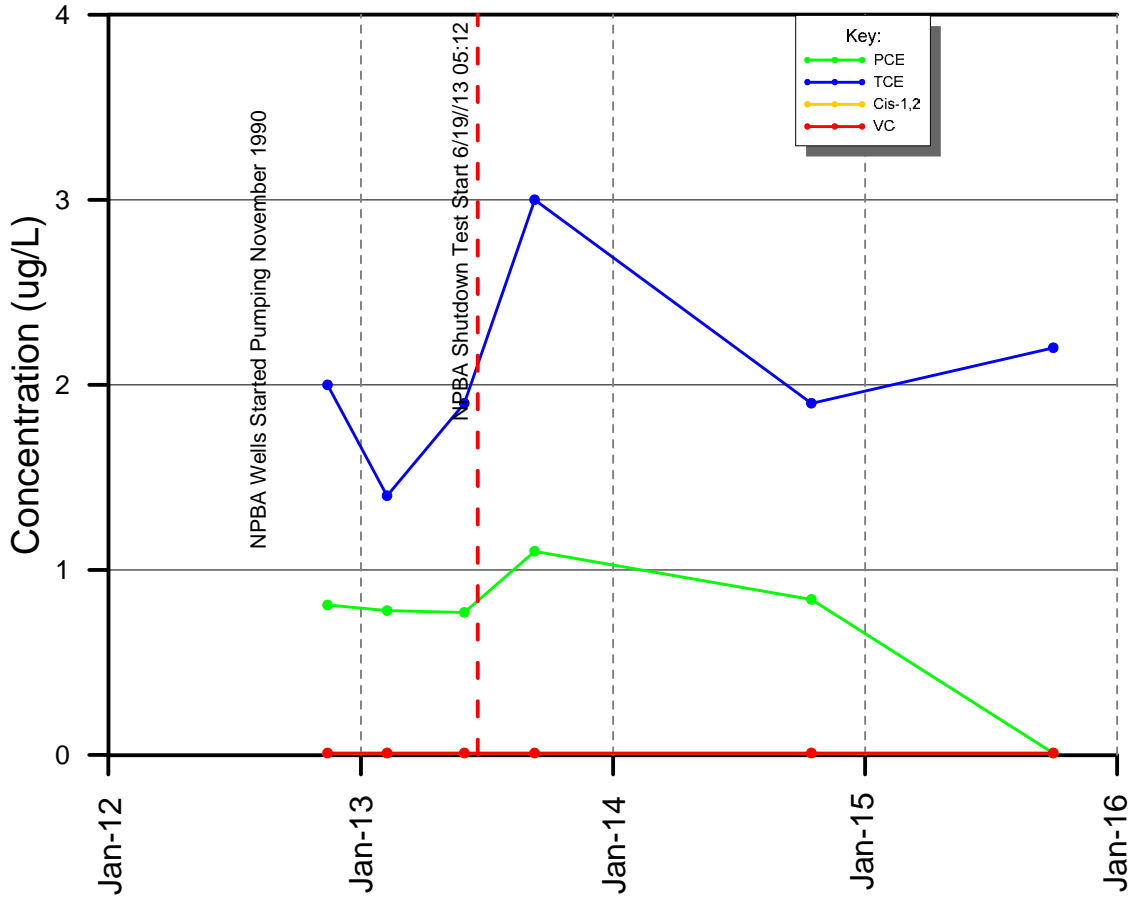
# MW-142S



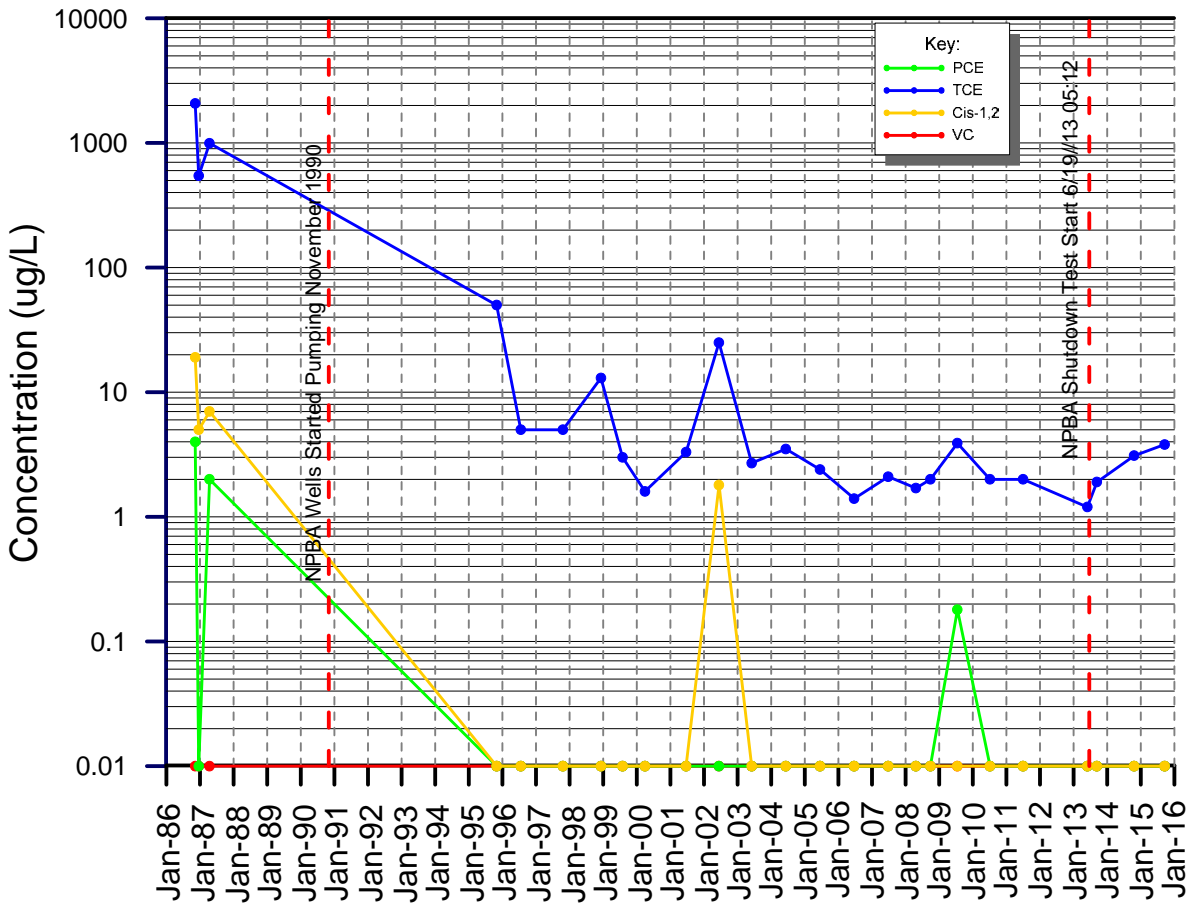
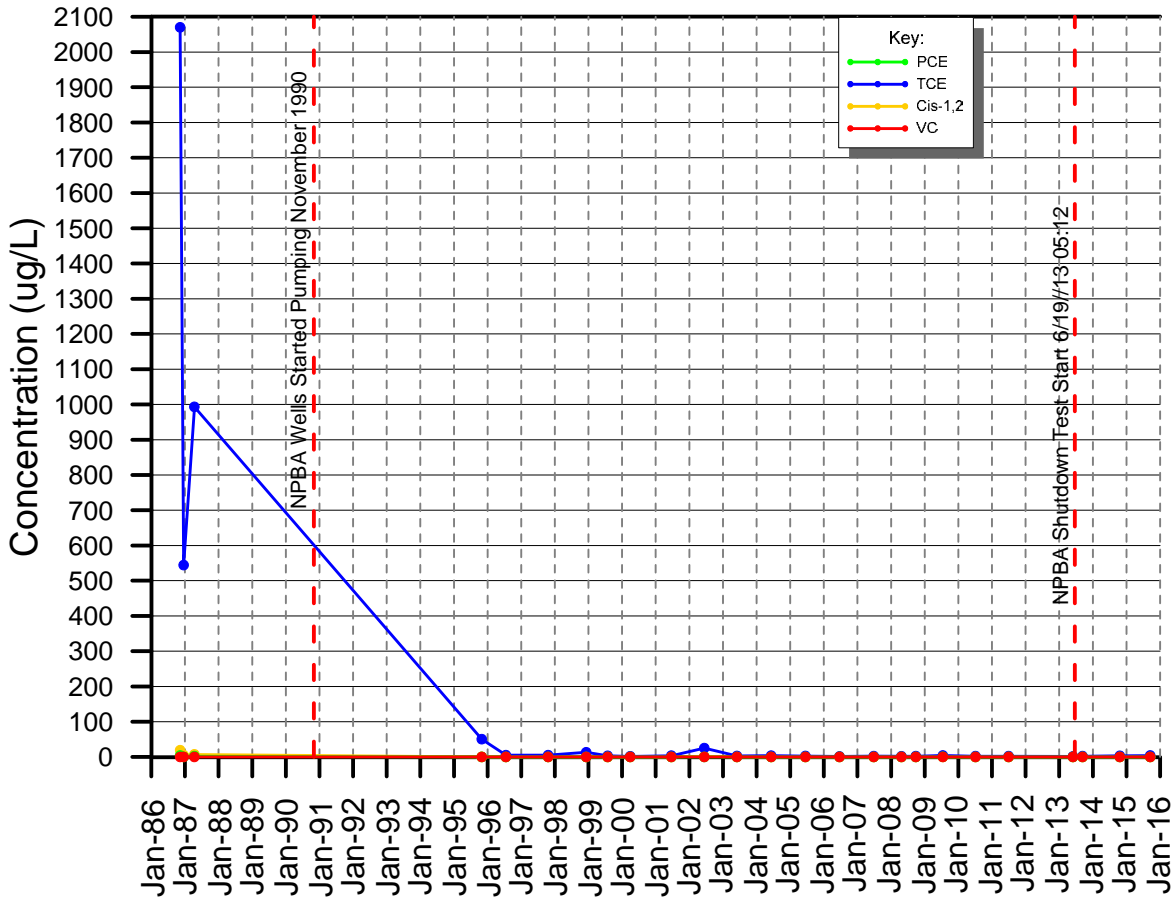
# MW-143D



# MW-143S



# RW-2



# RW-4 (Folk)

