GROUNDWATER EXTRACTION AND TREATMENT SYSTEM
ANNUAL OPERATIONS REPORT
FOR THE PERIOD
JANUARY 1, 2012, THROUGH DECEMBER 31, 2012
FORMER YORK NAVAL ORDNANCE PLANT

SAIC Project 2603200141 / 1000 / 100

Prepared for:

Harley-Davidson Motor Company Operations, Inc.
York, PA

March 2013

SAIC Energy, Environment & Infrastructure, LLC
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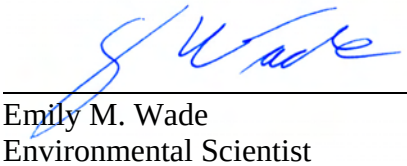
Respectfully submitted,



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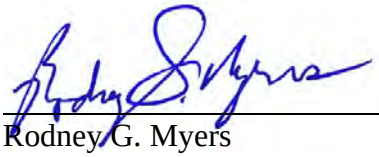

Rodney G. Myers
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cfm	-	cubic feet per minute
cis-1,2-DCE	-	cis-1,2-dichloroethene
1,1-DCE	-	1,1-dichloroethene
EPA	-	United States Environmental Protection Agency
fYNOP	-	former York Naval Ordnance Plant
GAC	-	granular-activated carbon
gpd	-	gallons per day
gpm	-	gallons per minute
GWTS	-	groundwater extraction and treatment system
Harley-Davidson	-	Harley-Davidson Motor Company Operations, Inc.
lbs/day	-	pounds per day
MCL	-	maximum contaminant level
MSC	-	medium specific concentration
NB4	-	North Building 4
NPBA	-	Northeast Property Boundary Area
NPDES	-	National Pollutant Discharge Elimination System
PADEP	-	Pennsylvania Department of Environmental Protection
PCE	-	tetrachloroethene
ppm	-	parts per million
PTA	-	packed tower aerator
PVC	-	polyvinyl chloride
RI	-	Remedial Investigation
SAIC	-	SAIC Energy, Environment & Infrastructure, LLC
SRBC	-	Susquehanna River Basin Commission
TCA	-	1,1,1-trichloroethane
TCE	-	trichloroethene
µg/L	-	micrograms per liter
VOCs	-	volatile organic compounds
WPL	-	West Parking Lot
YCIDA	-	York County Industrial Development Authority

EXECUTIVE SUMMARY

This report is a summary of the groundwater extraction and treatment system (GWTS) operations and maintenance during the calendar year 2012 for the former York Naval Ordnance Plant (fYNOP). The GWTS is located at the Harley-Davidson Motor Company Operations, Inc. (Harley-Davidson) facility in York, Pennsylvania, and has been in operation since November 1990. The system operated with only a few interruptions during the report period of January 1, 2012, through December 31, 2012. The GWTS is designed to accomplish the following:

1. Prevent off-site groundwater and contaminant migration in the Northeast Property Boundary Area (NPBA).

2. Remove volatile organic compound (VOC)-impacted groundwater in the 1,1,1-trichloroethane (TCA) Tank Area near Building 2.

3. Prevent off-site migration of contaminants in groundwater in the West Parking Lot (WPL) Area.

4. Collect groundwater from the Building 3 Dewatering (Lift Station) Area's groundwater interceptor trench system, preventing VOC-impacted groundwater from discharging to the surface or into the building.

The extraction system consists of fifteen (15) active extraction wells: nine (9) in the NPBA, one (1) in the TCA Tank Area, four (4) in the WPL/NB4 Area, and the Building 3 Dewatering Area's interceptor trench system including one (1) well (CW-19).

Several significant maintenance and groundwater treatment related modifications or repairs were conducted during the 2012 report period. These included:

- Painting a fiberglass resin with a Gel-coat hardener onto the packed tower aerator (PTA) tower and influent piping above the roofline of the GWTS to protect the fiberglass tower and piping from sun damage.

- Updating the standard Operations and Maintenance manual to reflect modifications to the site and the GWTS.

- Updating RSView monitoring software.

- Treating 531,560 gallons of groundwater generated during drilling activities as part of the "Supplemental Groundwater Remedial Investigation - Part 2" work.

- Cleaning and repairing the effluent discharge pumps.

- Replacing granular-activated carbon (GAC) in the off-gas treatment system.

SAIC Energy, Environment & Infrastructure, LLC (SAIC) estimates that approximately 1,525 pounds of VOCs were removed by the groundwater treatment system during the time period of January through December 2012. The total amount of groundwater extracted during this 12-month reporting period was approximately 154 million gallons. Since initiation of the program, approximately 41,159 pounds of VOCs have been removed.

Groundwater elevation data collected in June and December 2012 indicate that operation of groundwater extraction wells at the NPBA, TCA Tank, and WPL areas resulted in areas of groundwater table depression that capture or minimize off-site migration of VOC-impacted groundwater.

The combined influent total VOC concentrations in captured groundwater averaged 1,186 micrograms per liter (µg/L) during 2012. Trichloroethene (TCE), tetrachloroethene (PCE), cis-1,2-dichloroethene (cis-1,2-DCE), and TCA are the predominant VOCs in the influent groundwater entering the PTA. The PTA effluent was sampled and reported four times in 2012. The treatment system effluent has maintained non-detectable concentrations of target VOCs during this reporting period.

During 2012, the extraction wells were sampled for priority pollutant VOCs in June and December. Site-wide water levels measured in June and December 2012 showed little variation in the configuration of the site groundwater table. Water levels measured in June were generally one to four feet higher compared to December.

Historically, VOC concentrations in the site-wide extraction wells have shown a generally decreasing trend. Concentrations in the NPBA extraction wells continued to support this trend during 2012. The VOC concentrations in the TCA Tank Area extraction well (CW-8) have exhibited a decreasing concentration trend since June 1996, with negligible TCA concentrations, but total VOC concentrations have stabilized in the 400 to 900 µg/L range since 2001. VOC concentrations have generally decreased at the WPL extraction wells since May 1994. During this time, most of the WPL extraction wells have exhibited a relatively flat or gradual decreasing concentration trend for the most prevalent VOC in this area (TCE). In 2012, CW-9 and CW-15A had increased levels of PCE and TCE in the December 2012 sampling event.

1.0 INTRODUCTION

This report presents a summary of the operating record for the former York Naval Ordnance Plant (fYNOP) groundwater extraction and treatment system (GWTS), extraction well quality, and groundwater level data monitored at the site. The fYNOP facility is located at the Harley-Davidson Motor Company Operations, Inc. (Harley-Davidson) York facility and on the York County Industrial Development Authority (YCIDA) property in Springettsbury Township, York, Pennsylvania, as shown on Figure 1-1. This report covers a 12-month period from January 1 through December 31, 2012.

The west campus area (encompassing the West Parking Lot [WPL] and 1,1,1-trichloroethane [TCA] systems) was sold to YCIDA on June 14, 2012. Harley-Davidson has retained responsibility for the cleanup and established an easement agreement with YCIDA (1445 Eden Road, York, Pennsylvania) to continue remediation, monitoring, and maintenance activities. The fYNOP facility now includes properties owned by Harley-Davidson and YCIDA (see property boundaries shown on Figure 1-2).

At the fYNOP, groundwater is extracted from 14 active pumping wells (CW-1, CW-1A, CW-2 through CW-7, CW-7A, CW-8, CW-9, CW-13, CW-15A, and CW-17) operating in 3 separate areas designated as the Northeast Property Boundary Area (NPBA), the WPL Area (including the North Building 4 [NB4] Area), and the TCA Tank Area. Groundwater is also extracted from a subsurface gravity drainage system located along the upgradient (eastern) perimeter of Harley-Davidson's production facility (Building 3). This collection system, formerly known as the Softail Dewatering System and now known as the Building 3 Dewatering System, was implemented in 2002 and consists of approximately 800 feet of deep interceptor trench and approximately 600 feet of shallow interceptor trench (toe drain). The locations of these collection systems are shown on Figure 1-2.

All extracted groundwater is piped to a central treatment system located in the groundwater treatment building (Building 41A) for processing through a packed tower aerator (PTA) system prior to discharge to the Codorus Creek, designated as Outfall No. 003 (see Figures 1-1 and 1-2). Figure 1-3 presents a schematic flow diagram for this treatment system. A chemical sequestering agent (Redux 525) injection system was installed to reduce mineral fouling of the GWTS PTA and effluent discharge pumps and components in June 2010 and has continued to operate throughout 2012. PTA off-gases are treated by a granular-activated carbon (GAC) filter system for removal of volatile organic compounds (VOCs) before being discharged to the atmosphere.

In November 1990, ten extraction wells in the NPBA and TCA Tank Areas were brought on-line while ongoing studies were performed in the WPL. The WPL Area groundwater extraction system was brought on-line in May 1994. Finally, the Building 3 Dewatering System was brought on-line in January 2004.

On December 2, 1993, the National Pollutant Discharge Elimination System (NPDES) permit No. PA0085677 was issued for the system. The most current permit renewal was issued by the Pennsylvania Department of Environmental Protection (PADEP) on November 22, 2010. Treated groundwater is collected in a wet well located immediately northwest of Building 41A (refer to Figure 1-2). From the wet well, groundwater is pumped through a force main to Outfall 003 located along the Codorus Creek.

2.0 GEOLOGY AND HYDROGEOLOGY

Two geologic rock formations underlie the site. Solution-prone (karst) gray carbonate bedrock (limestone and dolostone) underlies the flat lowland (western) portion of the site. Quartzitic sandstone underlies the more steeply sloping hills or upland area present on the eastern part of the site. Groundwater flow is generally westward, from the upland area at the eastern part of the site toward Codorus Creek. A detailed discussion of the geology and hydrogeology is included in a document prepared by Groundwater Sciences Corporation in September 2011 entitled, "Supplemental Remedial Investigation Groundwater Report (Part 1)." Further ongoing investigations are continuing in the "Supplemental Groundwater Remedial Investigation - Part 2."

3.0 SITE-WIDE GROUNDWATER MONITORING

The groundwater monitoring program at the fYNOP site for this year consisted of:

- Measuring depth to water in all available monitoring and observation wells twice during the year (Table A-1 found in Appendix A).

- Sampling and chemical analysis of water from the collection wells twice during the year (Table A-2 found in Appendix A).

3.1 Groundwater Flow Direction

The depth to water was measured in site-wide groundwater wells two times during the reporting period (June 13, 2012, and December 7, 2012). These measurements were taken from approximately 170 monitoring points in June and 200 monitoring points in December (including two surface water locations in Codorus Creek in June and one surface water location in Codorus Creek in December 2012). Newly constructed monitoring wells were installed in 2012 as part of the "Supplemental Groundwater Remedial Investigation - Part 2" and other investigations. The depths to water at each monitoring point for these events were converted to groundwater surface elevations and are presented in Table A-1 (found in Appendix A). Figures 3-1 and 3-2 identify the location of each well that was available or measured, including the classification as a groundwater extraction well (see the green symbol of a circle with a cross and two quadrants filled in) or a groundwater monitoring well (see the symbol of a circle with a cross and all quadrants empty).

Several water levels could not be collected in June due to lack of accessibility. A roll-off was staged over MW-35D, and cars were parked over Ru-MW-7 and Ru-MW-8. In December, monitoring well Ru-MW-7 was not measured because a car was parked over the wellhead, and RW-5 was not gauged because the car dealership was replacing the sign located above the wellhead.

Figures 3-1 and 3-2 present the interpreted shallow groundwater table from water levels measured on June 13 and December 7, 2012, respectively. The groundwater contours presented on these maps were generated using only water levels collected from wells screened in the shallow portion of the aquifer. The general configuration of the water table in the eastern half of the site indicates a gradient toward the west-southwest. The water table gradient beneath the eastern portion of the site, underlain by sandstone, is relatively steep. The water table gradient in the western half of the site is generally westward, toward Codorus Creek. The water table gradient beneath the western portion of the site, underlain by limestone bedrock, is relatively flat.

A significantly large area centered on the production facility (Building 3) does not have monitoring wells, and CW-19 (located within Building 3) was constructed above the normal groundwater surface elevation and is normally dry. Groundwater contours in this area were adjusted to account for known surface seeps and the elevations of groundwater depression trenches actively collecting groundwater at the time of the survey. The trench locations and elevations are also shown on Figures 3-1 and 3-2.

The June and December 2012 groundwater table contours are generally similar. Although the average precipitation for these months is similar, in normal precipitation years, June water levels would be declining after winter recharge ceased in May, due to active plant uptake and evapo-transpiration. December water levels generally increase due to groundwater recharge, which starts when trees drop their leaves in October/November. The amount and timing of precipitation events result in the variations that are noted from year to year. In 2012, September and October were noted as unusually wet. A brief summary of seasonal water level fluctuations is presented below by bedrock aquifer type (also refer to Table 3-1, Table 3-2, and Figure 3-3):

- The water levels in the eastern portion of the site that is underlain by sandstone were approximately one to two feet higher in June 2012 compared to December 2012. This determination was made using data for wells in areas that are not affected by the NPBA extraction wells.

- Water levels in the limestone aquifer were generally one to two feet higher in June 2012 compared to December 2012. The month of May was wetter than average; whereas November was slightly drier than normal in 2012 compared to an average year (refer to Table 3-1).

4.0 GROUNDWATER EXTRACTION AND TREATMENT SYSTEM

The GWTS serves to remediate groundwater containing dissolved VOCs that is recovered from five main areas of the site: NPBA, TCA Tank, NB4, WPL, and the Building 3 dewatering system.

4.1 System Description

Extraction wells within the NPBA, TCA Tank Area, NB4, and the WPL groundwater extraction areas remove groundwater by means of electric submersible pumps. A lift station pump removes water from a series of collection trenches in the vicinity of the production plant, Building 3. The pumping water level within each extraction well is maintained by liquid level probes and control circuitry between the "on" and "off" probes. This produces an area of drawdown and groundwater capture. The extracted groundwater is conveyed via underground piping to the treatment system where the dissolved VOCs are removed from the groundwater.

The groundwater treatment system is housed in a 30-foot by 40-foot building (Building 41A). The process flow diagram for the system is presented on Figure 1-3. The treatment system consists of a 2,600-gallon equalization tank; a 5-foot-diameter by 47-foot-high PTA capable of treating 400 gallons per minute (gpm) of groundwater; and a 10,000-pound vapor-phase GAC unit for PTA off-gas treatment.

Extracted groundwater is pumped from the equalization tank at a maximum flow rate of 400 gpm to the top of the PTA. Redux 525 sequestering agent is injected into this flow at an approximate rate of 20 parts per million (ppm). Groundwater is then distributed evenly over the top of the polypropylene packing and flows down through the packed section of the PTA, while a 4,000 cubic feet per minute (cfm) centrifugal blower draws air up through the PTA column. The VOCs are effectively "stripped" from the water and then adsorbed to the GAC in the air phase. The treated groundwater flows by gravity to a wet well (effluent pump station) located on the north side of Building 41A where it is pumped approximately 1,600 feet via an 8-inch underground force main to Outfall No. 003 and discharged to Codorus Creek (see Figure 1-2).

The groundwater treatment system is equipped with a PC-based RSView monitoring system. The RSView software was upgraded from version 32 7.1 to 32 7.6 in 2012. Remote computer terminals are located in both Harley-Davidson and SAIC Energy, Environment & Infrastructure, LLC (SAIC) offices where extraction well pumping rates and treatment processes can be monitored. System and extraction well pumping rates are adjusted at the site. System data, recorded in an Access® data base (via the RSView monitoring system) during 2012, are included in Appendix B.

4.2 System Maintenance and Modifications

Twice a month, system inspections are performed on the groundwater treatment system at the Harley-Davidson facility. The purpose of these inspections is to ensure effective operation of the system. A summary of operation and maintenance data recorded during these visits is included in Appendix C. Items reviewed during each visit include the following:

- Check for system alarms.
- Inspect control panels.
- Check water conveyance line pressures.
- Check pressure differential across the stripping tower.
- Check piping and pumps for leaks.
- Clean Y-strainers of buildup, etc., as necessary.
- Check and record amperage draws on all motors (quarterly).
- Record flow rates on recovery wells and transfer pump.

Significant maintenance and groundwater treatment-related modifications or repairs were identified and addressed during the report period. A brief summary is presented below:

- The Operations and Maintenance Manual was updated to reflect the 2011 modifications to the GWTS.

- The effluent pumps were removed one at a time to be cleaned and repaired. The repairs included general pump maintenance and replacing damaged parts.

- Treated 531,560 gallons of groundwater from the "Supplemental Groundwater Remedial Investigation - Part 2" that were conducted in 2012. The groundwater was collected during drilling and groundwater sampling activities.

- SAIC cleaned and gel-coated the PTA tower and influent piping above the roofline of the GWTS (Building 41A).

- Control Systems 21 completed a calibration check on all flow meters (except the Building 3 Dewatering System flow meter because there was no flow into the system) associated with the GWTS.

- SAIC updated the PC Anywhere RSView software that is used to control and monitor the GWTS.

- SAIC performed break-through monitoring of the GAC to determine when to complete the GAC change-out. Spent GAC was removed and replaced in March, June, and October 2012.

4.3 Groundwater Withdrawal and VOC Removal

Table 4-1 presents recorded groundwater withdrawal and total VOC removal that have been accomplished through operation of the GWTS. A system-wide total of approximately 41,159 pounds of VOCs have been removed since the groundwater treatment system began operation in November 1990. On average, prior to start-up of the WPL system in May 1994, approximately 131 gpm of groundwater and 1.2 pounds per day (lbs/day) of total VOCs were

being extracted by the system. Since the WPL system became operational, the average groundwater pumping rate from 1995 through December 2012 was approximately 278 gpm.

The total amount of groundwater extracted during the period from January 1 through December 31, 2012, was approximately 154 million gallons (an average of 419,739 gallons per day [gpd] or 291 gpm). The 2012 extraction volumes are approximately one percent lower than the previous year (2011) when the average flows were approximately 422,927 gpd (or 294 gpm). This decrease is attributable to CW-8 being off-line for three months and a decrease in the annual precipitation for 2012, compared to 2011. The GWTS was shut down for a total of approximately 6.6 days in 2012 due to maintenance activities. PADEP was notified of these activities, in accordance with NPDES requirements.

Quarterly PTA influent analyses (shown in Table A-3, Appendix A), along with the measured extraction volumes, are used to calculate the mass of VOCs removed from site groundwater during the reporting period (see Figure 4-1). Using these data, the total estimated mass of VOCs removed from January through December 2012 was 1,525 pounds. This mass removal rate is approximately 22 percent higher than the value calculated during 2011 (approximately 1,200 pounds). This increase in mass removal rate can be attributed to a higher overall average influent concentration for 2012 (1,186 micrograms per liter [μg/L]) compared to 2011 (934 μg/L). The calculated VOC mass removal rates (lbs/day) extracted by the GWTS for the last five calendar years are shown below:

- 2012 – 4.2 lbs/day
- 2011 – 3.3 lbs/day
- 2010 – 3.8 lbs/day
- 2009 – 4.3 lbs/day
- 2008 – 4.3 lbs/day

From the time that groundwater remediation began in November 1990 until start-up of the WPL extraction system in May 1994, the PTA influent concentrations averaged approximately 750 μg/L of total VOCs. Following start-up of the WPL system, the average total VOC concentration spiked above 10,000 μg/L and then asymptotically decreased to a base level. The average total VOC concentration detected in the PTA influent samples during the 2012 reporting period was 1,186 μg/L. The trend in PTA influent total VOC chemistry is illustrated on Figure 4-1. Figure 4-2 shows PTA influent chemistry trends since the start of pumping for tetrachloroethene (PCE), TCA, trichloroethene (TCE), and 1,1-dichloroethene (1,1-DCE).

The PTA effluent was sampled and reported four times during 2012. Analytical testing results for the 2012 PTA effluent and influent sampling are presented in Table A-3 (Appendix A). The treatment system effluent has maintained non-detectable concentrations of target VOCs during this reporting period.

On a quarterly basis, Harley-Davidson submits data to the Susquehanna River Basin Commission (SRBC) regarding nonconsumptive groundwater withdrawal associated with the

groundwater treatment system in accordance with dockets 19900715-1 and 19980901-1. The groundwater withdrawal dockets were modified on March 18, 2010. Information provided to the SRBC includes daily groundwater withdrawal totals (i.e., groundwater volumes extracted) from all collection wells and the overall system influent groundwater quality.

5.0 NPBA GROUNDWATER EXTRACTION SYSTEM

Groundwater extraction at the NPBA commenced in November 1990. Nine groundwater extraction wells (CW-1, CW-1A, CW-2, CW-3, CW-4, CW-5, CW-6, CW-7, and CW-7A) pump to the NPBA control building where individual pumping rates are controlled and measured. The groundwater from each well is combined to a common 3-inch-diameter pipe, which transmits the water a distance of approximately 2,000 feet to the groundwater treatment system.

5.1 System Operational Conditions

The majority of the NPBA extraction wells operated continuously during the report period. On occasion, periods of interrupted pumping occurred and were related to various repairs and maintenance of the system.

Table 5-1 presents a record of monthly groundwater withdrawals for each extraction well for this reporting period. During 2012, the NPBA extraction system removed approximately 6.5 million gallons of groundwater at an average rate of approximately 546,188 gallons per month, or 12.5 gpm. This volume is slightly lower than the withdrawal from the NPBA reported for 2011 (16.4 gpm). Figure 5-1 presents a graphical comparison of the 2012 monthly total volumes of groundwater pumped from the NPBA with respect to the other on-site systems. Overall, the NPBA pumped approximately 4.0 percent of the total volume of groundwater withdrawn at the site during 2012.

Measured groundwater levels for 2012 are presented in Table A-1. The groundwater contour maps (Figures 3-1 and 3-2) show the effect that the groundwater extraction system imposed on the water table at the NPBA on June 13 and December 7, 2012. Additionally, Table 5-2 summarizes measurements of water levels for extraction wells in the NPBA during 2012. This table also includes design “pump on” and “pump off” water level elevations. The NPBA wells require frequent flow adjustments to maintain a balanced number of pump cycles, which is controlled by the pumping rate of each well. When a flow rate is too low for current conditions, it results in water levels above the “pump on” elevation and a high level alarm.

In 2012, groundwater levels were measured in the groundwater extraction wells on a monthly basis to help determine if proper groundwater drawdown was being maintained. During 2012, up to three wells were noted during two months to be above the designed drawdown range. It should be noted that these low-flow extraction wells are generally more difficult to maintain, due to constant minor flow adjustments to the extraction wells.

The groundwater contours on Figures 3-1 and 3-2 indicate that areas of groundwater depression are present along the northeast property boundary. Note that at the time of the June and December 2012 water level measurement events, one of the NPBA collection wells (CW-1A) was pumping very little (or not pumping) groundwater due to low groundwater levels.

Maintenance

SAIC replaced several groundwater extraction well pumps and acid-cleaned the underground conveyance piping during the report period. Check valves, Y-strainers, chlorination of CW-3 and CW-6, and other components of the groundwater extraction system are maintained on a twice-per-month schedule. The current maintenance program has been sufficient to keep the system operational. A brief summary of several maintenance issues addressed in 2012 is presented below:

- A new pump end was installed at CW-1 in October 2012.
- A new pump motor was installed at CW-2 in March 2012, and a new pump end was installed in November 2012.
- A new pump end was installed at CW-4 in January 2012.
- A new pump end was installed at CW-6 in February 2012.
- A new pump end was installed at CW-7 in July 2012, and a new pump motor was installed in August 2012.
- The underground groundwater conveyance lines were acid-cleaned in May 2012.

5.2 Groundwater Chemistry

With the exception of CW-6, the dominant VOC found in groundwater samples collected from the NPBA extraction wells is TCE with concentrations ranging from 1.8 µg/L (CW-5, December 10, 2012) to 87 µg/L (CW-7A, December 10, 2012). PCE was the dominant VOC found in groundwater samples collected from extraction well CW-6 (at a concentration of approximately 80 µg/L). Historical trends of TCE results from samples collected in the NPBA collection wells are shown on Figure 5-2, and demonstrate a declining trend in this area. Historical VOC concentration trends from sampling of groundwater at each collection well are shown on Figures 5-3 through 5-11. The groundwater quality analysis from the 2012 extraction well sampling data is presented in Table A-2 (Appendix A). None of the detected VOCs identified in groundwater samples collected from CW-5 or CW-7 exceeded the Pennsylvania medium specific concentration (MSC) or United States Environmental Protection Agency (EPA) maximum contaminant level (MCL) during 2012 (see Table A-2).

6.0 TCA TANK AREA GROUNDWATER EXTRACTION SYSTEM

In response to a release of TCA from a former solvent supply tank, groundwater extraction was initiated in November 1990 from CW-8, located at the southeast corner of former Building 91. Pumping was initiated to prevent TCA migration and remove VOCs from the groundwater in this area. Groundwater extraction was initiated in February 1995 from CW-16 to contain and remediate groundwater beneath the former degreaser area located inside former Building 2, 150 feet east of CW-8. Groundwater from the TCA Tank Area is conveyed a distance of approximately 1,500 feet through a 3-inch-diameter underground pipe (rerouted/installed in 2011) to the groundwater treatment system.

Initially, extraction well CW-8 was pumped at a rate higher than necessary to maintain capture. The early goal was to reverse the direction of migration prior to initiation of groundwater pumping in the WPL, which would have potentially pulled the western edge of the TCA Tank plume further west, dispersing the concentrated source area. Prior to pumping of the WPL, the groundwater treatment plant, which was designed to handle water from the WPL, had excess capacity. Thus, the capacity was utilized to address the TCA Tank plume. When the WPL extraction system came on-line in May 1994, the pumping rate of CW-8 was reduced to a level that maintains capture of the TCA Tank Area plume.

In July 2011, extraction well CW-8 conveyance piping, electric, and communications were rerouted from overhead in former Building 2 to underground running along the west side of former Building 4. The conveyance piping, electric, and communications were rerouted due to the planned demolition of former Building 2 in late 2011.

In August 2012, extraction well CW-8 was shut down, and the pump assembly was pulled from the well to avoid interference or possible damage during air-rotary drilling of a new monitoring well, located adjacent to the CW-8 wellhead. This drilling was part of the ongoing "Supplemental Groundwater Remedial Investigation - Part 2" work. Following drilling, at the end of October 2012, and prior to reinstallation of the pump, CW-8 was redeveloped, using pumping and surging methods. Upon restart of CW-8, pumping rates were observed to be approximately 20 percent higher than the pre-drilling rates (increased from approximately 100 gpm to more than 120 gpm) in order to maintain the same pumping level drawdown and may have increased as a result of the well redevelopment activities.

6.1 System Operational Conditions

Except for CW-8 being off-line for drilling work (August 2, 2012, through October 31, 2012), the extraction well operated the majority of the time during the reporting period. Table 5-1 presents a record of monthly groundwater withdrawals from extraction well CW-8. Figure 5-1 presents a graphical comparison of the 2012 monthly total volumes of groundwater pumped from the former TCA Tank Area with respect to the other on-site systems. The TCA shutdown event is evident in this illustration during August, September, and October. During 2012, approximately 44 million gallons of groundwater were extracted from the TCA Tank Area, averaging approximately 3.7 million gallons per month (84 gpm). An average of approximately 80 gpm

was calculated for the previous report period in 2011. Overall, the TCA Tank Area pumped approximately 28 percent of the total volume of groundwater withdrawn at the site during 2012.

The groundwater contour maps (Figures 3-1 and 3-2) indicate water level conditions that existed on June 13 and December 7, 2012. The water level at CW-8 was noted to be approximately three to four feet below the elevation measured in nearby wells during the June and December site-wide groundwater level measurement events. Additionally, Table 5-2 summarizes measurements of water levels for the CW-8 extraction well in the TCA Tank Area. The table also lists design "pump on" and "pump off" water level elevations.

During November 2012, the observed water level in CW-8 was above the design drawdown level for this well. The observed water level at CW-8 was generally within the designed range for the remainder of 2012 (excluding the months the well was off-line).

Based on the monthly total flow data, the CW-8 daily extraction rate averaged approximately 120,873 gpd. This value equates to a monthly average of 3.7 million gallons, which represents a 5.4 percent increase from 2011 (3.5 million gallons per month). This well usually operated at its maximum capacity in 2012. Extraction well CW-8 did not operate for 90 days in 2012, compared to 46 days in 2011. Overall, CW-8 pumped approximately 28 percent of the total volume of groundwater withdrawn at the site in 2012.

Maintenance

Other than the pump removal activity reported above, there were no unscheduled maintenance actions for CW-8 during 2012. Extraction well CW-8 operated as designed throughout the report period with only one interruption (described above) for the drilling work.

6.2 Groundwater Chemistry

As groundwater pump and treat progressed in the TCA Tank Area, the dominant VOC present in groundwater sampled from the area shifted from TCA to TCE. Historical TCA concentrations in groundwater samples collected from wells CW-8 and CW-16 are shown on Figure 6-1. Historical TCE concentrations in groundwater samples collected from CW-8 and CW-16 are shown on Figure 6-2. A data summary of the groundwater quality analysis results from the 2012 extraction well sampling is presented in Table A-2 (Appendix A). During the June 18, 2012, sampling event, TCA was undetected in the groundwater sample collected from CW-8. The predominant VOCs and historical concentration trends in groundwater samples collected from collection well CW-8 are shown on Figure 6-3. TCE and cis-1,2-dichloroethene (cis-1,2-DCE) were the predominant VOCs detected in groundwater samples collected from CW-8 during 2012. On December 10, 2012, the TCA, TCE, and cis-1,2-DCE concentrations in groundwater samples collected at CW-8 were 25 µg/L, 180 µg/L, and 150 µg/L, respectively.

7.0 WEST PARKING LOT GROUNDWATER EXTRACTION SYSTEM

Three groundwater extraction wells (CW-9, CW-13, and CW-17) operate in the WPL Area of the Harley-Davidson property. One additional extraction well (CW-15A) is located near the exterior northwest corner of former Building 4. These four wells are referred to as the WPL wells. The purpose of the WPL groundwater extraction system is to prevent off-site migration of groundwater containing dissolved VOCs and to control the migration of VOCs in a plume located near the northwest corner of former Building 4. Groundwater extraction from the WPL wells is conducted via underground piping to the GWTS in Building 41A. The wells are individually piped to the GWTS so that flow control, flow measurements, and water samples may be obtained for each well at this central location. Water is piped the following distances from the wells to the treatment plant: CW-9 (1,320 feet), CW-13 (890 feet), CW-15A (310 feet), and CW-17 (590 feet).

Extraction wells CW-9, CW-13, CW-14, and CW-15A began operation in May 1994, and CW-17 began operating in September 1995. Well CW-17 was a replacement extraction well for CW-14, which was discontinued due to excessive sediment buildup in the well.

7.1 System Operational Conditions

Approximately 105 million gallons of groundwater were extracted from the WPL Area during 2012 (see Table 5-1), averaging approximately 8.8 million gallons per month (200 gpm). This groundwater extraction rate represents a 1.5 percent decrease from 2011 when the extraction rate was approximately 203 gpm. A graphical comparison of the WPL groundwater extraction volumes to the other site extraction systems is presented on Figure 5-1. Overall, the WPL wells pumped approximately 67 percent of the total volume of groundwater withdrawn at the site.

The groundwater contour maps (Figures 3-1 and 3-2) show the effect that the groundwater extraction system imposed on the water table at the WPL Area on June 13, 2012, and December 7, 2012. Groundwater contours from both measurement periods indicate a general area of groundwater surface depression surrounding the WPL Area.

Table 5-2 summarizes measurements of water levels for the WPL extraction wells. The table also lists design “pump on” and “pump off” water level elevations. A review of Table 5-2 indicates that during 2012, the water levels in WPL wells were generally close to the designed range. Two groundwater extraction wells were noted in June to be above the designated drawdown range. Extraction well CW-15A was above the designated drawdown range in September. The flow rates were increased in the extraction wells to maintain the appropriate drawdown.

Maintenance

The WPL wells operated as designed throughout the report period with short interruptions for maintenance and repairs. The current maintenance program has maintained reliable operation of

extraction wells CW-9, CW-13, CW-15A, and CW-17. A brief summary of maintenance issues addressed in 2012 is presented below:

- In June 2012, a new pump motor was installed at CW-17.
- In July 2012, new power wiring was pulled from the GWTS to CW-17 wellhead.
- In July 2012, a new pump end was installed at CW-15A.

7.2 Groundwater Chemistry

Historical concentrations of VOCs detected in groundwater samples in the WPL collection wells are shown on Figures 7-1 through 7-5. A data summary of the groundwater quality analysis results from the 2012 extraction well sampling is presented in Table A-2 (Appendix A). The dominant detected VOC in groundwater from samples collected at CW-15a and CW-17 was TCE, with concentrations ranging from 120 µg/L (December 10, 2012, at CW-17) to 9,800 µg/L (December 10, 2012, at CW-15A). TCE was also the VOC with the highest detection in the WPL well samples collected in 2012. The dominant detected VOC in groundwater collected from CW-9 was PCE (up to 1,900 µg/L on December 10, 2012), and the dominant detected VOC in groundwater collected from CW-13 was cis-1,2-DCE (up to 400 µg/L on December 10, 2012). The 2012 groundwater sampling results from extraction wells CW-9 and CW-15A showed increased concentrations of PCE and TCE in the December 2012 sampling, as compared to the June 2012 and prior data within the last three to four years.

8.0 BUILDING 3 DEWATERING SYSTEM

Harley-Davidson's current production plant, also referred to as Building 3, was constructed in the eastern portion of the site, in the vicinity of the former test track. Due to the potential for shallow VOC-impacted groundwater to discharge to the surface and to the lowest floor of the facility, a groundwater collection system was installed during building construction in 2001. The groundwater collection system for Building 3 consists of a shallow interceptor trench along the base of a steep hillside near the northeast corner of the building (or toe drain), a deep interceptor trench and drain beneath the building foundation footer (or footer drain), and a shallow capture well (CW-19) located in the Building 3 basement, near a paint sludge pit. All three components of the groundwater collection system are designed to flow to a pumping station (or lift station). From the lift station, the groundwater is transported via underground piping to the groundwater treatment facility located in Building 41A (see Figure 1-2).

Groundwater collection via this system was initiated in March 2002. During 2012, this system collected 1,005,930 gallons of groundwater (refer to Table 5-1). This groundwater recovery rate represents a 5 percent decrease from 2011, when the annual recovery rate was 1,061,990 gallons, and is generally consistent with differences in annual precipitation. A graphical comparison of the dewatering system groundwater extraction volumes to the other site extraction systems is presented on Figure 5-1. Overall, the dewatering system recovered approximately 0.6 percent of the total volume of groundwater withdrawn at the site.

8.1 Toe Drain System

The northeast corner of the Building 3 site was identified as the area with the most potential for groundwater to discharge to the surface after final grading. To prevent the potential for human contact with the groundwater, a toe drain was installed at the bottom of the slope cut. This was designed to intercept and collect shallow groundwater seepage from this area, thus minimizing surface discharges. The toe drain was constructed as a shallow (approximately four-foot deep) gravity flow trench drain filled with gravel surrounding a four-inch perforated, corrugated polyvinyl chloride (PVC) pipe. The toe drain trench was lined with geotextile fabric to minimize sedimentation entering the piping. A low permeable soil layer was placed on top of the gravel-filled trench to reduce infiltration of surface water into the drain. During site-wide restructuring activities, the hillside was cut to allow the northern expansion of Building 3. The toe drain was reinstalled northward, along the new toe of the slope (approximately 110 feet to the north of the former toe drain) on October 26, 2010.

A hillside interceptor drain system was installed on a section of the east hillside and connected to the south end of the toe drain in May 2011. The interceptor system was installed to direct water from a seep in the hillside to the toe drain and to stabilize the hillside. The interceptor system was shaped like a "T." Additional hillside stabilization work was completed in 2012. The 2011 interceptor system and "T" were removed, and new PVC interceptor drains were installed at various points on the hillside and covered with stone gabion boxes. The 2012 hillside stabilization drains were redirected to discharge to the nearby surface water drainage system.

8.2 Footer Drain System

During construction of the original Building 3, a deep trench drain was installed along the eastern perimeter of the building foundation due to the high probability of groundwater levels encountering the lower floor of the facility and the building footer. The footer drain is sloped to gravity-drain to the lift station, located along the north-central edge of the Building 3 expansion. The depth of the footer drain varies from 25 feet at the south end to approximately 29 feet near the lift station. Four clean-outs were installed along the 760-foot length of trenching. The footer drain was constructed of six-inch perforated, corrugated PVC piping in a trench filled with coarse gravel. Prior to installation of the piping and drainage course, the trench was lined with a geotextile fabric to minimize sediment mixing with the gravel. During the Building 3 expansion work, one of the deep clean-outs was abandoned, one was maintained inside the expanded building, and the southernmost clean-out was extended beneath the southern building expansion.

8.3 Capture Well (CW-19)

During construction of Building 3, a shallow capture well (CW-19) and force main were installed adjacent to the paint sludge pit area of the production plant, within the basement of Building 3. The paint sludge pit area consists of a 27-foot-deep pit used to house the paint sludge holding tank. CW-19 was installed seven feet deeper than the pit so that the well could be used to begin pumping prior to the groundwater level reaching the elevation of the bottom of the pit. The force main was installed to transfer groundwater captured in the well to the lift station. The force main was installed with a slope toward the lift station so that groundwater does not remain in the line after the well pump stops running. Since construction in 2002, groundwater has not been encountered in CW-19, and it remained dry during 2012. The lowering of groundwater from the footer drain effectively keeps the groundwater below the depth of CW-19. There was no groundwater removed from CW-19 in 2012.

8.4 Lift Station

The lift station is located north of the Building 3. The lift station conveys groundwater to the groundwater treatment plant in Building 41A. The lift station controls are automated using a float controller, and pump operation can be monitored and deactivated remotely.

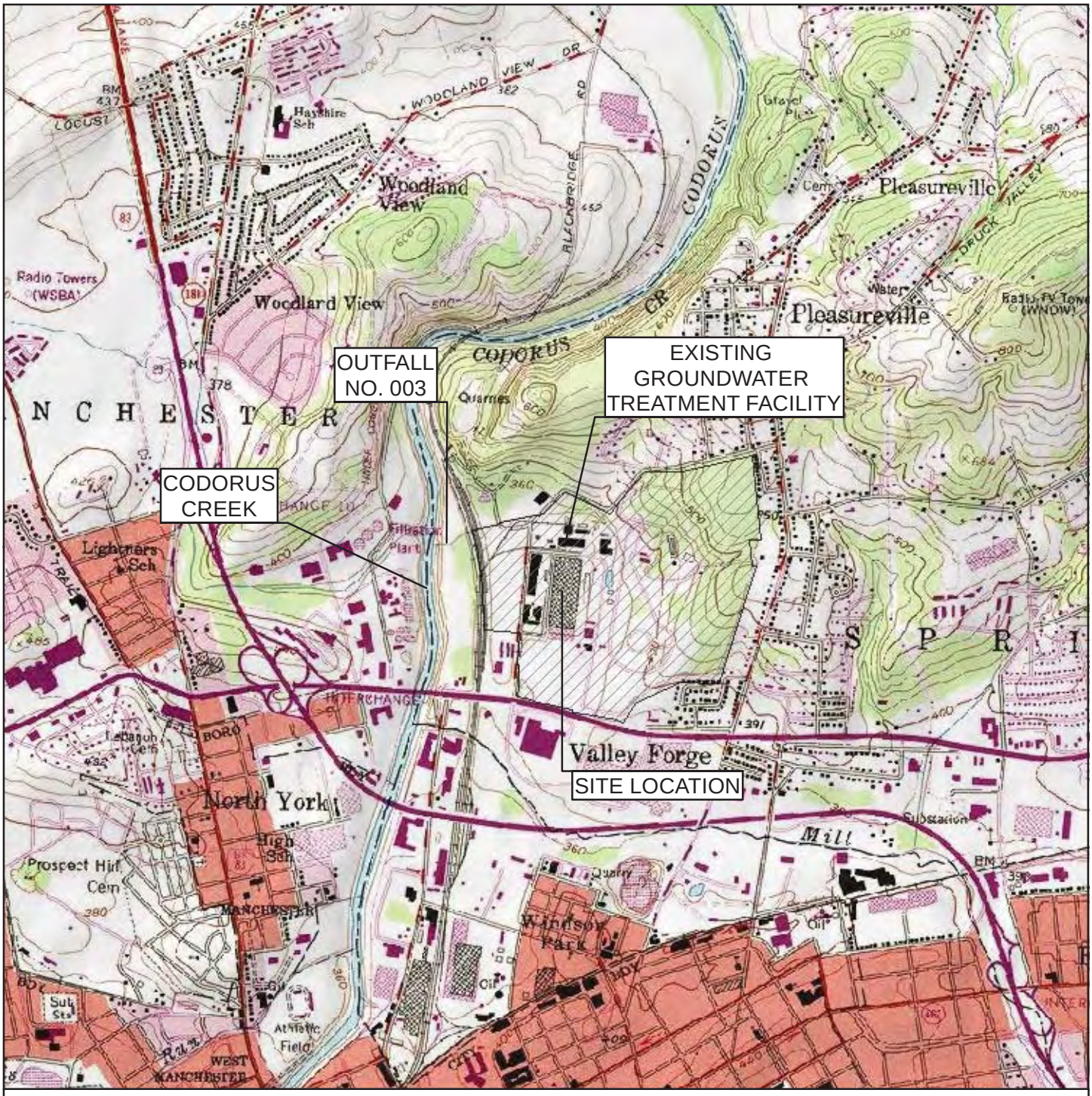
8.5 Groundwater Chemistry

Sampling of groundwater collected by the lift station was initially performed in June 2003 in response to a reporting requirement for the SRBC. No water was entering the lift station during the collection well sampling event in June 2012. A groundwater sample was collected from the wet well of the lift station in December 2012 (but the toe drain was not flowing and could not be sampled). The toe drain was sampled in January 2013 during a precipitation event when flow was observed.

A summary of the laboratory analytical results from sampling of the toe drain and the footer drain is shown in Table A-2 (Appendix A). A review of the December 2012 lift station sampling results indicated that only one VOC (TCE) was reported at 0.26 µg/L in the footer drain sample

(the sample had an estimated "J" data qualifier). TCE was also reported in the toe drain sample at an estimated concentration of 0.5 µg/L (the sample also has a J data qualifier). Although a low estimated concentration of acetone (4.2 µg/L) was also reported in this sample, it is considered to be a laboratory contaminant. None of the reported detections in the toe drain or footer drain samples exceeded any of the PADEP MSCs or EPA MCLs. These results are consistent with the sampling results of the toe drain and footer drain since 2004.

FIGURES

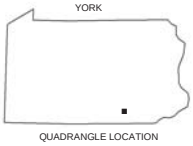


NOTE: Map based on USGS 7.5 minute series York quadrangle.

0 1,000 2,000 4,000 '

1 inch = 2,000 feet

N
W E
S



QUADRANGLE LOCATION

FORMER YORK NAVAL ORDNANCE PLANT

1425 EDEN ROAD, YORK, PA 17402

SITE LOCATION MAP

drawn JEB	checked EMW	approved RGM	figure no. 1-1
date 01/23/2013	date 01/23/2013	date 01/23/2013	
job no. 2603200141-1000-100		file no. Fig1site-loc.mxd	

initials	date	revision

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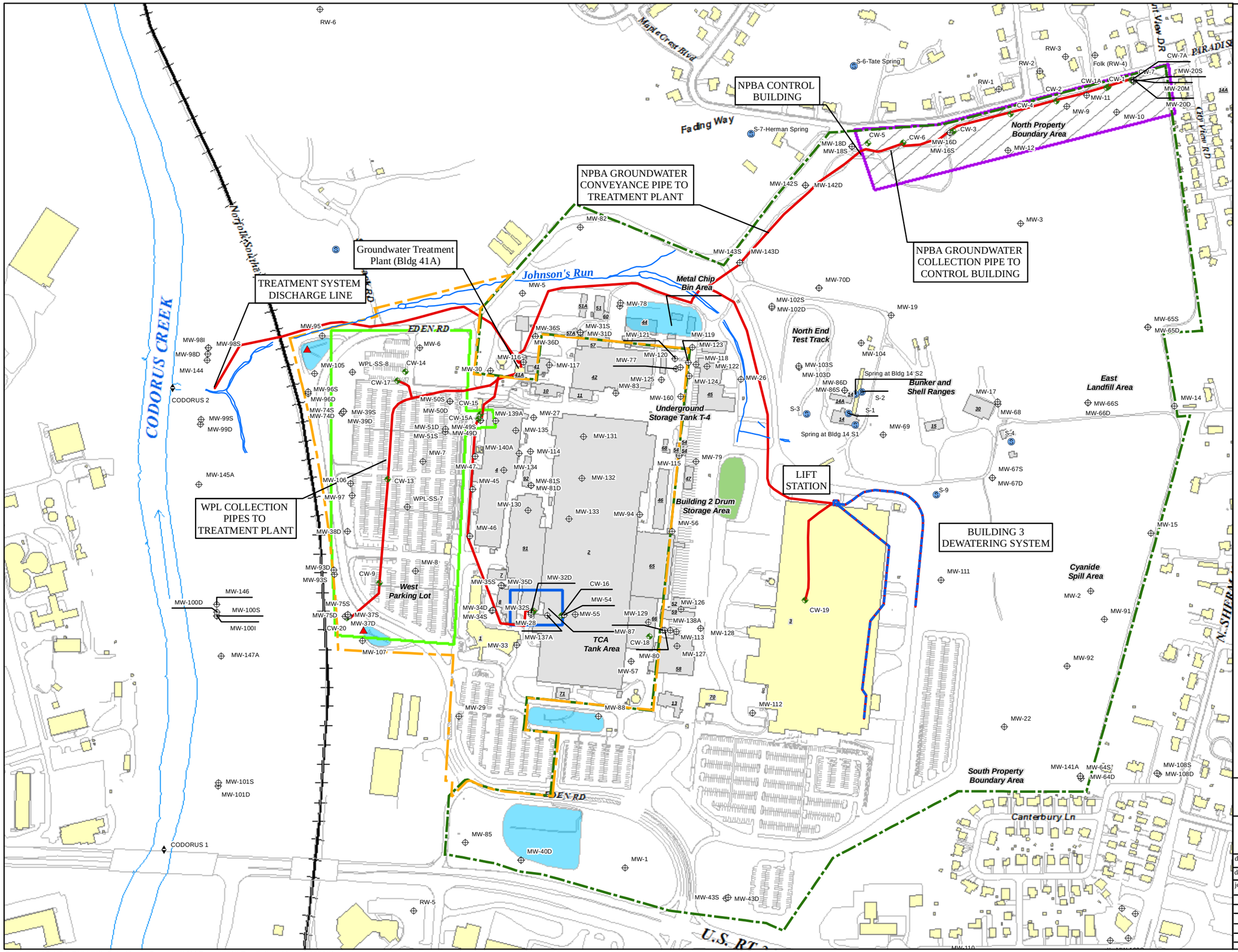

Legend

- Monitoring Well and Designation
- Extraction Well and Designation
- Stream Gauge and Designation
- Spring
- Vortechnic Outlet Structure
- York County Industrial Development Authority
- Harley-Davidson Motor Company Operations, Inc
- Groundwater Interceptor Trenches
- Treatment System Features
- NPBA Area
- TCA Area
- WPL Area
- Surface Water
- Existing Building
- Removed Building
- Roads Curb Boundary
- Railroad
- Fire Water Pond
- Stormwater Basin

N

NOTE:
1. *Base data (Buildings, Building Boundaries, Roads and Curbs) from NuTec Survey conducted in 2006.*

0 200 400 800
SCALE IN FEET

FORMER YORK NAVAL ORDNANCE PLANT
1425 Eden Rd York, Pa 17402

GROUNDWATER TREATMENT SYSTEM LOCATION

drawn	checked	approved	figure no.
RAM	EMW	RGM	1-2
date 01/30/2013	date 01/23/2013	date 01/23/2013	
job no. 2603200141-1000-100		file no. Fig_2_Site_Map_20130131	

initials	date	revision
JMG	01/30/2013	Property Bounds and Symbols
JMG	02/12/2013	Stormwater basins/sw pts

SAIC

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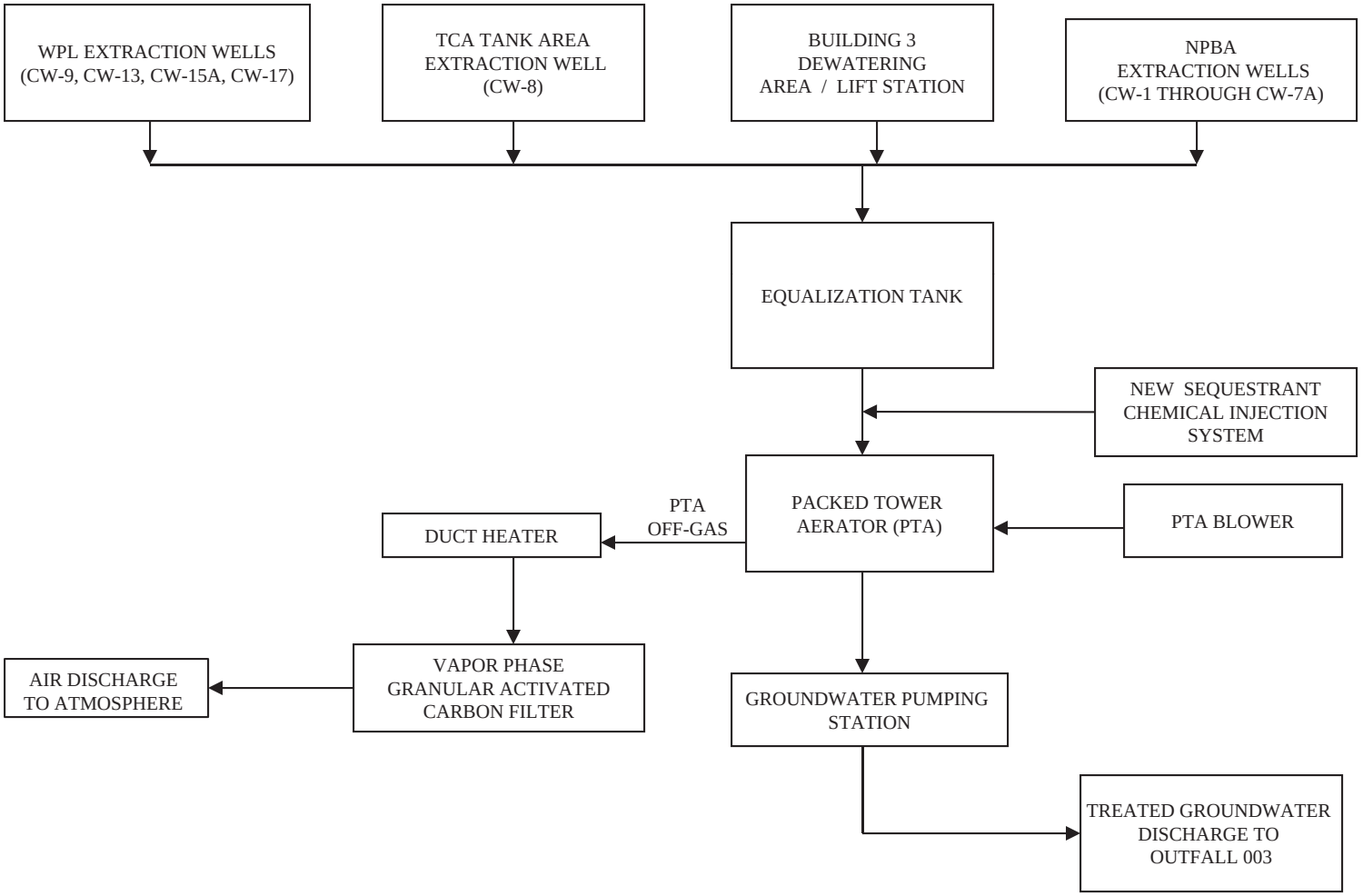
FIGURE 1-3
GROUNDWATER TREATMENT SYSTEM FLOW DIAGRAM
Former York Naval Ordnance Plant



Updated February 6, 2013

FORMER YORK NAVAL ORDINANCE PLANT GROUNDWATER WITHDRAWAL JUNE 13, 2012		
WELL ID	DAILY FLOW (GALLONS)	AVERAGE DAILY PUMPING RATE (GPM)
CW-1	2,667	1.85
CW-1A	190	0.13
CW-2	536	0.37
CW-3	6,750	4.69
CW-4	2,564	1.78
CW-5	923	0.64
CW-6	3,901	2.71
CW-7	1,076	0.75
CW-7A	1,253	0.87
CW-8	146,361	101.64
CW-9	86,537	60.10
CW-13	106,652	74.06
CW-15A	3,394	2.36
CW-17	45,561	31.64
LIFTSTATION	2,500	1.74

Legend

- Monitoring Well and Designation
- Collection Well
- Staff Gauge/Stream Gauge
- Residential Well
- York County Industrial Development Authority
- Harley-Davidson Motor Company Operations, Inc
- Inferred Groundwater Contour (Feet)
- Groundwater Contour (Feet)
- Groundwater Contour Sink (Feet)
- Bedrock Contact
- Groundwater Interceptor Trenches
- Surface Water
- Existing Building
- Removed Building
- Roads Curb Boundary
- Fire Water Pond
- Stormwater Basin

N

NOTE:

1. *Base data (Buildings, Building Boundaries, Roads and Curbs, and Contour Lines, from NuTec Survey conducted in 2006)*
2. *Gauging data that was used was from the 6/13/2012 gauging event.*
3. *The shallow groundwater elevation was used when contouring at well pairs (in black). Gray water levels are from deep wells and are presented for comparison only.*
4. *The groundwater elevations at MW-29 and MW-85 were not used for contouring because they are considered to be anomalously high*

0 250 500 1,000 Feet

FORMER YORK NAVAL ORDNANCE PLANT

1425 EDEN ROAD, YORK, PA 17402

GROUNDWATER SURFACE CONTOUR MAP JUNE 2012

drawn RAM	checked	approved	figure no. 3-1
date 1/29/2013	date	date	
job no. 2603200141-1000-100		file no. Fig_GW_Con_Jun_13	

initials	date	revision
JMG	02/12/2013	Stormwater basins, Symbols

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FORMER YORK NAVAK ORDINANCE PLANT GROUNDWATER WITHDRAWL DECEMBER 7, 2012		
WELL ID	DAILY FLOW (GALLONS)	AVERAGE DAILY PUMPING RATE (GPM)
CW-1	2,589	1.80
CW-1A	158	0.11
CW-2	421	0.29
CW-3	4,069	2.83
CW-4	2,306	1.60
CW-5	1,058	0.73
CW-6	3,959	2.75
CW-7	1,035	0.72
CW-7A	1,025	0.71
CW-8	175,132	121.62
CW-9	99,651	69.20
CW-13	108,071	75.05
CW-15A	3,882	2.70
CW-17	92,792	64.44
LIFTSTATION	1,790	1.24

Legend

- Monitoring Well and Designation
- Collection Well
- Staff Gauge/Stream Gauge
- Residential Well
- York County Industrial Development Authority
- Harley-Davidson Motor Company Operations, Inc
- Bedrock Contact
- Inferred Groundwater Contour (Fet)
- Groundwater Contour (Feet)
- Groundwater Contour Sink (Feet)
- Groundwater Interceptor Trenches
- Cordorus Creek
- Existing Building
- Removed Building
- Roads Curb Boundary
- Fire Water Pond
- Stormwater Basin

N

NOTE:

1. *Base data (Buildings, Building Boundaries, Roads and Curbs, and Contour Lines, from NuTec Survey conducted in 2006)*
2. *Gauging data that was used was from the 12/7/2012 gauging event.*
3. *The shallow groundwater elevation was used when contouring at well pairs (in black). Gray water levels are from deep wells and are presented for comparison only.*
4. *The groundwater elevations at MW-29 and MW-85 were not used for contouring because they are considered to be anomalously high.*
5. *The groundwater elevations at MW-118 through MW-124 were not used for contouring because they represent perched groundwater.*

0 250 500 1,000 Feet

FORMER YORK NAVAL ORDNANCE PLANT

1425 EDEN ROAD, YORK, PA 17402

GROUNDWATER SURFACE CONTOUR MAP DECEMBER 2012

drawn RAM	checked	approved	figure no. **3-2**
date 01/29/2013	date	date	
job no. 2603200141-1000-100			file no. Fig_GW_Con_Dec_2012

initials	date	revision
JMG	02/12/2013	Stormwater basins, Symbols

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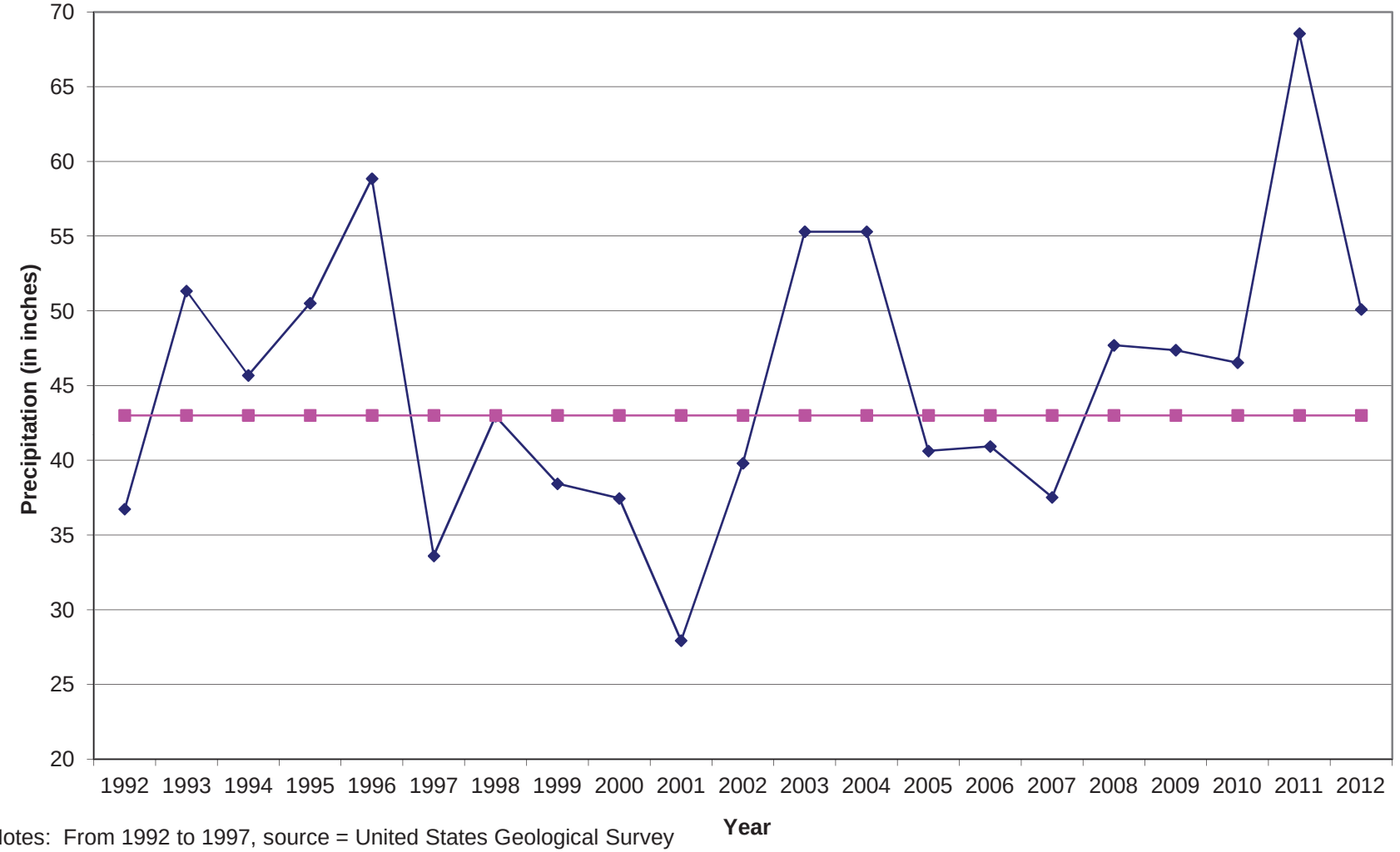
Figure 3-3
Annual Historical Precipitation Data for York, PA
Former York Naval Ordnanace Plant
1425 Eden Road, York PA 17402



Notes: From 1992 to 1997, source = United States Geological Survey
From 1998 to 2002, source = Accuweather.com
From 2003 to 2012, source = Harley-Davidson and weather underground
Normal precipitaion for York, PA is from AccuWeather.com

Figure 4-1
Packed Tower Aerator Influent Chemistry - Total VOC Concentration
Former York Naval Ordnance Plant
1425 Eden Road, York PA 17402

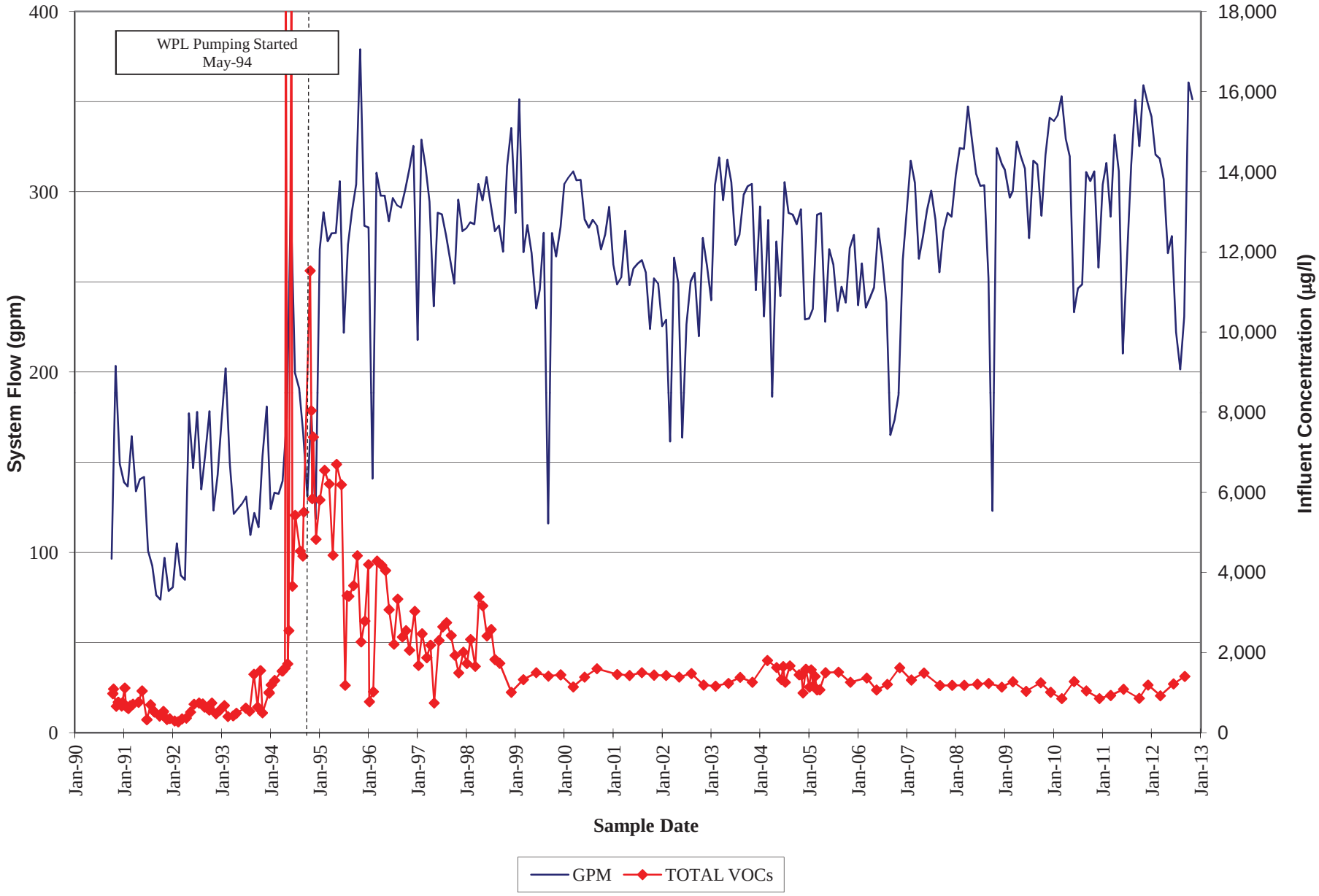


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Figure 4-2
Packed Tower Aerator Influent Chemistry for NPDES Discharge Permit Required Compounds
Former York Naval Ordnance Plant
1425 Eden Road, York PA 17402

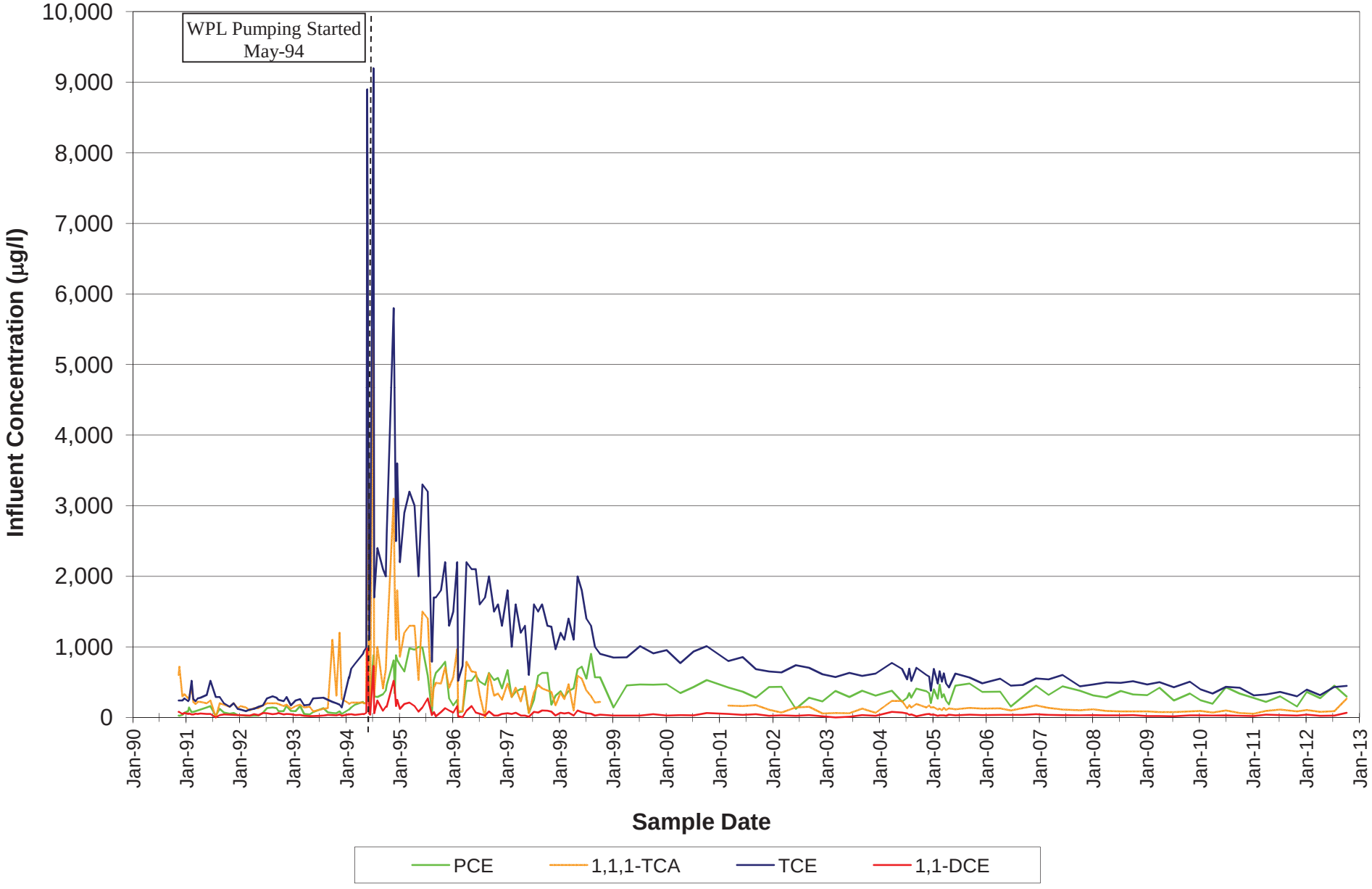

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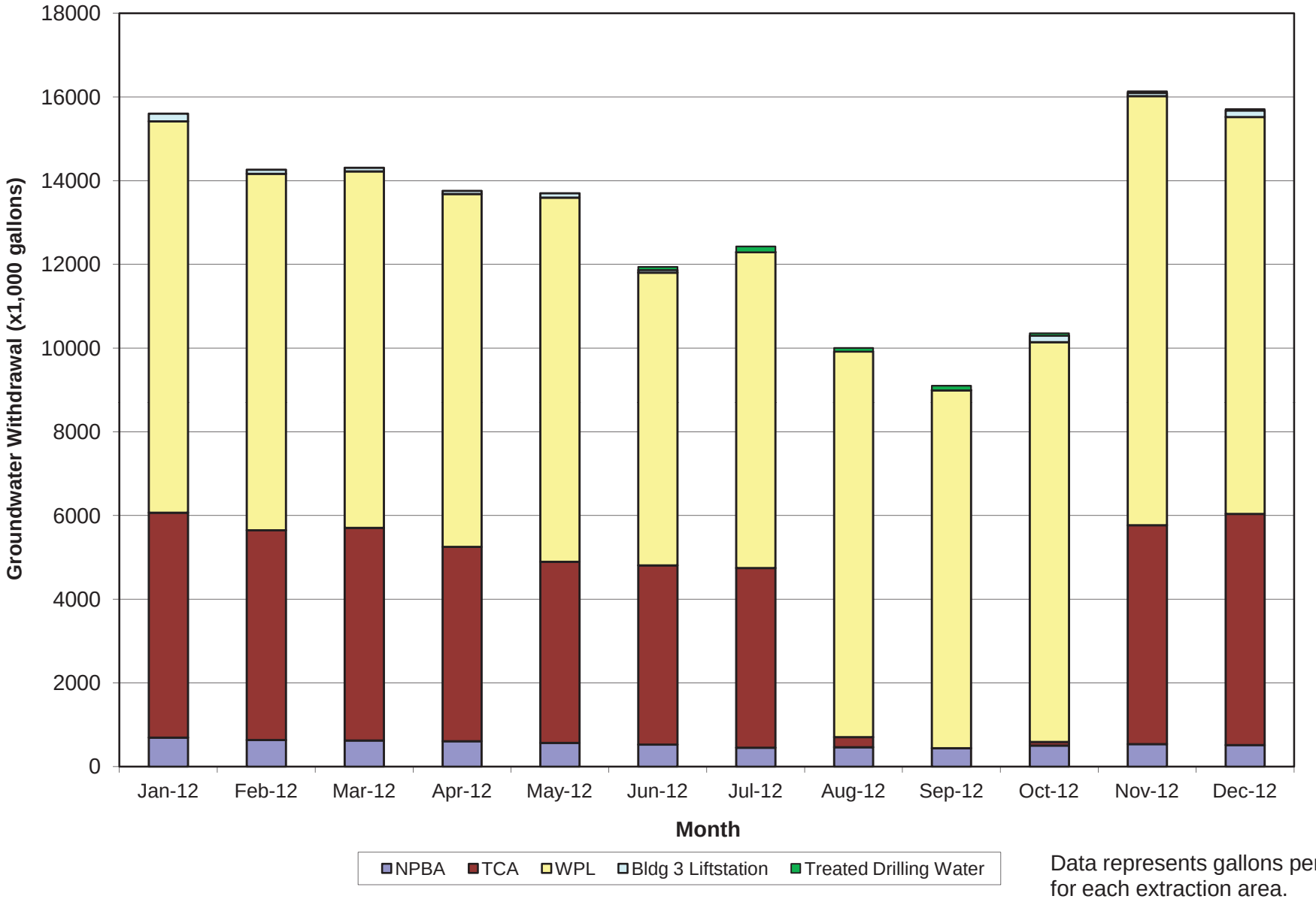
Figure 5-1
2012 Groundwater Withdrawals
Former York Naval Ordnance Plant
1425 Eden Road, York PA 17402



Data represents gallons per month for each extraction area.

C:\Documents and Settings\wadeem\Desktop\EMW\H-D O&M\flow data table_2012

Figure 5-2
TCE in NPBA Extraction Wells
Former York Naval Ordnance Plant
1425 Eden Road, York PA 17402

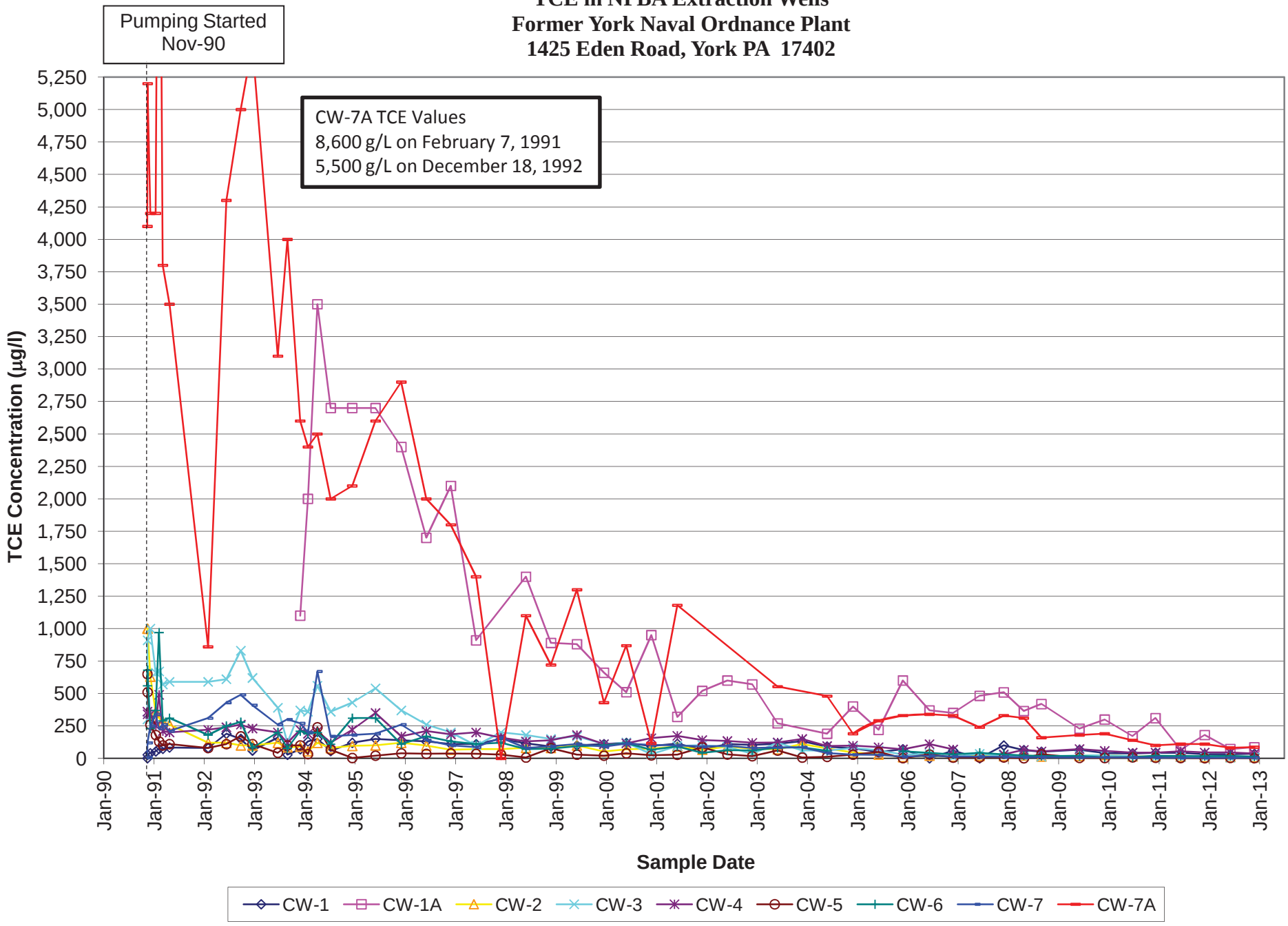


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Figure 5-3
Predominant VOC Concentrations - Extraction Well CW-1
Former York Naval Ordnance Plant
1425 Eden Road, York PA 17402

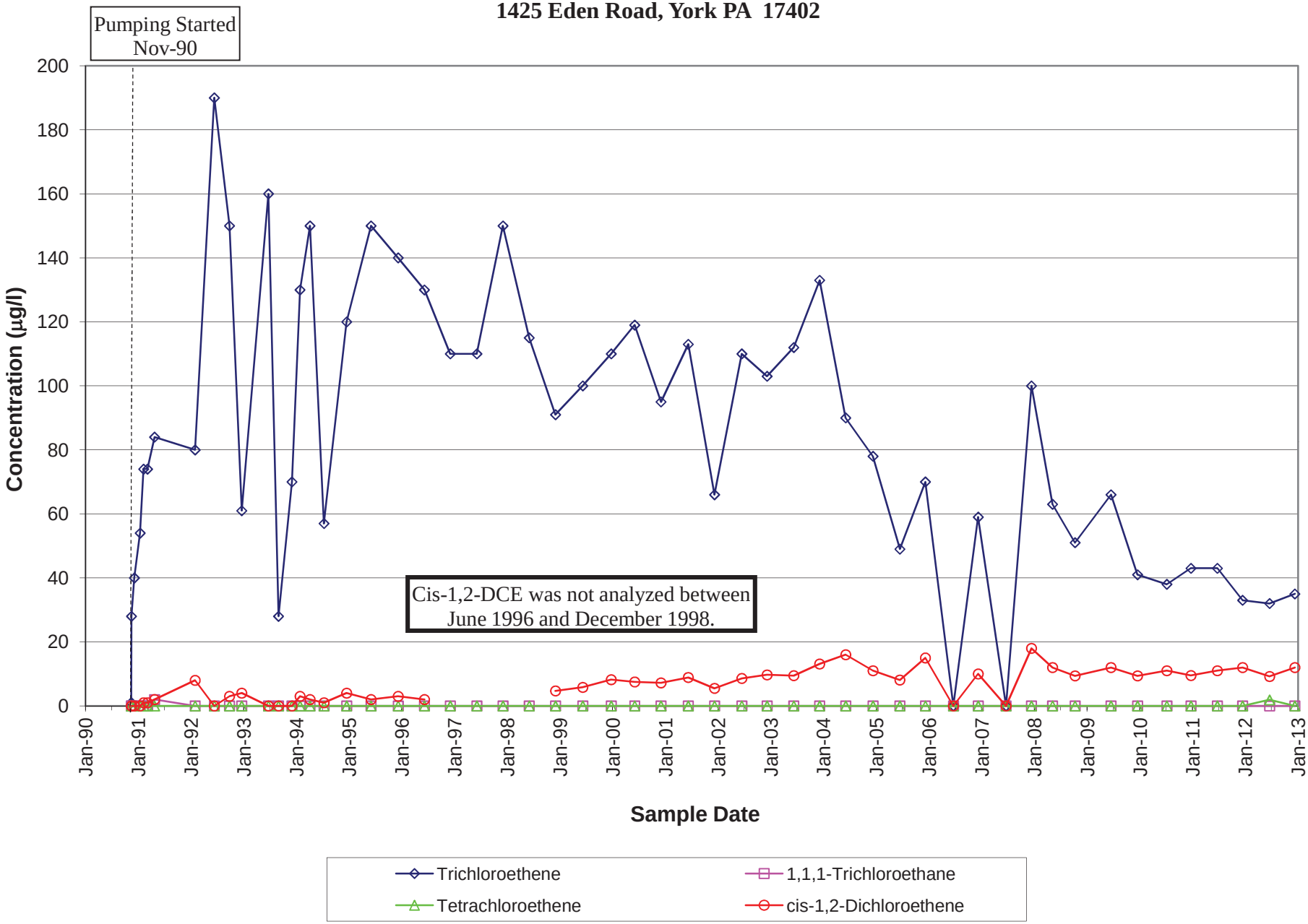

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Figure 5-4
Predominant VOC Concentrations - Extraction Well CW-1A
Former York Naval Ordnance Plant
1425 Eden Road, York PA 17402

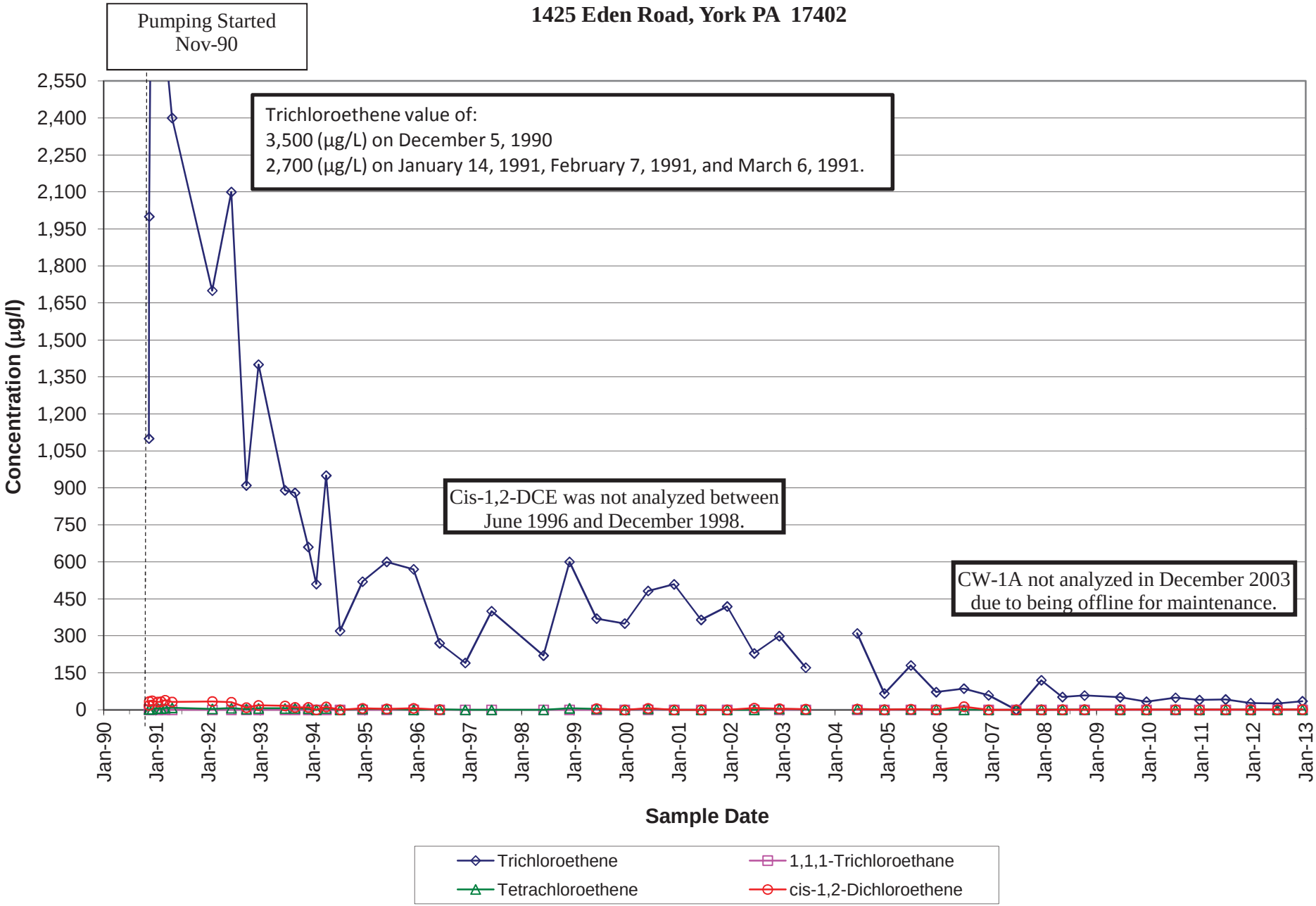

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Figure 5-5
Predominant VOC Concentrations - Extraction Well CW-2
Former York Naval Ordnance Plant
1425 Eden Road, York PA 17402

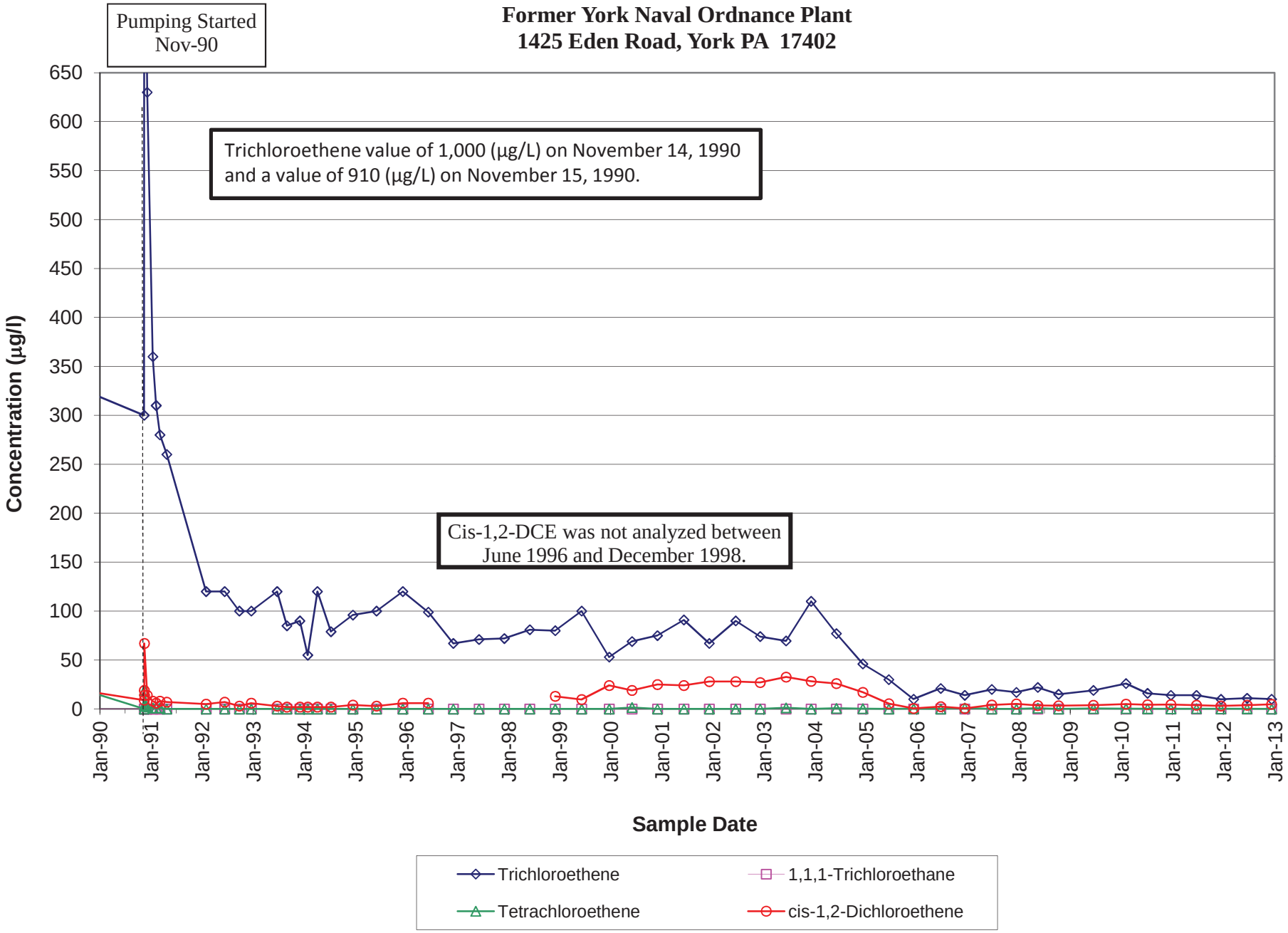

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Figure 5-6
Predominant VOC Concentrations - Extraction Well CW-3
Former York Naval Ordnance Plant
1425 Eden Road, York PA 17402

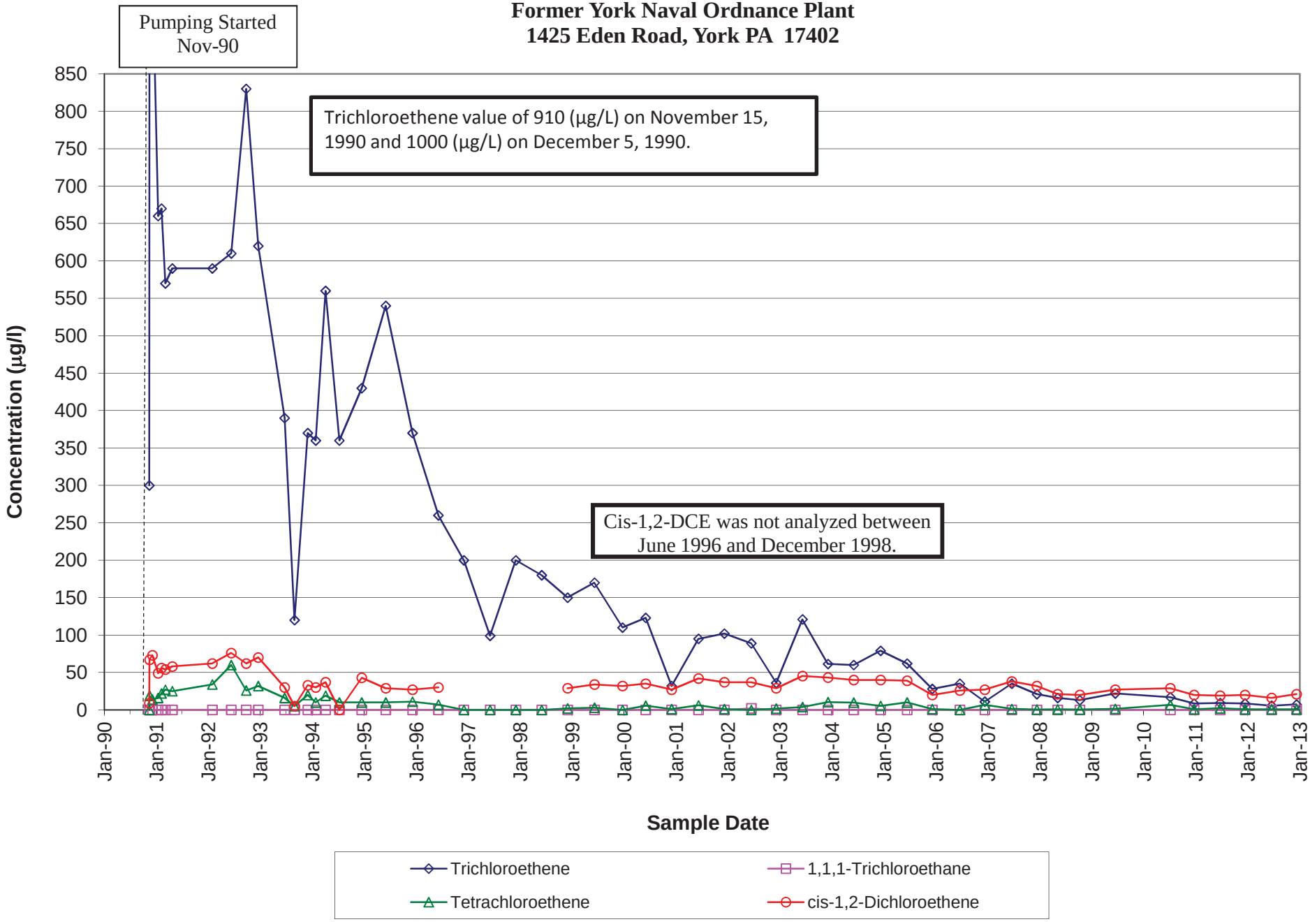

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Figure 5-7
Predominant VOC Concentrations - Extraction Well CW-4
Former York Naval Ordnance Plant
1425 Eden Road, York PA 17402

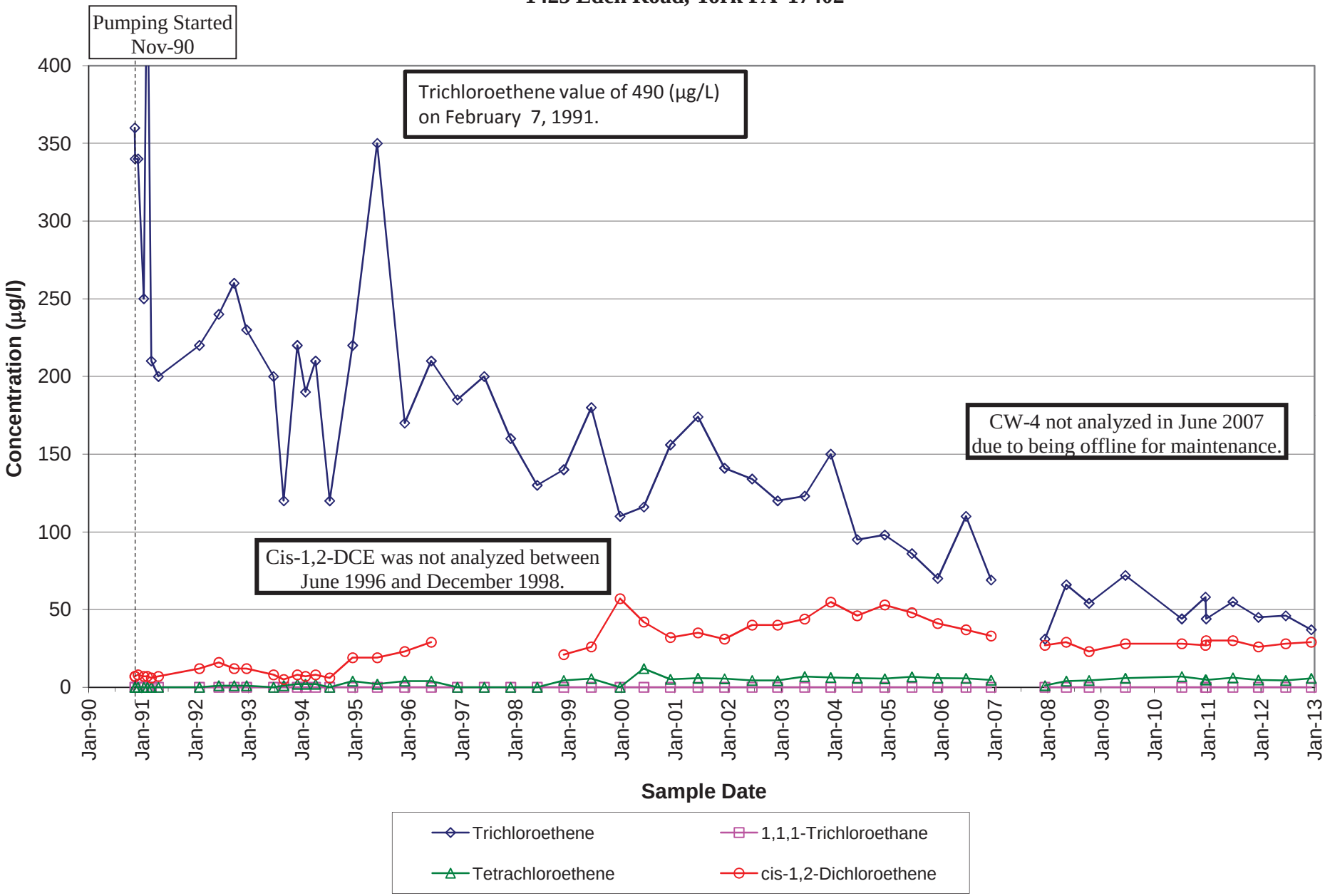

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Figure 5-8
Predominant VOC Concentrations - Extraction Well CW-5
Former York Naval Ordnance Plant
1425 Eden Road, York PA 17402

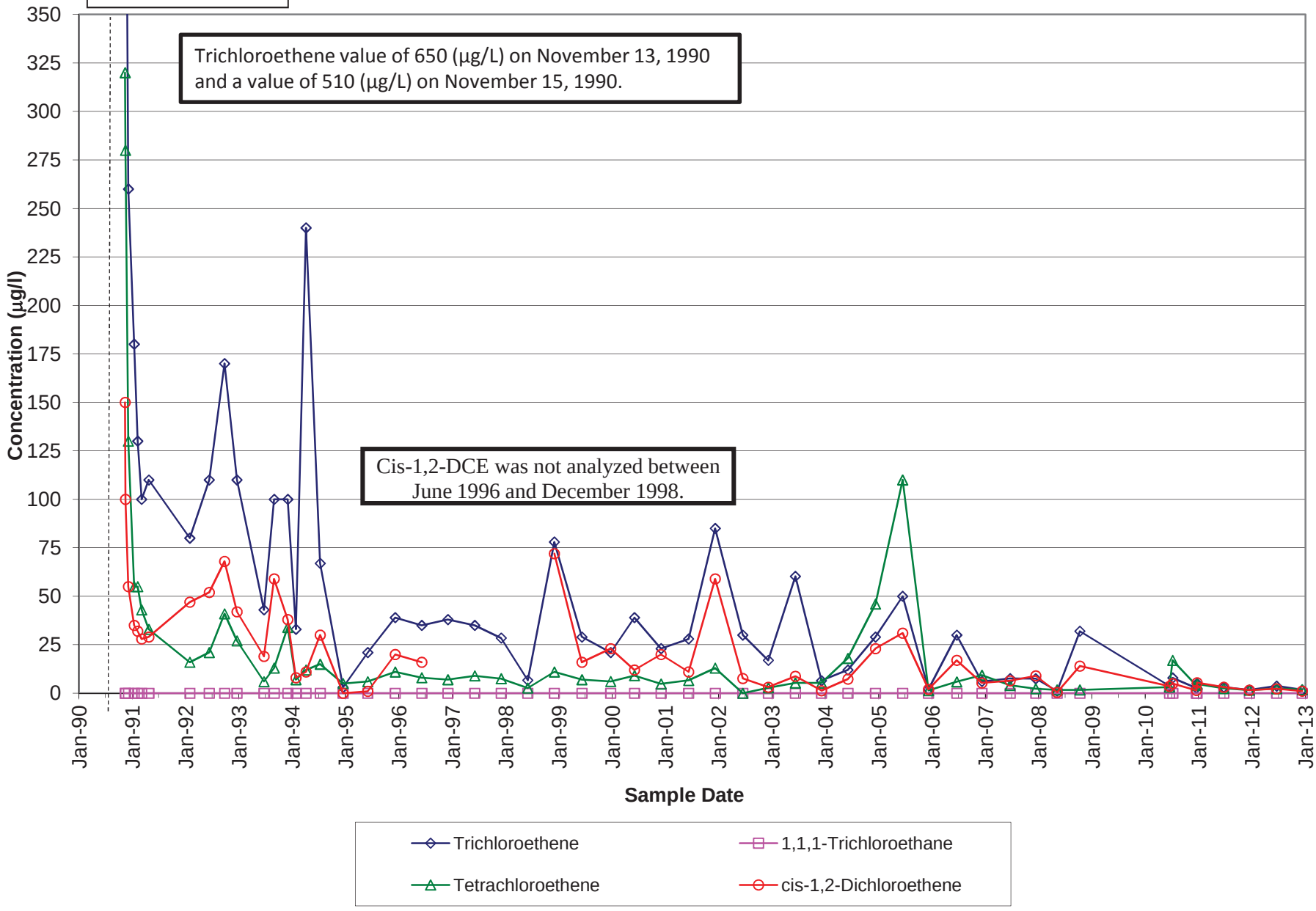

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Figure 5-9
Predominant VOC Concentrations - Extraction Well CW-6
Former York Naval Ordnance Plant
1425 Eden Road, York PA 17402

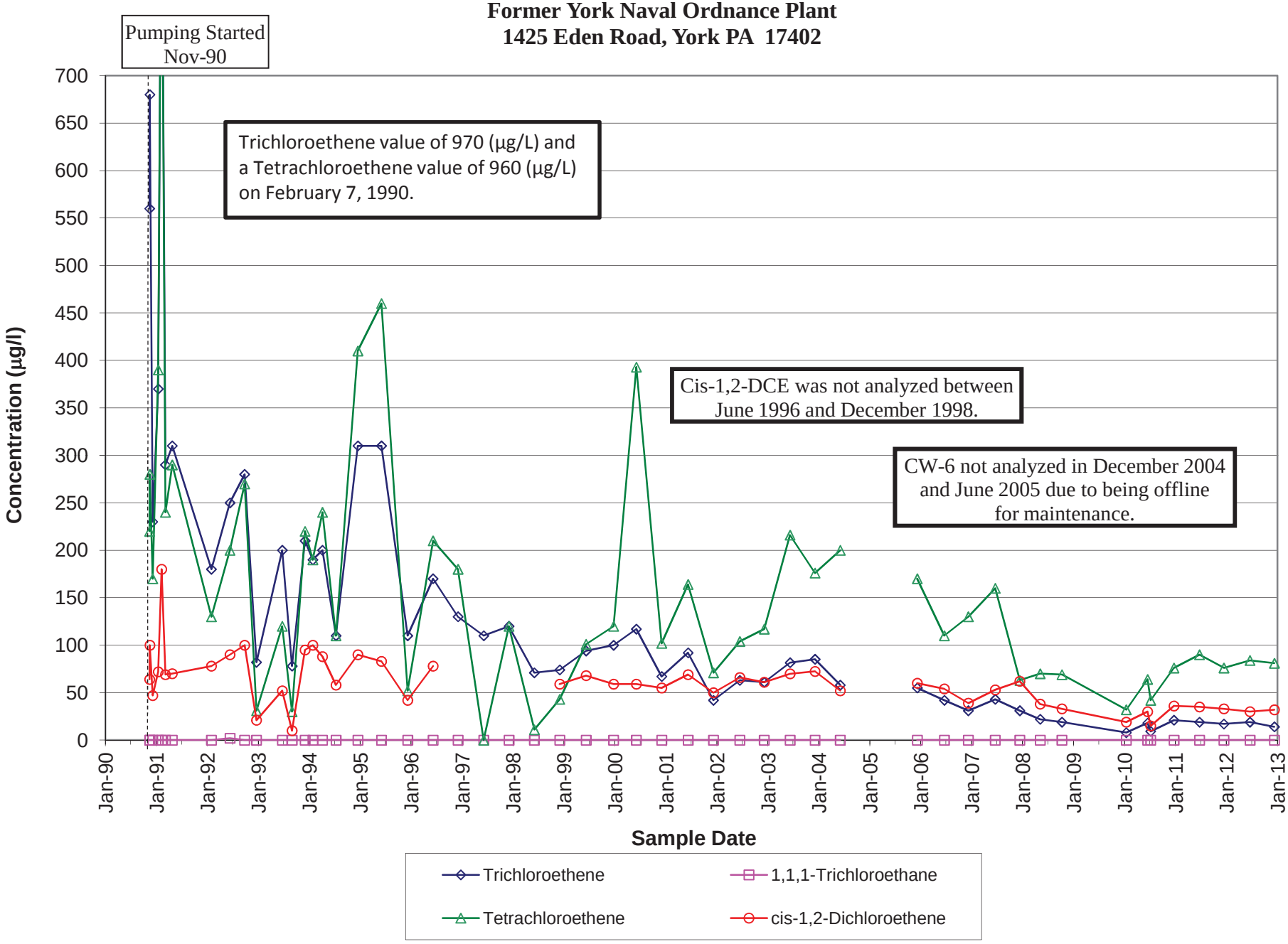

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Figure 5-10
Predominant VOC Concentrations - Extraction Well CW-7
Former York Naval Ordnance Plant
1425 Eden Road, York PA 17402

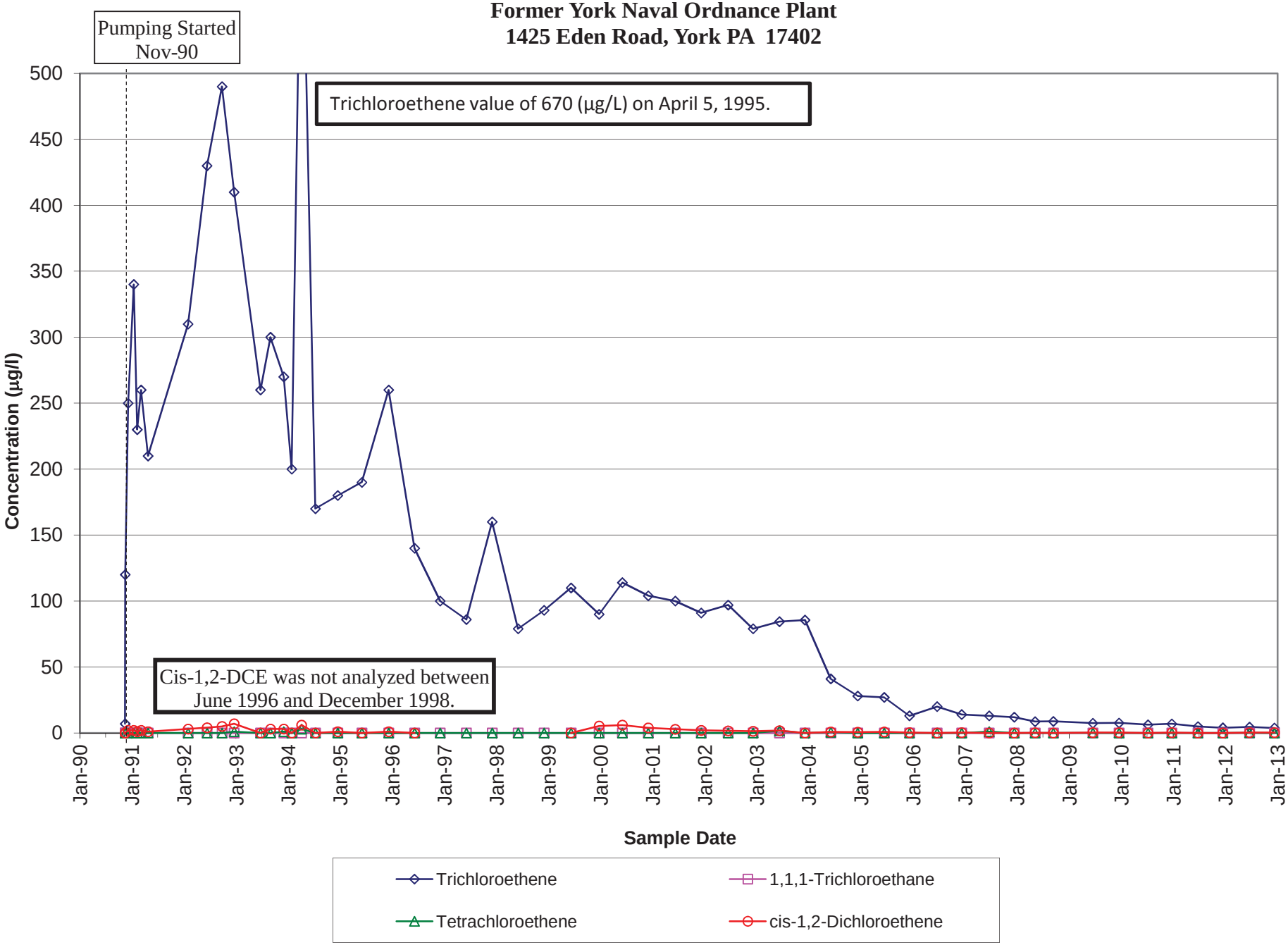

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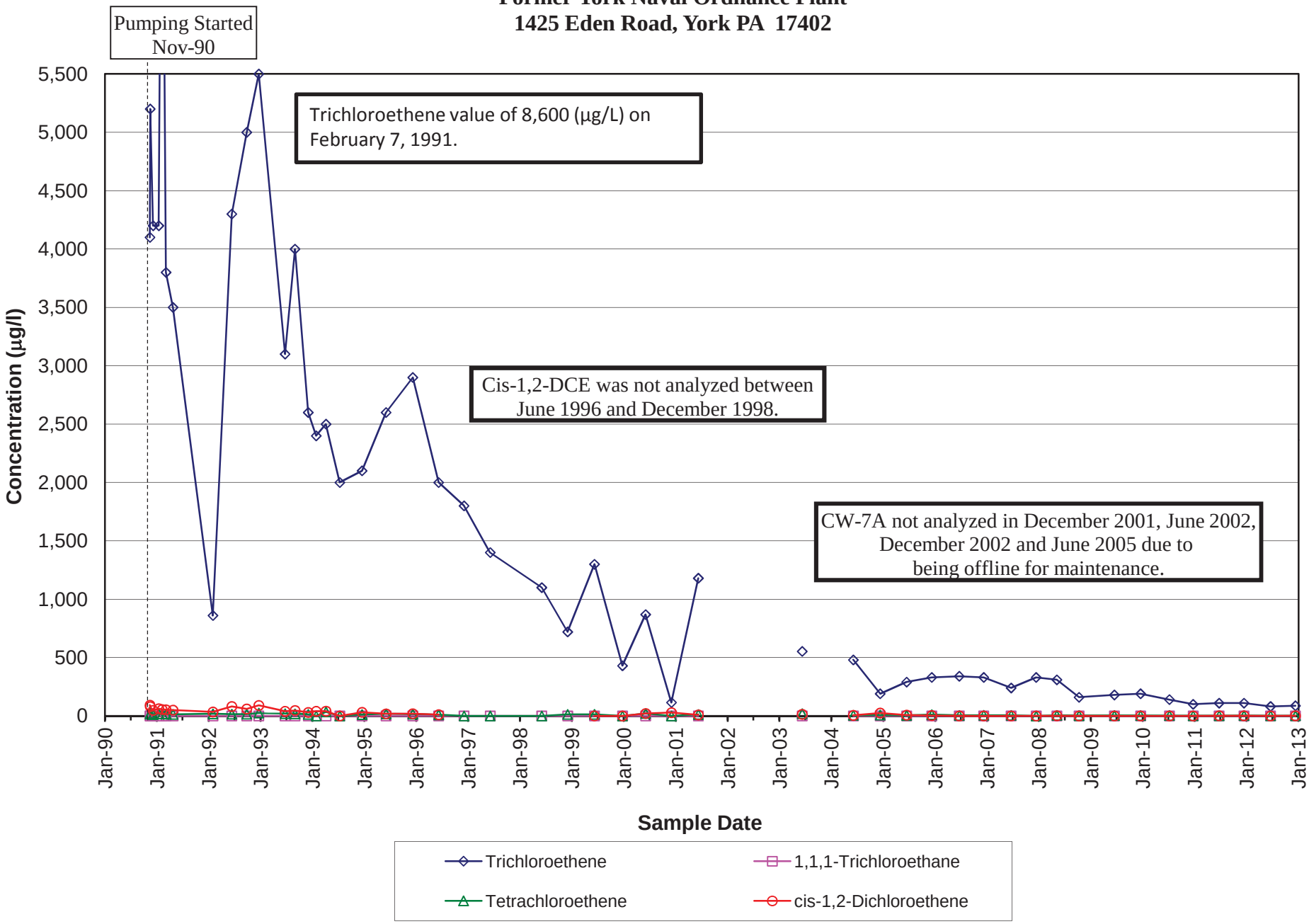
Figure 5-11
Predominant VOC Concentrations - Extraction Well CW-7A
Former York Naval Ordnance Plant
1425 Eden Road, York PA 17402



P:\HBG\ENV\Harley\Reporting\Annual O&M Reports\2012\cw_data for annual_12

Figure 6-1
TCA in TCA Tank Area Extraction Wells
Former York Naval Ordnance Plant
1425 Eden Road, York PA 17402

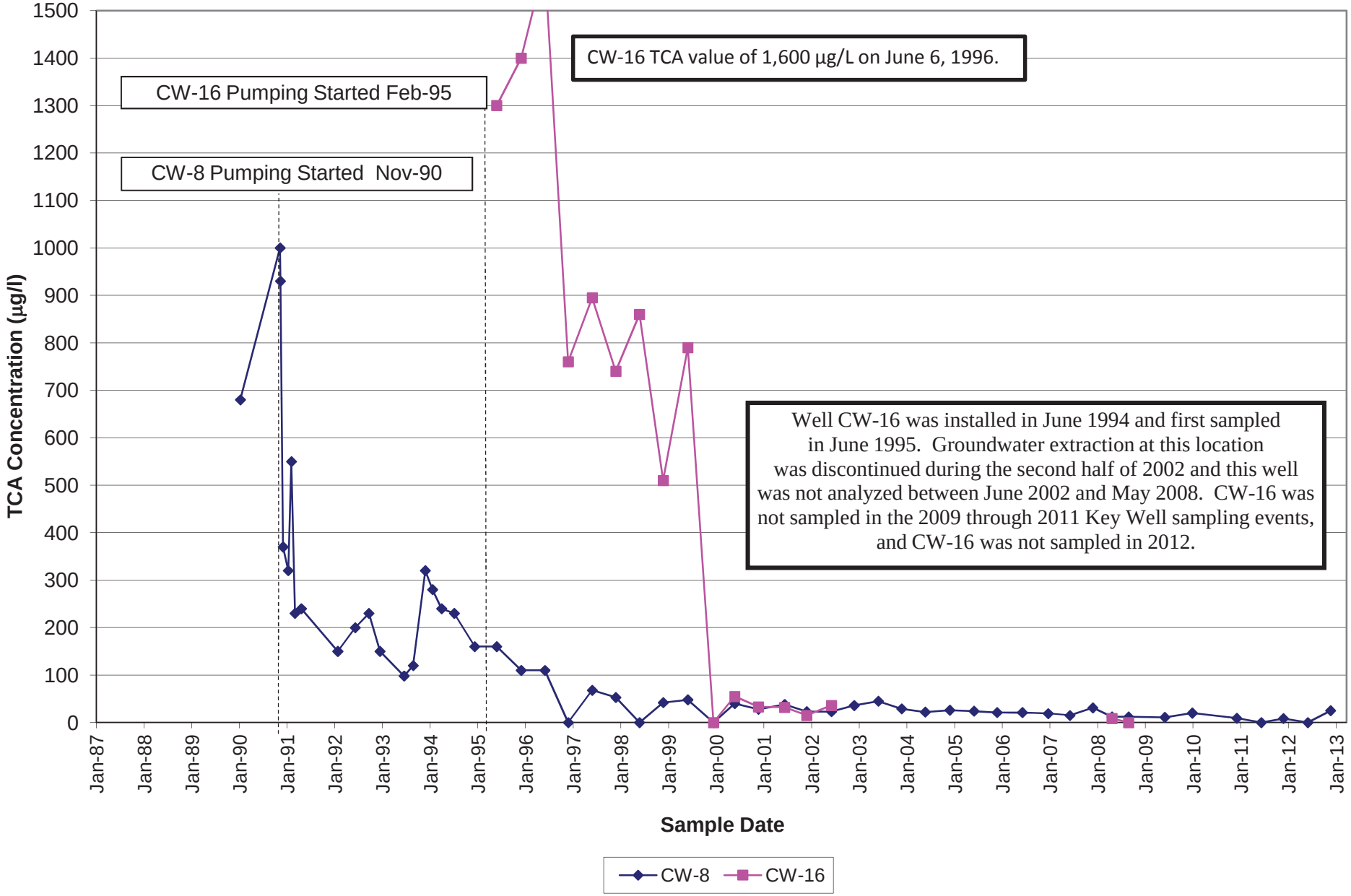


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Figure 6-2
TCE in TCA Tank Area Extraction Wells
Former York Naval Ordnance Plant
1425 Eden Road, York

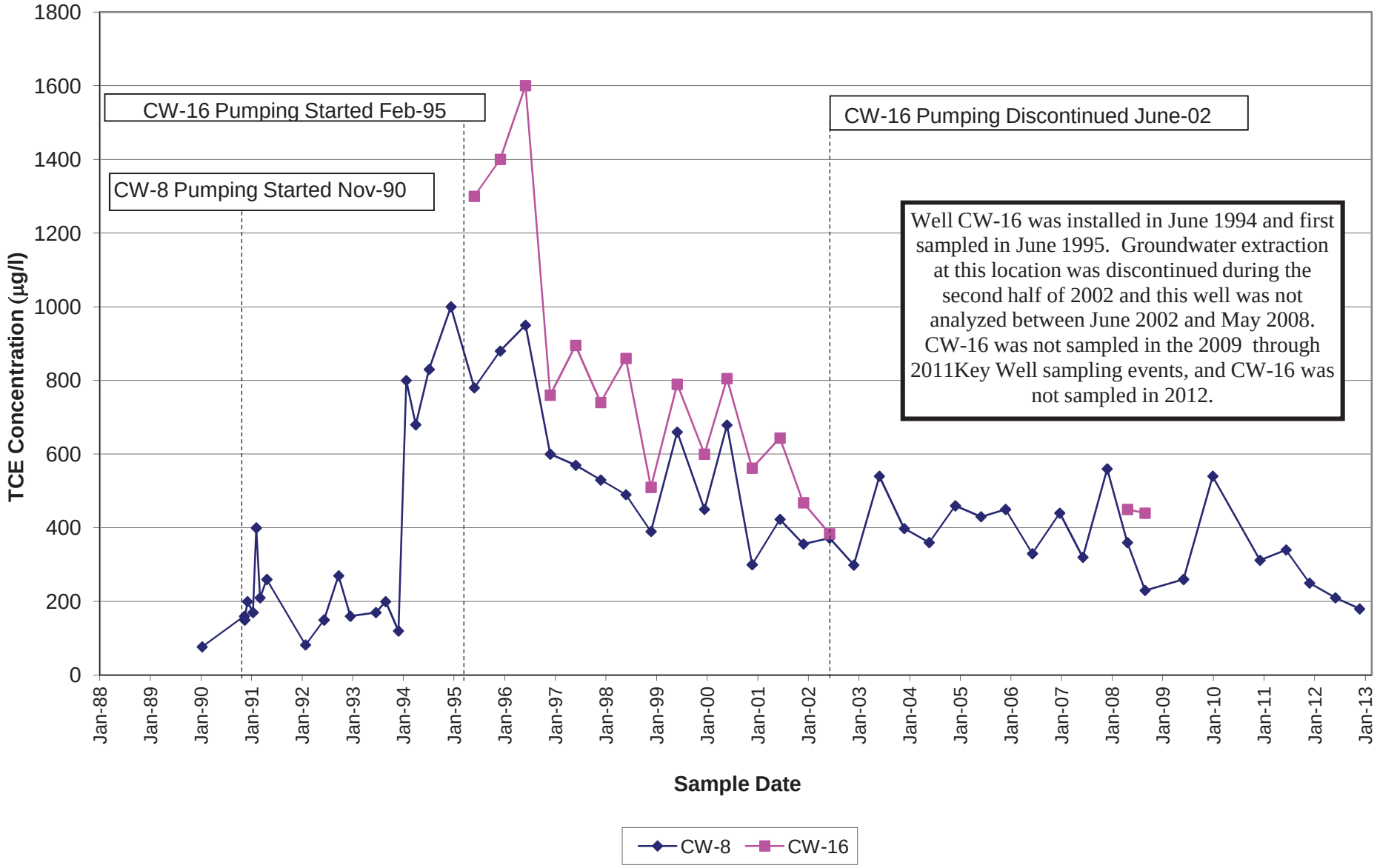

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Figure 6-3
Predominant VOC Concentrations - Extraction Well CW-8
Former York Naval Ordnance Plant
1425 Eden Road, York PA 17402

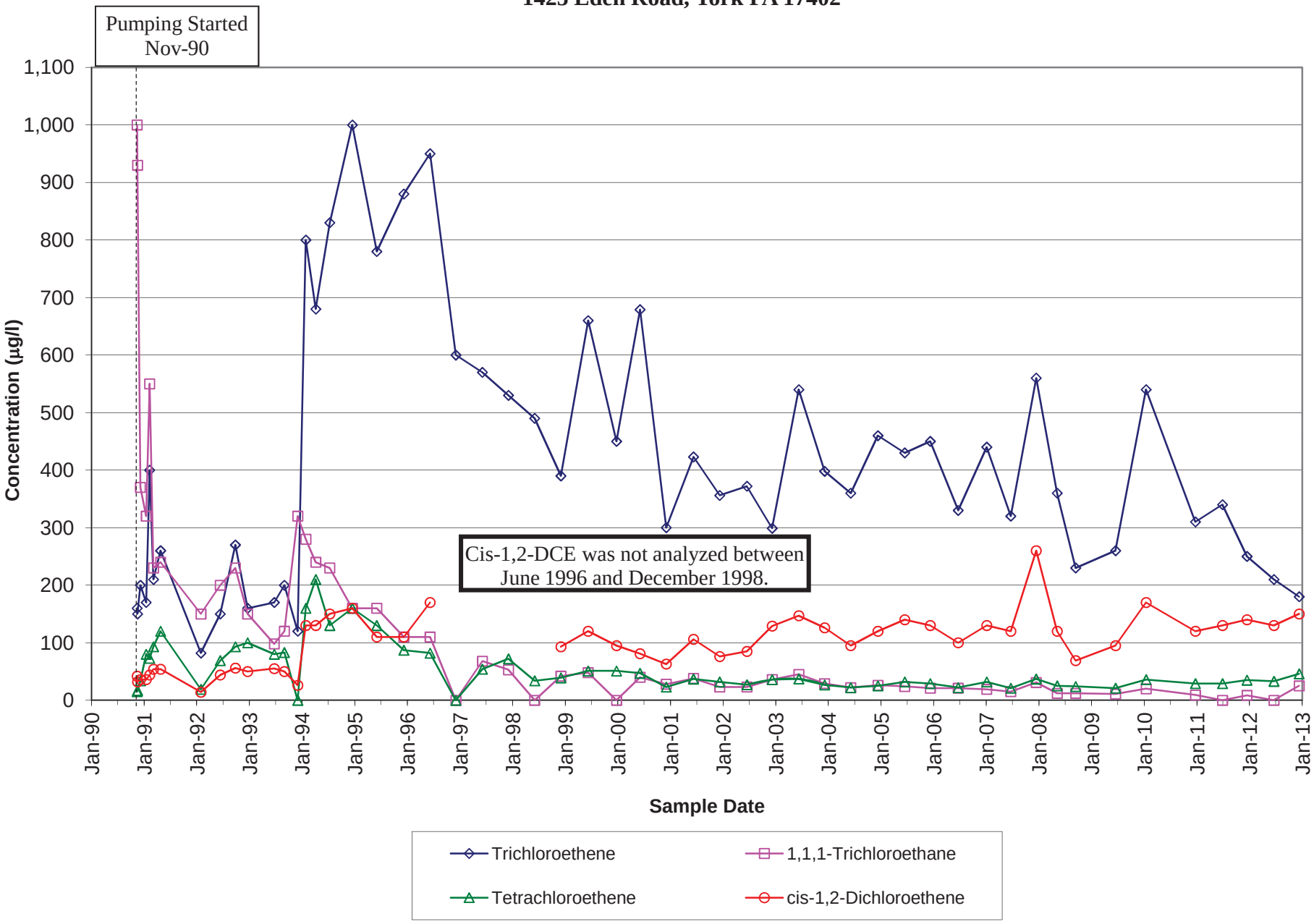

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Figure 7-1
TCE in WPL Extraction Wells
Former York Naval Ordnance Plant
1425 Eden Road, York PA 17402

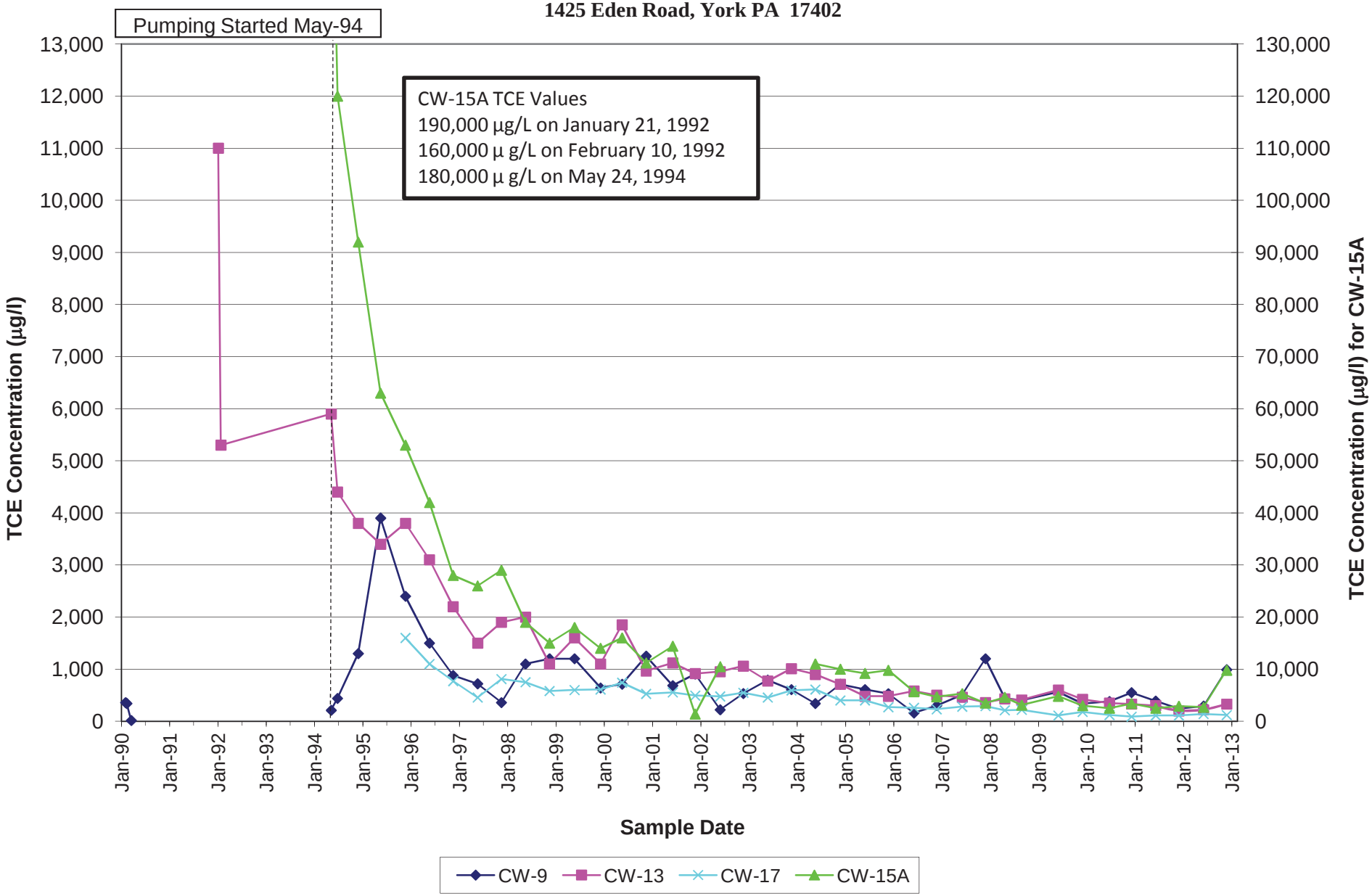

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Figure 7-2
Predominant VOC Concentrations - Extraction Well CW-9
Former York Naval Ordnance Plant
1425 Eden Road, York PA 17402

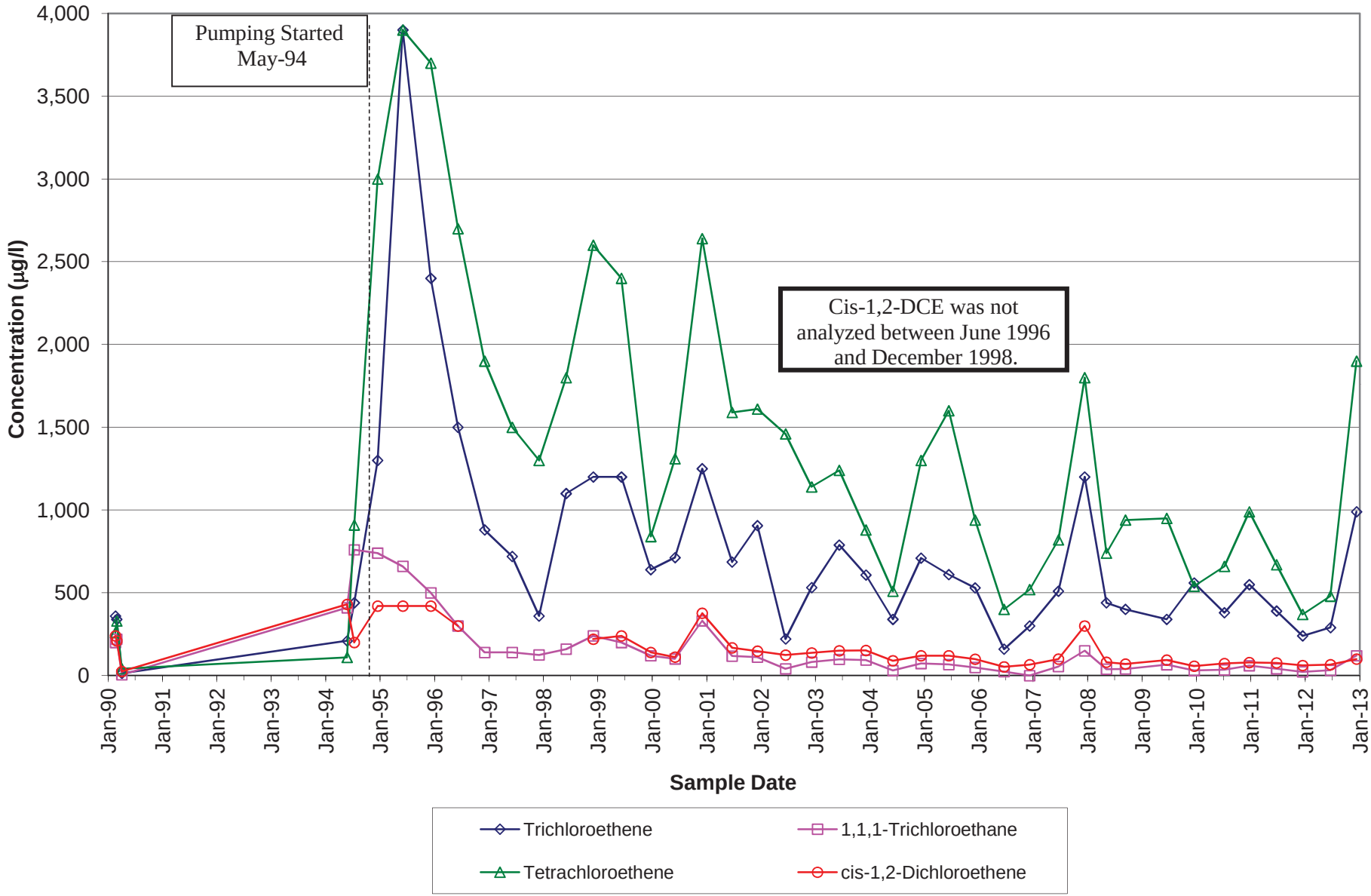

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Figure 7-3
Predominant VOC Concentrations - Extraction Well CW-13
Former York Naval Ordnance Plant
1425 Eden Road, York PA 17402

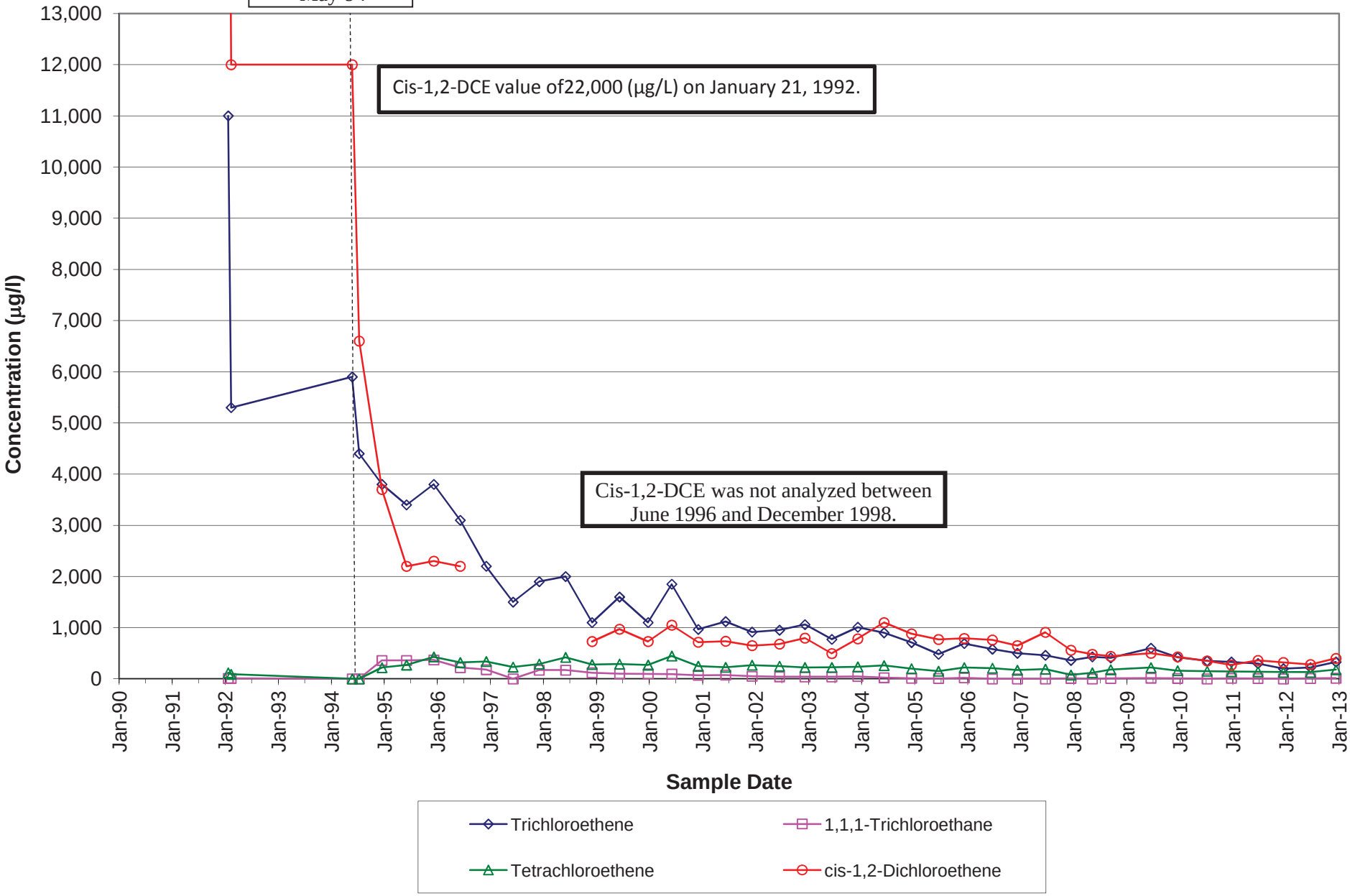

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Figure 7-4
Predominant VOC Concentrations - Extraction Well CW-15A
Former York Naval Ordnance Plant
1425 Eden Road, York PA 17402

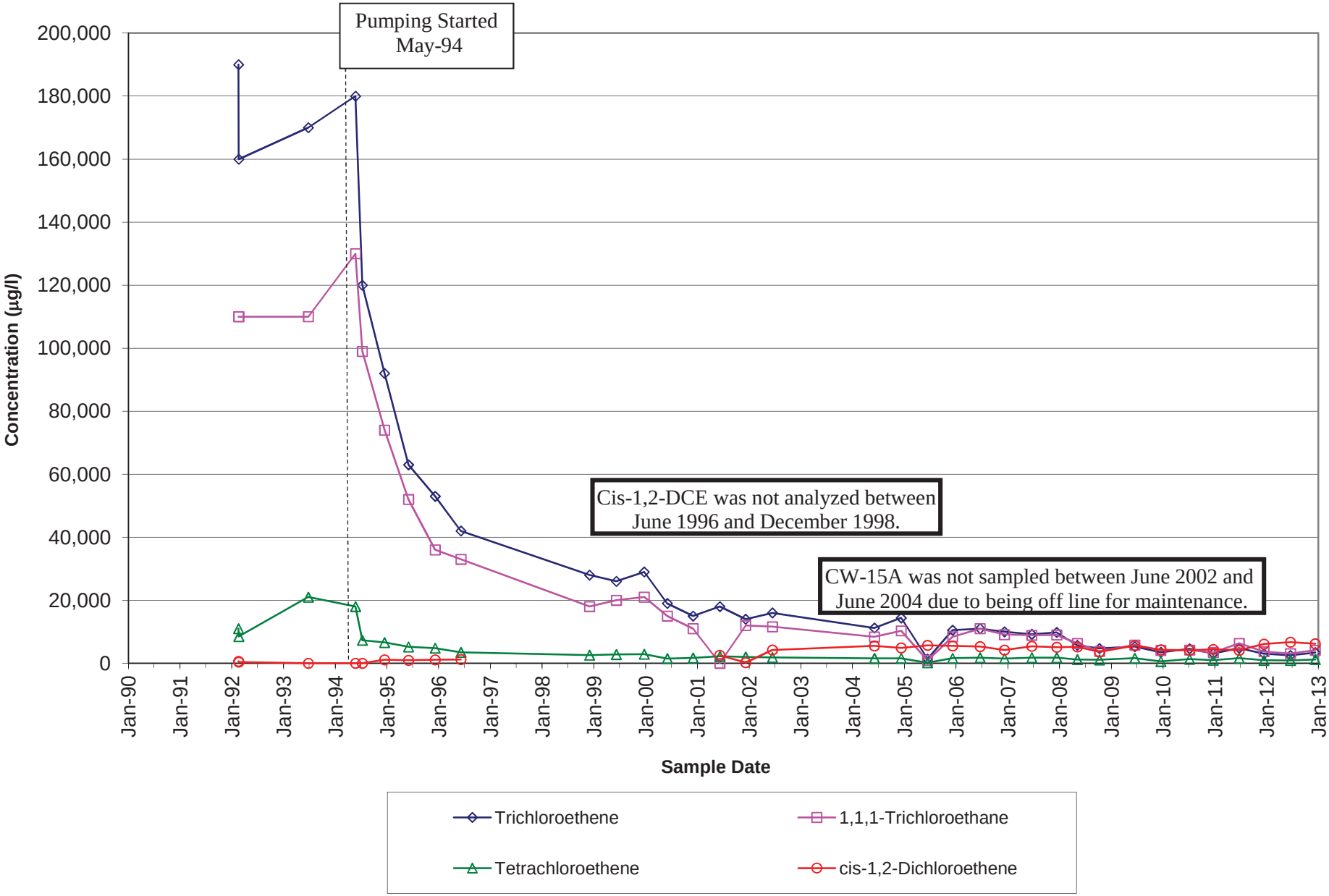

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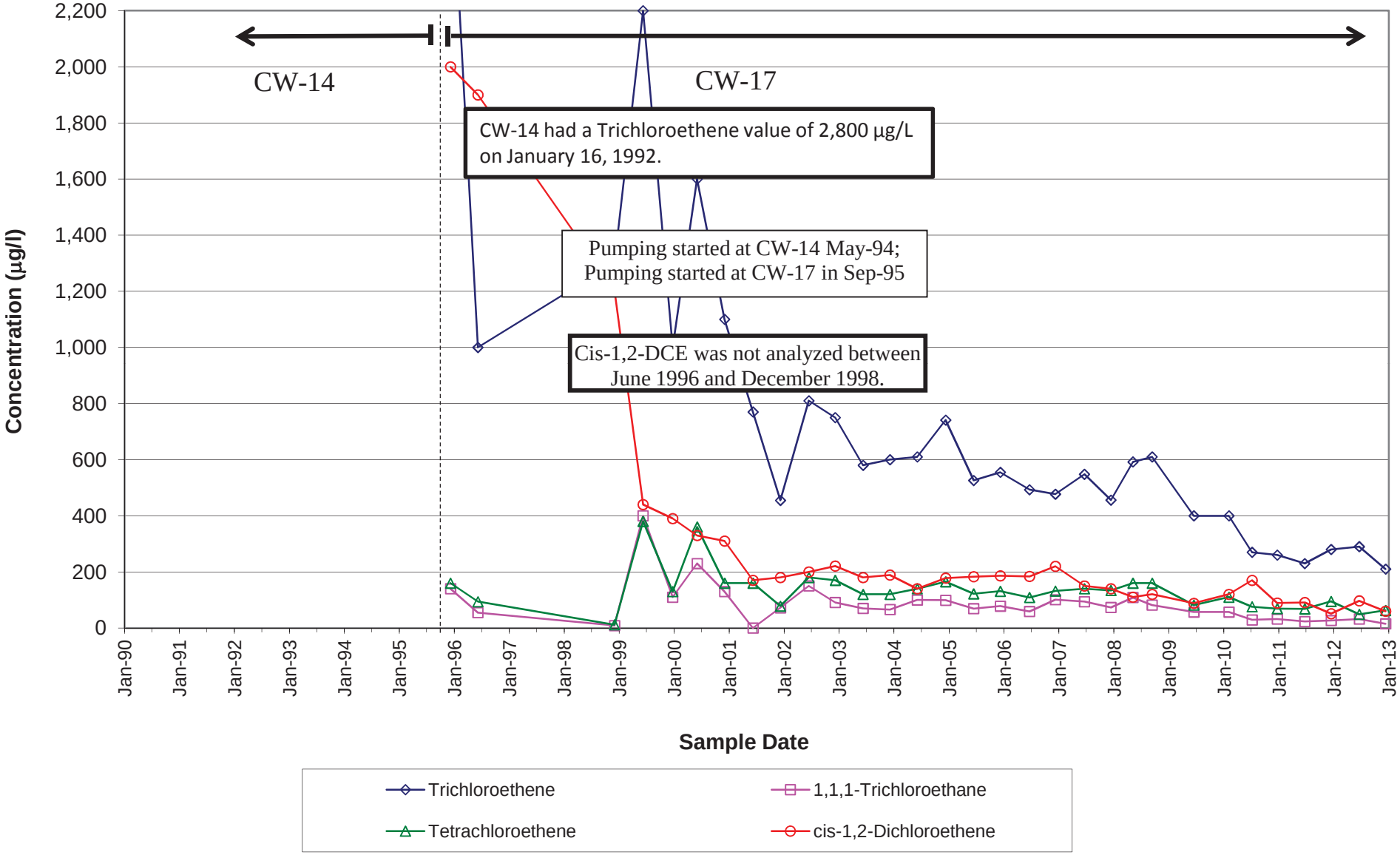
Figure 7-5
Predominant VOC Concentrations
Extraction Wells CW-14 and CW-17
Former York Naval Ordnance Plant
1425 Eden Road, York PA 17402



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TABLES

TABLE 3-1
MONTHLY PRECIPITATION COMPARISON
Former York Naval Ordnance Plant
1425 Eden Road, York PA 17402

Month	2012 Precipitation Amount (inches)	Normal Precipitation Amount (inches)
January	1.86	3.1
February	1.53	2.8
March	2.64	3.7
April	2.92	3.5
May	5.83	4.2
June	3.82	3.6
July	5.01	4.1
August	4.90	3.4
September	7.60	4.30
October	8.81	3.4
November	1.50	3.5
December	3.68	3.3
TOTALS:	50.09	42.90

Notes:

1. 2012 Precipitation data provided by Harley-Davidson at the plant in York, PA.
2. Normal precipitation data for York, PA from National Climatic Data Center. NOAA's 1981-2010 Climate Normals.

TABLE 3-2
ANNUAL HISTORICAL PRECIPITATION TOTALS
Former York Naval Ordnance Plant
1425 Eden Road, York PA 17402

Calendar Year	Annual Rainfall (inches)
1992	36.73
1993	51.33
1994	45.68
1995	50.51
1996	58.85
1997	33.60
1998	42.95
1999	38.43
2000	37.45
2001	27.93
2002	39.80
2003	48.61
2004	55.30
2005	40.62
2006	40.93
2007	37.52
2008	47.70
2009	47.37
2010	46.53
2011	68.56
2012	50.09

Notes:

1. Precipitation data for 1992 - 1997 from United States Geological Survey
2. Precipitation data for 1998 - 2002 from AccuWeather.com
3. Precipitation data for 2003 - 2012 from Harley-Davidson

TABLE 4-1
VOCs REMOVED FROM COLLECTED GROUNDWATER
JANUARY 1, 2012 - DECEMBER 31, 2012
Former York Naval Ordnance Plant
1425 Eden Road, York PA 17402

DATE	MONTHLY GROUNDWATER WITHDRAWAL (PTA Totalizer, gallons)	AVERAGE MONTHLY TOTAL VOCs (ppb)		ESTIMATED MONTHLY VOC REMOVAL (pounds)
Jan-12	14,811,391	1194		148
Feb-12	13,608,102	1194	*	136
Mar-12	13,751,686	1194	*	137
Apr-12	13,328,280	925		103
May-12	13,447,682	925	*	104
Jun-12	11,850,800	925	*	92
Jul-12	12,113,004	1219		123
Aug-12	10,168,276	1219	*	103
Sep-12	9,222,394	1219	*	94
Oct-12	10,511,746	1406		123
Nov-12	15,694,363	1406	*	184
Dec-12	15,116,932	1406	*	177
TOTAL	**153,624,656**	**NA**		**1,525**

ANNUAL TOTALS		
YEAR	GROUNDWATER WITHDRAWAL (gallons)	ESTIMATED VOC REMOVAL (pounds)
1990 (NOV & DEC)	12,954,886	92
1991	62,458,393	357
1992	66,081,120	322
1993	72,198,940	421
1994	88,387,251	3,905
1995	141,357,856	5,572
1996	152,168,899	3,631
1997	150,246,400	2,675
1998	157,461,800	2,795
1999	133,687,100	1,464
2000	152,839,477	1,785
2001	134,557,249	1,659
2002	121,290,897	1269
2003	153,097,508	1,599
2004	140,725,167	1,786
2005	134,503,508	1,550
2006	125,192,364	1,295
2007	149,331,940	1,734
2008	155,341,655	1,560
2009	161,171,721	1,584
2010	159,042,802	1,388
2011	154,368,351	1,196
2012	153,624,656	1,519
TOTAL	**2,932,089,940**	**41,159**

NOTES:
1. * - No sample collected this month; concentration is the most recent
2. NA - Not Applicable

TABLE 5-1
RECORD OF GROUNDWATER WITHDRAWALS
JANUARY 1, 2012 - DECEMBER 31, 2012
Former York Naval Ordnance Plant
1425 Eden Road, York PA 17402

MONTH	NPBA WELLS (gallons)										TCA WELL (gallons)		WPL WELLS (gallons)					Building 3 De-Watering System	Treated Drilling Water (gallons)	MONTHLY TOTAL
	CW-1	CW-1A	CW-2	CW-3	CW-4	CW-5	CW-6	CW-7	CW-7A	SUBTOTAL	CW-8	SUBTOTAL	CW-9	CW-13	CW-15A	CW-17	SUBTOTAL			
Jan-12	90,015	8,421	17,863	228,930	80,317	50,974	136,754	23,651	57,097	694,022	5,375,947	5,375,947	2,798,591	3,433,542	222,088	2,893,807	9,348,028	184,990	0	15,602,987
Feb-12	80,608	6,880	11,588	208,878	79,664	42,447	132,971	21,929	50,037	635,002	5,015,355	5,015,355	2,547,409	3,207,954	193,503	2,566,890	8,515,756	96,360	0	14,262,473
Mar-12	79,533	6,534	8,464	212,291	81,176	33,583	129,921	23,585	46,240	621,327	5,084,294	5,084,294	2,529,869	3,262,336	169,843	2,556,402	8,518,450	89,020	0	14,313,091
Apr-12	75,136	4,662	14,692	209,586	77,253	26,610	129,490	27,274	43,240	607,943	4,645,037	4,645,037	2,579,772	3,212,580	163,646	2,474,427	8,430,425	73,150	0	13,756,555
May-12	74,791	4,676	17,242	194,720	76,465	25,759	102,182	28,099	40,305	564,239	4,329,917	4,329,917	2,671,731	3,262,211	134,051	2,635,874	8,703,867	104,700	0	13,702,723
Jun-12	77,708	5,510	15,551	151,135	70,525	24,816	116,237	29,006	32,896	523,384	4,283,434	4,283,434	2,521,988	3,112,889	84,285	1,275,943	6,995,105	67,680	70,550	11,940,153
Jul-12	70,935	3,725	14,072	109,266	65,044	16,018	111,699	29,761	28,885	449,405	4,298,177	4,298,177	2,493,261	3,124,499	73,485	1,854,592	7,545,837	730	134,440	12,428,589
Aug-12	74,186	2,549	9,874	117,790	68,707	18,426	118,167	19,042	31,652	460,393	245,375	245,375	2,692,529	3,325,059	127,441	3,068,277	9,213,306	0	87,020	10,006,094
Sep-12	66,456	3,147	12,080	109,051	64,278	19,625	103,806	32,348	29,776	440,567	0	0	2,482,093	3,019,277	113,706	2,938,238	8,553,314	20	108,620	9,102,521
Oct-12	77,858	5,240	12,112	119,294	70,676	29,258	123,578	34,144	28,882	501,042	90,559	90,559	2,796,261	3,293,187	133,642	3,327,329	9,550,419	157,310	59,350	10,358,680
Nov-12	76,990	7,784	16,091	120,748	71,853	48,637	124,387	34,429	39,225	540,144	5,227,349	5,227,349	3,238,865	3,340,684	134,901	3,540,444	10,254,894	74,130	42,360	16,138,877
Dec-12	81,527	4,372	13,998	125,037	69,443	31,732	120,991	38,470	31,222	516,792	5,523,331	5,523,331	3,106,317	3,346,095	116,414	2,914,892	9,483,718	157,840	29,220	15,710,901
TOTALS	925,743	63,500	163,627	1,906,726	875,401	367,885	1,450,183	341,738	459,457	6,554,260	44,118,775	44,118,775	32,458,686	38,940,313	1,667,005	32,047,115	105,113,119	1,005,930	531,560	157,323,644

VALUES ARE IN GALLONS FOR EACH EXTRACTION WELL

Note: Monthly groundwater withdrawal value from Table 4-1 differs slightly from the monthly total in the last column above. The value in Table 4-1 is taken directly from the PTA totalizer, while the value in the last column of this table is the sum of the individual well totalizers.

TABLE 5-2
GROUNDWATER EXTRACTION WELL PUMPING WATER LEVEL ELEVATIONS
Former York Naval Ordnance Plant
1425 Eden Road, York PA 17402

Extraction System Location	Well No.	Reference Elevation (ft AMSL)	Range (ft AMSL)		Groundwater Elev. (ft AMSL)											
			Pump On (High)	Pump Off (Low)	1/20/2012	2/20/2012	3/25/2012	4/20/2012	5/24/2012	6/26/2012	7/27/2012	8/29/2012	9/28/2012	10/17/2012	11/14/2012	12/24/2012
NPBA	CW-1	570.07	495.57	492.57	490.83	493.7	494.49	493.74	491.69	493.05	493.41	493.65	493.74	493.82	492.04	495.2
	CW-1A	568.28	508.78	505.78	507.06	506.56	506.33	509.04	508.25	506.53	507.36	506.45	506.27	508.53	508.49	508.34
	CW-2	556.95	483.45	480.45	482.8	482.17	481.17	481	481.12	481.02	480.7	483.70	483.8	482.19	482.22	481.14
	CW-3	518.66	440.66	437.66	438.45	438.14	440.84	438.16	438.84	443.20	437.63	438.75	438.45	438.51	437.9	437.92
	CW-4	541.55	458.05	455.05	455.61	457.38	455.13	457.58	458.70	457.99	455.54	455.90	455.54	457.23	455.28	455.52
	CW-5	470.34	424.84	421.84	422.59	427.43	424.69	423.51	423.11	425.33	424.93	422.41	427.42	422.33	421.85	422.02
	CW-6	484.67	415.57	412.57	413.88	413.62	412.31	413.77	418.90	414.47	413.91	413.67	413.84	413.5	414.44	423.75
	CW-7	573.78	493.28	490.28	489.35	489.95	491.13	491.09	493.97	491.09	492.07	OL	492.36	491.59	493.26	492.53
	CW-7A	573.91	523.41	520.41	522.08	522.2	522.75	521.26	521.26	523.86	524.75	522.79	520.96	522.96	522.23	522.91
TCA	CW-8	362.70	341.34	337.34	336.45	335.81	336.63	336.49	338.69	337.47	339.35	OL	OL	OL	341.61	340.07
WPL	CW-9	356.82	333.79	328.79	330.57	332.44	329.83	328.59	333.37	331.81	332.56	332.59	NM	331.43	NM	331.89
	CW-13	358.85	327.60	322.60	323.94	323.4	323.1	323.30	325.56	328.73	325.55	325.37	326.14	325.68	326.06	324.89
	CW-15A	361.40	333.50	328.50	328.25	327.55	332.15	329.02	331.75	335.33	332.04	329.32	333.6	328.39	329.75	329.99
	CW-17	358.70	336.37	331.47	333.85	333.75	333.11	333.84	333.89	NM	334.57	334.29	334.45	333.7	334.25	334.73

Notes:
1. ft AMSL - feet above mean sea level
2. NM - Not Measured
3. OL - Off Line

APPENDIX A

Data Tables

TABLE A-1

SITE-WIDE GROUNDWATER LEVELS AND ELEVATION DATA

FORMER YORK NAVAL ORDNANCE PLANT

1425 Eden Road, York PA 17402

Monitoring Location	Date	Time	Reference Elevation (ft. AMSL)	Depth (ft.)	Water Level (ft. AMSL)
CODORUS 1	6/13/2012	9:28	379.69	39.16	340.53
CODORUS 2	6/13/2012	9:07	341.55	1.50	339.71
Cole B	6/13/2012	12:42	363.75	12.23	351.52
Cole D	6/13/2012	13:05	370.15	12.19	357.96
Cole E deep	6/13/2012	13:03	369.17	15.39	353.78
Cole E shallow	6/13/2012	13:02	369.54	15.85	353.69
Cole F	6/13/2012	13:00	370.39	17.70	352.69
Flush - Cole	6/13/2012	12:39	361.92	10.66	351.26
MW-4 (Cole)	6/13/2012	12:56	367.21	15.39	351.82
CW-1*	6/13/2012	10:24	570.07	74.30	495.77
CW-1A*	6/13/2012	10:26	568.28	58.25	510.03
CW-2*	6/13/2012	10:35	556.95	69.05	487.90
CW-3*	6/13/2012	10:45	518.66	79.00	439.66
CW-4*	6/13/2012	10:38	541.55	86.6	454.95
CW-5*	6/13/2012	11:03	470.34	41.19	429.15
CW-6*	6/13/2012	10:59	484.67	70.80	413.87
CW-7*	6/13/2012	10:16	573.78	83.95	489.83
CW-7A*	6/13/2012	10:18	573.91	49.57	524.34
CW-8*	6/13/2012	10:53	362.70	23.53	339.17
CW-9*	6/13/2012	10:45	356.82	24.29	332.53
CW-13*	6/13/2012	11:00	358.85	31.52	327.33
CW-14	6/13/2012	11:25	358.92	19.56	339.36
CW-15	6/13/2012	9:44	361.48	16.55	344.93
CW-15A*	6/13/2012	9:46	361.40	21.82	339.58
CW-16	6/13/2012	11:04	365.11	21.02	344.09
CW-17*	6/13/2012	11:21	358.70	19.10	339.60
CW-18	6/13/2012	11:49	368.98	22.41	346.57
CW-19	6/13/2012	12:00	384.94	D	D
CW-20	6/13/2012	10:30	361.49	22.52	338.97
Kinsley Well (Quarry)	6/13/2012	13:28	465.83	D	D
MW-1	6/13/2012	12:22	380.73	35.50	345.23
MW-2	6/13/2012	9:40	508.88	63.01	445.87
MW-3	6/13/2012	10:35	541.10	NM	NM
MW-5	6/13/2012	13:30	369.71	22.15	347.56
MW-6	6/13/2012	11:36	359.62	16.91	342.71
MW-7	6/13/2012	11:08	359.48	22.24	337.24
MW-8	6/13/2012	10:49	358.09	18.98	339.11
MW-9	6/13/2012	10:32	558.78	46.39	512.39
MW-10	6/13/2012	10:21	567.80	51.90	515.90
MW-11	6/13/2012	10:30	563.08	24.94	538.14

Note:

A= Location was artesian.
D= Location was dry.
*= Active extraction well.
NM= Not measured.
NA = Not available.

TABLE A-1

SITE-WIDE GROUNDWATER LEVELS AND ELEVATION DATA

FORMER YORK NAVAL ORDNANCE PLANT

1425 Eden Road, York PA 17402

Monitoring Location	Date	Time	Reference Elevation (ft. AMSL)	Depth (ft.)	Water Level (ft. AMSL)
MW-12	6/13/2012	10:41	535.93	36.46	499.47
MW-14	6/13/2012	9:48	519.54	30.78	488.76
MW-15	6/13/2012	9:46	523.95	60.14	463.81
MW-16D	6/13/2012	10:46	516.51	7.73	508.78
MW-16S	6/13/2012	10:48	516.60	35.95	480.65
MW-17	6/13/2012	9:11	456.86	11.99	444.87
MW-18D	6/13/2012	11:08	464.19	16.50	447.69
MW-18S	6/13/2012	11:06	464.12	16.26	447.86
MW-19	6/13/2012	8:52	427.36	22.22	405.14
MW-20D	6/13/2012	10:13	573.85	37.38	536.47
MW-20M	6/13/2012	10:15	574.19	45.51	528.68
MW-20S	6/13/2012	10:17	574.05	45.59	528.46
MW-22	6/13/2012	9:23	447.57	57.04	390.53
MW-26	6/13/2012	8:32	379.44	23.26	356.18
MW-27	6/13/2012	10:20	361.29	15.65	345.64
MW-28	6/13/2012	10:57	362.91	18.90	344.01
MW-29	6/13/2012	16:50	364.77	12.23	352.54
MW-30	6/13/2012	10:16	362.26	13.70	348.56
MW-31D	6/13/2012	13:37	369.30	15.60	353.70
MW-31S	6/13/2012	13:35	369.28	15.20	354.08
MW-32D	6/13/2012	10:54	362.57	18.51	344.06
MW-32S	6/13/2012	10:55	362.44	18.48	343.96
MW-33	6/13/2012	11:33	363.88	19.62	344.26
MW-34D	6/13/2012	10:45	361.00	17.01	343.99
MW-34S	6/13/2012	10:43	361.00	17.04	343.96
MW-35D	6/13/2012	10:41	360.60	NM	NM
MW-35S	6/13/2012	10:40	360.49	16.46	344.03
MW-36D	6/13/2012	13:26	370.96	23.63	347.33
MW-36S	6/13/2012	13:28	370.95	23.09	347.86
MW-37D	6/13/2012	10:25	359.11	20.25	338.86
MW-37S	6/13/2012	10:24	359.13	18.96	340.17
MW-38D	6/13/2012	10:51	358.62	20.69	337.93
MW-39D	6/13/2012	11:29	360.21	20.07	340.14
MW-39S	6/13/2012	11:30	360.14	20.91	339.23
MW-40D	6/13/2012	12:28	374.65	28.11	346.54
MW-40S	6/13/2012	12:27	374.69	23.75	350.94
MW-43D	6/13/2012	13:10	380.08	31.74	348.34
MW-43S	6/13/2012	13:12	379.76	31.41	348.35
MW-45	6/13/2012	10:09	359.91	15.66	344.25
MW-46	6/13/2012	10:11	359.19	15.44	343.75

Note:

A= Location was artesian.
D= Location was dry.
*= Active extraction well.
NM= Not measured.
NA= Not available.

TABLE A-1

SITE-WIDE GROUNDWATER LEVELS AND ELEVATION DATA

FORMER YORK NAVAL ORDNANCE PLANT

1425 Eden Road, York PA 17402

Monitoring Location	Date	Time	Reference Elevation (ft. AMSL)	Depth (ft.)	Water Level (ft. AMSL)
MW-47	6/13/2012	13:15	360.57	17.98	342.59
MW-49D	6/13/2012	9:50	361.44	16.32	345.12
MW-49S	6/13/2012	9:48	361.45	16.37	345.08
MW-50D	6/13/2012	11:18	360.41	18.72	341.69
MW-50S	6/13/2012	11:16	360.40	18.42	341.98
MW-51D	6/13/2012	11:13	360.43	22.08	338.35
MW-51S	6/13/2012	11:12	360.19	20.05	340.14
MW-54	6/13/2012	11:10	365.27	21.19	344.08
MW-55	6/13/2012	11:20	365.17	19.20	345.97
MW-56	6/13/2012	12:00	371.83	NM	NM
MW-57	6/13/2012	11:43	364.54	18.70	345.84
MW-64D	6/13/2012	9:28	416.43	58.57	357.86
MW-64S	6/13/2012	9:26	416.34	32.60	383.74
MW-65D	6/13/2012	10:08	546.80	48.31	498.49
MW-65S	6/13/2012	10:06	546.82	47.10	499.72
MW-66D	6/13/2012	9:56	506.92	37.58	469.34
MW-66S	6/13/2012	9:58	506.73	36.72	470.01
MW-67D	6/13/2012	9:19	446.26	1.5A	444.76A
MW-67S	6/13/2012	9:17	446.26	9.33	436.93
MW-68	6/13/2012	9:13	458.06	5.53	452.53
MW-69	6/13/2012	8:58	411.90	7.56	404.34
MW-70D	6/13/2012	8:47	416.31	21.72	394.59
MW-70S	6/13/2012	8:49	416.21	21.66	394.55
MW-74D	6/13/2012	11:32	359.79	18.71	341.08
MW-74S	6/13/2012	11:31	359.85	19.01	340.84
MW-75D	6/13/2012	10:28	359.85	20.95	338.9
MW-75S	6/13/2012	10:27	359.03	19.72	339.31
MW-77	6/13/2012	8:13	379.48	22.95	356.53
MW-78	6/13/2012	7:40	375.32	20.68	354.64
MW-79	6/13/2012	12:29	375.84	20.58	355.26
MW-80	6/13/2012	7:27	370.29	23.73	346.56
MW-81D	6/13/2012	10:10	359.89	14.60	345.29
MW-81S	6/13/2012	10:31	360.12	15.01	345.11
MW-82	6/13/2012	13:33	382.18	34.87	347.31
MW-83	6/13/2012	12:50	363.69	7.80	355.89
MW-84	6/13/2012	7:49	376.53	22.39	354.14
MW-85	6/13/2012	12:31	371.54	14.25	357.29
MW-86D	6/13/2012	9:02	406.56	8.28	398.28
MW-86S	6/13/2012	9:04	406.50	10.00	396.50
MW-87	6/13/2012	7:28	370.64	23.98	346.66

Note:

A= Location was artesian.
D= Location was dry.
*= Active extraction well.
NM= Not measured.
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TABLE A-1

SITE-WIDE GROUNDWATER LEVELS AND ELEVATION DATA

FORMER YORK NAVAL ORDNANCE PLANT

1425 Eden Road, York PA 17402

Monitoring Location	Date	Time	Reference Elevation (ft. AMSL)	Depth (ft.)	Water Level (ft. AMSL)
MW-88	6/13/2012	12:10	367.93	22.81	345.12
MW-91	6/13/2012	9:42	501.18	54.43	446.75
MW-92	6/13/2012	9:32	476.87	81.61	395.26
MW-93D	6/13/2012	10:34	360.14	19.79	340.35
MW-93S	6/13/2012	10:33	360.76	20.12	340.64
MW-94	6/13/2012	12:45	365.03	8.26	356.77
MW-95	6/13/2012	12:20	358.72	NM	NM
MW-96D	6/13/2012	12:12	361.00	20.42	340.58
MW-96S	6/13/2012	12:11	361.21	20.67	340.54
MW-97	6/13/2012	10:56	357.39	21.16	336.23
MW-98D	6/13/2012	9:11	361.41	20.02	341.39
MW-98I	6/13/2012	9:14	360.78	20.67	340.11
MW-98S	6/13/2012	9:12	360.77	20.31	340.46
MW-99D	6/13/2012	9:03	359.91	18.84	341.07
MW-99S	6/13/2012	9:05	360.37	19.33	341.04
MW-100D	6/13/2012	8:59	362.14	20.90	341.24
MW-100I	6/13/2012	8:58	361.81	20.61	341.20
MW-100S	6/13/2012	8:57	362.28	21.17	341.11
MW-101D	6/13/2012	8:52	356.22	15.82	340.40
MW-101S	6/13/2012	8:53	356.54	16.28	340.26
MW-102D	6/13/2012	8:42	405.23	10.99	394.24
MW-102S	6/13/2012	8:44	405.41	36.30	369.11
MW-103D	6/13/2012	8:39	401.61	17.90	383.71
MW-103S	6/13/2012	8:37	402.00	15.95	386.05
MW-104	6/13/2012	8:54	428.72	28.31	400.41
MW-105	6/13/2012	11:51	362.05	21.36	340.69
MW-106	6/13/2012	10:54	360.15	23.64	336.51
MW-107	6/13/2012	10:23	363.56	22.87	340.69
MW-108D	6/13/2012	11:36	426.35	17.23	409.12
MW-108S	6/13/2012	11:38	425.46	25.81	399.65
MW-109D	6/13/2012	11:47	389.12	33.50	355.62
MW-109S	6/13/2012	11:49	388.39	33.85	354.54
MW-110	6/13/2012	11:44	378.36	23.92	354.44
MW-111	6/13/2012	11:23	433.63	17.25	416.38
MW-112	6/13/2012	11:15	393.52	47.38	346.14
MW-113	6/13/2012	7:25	371.02	24.02	347.00
MW-114	6/13/2012	10:23	360.71	15.66	345.05
MW-115	6/13/2012	12:34	373.30	18.97	354.33
MW-116	6/13/2012	10:12	364.59	17.26	347.33
MW-117	6/13/2012	12:58	365.00	8.53	356.47

Note:

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TABLE A-1

SITE-WIDE GROUNDWATER LEVELS AND ELEVATION DATA

FORMER YORK NAVAL ORDNANCE PLANT

1425 Eden Road, York PA 17402

Monitoring Location	Date	Time	Reference Elevation (ft. AMSL)	Depth (ft.)	Water Level (ft. AMSL)
MW-118	6/13/2012	8:28	377.44	7.60	369.84
MW-119	6/13/2012	8:19	377.03	15.19	361.84
MW-120	6/13/2012	8:17	377.63	8.61	369.02
MW-121	6/13/2012	8:15	376.31	15.24	361.07
Ru-MW-1	6/13/2012	11:51	389.69	33.70	355.99
Ru-MW-2	6/13/2012	11:53	391.50	36.40	355.10
Ru-MW-3	6/13/2012	11:55	395.86	40.77	355.09
Ru-MW-4	6/13/2012	11:57	394.17	39.06	355.11
Ru-MW-5	6/13/2012	12:08	378.80	28.25	350.55
RU-MW-6	6/13/2012	12:06	383.28	23.33	359.95
Ru-MW-7	6/13/2012	12:10	NA	NM	NA
Ru-MW-8	6/13/2012	12:11	NA	NM	NA
RW-2	6/13/2012	12:00	548.27	NM	NM
RW-5	6/13/2012	12:53	375.54	30.39	345.15
SOFTAIL LIFT STATION	6/13/2012	11:28	396.62	27.56	369.06
WPL-SS-7	6/13/2012	11:04	357.78	22.02	335.76
WPL-SS-8	6/13/2012	11:26	364.40	22.70	341.7
CODORUS 1	12/7/2012	9:41	379.69	40.31	339.38
CODORUS 2	12/7/2012	9:16	341.55	D	D
Cole B	12/7/2012	12:25	363.75	12.46	351.29
Cole D	12/7/2012	12:35	370.15	16.32	353.83
Cole E deep	12/7/2012	12:33	369.17	16.81	352.36
Cole E shallow	12/7/2012	12:32	369.54	17.13	352.41
Cole F	12/7/2012	12:30	370.39	18.17	352.22
Flush - Cole	12/7/2012	12:22	361.92	10.94	350.98
MW-4 (Cole)	12/7/2012	12:26	367.21	15.75	351.46
CW-1*	12/7/2012	11:42	570.07	76.87	493.2
CW-1A*	12/7/2012	12:47	568.28	63.15	505.13
CW-2*	12/7/2012	11:52	556.95	77.00	479.95
CW-3*	12/7/2012	12:02	518.66	83.96	434.70
CW-4*	12/7/2012	11:59	541.55	86.62	454.93
CW-5*	12/7/2012	12:20	470.34	30.36	439.98
CW-6*	12/7/2012	12:18	484.67	75.12	409.55
CW-7*	12/7/2012	11:33	573.78	87.40	486.38
CW-7A*	12/7/2012	11:34	573.91	48.64	525.27
CW-8*	12/7/2012	7:21	362.70	23.54	339.16
CW-9*	12/7/2012	4:13	356.82	25.20	331.62
CW-13*	12/7/2012	4:03	358.85	34.61	324.24
CW-14	12/7/2012	3:47	358.92	24.83	334.09
CW-15	12/7/2012	8:09	361.48	20.53	340.95

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TABLE A-1

SITE-WIDE GROUNDWATER LEVELS AND ELEVATION DATA

FORMER YORK NAVAL ORDNANCE PLANT

1425 Eden Road, York PA 17402

Monitoring Location	Date	Time	Reference Elevation (ft. AMSL)	Depth (ft.)	Water Level (ft. AMSL)
CW-15A*	12/7/2012	8:13	361.40	35.64	325.76
CW-16	12/7/2012	8:20	365.11	22.44	342.67
CW-17*	12/7/2012	3:49	358.70	24.82	333.88
CW-18	12/7/2012	8:53	368.98	23.98	345.00
CW-19	12/7/2012	16:14	384.94	D	D
CW-20	12/7/2012	4:55	361.49	23.08	338.41
Kinsley Well (Quarry)	12/7/2012	13:37	465.83	D	D
MW-1	12/7/2012	13:00	380.73	36.45	344.28
MW-2	12/7/2012	10:53	508.88	63.95	444.93
MW-3	12/7/2012	12:12	541.10	63.94	477.16
MW-5	12/7/2012	7:00	369.71	24.22	345.49
MW-6	12/7/2012	3:45	359.62	19.84	339.78
MW-7	12/7/2012	4:23	359.48	26.46	333.02
MW-8	12/7/2012	4:15	358.09	19.86	338.23
MW-9	12/7/2012	11:50	558.78	46.53	512.25
MW-10	12/7/2012	11:38	567.80	51.76	516.04
MW-11	12/7/2012	11:48	563.08	26.87	536.21
MW-12	12/7/2012	11:55	535.93	40.58	495.35
MW-14	12/7/2012	11:05	519.54	31.71	487.83
MW-15	12/7/2012	11:00	523.95	61.02	462.93
MW-16D	12/7/2012	12:05	516.51	7.02	509.49
MW-16S	12/7/2012	12:04	516.60	38.03	478.57
MW-17	12/7/2012	10:24	456.86	12.47	444.39
MW-18D	12/7/2012	12:23	464.19	16.21	447.98
MW-18S	12/7/2012	12:22	464.12	16.01	448.11
MW-19	12/7/2012	10:08	427.36	22.79	404.57
MW-20D	12/7/2012	11:30	573.85	37.02	536.83
MW-20M	12/7/2012	11:31	574.19	45.20	528.99
MW-20S	12/7/2012	11:32	574.05	45.66	528.39
MW-22	12/7/2012	10:53	447.57	58.13	389.44
MW-26	12/7/2012	9:06	379.44	25.60	353.84
MW-27	12/7/2012	7:50	361.29	16.72	344.57
MW-28	12/7/2012	7:33	362.91	20.28	342.63
MW-29	12/7/2012	4:45	364.77	13.64	351.13
MW-30	12/7/2012	6:50	362.26	16.74	345.52
MW-31D	12/7/2012	7:12	369.30	17.13	352.17
MW-31S	12/7/2012	7:10	369.28	16.89	352.39
MW-32D	12/7/2012	7:22	362.57	19.53	343.04
MW-32S	12/7/2012	7:23	362.44	19.83	342.61
MW-33	12/7/2012	7:53	363.88	20.97	342.91

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TABLE A-1

SITE-WIDE GROUNDWATER LEVELS AND ELEVATION DATA

FORMER YORK NAVAL ORDNANCE PLANT

1425 Eden Road, York PA 17402

Monitoring Location	Date	Time	Reference Elevation (ft. AMSL)	Depth (ft.)	Water Level (ft. AMSL)
MW-34D	12/7/2012	7:48	361.00	18.35	342.65
MW-34S	12/7/2012	7:47	361.00	18.41	342.59
MW-35D	12/7/2012	7:38	360.60	17.95	342.65
MW-35S	12/7/2012	7:41	360.49	17.57	342.92
MW-36D	12/7/2012	7:07	370.96	25.80	345.16
MW-36S	12/7/2012	7:05	370.95	25.43	345.52
MW-37D	12/7/2012	4:57	359.11	20.72	338.39
MW-37S	12/7/2012	4:59	359.13	20.53	338.60
MW-38D	12/7/2012	4:10	358.62	21.99	336.63
MW-39D	12/7/2012	3:56	360.21	22.15	338.06
MW-39S	12/7/2012	3:55	360.14	22.64	337.50
MW-40D	12/7/2012	13:11	374.65	30.36	344.29
MW-40S	12/7/2012	13:10	374.69	30.33	344.36
MW-43D	12/7/2012	12:47	380.08	32.98	347.10
MW-43S	12/7/2012	12:48	379.76	31.99	347.77
MW-45	12/7/2012	11:56	359.91	17.03	342.88
MW-46	12/7/2012	12:00	359.19	16.83	342.36
MW-47	12/7/2012	8:18	360.57	20.28	340.29
MW-49D	12/7/2012	8:12	361.44	17.26	344.18
MW-49S	12/7/2012	8:10	361.45	17.22	344.23
MW-50D	12/7/2012	4:30	360.41	21.20	339.21
MW-50S	12/7/2012	4:28	360.40	21.02	339.38
MW-51D	12/7/2012	4:36	360.43	22.55	337.88
MW-51S	12/7/2012	4:35	360.19	23.63	336.56
MW-54	12/7/2012	8:15	365.27	22.62	342.65
MW-55	12/7/2012	8:17	365.17	22.54	342.63
MW-56	12/7/2012	0:00	371.83	NM	NM
MW-57	12/7/2012	8:45	364.54	19.87	344.67
MW-64D	12/7/2012	10:41	416.43	59.81	356.62
MW-64S	12/7/2012	10:40	416.34	35.94	380.4
MW-65D	12/7/2012	11:23	546.80	47.59	499.21
MW-65S	12/7/2012	11:22	546.82	48.73	498.09
MW-66D	12/7/2012	11:08	506.92	38.67	468.25
MW-66S	12/7/2012	11:10	506.73	37.57	469.16
MW-67D	12/7/2012	10:31	446.26	1.54A	444.72A
MW-67S	12/7/2012	10:30	446.26	10.00	436.26
MW-68	12/7/2012	10:26	458.06	6.30	451.76
MW-69	12/7/2012	10:15	411.90	8.43	403.47
MW-70D	12/7/2012	10:05	416.31	22.88	393.43
MW-70S	12/7/2012	10:06	416.21	22.69	393.52

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SITE-WIDE GROUNDWATER LEVELS AND ELEVATION DATA

FORMER YORK NAVAL ORDNANCE PLANT

1425 Eden Road, York PA 17402

Monitoring Location	Date	Time	Reference Elevation (ft. AMSL)	Depth (ft.)	Water Level (ft. AMSL)
MW-74D	12/7/2012	3:59	359.79	20.22	339.57
MW-74S	12/7/2012	3:58	359.85	20.74	339.11
MW-75D	12/7/2012	5:01	359.85	21.49	338.36
MW-75S	12/7/2012	5:04	359.03	20.45	338.58
MW-77	12/7/2012	8:25	379.48	24.94	354.54
MW-78	12/7/2012	7:19	375.32	21.72	353.60
MW-79	12/7/2012	9:22	375.84	22.91	352.93
MW-80	12/7/2012	11:20	370.29	NM	NM
MW-81D	12/7/2012	7:59	359.89	16.28	343.61
MW-81S	12/7/2012	7:58	360.12	16.96	343.16
MW-82	12/7/2012	13:50	382.18	36.39	345.79
MW-83	12/7/2012	7:45	363.69	8.83	354.86
MW-84	12/7/2012	7:20	376.53	23.75	352.78
MW-85	12/7/2012	13:15	371.54	7.74	363.80
MW-86D	12/7/2012	10:17	406.56	8.72	397.84
MW-86S	12/7/2012	10:18	406.50	10.51	395.99
MW-87	12/7/2012	11:26	370.64	25.55	345.09
MW-88	12/7/2012	10:41	367.93	23.83	344.10
MW-91	12/7/2012	10:51	501.18	55.30	445.88
MW-92	12/7/2012	10:47	476.87	83.12	393.75
MW-93D	12/7/2012	5:08	360.14	21.16	338.98
MW-93S	12/7/2012	5:06	360.76	21.86	338.90
MW-94	12/7/2012	9:39	365.03	10.09	354.94
MW-95	12/7/2012	5:11	358.72	19.51	339.21
MW-96D	12/7/2012	5:16	361.00	22.21	338.79
MW-96S	12/7/2012	5:17	361.21	22.48	338.73
MW-97	12/7/2012	4:08	357.39	21.01	336.38
MW-98D	12/7/2012	9:06	361.41	20.90	340.51
MW-98I	12/7/2012	9:05	360.78	21.40	339.38
MW-98S	12/7/2012	9:04	360.77	21.28	339.49
MW-99D	12/7/2012	9:18	359.91	19.62	340.29
MW-99S	12/7/2012	9:15	360.37	20.09	340.28
MW-100D	12/7/2012	9:26	362.14	21.44	340.70
MW-100I	12/7/2012	9:29	361.81	21.22	340.59
MW-100S	12/7/2012	9:28	362.28	21.75	340.53
MW-101D	12/7/2012	8:45	356.22	16.45	339.77
MW-101S	12/7/2012	8:46	356.54	16.92	339.62
MW-102D	12/7/2012	10:02	405.23	12.17	393.06
MW-102S	12/7/2012	10:03	405.41	37.94	367.47
MW-103D	12/7/2012	9:56	401.61	18.86	382.75

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SITE-WIDE GROUNDWATER LEVELS AND ELEVATION DATA

FORMER YORK NAVAL ORDNANCE PLANT

1425 Eden Road, York PA 17402

Monitoring Location	Date	Time	Reference Elevation (ft. AMSL)	Depth (ft.)	Water Level (ft. AMSL)
MW-103S	12/7/2012	10:00	402.00	16.86	385.14
MW-104	12/7/2012	10:01	428.72	28.43	400.29
MW-105	12/7/2012	5:13	362.05	23.22	338.83
MW-106	12/7/2012	4:05	360.15	25.50	334.65
MW-107	12/7/2012	4:56	363.56	23.31	340.25
MW-108D	12/7/2012	12:57	426.35	19.30	407.05
MW-108S	12/7/2012	12:58	425.46	25.82	399.64
MW-109D	12/7/2012	13:05	389.12	34.10	355.02
MW-109S	12/7/2012	13:06	388.39	34.36	354.03
MW-110	12/7/2012	13:00	378.36	24.48	353.88
MW-111	12/7/2012	9:46	433.63	19.92	413.71
MW-112	12/7/2012	9:40	393.52	48.59	344.93
MW-113	12/7/2012	11:28	371.02	25.92	345.10
MW-114	12/7/2012	7:53	360.71	17.03	343.68
MW-115	12/7/2012	9:15	373.30	22.15	351.15
MW-116	12/7/2012	6:55	364.59	19.25	345.34
MW-117	12/7/2012	7:43	365.00	12.96	352.04
MW-118	12/7/2012	8:53	377.44	7.50	369.94
MW-119	12/7/2012	8:35	377.03	15.93	361.10
MW-120	12/7/2012	8:30	377.63	8.77	368.86
MW-121	12/7/2012	8:28	376.31	17.12	359.19
MW-122	12/7/2012	9:00	377.61	8.63	368.98
MW-123	12/7/2012	8:48	379.64	12.49	367.15
MW-124	12/7/2012	8:57	376.37	14.24	362.13
MW-125	12/7/2012	8:15	366.56	11.89	354.67
MW-126	12/7/2012	11:12	371.42	25.95	345.47
MW-127	12/7/2012	11:00	371.55	26.47	345.08
MW-128	12/7/2012	10:54	370.58	25.46	345.12
MW-129	12/7/2012	9:00	365.41	20.38	345.03
MW-130	12/7/2012	9:47	362.15	19.04	343.11
MW-131	12/7/2012	9:20	365.35	21.13	344.22
MW-132	12/7/2012	9:26	365.30	20.74	344.56
MW-133	12/7/2012	9:35	365.31	20.50	344.81
MW-134	12/7/2012	10:21	361.21	17.18	344.03
MW-135	12/7/2012	10:09	361.57	17.32	344.25
MW-137A	12/7/2012	8:30	365.40	22.39	343.01
MW-138A	12/7/2012	11:10	370.82	43.61	327.21
MW-139A	12/7/2012	10:27	361.81	16.71	345.10
MW-140A	12/7/2012	9:57	361.20	17.73	343.47
MW-141A	12/7/2012	10:43	417.21	48.97	368.24

Note:

A= Location was artesian.
D= Location was dry.
*= Active extraction well.
NM= Not measured.
NA= Not available.

TABLE A-1

SITE-WIDE GROUNDWATER LEVELS AND ELEVATION DATA

FORMER YORK NAVAL ORDNANCE PLANT

1425 Eden Road, York PA 17402

Monitoring Location	Date	Time	Reference Elevation (ft. AMSL)	Depth (ft.)	Water Level (ft. AMSL)
MW-142D	12/7/2012	12:28	437.78	17.75	420.03
MW-142S	12/7/2012	12:29	437.44	5.54	431.90
MW-143D	12/7/2012	12:30	403.71	8.55	395.16
MW-143S	12/7/2012	12:31	403.56	30.55	373.01
MW-144	12/7/2012	9:09	361.52	21.61	339.91
MW-145A	12/7/2012	9:21	362.67	22.00	340.67
MW-146	12/7/2012	9:24	362.39	21.90	340.49
MW-147A	12/7/2012	9:32	361.25	19.34	341.91
MW-160	12/7/2012	8:20	374.71	20.08	354.63
Ru-MW-1	12/7/2012	13:10	389.69	33.94	355.75
Ru-MW-2	12/7/2012	13:11	391.50	36.96	354.54
Ru-MW-3	12/7/2012	13:13	395.86	41.32	354.54
Ru-MW-4	12/7/2012	13:12	394.17	39.65	354.52
Ru-MW-5	12/7/2012	13:36	378.80	24.18	354.62
Ru-MW-6	12/7/2012	13:35	383.28	28.80	354.48
Ru-MW-7	12/7/2012	13:32	NA	NM	NA
Ru-MW-8	12/7/2012	13:30	NA	29.91	NA
RW-2	12/7/2012	12:10	548.27	NM	NM
RW-5	12/7/2012	12:15	375.54	NM	NM
SOFTAIL LIFT STATION	12/7/2012	9:52	396.62	27.08	369.54
WPL-SS-7	12/7/2012	4:20	357.78	22.33	335.45
WPL-SS-8	12/7/2012	3:53	364.40	24.85	339.55

Note:

A= Location was artesian.
D= Location was dry.
*= Active extraction well.
NM= Not measured.
NA= Not available.

Table A-2.
Collection Well Groundwater Data Summary
Former York Naval Ordnance Plant - York, PA

Location/ID Sample Date Parameter	MSC Used Aquifer R (ug/L)	MSC Used Aquifer NR (ug/L)	Federal MCL (ug/L)	EPA RSL Tap Water (ug/L)	CW-1 6/18/2012	CW-1 12/10/2012	CW-1A 6/18/2012	CW-1A 12/10/2012	CW-2 6/18/2012	CW-2 12/10/2012	CW-3 6/18/2012	CW-3 12/10/2012	CW-3 12/10/2012	CW-4 6/18/2012
TOTAL VOC														
					41.88	47	30.89	37.5	21.97	14.8	31.03	31.69	33.97	84.57
Volatile Organic Compound														
1,1,1,2-Tetrachloroethane	70	70		0.52	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U
1,1,1-Trichloroethane	200	200	200	9100	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U
1,1,2,2-Tetrachloroethane	0.84	4.3		0.067	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U
1,1,2-Trichloroethane	5	5	5	0.24	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U
1,1-Dichloroethane	31	160		2.4	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U
1,1-Dichloroethene	7	7	7	340	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U
1,2-Dibromoethane	0.05	0.05	0.05	0.0065	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U
1,2-Dichloroethane	5	5	5	0.15	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U
1,2-Dichloropropane	5	5	5	0.39	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U
1,4-Dioxane	6.4	32		0.67	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	400 U
2-Butanone	4000	4000		7100	5 U	5 U	5 U	5 U	1 J	5 U	5 U	5 U	5 U	10 U
2-Hexanone	11	44		47	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 U
4-Methyl-2-Pentanone	2900	8200		2000	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 U
Acetone	33000	92000		22000	5 U	5 U	3 J	5 U	5.2	5 U	8.2	3.5 J	5	5.2 J
Acrylonitrile	0.72	3.7		0.045	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	40 U
Benzene	5	5	5	0.41	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U
Bromochloromethane	90	90			1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U
Bromodichloromethane	80	80		0.12	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U
Bromoform	80	80		8.5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U
Bromomethane	10	10		8.7	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U
Carbon Disulfide	1500	6200		1000	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U
Carbon Tetrachloride	5	5	5	0.44	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U
Chlorobenzene	100	100	100	91	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U
Chlorodibromomethane	80	80		0.15	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U
Chloroethane	230	900		21000	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U
Chloroform	80	80		0.19	1 U	1 U	0.21 J	0.3 J	1 U	1 U	1 U	1 U	1 U	2 U
Chloromethane	30	30		190	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U
cis-1,2-Dichloroethene	70	70	70	73	9.2	12	0.74 J	1.4	3.9	4.8	16	21	21	28
cis-1,3-Dichloropropene	6.6	26		0.43	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U
Ethylbenzene	700	700	700	1.5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U
Methyl tert-butyl ether	20	20		12	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U
Methylene chloride	5	5		4.8	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.49 J
Styrene	100	100	100	1600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U
Tetrachloroethene	5	5	5	0.11	0.19 J	1 U	0.6 J	0.8 J	0.31 J	1 U	0.91 J	0.79 J	0.67 J	4.4
Toluene	1000	1000	1000	2300	0.49 J	1 U	0.34 J	1 U	0.35 J	1 U	0.32 J	1 U	1 U	0.48 J
trans-1,2-Dichloroethene	100	100	100	110	1 U	1 U	1 U	1 U	0.21 J	1 U	1 U	1 U	1 U	2 U
trans-1,3-Dichloropropene	6.6	26		0.43	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U
Trichloroethene	5	5	5	2	32	35	26	35	11	10	5.6	6.4	7.3	46
Vinyl Chloride	2	2	2	0.016	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U
Xylenes (Total)	10000	10000	10000	200	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	6 U

Blank results = analyte not analyzed. U = Not detected. J = Organics; estimated. Inorganics; blank contamination. B = Organics; blank contamination. Inorganics; estimated. E = Inorganics: matrix interference.

Table A-2.
Collection Well Groundwater Data Summary
Former York Naval Ordnance Plant - York, PA

Location/ID Sample Date Parameter	MSC Used Aquifer R (ug/L)	MSC Used Aquifer NR (ug/L)	Federal MCL (ug/L)	EPA RSL Tap Water (ug/L)	CW-4 12/10/2012	CW-5 6/18/2012	CW-5 12/10/2012	CW-6 6/18/2012	CW-6 Dup 6/18/2012	CW-6 12/10/2012	CW-7 6/18/2012	CW-7 12/10/2012	CW-7A 6/18/2012	CW-7A 12/10/2012
TOTAL VOC														
					71.7	14.44	5.69	134.2	121.8	127	9.69	5.3	85.2	91.6
Volatile Organic Compound														
1,1,1,2-Tetrachloroethane	70	70		0.52	2 U	1 U	1 U	5 U	5 U	5 U	1 U	1 U	5 U	5 U
1,1,1-Trichloroethane	200	200	200	9100	2 U	1 U	1 U	5 U	5 U	5 U	1 U	1 U	5 U	5 U
1,1,2,2-Tetrachloroethane	0.84	4.3		0.067	2 U	1 U	1 U	5 U	5 U	5 U	1 U	1 U	5 U	5 U
1,1,2-Trichloroethane	5	5	5	0.24	2 U	1 U	1 U	5 U	5 U	5 U	1 U	1 U	5 U	5 U
1,1-Dichloroethane	31	160		2.4	2 U	1 U	1 U	5 U	5 U	5 U	1 U	1 U	5 U	5 U
1,1-Dichloroethene	7	7	7	340	2 U	1 U	1 U	5 U	5 U	5 U	1 U	1 U	5 U	5 U
1,2-Dibromoethane	0.05	0.05	0.05	0.0065	2 U	1 U	1 U	5 U	5 U	5 U	1 U	1 U	5 U	5 U
1,2-Dichloroethane	5	5	5	0.15	2 U	1 U	1 U	5 U	5 U	5 U	1 U	1 U	5 U	5 U
1,2-Dichloropropane	5	5	5	0.39	2 U	1 U	1 U	5 U	5 U	5 U	1 U	1 U	5 U	5 U
1,4-Dioxane	6.4	32		0.67	400 U	200 U	200 U	1000 U	1000 U	1000 U	200 U	200 U	1000 U	1000 U
2-Butanone	4000	4000		7100	10 U	0.69 J	0.89 J	25 U	25 U	25 U	5 U	5 U	25 U	25 U
2-Hexanone	11	44		47	10 U	5 U	5 U	25 U	25 U	25 U	5 U	5 U	25 U	25 U
4-Methyl-2-Pentanone	2900	8200		2000	10 U	5 U	5 U	25 U	25 U	25 U	5 U	5 U	25 U	25 U
Acetone	33000	92000		22000	10 U	5	5 U	25 U	25 U	25 U	2.9 J	5 U	25 U	25 U
Acrylonitrile	0.72	3.7		0.045	40 U	20 U	20 U	100 U	100 U	100 U	20 U	20 U	100 U	100 U
Benzene	5	5	5	0.41	2 U	1 U	1 U	5 U	5 U	5 U	1 U	1 U	5 U	5 U
Bromochloromethane	90	90			2 U	1 U	1 U	5 U	5 U	5 U	1 U	1 U	5 U	5 U
Bromodichloromethane	80	80		0.12	2 U	1 U	1 U	5 U	5 U	5 U	1 U	1 U	5 U	5 U
Bromoform	80	80		8.5	2 U	1 U	1 U	5 U	5 U	5 U	1 U	1 U	5 U	5 U
Bromomethane	10	10		8.7	2 U	1 U	1 U	5 U	5 U	5 U	1 U	1 U	5 U	5 U
Carbon Disulfide	1500	6200		1000	2 U	1 U	1 U	5 U	5 U	5 U	1 U	1 U	5 U	5 U
Carbon Tetrachloride	5	5	5	0.44	2 U	1 U	1 U	5 U	5 U	5 U	1 U	1 U	5 U	5 U
Chlorobenzene	100	100	100	91	2 U	1 U	1 U	5 U	5 U	5 U	1 U	1 U	5 U	5 U
Chlorodibromomethane	80	80		0.15	2 U	1 U	1 U	5 U	5 U	5 U	1 U	1 U	5 U	5 U
Chloroethane	230	900		21000	2 U	1 U	1 U	5 U	5 U	5 U	1 U	1 U	5 U	5 U
Chloroform	80	80		0.19	2 U	1 U	1 U	5 U	5 U	5 U	1.4	1.2	0.9 J	1 J
Chloromethane	30	30		190	2 U	1 U	1 U	5 U	5 U	5 U	1 U	1 U	5 U	5 U
cis-1,2-Dichloroethene	70	70	70	73	29	2.3	1.1	30	29	32	0.29 J	0.3 J	5 U	1.2 J
cis-1,3-Dichloropropene	6.6	26		0.43	2 U	1 U	1 U	5 U	5 U	5 U	1 U	1 U	5 U	5 U
Ethylbenzene	700	700	700	1.5	2 U	1 U	1 U	5 U	5 U	5 U	1 U	1 U	5 U	5 U
Methyl tert-butyl ether	20	20		12	2 U	1 U	1 U	5 U	5 U	5 U	1 U	1 U	5 U	5 U
Methylene chloride	5	5		4.8	2 U	1 U	1 U	1.2 J	1.8 J	5 U	1 U	1 U	1.5 J	5 U
Styrene	100	100	100	1600	2 U	1 U	1 U	5 U	5 U	5 U	1 U	1 U	5 U	5 U
Tetrachloroethene	5	5	5	0.11	5.7	2.4	1.9	84	74	81	0.17 J	1 U	1.8 J	2.4 J
Toluene	1000	1000	1000	2300	2 U	0.35 J	1 U	5 U	5 U	5 U	0.43 J	1 U	5 U	5 U
trans-1,2-Dichloroethene	100	100	100	110	2 U	1 U	1 U	5 U	5 U	5 U	1 U	1 U	5 U	5 U
trans-1,3-Dichloropropene	6.6	26		0.43	2 U	1 U	1 U	5 U	5 U	5 U	1 U	1 U	5 U	5 U
Trichloroethene	5	5	5	2	37	3.7	1.8	19	17	14	4.5	3.8	81	87
Vinyl Chloride	2	2	2	0.016	2 U	1 U	1 U	5 U	5 U	5 U	1 U	1 U	5 U	5 U
Xylenes (Total)	10000	10000	10000	200	6 U	3 U	3 U	15 U	15 U	15 U	3 U	3 U	15 U	15 U

Blank results = analyte not analyzed. U = Not detected. J = Organics; estimated. Inorganics; blank contamination. B = Organics; blank contamination. Inorganics; estimated. E = Inorganics: matrix interference.

Table A-2.
Collection Well Groundwater Data Summary
Former York Naval Ordnance Plant - York, PA

Location/ID Sample Date Parameter	MSC Used Aquifer R (ug/L)	MSC Used Aquifer NR (ug/L)	Federal MCL (ug/L)	EPA RSL Tap Water (ug/L)	CW-8 6/18/2012	CW-8 12/10/2012	CW-9 6/18/2012	CW-9 12/10/2012	CW-13 6/18/2012	CW-13 12/10/2012	CW-15A 6/18/2012	CW-15A 12/10/2012	CW-17 6/18/2012
TOTAL VOC													
					387.6	414.8	886.9	3172	655.1	948.3	18190	31250	302.8
Volatile Organic Compound													
1,1,1,2-Tetrachloroethane	70	70		0.52	20 U	20 U	25 U	100 U	13 U	13 U	500 U	500 U	10 U
1,1,1-Trichloroethane	200	200	200	9100	20 U	25	32	120	9 J	13	6200	11000	6.9 J
1,1,2,2-Tetrachloroethane	0.84	4.3		0.067	20 U	20 U	25 U	100 U	13 U	13 U	500 U	500 U	10 U
1,1,2-Trichloroethane	5	5	5	0.24	20 U	20 U	25 U	100 U	13 U	13 U	500 U	500 U	10 U
1,1-Dichloroethane	31	160		2.4	20 U	4 J	5.5 J	100 U	13 U	5.4 J	500 U	150 J	4.1 J
1,1-Dichloroethene	7	7	7	340	8.9 J	9.8 J	9.4 J	100 U	7.9 J	11 J	1500	2500	6.5 J
1,2-Dibromoethane	0.05	0.05	0.05	0.0065	20 U	20 U	25 U	100 U	13 U	13 U	500 U	500 U	10 U
1,2-Dichloroethane	5	5	5	0.15	20 U	20 U	25 U	100 U	13 U	13 U	500 U	500 U	10 U
1,2-Dichloropropane	5	5	5	0.39	20 U	20 U	25 U	100 U	13 U	13 U	500 U	500 U	10 U
1,4-Dioxane	6.4	32		0.67	4000 U	4000 U	5000 U	20000 U	2500 U	2500 U	100000 U	100000 U	2000 U
2-Butanone	4000	4000		7100	100 U	100 U	130 U	500 U	63 U	63 U	2500 U	2500 U	50 U
2-Hexanone	11	44		47	100 U	100 U	130 U	500 U	63 U	63 U	2500 U	2500 U	50 U
4-Methyl-2-Pentanone	2900	8200		2000	100 U	100 U	130 U	500 U	63 U	63 U	2500 U	2500 U	50 U
Acetone	33000	92000		22000	100 U	100 U	130 U	500 U	63 U	63 U	2500 U	2500 U	50 U
Acrylonitrile	0.72	3.7		0.045	400 U	400 U	500 U	2000 U	250 U	250 U	10000 U	10000 U	200 U
Benzene	5	5	5	0.41	20 U	20 U	25 U	100 U	13 U	13 U	500 U	500 U	10 U
Bromochloromethane	90	90			20 U	20 U	25 U	100 U	13 U	13 U	500 U	500 U	10 U
Bromodichloromethane	80	80		0.12	20 U	20 U	25 U	100 U	13 U	13 U	500 U	500 U	10 U
Bromoform	80	80		8.5	20 U	20 U	25 U	100 U	13 U	13 U	500 U	500 U	10 U
Bromomethane	10	10		8.7	20 U	20 U	25 U	100 U	13 U	13 U	500 U	500 U	10 U
Carbon Disulfide	1500	6200		1000	20 U	20 U	25 U	100 U	13 U	13 U	160 J	500 U	10 U
Carbon Tetrachloride	5	5	5	0.44	20 U	20 U	25 U	100 U	13 U	13 U	500 U	500 U	10 U
Chlorobenzene	100	100	100	91	20 U	20 U	25 U	100 U	13 U	13 U	500 U	500 U	10 U
Chlorodibromomethane	80	80		0.15	20 U	20 U	25 U	100 U	13 U	13 U	500 U	500 U	10 U
Chloroethane	230	900		21000	20 U	20 U	25 U	100 U	13 U	13 U	500 U	500 U	10 U
Chloroform	80	80		0.19	20 U	20 U	25 U	100 U	13 U	13 U	500 U	500 U	10 U
Chloromethane	30	30		190	20 U	20 U	25 U	100 U	13 U	13 U	500 U	500 U	10 U
cis-1,2-Dichloroethene	70	70	70	73	130	150	66	100	280	400	6700	6200	88
cis-1,3-Dichloropropene	6.6	26		0.43	20 U	20 U	25 U	100 U	13 U	13 U	500 U	500 U	10 U
Ethylbenzene	700	700	700	1.5	20 U	20 U	25 U	100 U	13 U	13 U	500 U	500 U	10 U
Methyl tert-butyl ether	20	20		12	20 U	20 U	25 U	100 U	13 U	13 U	500 U	500 U	10 U
Methylene chloride	5	5		4.8	5.7 J	20 U	4 J	62 J	4.3 J	3.4 J	160 J	500 U	3.3 J
Styrene	100	100	100	1600	20 U	20 U	25 U	100 U	13 U	13 U	500 U	500 U	10 U
Tetrachloroethene	5	5	5	0.11	33	46	480	1900	130	180	770	1600	54
Toluene	1000	1000	1000	2300	20 U	20 U	25 U	100 U	13 U	13 U	500 U	500 U	10 U
trans-1,2-Dichloroethene	100	100	100	110	20 U	20 U	25 U	100 U	13 U	13 U	500 U	500 U	10 U
trans-1,3-Dichloropropene	6.6	26		0.43	20 U	20 U	25 U	100 U	13 U	13 U	500 U	500 U	10 U
Trichloroethene	5	5	5	2	210	180	290	990	220	330	2700	9800	140
Vinyl Chloride	2	2	2	0.016	20 U	20 U	25 U	100 U	3.9 J	5.5 J	500 U	500 U	10 U
Xylenes (Total)	10000	10000	10000	200	60 U	60 U	75 U	300 U	38 U	38 U	1500 U	1500 U	30 U

Blank results = analyte not analyzed. U = Not detected. J = Organics; estimated. Inorganics; blank contamination. B = Organics; blank contamination. Inorganics; estimated. E = Inorganics: matrix interference.

Table A-2.
Collection Well Groundwater Data Summary
Former York Naval Ordnance Plant - York, PA

Location/ID Sample Date Parameter	MSC Used Aquifer R (ug/L)	MSC Used Aquifer NR (ug/L)	Federal MCL (ug/L)	EPA RSL Tap Water (ug/L)	CW-17 12/10/2012	Softail Lift Station Deep Foundation 12/10/2012
TOTAL VOC						
					279.8	0.5
Volatile Organic Compound						
1,1,1,2-Tetrachloroethane	70	70		0.52	10 U	1 U
1,1,1-Trichloroethane	200	200	200	9100	8.4 J	1 U
1,1,2,2-Tetrachloroethane	0.84	4.3		0.067	10 U	1 U
1,1,2-Trichloroethane	5	5	5	0.24	10 U	1 U
1,1-Dichloroethane	31	160		2.4	4.3 J	1 U
1,1-Dichloroethene	7	7	7	340	7.1 J	1 U
1,2-Dibromoethane	0.05	0.05	0.05	0.0065	10 U	1 U
1,2-Dichloroethane	5	5	5	0.15	10 U	1 U
1,2-Dichloropropane	5	5	5	0.39	10 U	1 U
1,4-Dioxane	6.4	32		0.67	2000 U	200 U
2-Butanone	4000	4000		7100	50 U	5 U
2-Hexanone	11	44		47	50 U	5 U
4-Methyl-2-Pentanone	2900	8200		2000	50 U	5 U
Acetone	33000	92000		22000	50 U	5 U
Acrylonitrile	0.72	3.7		0.045	200 U	20 U
Benzene	5	5	5	0.41	10 U	1 U
Bromochloromethane	90	90			10 U	1 U
Bromodichloromethane	80	80		0.12	10 U	1 U
Bromoform	80	80		8.5	10 U	1 U
Bromomethane	10	10		8.7	10 U	1 U
Carbon Disulfide	1500	6200		1000	10 U	1 U
Carbon Tetrachloride	5	5	5	0.44	10 U	1 U
Chlorobenzene	100	100	100	91	10 U	1 U
Chlorodibromomethane	80	80		0.15	10 U	1 U
Chloroethane	230	900		21000	10 U	1 U
Chloroform	80	80		0.19	10 U	1 U
Chloromethane	30	30		190	10 U	1 U
cis-1,2-Dichloroethene	70	70	70	73	97	1 U
cis-1,3-Dichloropropene	6.6	26		0.43	10 U	1 U
Ethylbenzene	700	700	700	1.5	10 U	1 U
Methyl tert-butyl ether	20	20		12	10 U	1 U
Methylene chloride	5	5		4.8	10 U	1 U
Styrene	100	100	100	1600	10 U	1 U
Tetrachloroethene	5	5	5	0.11	43	1 U
Toluene	1000	1000	1000	2300	10 U	1 U
trans-1,2-Dichloroethene	100	100	100	110	10 U	1 U
trans-1,3-Dichloropropene	6.6	26		0.43	10 U	1 U
Trichloroethene	5	5	5	2	120	0.5 J
Vinyl Chloride	2	2	2	0.016	10 U	1 U
Xylenes (Total)	10000	10000	10000	200	30 U	3 U

Blank results = analyte not analyzed. U = Not detected. J = Organics; estimated. Inorganics; blank contamination. B = Organics; blank contamination. Inorganics; estimated. E = Inorganics: matrix interference.

TABLE A-3
WATER QUALITY ANALYSES
PACKED TOWER AERATOR SAMPLES (January 1, 2012 - December 31, 2012)

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

Sample ID		Outfall #003 GWTS	Outfall #003 GWTS	Outfall #003 GWTS	Outfall #003 GWTS
Lab ID		9945544001	9960938001	9977793001	9992006001
Sample Date		1/5/2012	4/6/2012	7/13/2012	10/5/2012
Parameter	Units	Result	Result	Result	Result
1,1-DICHLOROETHENE	µg/l	N.D.@1	N.D.@1	N.D.@1	N.D.@1
TETRACHLOROETHENE	µg/l	N.D.@1	N.D.@1	N.D.@1	N.D.@1
TRICHLOROETHENE	µg/l	N.D.@1	N.D.@1	N.D.@1	N.D.@1
METHYLENE CHLORIDE	µg/l	N.D.@1	N.D.@1	N.D.@1	N.D.@1
VINYL CHLORIDE	µg/l	N.D.@1	N.D.@1	N.D.@1	N.D.@1
TOTAL VOCs	µg/l	0	0	0	0

Sample ID		Influent to #003 GWTS	Influent to #003 GWTS	Influent to #003 GWTS	Influent to #003 GWTS
Lab ID		9945546001	9960937001	9977794001	9992007001
Sample Date		1/5/2012	4/6/2012	7/13/2012	10/5/2012
Parameter	Units	Result	Result	Result	Result
1,1,1-TRICHLOROETHANE	µg/l	106	79.3	88.5	266
1,1-DICHLOROETHANE	µg/l	7.6	6.3	6.3	12
1,1-DICHLOROETHENE	µg/l	38.2	23.8	24.4	66.1
1,2-DICHLOROETHANE	µg/l	N.D.@1	N.D.@1	N.D.@1	N.D.@1
CHLOROBENZENE	µg/l	N.D.@1	N.D.@1	N.D.@1	N.D.@1
CHLOROFORM	µg/l	N.D.@1	N.D.@1	N.D.@1	N.D.@1
METHYLENE CHLORIDE	µg/l	N.D.@1	N.D.@1	N.D.@1	N.D.@1
TETRACHLOROETHENE	µg/l	360	271	450	294
TRICHLOROETHENE	µg/l	394	315	429	446
VINYL CHLORIDE	µg/l	3.2	N.D.@1	1	3.2
CIS 1,2-DICHLOROETHENE	µg/l	283	228	218	319
TRANS 1,2-DICHLOROETHENE	µg/l	1.6	1.6	1.8	N.D.@1
TOTAL VOCs	µg/l	1194	925	1219	1406

All Analysis Performed by ALS ENVIRONMENTAL - MIDDLETOWN, PA (Formerly ALSI of Middletown, PA)

µg/l - micrograms per liter
N.D.@1 - not detected at indicated concentration
PTA Infl. - Official sample name is "influent to #003 GWTS"
PTA Effl. - Official sample name is "outfall #003 GWTS"

APPENDIX B

2012 Access® Database Summary
Groundwater Treatment Plant Operations

Harley-Davidson Motor Company

Groundwater Treatment Plant Operations

From: 1/1/2012
To: 12/31/2012

DATE	Tower Blower Cycles	Tower Blower Hours	Tower Pump Cycles	Tower Pump Hours	Discharge Flow	Effluent P1 Cycles	Effluent P1 Hours	Effluent P2 Cycles	Effluent P2 Hours	KWH	pH	De-Water Flow	SVE Blower Cycles	SVE Blower Hours
1/1/2012	1	23.97	1	23.97	501119.7	1	23.98	1	23.98	2294	7.0	3620	0	0.00
1/2/2012	1	23.97	1	23.97	500532.6	1	23.97	1	23.98	2312	7.0	2710	0	0.00
1/3/2012	1	23.97	1	23.97	499406.8	1	23.98	1	23.98	2595	7.0	2180	0	0.00
1/4/2012	1	23.97	1	23.97	498903.2	2	19.98	2	23.83	2608	7.0	1720	0	0.00
1/5/2012	1	23.97	1	23.97	495356.8	1	23.98	2	20.98	2554	7.0	1680	0	0.00
1/6/2012	1	23.97	1	23.97	494489.6	1	23.98	3	13.65	2274	7.0	1650	0	0.00
1/7/2012	1	23.97	1	23.97	475313.1	3	16.62	3	12.78	2200	7.0	2100	0	0.00
1/8/2012	1	23.97	1	23.97	453313.3	4	11.98	3	12.13	2167	7.0	1650	0	0.00
1/9/2012	1	23.97	1	23.97	473468.3	4	12.00	3	12.17	2253	7.0	1250	0	0.00
1/10/2012	1	23.97	1	23.97	470809.9	4	12.00	3	12.17	2224	7.0	1700	0	0.00
1/11/2012	1	23.97	1	23.97	469762.4	4	12.00	3	12.15	2224	7.0	1760	0	0.00
1/12/2012	1	23.97	1	23.97	479623.6	3	15.98	3	12.23	2213	7.0	23880	0	0.00
1/13/2012	1	23.97	1	23.97	462765.6	5	19.38	3	12.20	2498	7.0	10650	0	0.00
1/14/2012	1	23.97	1	23.97	473875.2	4	12.02	3	12.15	2536	7.0	4160	0	0.00
1/15/2012	1	23.97	1	23.97	471334.2	4	12.00	3	12.17	2541	7.0	2240	0	0.00
1/16/2012	1	23.97	1	23.97	471813.1	4	12.00	3	12.15	2525	7.0	1780	0	0.00
1/17/2012	1	23.97	1	23.97	473633.1	4	12.00	3	12.15	2233	7.0	7340	0	0.00
1/18/2012	1	23.97	1	23.97	472775.1	4	12.02	3	12.30	2247	7.0	4330	0	0.00
1/19/2012	1	23.97	1	23.97	471640.1	4	12.02	3	12.15	2516	7.0	2230	0	0.00
1/20/2012	1	23.97	1	23.97	471309.4	4	12.02	3	12.17	2528	7.0	1810	0	0.00
1/21/2012	1	23.97	1	23.97	471840.9	4	12.02	3	12.15	2543	7.0	2230	0	0.00
1/22/2012	1	23.97	1	23.97	471474.3	4	12.00	3	12.15	2543	7.0	2230	0	0.00
1/23/2012	1	23.97	1	23.97	472682.4	4	12.02	3	12.18	2515	7.0	6130	0	0.00
1/24/2012	1	23.97	1	23.97	479491.8	3	16.00	3	12.40	2248	7.0	21010	0	0.00
1/25/2012	1	23.97	1	23.97	474490.1	3	16.00	3	12.35	2246	7.0	8000	0	0.00
1/26/2012	1	23.97	1	23.97	476769.5	3	15.98	3	12.17	2249	7.0	13080	0	0.00
1/27/2012	1	23.97	1	23.97	485459.6	4	12.02	3	12.30	2249	7.0	31850	0	0.00
1/28/2012	1	23.97	1	23.97	475400.6	3	15.98	3	12.17	2265	7.0	8160	0	0.00
1/29/2012	1	23.97	1	23.97	473689.8	4	12.00	3	12.18	2272	7.0	4540	0	0.00
1/30/2012	1	23.97	1	23.97	474654.9	4	12.00	3	12.18	2260	7.0	3970	0	0.00
1/31/2012	1	23.97	1	23.97	474192.4	3	15.98	3	12.17	2251	7.0	3350	0	0.00
2/1/2012	1	23.97	1	23.97	473835	4	12.00	3	12.15	1961	7.0	3350	0	0.00
2/2/2012	1	23.97	1	23.97	473408.6	4	12.02	3	12.17	2235	7.0	2760	0	0.00
2/3/2012	1	23.97	1	23.97	473382.8	4	11.98	3	12.18	2243	7.0	1940	0	0.00
2/4/2012	1	23.97	1	23.97	472996.6	4	12.02	3	12.17	2263	7.0	2350	0	0.00
2/5/2012	1	23.97	1	23.97	472993.5	4	11.98	3	12.18	2257	7.0	2870	0	0.00
2/6/2012	1	23.97	1	23.97	472771	4	11.98	3	12.18	2248	7.0	2380	0	0.00
2/7/2012	1	23.97	1	23.97	472258.1	4	12.00	3	12.17	2241	7.0	1820	0	0.00
2/8/2012	1	23.97	1	23.97	472729.8	4	12.00	3	12.15	2512	7.0	2930	0	0.00
2/9/2012	1	23.97	1	23.97	473330.3	4	12.00	3	12.15	2251	7.0	5150	0	0.00
2/10/2012	1	23.97	1	23.97	472752.5	4	12.00	3	12.15	2248	7.0	2810	0	0.00

DATE	Tower Blower Cycles	Tower Blower Hours	Tower Pump Cycles	Tower Pump Hours	Discharge Flow	Effluent P1 Cycles	Effluent P1 Hours	Effluent P2 Cycles	Effluent P2 Hours	KWH	pH	De-Water Flow	SVE Blower Cycles	SVE Blower Hours
2/11/2012	1	23.97	1	23.97	473698	4	12.02	3	12.28	2520	7.0	5750	0	0.00
2/12/2012	1	23.97	1	23.97	472433.2	4	12.02	3	12.15	2538	7.0	3360	0	0.00
2/13/2012	1	23.97	1	23.97	472061.3	4	12.02	3	12.15	2246	7.0	2240	0	0.00
2/14/2012	1	23.97	1	23.97	471846.1	4	12.02	3	12.27	2229	7.0	1800	0	0.00
2/15/2012	1	23.97	1	23.97	470757.4	4	12.00	3	12.15	2227	7.0	1820	0	0.00
2/16/2012	1	23.97	1	23.97	468756.1	4	12.00	3	12.15	2222	7.0	2810	0	0.00
2/17/2012	1	23.97	1	23.97	469181.5	4	12.00	3	12.15	1952	7.0	3710	0	0.00
2/18/2012	1	23.97	1	23.97	468741.7	3	19.98	2	4.05	2223	7.0	2240	0	0.00
2/19/2012	1	23.97	1	23.97	468301.8	1	23.98	0	0.00	2229	7.0	1740	0	0.00
2/20/2012	2	23.33	2	23.32	453068.2	4	23.17	4	7.25	2181	7.0	1290	0	0.00
2/21/2012	1	23.97	1	23.97	466310.8	4	23.77	4	12.43	2262	7.0	1260	0	0.00
2/22/2012	4	23.60	4	23.53	458833.1	9	19.03	9	9.65	1918	7.0	1260	0	0.00
2/23/2012	1	23.97	1	23.97	467002	2	23.92	0	0.00	1923	7.0	1220	0	0.00
2/24/2012	1	23.97	1	23.97	470015.8	6	14.62	5	9.67	2226	7.0	5350	0	0.00
2/25/2012	1	23.97	1	23.97	468331.7	4	11.97	3	12.00	2234	7.0	2300	0	0.00
2/26/2012	1	23.97	1	23.97	465732	4	11.98	3	12.00	2204	7.0	1700	0	0.00
2/27/2012	1	23.97	1	23.97	461763.4	4	11.98	3	12.00	2172	7.0	1240	0	0.00
2/28/2012	1	23.97	1	23.97	461057.8	4	11.98	3	12.00	2175	7.0	1190	0	0.00
2/29/2012	1	23.97	1	23.97	469752.1	4	11.98	3	12.20	2211	7.0	25720	0	0.00
3/1/2012	1	23.97	1	23.97	465625.9	4	12.00	3	12.07	2196	7.0	15080	0	0.00
3/2/2012	1	23.97	1	23.97	462545.2	4	11.98	3	12.00	2201	7.0	6240	0	0.00
3/3/2012	1	2.75	1	2.74	53436.33	1	1.31	1	1.43	260	1.0	1605	0	0.00
3/4/2012	1	17.18	1	17.14	333839.6	3	8.17	3	8.94	1627	6.0	10025	0	0.00
3/5/2012	2	16.60	2	16.53	321110.7	3	9.20	2	7.32	1611	7.0	3120	0	0.00
3/6/2012	1	23.97	1	23.97	464715.4	4	11.97	3	12.00	2187	7.0	1840	0	0.00
3/7/2012	1	23.97	1	23.97	469073.3	4	11.97	3	12.00	1876	7.0	2270	0	0.00
3/8/2012	1	23.97	1	23.97	475270.8	4	11.98	3	12.00	1896	7.0	1820	0	0.00
3/9/2012	1	23.97	1	23.97	475519.1	4	12.07	3	12.00	1940	7.0	2340	0	0.00
3/10/2012	1	23.97	1	23.97	473258.2	4	11.98	3	12.03	2204	7.0	1380	0	0.00
3/11/2012	1	23.97	1	23.97	473258.2	4	11.98	3	12.03	2204	7.0	1380	0	0.00
3/12/2012	1	23.97	1	23.97	473258.2	4	11.98	3	12.03	2204	7.0	1380	0	0.00
3/13/2012	1	23.97	1	23.97	473258.2	4	11.98	3	12.03	2204	7.0	1380	0	0.00
3/14/2012	1	23.97	1	23.97	485140.3	5	12.93	3	12.00	1948	7.0	1230	0	0.00
3/15/2012	1	23.97	1	23.97	485140.3	5	12.93	3	12.00	1948	7.0	1230	0	0.00
3/16/2012	1	23.97	1	23.97	466090.4	4	11.97	3	12.00	1871	7.0	1230	0	0.00
3/17/2012	1	23.97	1	23.97	465871.1	4	11.98	3	12.00	1870	7.0	810	0	0.00
3/18/2012	1	23.97	1	23.97	465264.4	4	11.98	3	12.00	1864	7.0	1200	0	0.00
3/19/2012	1	23.97	1	23.97	464005.7	4	11.97	3	12.00	1850	7.0	780	0	0.00
3/20/2012	1	23.97	1	23.97	462019.9	4	11.97	3	12.00	1841	7.0	1160	0	0.00
3/21/2012	1	23.97	1	23.97	461701.6	4	11.97	3	12.00	1845	7.0	770	0	0.00
3/22/2012	1	23.97	1	23.97	461278.3	4	11.98	3	12.00	1845	7.0	770	0	0.00
3/23/2012	1	23.97	1	23.97	460651	4	11.98	3	12.00	1841	7.0	1150	0	0.00
3/24/2012	1	23.97	1	23.97	460780.8	4	11.98	3	12.03	1854	7.0	7400	0	0.00
3/25/2012	1	23.97	1	23.97	460802.4	4	11.98	3	12.03	1857	7.0	8600	0	0.00
3/26/2012	1	23.97	1	23.97	456999.7	4	11.97	3	12.00	1844	7.0	2900	0	0.00
3/27/2012	1	23.97	1	23.97	456112.8	4	11.98	3	12.00	2135	7.0	1380	0	0.00
3/28/2012	1	23.97	1	23.97	456589.7	4	11.98	3	12.00	1857	7.0	1830	0	0.00

DATE	Tower Blower Cycles	Tower Blower Hours	Tower Pump Cycles	Tower Pump Hours	Discharge Flow	Effluent P1 Cycles	Effluent P1 Hours	Effluent P2 Cycles	Effluent P2 Hours	KWH	pH	De-Water Flow	SVE Blower Cycles	SVE Blower Hours
3/29/2012	1	23.97	1	23.97	455804.8	4	11.98	3	12.00	1859	7.0	1320	0	0.00
3/30/2012	1	23.97	1	23.97	455900.7	4	11.97	3	12.00	2137	7.0	830	0	0.00
3/31/2012	1	23.97	1	23.97	457363.3	4	11.97	3	12.00	1897	7.0	4570	0	0.00
4/1/2012	1	23.97	1	23.97	456338.4	4	11.98	3	12.02	1900	7.0	2310	0	0.00
4/2/2012	1	23.97	1	23.97	458994.8	4	11.98	3	12.00	1900	7.0	8780	0	0.00
4/3/2012	1	23.97	1	23.97	456381.7	4	11.98	3	12.00	1887	7.0	2470	0	0.00
4/4/2012	1	23.97	1	23.97	456378.6	4	11.98	3	12.00	1842	7.0	2840	0	0.00
4/5/2012	1	23.97	1	23.97	455743.1	4	11.97	3	12.00	1857	7.0	1360	0	0.00
4/6/2012	1	23.97	1	23.97	455561.8	4	11.97	3	12.00	1872	7.0	1300	0	0.00
4/7/2012	1	23.97	1	23.97	455589.6	4	11.97	3	12.00	1873	7.0	830	0	0.00
4/8/2012	1	23.97	1	23.97	455727.6	4	11.98	3	12.00	1865	7.0	1190	0	0.00
4/9/2012	1	23.97	1	23.97	454864.5	4	11.98	3	12.00	1844	7.0	780	0	0.00
4/10/2012	1	23.97	1	23.97	454931.4	4	11.98	3	12.00	1854	7.0	760	0	0.00
4/11/2012	1	23.97	1	23.97	455053	4	11.98	3	12.00	2122	7.0	740	0	0.00
4/12/2012	1	23.97	1	23.97	454325.8	4	11.97	3	12.00	1859	7.0	360	0	0.00
4/13/2012	1	23.97	1	23.97	454642	4	11.97	3	12.00	1860	7.0	710	0	0.00
4/14/2012	1	23.97	1	23.97	454694.5	4	11.98	3	12.00	1860	7.0	350	0	0.00
4/15/2012	1	23.97	1	23.97	454605.9	4	11.98	3	12.00	1839	7.0	1150	0	0.00
4/16/2012	1	23.97	1	23.97	453926.1	4	11.98	3	12.00	1820	7.0	700	0	0.00
4/17/2012	1	23.97	1	23.97	404830.2	3	10.68	13	10.33	1744	7.0	320	0	0.00
4/18/2012	1	23.97	1	23.97	433792.7	3	12.00	4	11.97	1813	7.0	320	0	0.00
4/19/2012	1	23.97	1	23.97	433458	3	12.00	4	11.97	1804	7.0	1130	0	0.00
4/20/2012	1	23.97	1	23.97	433105.7	3	12.00	4	11.98	1809	7.0	340	0	0.00
4/21/2012	1	23.97	1	23.97	432154	3	12.00	4	11.98	1802	7.0	650	0	0.00
4/22/2012	1	23.97	1	23.97	436127.8	3	12.00	4	11.98	1827	7.0	13030	0	0.00
4/23/2012	1	23.97	1	23.97	439748.2	3	12.00	4	11.98	1853	7.0	20390	0	0.00
4/24/2012	1	23.97	1	23.97	434569.3	3	12.00	4	11.97	1832	7.0	4740	0	0.00
4/25/2012	1	23.97	1	23.97	433160.3	3	12.00	4	11.97	1815	7.0	1380	0	0.00
4/26/2012	1	23.97	1	23.97	432504.2	3	12.00	4	11.97	1811	7.0	1340	0	0.00
4/27/2012	1	23.97	1	23.97	432494.9	3	12.00	4	11.98	1823	7.0	880	0	0.00
4/28/2012	1	23.97	1	23.97	431059.1	3	12.00	4	11.98	2083	7.0	840	0	0.00
4/29/2012	1	23.97	1	23.97	431948	3	12.00	4	11.98	1814	7.0	790	0	0.00
4/30/2012	1	23.97	1	23.97	431569	3	12.00	4	11.97	1811	7.0	370	0	0.00
5/1/2012	1	23.97	1	23.97	431528.8	3	12.00	4	11.97	1787	7.0	740	0	0.00
5/2/2012	1	23.97	1	23.97	431360.9	3	12.00	4	11.97	1799	7.0	780	0	0.00
5/3/2012	1	23.97	1	23.97	435005	3	12.00	4	11.98	1795	7.0	10640	0	0.00
5/4/2012	1	23.97	1	23.97	431904.8	3	12.00	4	11.98	1782	7.0	2440	0	0.00
5/5/2012	1	23.97	1	23.97	431864.6	3	12.00	4	11.98	1787	7.0	1880	0	0.00
5/6/2012	1	23.97	1	23.97	431114.7	3	12.00	4	11.98	1787	7.0	870	0	0.00
5/7/2012	1	23.97	1	23.97	431322.8	3	12.00	4	11.97	1787	7.0	820	0	0.00
5/8/2012	1	23.97	1	23.97	432933.7	3	12.00	4	11.97	1786	7.0	5060	0	0.00
5/9/2012	1	23.97	1	23.97	432821.4	3	12.00	4	11.97	1783	7.0	4240	0	0.00
5/10/2012	1	23.97	1	23.97	432318.8	3	12.00	4	11.97	1786	7.0	2980	0	0.00
5/11/2012	1	23.97	1	23.97	431455.7	3	12.00	4	11.98	1797	7.0	880	0	0.00
5/12/2012	1	23.97	1	23.97	431204.3	3	12.00	4	11.98	1803	7.0	850	0	0.00
5/13/2012	1	23.97	1	23.97	431177.6	3	12.00	4	11.98	1803	7.0	790	0	0.00
5/14/2012	1	23.97	1	23.97	434774.3	3	12.00	4	11.97	1794	7.0	10400	0	0.00

DATE	Tower Blower Cycles	Tower Blower Hours	Tower Pump Cycles	Tower Pump Hours	Discharge Flow	Effluent P1 Cycles	Effluent P1 Hours	Effluent P2 Cycles	Effluent P2 Hours	KWH	pH	De-Water Flow	SVE Blower Cycles	SVE Blower Hours
5/15/2012	1	23.97	1	23.97	437982.8	3	12.00	4	11.97	1800	7.0	16710	0	0.00
5/16/2012	1	23.97	1	23.97	435562.3	3	12.00	4	11.97	1795	7.0	4110	0	0.00
5/17/2012	1	23.97	1	23.97	433527	3	12.00	4	11.98	1789	7.0	1790	0	0.00
5/18/2012	1	23.97	1	23.97	432497	3	12.00	4	11.98	1787	7.0	860	0	0.00
5/19/2012	1	23.97	1	23.97	431042.6	3	12.00	4	11.98	1779	7.0	840	0	0.00
5/20/2012	1	23.97	1	23.97	430627.5	3	12.00	4	11.97	1778	7.0	790	0	0.00
5/21/2012	1	23.97	1	23.97	431708	3	12.00	4	11.97	1772	7.0	3390	0	0.00
5/22/2012	1	23.97	1	23.97	423702.8	3	12.00	4	11.97	1712	7.0	1720	0	0.00
5/23/2012	1	23.97	1	23.97	428800.3	3	12.00	4	11.98	1749	7.0	2530	0	0.00
5/24/2012	1	23.97	1	23.97	438231	3	12.00	4	11.98	1786	7.0	2930	0	0.00
5/25/2012	1	23.97	1	23.97	438376.2	3	12.00	4	11.98	1794	7.0	860	0	0.00
5/26/2012	1	23.97	1	23.97	437337	3	12.00	4	11.97	1809	8.0	820	0	0.00
5/27/2012	1	23.97	1	23.97	437481.2	3	12.00	4	11.97	1811	7.0	1780	0	0.00
5/28/2012	1	23.97	1	23.97	437477	3	12.00	4	11.98	1804	8.0	2330	0	0.00
5/29/2012	1	23.97	1	23.97	441551.7	3	12.00	4	11.97	1812	7.0	12220	0	0.00
5/30/2012	1	23.97	1	23.97	440445.5	3	12.00	4	11.98	1815	7.0	5870	0	0.00
5/31/2012	1	23.97	1	23.97	440544.4	3	12.00	4	11.98	1817	7.0	1780	0	0.00
6/1/2012	1	23.97	1	23.97	423381.5	3	12.00	4	11.93	1757	7.0	13990	0	0.00
6/2/2012	1	23.97	1	23.97	367132.2	3	12.00	4	11.72	1599	7.0	18590	0	0.00
6/3/2012	1	23.97	1	23.97	361156.1	3	12.00	4	11.60	1594	7.0	2700	0	0.00
6/4/2012	1	23.97	1	23.97	403698.2	3	12.00	4	11.78	1707	7.0	4360	0	0.00
6/5/2012	1	23.97	1	23.97	365517.1	3	12.00	4	11.78	1591	7.0	2230	0	0.00
6/6/2012	1	23.97	1	23.97	397520.3	3	12.00	4	11.90	1689	7.0	1250	0	0.00
6/7/2012	1	23.97	1	23.97	446927.3	3	12.00	4	11.97	1832	7.0	1190	0	0.00
6/8/2012	1	23.97	1	23.97	448790.6	3	12.00	4	11.97	1838	7.0	1160	0	0.00
6/9/2012	1	23.97	1	23.97	451836.3	3	12.00	4	11.98	1849	7.0	740	0	0.00
6/10/2012	1	23.97	1	23.97	454135.2	3	12.00	4	11.97	1852	8.0	1080	0	0.00
6/11/2012	1	23.97	1	23.97	458062.6	3	12.00	4	11.98	1865	8.0	8110	0	0.00
6/12/2012	1	23.97	1	23.97	395376.8	3	12.00	4	11.87	1673	7.0	6440	0	0.00
6/13/2012	1	23.97	1	23.97	406449.3	3	12.00	4	11.93	1706	7.0	2500	0	0.00
6/14/2012	6	19.67	7	19.57	373289.5	3	8.62	4	11.22	1496	7.0	450	0	0.00
6/15/2012	1	23.97	1	23.97	462249.6	4	11.98	3	12.00	1844	8.0	1570	0	0.00
6/16/2012	1	23.97	1	23.97	462619.3	4	11.98	3	12.00	1843	8.0	380	0	0.00
6/17/2012	1	23.97	1	23.97	462193.9	4	12.00	3	12.00	1847	8.0	760	0	0.00
6/18/2012	1	23.97	1	23.97	406180.5	4	11.87	3	12.00	1694	7.0	760	0	0.00
6/19/2012	1	23.97	1	23.97	365288.5	4	11.80	3	12.00	1586	8.0	710	0	0.00
6/20/2012	1	23.97	1	23.97	422425.7	4	11.92	3	12.00	1760	8.0	340	0	0.00
6/21/2012	2	16.30	2	16.25	298918.3	3	8.22	3	8.00	1201	8.0	680	0	0.00
6/22/2012	1	23.97	1	23.97	365254.5	4	11.93	3	12.00	1581	8.0	320	0	0.00
6/23/2012	1	23.97	1	23.97	365484.2	4	11.80	3	12.00	1588	8.0	710	0	0.00
6/24/2012	1	23.97	1	23.97	364992.8	4	11.80	3	12.00	1584	8.0	680	0	0.00
6/25/2012	2	17.57	2	17.52	266943	3	11.28	2	6.02	1151	8.0	320	0	0.00
6/26/2012	1	23.97	1	23.97	365877.6	4	11.88	3	12.00	1560	8.0	320	0	0.00
6/27/2012	1	23.97	1	23.97	367954.1	4	11.80	3	12.00	1566	8.0	6630	0	0.00
6/28/2012	1	23.97	1	23.97	379815.6	4	11.87	3	12.00	1596	8.0	38250	0	0.00
6/29/2012	1	23.97	1	23.97	375341.3	4	11.82	3	12.00	1586	8.0	19200	0	0.00
6/30/2012	1	23.97	1	23.97	365987.8	4	11.80	3	12.00	1562	8.0	1810	0	0.00

DATE	Tower Blower Cycles	Tower Blower Hours	Tower Pump Cycles	Tower Pump Hours	Discharge Flow	Effluent P1 Cycles	Effluent P1 Hours	Effluent P2 Cycles	Effluent P2 Hours	KWH	pH	De-Water Flow	SVE Blower Cycles	SVE Blower Hours
7/1/2012	1	23.97	1	23.97	365293.6	4	11.78	3	12.00	1554	8.0	470	0	0.00
7/2/2012	1	23.97	1	23.97	365312.2	4	11.77	3	12.00	1575	8.0	10	0	0.00
7/3/2012	2	23.47	2	23.42	401606.3	5	11.17	3	12.00	1674	8.0	250	0	0.00
7/4/2012	1	23.97	1	23.97	372792	4	11.82	3	12.00	1581	8.0	13410	0	0.00
7/5/2012	1	23.97	1	23.97	397771.6	4	11.85	3	12.00	1627	8.0	60560	0	0.00
7/6/2012	1	23.97	1	23.97	370786.6	4	11.80	3	12.00	1581	8.0	11240	0	0.00
7/7/2012	1	23.97	1	23.97	364948.6	4	11.77	3	12.00	1565	8.0	0	0	0.00
7/8/2012	1	23.97	1	23.97	363154.3	4	11.70	3	12.00	1559	8.0	0	0	0.00
7/9/2012	1	23.97	1	23.97	362256.1	4	11.65	3	12.00	1549	8.0	0	0	0.00
7/10/2012	1	23.97	1	23.97	363992.7	3	11.75	3	11.97	1565	8.0	0	0	0.00
7/11/2012	1	23.97	1	23.97	409826.7	3	12.00	3	11.90	1700	8.0	0	0	0.00
7/12/2012	1	23.97	1	23.97	453656.3	3	12.00	4	11.98	1828	8.0	0	0	0.00
7/13/2012	1	23.97	1	23.97	453960.1	3	12.00	4	11.98	1832	8.0	0	0	0.00
7/14/2012	1	23.97	1	23.97	454356.7	3	12.00	4	11.97	1829	8.0	0	0	0.00
7/15/2012	1	23.97	1	23.97	453911.7	3	12.00	4	11.97	1825	8.0	0	0	0.00
7/16/2012	1	23.97	1	23.97	454216.6	3	12.00	4	11.98	1828	8.0	0	0	0.00
7/17/2012	1	23.97	1	23.97	453911.7	3	12.00	4	11.97	1828	8.0	0	0	0.00
7/18/2012	1	23.97	1	23.97	470778	3	12.00	4	14.28	1867	8.0	34430	0	0.00
7/19/2012	2	20.72	2	20.67	390390.6	4	12.03	5	12.57	1572	7.0	0	0	0.00
7/20/2012	1	23.97	1	23.97	458480.8	3	12.00	4	11.97	1852	7.0	11360	0	0.00
7/21/2012	1	23.97	1	23.97	453006.3	3	12.00	4	11.98	1841	7.0	0	0	0.00
7/22/2012	1	23.97	1	23.97	452520.2	3	12.00	4	11.98	1828	7.0	0	0	0.00
7/23/2012	1	23.97	1	23.97	453873.6	3	12.00	4	11.98	1834	7.0	3440	0	0.00
7/24/2012	1	23.97	1	23.97	452026.8	3	12.00	4	11.98	1833	7.0	0	0	0.00
7/25/2012	1	23.97	1	23.97	454616.3	3	12.00	4	11.97	1829	7.0	0	0	0.00
7/26/2012	5	23.52	5	23.35	436897.2	4	11.75	4	11.50	1771	7.0	0	0	0.00
7/27/2012	1	23.97	1	23.97	458287.2	4	11.98	3	12.00	1850	7.0	0	0	0.00
7/28/2012	1	13.75	4	13.48	165542.2	7	6.90	2	6.43	1056	3.7	0	0	0.00
7/29/2012	0	0.00	0	0.00	0	0	0.00	0	0.00	0	0.0	0	0	0.00
7/30/2012	1	11.98	4	11.75	144232.4	7	6.01	1	5.60	920	3.3	0	0	0.00
7/31/2012	1	23.97	1	23.97	460598.5	4	11.98	3	12.00	1846	7.0	0	0	0.00
8/1/2012	1	23.97	1	23.97	461615.1	4	12.00	3	12.00	1847	7.0	0	0	0.00
8/2/2012	1	23.97	1	23.97	408544.3	10	10.58	9	10.78	1733	7.0	0	0	0.00
8/3/2012	2	22.47	2	22.40	300305.8	9	11.00	8	9.18	1443	7.0	0	0	0.00
8/4/2012	1	23.97	1	23.97	321712.3	4	10.35	12	12.00	1553	7.0	0	0	0.00
8/5/2012	1	23.97	1	23.97	321643.3	4	10.70	11	12.00	1557	7.0	0	0	0.00
8/6/2012	1	23.97	1	23.97	321968.7	3	11.88	3	11.82	1553	7.0	0	0	0.00
8/7/2012	1	23.97	1	23.97	321874	3	12.00	4	11.85	1550	7.0	0	0	0.00
8/8/2012	1	23.97	1	23.97	321467.1	3	12.00	4	11.95	1548	7.0	0	0	0.00
8/9/2012	1	23.97	1	23.97	321128.3	3	12.00	4	11.98	1544	7.0	0	0	0.00
8/10/2012	1	23.97	1	23.97	321557.8	3	12.00	4	11.98	1541	7.0	0	0	0.00
8/11/2012	1	23.97	1	23.97	321720.5	3	12.00	4	11.98	1543	7.0	0	0	0.00
8/12/2012	1	23.97	1	23.97	321612.3	3	12.00	4	11.97	1544	7.0	0	0	0.00
8/13/2012	1	23.97	1	23.97	327770.7	3	12.00	4	11.95	1551	7.0	14450	0	0.00
8/14/2012	1	23.97	1	23.97	320573.1	3	12.00	4	11.95	1536	7.0	0	0	0.00
8/15/2012	1	23.97	1	23.97	320648.3	3	12.00	4	11.97	1537	7.0	0	0	0.00
8/16/2012	1	23.97	1	23.97	320502	3	12.00	4	11.97	1540	7.0	0	0	0.00

DATE	Tower Blower Cycles	Tower Blower Hours	Tower Pump Cycles	Tower Pump Hours	Discharge Flow	Effluent P1 Cycles	Effluent P1 Hours	Effluent P2 Cycles	Effluent P2 Hours	KWH	pH	De-Water Flow	SVE Blower Cycles	SVE Blower Hours
8/17/2012	1	23.97	1	23.97	320176.5	3	12.00	4	11.98	1540	7.0	0	0	0.00
8/18/2012	1	23.97	1	23.97	319913.9	3	12.00	4	11.98	1542	7.0	0	0	0.00
8/19/2012	1	23.97	1	23.97	319909.8	3	12.00	4	11.97	1536	7.0	0	0	0.00
8/20/2012	1	23.97	1	23.97	319788.2	3	12.00	4	11.97	1535	7.0	0	0	0.00
8/21/2012	1	23.97	1	23.97	318988.9	3	12.00	4	11.98	1540	7.0	0	0	0.00
8/22/2012	1	23.97	1	23.97	306381.7	3	12.00	12	11.07	1514	7.0	3230	0	0.00
8/23/2012	1	23.97	1	23.97	318988.9	3	12.00	4	11.97	1549	7.0	0	0	0.00
8/24/2012	1	23.97	1	23.97	324812.6	3	12.00	4	11.97	1554	7.0	11910	0	0.00
8/25/2012	1	23.97	1	23.97	318917.9	3	12.00	4	11.97	1536	7.0	0	0	0.00
8/26/2012	1	23.97	1	23.97	318812.8	3	12.00	4	11.98	1540	7.0	0	0	0.00
8/27/2012	1	23.97	1	23.97	318762.3	3	12.00	4	11.97	1545	7.0	0	0	0.00
8/28/2012	1	23.97	1	23.97	329502.1	3	12.00	4	11.90	1561	7.0	21740	0	0.00
8/29/2012	1	23.97	1	23.97	334353.4	3	12.00	4	11.82	1565	7.0	29050	0	0.00
8/30/2012	1	23.97	1	23.97	320562.8	3	12.00	4	11.88	1539	7.0	0	0	0.00
8/31/2012	1	23.97	1	23.97	323760.9	3	12.00	4	11.92	1548	7.0	6640	0	0.00
9/1/2012	1	23.97	1	23.97	320238.3	3	12.00	4	11.93	1550	7.0	0	0	0.00
9/2/2012	1	23.97	1	23.97	320216.7	3	12.00	4	11.95	1550	7.0	0	0	0.00
9/3/2012	1	23.97	1	23.97	320130.2	3	12.00	4	11.95	1548	7.0	0	0	0.00
9/4/2012	1	23.97	1	23.97	320352.7	3	12.00	4	11.93	1550	7.0	0	0	0.00
9/5/2012	1	23.97	1	23.97	323031.7	3	12.00	4	11.92	1556	7.0	4740	0	0.00
9/6/2012	1	9.15	1	9.12	122301.2	1	4.00	2	5.17	557	7.0	0	0	0.00
9/7/2012	0	0.00	0	0.00	11.33	0	0.00	0	0.00	-84	7.0	0	0	0.00
9/8/2012	1	16.88	1	16.88	227186.1	3	8.00	7	8.03	1053	7.0	0	0	0.00
9/9/2012	1	23.97	1	23.97	321794.7	9	12.00	12	9.55	1538	7.0	0	0	0.00
9/10/2012	1	23.97	1	23.97	321372.3	6	10.80	13	11.18	1539	7.0	0	0	0.00
9/11/2012	1	23.97	1	23.97	322127.3	4	11.18	7	12.00	1549	7.0	0	0	0.00
9/12/2012	1	23.97	1	23.97	325140.1	4	11.85	3	12.00	1542	7.0	0	0	0.00
9/13/2012	1	23.97	1	23.97	343188.8	4	11.97	3	12.00	1582	7.0	33040	0	0.00
9/14/2012	1	23.97	1	23.97	341814.8	4	11.88	3	12.00	1575	7.0	32450	0	0.00
9/15/2012	1	23.97	1	23.97	321814.2	4	11.83	3	12.00	1526	7.0	0	0	0.00
9/16/2012	1	23.97	1	23.97	321688.6	4	11.93	3	12.00	1531	7.0	0	0	0.00
9/17/2012	1	23.97	1	23.97	325151.4	4	11.97	3	12.00	1539	7.0	0	0	0.00
9/18/2012	1	23.97	1	23.97	326667.6	4	11.98	3	12.00	1541	7.0	0	0	0.00
9/19/2012	1	23.97	1	23.97	326891.1	4	11.98	3	12.00	1556	6.0	0	0	0.00
9/20/2012	1	23.97	1	23.97	327185.7	4	11.98	3	12.00	1559	6.0	0	0	0.00
9/21/2012	1	23.97	1	23.97	336761.6	4	11.97	3	12.00	1567	6.0	0	0	0.00
9/22/2012	1	23.97	1	23.97	339697.1	4	11.97	3	12.00	1569	7.0	0	0	0.00
9/23/2012	1	23.97	1	23.97	339556	4	11.97	3	12.00	1570	6.0	0	0	0.00
9/24/2012	1	23.97	1	23.97	339599.2	4	11.98	3	12.00	1563	6.0	0	0	0.00
9/25/2012	1	23.97	1	23.97	327508.1	4	11.98	3	12.00	1552	6.0	0	0	0.00
9/26/2012	1	23.97	1	23.97	331626	4	11.97	3	12.00	1555	6.0	10280	0	0.00
9/27/2012	1	23.97	1	23.97	326395.7	4	11.97	3	12.00	1540	6.0	0	0	0.00
9/28/2012	1	23.97	1	23.97	337943	4	11.97	3	12.00	1567	6.0	17260	0	0.00
9/29/2012	1	23.97	1	23.97	329499.1	4	11.97	3	12.00	1546	6.0	0	0	0.00
9/30/2012	1	23.97	1	23.97	335502.9	4	11.98	3	12.00	1560	6.0	10870	0	0.00
10/1/2012	1	23.97	1	23.97	351018.8	4	11.95	3	12.00	1567	6.0	42650	0	0.00
10/2/2012	1	23.97	1	23.97	329038.6	4	11.97	3	12.00	1531	6.0	0	0	0.00

DATE	Tower Blower Cycles	Tower Blower Hours	Tower Pump Cycles	Tower Pump Hours	Discharge Flow	Effluent P1 Cycles	Effluent P1 Hours	Effluent P2 Cycles	Effluent P2 Hours	KWH	pH	De-Water Flow	SVE Blower Cycles	SVE Blower Hours
10/3/2012	1	23.97	1	23.97	334346.2	4	11.98	3	12.00	1544	6.0	0	0	0.00
10/4/2012	1	23.97	1	23.97	335482.3	4	11.98	3	12.00	1546	6.0	0	0	0.00
10/5/2012	1	23.97	1	23.97	353596.9	4	11.98	3	12.00	1567	6.0	12160	0	0.00
10/6/2012	1	23.97	1	23.97	351049.8	4	11.97	3	12.00	1563	6.0	1480	0	0.00
10/7/2012	1	23.97	1	23.97	350506.9	4	11.98	3	12.00	1571	6.0	1060	0	0.00
10/8/2012	1	23.97	1	23.97	350532.7	4	11.97	3	12.00	1594	6.0	1310	0	0.00
10/9/2012	1	23.97	1	23.97	350415.3	4	11.98	3	12.00	1583	6.0	850	0	0.00
10/10/2012	1	23.97	1	23.97	347930.9	4	11.97	3	12.00	1566	6.0	1320	0	0.00
10/11/2012	1	23.97	1	23.97	342669.7	4	11.95	3	12.00	1557	6.0	610	0	0.00
10/12/2012	2	21.97	3	21.95	310391.5	3	10.58	4	11.18	1448	6.0	2510	0	0.00
10/13/2012	1	23.97	1	23.97	335794.4	3	12.00	6	11.25	1848	6.0	580	0	0.00
10/14/2012	1	23.97	1	23.97	335789.3	3	12.00	6	11.45	1562	6.0	280	0	0.00
10/15/2012	1	23.97	1	23.97	335809.9	3	12.00	4	11.80	1548	6.0	610	0	0.00
10/16/2012	1	23.97	1	23.97	335745	3	12.00	4	11.95	1560	6.0	320	0	0.00
10/17/2012	1	23.97	1	23.97	333968.2	3	12.00	4	11.92	1558	6.0	250	0	0.00
10/18/2012	1	23.97	1	23.97	334964.2	3	12.00	4	11.95	1542	6.0	7760	0	0.00
10/19/2012	2	17.48	2	17.43	247539.9	3	10.88	2	6.33	1142	6.0	15070	0	0.00
10/20/2012	1	23.97	1	23.97	332697.2	4	10.98	8	12.00	1572	6.0	3050	0	0.00
10/21/2012	1	23.97	1	23.97	331745.5	4	10.80	9	12.00	1579	6.0	650	0	0.00
10/22/2012	1	23.97	1	23.97	331536.4	4	11.62	3	12.00	1564	6.0	580	0	0.00
10/23/2012	1	23.97	1	23.97	331612.6	4	11.90	3	12.00	1564	6.0	620	0	0.00
10/24/2012	1	23.97	1	23.97	331286.1	4	11.97	3	12.00	1554	6.0	310	0	0.00
10/25/2012	1	23.97	1	23.97	331121.3	4	11.97	3	12.00	1568	6.0	260	0	0.00
10/26/2012	1	23.97	1	23.97	331265.5	4	11.63	4	12.35	1576	6.0	260	0	0.00
10/27/2012	1	23.97	1	23.97	331262.4	0	0.00	1	23.98	1584	6.0	240	0	0.00
10/28/2012	1	23.97	1	23.97	330980.2	0	0.00	1	23.98	1580	6.0	0	0	0.00
10/29/2012	2	23.92	2	23.87	355329.4	4	10.18	6	13.60	1608	6.0	46360	0	0.00
10/30/2012	1	23.97	1	23.97	369602.1	4	11.90	3	12.00	1653	6.0	59370	0	0.00
10/31/2012	1	23.97	1	23.97	436716.9	3	18.48	3	17.83	1805	6.0	16140	0	0.00
11/1/2012	1	23.97	1	23.97	494590.5	2	20.75	1	23.97	1936	6.0	6560	0	0.00
11/2/2012	1	23.97	1	23.97	518245.5	1	23.98	1	23.98	1990	6.0	23920	0	0.00
11/3/2012	1	23.97	1	23.97	521437.5	1	23.98	1	23.98	1993	6.0	0	0	0.00
11/4/2012	1	23.97	1	23.97	524728.3	1	23.97	1	23.98	2003	6.0	0	0	0.00
11/5/2012	1	23.97	1	23.97	526883.1	2	20.57	1	23.97	2242	6.0	9050	0	0.00
11/6/2012	1	23.97	1	23.97	522126.6	1	23.97	1	23.97	2243	6.0	1710	0	0.00
11/7/2012	1	23.97	1	23.97	537320.1	2	20.23	1	23.97	2263	6.0	1240	0	0.00
11/8/2012	1	23.97	1	23.97	538891.9	1	23.98	1	23.98	2021	6.0	1220	0	0.00
11/9/2012	1	23.97	1	23.97	548799.4	1	23.98	1	23.98	2279	6.0	800	0	0.00
11/10/2012	1	23.97	1	23.97	549843.9	1	23.98	1	23.98	2286	6.0	1180	0	0.00
11/11/2012	1	23.97	1	23.97	542331.1	3	17.63	2	21.12	2002	6.0	740	0	0.00
11/12/2012	1	23.97	1	23.97	527172.5	3	18.87	2	20.28	1971	6.0	760	0	0.00
11/13/2012	1	23.97	1	23.97	547782.8	1	23.98	1	23.97	2026	6.0	18600	0	0.00
11/14/2012	1	23.97	1	23.97	554298.6	1	23.98	1	23.97	2299	6.0	4310	0	0.00
11/15/2012	1	23.97	1	23.97	539319.3	1	23.97	1	23.98	2296	6.0	2210	0	0.00
11/16/2012	1	23.97	1	23.97	527878.1	2	22.25	3	20.18	2295	6.0	1740	0	0.00
11/17/2012	1	23.97	1	23.97	525391.6	2	23.87	1	23.83	2304	6.0	1700	0	0.00
11/18/2012	1	23.97	1	23.97	519089.1	2	23.58	1	23.67	2290	6.0	1220	0	0.00

DATE	Tower Blower Cycles	Tower Blower Hours	Tower Pump Cycles	Tower Pump Hours	Discharge Flow	Effluent P1 Cycles	Effluent P1 Hours	Effluent P2 Cycles	Effluent P2 Hours	KWH	pH	De-Water Flow	SVE Blower Cycles	SVE Blower Hours
11/19/2012	1	23.97	1	23.97	520667	1	23.97	1	23.98	2282	6.0	810	0	0.00
11/20/2012	1	23.97	1	23.97	525563.7	1	23.97	1	23.98	2024	6.0	11290	0	0.00
11/21/2012	1	23.97	1	23.97	520761.8	1	23.98	1	23.97	2264	6.0	800	0	0.00
11/22/2012	1	23.97	1	23.97	516795.3	1	23.98	1	23.97	2252	6.0	800	0	0.00
11/23/2012	1	23.97	1	23.97	513404.5	1	23.97	1	23.98	2223	6.0	790	0	0.00
11/24/2012	1	23.97	1	23.97	509929.3	1	23.97	1	23.97	2244	6.0	770	0	0.00
11/25/2012	1	23.97	1	23.97	506460.3	1	23.97	2	21.82	2236	6.0	730	0	0.00
11/26/2012	1	23.97	1	23.97	503514.5	2	22.50	2	20.97	2233	6.0	730	0	0.00
11/27/2012	1	23.97	1	23.97	504168.5	1	23.97	2	22.48	2238	6.0	8100	0	0.00
11/28/2012	1	23.97	1	23.97	501738.8	1	23.98	1	23.98	2236	6.0	2970	0	0.00
11/29/2012	1	23.97	1	23.97	500645.9	1	23.97	1	23.98	2234	6.0	1240	0	0.00
11/30/2012	1	23.97	1	23.97	504583.6	1	13.73	1	23.97	2238	6.0	10500	0	0.00
12/1/2012	1	23.97	1	23.97	497818.6	0	0.00	1	23.97	2210	6.0	820	0	0.00
12/2/2012	1	23.97	1	23.97	496677.3	0	0.00	1	23.97	1938	6.0	770	0	0.00
12/3/2012	1	23.97	1	23.97	496920.4	1	12.97	1	23.98	1918	6.0	1140	0	0.00
12/4/2012	1	23.97	1	23.97	494203.3	1	23.72	1	23.98	1899	6.0	740	0	0.00
12/5/2012	1	23.97	1	23.97	487878	2	19.98	2	23.38	1896	6.0	370	0	0.00
12/6/2012	1	23.97	1	23.97	486772.8	3	14.85	2	22.22	2183	6.0	710	0	0.00
12/7/2012	1	23.97	1	23.97	495005.6	2	16.67	1	23.97	2227	6.0	31010	0	0.00
12/8/2012	1	23.97	1	23.97	483032.9	3	12.68	1	23.97	1916	6.0	2190	0	0.00
12/9/2012	1	23.97	1	23.97	482557	3	12.83	2	19.98	1916	6.0	3880	0	0.00
12/10/2012	1	23.97	1	23.97	482270.7	4	12.90	1	23.97	1897	6.0	3930	0	0.00
12/11/2012	1	23.97	1	23.97	481312.8	4	12.58	1	23.98	1907	6.0	3380	0	0.00
12/12/2012	1	23.97	1	23.97	480193.2	4	12.70	1	23.98	2181	6.0	1350	0	0.00
12/13/2012	1	23.97	1	23.97	479662.8	4	12.62	1	23.82	2181	6.0	870	0	0.00
12/14/2012	1	23.97	1	23.97	478866.6	4	12.45	2	15.98	2198	6.0	870	0	0.00
12/15/2012	1	23.97	1	23.97	477670.7	4	12.42	3	12.23	2194	6.0	820	0	0.00
12/16/2012	1	23.97	1	23.97	475611.8	4	12.38	2	19.98	1925	6.0	790	0	0.00
12/17/2012	1	23.97	1	23.97	474557	4	12.33	1	23.65	1914	6.0	390	0	0.00
12/18/2012	1	23.97	1	23.97	476100	4	12.32	2	15.98	1915	6.0	2780	0	0.00
12/19/2012	1	23.97	1	23.97	472854.4	4	12.40	3	12.00	2143	6.0	1280	0	0.00
12/20/2012	2	23.27	2	23.23	467904.3	5	18.40	3	15.62	2130	6.0	3420	0	0.00
12/21/2012	1	23.97	1	23.97	497568.3	4	15.43	1	23.98	2210	6.0	35000	0	0.00
12/22/2012	1	23.97	1	23.97	487707	4	13.58	1	23.97	2212	6.0	5670	0	0.00
12/23/2012	1	23.97	1	23.97	489797.9	2	23.50	1	23.98	2211	6.0	2970	0	0.00
12/24/2012	1	23.97	1	23.97	490591	2	20.40	1	23.98	2486	6.0	2460	0	0.00
12/25/2012	1	23.97	1	23.97	492769.5	1	23.97	1	23.98	2227	6.0	8650	0	0.00
12/26/2012	1	23.97	1	23.97	495467.1	1	23.98	1	23.98	2506	6.0	16710	0	0.00
12/27/2012	1	23.97	1	23.97	503663.8	1	23.98	1	23.98	2516	6.0	32820	0	0.00
12/28/2012	1	23.97	1	23.97	497389	1	23.98	1	23.98	2246	6.0	7980	0	0.00
12/29/2012	1	23.97	1	23.97	498048.3	1	23.98	1	23.97	2518	6.0	8160	0	0.00
12/30/2012	1	23.97	1	23.97	498030	1	23.97	1	23.98	2393	6.0	2565	0	0.00
12/31/2012	1	23.97	1	23.97	498030	1	23.97	1	23.98	2393	6.0	2565	0	0.00

DATE	Tower Blower Cycles	Tower Blower Hours	Tower Pump Cycles	Tower Pump Hours	Discharge Flow	Effluent P1 Cycles	Effluent P1 Hours	Effluent P2 Cycles	Effluent P2 Hours	KWH	pH	De-Water Flow	SVE Blower Cycles	SVE Blower Hours
Sum	387	8610.10	395	8608.68	153624656	1204	4898.43	1174	5007.95	679846		1537490	0	0.00
Max	6	23.97	7	23.97	554299	10	23.98	13	23.98	2608	8.0	60560	0	0.00
Average	1	23.52	1	23.52	419739	3	13.38	3	13.68	1858	6.8	4201	0	0.00

Harley-Davidson Motor Company

TCA and West Parking Lot Area Well Flow Data

Gallons Pumped

From: 1/1/2012

To: 12/31/2012

DATE	CW-8	CW-16	CW-9	CW-20	CW-13	CW-17	CW-15A
1/1/2012	175363	0	102447	0	110743	102447	7052
1/2/2012	175319	0	102436	0	110757	102435	7260
1/3/2012	175431	0	102481	0	110819	102476	7220
1/4/2012	173416	0	102477	0	110814	101616	7187
1/5/2012	172893	0	102466	0	110799	98717	7099
1/6/2012	172290	0	102478	0	110806	96887	7268
1/7/2012	172653	0	84352	0	110802	95061	7210
1/8/2012	172675	0	66939	0	110363	93669	7187
1/9/2012	171744	0	88357	0	110767	93311	7079
1/10/2012	171554	0	88369	0	110768	91597	7117
1/11/2012	171307	0	88383	0	110778	91228	7209
1/12/2012	171914	0	88373	0	110750	91221	7187
1/13/2012	160363	0	88379	0	110796	91230	7110
1/14/2012	173201	0	88357	0	110738	91205	7156
1/15/2012	169009	0	88369	0	110736	91218	7183
1/16/2012	169313	0	88378	0	110768	91222	7091
1/17/2012	169422	0	88354	0	110730	91195	7149
1/18/2012	169769	0	88375	0	110772	91224	7186
1/19/2012	175931	0	88365	0	110755	91208	7125
1/20/2012	175926	0	88368	0	110769	91217	7058
1/21/2012	175721	0	88382	0	110768	91227	7224
1/22/2012	176118	0	88367	0	110757	91217	7192
1/23/2012	176153	0	88376	0	110760	91224	7157

DATE	CW-8	CW-16	CW-9	CW-20	CW-13	CW-17	CW-15A
1/24/2012	176183	0	88380	0	110788	91230	7142
1/25/2012	176360	0	88386	0	110789	91236	7123
1/26/2012	176327	0	88363	0	110750	91214	7195
1/27/2012	176413	0	88372	0	110760	91226	7166
1/28/2012	176126	0	88379	0	110768	91227	7178
1/29/2012	176005	0	88357	0	110781	91204	7204
1/30/2012	175411	0	88372	0	110787	91219	7190
1/31/2012	175637	0	88354	0	110804	91199	7184
2/1/2012	175718	0	88366	0	110817	91213	7121
2/2/2012	176023	0	88369	0	110803	91214	7085
2/3/2012	176431	0	88347	0	110771	91191	7174
2/4/2012	176443	0	88358	0	110787	91204	7088
2/5/2012	176463	0	88374	0	110794	91217	7176
2/6/2012	176419	0	88356	0	110747	91201	7188
2/7/2012	176420	0	88374	0	110763	91220	7152
2/8/2012	176404	0	88384	0	110769	91229	7062
2/9/2012	176373	0	88372	0	110767	91216	7136
2/10/2012	175662	0	88382	0	110763	91226	7186
2/11/2012	175260	0	88393	0	110772	91244	7175
2/12/2012	174449	0	88375	0	110776	91222	7076
2/13/2012	173718	0	88387	0	110801	91231	7169
2/14/2012	173265	0	88398	0	110812	91239	7128
2/15/2012	172540	0	88378	0	110809	90578	7113
2/16/2012	173515	0	88385	0	110416	88378	7186
2/17/2012	173590	0	88374	0	110810	88366	7181
2/18/2012	173989	0	88378	0	110818	88375	7183
2/19/2012	173945	0	88389	0	110823	88384	7142

DATE	CW-8	CW-16	CW-9	CW-20	CW-13	CW-17	CW-15A
2/20/2012	168312	0	85126	0	107849	83612	6087
2/21/2012	166998	0	88365	0	110818	85494	5701
2/22/2012	165106	0	86331	0	108807	83939	5709
2/23/2012	169405	0	88372	0	110823	85503	5883
2/24/2012	169257	0	88382	0	110834	85511	5852
2/25/2012	168890	0	88367	0	110826	85500	5780
2/26/2012	169662	0	86857	0	110845	84971	5751
2/27/2012	170204	0	85502	0	110857	84123	5727
2/28/2012	169931	0	85481	0	110828	84104	5622
2/29/2012	170963	0	85487	0	110849	82985	5670
3/1/2012	173382	0	85487	0	110824	82713	5682
3/2/2012	174014	0	85492	0	110814	82725	5655
3/3/2012	18897	0	9776	0	12680	9461	657
3/4/2012	118058	0	61072	0	79215	59105	4104
3/5/2012	114337	0	58993	0	76496	57072	3963
3/6/2012	168224	0	85489	0	110921	82713	5758
3/7/2012	168947	0	85464	0	110883	87328	5750
3/8/2012	170918	0	85488	0	110840	94584	5737
3/9/2012	169433	0	85467	0	110779	95442	5658
3/10/2012	168883	0	85485	0	110798	95464	5615
3/11/2012	168883	0	85485	0	110798	95464	5615
3/12/2012	168883	0	85485	0	110798	95464	5615
3/13/2012	168883	0	85485	0	110798	95464	5615
3/14/2012	178000	0	88948	0	115294	90452	6062
3/15/2012	178000	0	88948	0	115294	90452	6062
3/16/2012	171043	0	85477	0	110798	86924	5824
3/17/2012	170003	0	85482	0	110816	86929	5757

DATE	CW-8	CW-16	CW-9	CW-20	CW-13	CW-17	CW-15A
3/18/2012	172794	0	85490	0	110839	86935	5748
3/19/2012	174107	0	85497	0	110868	85965	5707
3/20/2012	174154	0	85481	0	110849	84100	5632
3/21/2012	174158	0	85488	0	110841	84111	5744
3/22/2012	175044	0	85501	0	110863	84119	5888
3/23/2012	174989	0	85483	0	110854	83557	5814
3/24/2012	175626	0	85496	0	110850	81319	5808
3/25/2012	175361	0	85501	0	108988	82271	5871
3/26/2012	174184	0	85478	0	108100	82712	5805
3/27/2012	173978	0	85493	0	108089	82725	5754
3/28/2012	173674	0	85470	0	108066	82700	5747
3/29/2012	173146	0	85472	0	108092	82708	5661
3/30/2012	172895	0	85485	0	108100	82720	5724
3/31/2012	171396	0	85011	0	108091	82704	5811
4/1/2012	170780	0	84502	0	108101	82710	5752
4/2/2012	169905	0	84397	0	108072	82717	5747
4/3/2012	170163	0	84578	0	108083	82734	5659
4/4/2012	169390	0	84702	0	108074	82707	5765
4/5/2012	167268	0	84570	0	108101	82724	5751
4/6/2012	167388	0	84796	0	108082	82704	5653
4/7/2012	168824	0	86757	0	108078	82717	5727
4/8/2012	169490	0	85976	0	108079	82730	5696
4/9/2012	169657	0	85797	0	108023	82708	5717
4/10/2012	169765	0	86705	0	108021	82710	5781
4/11/2012	170077	0	86972	0	108050	82725	5796
4/12/2012	169763	0	86458	0	108010	82705	5732
4/13/2012	170034	0	87155	0	108011	82711	5636

DATE	CW-8	CW-16	CW-9	CW-20	CW-13	CW-17	CW-15A
4/14/2012	170016	0	87622	0	108051	82728	5722
4/15/2012	169860	0	87486	0	107997	82690	5670
4/16/2012	169870	0	86596	0	108024	82717	5718
4/17/2012	110533	0	86498	0	108042	82728	5682
4/18/2012	143294	0	86696	0	108044	80264	5744
4/19/2012	144019	0	86650	0	108019	79898	5640
4/20/2012	142123	0	86874	0	106434	81503	5274
4/21/2012	139522	0	86800	0	105340	82108	5033
4/22/2012	139577	0	85356	0	105327	82729	5017
4/23/2012	139806	0	84680	0	105341	82734	4993
4/24/2012	139431	0	84915	0	105340	82735	4912
4/25/2012	139161	0	85038	0	105317	82705	4893
4/26/2012	139194	0	86025	0	105320	82726	4970
4/27/2012	139218	0	86115	0	105323	82731	5022
4/28/2012	139153	0	86436	0	105295	82724	4899
4/29/2012	138978	0	86300	0	105274	82700	5012
4/30/2012	138778	0	86320	0	105307	82705	5033
5/1/2012	138682	0	86556	0	105269	82689	5030
5/2/2012	138762	0	86546	0	105277	82696	4974
5/3/2012	139110	0	86024	0	105288	82702	5000
5/4/2012	139059	0	86234	0	105248	82686	4959
5/5/2012	139059	0	86222	0	105191	82692	4911
5/6/2012	139134	0	86273	0	105224	82698	4891
5/7/2012	138967	0	86082	0	105253	82686	4844
5/8/2012	138959	0	86009	0	105270	82688	4747
5/9/2012	139111	0	85981	0	105277	82705	4434
5/10/2012	139201	0	86077	0	105323	82713	4308

DATE	CW-8	CW-16	CW-9	CW-20	CW-13	CW-17	CW-15A
5/11/2012	139184	0	86476	0	105297	82719	4253
5/12/2012	139089	0	86487	0	105306	82730	4190
5/13/2012	139023	0	86339	0	105247	82713	4314
5/14/2012	139106	0	86244	0	105284	82729	4285
5/15/2012	139590	0	86014	0	105300	82716	4212
5/16/2012	139503	0	86186	0	105210	84426	4242
5/17/2012	139529	0	86146	0	105189	85489	4314
5/18/2012	140234	0	86217	0	105259	85504	4300
5/19/2012	140131	0	86048	0	105221	85483	4241
5/20/2012	140191	0	85976	0	105243	85489	4189
5/21/2012	140161	0	85942	0	105172	85469	4283
5/22/2012	140218	0	86122	0	105154	85445	4311
5/23/2012	140294	0	86442	0	105198	85483	3792
5/24/2012	140435	0	86265	0	105203	87580	3945
5/25/2012	140372	0	86384	0	105173	89046	4171
5/26/2012	140344	0	86436	0	105184	89033	4228
5/27/2012	140314	0	86426	0	105180	89045	3949
5/28/2012	140295	0	86197	0	105230	89053	3757
5/29/2012	140398	0	85758	0	105183	89031	3704
5/30/2012	140792	0	85785	0	105188	89044	3676
5/31/2012	140670	0	85837	0	105170	90692	3597
6/1/2012	140718	0	85974	0	105213	66739	3597
6/2/2012	141331	0	86422	0	105265	0	3696
6/3/2012	141268	0	86638	0	105169	0	3601
6/4/2012	144745	0	86703	0	105199	43583	3588
6/5/2012	146656	0	86554	0	105173	0	3594
6/6/2012	146630	0	86499	0	105745	36236	3532

DATE	CW-8	CW-16	CW-9	CW-20	CW-13	CW-17	CW-15A
6/7/2012	146670	0	86151	0	106657	91198	3451
6/8/2012	146563	0	86038	0	106674	93559	3472
6/9/2012	146393	0	85909	0	106669	97093	3480
6/10/2012	146319	0	85962	0	106650	99596	3464
6/11/2012	146136	0	85904	0	106639	101678	3451
6/12/2012	146148	0	86245	0	106627	32284	3438
6/13/2012	146361	0	86537	0	106652	45561	3394
6/14/2012	122291	0	71194	0	87571	83852	2402
6/15/2012	153716	0	87009	0	106632	105243	2302
6/16/2012	150720	0	86377	0	106595	106606	2301
6/17/2012	151264	0	86212	0	106614	106618	2302
6/18/2012	151135	0	86561	0	106655	44637	2298
6/19/2012	149398	0	86715	0	106648	0	2301
6/20/2012	149187	0	86044	0	106602	64393	2183
6/21/2012	100757	0	58618	0	72623	57066	1491
6/22/2012	146234	0	86827	0	106620	1	2445
6/23/2012	145967	0	86059	0	106609	0	2446
6/24/2012	144236	0	85554	0	106596	0	2427
6/25/2012	105743	0	62650	0	77852	0	1787
6/26/2012	145599	0	85530	0	107195	0	2439
6/27/2012	145248	0	85718	0	107408	0	2444
6/28/2012	145071	0	85930	0	107423	0	2357
6/29/2012	145371	0	86474	0	107451	0	2301
6/30/2012	145559	0	86980	0	107463	0	2301
7/1/2012	146273	0	87161	0	107483	0	2302
7/2/2012	146360	0	87529	0	107442	0	2291
7/3/2012	142957	0	84546	0	104672	50512	2189

DATE	CW-8	CW-16	CW-9	CW-20	CW-13	CW-17	CW-15A
7/4/2012	145611	0	85829	0	107441	0	2294
7/5/2012	145480	0	84774	0	107454	0	2298
7/6/2012	145384	0	84974	0	107475	0	2301
7/7/2012	145194	0	85724	0	107471	0	2213
7/8/2012	145248	0	85778	0	107448	0	2157
7/9/2012	145130	0	85807	0	107471	0	2158
7/10/2012	145013	0	86001	0	107491	0	2158
7/11/2012	144895	0	85618	0	107467	50850	2085
7/12/2012	144665	0	85769	0	107415	99612	2018
7/13/2012	145382	0	85912	0	107416	99625	2014
7/14/2012	145830	0	85576	0	107370	99594	2013
7/15/2012	146210	0	85111	0	107368	99604	2011
7/16/2012	146282	0	84993	0	107369	99612	1963
7/17/2012	146098	0	84712	0	107399	99600	1868
7/18/2012	145743	0	84222	0	107373	99613	1784
7/19/2012	129819	0	73409	0	92649	82782	1557
7/20/2012	152360	0	85469	0	107393	95410	1736
7/21/2012	152156	0	85471	0	107319	95415	1726
7/22/2012	152226	0	85460	0	107359	95401	1726
7/23/2012	152341	0	85466	0	107400	95409	1726
7/24/2012	151805	0	85478	0	107383	95424	1726
7/25/2012	151591	0	85467	0	107408	95410	3814
7/26/2012	145334	0	83253	0	104660	84097	4914
7/27/2012	148699	0	86368	0	107405	96315	5211
7/28/2012	102754	0	59038	0	73244	65974	3464
7/29/2012	0	0	0	0	0	0	0
7/30/2012	89526	0	51438	0	63816	57482	3018

DATE	CW-8	CW-16	CW-9	CW-20	CW-13	CW-17	CW-15A
7/31/2012	151811	0	86908	0	107438	96851	4750
8/1/2012	151573	0	86922	0	107536	98963	4570
8/2/2012	93801	0	86905	0	107491	99651	4429
8/3/2012	0	0	81152	0	100407	93069	4059
8/4/2012	0	0	86944	0	107580	99699	4334
8/5/2012	0	0	86926	0	107529	99682	4314
8/6/2012	0	0	86936	0	107553	99698	4314
8/7/2012	0	0	86914	0	107543	99667	4354
8/8/2012	0	0	86901	0	107512	99649	4310
8/9/2012	0	0	86902	0	107480	99649	4184
8/10/2012	0	0	86903	0	107494	99644	4171
8/11/2012	0	0	86905	0	107451	99658	4185
8/12/2012	0	0	86922	0	107507	99670	4101
8/13/2012	0	0	86894	0	107443	99644	3994
8/14/2012	0	0	86926	0	107483	99677	4026
8/15/2012	0	0	86938	0	107467	99695	4026
8/16/2012	0	0	86920	0	107467	99673	4001
8/17/2012	0	0	86934	0	107525	99688	3894
8/18/2012	0	0	86930	0	107476	99690	3913
8/19/2012	0	0	86936	0	107427	99694	3905
8/20/2012	0	0	86918	0	107441	99672	3884
8/21/2012	0	0	86925	0	107411	99678	3883
8/22/2012	1	0	86911	0	107430	85387	3883
8/23/2012	0	0	86922	0	107490	99670	3883
8/24/2012	0	0	86928	0	107471	99675	3883
8/25/2012	0	0	86909	0	107451	99659	4094
8/26/2012	0	0	86918	0	107470	99666	4166

DATE	CW-8	CW-16	CW-9	CW-20	CW-13	CW-17	CW-15A
8/27/2012	0	0	86940	0	107562	99696	4170
8/28/2012	0	0	86914	0	107491	99668	4169
8/29/2012	0	0	87791	0	107462	99673	4165
8/30/2012	0	0	88360	0	107511	99684	4116
8/31/2012	0	0	88383	0	107498	99689	4061
9/1/2012	0	0	88374	0	107502	99678	4036
9/2/2012	0	0	88375	0	107530	99690	4027
9/3/2012	0	0	88360	0	107477	99656	3995
9/4/2012	0	0	88373	0	107478	99682	3926
9/5/2012	0	0	88384	0	107505	99690	3884
9/6/2012	0	0	33655	0	40876	37910	1477
9/7/2012	0	0	73	0	0	0	0
9/8/2012	0	0	62269	0	75735	70232	2840
9/9/2012	0	0	88359	0	107465	99662	4033
9/10/2012	0	0	88381	0	107525	99683	4026
9/11/2012	0	0	88378	0	107422	100733	4026
9/12/2012	0	0	88358	0	107441	105265	4025
9/13/2012	0	0	88369	0	107515	106694	4021
9/14/2012	0	0	88383	0	107601	106711	3954
9/15/2012	0	0	88370	0	107582	106693	3885
9/16/2012	0	0	88376	0	107557	106713	3883
9/17/2012	0	0	88374	0	107433	106698	3883
9/18/2012	0	0	88356	0	107407	106678	3922
9/19/2012	0	0	88377	0	107521	106712	3930
9/20/2012	0	0	88391	0	107582	107513	3884
9/21/2012	0	0	88384	0	107542	108167	3886
9/22/2012	0	0	88374	0	107584	108125	4026

DATE	CW-8	CW-16	CW-9	CW-20	CW-13	CW-17	CW-15A
9/23/2012	0	0	88388	0	107550	108140	4026
9/24/2012	0	0	88388	0	107473	108134	4013
9/25/2012	0	0	88362	0	107445	105393	3918
9/26/2012	0	0	88368	0	107469	105277	3884
9/27/2012	0	0	88377	0	107455	105286	3884
9/28/2012	0	0	88365	0	107500	107196	4606
9/29/2012	0	0	88364	0	107556	108101	4892
9/30/2012	0	0	88388	0	107549	108126	4914
10/1/2012	0	0	88368	0	107494	108100	4772
10/2/2012	0	0	88384	0	107555	108117	4678
10/3/2012	0	0	90662	0	107563	110344	4662
10/4/2012	0	0	91245	0	107602	110923	4609
10/5/2012	0	0	91231	0	107566	113161	4601
10/6/2012	0	0	91245	0	107576	113762	4601
10/7/2012	0	0	91247	0	107487	113762	4601
10/8/2012	0	0	91223	0	107464	113732	4575
10/9/2012	0	0	91231	0	107407	113737	4481
10/10/2012	0	0	91240	0	107408	110591	4461
10/11/2012	0	0	91220	0	107397	105233	4459
10/12/2012	0	0	83518	0	98359	100344	4193
10/13/2012	0	0	91234	0	107452	110901	4594
10/14/2012	0	0	91212	0	107429	110884	4514
10/15/2012	0	0	91229	0	107485	110902	4459
10/16/2012	0	0	91232	0	107476	110908	4414
10/17/2012	0	0	91226	0	107467	109353	4175
10/18/2012	0	0	91232	0	107505	107144	4063
10/19/2012	0	0	66306	0	78192	76226	3054

DATE	CW-8	CW-16	CW-9	CW-20	CW-13	CW-17	CW-15A
10/20/2012	0	0	91232	0	107497	105286	4170
10/21/2012	0	0	91238	0	107463	105290	4168
10/22/2012	0	0	91216	0	107450	105264	4073
10/23/2012	0	0	91226	0	107451	105271	4027
10/24/2012	0	0	91246	0	107489	105291	4026
10/25/2012	0	0	91213	0	107430	105258	4140
10/26/2012	0	0	91228	0	107480	105290	4194
10/27/2012	0	0	91238	0	107426	105287	4171
10/28/2012	0	0	91221	0	107504	105275	4170
10/29/2012	0	0	90862	0	107047	104872	4222
10/30/2012	0	0	92441	0	107521	106492	4132
10/31/2012	90559	0	97415	0	107545	110329	4183
11/1/2012	152917	0	100466	0	109007	114767	4824
11/2/2012	151760	0	105552	0	113999	118742	4897
11/3/2012	151207	0	108856	0	116136	121483	4890
11/4/2012	149241	0	113149	0	116536	126914	5035
11/5/2012	147443	0	104602	0	116517	132342	5033
11/6/2012	150313	0	103114	0	116513	135617	5034
11/7/2012	166720	0	104084	0	116631	140339	5033
11/8/2012	168527	0	110895	0	116676	140356	5013
11/9/2012	175958	0	110702	0	114312	138072	5182
11/10/2012	177960	0	110854	0	113671	137453	5060
11/11/2012	177821	0	110896	0	113726	132064	4979
11/12/2012	173132	0	110878	0	113712	118306	4716
11/13/2012	188727	0	108665	0	111428	113740	4334
11/14/2012	198303	0	109980	0	110837	115621	4314
11/15/2012	186190	0	110919	0	110843	116558	4314

DATE	CW-8	CW-16	CW-9	CW-20	CW-13	CW-17	CW-15A
11/16/2012	186874	0	110893	0	110810	114331	4307
11/17/2012	185577	0	110908	0	110830	112855	4209
11/18/2012	181790	0	110900	0	110840	111188	4171
11/19/2012	189996	0	108736	0	108703	110892	4170
11/20/2012	194508	0	108074	0	108067	110878	4193
11/21/2012	190853	0	108083	0	108071	110880	4314
11/22/2012	187625	0	108101	0	108079	110902	4314
11/23/2012	178487	0	108088	0	108104	110917	4314
11/24/2012	179261	0	108078	0	108088	110885	4255
11/25/2012	175182	0	107150	0	108095	110896	4173
11/26/2012	171153	0	105264	0	108104	107583	4127
11/27/2012	170973	0	105249	0	108075	104308	3899
11/28/2012	173814	0	105255	0	108083	103867	3883
11/29/2012	171300	0	105227	0	108087	103836	3885
11/30/2012	173737	0	105247	0	108104	103852	4029
12/1/2012	174930	0	105261	0	108111	101665	4027
12/2/2012	175644	0	105258	0	108101	99667	4027
12/3/2012	177633	0	105271	0	108101	99036	4027
12/4/2012	172983	0	105241	0	108084	96845	4016
12/5/2012	172471	0	97374	0	108114	96863	3921
12/6/2012	173396	0	99637	0	108092	95329	3883
12/7/2012	175132	0	99651	0	108071	92792	3882
12/8/2012	175210	0	99662	0	108033	92624	3892
12/9/2012	171858	0	99670	0	108049	92640	3699
12/10/2012	171871	0	99612	0	107969	92579	3704
12/11/2012	169130	0	99600	0	107960	92583	3738
12/12/2012	168238	0	99630	0	107998	92609	3740

DATE	CW-8	CW-16	CW-9	CW-20	CW-13	CW-17	CW-15A
12/13/2012	168811	0	99658	0	108024	92625	3738
12/14/2012	169064	0	99661	0	108061	92632	3738
12/15/2012	169141	0	99660	0	108050	92259	3738
12/16/2012	168677	0	99661	0	108060	90273	3711
12/17/2012	168951	0	99656	0	108042	89776	3738
12/18/2012	167852	0	99659	0	108060	89782	3711
12/19/2012	167959	0	99679	0	108056	89792	3598
12/20/2012	167392	0	96501	0	104626	86944	3549
12/21/2012	183553	0	99643	0	108054	85871	3742
12/22/2012	187219	0	99643	0	108063	86671	3738
12/23/2012	187918	0	99669	0	108027	92627	3738
12/24/2012	191322	0	99670	0	108038	92647	3676
12/25/2012	190517	0	99671	0	108029	92635	3615
12/26/2012	192387	0	99678	0	108050	92647	3600
12/27/2012	192852	0	99667	0	108035	95208	3651
12/28/2012	193271	0	99657	0	108025	99269	3597
12/29/2012	193357	0	99677	0	108046	100668	3596
12/30/2012	192296	0	99670	0	108033	103667	3692
12/31/2012	192296	0	99670	0	108033	103667	3692
Sum	44118775	0	32458686	0	38940313	32047115	1667005
Average	120543	0	88685	0	106394	87560	4555

Harley-Davidson Motor Company

Northeast Property Boundary Area Well Flow Data

Gallons Pumped

From: 1/1/2012

To: 12/31/2012

DATE	CW-1	CW-1A	CW-2	CW-3	CW-4	CW-5	CW-6	CW-7	CW-7A
1/1/2012	2964	316	809	7519	2842	2180	4439	761	2032
1/2/2012	2960	309	791	7494	2816	2040	4415	760	2028
1/3/2012	2955	299	785	7463	2779	1889	4391	746	2027
1/4/2012	2946	291	738	7436	2748	1716	4355	794	2019
1/5/2012	2941	290	583	7417	2710	1668	4340	792	2003
1/6/2012	2933	288	550	7406	2674	1627	4351	791	1969
1/7/2012	2930	285	525	7421	2632	1593	4335	789	1921
1/8/2012	2927	275	508	7404	2593	1431	4317	785	1872
1/9/2012	2919	268	502	7387	2525	1374	4292	782	1867
1/10/2012	2920	270	497	7385	1805	1291	4273	781	1871
1/11/2012	2916	257	498	7384	615	1133	4274	777	1831
1/12/2012	2915	260	507	7386	774	1674	4280	775	1813
1/13/2012	2915	257	523	7505	1610	1810	4377	774	1809
1/14/2012	2915	260	506	7578	2730	1663	4461	768	1808
1/15/2012	2910	258	482	7538	2704	1510	4447	763	1807
1/16/2012	2904	247	465	7514	2695	1394	4422	759	1799
1/17/2012	2906	250	459	7497	2872	1173	4404	761	1799
1/18/2012	2903	246	442	7474	2916	1500	4396	759	1798
1/19/2012	2895	248	434	7452	2927	1382	4385	758	1797
1/20/2012	2894	245	423	6571	2919	1310	4448	759	1785
1/21/2012	2888	237	415	7374	2926	1286	4485	758	1775
1/22/2012	2881	237	402	7357	2905	1189	4512	755	1726
1/23/2012	2878	233	398	7337	2908	1141	4503	754	1740
1/24/2012	2875	225	479	7326	2744	1659	4454	750	1718
1/25/2012	2866	238	674	7328	2806	1856	4411	751	1741
1/26/2012	2866	252	679	7336	2864	1869	4404	750	1780
1/27/2012	2864	275	782	7345	2864	2007	4441	752	1793
1/28/2012	2863	315	807	7338	2862	1926	4445	753	1795
1/29/2012	2860	337	769	7330	2856	1858	4437	752	1795
1/30/2012	2856	331	734	7320	2850	2406	4588	757	1792
1/31/2012	2850	322	697	7308	2846	2419	4672	685	1787
2/1/2012	2849	309	694	7305	2849	2179	4664	756	1776
2/2/2012	2844	304	673	7296	2847	2080	4679	742	1774
2/3/2012	2838	290	611	7264	2830	1926	4672	745	1783
2/4/2012	2833	289	587	7260	2811	1834	4710	787	1793

DATE	CW-1	CW-1A	CW-2	CW-3	CW-4	CW-5	CW-6	CW-7	CW-7A
2/5/2012	2832	281	568	7271	2798	1819	4779	783	1792
2/6/2012	2827	275	560	7261	2793	1750	4779	783	1788
2/7/2012	2823	268	562	7265	2796	1697	4788	788	1787
2/8/2012	2817	263	562	7260	2792	1647	4790	786	1785
2/9/2012	2814	261	523	7257	2791	1627	4744	784	1784
2/10/2012	2812	267	430	7247	2794	1611	4673	785	1779
2/11/2012	2808	257	411	7241	2788	1622	4594	781	1776
2/12/2012	2803	252	406	7226	2779	1585	4588	777	1774
2/13/2012	2797	248	408	7215	2773	1485	4608	771	1772
2/14/2012	2790	244	411	7215	2752	1444	4590	771	1774
2/15/2012	2784	238	402	7209	2747	1250	4548	766	1769
2/16/2012	2778	238	404	7194	2735	1329	4532	764	1762
2/17/2012	2772	231	404	7187	2721	1269	4539	760	1761
2/18/2012	2772	233	406	7185	2722	1355	4559	754	1742
2/19/2012	2767	228	408	7176	2712	1252	4586	751	1722
2/20/2012	2714	225	395	5962	2721	1186	4735	741	1684
2/21/2012	2720	233	401	7405	2811	1238	4061	745	1714
2/22/2012	2678	220	396	7263	2690	1222	4168	730	1677
2/23/2012	2753	230	397	7344	2653	1265	4470	737	1717
2/24/2012	2736	199	392	7314	2647	1321	4466	733	1714
2/25/2012	2669	147	101	7293	2659	1164	4468	729	1638
2/26/2012	2705	129	0	7243	2641	1035	4445	726	1589
2/27/2012	2682	131	0	7206	2637	1013	4555	720	1577
2/28/2012	2761	187	76	7174	2625	1027	4613	718	1545
2/29/2012	2830	203	0	7140	2750	1215	4568	716	1489
3/1/2012	2843	232	0	7125	2804	1553	4528	717	1465
3/2/2012	2851	247	0	7108	2794	1733	4568	715	1463
3/3/2012	317	36	1	824	318	199	526	81	162
3/4/2012	1982	228	6	5146	1984	1246	3284	507	1011
3/5/2012	1872	217	0	5008	1915	1191	3167	562	1139
3/6/2012	2730	252	0	7312	2826	1759	4636	715	1715
3/7/2012	2765	243	0	7371	2963	1731	4800	701	1691
3/8/2012	2767	252	0	7350	2999	1631	4233	671	1701
3/9/2012	2748	257	0	7324	2962	1514	4133	672	1706
3/10/2012	2749	245	0	7306	2881	1309	4142	675	1677
3/11/2012	2749	245	0	7306	2881	1309	4142	675	1677
3/12/2012	2749	245	0	7306	2881	1309	4142	675	1677
3/13/2012	2749	245	0	7306	2881	1309	4142	675	1677
3/14/2012	2799	234	305	7438	2737	1131	4652	552	1741
3/15/2012	2799	234	305	7438	2737	1131	4652	552	1741

DATE	CW-1	CW-1A	CW-2	CW-3	CW-4	CW-5	CW-6	CW-7	CW-7A
3/16/2012	2690	225	305	7144	2630	1089	4469	662	1673
3/17/2012	2661	212	508	7027	2600	1059	4383	983	1619
3/18/2012	2651	208	478	7009	2599	1010	4355	944	1588
3/19/2012	2644	196	435	7093	2676	1023	4357	933	1550
3/20/2012	2641	194	458	7138	2724	972	4363	947	1469
3/21/2012	2641	196	539	7117	2709	983	4337	944	1470
3/22/2012	2636	191	497	7084	2685	905	4299	924	1467
3/23/2012	2634	192	487	7037	2678	976	4278	934	1468
3/24/2012	2628	195	502	7019	2682	1102	4276	921	1464
3/25/2012	2623	203	527	7128	2682	1400	4448	915	1462
3/26/2012	2613	191	542	7164	2670	498	4466	927	1459
3/27/2012	2606	188	523	7144	2665	208	4439	896	1462
3/28/2012	2600	186	521	7140	2662	750	4434	931	1464
3/29/2012	2607	188	501	7134	2656	292	4443	910	1460
3/30/2012	2601	178	498	7123	2648	551	4423	881	1460
3/31/2012	2588	179	526	7122	2647	710	4404	898	1462
4/1/2012	2585	165	505	7095	2642	811	4375	935	1463
4/2/2012	2584	177	502	7062	2635	1173	4348	937	1466
4/3/2012	2573	170	506	7049	2627	1136	4325	880	1466
4/4/2012	2573	164	513	7076	2617	1181	4306	898	1461
4/5/2012	2567	160	510	7056	2613	1088	4363	871	1460
4/6/2012	2558	169	505	7042	2605	1133	4406	914	1460
4/7/2012	2553	159	505	7039	2593	1036	4421	938	1459
4/8/2012	2548	162	501	7034	2588	959	4433	923	1458
4/9/2012	2539	162	489	7026	2579	833	4422	951	1454
4/10/2012	2535	155	486	7028	2573	882	4412	935	1453
4/11/2012	2528	157	490	7016	2569	786	4391	936	1450
4/12/2012	2519	153	486	7007	2564	730	4366	946	1442
4/13/2012	2515	159	479	7002	2554	795	4354	1002	1406
4/14/2012	2510	148	478	6997	2543	773	4335	958	1392
4/15/2012	2504	156	482	6996	2536	756	4318	996	1411
4/16/2012	2503	149	484	6998	2520	732	4314	951	1436
4/17/2012	2502	145	479	7000	2514	749	4332	869	1445
4/18/2012	2494	145	477	6999	2502	734	4345	906	1444
4/19/2012	2486	147	463	6981	2490	770	4343	890	1438
4/20/2012	2479	149	483	6951	2481	785	4334	904	1437
4/21/2012	2473	152	479	6939	2470	816	4324	879	1440
4/22/2012	2469	152	479	6940	2466	859	4299	830	1440
4/23/2012	2467	154	479	6945	2604	1351	4441	881	1438
4/24/2012	2460	165	499	6937	2651	1242	4514	884	1431

DATE	CW-1	CW-1A	CW-2	CW-3	CW-4	CW-5	CW-6	CW-7	CW-7A
4/25/2012	2453	158	495	6918	2645	1026	4526	872	1432
4/26/2012	2445	153	490	6898	2636	940	4529	880	1436
4/27/2012	2438	150	492	6901	2636	825	4046	932	1439
4/28/2012	2430	139	485	6889	2611	555	3114	856	1425
4/29/2012	2428	148	482	6889	2607	568	4239	856	1425
4/30/2012	2418	140	489	6876	2582	586	4215	864	1433
5/1/2012	2414	136	489	6869	2555	656	4232	914	1437
5/2/2012	2409	133	488	6876	2550	696	4201	933	1439
5/3/2012	2403	133	492	6869	2510	616	4099	914	1440
5/4/2012	2397	134	497	6865	2488	711	4045	893	1434
5/5/2012	2389	129	493	6860	2498	663	3949	888	1430
5/6/2012	2381	134	483	6855	2503	370	3964	921	1428
5/7/2012	2464	132	474	6854	2491	730	4045	928	1426
5/8/2012	2447	137	478	6860	2488	742	4100	1007	1428
5/9/2012	2473	138	482	6821	2527	860	3967	972	1408
5/10/2012	2444	150	490	6833	2548	843	3884	959	1431
5/11/2012	2390	135	491	6812	2547	771	3864	934	1421
5/12/2012	2297	133	491	6786	2537	694	3847	935	1421
5/13/2012	2258	133	491	6774	2530	668	3859	929	1421
5/14/2012	2446	134	492	6769	2526	774	3823	953	1420
5/15/2012	2577	140	519	6773	2525	1060	3778	962	1428
5/16/2012	2543	173	530	6900	2519	1426	3600	1012	1427
5/17/2012	2558	174	556	7094	2504	1258	1581	949	1351
5/18/2012	2639	173	513	7290	2498	1080	1087	957	1196
5/19/2012	2624	167	512	7300	2490	985	0	962	1083
5/20/2012	2620	166	505	7300	2477	918	0	1017	1078
5/21/2012	2617	176	504	7464	2473	971	0	1002	1080
5/22/2012	773	53	1856	2328	760	292	6	299	325
5/23/2012	1589	151	871	4164	1434	742	1800	681	953
5/24/2012	2545	184	474	7743	2773	1020	4314	887	1399
5/25/2012	2098	182	572	5361	2738	928	4432	890	1344
5/26/2012	2700	174	515	3260	2723	866	4379	902	1313
5/27/2012	2672	172	460	4169	2607	810	4337	880	1280
5/28/2012	2637	171	407	4158	2722	831	4312	915	1256
5/29/2012	2634	171	536	4410	2658	849	4287	893	1299
5/30/2012	2652	176	543	6315	2647	1006	4247	881	1272
5/31/2012	2701	182	538	6988	2619	923	4143	930	1237
6/1/2012	2715	176	501	6946	2592	772	4095	939	1225
6/2/2012	2733	194	497	6915	2574	1517	4065	979	1234
6/3/2012	2739	230	506	6911	2560	1696	4039	997	1234

DATE	CW-1	CW-1A	CW-2	CW-3	CW-4	CW-5	CW-6	CW-7	CW-7A
6/4/2012	2742	237	540	6894	2555	1554	4012	1040	1230
6/5/2012	2734	230	531	6881	2556	1317	3988	1045	1226
6/6/2012	2729	222	519	6863	2561	1140	3967	1046	1220
6/7/2012	2732	217	544	6857	2565	1032	3947	1034	1216
6/8/2012	2727	211	552	6830	2558	968	3966	1053	1214
6/9/2012	2716	208	540	6794	2556	912	3971	1008	1210
6/10/2012	2710	199	537	6781	2566	868	3950	1037	1202
6/11/2012	2702	196	540	6775	2567	795	3933	1036	1224
6/12/2012	2685	190	539	6769	2568	731	3921	1060	1257
6/13/2012	2667	190	536	6750	2564	923	3901	1076	1253
6/14/2012	1791	166	446	3491	1750	657	2790	758	817
6/15/2012	2591	188	533	3948	2411	833	4121	862	1028
6/16/2012	2580	194	531	3845	2410	815	4079	805	1013
6/17/2012	2546	194	530	3827	2410	755	4026	859	1005
6/18/2012	2551	184	520	3891	2282	774	3988	953	940
6/19/2012	2551	184	521	3865	2229	760	3956	1006	909
6/20/2012	2528	172	527	3837	2229	734	3930	978	908
6/21/2012	1720	141	451	2476	1529	456	2937	685	641
6/22/2012	2531	174	552	3710	2313	500	3954	977	1044
6/23/2012	2514	156	530	3916	2346	719	3915	979	1057
6/24/2012	2490	155	519	3887	2285	693	3876	1005	1057
6/25/2012	1886	140	476	2040	1629	514	2765	763	926
6/26/2012	2786	149	519	3920	2288	679	4070	1012	1237
6/27/2012	2822	157	511	3902	2280	666	4104	1001	1160
6/28/2012	2826	156	507	3893	2272	652	4023	1060	1065
6/29/2012	2837	155	502	3862	2265	384	3986	987	1076
6/30/2012	2827	145	494	3859	2255	0	3962	966	1068
7/1/2012	2830	149	495	3849	2257	0	3934	937	1117
7/2/2012	2827	141	488	3836	2254	478	3904	990	1130
7/3/2012	2754	139	544	3288	2269	608	3802	947	1127
7/4/2012	2794	137	491	3861	2334	587	3871	1018	1097
7/5/2012	2778	136	484	3838	2291	567	3840	1048	1119
7/6/2012	2757	144	488	3824	2273	538	3821	996	1103
7/7/2012	2754	137	486	3813	2235	526	3804	992	1088
7/8/2012	810	138	507	3796	2237	565	3782	1052	1059
7/9/2012	0	137	543	3779	2250	545	3763	1021	1008
7/10/2012	1735	138	531	3767	2257	536	3751	1023	1025
7/11/2012	2294	127	501	3755	2153	529	3739	1048	1079
7/12/2012	2278	121	482	3751	2113	514	3731	1042	1087
7/13/2012	2494	122	483	2556	2106	503	3812	1038	1075

DATE	CW-1	CW-1A	CW-2	CW-3	CW-4	CW-5	CW-6	CW-7	CW-7A
7/14/2012	2658	122	473	3741	2114	597	3843	994	1080
7/15/2012	2646	126	471	3740	2108	609	3820	1038	1071
7/16/2012	2634	113	470	3731	2104	629	3799	1019	1078
7/17/2012	2626	120	473	3724	2100	571	3777	978	957
7/18/2012	2618	113	483	3720	2190	533	3765	958	842
7/19/2012	2173	115	542	3331	1909	259	3654	886	827
7/20/2012	2512	130	516	3862	2264	502	4031	1017	841
7/21/2012	2579	125	509	3856	2299	674	3923	1013	837
7/22/2012	2617	124	497	3848	2255	623	3896	1065	835
7/23/2012	2646	115	492	3836	2245	581	3868	1019	831
7/24/2012	2642	111	492	3829	2254	566	3835	1046	830
7/25/2012	2624	99	485	3816	2254	543	3796	1105	817
7/26/2012	2518	109	485	3736	2237	546	3722	1019	815
7/27/2012	2560	106	503	3786	2252	668	3764	981	813
7/28/2012	1769	108	332	2705	1633	497	2660	794	741
7/29/2012	0	0	0	0	0	0	0	0	0
7/30/2012	1541	94	290	2357	1423	433	2318	692	645
7/31/2012	2467	129	36	3935	2374	691	3674	985	911
8/1/2012	2450	121	3	3915	2339	666	3663	1083	865
8/2/2012	2422	118	0	3898	2309	622	3654	1015	843
8/3/2012	2075	117	1	3632	2221	569	3382	974	844
8/4/2012	2479	110	0	3909	2389	586	3634	986	816
8/5/2012	2437	110	0	3891	2350	734	3626	1001	808
8/6/2012	2445	119	0	3874	2327	862	3837	981	806
8/7/2012	2409	116	0	3859	2299	740	3939	1016	809
8/8/2012	2403	117	0	3846	2278	658	3908	1013	796
8/9/2012	2417	115	0	3834	2268	609	3884	980	790
8/10/2012	2400	119	410	3830	2252	650	3863	1023	793
8/11/2012	2398	113	490	3825	2240	658	3830	1075	789
8/12/2012	2394	114	484	3817	2222	599	3799	1023	783
8/13/2012	2395	111	475	3811	2221	535	3779	1036	787
8/14/2012	2393	104	478	3805	2220	531	3754	1011	778
8/15/2012	2396	104	449	3808	2198	605	3773	825	781
8/16/2012	2397	101	445	3805	2192	587	3794	711	771
8/17/2012	2399	104	490	3798	2187	551	3798	697	769
8/18/2012	2461	111	500	3860	2232	538	3881	7	1004
8/19/2012	2355	112	500	3852	2210	514	3897	0	1016
8/20/2012	2456	113	498	3842	2206	519	3902	0	1009
8/21/2012	2466	49	168	3853	2091	620	3920	3	307
8/22/2012	2416	0	407	3784	2116	579	3852	0	1053

DATE	CW-1	CW-1A	CW-2	CW-3	CW-4	CW-5	CW-6	CW-7	CW-7A
8/23/2012	2377	1	486	3724	2142	533	3789	0	1490
8/24/2012	2382	0	469	3717	2142	513	3778	0	1519
8/25/2012	2381	0	439	3724	2142	501	3774	0	1543
8/26/2012	2379	0	432	3730	2142	526	3774	0	1554
8/27/2012	2383	0	434	3727	2141	623	3962	0	1518
8/28/2012	2385	0	452	3723	2141	592	4094	0	1615
8/29/2012	2359	78	478	3701	2128	563	3944	437	1510
8/30/2012	2350	84	430	3710	2179	533	3865	912	1481
8/31/2012	2327	88	456	3686	2183	510	3818	1233	1405
9/1/2012	2317	85	461	3674	2176	493	3791	1290	1451
9/2/2012	2312	85	439	3674	2177	482	3773	1078	1474
9/3/2012	2305	89	430	3674	2175	530	3754	1024	1489
9/4/2012	2300	86	435	3671	2173	821	3932	1026	1480
9/5/2012	2303	93	427	3679	2179	891	3994	1030	1417
9/6/2012	906	38	172	1402	839	283	1520	403	560
9/7/2012	0	0	0	0	0	0	0	0	0
9/8/2012	1670	102	398	1525	1508	556	3089	876	958
9/9/2012	2400	113	454	3921	2130	706	4274	1146	1210
9/10/2012	2401	105	451	3910	2122	664	4225	1234	1093
9/11/2012	2256	101	449	3898	2251	611	4186	1202	1041
9/12/2012	2191	98	435	3874	2348	593	4148	1212	1130
9/13/2012	2220	99	412	3859	2381	574	4112	1116	1064
9/14/2012	2290	104	414	3860	2387	554	3748	1238	1015
9/15/2012	2263	84	425	3855	2370	531	0	1046	1097
9/16/2012	2223	90	435	3872	2361	533	0	1033	1106
9/17/2012	2634	92	424	4079	2352	537	3054	1104	1078
9/18/2012	2775	102	487	4138	2357	719	4096	1199	1072
9/19/2012	2491	127	464	4125	2355	1011	4058	1163	966
9/20/2012	2362	141	460	4116	2352	986	4048	1176	834
9/21/2012	2411	138	437	4097	2347	826	4036	1229	833
9/22/2012	2418	148	413	4087	2340	746	4038	1123	832
9/23/2012	2410	132	383	4067	2334	680	4026	1248	823
9/24/2012	2400	117	393	4046	2327	651	4018	1161	813
9/25/2012	2355	119	384	4025	2323	632	4008	1148	807
9/26/2012	2378	124	384	4004	2321	614	3999	1186	805
9/27/2012	2379	119	382	4004	2305	620	3992	1157	803
9/28/2012	2370	131	425	3982	2321	1033	3963	1130	820
9/29/2012	2363	140	413	3971	2330	961	3964	1174	850
9/30/2012	2353	145	394	3962	2337	787	3960	1196	855
10/1/2012	2460	140	339	3944	2331	710	3947	1146	853

DATE	CW-1	CW-1A	CW-2	CW-3	CW-4	CW-5	CW-6	CW-7	CW-7A
10/2/2012	2459	142	475	3932	2330	911	3939	1129	864
10/3/2012	2559	170	399	3930	2330	1327	4018	1063	937
10/4/2012	2597	195	431	3927	2338	1257	4071	1107	963
10/5/2012	2587	197	407	3920	2344	1044	4072	1135	969
10/6/2012	2583	193	432	3921	2347	890	4068	1174	967
10/7/2012	2572	181	420	3913	2343	794	4057	1160	963
10/8/2012	2566	166	388	3891	2337	774	4032	1094	958
10/9/2012	2562	164	401	3882	2337	774	4025	1160	957
10/10/2012	2557	159	406	3869	2335	789	4026	1056	957
10/11/2012	2551	152	404	3859	2333	755	4017	1118	953
10/12/2012	2300	153	362	3479	2120	718	3769	1012	888
10/13/2012	2496	149	392	3781	2299	746	4136	1114	950
10/14/2012	2488	144	405	3784	2297	757	4125	1125	952
10/15/2012	2482	151	412	3786	2297	798	4127	1074	953
10/16/2012	2602	146	405	3982	2297	801	4132	1120	948
10/17/2012	2603	143	384	3851	2293	791	4033	1116	896
10/18/2012	2578	136	401	3938	2293	722	3973	1089	865
10/19/2012	1557	137	397	2838	1657	565	2891	898	636
10/20/2012	2313	154	596	3937	2311	708	4033	1091	875
10/21/2012	2637	143	547	3923	2302	655	4004	1088	867
10/22/2012	2564	137	409	3902	2297	628	3984	1118	862
10/23/2012	2553	148	308	3894	2294	686	3968	1058	862
10/24/2012	2595	130	164	3886	2292	737	3979	1102	856
10/25/2012	2589	125	45	3878	2296	724	3989	1141	856
10/26/2012	2564	124	12	3865	2296	725	3972	1150	853
10/27/2012	2554	130	4	3862	2295	738	3951	1119	850
10/28/2012	2534	126	16	3854	2292	733	3936	1130	847
10/29/2012	2352	237	843	3905	2253	1036	4048	1089	944
10/30/2012	2611	364	901	3933	2249	2322	4132	1057	1360
10/31/2012	2833	404	607	4028	2241	3643	4124	1111	1421
11/1/2012	2853	424	600	4058	2353	3106	4200	1181	1449
11/2/2012	2762	384	571	4034	2426	2555	4252	1240	1449
11/3/2012	2894	341	599	4023	2438	2210	4273	1108	1432
11/4/2012	3045	331	581	4017	2432	1871	4274	1070	1414
11/5/2012	3009	298	539	4004	2430	1422	4254	1105	1389
11/6/2012	3018	293	517	4000	2430	1746	4274	1110	1392
11/7/2012	3033	279	501	3988	2423	1688	4238	1107	1399
11/8/2012	3043	281	553	3977	2423	1614	4214	1125	1400
11/9/2012	3041	267	554	3966	2424	1573	4197	1155	1388
11/10/2012	3045	261	537	3955	2424	1532	4171	1089	1376

DATE	CW-1	CW-1A	CW-2	CW-3	CW-4	CW-5	CW-6	CW-7	CW-7A
11/11/2012	3040	260	527	3939	2417	1505	4141	1152	1362
11/12/2012	3033	255	518	3933	2417	1499	4146	1086	1357
11/13/2012	3030	250	535	3932	2410	1719	4146	1108	1354
11/14/2012	3021	259	553	3915	2409	1730	4181	1084	1350
11/15/2012	3007	257	565	3928	2409	1630	4204	1089	1344
11/16/2012	2983	253	703	3926	2406	1529	4184	1052	1330
11/17/2012	2979	244	667	3906	2410	1500	4148	1096	1310
11/18/2012	2972	235	492	3884	2407	1497	4108	1098	1291
11/19/2012	2965	230	129	4085	2402	1504	4177	1167	1280
11/20/2012	2949	231	530	4145	2401	1509	4163	1181	1269
11/21/2012	2940	223	669	4121	2398	1468	4121	1160	1251
11/22/2012	819	224	660	4135	2358	1425	4125	1196	1232
11/23/2012	0	245	592	4127	2340	1414	4093	1255	1232
11/24/2012	0	233	529	4128	2342	1367	4068	1124	1226
11/25/2012	0	239	500	4127	2345	1320	4048	1189	1214
11/26/2012	2342	226	457	4108	2336	1277	4021	1263	1198
11/27/2012	2813	194	398	4098	2341	1383	4000	1285	1169
11/28/2012	2807	194	538	4096	2363	1450	3986	1182	1143
11/29/2012	2778	190	503	4095	2366	1342	3993	1171	1117
11/30/2012	2769	183	474	4098	2373	1252	3987	1201	1108
12/1/2012	2707	182	456	4086	2370	1173	4001	1124	1098
12/2/2012	2633	178	445	4081	2371	1144	3986	1188	1094
12/3/2012	2601	173	438	4076	2362	1088	3984	1137	1088
12/4/2012	2596	174	434	4081	2330	300	4006	1114	1078
12/5/2012	2602	163	429	4086	2322	4	4017	1027	1070
12/6/2012	2594	169	423	4068	2310	723	3985	1129	1036
12/7/2012	2589	158	421	4069	2306	1058	3959	1035	1025
12/8/2012	2585	151	417	4072	2313	1006	3948	1108	1021
12/9/2012	2584	147	415	4064	2308	965	3942	1057	1012
12/10/2012	2588	146	432	4065	2305	997	3941	1104	1006
12/11/2012	2575	145	424	4081	2211	903	3969	1362	981
12/12/2012	2575	132	411	4075	2175	796	3956	1502	963
12/13/2012	2622	125	411	4066	2164	778	3947	1455	949
12/14/2012	2713	125	412	4056	2156	767	3926	1375	999
12/15/2012	2702	107	409	4056	2141	756	3895	1520	1022
12/16/2012	2708	124	413	4050	2124	762	3853	1495	1019
12/17/2012	2710	122	404	4037	2216	768	3835	1504	1019
12/18/2012	2711	121	397	4031	2235	802	3827	1357	1019
12/19/2012	2052	117	411	3172	1692	609	3358	1229	769
12/20/2012	2635	110	502	3990	2187	726	4210	1356	973

DATE	CW-1	CW-1A	CW-2	CW-3	CW-4	CW-5	CW-6	CW-7	CW-7A
12/21/2012	2766	119	560	4103	2318	1419	4235	1327	992
12/22/2012	2796	124	550	4093	2309	1480	4208	1278	995
12/23/2012	2516	112	508	3940	2293	1465	1394	1253	999
12/24/2012	2387	119	477	4101	2257	1265	3800	1214	996
12/25/2012	2742	117	448	4098	2259	1125	4226	1268	999
12/26/2012	2733	118	460	4081	2247	1141	4166	1260	1000
12/27/2012	2716	126	572	4071	2235	1529	4132	1126	999
12/28/2012	2713	152	531	4060	2241	1550	4114	1134	1000
12/29/2012	2714	168	500	4052	2228	1545	4079	1158	999
12/30/2012	2681	174	444	4038	2229	1544	4046	1137	1001
12/31/2012	2681	174	444	4038	2229	1544	4046	1137	1001
Sum	925743	63500	163627	1906726	875401	367885	1450183	341738	459457
Average	2529	173	447	5210	2392	1005	3962	934	1255

APPENDIX C

2012 Operation and Maintenance Data Summary

TABLE C-1
2012 OPERATION AND MAINTENANCE DATA SUMMARY
former York Naval Ordnance Plant
1425 Eden Road, York PA 17402

TECHNICIAN	SRL	SRL	SRL	SRL	SRL	SRL	SRL	SRL	SRL	SRL	SRL	SRL	SRL	SRL	SRL	SRL	SRL	SRL	SRL	SRL	SRL	SRL	SRL	SRL
Date	1/5/2012	1/20/2012	2/3/2012	2/20/2012	3/7/2012	3/25/2012	4/6/2012	4/20/2012	5/9/2012	5/24/2012	6/8/2012	6/26/2012	7/13/2012	7/27/2012	8/15/2012	8/29/2012	9/14/2012	9/28/2012	10/5/2012	10/17/2012	11/2/2012	11/14/2012	12/12/2012	12/24/2012
PTA INFL. PUMP																								
Full Load = 17 AMPS	NM	NM	NM	12.88	NM	NM	NM	NM	12.36	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	8.4	NM	17.05	NM	15.51
FLOW RATE gpm	355	340	333	324	326	329	321	300	300	299	310	253	325	328	229	284	276	290	235	227	387	390	339	354
PTA BLOWER																								
Full Load = 24 AMP READINGS	NM	NM	NM	22.34	NM	NM	NM	NM	20.99	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	22.2	NM	22.52	NM	22.72
PRESSURE inches water	16.5	16.75	16.75	16.5	16.5	16.0	16.5	16	15.25	15.25	15.25	15	15	14.75	14.75	15	15	15.25	15.25	16	16	16.5	16.75	16.75
TOWER PANEL																								
VISUAL INSPECT	NA	NA	NA	Y	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Y	NA	Y	NA	Y
WARWICK SECURE	NA	NA	NA	Y	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Y	NA	Y	NA	Y
TOWER SAMPLING																								
AST EFFLUENT pH	8.40	NM	8.40	NM	8.44	NM	8.4	NM	8.41	NM	8.31	NM	8.2	NM	8.2	NM	8.2	NM	8.2	NM	8.1	NM	8.1	NM
AST INFLUENT pH	7.35	7.16	7.35	7.22	7.23	6.84	7.23	7.29	7.28	7.4	7.2	7.5	7.2	6.80	7.0	6.80	7.0	6.58	7.1	6.50	7.0	6.49	6.9	6.48
REDUX CHEMICAL INJECTION																								
LMI PUMP SPEED (%)	64	64	64	64	63	64	64	64	64	64	64	63	64	64	61	63	64	64	62	61	64	64	64	64.00
LMI INJECTION RATE (milis/min)	18.6	17.6	17.4	17.1	17.2	16.9	17.6	15.7	15.9	15.5	16	13.5	16.6	17.2	11.9	14.4	14.4	14.2	12.8	12	20.2	20.5	18.3	18.40
TCA WELL																								
CW-8; Full Load = 15.9 AMPS	NM	NM	NM	12.29	NM	NM	NM	NM	11.99	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	OL	NM	12.62	NM	12.67
CW-8 FLOW RATE gpm	121.8	123.9	125.7	122.1	117	124.9	118.2	101.8	98.3	99.4	103.4	102.7	103.4	105.5	OL	OL	OL	OL	OL	OL	109	143.8	118	135
CW-8 PRESSURE psi	50	50	50	49	50	50	49	62	62	62	60	60	60	60	OL	OL	OL	OL	OL	OL	62	24	32	36
CW-8 CLEAN "Y" STRAINER	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	OL	N	N	N	N
CW-8 CLEAN CK. VALVE	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	OL	N	N	N	N
CW-8 HIGH LEVEL ALARM	N	N	N	N	N	N	N	N	N	N	N	N	N	N'	OL	OL	OL	OL	OL	OL	Y	Y	N	N
WPL WELLS																								
TOTAL FLOW RATE gpm	224	209	210	205	204	200	196	195	194	197	203	136	208	207	209	205	216	213	223	219	243	237	215	212
CW-9; Full Load = 15.9 AMPS	NM	NM	NM	15.53	NM	NM	NM	NM	15.64	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	15.77	NM	15.71	NM	15.72
CW-9 FLOW RATE gpm	72	61.8	64.1	61.9	59.6	60.3	59.0	61.9	59.9	60.4	60.4	59.9	59.1	59.8	60.9	63.3	61.7	62.0	64.1	63.4	75.5	74.1	69.6	70.2
CW-9 PRESSURE psi	68	105	105	105	92	106	105	105	105	105	105	93	104	102	85	99	90	81	78	81	60	65	98	96
CW-9 CLEAN "Y" STRAINER	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
CW-9 HIGH LEVEL ALARM?	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	N	N	N
CW-13; Full Load = 11.5 AMPS	NM	NM	NM	9.88	NM	NM	NM	NM	9.9	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	9.95	NM	9.93	NM	9.91
CW-13 FLOW RATE gpm	78.0	78.0	62.5	78.1	78.3	78.1	76.1	76.1	74.1	74.1	74.5	76.3	75.4	75.9	75.7	76.7	75.7	74.7	75.6	75.4	81.2	78.2	75.9	76.1
CW-13 PRESSURE psi	46	47	47	46	49	46	47	47	49	49	50	50	50	59	50	50	50	49	50	49	53	60	50	48
CW-13 CLEAN "Y" STRAINER	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
CW-13 HIGH LEVEL ALARM?	N	N	N	N	N	N	N	N	N	N	N	Y	N	N	N	N	N	N	N	N	Y	N	N	N
CW-17; Full Load = 11.5 AMPS	NM	NM	NM	11.09	NM	NM	NM	NM	11.32	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	12.13	NM	11.99	NM	11.73
CW-17 FLOW RATE gpm	70.2	63.8	780	59.8	62.4	57.1	58.1	56.3	58.2	60.2	66.1	OL	70.8	67.1	70.7	69.6	74.9	74.3	80.5	77.9	82.6	80.2	65.3	64.9
CW-17 PRESSURE psi	86	40.7	84	94	102	110	106	110	100	95	86	OL	87	60	77	77	70	78	42	59	70	55	99	100
CW-17 CLEAN "Y" STRAINER	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
CW-17 HIGH LEVEL ALARM?	N	N	N	N	Y	N	N	N	N	N	N	Y	N	N'	N	N	N	N	N	N	Y	N	N	N
CW-15A; Full Load = 1.6 AMPS	NM	NM	NM	1.52	NM	NM	NM	NM	1.33	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	1.33	NM	1.35	NM	1.43
CW-15A FLOW RATE gpm	4.9	4.9	5	5	4	4.1	3.9	3.9	3	2.5	2.4	1.6	1.5	3.5	2.8	2.9	2.8	2.7	3.2	3.0	3.4	3.0	2.6	2.6
CW-15A PRESSURE psi	52	40	32	22	100	42	32	18	20	28	10	11	10	76	82	76	77	72	75	72	65	90	78	50
CW-15A CLEAN "Y" STRAINER	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
CW-15A HIGH LEVEL ALARM?	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
AST influent pressure inches of water	6.4	6.40	7.1	6.4	9.8	7.5	9.8	8.8	7.6	7.1	6.4	4.3	8.4	8.5	9.0	8.3	9.3	9.1	9.3	9.7	9.5	9.8	10	9.7
GAC influent pressure inches of water	8.7	2.3	8.3	7.9	8.4	7.1	8.9	7.8	7.3	7.8	7.3	7.6	7.6	7.2	7.9	7.6	7.9	7.7	7.6	8.5	8.0	8.3	8.4	8.3
AST pitot pressure inches of water	0.28	0.29	0.29	0.3	0.27	0.26	0.27	0.26	0.26	0.27	0.26	0.25	0.27	0.27	0.26	0.27	0.25	0.26	0.25	0.27	0.26	0.27	0.27	0.27

Notes:
Y - Yes NA - Not Applicable OL - Off Line
N - No NM - Not Measured

TABLE C-1
2012 OPERATION AND MAINTENANCE DATA SUMMARY
former York Naval Ordnance Plant
1425 Eden Road, York PA 17402

TECHNICIAN	SRL	SRL	SRL	SRL	SRL	SRL	SRL	SRL	SRL	SRL	SRL	SRL	SRL	SRL	SRL	SRL	SRL	SRL	SRL	SRL	SRL	SRL	SRL	SRL
Date	1/5/2012	1/20/2012	2/3/2012	2/20/2012	3/7/2012	3/25/2012	4/6/2012	4/20/2012	5/9/2012	5/24/2012	6/8/2012	6/26/2012	7/13/2012	7/27/2012	8/15/2012	8/29/2012	9/14/2012	9/28/2012	10/5/2012	10/17/2012	11/2/2012	11/14/2012	12/12/2012	12/24/2012
NPBA WELLS																								
VIS. INSP. CONTR. PANEL	NA	NA	NA	Y	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Y	NA	Y	NA	Y
WARWICK SECURE	NA	NA	NA	Y	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Y	NA	Y	NA	Y
SUMP PUMP OPR. CHK.	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MANIFOLD PRESS. psi	0	0	0	0	0	4	7	4	4	7	4	6	5	4	8	6	7	6	7	6	8	8	8	10
CW-1; Full Load = 1.6 AMPS	NM	NM	NM	1.39	NM	NM	NM	NM	1.36	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	1.32	NM	1.32	NM	1.37
CW-1 FLOW-RATE gpm	2	2	2	1.9	1.9	1.8	1.7	1.7	2.1	2.1	1.9	1.9	1.6	1.8	1.6	1.6	1.8	1.6	1.8	1.8	2.0	2.1	1.8	1.9
CW-1 PRESSURE psi	110	108	106	102	101	95	90	82	68	59	77	57	58	46	34	32	36	32	30	23	84	80	90	92
CW-1 CLEAN "Y" STRAINER	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CW-1 CLEAN CK. VALVE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CW-1 CLEAN FLOWSENSOR	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CW-1 HIGH LEVEL ALARM?	N	N	N	N	NM	N	N	N	Y	N	N	N	Y	N	N	N	N	N	N	N	N	N	N	N
CW-1A; Full Load = 1.6 AMPS	NM	NM	NM	1.43	NM	NM	NM	NM	1.43	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	1.44	NM	1.49	NM	1.47
CW-1A FLOW-RATE gpm	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.3	0.5	0.9	0.5	0.5	0.5	0.5	0.3	0.7	0.5	0.5	0.5	0.5	0.4	0.5	0.2	0.5
CW-1A PRESSURE psi	10	15	18	20	18	20	20	18	20	40	20	20	20	18	20	40	20	20	20	20	24	20	20	22
CW-1A CLEAN "Y" STRAINER	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CW-1A CLEAN CK. VALVE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CW-1A CLEAN FLOWSENSOR	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CW-1A HIGH LEVEL ALARM?	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
CW-2; Full Load = 1.6 AMPS	NM	NM	NM	1.27	NM	NM	NM	NM	1.53	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	1.55	NM	1.45	NM	1.48
CW-2 FLOW-RATE gpm	0.5	0.5	0.5	0.5	OL	0.5	0.5	0.5	0.5	1.2	0.5	0.5	0.5	0.5	0.2	0.5	0.5	0.5	0.5	0.4	0.3	0.5	0.5	0.5
CW-2 PRESSURE psi	20	24	36	30	OL	30	10	20	20	42	18	20	20	16	12	30	30	92	20	50	24	24	20	18
CW-2 CLEAN "Y" STRAINER	Y	Y	Y	Y	OL	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CW-2 CLEAN CK. VALVE	Y	Y	Y	Y	OL	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CW-2 CLEAN FLOWSENSOR	Y	Y	Y	Y	OL	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CW-2 HIGH LEVEL ALARM?	N	N	N	N	OL	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
CW-3; Full Load = 1.6 AMPS	NM	NM	NM	1.31	NM	NM	NM	NM	1.21	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	1.23	NM	1.32	NM	1.26
CW-3 FLOW-RATE gpm	5.1	5.1	5.1	4.9	5	4.9	4.8	4.9	4.8	5.3	4.8	2.7	2.6	2.6	2.6	2.6	2.7	2.8	2.7	2.8	2.8	2.7	2.8	2.8
CW-3 PRESSURE psi	46	40	44	42	5.7	50	46	44	44	53	60	60	56	60	60	57	62	52	52	53	52	50	42	44
CW-3 CLEAN "Y" STRAINER	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CW-3 CLEAN CK. VALVE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CW-3 CLEAN FLOWSENSOR	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CW-3 HIGH LEVEL ALARM?	N	N	N	N	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
CW-4; Full Load = 1.6 AMPS	NM	NM	NM	1.29	NM	NM	NM	NM	1.34	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	1.31	NM	1.31	NM	1.32
CW-4 FLOW-RATE gpm	1.9	2	1.9	1.8	1.998	1.8	1.8	1.8	1.7	1.8	1.8	1.6	1.4	1.6	1.6	1.5	1.6	1.6	1.6	1.6	1.8	1.7	1.5	1.5
CW-4 PRESSURE psi	12	95	93	88	Y	92	88	82	88	63	64	74	70	64	64	70	66	64	64	64	60	60	62	48
CW-4 CLEAN "Y" STRAINER	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CW-4 CLEAN CK. VALVE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CW-4 CLEAN FLOWSENSOR	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CW-4 HIGH LEVEL ALARM?	N	N	N	N	Y	N	N	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N
CW-5; Full Load = 6 AMPS	NM	NM	NM	1.32	NM	NM	NM	NM	1.26	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	1.30	NM	1.33	NM	1.29
CW-5 FLOW-RATE gpm	1.2	1.2	1.4	1.0	1.5	1.0	0.7	0.8	0.7	0.9	1.0	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.6	2.0	1.3	0.7	0.8
CW-5 PRESSURE psi	90	90	80	84	82	95	92	86	86	83	83	85	86	88	86	86	88	100	87	88	65	79	88	84
CW-5 CLEAN "Y" STRAINER	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CW-5 CLEAN CK. VALVE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CW-5 CLEAN FLOWSENSOR	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CW-5 HIGH LEVEL ALARM?	N	N	N	N	Y	Y	Y	N	N	N	N	N	N	N	N	N	N	Y	N	N	N	N	N	N
CW-6; Full Load = 1.6 AMPS	NM	NM	NM	1.33	NM	NM	NM	NM	1.28	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	1.30	NM	1.33	NM	1.33
CW-6 FLOW-RATE gpm	3	3.0	3.3	3.2	3.2	3.0	3.0	3.1	3.1	3.1	2.7	2.6	2.6	2.6	2.6	2.9	2.8	2.8	2.8	2.9	3.0	2.9	2.8	3.2
CW-6 PRESSURE psi	32	28	20	18	60	50	42	40	40	55	46	54	43	56	46	42	42	48	46	44	42	40	35	50
CW-6 CLEAN "Y" STRAINER	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CW-6 CLEAN CK. VALVE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CW-6 CLEAN FLOWSENSOR	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CW-6 HIGH LEVEL ALARM?	N	N	N	N	Y	Y	N	N	N	Y	N	Y	N	N	N	Y	N	N	N	N	N	N	N	Y
CW-7; Full Load = 1.6 AMPS	NM	NM	NM	1.42	NM	NM	NM	NM	1.38	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	1.49	NM	1.51	NM	1.48
CW-7 FLOW-RATE gpm	0.5	0.5	0.5	0.5	0.4	0.5	0.7	1.0	0.5	0.6	0.8	0.8	0.7	1.2	0.7	OL	0.6	1.0	0.7	0.5	0.6	0.5	0.8	0.5
CW-7 PRESSURE psi	92	90	40	87	20	20	10	20	25	20	20	20	20	20	16	OL	15	16	18	10	18	20	20	22
CW-7 CLEAN "Y" STRAINER	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CW-7 CLEAN CK. VALVE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CW-7 CLEAN FLOWSENSOR	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CW-7 HIGH LEVEL ALARM?	N	N	N	N	Y	N	N	N	N	N	N	N	N	N	N	OL	N	N	N	N	N	N	N	N
CW-7A; Full Load = 1.6 AMPS	NM	NM	NM	1.2	NM	NM	NM	NM	1.15	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	1.41	NM	1.43	NM	1.21
CW-7A FLOW-RATE gpm	1.3	1.2	1.3	1.2	0.6	1.0	1.0	1.0	1.0	0.9	0.8	1	0.6	0.8	4.0	0.5	0.6	0.5	0.7	0.6	1.2	1.1	0.5	0.7
CW-7A PRESSURE psi	NM	NM	0	0	0	0	10	0	0	0	0	0	0	0	0	10	30	30	40	40	118	120	36	120
CW-7A CLEAN "Y" STRAINER	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CW-7A CLEAN CK. VALVE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CW-7A CLEAN FLOWSENSOR	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CW-7A HIGH LEVEL ALARM?	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

Notes:
Y - Yes NA - Not Applicable OL - Off Line
N - No NM - Not Measured