# GROUNDWATER EXTRACTION AND TREATMENT SYSTEM
# ANNUAL OPERATIONS REPORT
# FOR THE PERIOD
# JANUARY 1, 2010, THROUGH DECEMBER 31, 2010
# FORMER YORK NAVAL ORDNANCE PLANT

**SAIC Project 4501020172 / 5000 / 100**

**Prepared for:**

## Harley-Davidson Motor Company Operations, Inc.

**York, PA**

**March 2011**

***SAIC Energy, Environment & Infrastructure, LLC***
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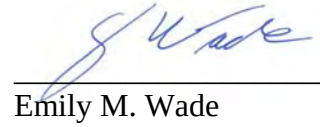
Respectfully submitted,



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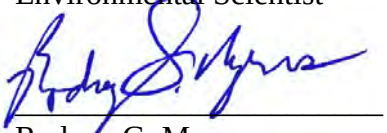

Rodney G. Myers
Project Manager

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| | | |
|---|---|---|
| bgs | - | below ground surface |
| cfm | - | cubic feet per minute |
| cis-1,2-DCE | - | cis-1,2-dichloroethene |
| 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. |
| IWTP | - | industrial wastewater treatment plant |
| lbs/day | - | pounds per day |
| 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 |
| SAIC | - | Science Applications International Corporation |
| SRBC | - | Susquehanna River Basin Commission |
| SVE | - | soil vapor extraction |
| TCA | - | 1,1,1-trichloroethane |
| TCE | - | trichloroethene |
| TFO | - | thermal fume oxidizer |
| µg/L | - | micrograms per liter |
| VFD | - | variable-frequency drive |
| VOCs | - | volatile organic compounds |
| WPL | - | West Parking Lot |

# EXECUTIVE SUMMARY

This report is a summary of the groundwater extraction and treatment system (GWTS) operations during the calendar year 2010 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 few interruptions during the report period of January 1, 2010, through December 31, 2010. The GWTS, including a soil vapor extraction (SVE) system, 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 groundwater in the West Parking Lot (WPL) Area.

4. Remove VOC-impacted groundwater at a former degreaser in the North Building 4 (NB4) Area.

5. Collect groundwater from the Building 3 Softail Dewatering (Lift Station) Area's groundwater interceptor trench system east of the Softail plant which prevents 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 Softail Dewatering Area's interceptor trench system including one (1) well CW-19.

Several significant maintenance-related modifications or repairs were conducted during the 2010 report period. These included:

- Discontinuation and demolition/salvage of the thermal fume oxidizer (TFO) unit.
- Discontinuation and decommissioning the SVE system.
- Replacement of the packed tower aerator (PTA) packing material due to fouling.
- Sequestering chemical delivery system installation to reduce mineral fouling of the GWTS components.
- Renewal of the National Pollutant Discharge Elimination System (NPDES) Discharge Permit for the GWTS (Outfall #003).
- Installation of a new variable-frequency drive (VFD) to control speed of influent pump.
- Rerouting of the toe drain, and modifications to the Lift Station as part of the northern expansion of the Softail building.
- Cleaning and repairing of the effluent discharge pumps.
- Replacement of granular-activated carbon (GAC) in the off-gas treatment system.

SAIC Energy, Environment & Infrastructure, LLC (SAIC) estimates that approximately 1,388 pounds of VOCs were removed by the groundwater treatment system during the time period of January through December 2010. The total amount of groundwater extracted during this 12-month reporting period was approximately 159 million gallons. Since initiation of the program, approximately 38,444 pounds of VOCs have been removed.

Groundwater elevation data collected in June and December 2010 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 1,046 micrograms per liter (µg/L) during 2010. Trichloroethene (TCE), TCA, cis-1,2-dichloroethene (cis-1,2-DCE), and tetrachloroethene (PCE) are the predominant VOCs in the influent groundwater entering the PTA. The PTA effluent was sampled and reported six times in 2010. The treatment system effluent has maintained non-detectable concentrations of target VOCs during this reporting period.

During 2010, the extraction wells, off-site monitoring locations, and key monitoring wells were sampled for priority pollutant VOCs, metals, and cyanide. The June sampling results were reported in the 2010 Key Well Sampling Report (SAIC, 2010). Site-wide water levels measured in June and December 2010 showed little variation in the configuration of the site groundwater table. Water levels measured in June were generally one to two feet higher compared to December. During June, there was above average rainfall, and December received less rain than the monthly average.

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 2010. 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 stabilizing 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 monitoring wells have exhibited a relatively flat or gradual decreasing concentration trend for the most prevalent VOC in this area (TCE). In 2010, similar trends are evident for all collection and monitoring wells in the WPL.

# 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) and extraction well quality data 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 in Springettsbury Township, York, Pennsylvania, as shown on Figure 1-1. This report covers a 12-month period from January 1 through December 31, 2010. Groundwater quality data for monitoring wells was collected during the 2010 Key Well annual sampling event. An analysis of these data is presented under a separate report entitled 2010 Key Well Sampling Report (SAIC, December 2010). A more complete analysis of the larger data set will be conducted as part of the groundwater remedial investigation report.

At the fYNOP, groundwater is extracted from fourteen (14) 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 three (3) separate areas designated as the Northeast Property Boundary Area (NPBA), the West Parking Lot (WPL) Area (including the North Building 4 [NB4] Area), and the 1,1,1-trichloroethane (TCA) Tank Area. Groundwater is also extracted from a subsurface gravity drainage system located along the upgradient (eastern) perimeter of Harley-Davidson's Softail facility (Building 3). This collection system, known as the Softail 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. A new toe drain was installed in late 2010 as part of the new construction activities.

All extracted groundwater is piped to a central treatment system located in the groundwater treatment building (Building 41) for processing through a packed tower aerator (PTA) system prior to discharge to the Codorus Creek, designated as Outfall No. 003 (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 in June 2010, following approval from the Pennsylvania Department of Environmental Protection (PADEP). This system was installed to reduce mineral fouling of the GWTS PTA and effluent discharge pumps and components. Prior to May 1994, PTA off-gases were treated by a granular-activated carbon (GAC) filter system for removal of volatile organic compounds (VOCs) before being discharged to the atmosphere. In May 1994, a thermal fume oxidizer (TFO) was installed and brought on-line to thermally destroy VOCs prior to atmospheric discharge. The economics of utilizing the TFO versus using GAC were regularly evaluated, and the most cost-effective treatment method was used, with the other system serving as a backup. In October 2010, the TFO was discontinued and salvaged due to its age. For calendar year 2010, the GAC served as the primary treatment method, operating 100 percent of the time the GWTS operated.

The groundwater extraction and PTA treatment system was designed and installed pursuant to an order from the PADEP dated September 11, 1990. In November 1990, 10 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. In conjunction with the WPL system start-up, PTA off-gases were redirected from the GAC filter to the TFO. Finally, the Softail 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 PADEP on November 22, 2010. The prior permit contained interim and final discharge limits based on relocating the treated groundwater discharge from Johnson Run, a tributary of Codorus Creek, to the Codorus Creek. Since June 2007, treated groundwater has been collected in a wet well located immediately northwest of Building 41 (refer to Figure 1-2). From the wet well, groundwater is pumped through a force main to Outfall 003 located along the Codorus Creek.

The data presented in this annual report were collected by SAIC Energy, Environment & Infrastructure, LLC (SAIC) under contract to Harley-Davidson and are summarized in the following chapter format:

- Chapter 2.0, Geology and Hydrogeology, summarizes the hydrogeologic conditions of the site.

- Chapter 3.0, Site-Wide Groundwater Monitoring, summarizes groundwater levels and quality.

- Chapter 4.0, Groundwater Extraction and Treatment System, describes the design capacity of the system and presents the record of influent and effluent water quality. The VOC loading to the PTA and GAC/TFO unit also is presented.

- Chapter 5.0, NPBA Groundwater Extraction System, summarizes water levels and VOC concentrations for each extraction well in the NPBA. System performance is evaluated based upon observed trends in the data.

- Chapter 6.0, TCA Tank Area Groundwater Extraction System, describes operation and performance of extraction well CW-8 located in this area. Water levels and VOC concentration data are used to evaluate system performance.

- Chapter 7.0, West Parking Lot Groundwater Extraction System, describes the operation of extraction wells in this area. System performance, water level data, and VOC trends are presented.

- Chapter 8.0, Softail Dewatering System, describes the operation of the groundwater collection system in this area.

## 2.0 GEOLOGY AND HYDROGEOLOGY

Two geologic rock formations underlie the site. Solution-prone gray limestone underlies the flat lowland (western) portion of the site. Quartzitic sandstone underlying the more steeply sloping hills or upland area is present on the eastern part of the site. Groundwater beneath the site generally flows from the upland area at the eastern part of the site westward toward Codorus Creek. A detailed discussion of the geology and hydrogeology is included in a document prepared by SAIC in July 2006 entitled, "Field Sampling Plan for Supplemental Remedial Investigations."

# 3.0 SITE-WIDE GROUNDWATER MONITORING

The groundwater monitoring program at the Harley-Davidson 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 14, 2010, and December 20, 2010). These measurements were taken from approximately 170 points (including 2 surface water locations in Codorus Creek) during both the June and December groundwater level monitoring events. 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 measured, including the classification as a groundwater extraction well (see the green symbol of a circle with a cross and two quadrants filled in), a key groundwater monitoring well (see the red symbol of a circle with a dot inside), or a groundwater monitoring well (see the symbol of a circle with a cross and all quadrants empty).

Figures 3-1 and 3-2 present the interpreted shallow groundwater table from water levels measured on June 14 and December 20, 2010, 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 the 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 around the Softail facility (Building 3) does not have monitoring wells. 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 2010 groundwater table contours are generally similar. In normal precipitation years, June water levels would be declining after winter recharge ceased in May. December water levels generally increase due to groundwater recharge, which starts when trees drop their leaves in October/November. Amount and timing of precipitation events result in the variations that are noted from year to year. 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 2010 compared to December 2010. This determination was made using data for wells in areas that are not affected by the NPBA

extraction wells. June received above average rainfall, whereas December received below average rainfall. Calendar year 2010 was a slightly wetter than normal year (refer to Table 3-1, Table 3-2 and Figure 3-3).

- Water levels in the limestone aquifer were generally one to two feet higher in December 2010 compared to June 2010. The months of June and December were both wetter than normal in 2010 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 Softail 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 Softail plant. 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 attached to the west wall of the industrial wastewater treatment plant (IWTP). The process flow diagram for the system is presented in 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 a rate of 20 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 foot 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 to a groundwater pump station located on the north side of Building 41 where it is pumped to a storm water outlet (Outfall No. 3) and discharged to Codorus Creek.

The groundwater treatment system is equipped with a PC-based RSView monitoring system. Remote computer terminals are located in both Harley-Davidson and 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 2010, is 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.

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

- During start-up testing of the TFO in January 2010, an airflow blockage was discovered in the heat exchanger of the TFO. The TFO was a backup treatment method. Due to the high cost of repairing the heat exchanger, a decision was made to retire the system. The TFO was demolished in October 2010. The construction/demolition waste and refractory waste were disposed of at Modern Landfill, and the metal was recycled through Consolidated Scrap Resources, Inc. A TFO demolition report is provided in Appendix D.

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

- SAIC replaced the packing material in the PTA in June of 2010. The tower was removed from the roof of Building 41. The packing material removed from the tower was placed in roll-offs for disposal. The tower was repacked and reinstalled on the roof of Building 41. The waste was disposed of at Modern Landfill.

- The NPDES permit (Permit No. PA0085677) for Outfall 003 was renewed on November 22, 2010, and will expire November 30, 2015. The treated water from the GWTS is discharged through Outfall 003.

- SAIC replaced the variable-frequency drive (VFD) board that controls the speed of the PTA influent pump in March 2010. The VFD would not restart due to a fault and then would time out.

- A new toe of slope drain was installed by Liberty Excavators, Inc., in October 2010 as part of the Softail (Building 3) northern expansion project. The existing hillside was cut back to allow space for the northern expansion of the building. The new toe of slope drain was installed along the north side of the new roadway, on the north and east sides of Building 3. The toe of slope drain ranges from approximately 3 feet below ground surface (bgs) to approximately 5 feet bgs. Liberty installed a six-inch perforated corrugated pipe in stone bedding that was wrapped in geofabric. The geofabric was then covered with soil to grade. The existing toe of slope drain was abandoned in place.

- SAIC installed a chemical delivery system to inject the Redux 525 into the GWTS to prevent effluent pump and effluent piping fouling in June 2010. The sequestering agent is injected after the influent transfer pump and before the PTA. The PADEP approved the addition of the sequestering agent in a letter dated July 23, 2009. The injection pump is tied to the PTA influent pump VFD. As the influent pump speed increases, the injection pumping rate also increases to keep the ratio of groundwater and chemical the

same regardless of pumping rate. In 2010, approximately 1,210 gallons of Redux 525 were injected into the GWTS. Initially, the injection rate was 15 parts per million (ppm). SAIC sampled for residual Redux 525 in the system at three locations (PTA influent, PTA effluent, and Codorus Creek discharge). It was determined the sequestering agent was slightly under-dosed. The dosage was increased to 20 ppm on December 20, 2010. The locations were again sampled for residual Redux 525. The analysis shows that 20 ppm is the correct dosing rate. At the current dosing rate, approximately five to seven gallons (depending on flow) are injected each day into the GWTS.

- SAIC decommissioned the SVE in December 2010. A notification letter of completed decommissioning was sent to the PADEP and the United States Environmental Protection Agency (EPA) on January 12, 2011.

- SAIC performed break-through monitoring of the GAC to determine when to complete the GAC change-out. Sixty-seven (67) days after new carbon is installed, vapor samples are collected and analyzed to determine if the carbon is approaching saturation. The GAC was removed and replaced in March, July, and November 2010.

## 4.3 Groundwater Withdrawal and VOC Removal

Table 4-1 presents recorded groundwater withdrawal and total VOC removal that has been accomplished through operation of the GWTS. A system-wide total of approximately 38,444 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 2010 was approximately 303 gpm with 3.8 lbs/day of total VOCs being removed.

The total amount of groundwater extracted during the period from January 1 through December 31, 2010, was approximately 159 million gallons (an average of 435,733 gallons per day [gpd]; 303 gpm). The 2010 extraction data are approximately 1.3 percent lower than the previous year (2009) when the average values were approximately 441,566 gpd and 306 gpm. This decrease is attributable to the shutdown of the GWTS for the PTA packing material change-out and CW-8 being off-line during the effluent pump repairs.

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 2010 was 1,388 pounds (116 pounds per month). This mass removal rate is approximately 12 percent lower than the value calculated during the previous reporting period (132 pounds per month). This decrease in mass removal rate can be attributed to a lower volume of groundwater removed in 2010 (159,042,802 gallons) compared to 2009 (161,171,721 gallons). Also a lower overall average influent concentration was determined for 2010 (1,046 micrograms per liter [µg/L]) compared to 2009 (1,176 µg/L). Estimated lbs/day of total VOCs extracted by the groundwater treatment system for the last five calendar years are shown below:

- 2010 – 3.8 lbs/day
- 2009 – 4.3 lbs/day
- 2008 – 4.3 lbs/day
- 2007 – 4.8 lbs/day
- 2006 – 3.6 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 to greater than 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 2010 report period was approximately 1,046 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-DCE.

The PTA effluent was sampled and reported on six times in 2010. The NPDES permit only requires quarterly sampling. Two additional samples were collected in March and May of 2010 to document that the PTA packing material was functioning properly in the months before the packing material was replaced. Analytical testing results for the reporting period 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 groundwater withdrawal associated with the groundwater treatment system in accordance with dockets 19900715 and 19980901. 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. The most recent submittal to the SRBC occurred in January 2011.

# 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 2,300 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 2010, the NPBA extraction system removed approximately 7.3 million gallons of groundwater at an average rate of approximately 604,790 gallons per month, or 13.8 gpm. This volume is slightly higher than the withdrawal from the NPBA reported for 2009 (12.5 gpm). Figure 5-1 presents a graphical comparison of the 2010 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.

Measured groundwater levels for the current report period 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 14 and December 20, 2010. Additionally, Table 5-2 summarizes measurements of water levels for extraction wells in the NPBA during 2010. 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 2010, groundwater levels were measured in the groundwater extraction wells on a monthly basis to help determine if proper groundwater drawdown was being maintained. During 2010, approximately two to five wells were noted each month to be above the designed drawdown range.

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 14, 2010, water level measurement event, three of the NBA collection wells (CW-1, CW-1A, and CW-6) were pumping very little (or not pumping) groundwater due to low groundwater levels and/or maintenance issues. In the December 20, 2010, water level measurement event, two of the NPBA collection wells (CW-1A and CW-2) were pumping very little 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-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 2010 is presented below:

- A new pump end and new motor were installed at CW-1 in April 2010.
- A new pump end was installed at CW-2 in January 2010.
- New pump ends were installed at CW-3 in February, April, June, and October 2010.
- New pump ends were installed at CW-4 in January, April, and November.
- A new pump motor was installed at CW-5 in March 2010.
- A new pump motor was installed at CW-7A in September 2010.
- The underground groundwater conveyance lines were acid cleaned in June 2010.

## 5.2 Groundwater Chemistry

In the collection wells, the dominant VOC is TCE with concentrations ranging from 5.0 µg/L (CW-5) to 140 µg/L (CW-7A). Historical trends of TCE in the NPBA are shown on Figure 5-2. A comparison of individual extraction well VOC verses the total VOC concentrations are shown on Table 5-3. Historical VOC trends for each collection well are shown on Figures 5-3 through 5-11. The groundwater quality analysis from the 2010 extraction well sampling data is presented in Table A-2 (Appendix A).

# 6.0 TCA TANK AREA GROUNDWATER EXTRACTION SYSTEM

Groundwater extraction was initiated in November 1990 from CW-8, located south of Building 91, 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 Building 2, 150 feet east of CW-8. Groundwater from the TCA Tank Area is conveyed a distance of approximately 1,000 feet through a 3-inch-diameter pipe 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 June 2002, extraction well CW-16 was removed from service. The pump at this well had failed. Because of the difficulty of servicing CW-16 due to its location in a congested manufacturing area and the ability of CW-8 to influence this vicinity, it was decided to discontinue groundwater extraction from this well (CW-16).

## 6.1 System Operational Conditions

Extraction well CW-8 operated the majority of the time during the reporting period. CW-8 was shut down during the PTA packing material change-out (6/19/2010 through 6/27/2010), as well as during the effluent pump repairs (6/29/2010 through 8/1/2010). Table 5-1 presents a record of monthly groundwater withdrawals from extraction well CW-8. During 2010, approximately 48 million gallons of groundwater were extracted from the TCA Tank Area, averaging approximately 4 million gallons per month (91 gpm). An average of approximately 96 gpm was calculated for the previous report period in 2009.

The groundwater contour maps (Figures 3-1 and 3-2) indicate water level conditions that existed on June 14 and December 20, 2010. 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 May, August, September, November, and December 2010, the observed water level in CW-8 was below the design drawdown level for this well. The observed water level at CW-8 was generally within the designed range for the remainder of 2010.

Based on the monthly total flow data, the CW-8 daily extraction rate averaged approximately 131,000 gpd. This value equates to a monthly average of 4 million gallons, which represents a 5 percent decrease from 2009 (4.17 million gallons per month). This well is consistently

operated at its maximum capacity; therefore, an increase in groundwater recharge does not necessarily explain the annual decrease in groundwater extraction. Extraction well CW-8 did not operate for 43 days in 2010, compared to 5 days in 2009. The 38 extra days of operation in 2009 explain the decrease in flow from 2009 to 2010. Overall, CW-8 pumped approximately 30 percent of the total volume of groundwater withdrawn at the site in 2010.

**Maintenance**

Extraction well CW-8 operated as designed throughout the report period with short interruptions for the PTA packing change-out and the effluent pump repairs. During the effluent pump repairs, at times, only one effluent pump was operational (usually two pumps are utilized). CW-8 was disabled to reduce the flow into the GWTS, allowing the GWTS to function properly utilizing one effluent pump.

## 6.2 Groundwater Chemistry

As groundwater pump and treat progressed in the TCA Tank Area, the dominant VOC present in the area shifted from TCA to TCE. A comparison of individual extraction well VOC verses the total VOC concentrations is shown on Table 5-3. TCA concentrations in collection wells CW-8 and CW-16 are shown in Figure 6-1. TCE concentrations in collection wells CW-8 and CW-16 is shown in Figure 6-2. In December 21, 2010, the TCA, TCE, and cis-1-2,DCE concentrations were 9.1 J µg/L, 310 µg/L, and 120 µg/L respectively. The predominant VOC concentrations in collection wells CW-8 and CW-16 are shown in Figure 6-3. The groundwater quality analysis from the 2010 extraction well sampling data is presented in Table A-2 (Appendix A).

# 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 NB4. 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 Building 4. Groundwater extraction from the WPL wells is conducted via underground piping to the groundwater treatment system in Building 41. The wells are individually piped to the groundwater treatment plant 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 107 million gallons of groundwater were extracted from the WPL Area during 2010 (see Table 5-1), averaging approximately 8.9 million gallons per month (204 gpm). This groundwater extraction rate represents a 3 percent increase from 2009 when the extraction rate was approximately 200 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 66 percent of the total volume of groundwater withdrawn at the site.

The groundwater contour maps (Figures 3-1 and 3-2) show the effect of the groundwater extraction system imposed on the water table at the WPL Area on June 14, 2010, and December 20, 2010. Groundwater contours 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 2010, the water levels in three of the four WPL wells (excluding CW-15A) were generally close to the designed range. The water level at well CW-15A was below the designed range for five months of 2010.

### 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 2010 is presented below:

- In February 2010, a new pump end and motor were installed at CW-17.

## 7.2 Groundwater Chemistry

Historical concentrations of VOCs in the WPL collection wells are shown on Figures 7-1 through 7-5. The dominate VOC is TCE with concentrations ranging from 88 µg/L (CW-17) to 3,400 µg/L (CW-15A). Extraction well CW-15A had the highest concentration of PCE (1,200 µg/L). A comparison of individual extraction well VOC verses the total VOC concentrations is shown on Table 5-3. The groundwater quality analysis from the 2010 extraction well sampling data is presented in Table A-2 (Appendix A).

# 8.0 SOFTAIL DEWATERING SYSTEM

Harley-Davidson started excavation activities for the Softail production plant in 2001. This facility 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 permanent groundwater collection system was designed as part of the project. The permanent groundwater collection system for the Softail site consists of a shallow interceptor trench (or toe drain), a deep interceptor trench and drain, and a capture well (CW-19). All three components of the groundwater collection system are designed to flow to a pumping station. From the pumping station, the groundwater is transported via underground piping to the groundwater treatment facility located in Building 41 (see Figure 1-2).

Groundwater collection via this system was initiated in March 2002. During 2010, this system collected over 61,650 gallons of groundwater (refer to Table 5-1). This groundwater recovery rate represents a 94 percent decrease from 2009 when the annual recovery rate was 965,190. A graphical comparison of the WPL groundwater extraction volumes to the other site extraction systems is presented on Figure 5-1. Overall, the Softail dewatering system recovered approximately 0.04 percent of the total volume of groundwater withdrawn at the site. The dewatering system only operated 20 days of the reporting period due to site-wide restructuring activities, including modifications to the toe of slope drain and to the lift station.

## 8.1 Toe Drain System

The northeast corner of the Softail 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 collect groundwater from this area, thus lowering the groundwater levels and minimizing surface discharges downgradient of the toe drain. The toe drain was constructed as a shallow trench drain filled with gravel and four-inch perforated polyvinyl chloride (PVC) piping. The toe drain trench was lined with geotextile fabric to minimize sedimentation of the piping. An impermeable layer was placed on top of the 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 the Softail Building. The toe drain was reinstalled along the new toe of slope on October 26, 2010, by Liberty Excavators, Inc.

## 8.2 Deep Trench Drain

The 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. The deep trench drain is sloped to gravity drain to the lift station. The depth varies from 22 feet to 26 feet. Four clean-outs were installed along the 760-foot length of piping. The deep trench drain was constructed of perforated 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.

## 8.3 Capture Well (CW-19)

A capture well (CW-19) and force main were installed in the paint sludge pit area of the Softail plant. 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 programmed 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. Groundwater level has not been recorded in this well. The lowering of groundwater from the deep trench effectively keeps the groundwater below the depth of CW-19.

## 8.4 Lift Station

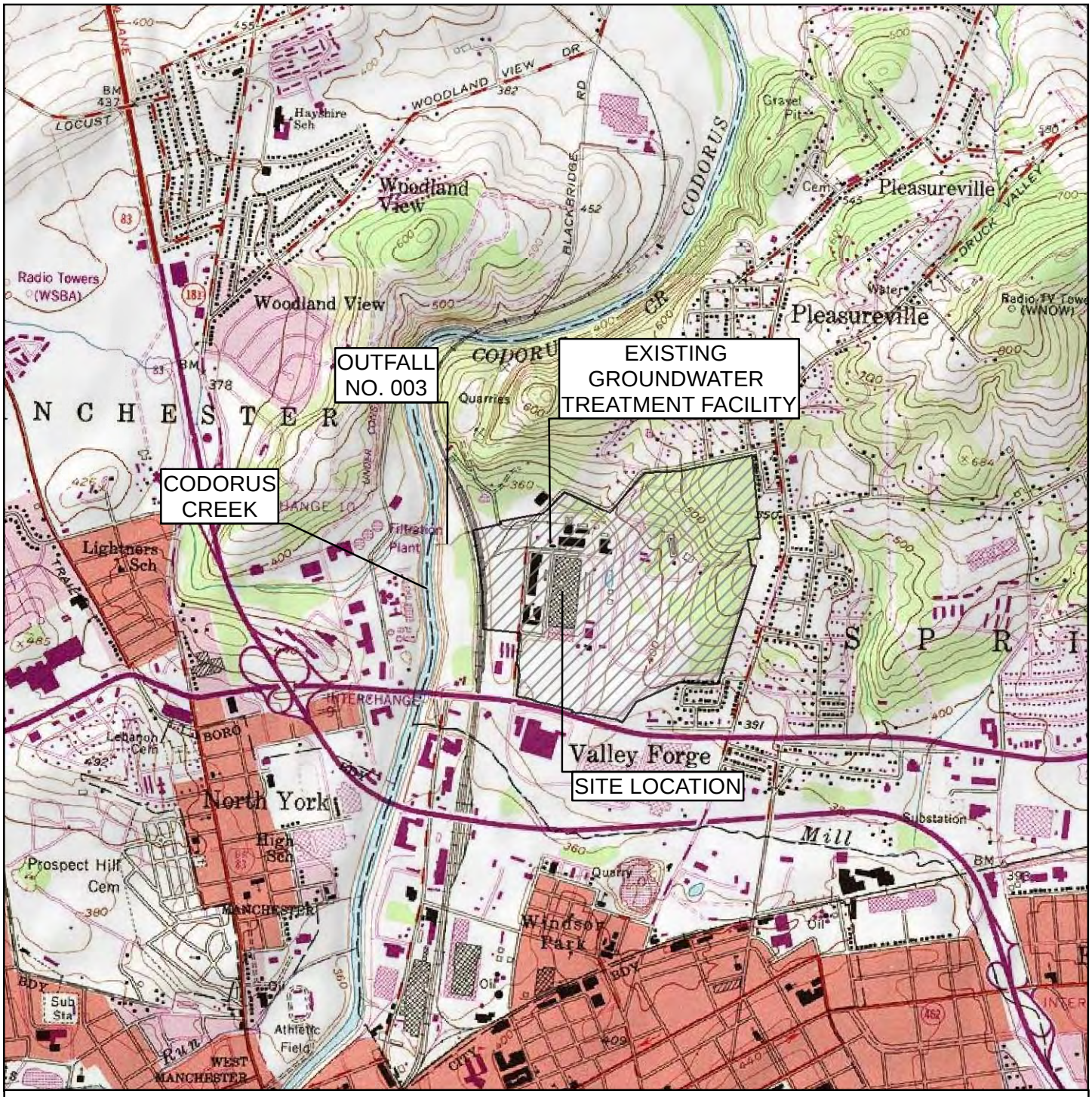
The lift station is located north of the Softail building. The lift station conveys groundwater to the groundwater treatment plant in Building 41. The lift station controls are automated, and pump operation can be controlled remotely.

## 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. Groundwater samples were not collected from the lift station in 2010. No water was entering the lift station during the 2010 Key Well Sampling (June) event or the collection well sampling event in December 2010.

A review of the December 2009 lift station sampling results indicated that only one VOC (TCE) was detected at 0.47 μg/L in the deep drain sample and 0.53 μg/L in the toe drain sample (both samples had a J data qualifier – Data indicate the presence of a compound that meets the identification criteria, but the result is less than the quantification limit but greater than zero).

# 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

YORK

QUADRANGLE LOCATION

**FORMER YORK NAVAL ORDNANCE PLANT**

1425 EDEN ROAD, YORK, PA 17402

## SITE LOCATION MAP

| | | | |
|---|---|---|---|
| drawn AGM | checked EMW | approved SMS | figure no. 1-1 |
| date 10/20/08 | date 3/11/2010 | date 3/11/2010 | |
| job no. 01-1633-00-9806-309 | | file no. Fig1site-loc.mxd | |

| initials | date | revision |
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NPBA CONTROL BUILDING

NPBA GROUNDWATER CONVEYANCE PIPE TO TREATMENT PLANT

NPBA GROUNDWATER COLLECTION PIPE TO CONTROL BUILDING

TREATMENT SYSTEM DISCHARGE LINE

WPL COLLECTION PIPES TO TREATMENT PLANT

LIFT STATION

SOFTAIL DEWATERING SYSTEM

CW-8 GROUNDWATER CONVEYANCE PIPE TO TREATMENT PLANT

CODORUS CREEK

Norfolk-Southern

Maple Crest Blvd

Fading Way

Sand E

EDEN RD

Metal Chip Bin Area

Underground Storage Tank T-4

Building 2 Drum Storage Area

TCA Tank Area

West Parking Lot

North Property Boundary Area

South Property Boundary Area

North End Test Track

Bunker and Shell Ranges

East Landfill Area

Cyanide Spill Area

Canterbury Ln

Pleasant View DR

PARADISE RD

Ridgewood Rd.

Mt. Herman Blvd

Hamilton St.

N. SHERMAN ST

Topper St.

Canford St.

U.S. RT 30

ARSENAL ROAD

RW-6 RW-5 RW-4 RW-3 RW-2 RW-1

S-6 S-7

MW-98I MW-98D MW-98S MW-99S MW-99D MW-100D MW-100I MW-100S MW-101S MW-101D MW-93D MW-93S MW-95 MW-96S MW-96D MW-74D MW-105 MW-106 MW-97 MW-75S MW-75D MW-107 MW-6 MW-74S MW-39S MW-39D MW-38D MW-37S MW-37D MW-20 CW-20 CW-9 CW-13 CW-14 CW-17 WPL-SS-8 WPL-SS-7 MW-50D MW-50S MW-51D MW-51S MW-7 MW-45 MW-46 MW-8 MW-47 MW-30 MW-116 MW-117 MW-82 MW-5 MW-78 MW-84 MW-36S MW-36D MW-31S MW-31D MW-83 MW-77 MW-26 MW-27 CW-15 CW-15A MW-49S MW-49D MW-114 MW-81D MW-28 MW-32S MW-32D MW-35S MW-35D MW-34S MW-34D MW-33 MW-29 MW-88 MW-85 MW-40S MW-40D MW-1 MW-43S MW-43D MW-42M MW-54 MW-55 CW-8 CW-16 MW-87 MW-80 MW-113 CW-18 MW-57 MW-115 MW-79 MW-94 MW-56 MW-112 MW-110 MW-109S MW-109D MW-111 MW-2 MW-91 MW-92 MW-22 MW-64D MW-64S MW-108S MW-108D MW-65S MW-65D MW-66S MW-66D MW-14 MW-68 MW-17 MW-67S MW-67D MW-69 MW-15 MW-102D MW-102S MW-70S MW-70D MW-19 MW-104 MW-103S MW-103D MW-86S MW-86D BLD14-S2 BLD14-S1 MW-18D MW-18S MW-16S MW-16D MW-12 MW-3 MW-9 MW-10 MW-11 CW-1 CW-2 CW-3 CW-4 CW-5 CW-6 CW-1A Folk (RW-4) CW-7 CW-7A MW-20S MW-20M MW-20D

40 51 60 44 67 43 12 50 41 42 10 45 14 30 15 68 47 4 92 46 2 7 52 59 58 1 3 71 13 70

## Legend

- Monitoring Well and Designation
- Extraction Well and Designation
- Key Well and Designation
- Spring
- Treatment System Features
- NPBA Area
- TCA Area
- WPL Area
- Codorus Creek
- Building
- Recently Removed Building
- Harley Davidson Property Boundary
- Roads and Curb Boundary
- Railroad

N

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

0 250 500 1,000
SCALE IN FEET

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

1425 Eden Rd York, Pa 17402

# GROUNDWATER TREATMENT SYSTEM LOCATION

| drawn | checked | approved | figure no. |
|---|---|---|---|
| AGM | EMW | SMS | 1-2 |
| date 3/28/2011 | date 3/28/2011 | date 3/28/2011 | |
| job no. 4501020024 | | file no. Fig_1-2_Site_Plan_20110325.mxd | |

| initials | date | revision |
|---|---|---|
| | | |

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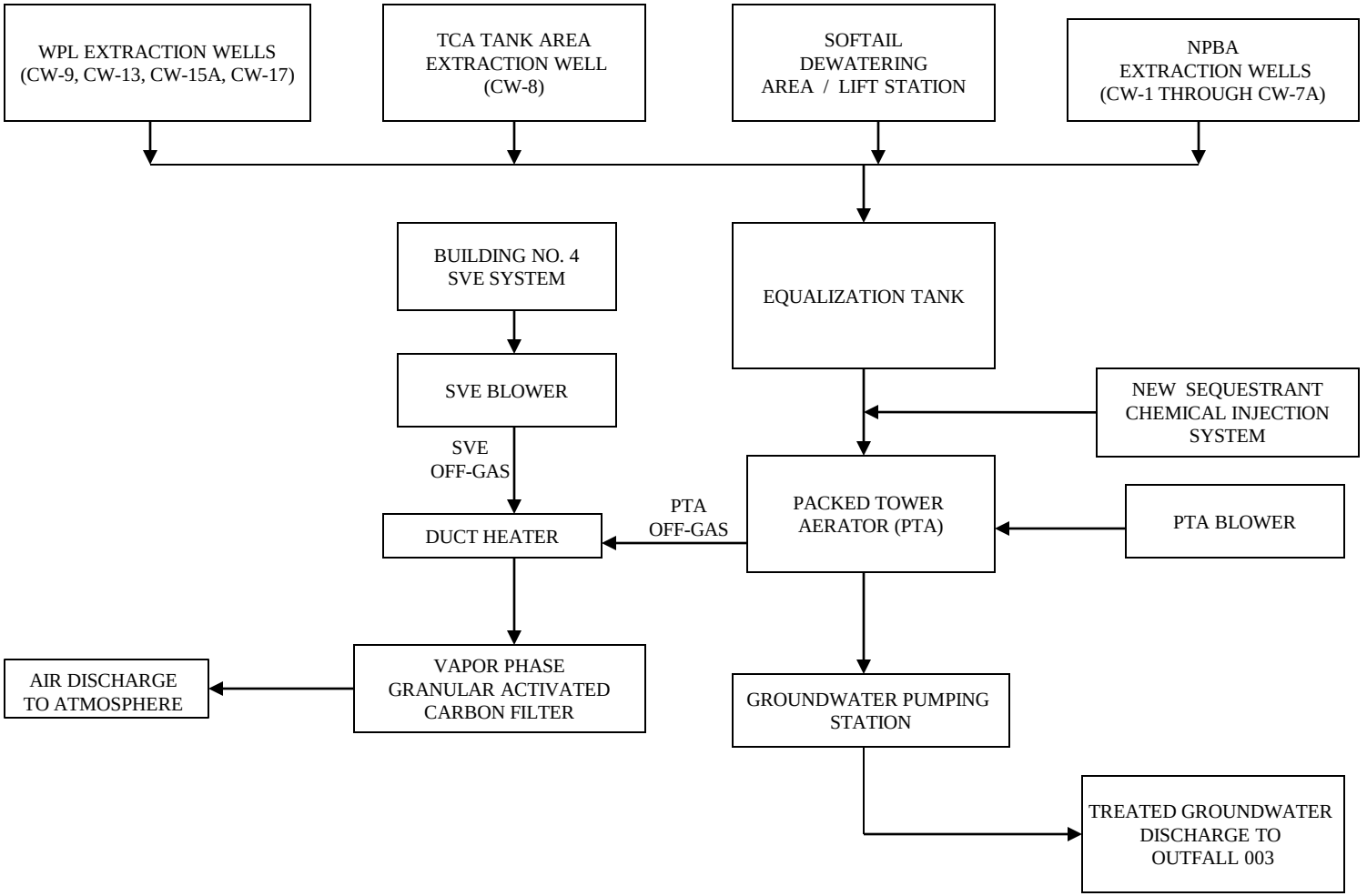
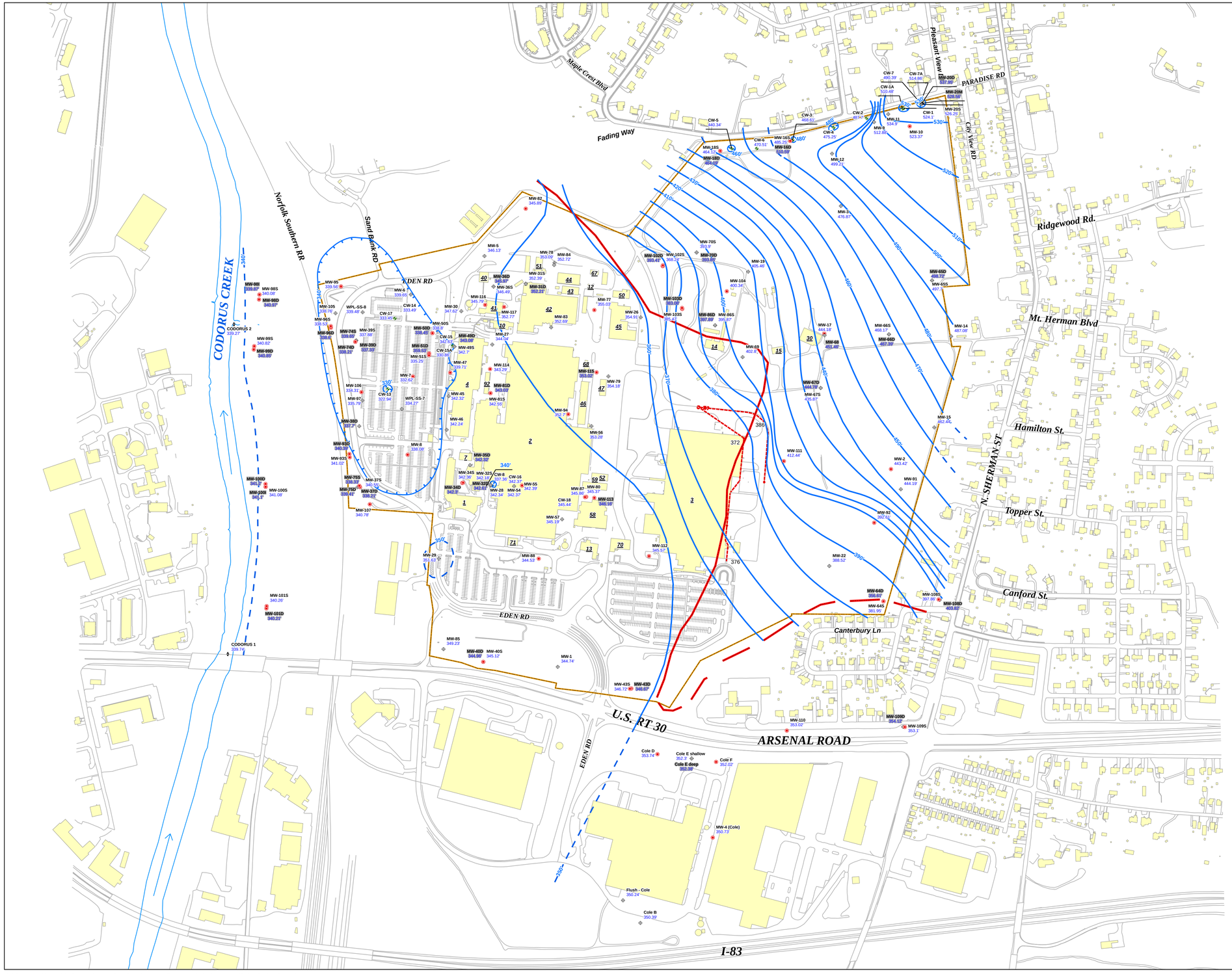
# FIGURE 1-3
# GROUNDWATER AND SVE TREATMENT SYSTEM FLOW DIAGRAM
## Former York Naval Ordnance Plant




March 24, 2011




**Harley-Davidson Motor Co. Operations Inc.**
**Groundwater Withdrawal: June 14, 2010**

| Well ID | Daily Flow (Gallons) | Average Daily Pumping Rate (GPM) |
|---|---|---|
| CW-1 | 436 | 0.3 |
| CW-1A | 185 | 0.1 |
| CW-2 | 663 | 0.5 |
| CW-3 | 5,153 | 3.6 |
| CW-4 | 2,610 | 1.8 |
| CW-5 | 774 | 0.5 |
| CW-6 | 0 | 0.0 |
| CW-7 | 2,719 | 1.9 |
| CW-7A | 1,395 | 1.0 |
| CW-8 | 144,200 | 100.1 |
| CW-9 | 106,524 | 74.0 |
| CW-13 | 107,446 | 74.6 |
| CW-15A | 4,920 | 3.4 |
| CW-17 | 82,260 | 57.1 |
| Lift Station | 0 | 0.0 |

## Legend

- Extraction Well and Designation
- Monitoring Well and Designation
- Key Well and Designation
- Stream Gauge and Designation
- Estimated Capture Zone
- Groundwater Contour (Feet)
- Inferred Groundwater Contour (Feet)
- Groundwater Contour Sink (Feet)
- Bedrock Contact
- Groundwater Interceptor Trenches
- Harley Davidson Property Boundary
- Buildings
- Cordorus Creek
- Roads and Curb Boundary

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 6/14/2010 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.*

0 300 600 1,200
SCALE IN FEET

**FORMER YORK NAVAL ORDNANCE PLANT**
1425 EDEN ROAD, YORK, PA 17402

**GROUNDWATER SURFACE CONTOUR MAP JUNE 2010**

| | | | |
|---|---|---|---|
| drawn AGM | checked SLM | approved RGM | figure no. 3-1 |
| date 8/25/2010 | date 10/12/2010 | date 11/2/2010 | |
| job no. 4501020172/8000/100 | | file no. Fig_3_GWC.mxd | |

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SAIC From Science to Solutions

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Harley-Davidson Motor Co. Operations, Inc.
Groundwater Withdrawal: December 20, 2010

| Well ID | Daily Flow (Gallons) | Average Daily Pumping Rate (GPM) |
|---|---|---|
| CW-1 | 3,060 | 2.1 |
| CW-1A | 111 | 0.1 |
| CW-2 | 511 | 0.4 |
| CW-3 | 5,388 | 3.7 |
| CW-4 | 2,723 | 1.9 |
| CW-5 | 848 | 0.6 |
| CW-6 | 4,335 | 3.0 |
| CW-7 | 717 | 0.5 |
| CW-7A | 974 | 0.7 |
| CW-8 | 160,000 | 111.1 |
| CW-9 | 100,182 | 69.6 |
| CW-13 | 105,683 | 73.4 |
| CW-15A | 3,087 | 2.1 |
| CW-17 | 81,874 | 56.9 |
| Lift Station | 0 | 0.0 |

## Legend

- Monitoring Well and Designation
- Key Well and Designation
- Extraction Well and Designation
- Stream Gauge and Designation
- Groundwater Contour (Feet)
- Inferred Groundwater Contour (Feet)
- Groundwater Contour Sink (Feet)
- Bedrock Contact
- Groundwater Interceptor Trenches
- Harley Davidson Property Boundary
- Building
- Recently Removed Building
- Cordorus Creek
- Roads and Curb Boundary

*NOTES:*

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 12/20/2010 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. *Well MW-97 groundwater elevation was not used in developing the groundwater surface contour map because it did not equilibrate before water level was measured.*

N

0 300 600 1,200

SCALE IN FEET

**FORMER YORK NAVAL ORDNANCE PLANT**

1425 EDEN ROAD, YORK, PA 17402

**GROUNDWATER SURFACE CONTOUR MAP - DECEMBER 2010**

| | | | |
|---|---|---|---|
| drawn JEB | checked EMW | approved CDO | figure no. 3-2 |
| date 1/26/2011 | date 3/29/2011 | date 3/29/2011 | |
| job no. 4501020172/5000/100 | | file no. Groundwater_Gauging_Dec_10-20110301 | |

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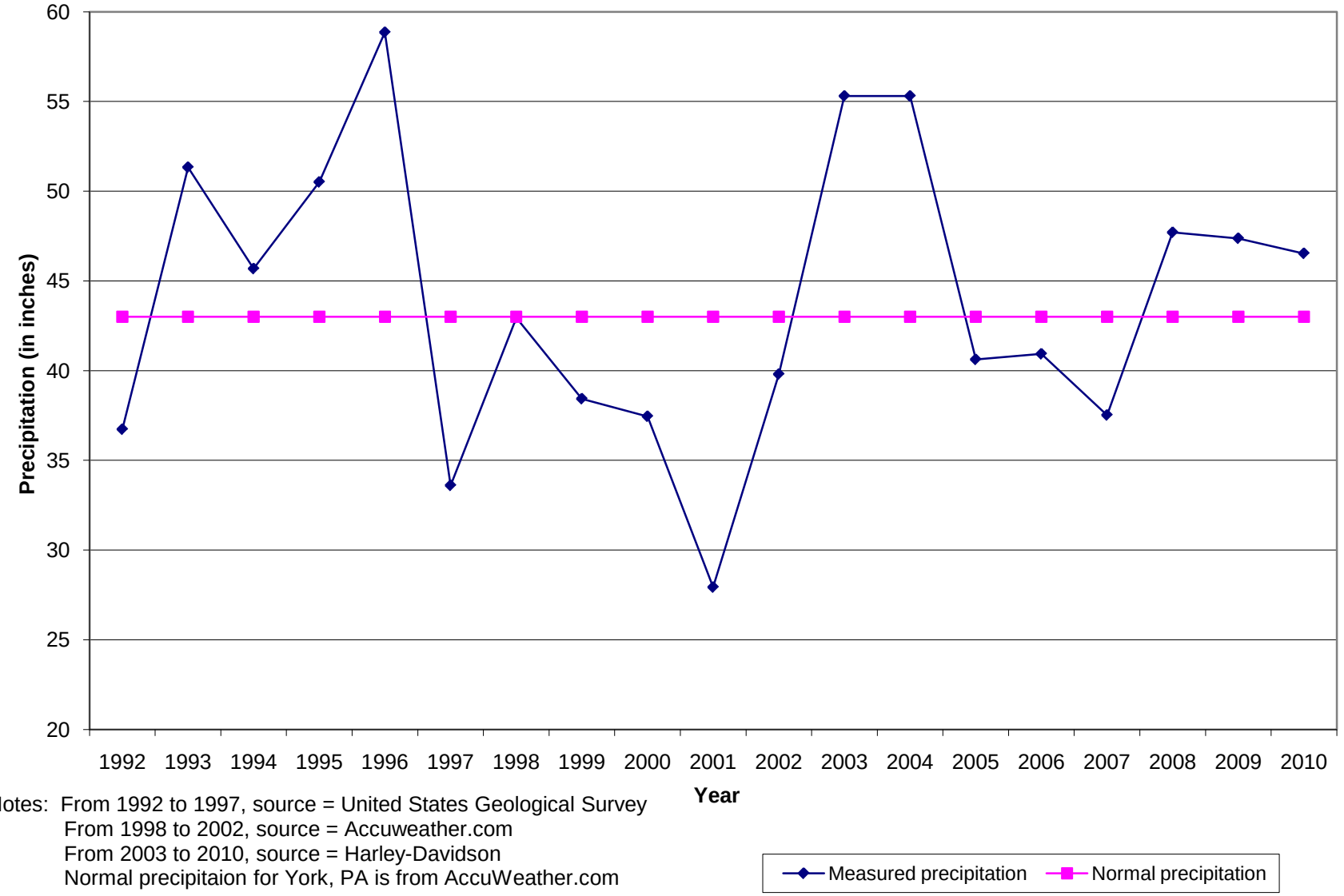
**Figure 3-3**
**Annual Historical Precipitation Data for York, PA**
**Former York Naval Ordnanace Plant**
**1425 Eden Road, York PA 17402**




Notes: From 1992 to 1997, source = United States Geological Survey
From 1998 to 2002, source = Accuweather.com
From 2003 to 2010, source = Harley-Davidson
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**

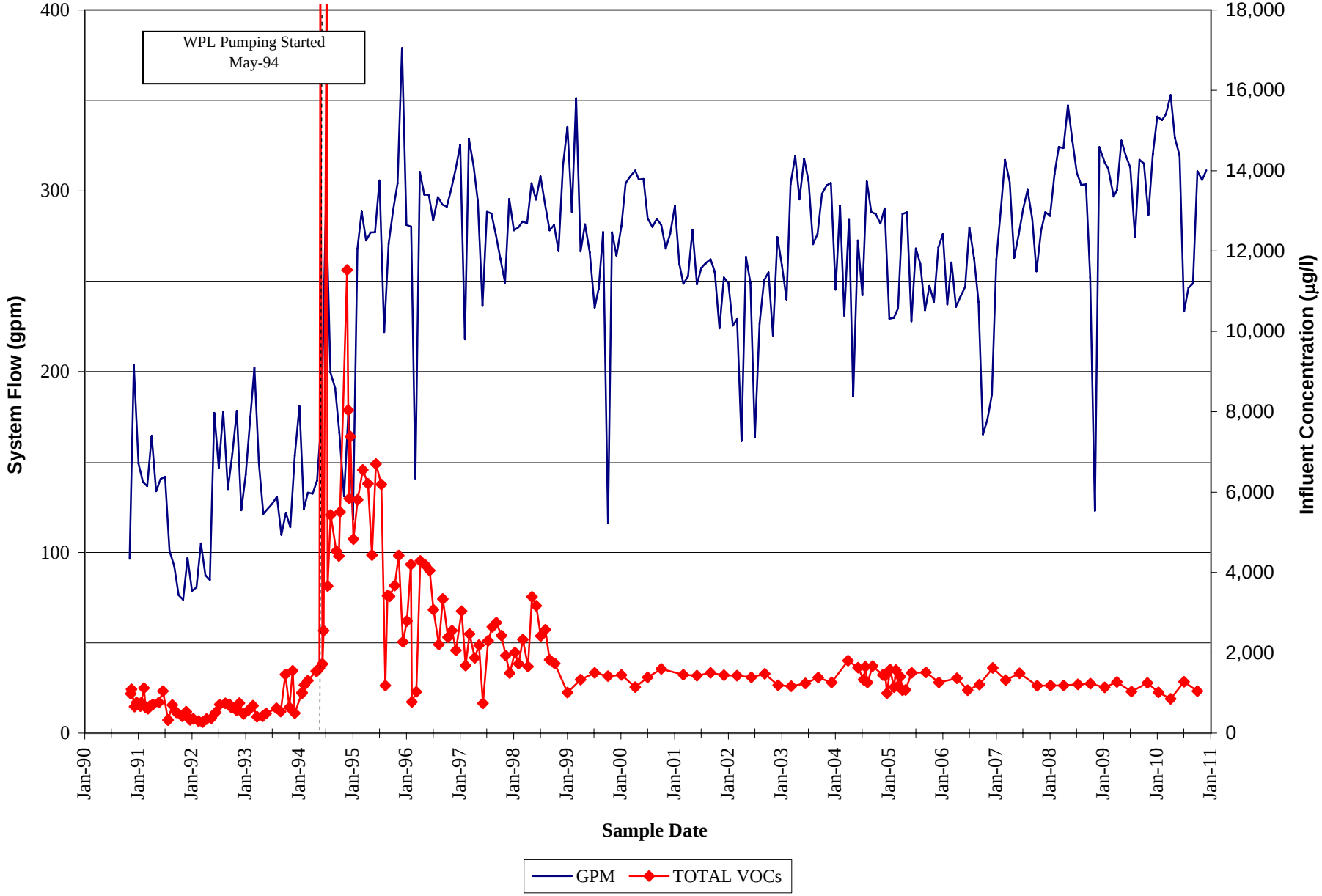



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**Figure 4-2**
**Packed Tower Aerator Influent Chemistry for NPDES Discharge Permit Required Compounds**
**Former York Naval Ordnance Plant**
**1425 Eden Road, York PA 17402**

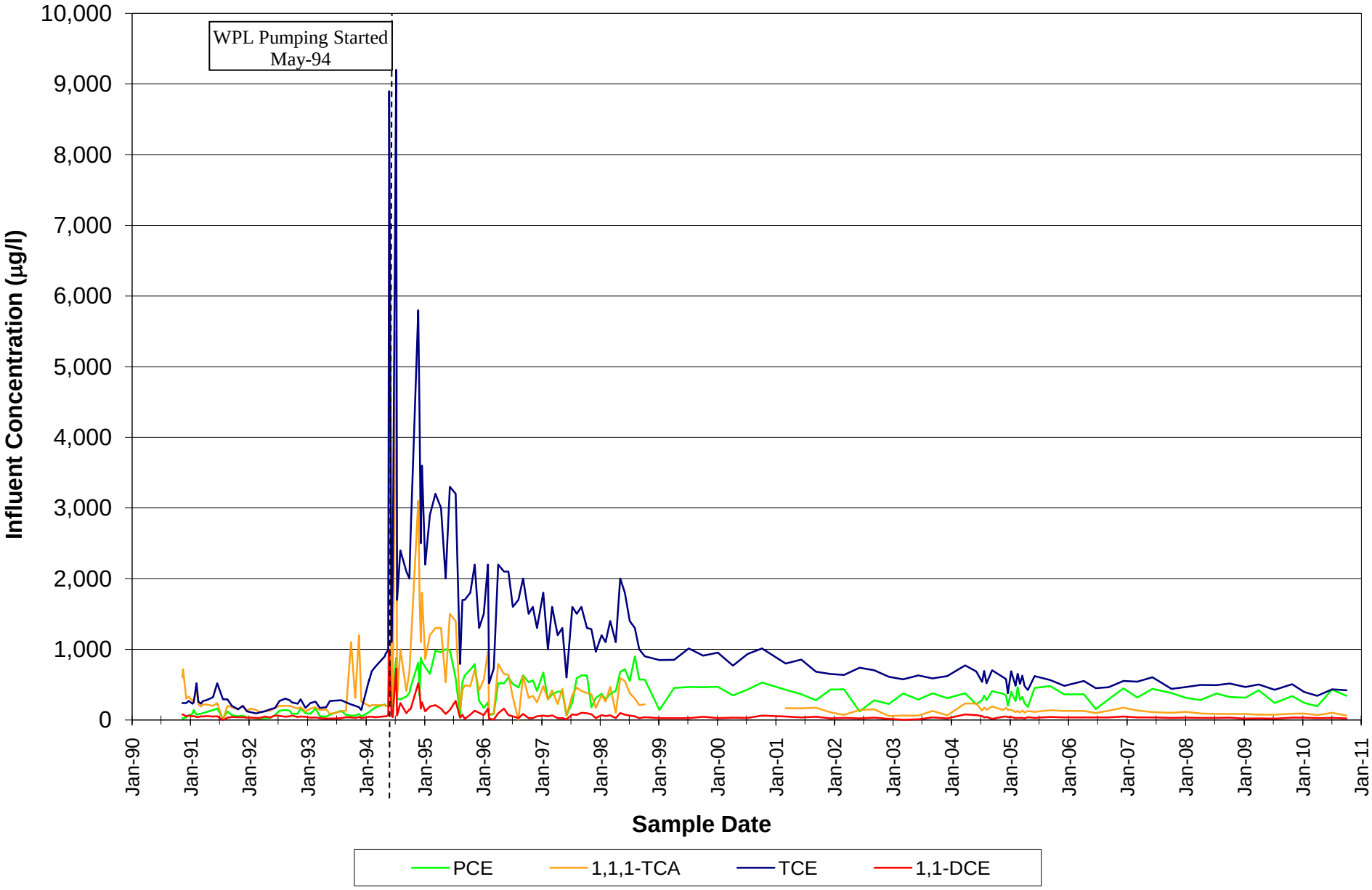


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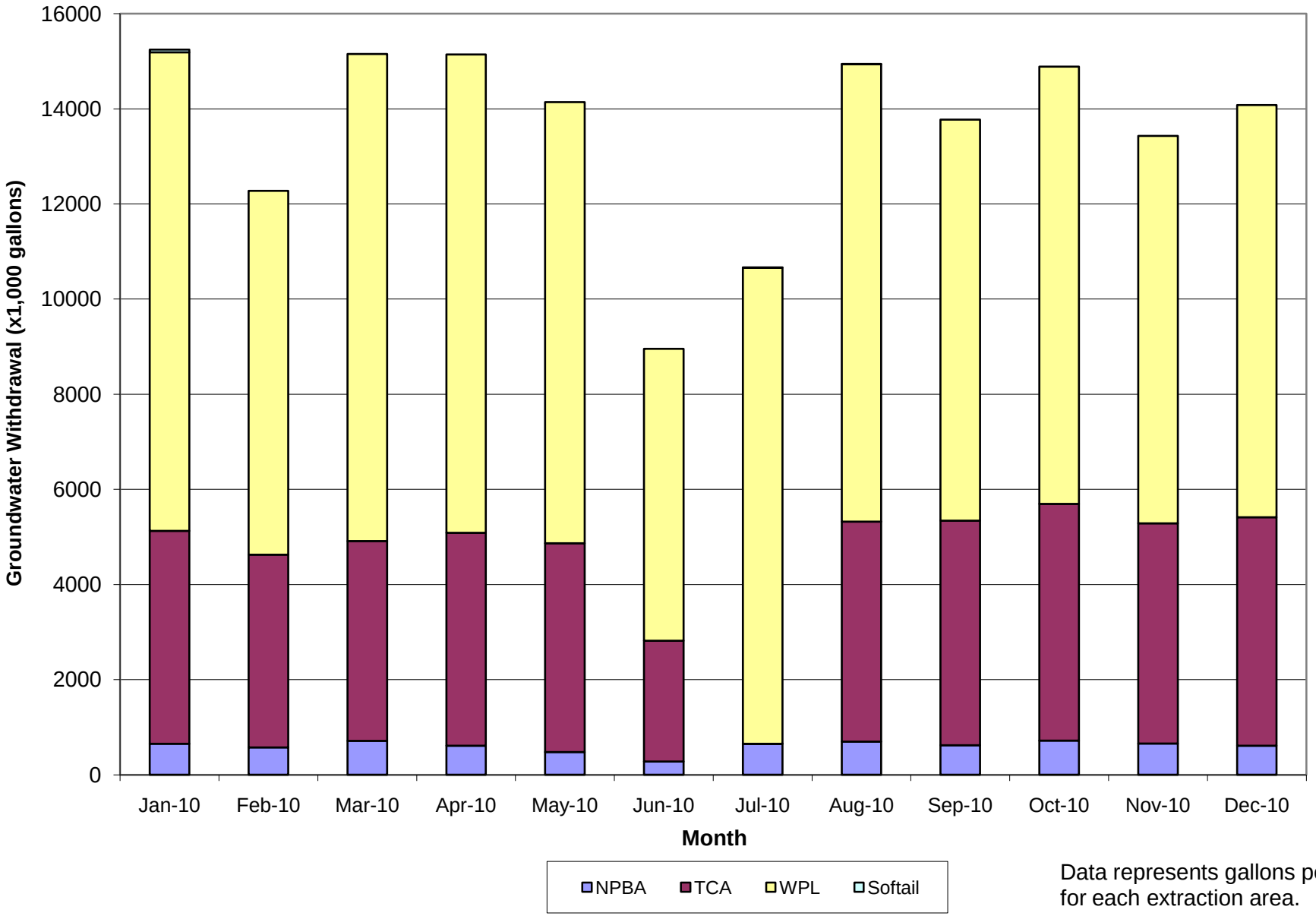
**Figure 5-1**
**2010 Groundwater Withdrawals**
**Former York Naval Ordnance Plant**
**1425 Eden Road, York PA 17402**




Data represents gallons per month for each extraction area.

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

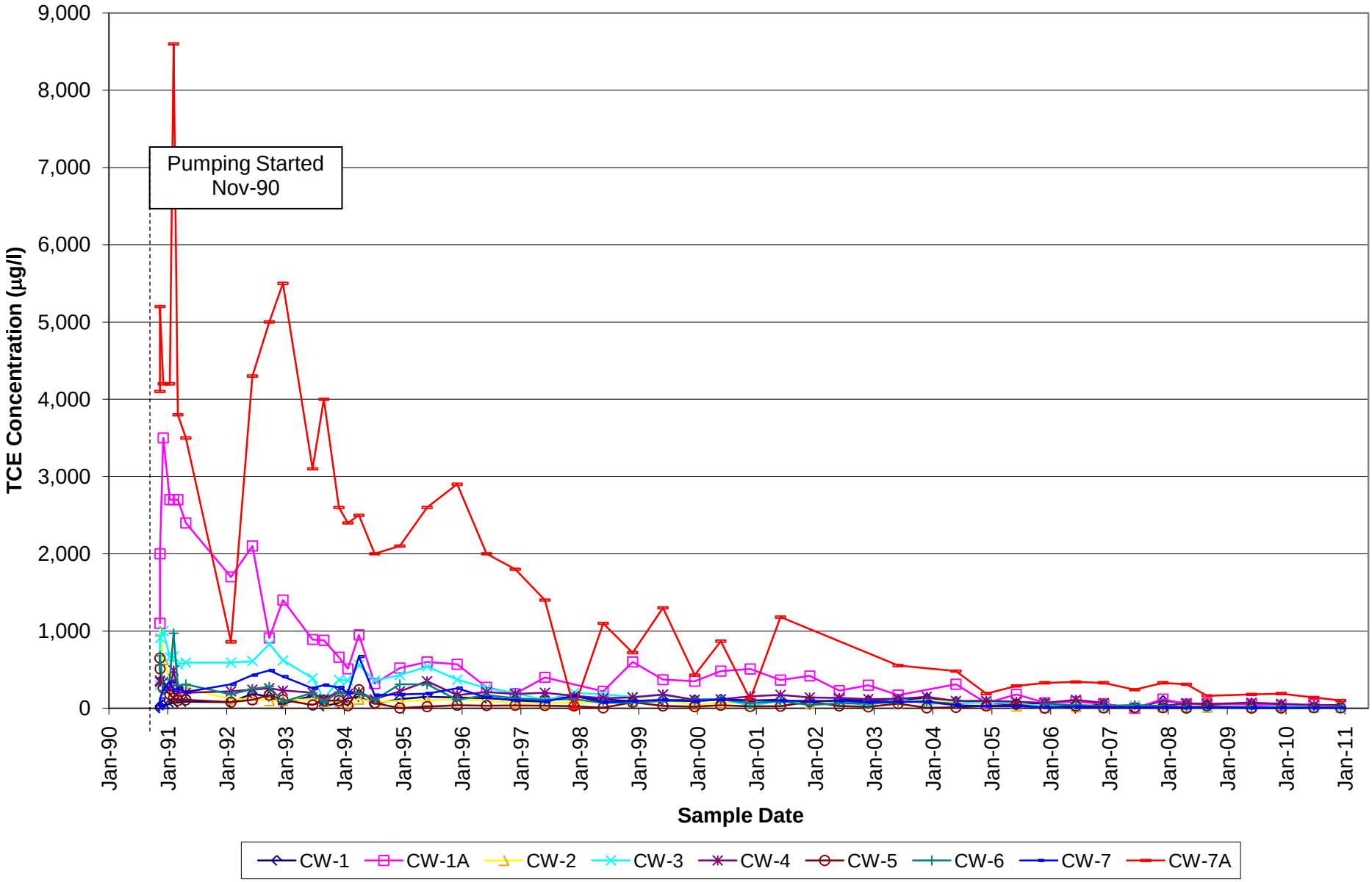


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**Figure 5-3**
**Predominant VOC Concentrations - Extraction Well CW-1**
**Former York Naval Ordnance Plant**
**1425 Eden Road, York PA 17402**

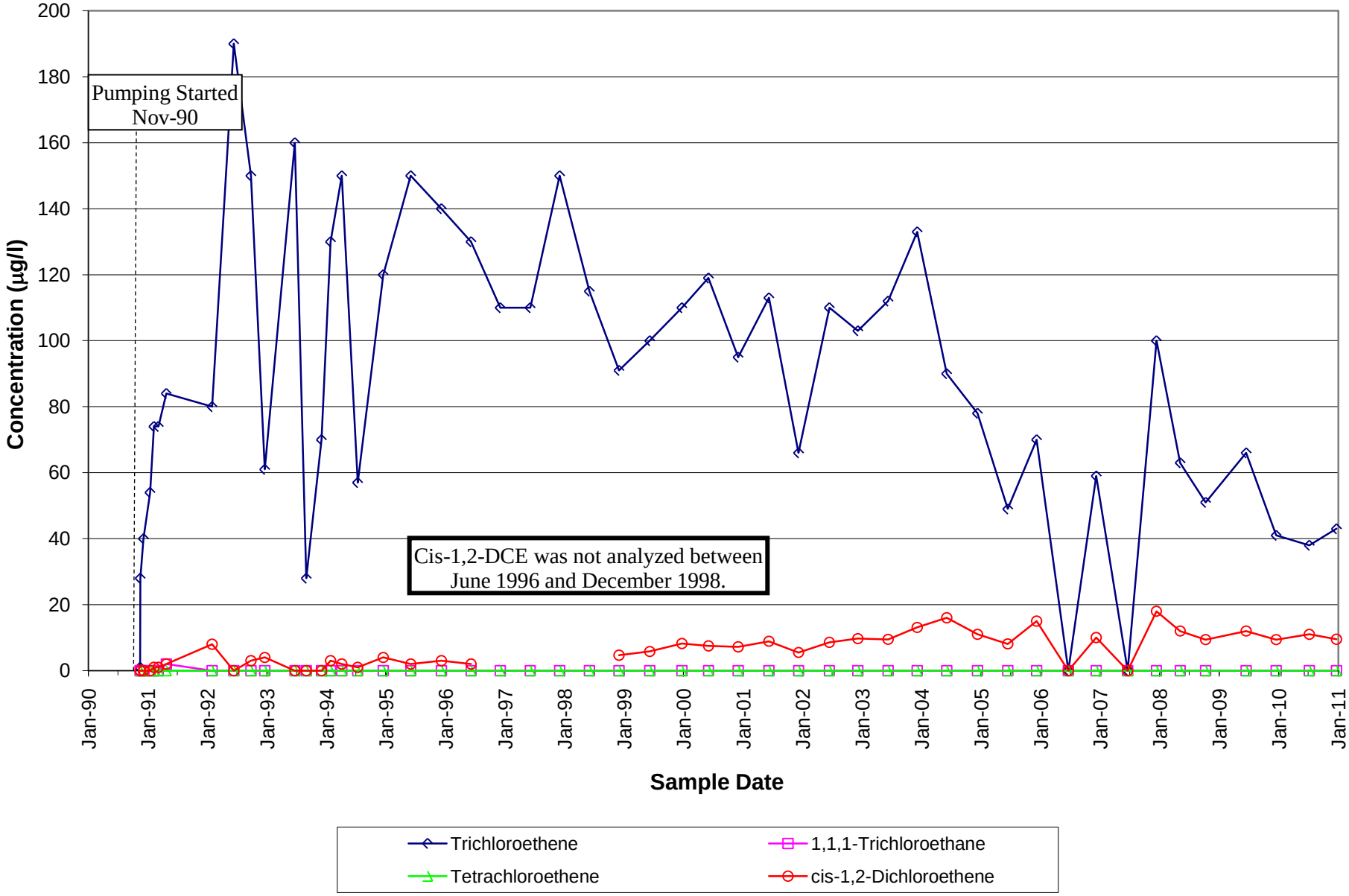


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**Figure 5-4**
**Predominant VOC Concentrations - Extraction Well CW-1A**
**Former York Naval Ordnance Plant**
**1425 Eden Road, York PA 17402**

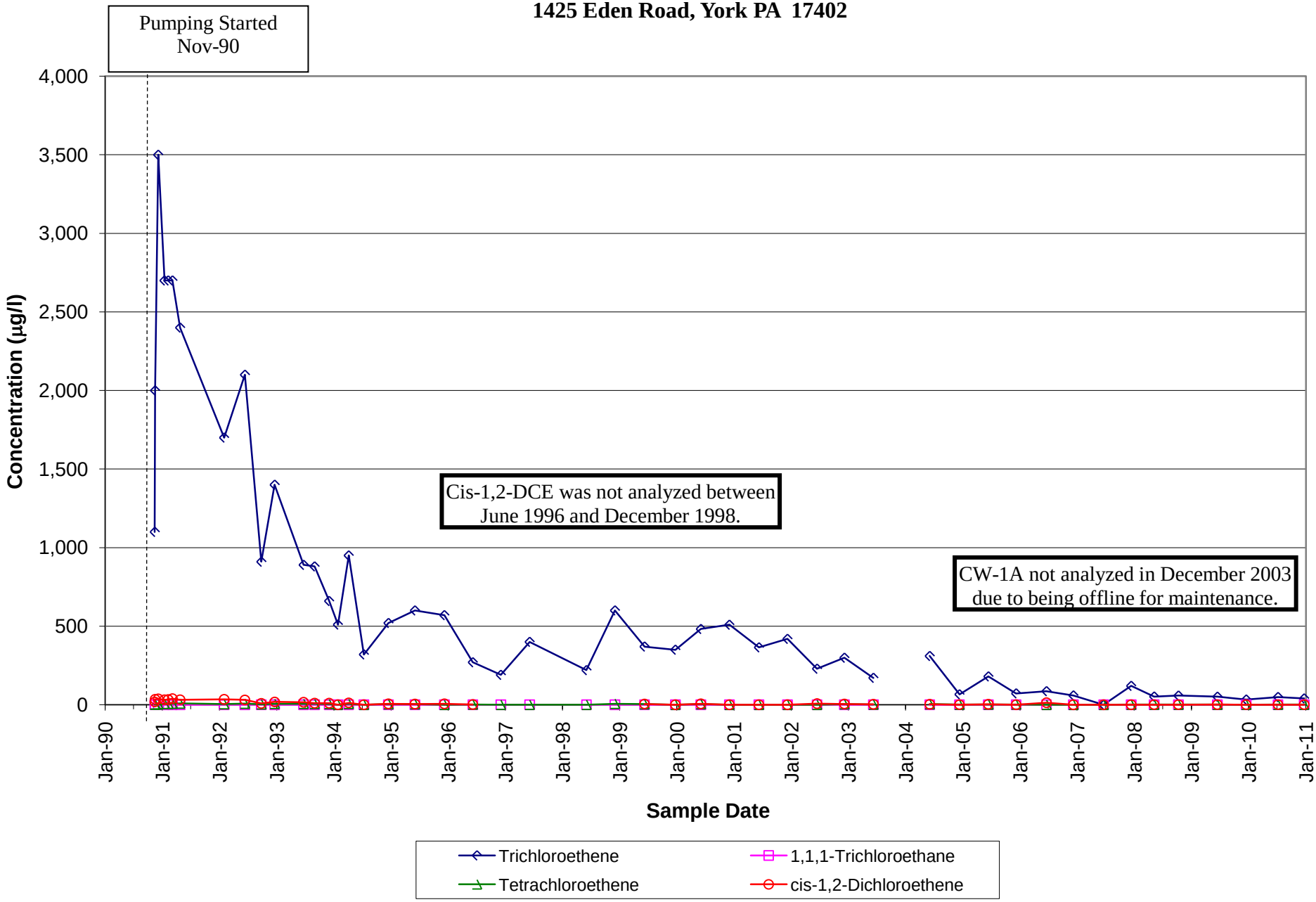


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**Figure 5-5**
**Predominant VOC Concentrations - Extraction Well CW-2**
**Former York Naval Ordnance Plant**
**1425 Eden Road, York PA 17402**

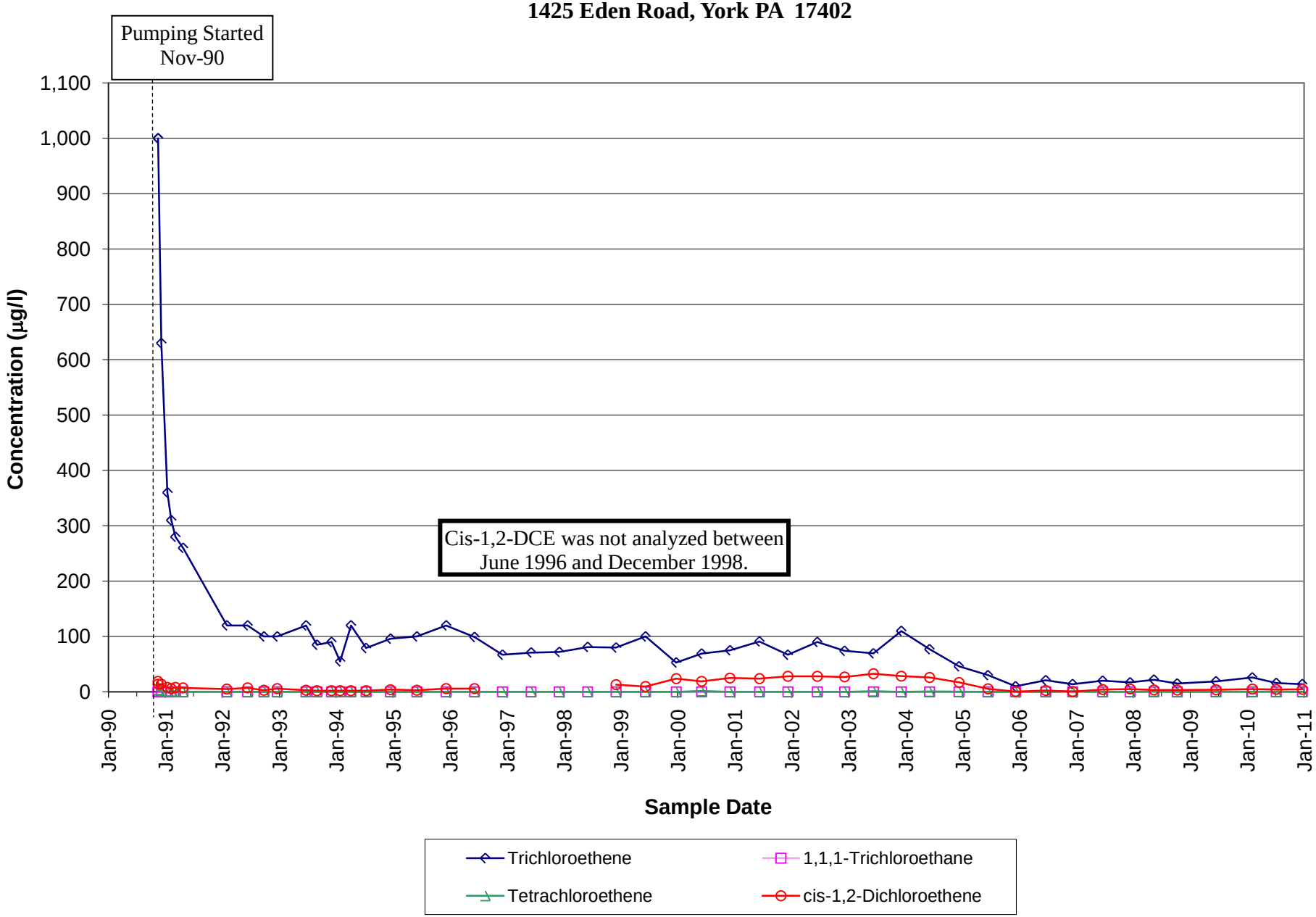


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**Figure 5-6**
**Predominant VOC Concentrations - Extraction Well CW-3**
**Former York Naval Ordnance Plant**
**1425 Eden Road, York PA 17402**

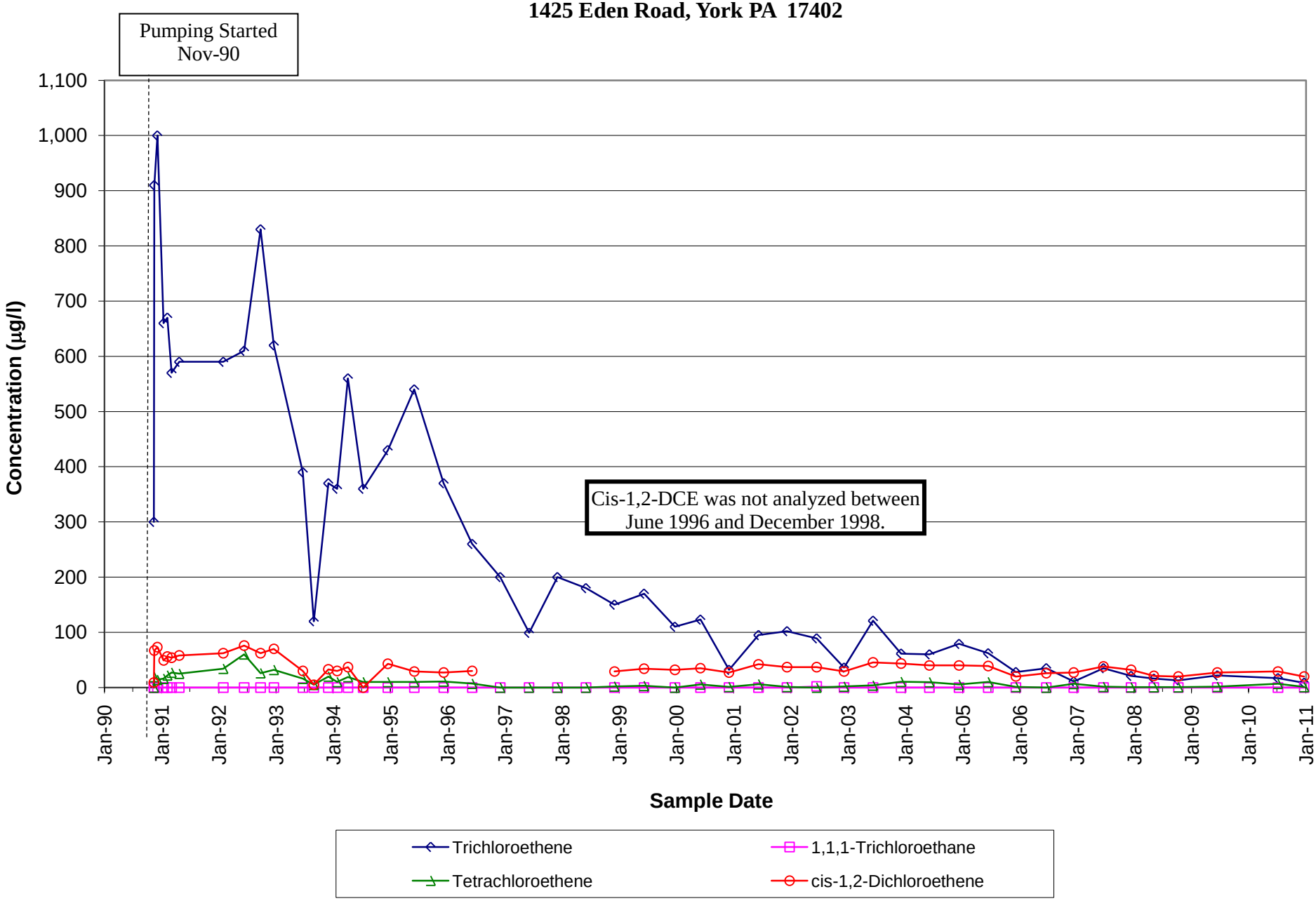


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**Figure 5-7**
**Predominant VOC Concentrations - Extraction Well CW-4**
**Former York Naval Ordnance Plant**
**1425 Eden Road, York PA 17402**

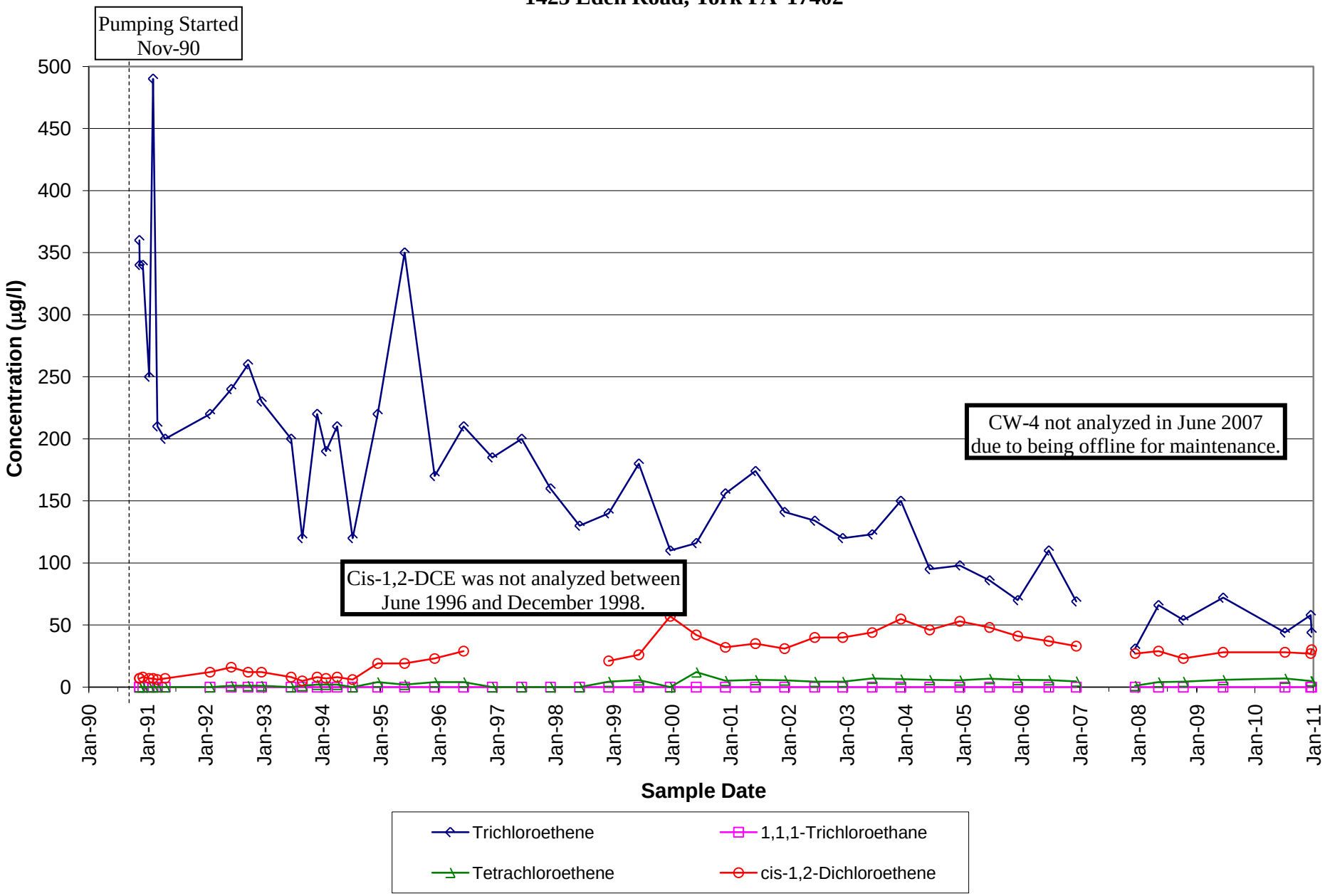


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**Figure 5-8**
**Predominant VOC Concentrations - Extraction Well CW-5**
**Former York Naval Ordnance Plant**
**1425 Eden Road, York PA 17402**

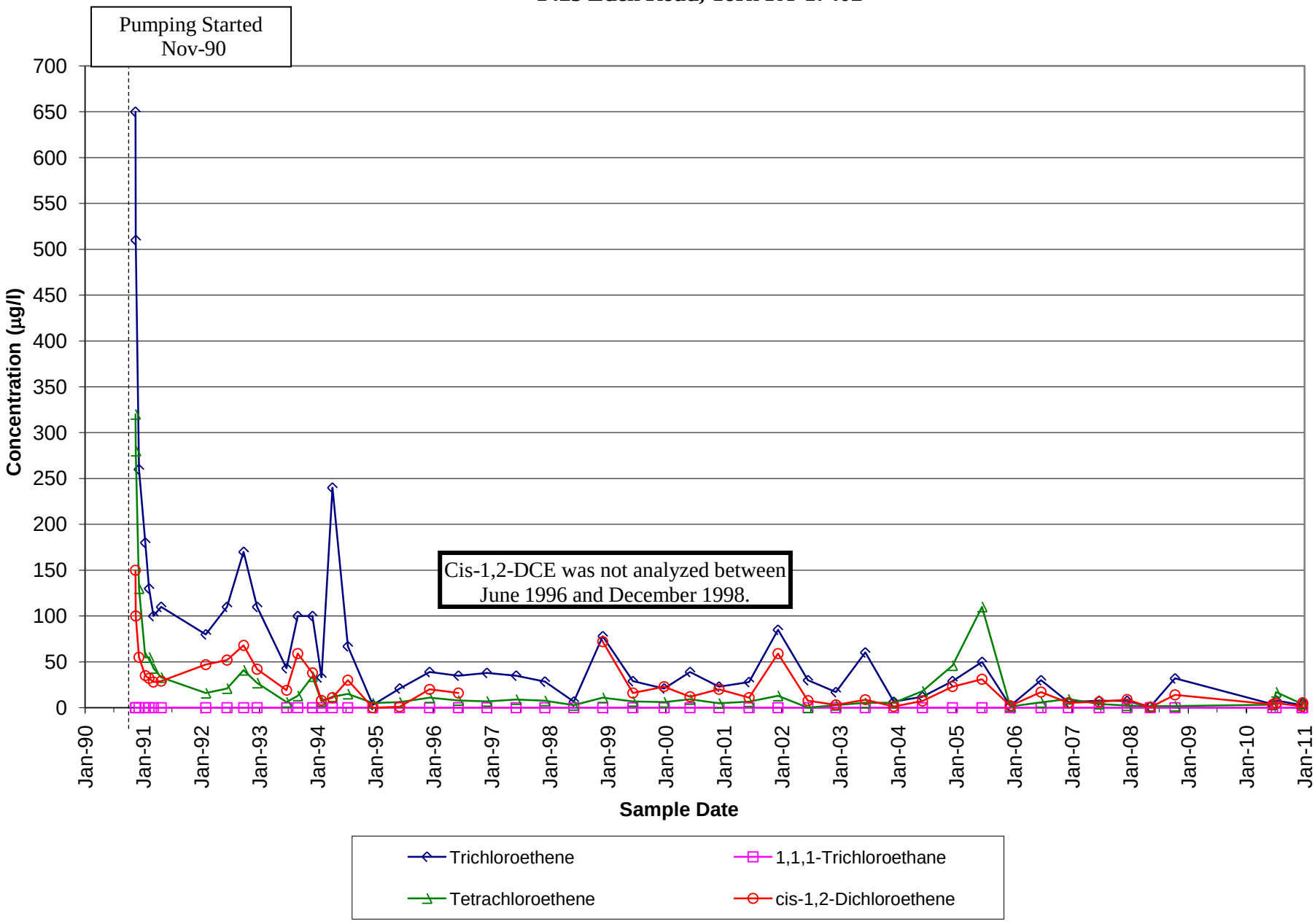


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**Figure 5-9**
**Predominant VOC Concentrations - Extraction Well CW-6**
**Former York Naval Ordnance Plant**
**1425 Eden Road, York PA 17402**

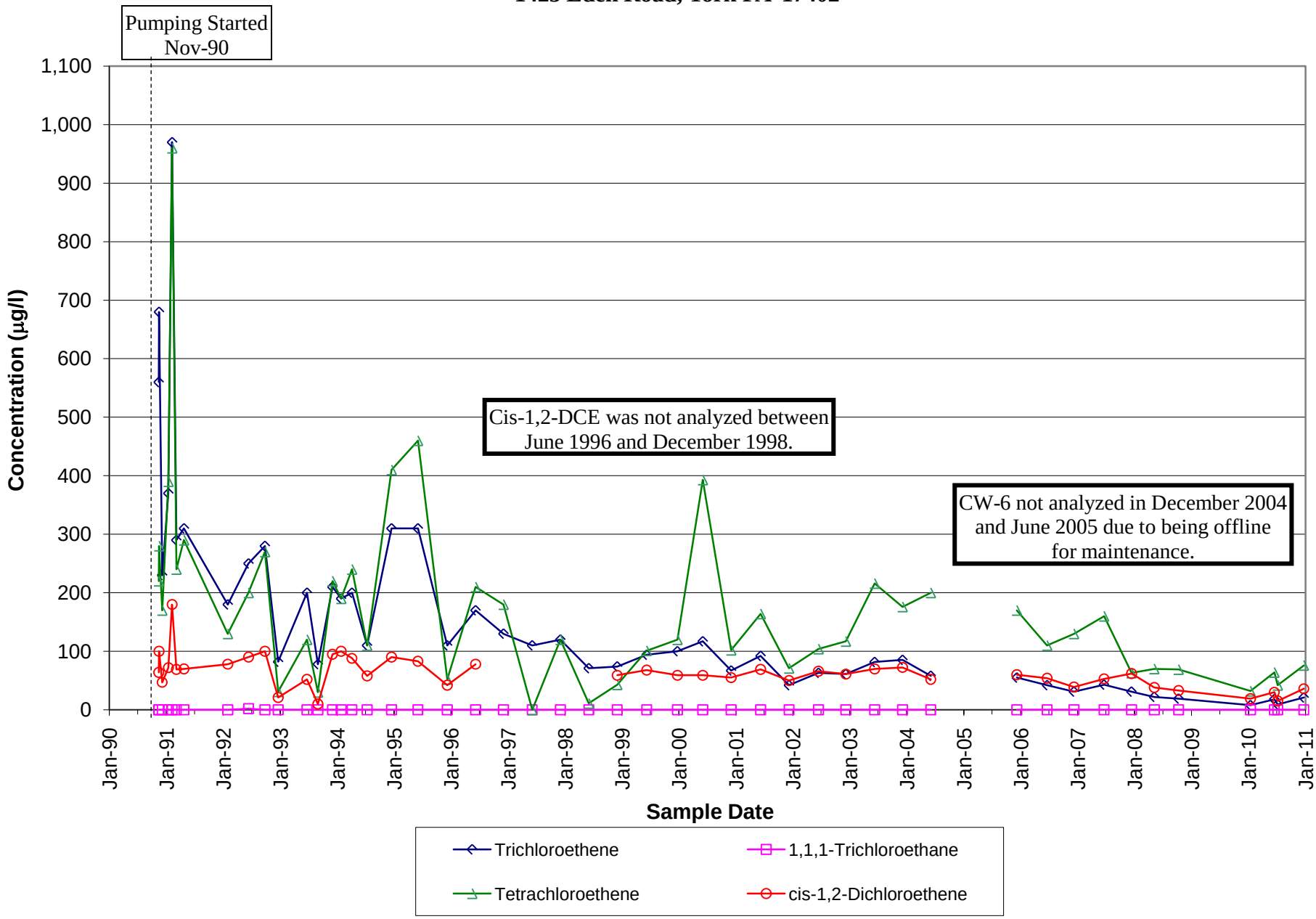


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**Figure 5-10**
**Predominant VOC Concentrations - Extraction Well CW-7**
**Former York Naval Ordnance Plant**
**1425 Eden Road, York PA 17402**

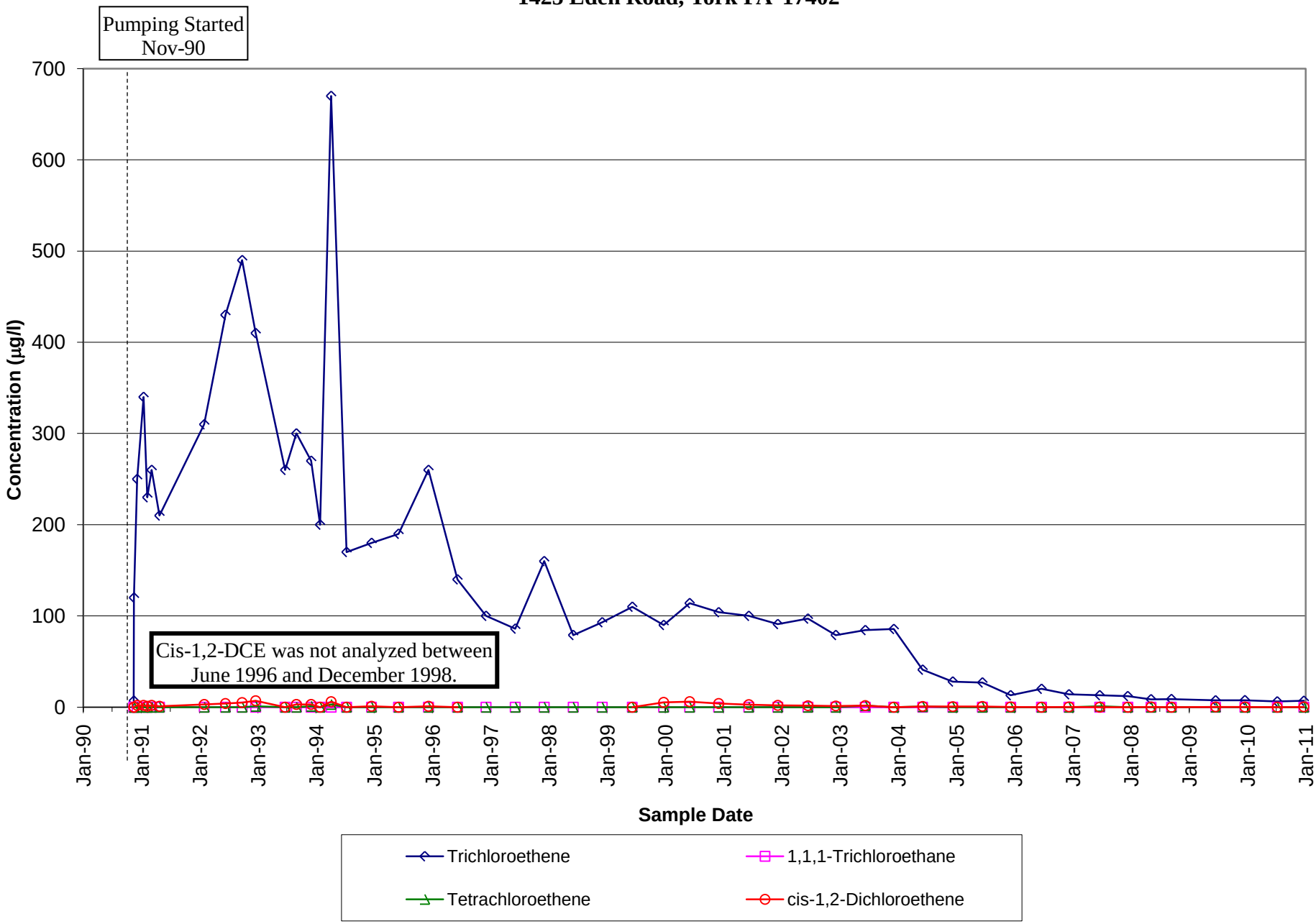


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**Figure 5-11**
**Predominant VOC Concentrations - Extraction Well CW-7A**
**Former York Naval Ordnance Plant**
**1425 Eden Road, York PA 17402**

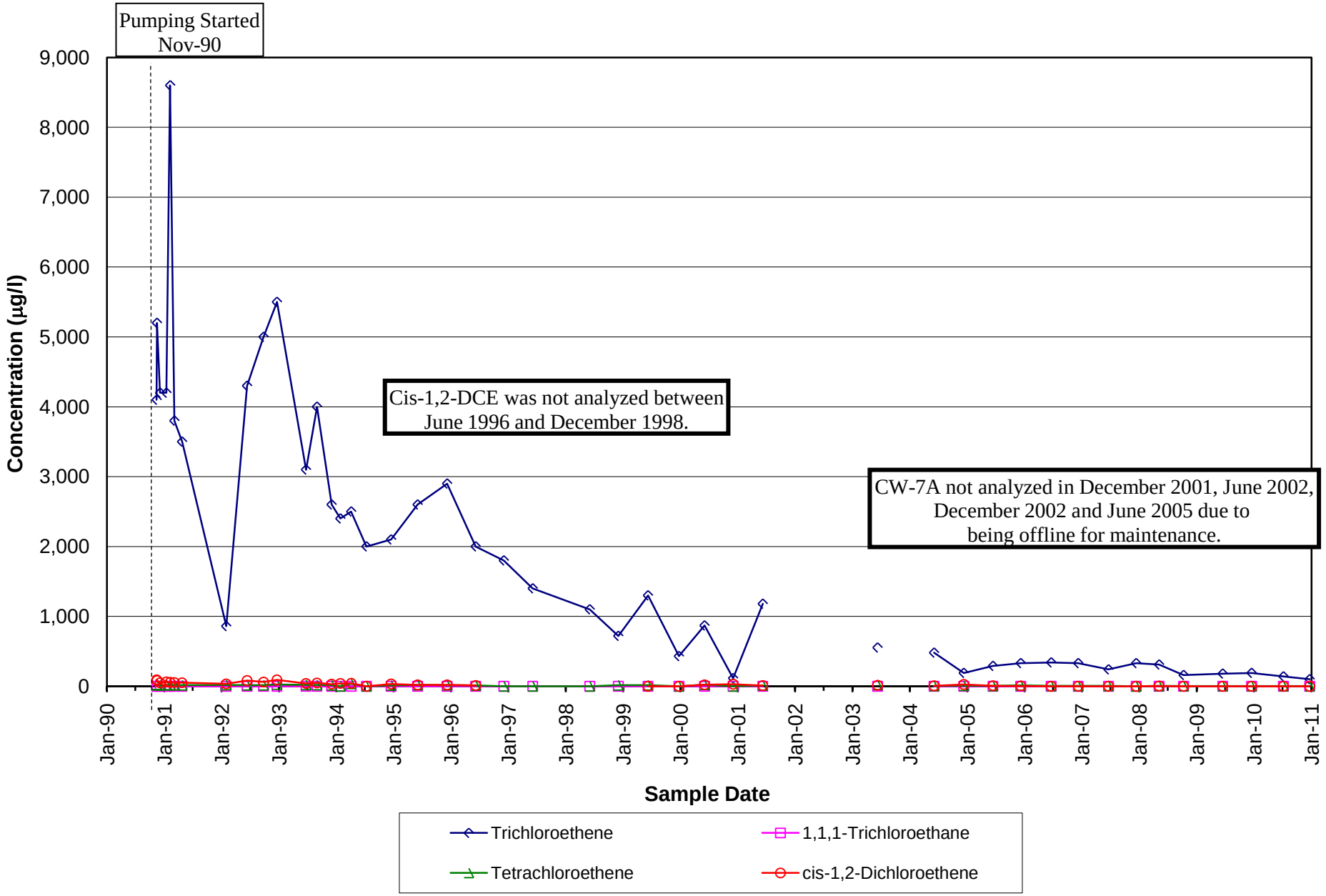


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**Figure 6-1**
**TCA in TCA Tank Area Extraction Wells**
**Former York Naval Ordnance Plant**
**1425 Eden Road, York PA 17402**

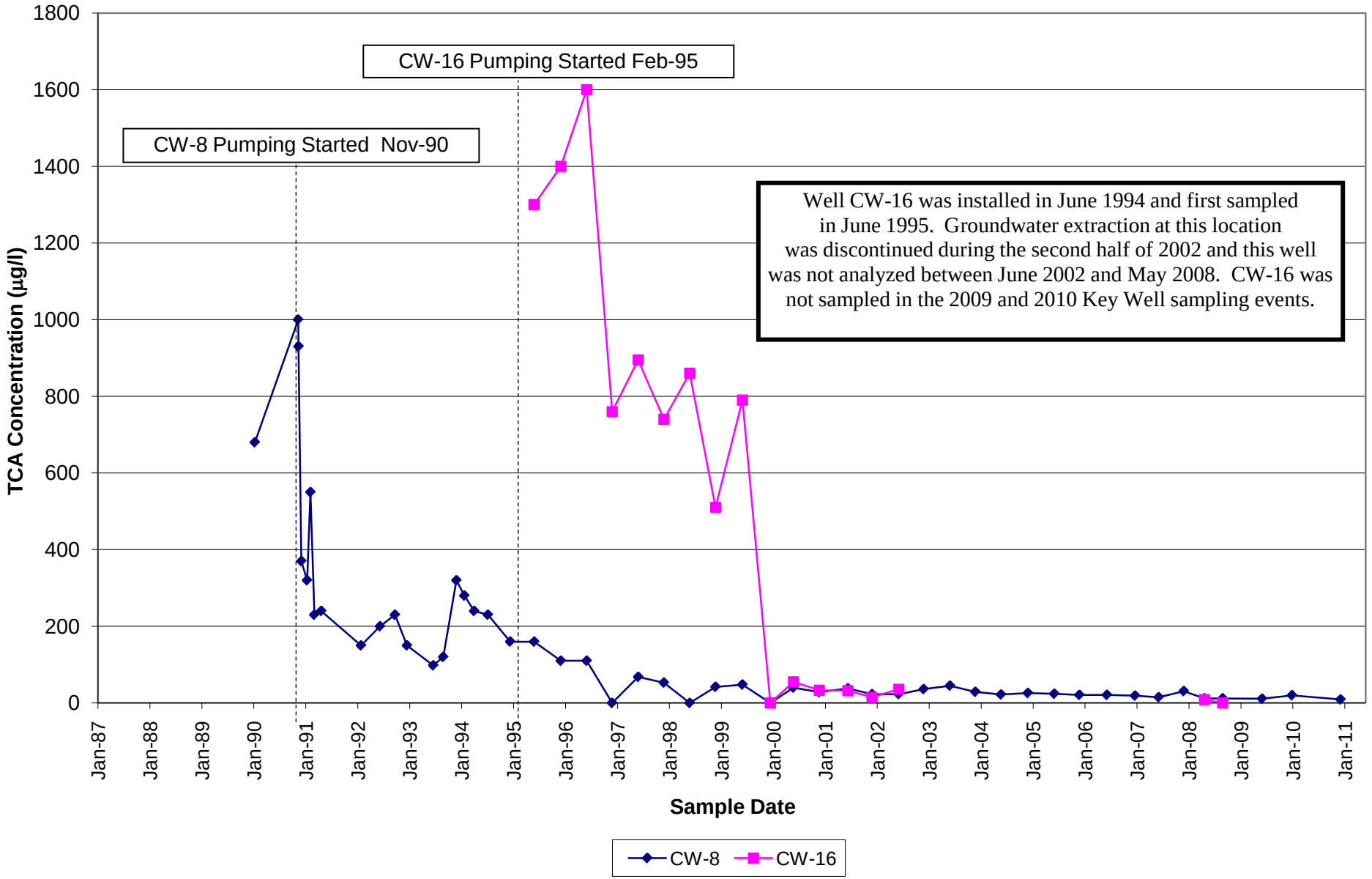


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**Figure 6-2**
**TCE in TCA Tank Area Extraction Wells**
**Former York Naval Ordnance Plant**
**1425 Eden Road, York**

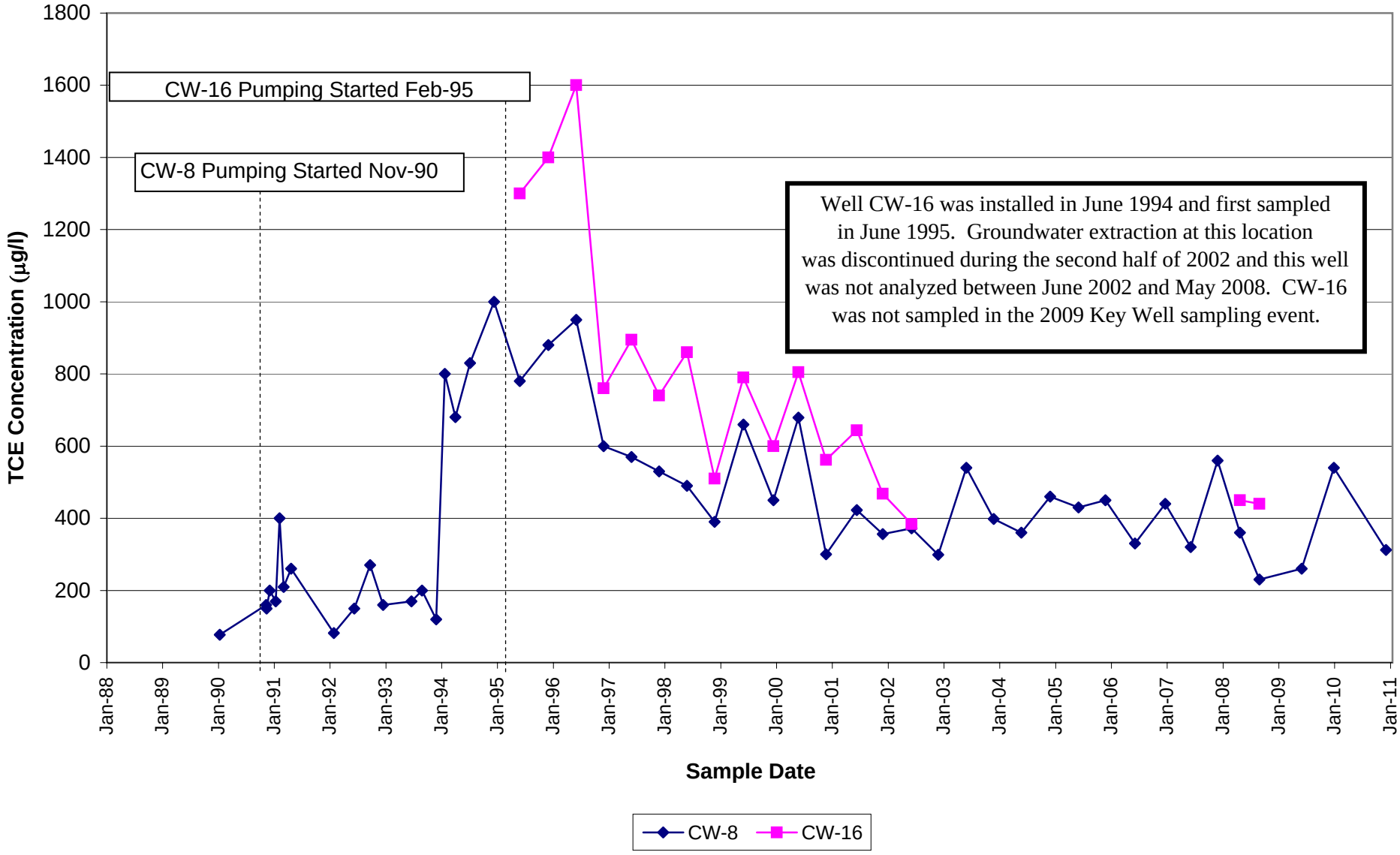


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**Figure 6-3**
**Predominant VOC Concentrations - Extraction Well CW-8**
**Former York Naval Ordnance Plant**
**1425 Eden Road, York PA 17402**

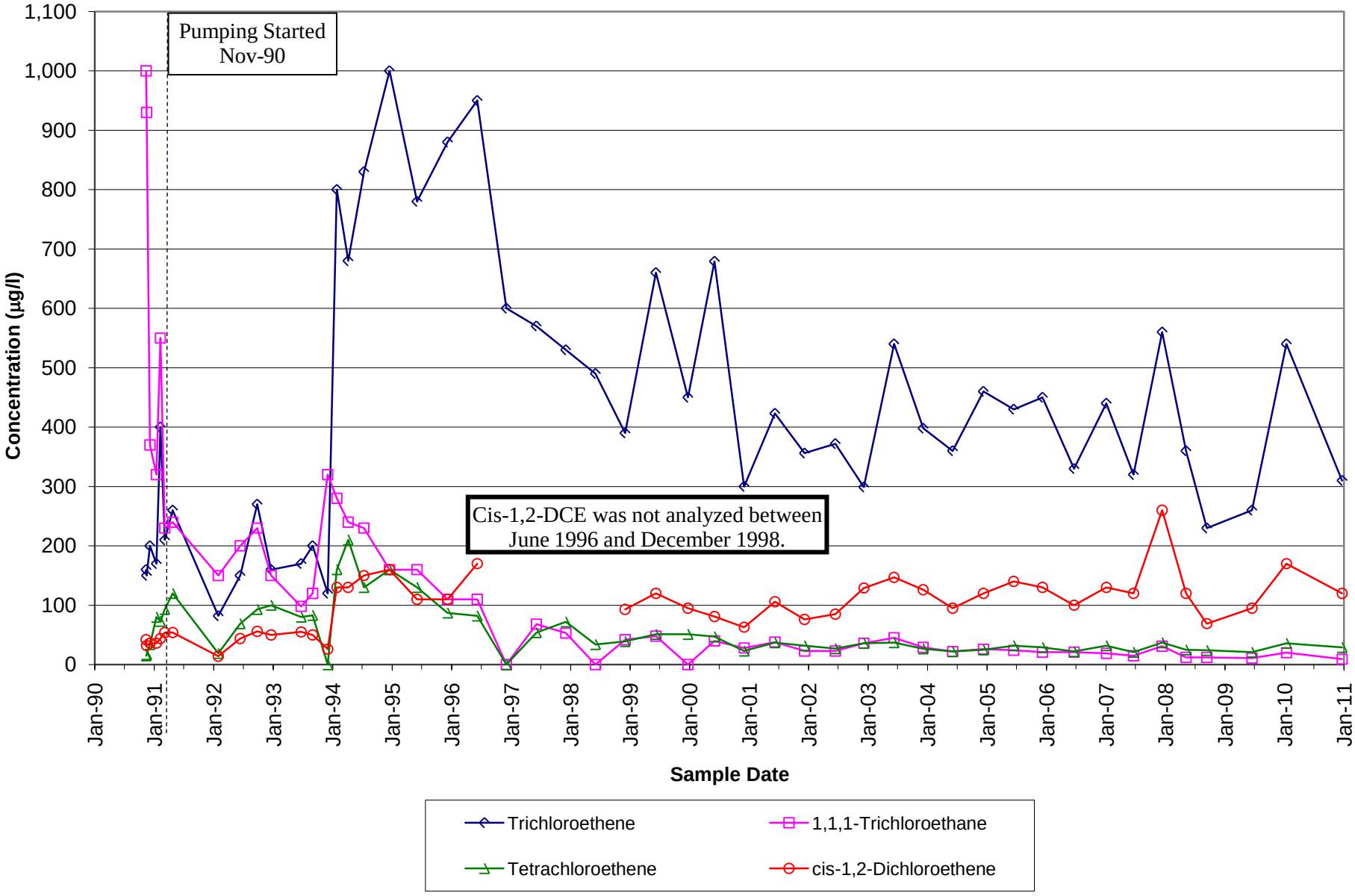


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**Figure 7-1**
**TCE in WPL Extraction Wells**
**Former York Naval Ordnance Plant**
**1425 Eden Road, York PA 17402**

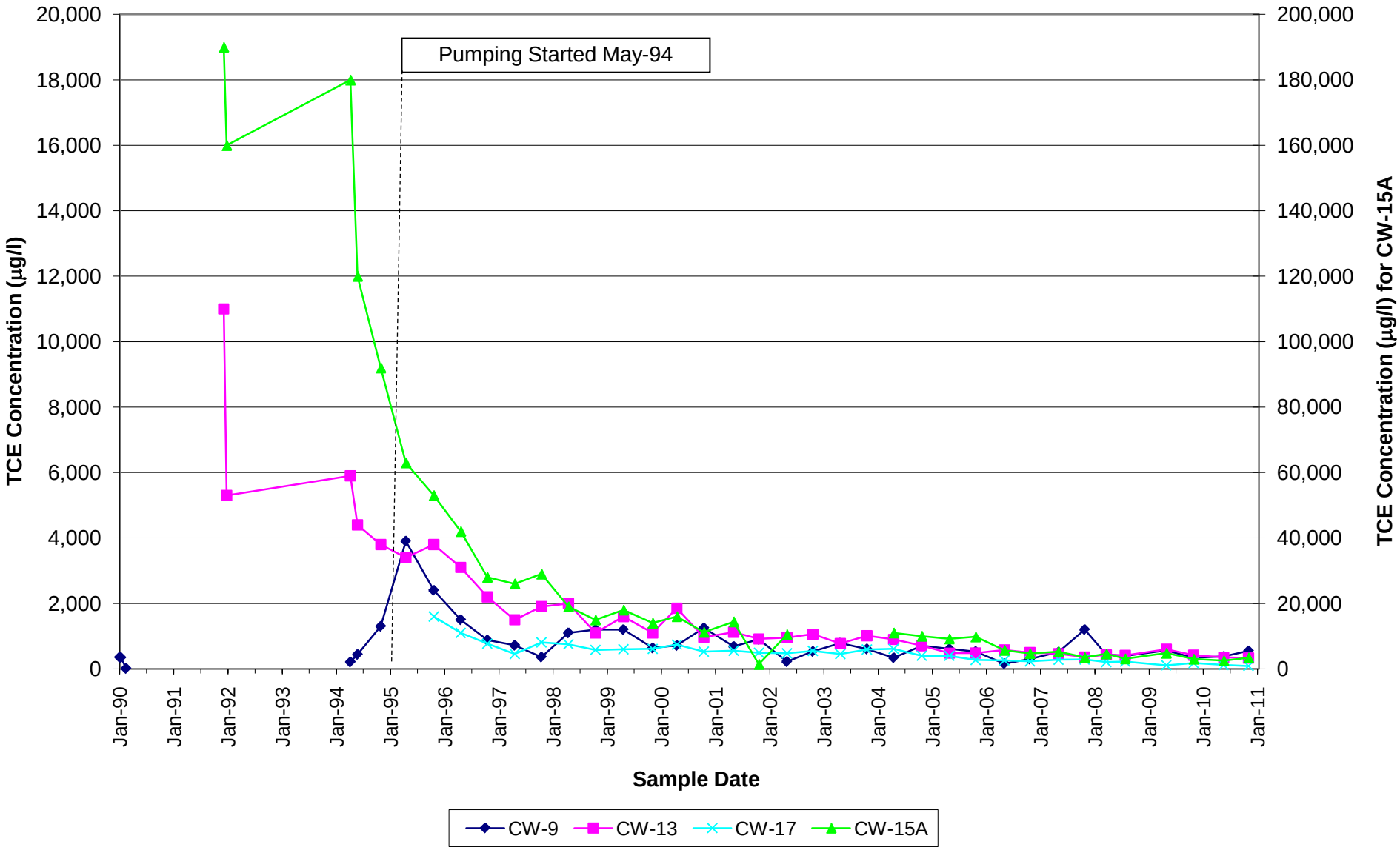


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**Figure 7-2**
**Predominant VOC Concentrations - Extraction Well CW-9**
**Former York Naval Ordnance Plant**
**1425 Eden Road, York PA 17402**

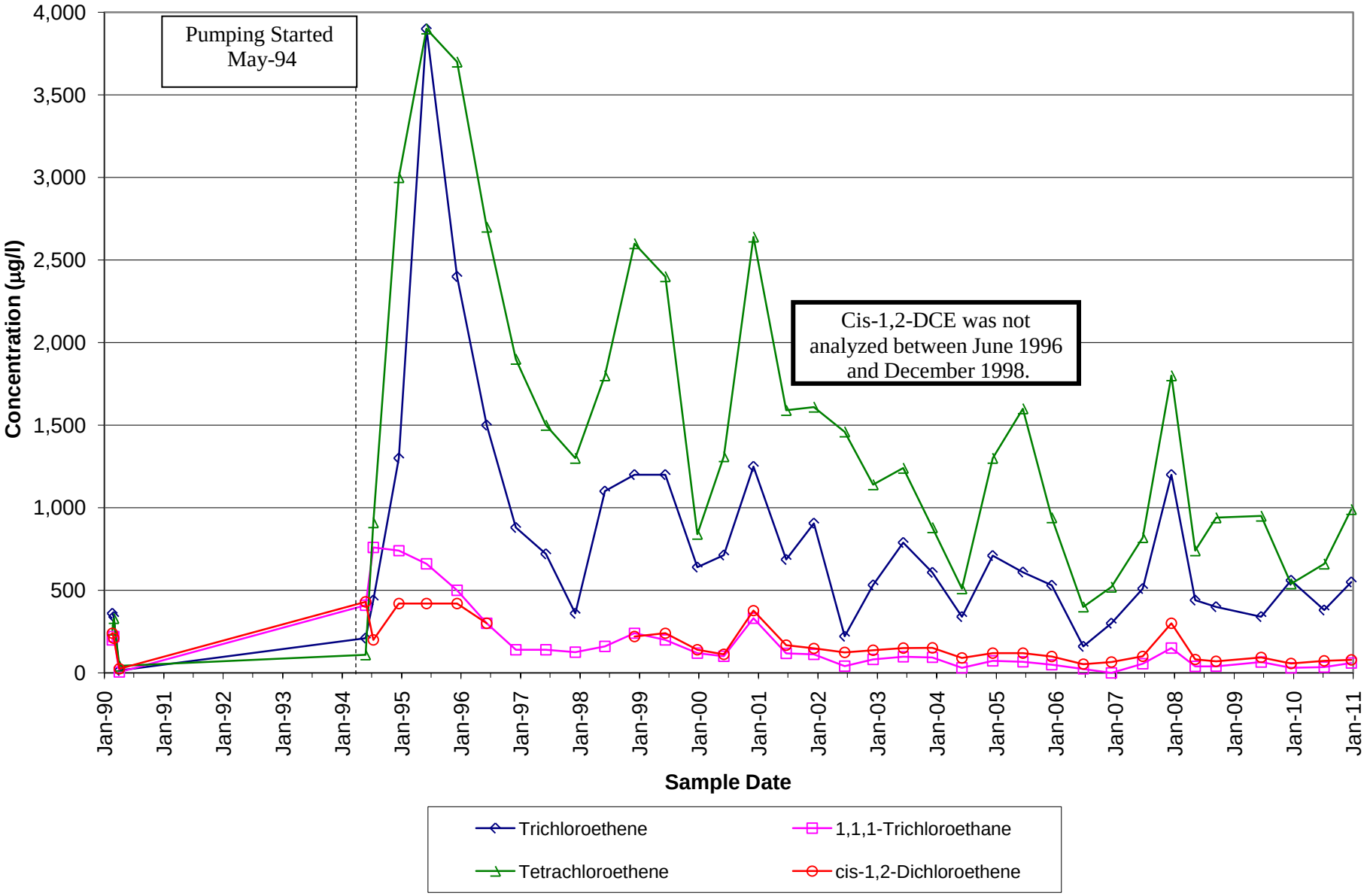


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**Figure 7-3**
**Predominant VOC Concentrations - Extraction Well CW-13**
**Former York Naval Ordnance Plant**
**1425 Eden Road, York PA 17402**

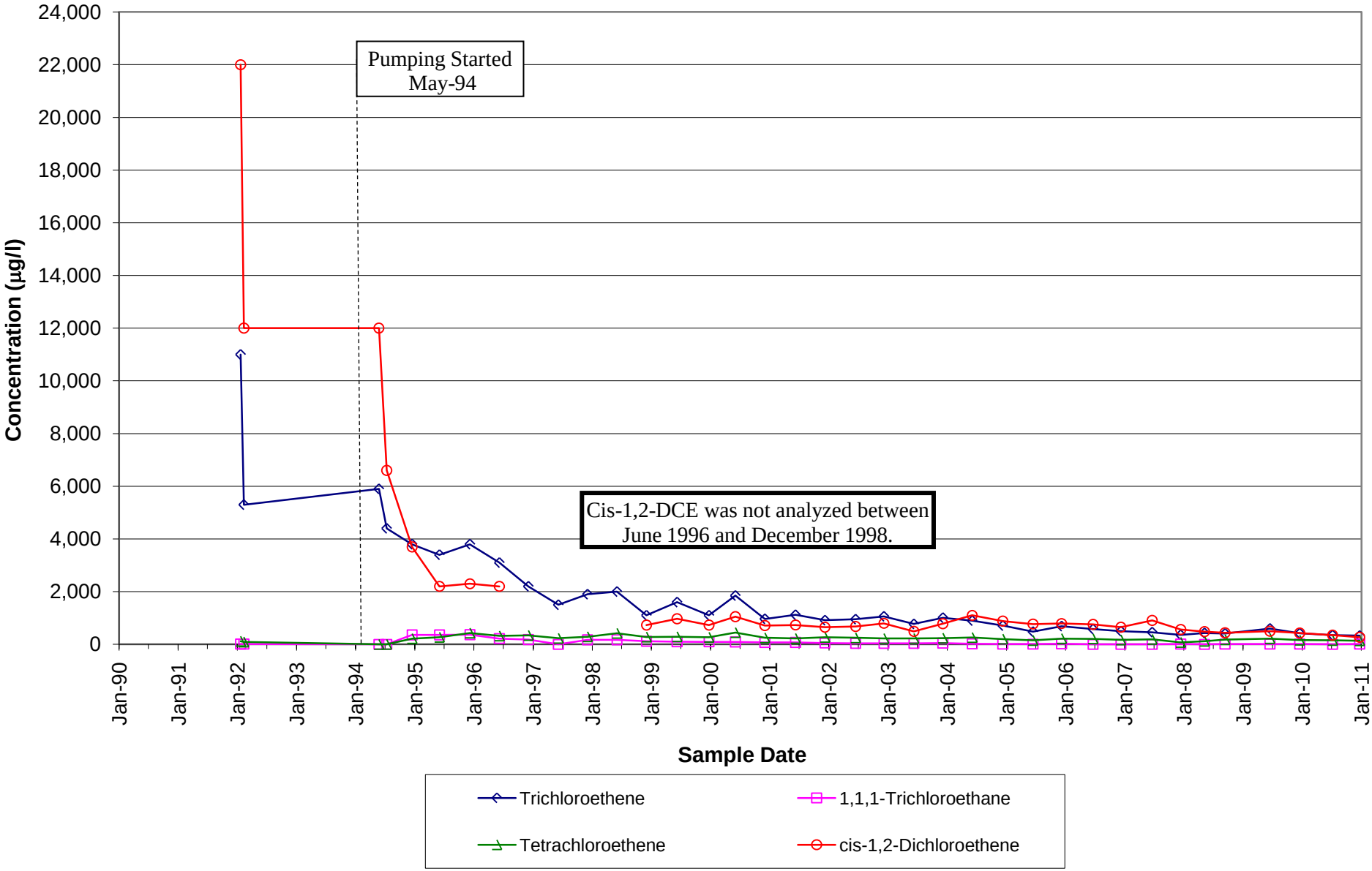


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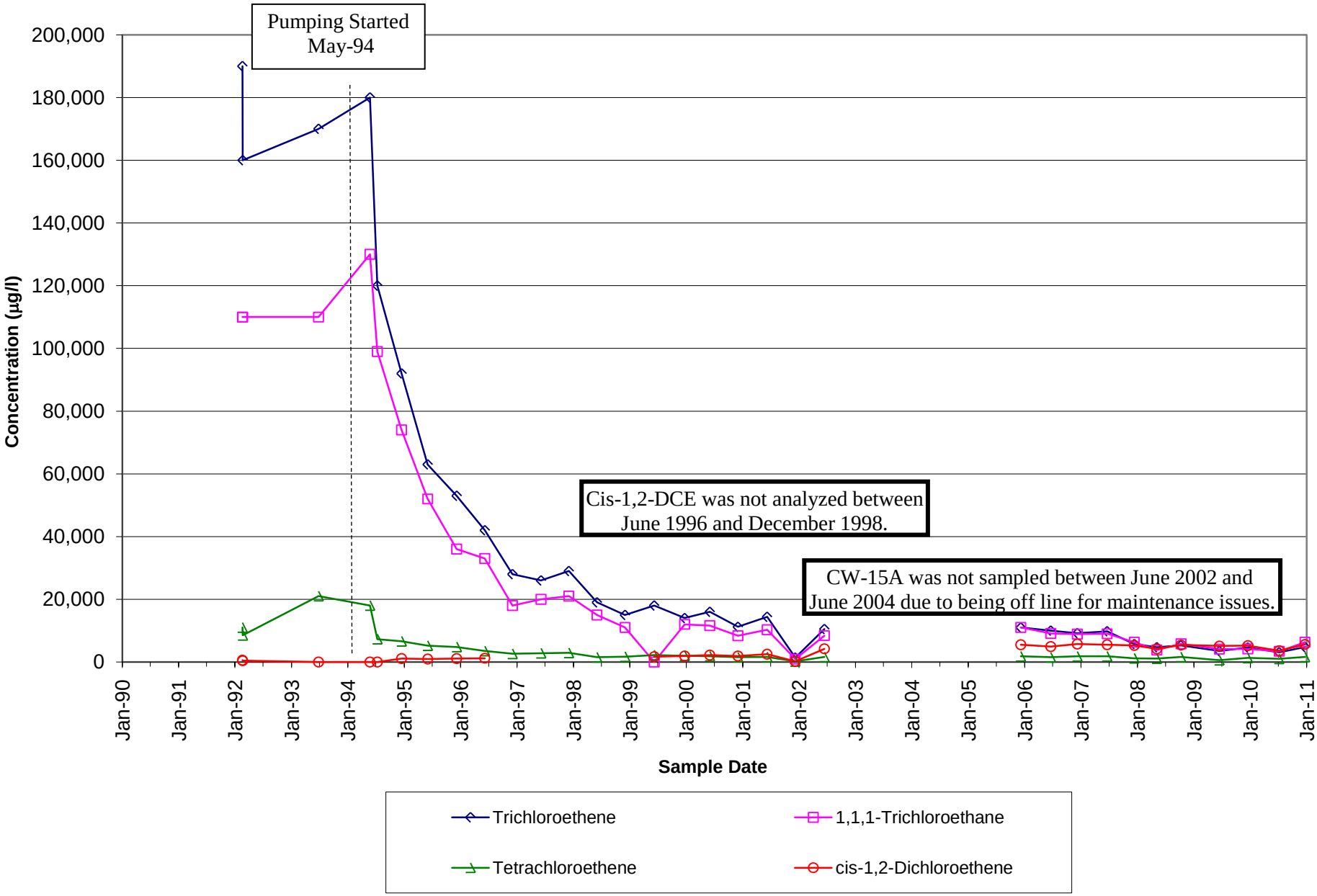
**Figure 7-4**
**Predominant VOC Concentrations - Extraction Well CW-15A**
**Former York Naval Ordnance Plant**
**1425 Eden Road, York PA 17402**

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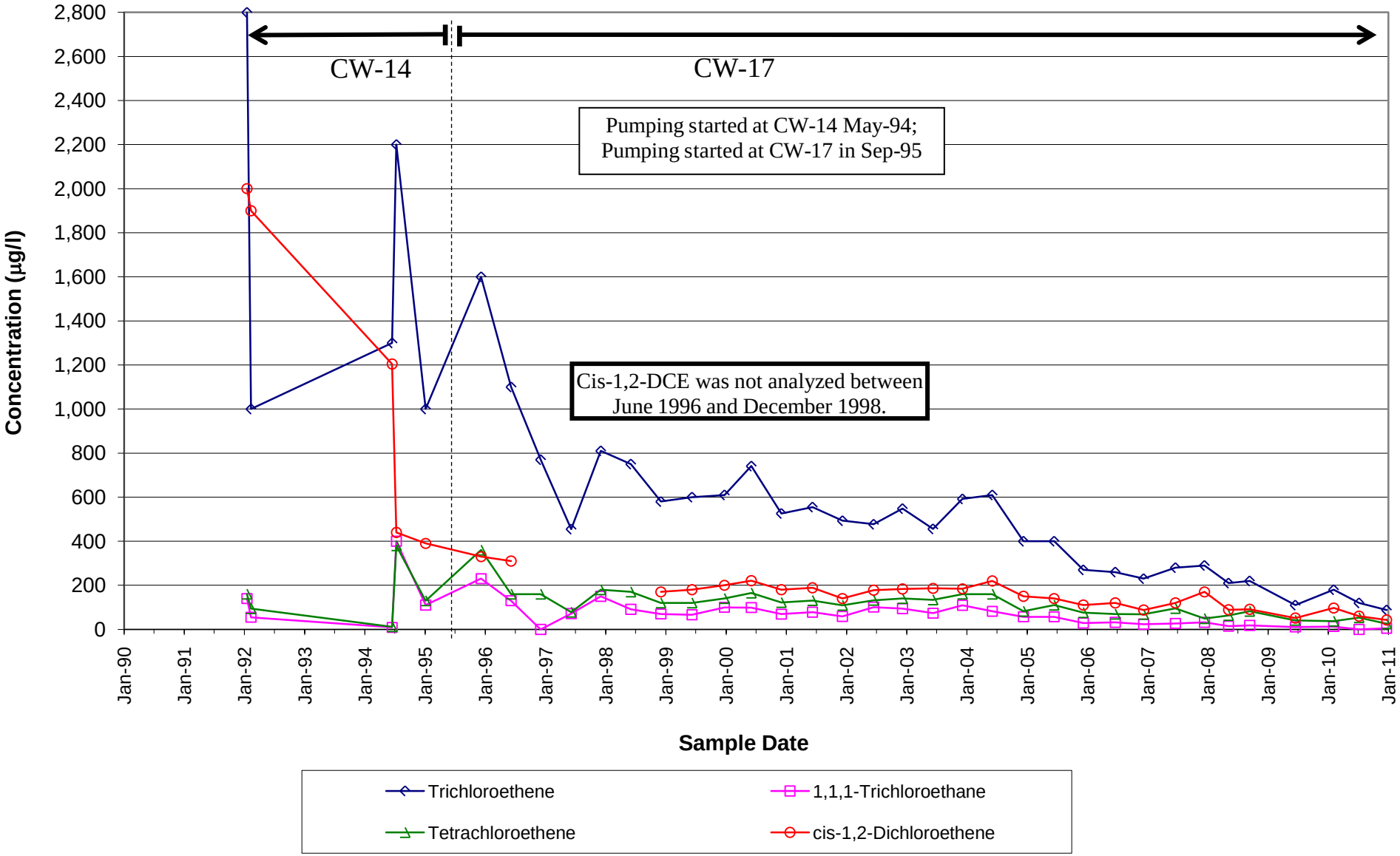
# Figure 7-5

**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 | 2010 Precipitation Amount (inches) | Normal Precipitation Amount (inches) |
|---|---|---|
| January | 1.93 | 3.44 |
| February | 2.37 | 2.77 |
| March | 4.00 | 3.65 |
| April | 1.74 | 3.52 |
| May | 4.29 | 4.26 |
| June | 5.34 | 4.31 |
| July | 8.60 | 3.75 |
| August | 3.76 | 3.33 |
| September | 4.75 | 4.10 |
| October | 4.98 | 3.16 |
| November | 2.48 | 3.47 |
| December | 2.29 | 3.24 |
| **TOTALS:** | 46.53 | 43.00 |

Notes:

1. 2010 Precipitation data collected by H-D environmental staff at the plant in York, PA.
2. Normal precipitation data for York, PA from Accuweather.com (determined in March 2004)

# 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 |

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 - 2010 from Harley-Davidson

TABLE 4-1
VOCs REMOVED FROM COLLECTED GROUNDWATER
JANUARY 1, 2010 - DECEMBER 31, 2010
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-10 | 15,155,345 | 1010 | | 128 |
| Feb-10 | 12,209,978 | 1010 | * | 103 |
| Mar-10 | 14,892,907 | 1010 | * | 126 |
| Apr-10 | 15,027,815 | 852 | | 107 |
| May-10 | 14,147,693 | 852 | * | 101 |
| Jun-10 | 8,943,771 | 852 | * | 64 |
| Jul-10 | 10,468,641 | 1280 | | 112 |
| Aug-10 | 14,314,241 | 1280 | * | 153 |
| Sep-10 | 13,202,472 | 1280 | * | 141 |
| Oct-10 | 14,149,866 | 1042 | | 123 |
| Nov-10 | 12,928,226 | 1042 | * | 112 |
| Dec-10 | 13,601,848 | 1042 | * | 118 |
| **TOTAL** | **159,042,802** | **NA** | | **1,388** |

| 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 |
| **TOTAL** | **2,624,096,932** | **38,444** |

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, 2010 - DECEMBER 31, 2010
Former York Naval Ordnance Plant
1425 Eden Road, York PA 17402

| | NPBA WELLS (gallons) | | | | | | | | | | TCA WELLS (gallons) | | WPL WELLS (gallons) | | | | | Softail De- | MONTHLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MONTH | 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 | Watering System | TOTAL |
| Jan-10 | 116,246 | 11,841 | 6,068 | 145,480 | 76,633 | 128,858 | 31,094 | 73,652 | 61,071 | 650,943 | 4,476,700 | 4,476,700 | 3,492,229 | 3,307,010 | 187,775 | 3,073,888 | 10,060,902 | 55,980 | 15,244,525 |
| Feb-10 | 91,843 | 7,591 | 16,323 | 125,781 | 108,474 | 103,109 | 5,366 | 69,930 | 46,117 | 574,534 | 4,050,900 | 4,050,900 | 3,067,279 | 3,123,323 | 169,314 | 1,290,412 | 7,650,328 | 0 | 12,275,762 |
| Mar-10 | 101,943 | 15,311 | 20,466 | 164,157 | 106,818 | 156,786 | 12,250 | 68,260 | 68,888 | 714,877 | 4,197,650 | 4,197,650 | 3,324,659 | 3,237,848 | 186,063 | 3,491,446 | 10,240,014 | 0 | 15,152,541 |
| Apr-10 | 66,018 | 11,899 | 21,078 | 156,949 | 102,499 | 115,626 | 2,012 | 71,972 | 63,979 | 612,030 | 4,475,950 | 4,475,950 | 3,474,374 | 3,297,727 | 188,937 | 3,093,315 | 10,054,351 | 0 | 15,142,331 |
| May-10 | 8 | 7,474 | 21,041 | 164,167 | 96,574 | 58,685 | 0 | 84,295 | 43,081 | 475,325 | 4,391,700 | 4,391,700 | 3,297,343 | 3,254,034 | 156,691 | 2,565,317 | 9,273,385 | 0 | 14,140,410 |
| Jun-10 | 12,535 | 3,420 | 17,119 | 97,962 | 54,584 | 28,374 | 210 | 44,648 | 21,809 | 280,661 | 2,536,800 | 2,536,800 | 2,187,498 | 2,163,172 | 99,020 | 1,685,268 | 6,134,958 | 0 | 8,952,419 |
| Jul-10 | 84,430 | 4,534 | 17,795 | 208,702 | 74,772 | 34,507 | 138,412 | 49,432 | 37,121 | 649,705 | 1,900 | 1,900 | 3,594,003 | 3,218,515 | 162,310 | 3,036,653 | 10,011,481 | 5,670 | 10,668,756 |
| Aug-10 | 88,611 | 3,783 | 17,195 | 223,869 | 69,390 | 23,592 | 167,735 | 67,698 | 35,018 | 696,891 | 4,624,600 | 4,624,600 | 3,321,560 | 3,267,754 | 183,805 | 2,844,056 | 9,617,175 | 0 | 14,938,666 |
| Sep-10 | 93,911 | 2,871 | 18,461 | 187,417 | 97,027 | 15,268 | 155,523 | 24,127 | 25,229 | 619,834 | 4,722,900 | 4,722,900 | 2,892,601 | 3,180,843 | 160,473 | 2,194,530 | 8,428,447 | 0 | 13,771,181 |
| Oct-10 | 84,162 | 3,710 | 19,456 | 263,598 | 104,921 | 27,624 | 154,574 | 22,146 | 35,231 | 715,422 | 4,978,500 | 4,978,500 | 3,124,453 | 3,335,402 | 144,672 | 2,589,574 | 9,194,101 | 0 | 14,888,023 |
| Nov-10 | 81,475 | 2,994 | 17,324 | 262,393 | 84,108 | 22,005 | 134,257 | 20,757 | 29,134 | 654,447 | 4,629,200 | 4,629,200 | 2,908,560 | 3,109,196 | 69,869 | 2,061,637 | 8,149,262 | 0 | 13,432,909 |
| Dec-10 | 85,342 | 3,348 | 18,491 | 214,395 | 82,667 | 24,902 | 131,977 | 21,735 | 29,958 | 612,815 | 4,800,600 | 4,800,600 | 2,990,071 | 3,157,077 | 91,305 | 2,430,568 | 8,669,021 | 0 | 14,082,436 |
| TOTALS | 906,524 | 78,775 | 210,816 | 2,214,869 | 1,058,466 | 739,336 | 933,409 | 618,652 | 496,636 | 7,257,483 | 47,887,400 | 47,887,400 | 37,674,629 | 37,651,900 | 1,800,233 | 30,356,663 | 107,483,425 | 61,650 | 162,689,958 |

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. The difference is utilized to determine the necessity for calibration of the 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) | 1/18/2010 | 2/26/2010 | 3/18/2010 | 4/15/2010 | 5/19/2010 | 6/14/2010 | 7/21/2010 | 8/25/2010 | 9/17/2010 | 10/17/2010 | 11/17/2010 | 12/17/2010 |
| NPBA | CW-1 | 570.07 | 495.57 | 492.57 | 495.05 | NM | 494.49 | 495.62 | NM | 524.10 | 494.78 | 492.25 | 492.6 | 495.28 | 492.71 | 492.91 |
| | CW-1A | 568.28 | 508.78 | 505.78 | 509.7 | NM | 508.8 | 507 | 508.56 | 510.48 | 508.4 | 509.07 | 505.79 | 508.99 | 506.53 | 505.93 |
| | CW-2 | 556.95 | 483.45 | 480.45 | NM | NM | 480.31 | 476.97 | 480.72 | 487.7 | 481.38 | 477.42 | 477.87 | 481.8 | 481.82 | 480.85 |
| | CW-3 | 518.66 | 440.66 | 437.66 | 452.41 | 437.66 | 438.65 | 454.13 | 440.58 | 468.61 | 437.65 | 438.21 | 439.74 | 440.91 | 439.53 | 439.59 |
| | CW-4 | 541.55 | 458.05 | 455.05 | 456.01 | NM | 455.31 | 455.92 | 457.55 | 475.25 | 455.05 | 456.98 | 457.12 | 458.01 | 455.37 | 457.84 |
| | CW-5 | 470.34 | 424.84 | 421.84 | 449.19 | 421.59 | 452.59 | 422.57 | 424.53 | 440.34 | 424.86 | 424.73 | 422.09 | 421.84 | 422.09 | 422.71 |
| | CW-6 | 484.67 | 415.57 | 412.57 | 434.42 | NM | 465.85 | NM | NM | 470.51 | 413.57 | 413.77 | 413.67 | 413.46 | 423.67 | 414.88 |
| | CW-7 | 573.78 | 493.28 | 490.28 | 487.42 | NM | 493.91 | 490.86 | 491.34 | 490.39 | 491 | 493.63 | 487.25 | 488.81 | 493.49 | 492.32 |
| | CW-7A | 573.91 | 523.41 | 520.41 | 522.95 | NM | 523.8 | 523.26 | 524.82 | 514.86 | 520.92 | 519.1 | 523.3 | 522.16 | 523.40 | 521.9 |
| TCA | CW-8 | 362.70 | 341.34 | 337.34 | 339.05 | 339.89 | 341.29 | NM | 336.99 | 337.36 | 346.75 | 336.78 | 335.59 | 337.39 | 336.93 | 336.43 |
| WPL | CW-9 | 356.82 | 333.79 | 328.79 | NM | NM | 335.39 | NM | NM | NM | 333.61 | 329.69 | NM | 332.21 | NM | 329.7 |
| | CW-13 | 358.85 | 327.60 | 322.60 | 326.60 | 322.28 | 327.2 | 324.06 | NM | 322.94 | 325.46 | 323.07 | 322.14 | 323.06 | 324.44 | 322.42 |
| | CW-15A | 361.40 | 333.50 | 328.50 | 329.32 | 331.59 | 331.86 | 328.31 | NM | 330.86 | NM | 328.29 | 327.69 | 328.27 | 330.75 | 327.70 |
| | CW-17 | 358.70 | 336.37 | 331.47 | 333.55 | 334.05 | NM | NM | NM | 333.45 | NM | 333.58 | 333.14 | 333.05 | 334.54 | 333.59 |

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

TABLE 5-3
COMPARISOM OF INDIVIDUAL VOC VS TOTAL VOC CONCENTRATIONS
Former York Naval Ordnance Plant
1425 Eden Road, York PA 17402

| Wells | TCE Jun-09 (µg/l) | TCE Jul-10 (µg/l) | TCE %* Jul-10 (µg/l) | PCE Jun-09 (µg/l) | PCE Jun-10 (µg/l) | PCE%* Jun-10 (µg/l) |
|---|---|---|---|---|---|---|
| CW-1 | 66 | 38 | 77.6 | N.D | N.D. | N.D. |
| CW-1A | 51 | 49 | 74.2 | N.D. | 0.92 J | N.D. |
| CW-2 | 19 | 16 | 69.3 | N.D. | 0.31 J | N.D. |
| CW-3 | 22 | 17 | 32.1 | 1.4 | 6.9 | 13 |
| CW-4 | 73 | 44 | 55.8 | 6 | 4 | 5.5 |
| CW-5 | 3.8 | 7.9 | 26.4 | 3.2 | 17 | 56.9 |
| CW-6 | 18 | 9.3 | 13.2 | 64 | 42 | 59.7 |
| CW-7 | 7.4 | 6.2 | 86.1 | N.D. | N.D. | N.D. |
| CW-7A | 180 | 140 | 36.8 | 3.6 | 4 J | N.D. |

| Well | TCE Jun-09 (µg/l) | TCE Dec-10 (µg/l) | TCE %* Dec-10 (µg/l) | PCE Jun-09 (µg/l) | PCE Dec-10 (µg/l) | PCE%* Dec-10 (µg/l) | TCA Jun-09 (µg/l) | TCA Dec-10 (µg/l) | TCA %* Dec-10 (µg/l) | DCE Jun-09 (µg/l) | DCE Dec-10 (µg/l) | DCE %* Dec-10 (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CW-8 | 260 | 310 | 80.1 | 21 | 29 | 7.5 | 11 | 9 | 2.4 | 95 | 120 | 31 |

| Wells | TCE Jun-09 (µg/l) | TCE Jul-10 (µg/l) | TCE %* Jul-10 (µg/l) | PCE Jun-09 (µg/l) | PCE Jun-10 (µg/l) | PCE%* Jun-10 (µg/l) | TCA Jun-09 (µg/l) | TCA Dec-10 (µg/l) | TCA %* Dec-10 (µg/l) | DCE Jun-09 (µg/l) | DCE Dec-10 (µg/l) | DCE %* Dec-10 (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CW-9 | 560 | 380 | 26.1 | 950 | 660 | 45.3 | 66 | 35 | 2.4 | 94 | 73 | 5 |
| CW-13 | 600 | 350 | 31 | 220 | 150 | 13.3 | N.D. | N.D. | N.D. | 500 | 350 | 31 |
| CW-15A | 4,800 | 2,500 | 20.7 | 1,600 | 910 | 7.5 | 6,300 | 3,100 | 25.7 | 5,600 | 4,100 | 34 |
| CW-17 | 110 | 120 | 46 | 41 | 53 | 20.3 | 11 | N.D. | N.D. | 51 | 60 | 23 |

Notes
1. * Represents the percent of the total volatile organic compound concentration
2. N.D. - Not Detected above laboratory reporting limit
3. N.S. - Not Sampled, well not pumping waer at time of collection
4. (µg/l) - Micrograms per liter
5. TCE - Trichloroethene
6. PCE - Tetrachloroethene
7. TCA - 1,1,1-Trichloroethane
8. DCE - 1,2 Dichloroethene
9. Laboratory data flagged as an estimated (J) was not considered a detection

# 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 | 12/20/2010 | 11:05 | 379.69 | 40.86 | 338.83 |
| CODORUS 2 | 12/20/2010 | 10:50 | 341.63 | 0.1 | 338.39 |
| Cole B | 12/20/2010 | 12:24 | 363.75 | 13.87 | 349.88 |
| Cole D | 12/20/2010 | 12:32 | 370.15 | 17.62 | 352.53 |
| Cole E deep | 12/20/2010 | 12:31 | 369.17 | 18.33 | 350.84 |
| Cole E shallow | 12/20/2010 | 12:30 | 369.54 | 18.71 | 350.83 |
| Cole F | 12/20/2010 | 12:29 | 370.39 | 19.67 | 350.72 |
| Flush - Cole | 12/20/2010 | 12:22 | 361.92 | 12.21 | 349.71 |
| MW-4 (Cole) | 12/20/2010 | 12:26 | 367.21 | 17.11 | 350.1 |
| CW-1* | 12/20/2010 | 10:02 | 570.07 | 72.2 | 497.87 |
| CW-1A* | 12/20/2010 | 10:04 | 568.28 | 61.3 | 506.98 |
| CW-2* | 12/20/2010 | 10:12 | 556.95 | 73.06 | 483.89 |
| CW-3* | 12/20/2010 | 10:22 | 518.66 | 82.1 | 436.56 |
| CW-4* | 12/20/2010 | 10:15 | 541.55 | 66.28 | 475.27 |
| CW-5* | 12/20/2010 | 10:36 | 470.34 | 45.91 | 424.43 |
| CW-6* | 12/20/2010 | 10:34 | 484.67 | 70.74 | 413.93 |
| CW-7* | 12/20/2010 | 9:56 | 573.78 | 84.09 | 489.69 |
| CW-7A* | 12/20/2010 | 9:58 | 573.91 | 51.93 | 521.98 |
| CW-8* | 12/20/2010 | 10:08 | 362.7 | 26.56 | 336.14 |
| CW-9* | 12/20/2010 | 9:28 | 356.82 | 27.88 | 328.94 |
| CW-13* | 12/20/2010 | 9:09 | 358.85 | 36.8 | 322.05 |
| CW-14 | 12/20/2010 | 8:30 | 358.92 | 25.61 | 333.31 |
| CW-15 | 12/20/2010 | 12:10 | 361.48 | 20.3 | 341.18 |
| CW-15A* | 12/20/2010 | 12:13 | 361.4 | 33.08 | 328.32 |
| CW-16 | 12/20/2010 | 11:56 | 364.6 | 23.28 | 341.32 |
| CW-17* | 12/20/2010 | 8:34 | 358.7 | 25.37 | 333.33 |
| CW-18 | 12/20/2010 | 9:46 | 364.72 | 20.13 | 344.59 |
| CW-19 | 12/20/2010 | | 384.94 | D | D |
| CW-20 | 12/20/2010 | 10:11 | 361.49 | 24.99 | 336.5 |
| Kinsley Well | 12/20/2010 | | 465.83 | D | D |
| MW-1 | 12/20/2010 | 11:20 | 380.73 | 36.95 | 343.78 |
| MW-2 | 12/20/2010 | 9:25 | 508.88 | 65.9 | 442.98 |
| MW-3 | 12/20/2010 | 10:30 | 541.1 | 65.65 | 475.45 |
| MW-5 | 12/20/2010 | 8:27 | 369.71 | 24.72 | 344.99 |
| MW-6 | 12/20/2010 | 8:37 | 359.62 | 20.03 | 339.59 |
| MW-7 | 12/20/2010 | 9:05 | 359.48 | 26.7 | 332.78 |
| MW-8 | 12/20/2010 | 9:24 | 358.09 | 21.81 | 336.28 |
| MW-9 | 12/20/2010 | 10:10 | 558.78 | 49.09 | 509.69 |
| MW-10 | 12/20/2010 | 10:00 | 567.8 | 54.44 | 513.36 |
| MW-11 | 12/20/2010 | 10:06 | 563.08 | 27.03 | 536.05 |
| MW-12 | 12/20/2010 | 10:18 | 535.93 | 46.13 | 489.8 |
| MW-14 | 12/20/2010 | 9:40 | 519.54 | 32.4 | 487.14 |
| MW-15 | 12/20/2010 | 9:30 | 524.09 | 61.31 | 462.78 |
| MW-16D | 12/20/2010 | 10:26 | 516.51 | 9.5 | 507.01 |
| MW-16S | 12/20/2010 | 10:24 | 516.6 | 38.7 | 477.9 |

*Note:*

A= Location was artesian.

D= Location was dry.

*= Active extraction well.

DDC= Gauged on different date due to inaccessibility.

OG= Water was over the gauge.

# 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-17 | 12/20/2010 | 8:55 | 456.86 | 13.5 | 443.36 |
| MW-18D | 12/20/2010 | 10:42 | 464.19 | 17.21 | 446.98 |
| MW-18S | 12/20/2010 | 10:40 | 464.12 | 17 | 447.12 |
| MW-19 | 12/20/2010 | 8:35 | 427.36 | 22.77 | 404.59 |
| MW-20D | 12/20/2010 | 9:54 | 573.85 | 38.33 | 535.52 |
| MW-20M | 12/20/2010 | 9:52 | 574.19 | 46.8 | 527.39 |
| MW-20S | 12/20/2010 | 9:50 | 574.05 | 47.19 | 526.86 |
| MW-22 | 12/20/2010 | 9:07 | 447.57 | 59.53 | 388.04 |
| MW-26 | 12/20/2010 | 8:10 | 376.46 | 26.4 | 350.06 |
| MW-27 | 12/20/2010 | 8:46 | 361.29 | 18.33 | 342.96 |
| MW-28 | 12/20/2010 | 10:03 | 362.91 | 21.71 | 341.2 |
| MW-29 | 12/20/2010 | 7:05 | 364.77 | 0.58 | 364.19 |
| MW-30 | 12/20/2010 | 8:13 | 362.26 | 16.49 | 345.77 |
| MW-31D | 12/20/2010 | 8:31 | 369.3 | 18.84 | 350.46 |
| MW-31S | 12/20/2010 | 8:30 | 369.28 | 18.62 | 350.66 |
| MW-32D | 12/20/2010 | 10:04 | 362.57 | 21.16 | 341.41 |
| MW-32S | 12/20/2010 | 10:05 | 362.44 | 21.37 | 341.07 |
| MW-34D | 12/20/2010 | 10:27 | 361 | 19.84 | 341.16 |
| MW-34S | 12/20/2010 | 10:25 | 361 | 19.81 | 341.19 |
| MW-35D | 12/20/2010 | 10:29 | 360.6 | 19.43 | 341.17 |
| MW-35S | 12/20/2010 | 12:09 | 360.49 | 18.61 | 341.88 |
| MW-36D | 12/20/2010 | 8:22 | 370.96 | 26.13 | 344.83 |
| MW-36S | 12/20/2010 | 8:21 | 370.95 | 25.68 | 345.27 |
| MW-37D | 12/20/2010 | 10:04 | 359.11 | 22.86 | 336.25 |
| MW-37S | 12/20/2010 | 10:04 | 359.13 | 20.38 | 338.75 |
| MW-38D | 12/20/2010 | 9:35 | 358.62 | 21.93 | 336.69 |
| MW-39D | 12/20/2010 | 9:48 | 360.21 | 23.38 | 336.83 |
| MW-39S | 12/20/2010 | 9:49 | 360.14 | 22.64 | 337.5 |
| MW-40D | 12/20/2010 | 11:26 | 374.65 | 30.93 | 343.72 |
| MW-40S | 12/20/2010 | 11:27 | 374.69 | 30.88 | 343.81 |
| MW-43D | 12/20/2010 | 11:43 | 380.08 | 33.44 | 346.64 |
| MW-43S | 12/20/2010 | 11:45 | 379.76 | 32.93 | 346.83 |
| MW-45 | 12/20/2010 | 12:20 | 359.91 | 18.78 | 341.13 |
| MW-46 | 12/20/2010 | 12:24 | 359.19 | 18.2 | 340.99 |
| MW-47 | 12/20/2010 | 12:18 | 360.57 | 21.67 | 338.9 |
| MW-49D | 12/20/2010 | 12:15 | 361.44 | 19.03 | 342.41 |
| MW-49S | 12/20/2010 | 12:14 | 361.45 | 19.6 | 341.85 |
| MW-50D | 12/20/2010 | 8:44 | 360.41 | 22.44 | 337.97 |
| MW-50S | 12/20/2010 | 9:44 | 360.4 | 21.9 | 338.5 |
| MW-51D | 12/20/2010 | 8:49 | 360.43 | 15.48 | 344.95 |
| MW-51S | 12/20/2010 | 8:51 | 360.19 | 25.34 | 334.85 |
| MW-54 | 12/20/2010 | 10:12 | 365.26 | 24.01 | 341.25 |
| MW-55 | 12/20/2010 | 10:14 | 365.22 | 23.97 | 341.25 |
| MW-56 | 12/20/2010 | 9:25 | 371.83 | 20.42 | 351.41 |
| MW-57 | 12/20/2010 | 9:53 | 364.54 | 20.41 | 344.13 |

*Note:*

A= Location was artesian.
D= Location was dry.
*= Active extraction well.
DDC= Gauged on different date due to inaccessibility.
OG= Water was over the gauge.

# 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-64D | 12/20/2010 | 9:13 | 416.43 | 60.31 | 356.12 |
| MW-64S | 12/20/2010 | 9:11 | 416.34 | 33.91 | 382.43 |
| MW-65D | 12/20/2010 | 9:45 | 546.8 | 48.3 | 498.5 |
| MW-65S | 12/20/2010 | 9:43 | 546.82 | 49.29 | 497.53 |
| MW-66D | 12/20/2010 | 9:37 | 506.92 | 39.96 | 466.96 |
| MW-66S | 12/20/2010 | 9:35 | 506.73 | 38.72 | 468.01 |
| MW-67D | 12/20/2010 | 9:02 | 446.26 | 1.49A | 444.77A |
| MW-67S | 12/20/2010 | 9:00 | 446.26 | 10.33 | 435.93 |
| MW-68 | 12/20/2010 | 8:57 | 458.06 | 7.31 | 450.75 |
| MW-69 | 12/20/2010 | 8:40 | 411.9 | 11.5 | 400.4 |
| MW-70D | 12/20/2010 | 8:32 | 413.26 | 24.82 | 388.44 |
| MW-70S | 12/20/2010 | 8:30 | 413.2 | 24.55 | 388.65 |
| MW-74D | 12/20/2010 | 9:45 | 359.79 | 20.72 | 339.07 |
| MW-74S | 12/20/2010 | 9:45 | 359.85 | 21.28 | 338.57 |
| MW-75D | 12/20/2010 | 10:08 | 359.85 | 23.43 | 336.42 |
| MW-75S | 12/20/2010 | 10:07 | 359.03 | 21.92 | 337.11 |
| MW-77 | 12/20/2010 | 8:40 | 379.48 | 26.28 | 353.2 |
| MW-78 | 12/20/2010 | 8:33 | 367.08 | 24.06 | 343.02 |
| MW-79 | 12/20/2010 | 9:11 | 375.84 | 23.5 | 352.34 |
| MW-80 | 12/20/2010 | 9:37 | 370.29 | 25.9 | 344.39 |
| MW-81D | 12/20/2010 | 8:58 | 359.89 | 17.96 | 341.93 |
| MW-81S | 12/20/2010 | 8:57 | 360.12 | 18.61 | 341.51 |
| MW-82 | 12/20/2010 | 11:35 | 384.27 | 39.46 | 344.81 |
| MW-83 | 12/20/2010 | 8:44 | 363.69 | 12.49 | 351.2 |
| MW-84 | 12/20/2010 | 8:35 | 366.97 | 25.58 | 341.39 |
| MW-85 | 12/20/2010 | 11:32 | 371.54 | 4.12 | 367.42 |
| MW-86D | 12/20/2010 | 8:46 | 406.56 | 9.58 | 396.98 |
| MW-86S | 12/20/2010 | 8:44 | 406.5 | 11.8 | 394.7 |
| MW-87 | 12/20/2010 | 9:39 | 370.64 | 25.66 | 344.98 |
| MW-88 | 12/20/2010 | 9:56 | 367.93 | 24.39 | 343.54 |
| MW-91 | 12/20/2010 | 9:22 | 501.18 | 57 | 444.18 |
| MW-92 | 12/20/2010 | 9:15 | 476.87 | 85.25 | 391.62 |
| MW-93D | 12/20/2010 | 10:15 | 360.14 | 21.04 | 339.1 |
| MW-93S | 12/20/2010 | 10:14 | 360.76 | 21.1 | 339.66 |
| MW-94 | 12/20/2010 | 9:03 | 365.03 | 12.51 | 352.52 |
| MW-95 | 12/20/2010 | 10:33 | 358.72 | 20.09 | 338.63 |
| MW-96D | 12/20/2010 | 10:30 | 361 | 22.84 | 338.16 |
| MW-96S | 12/20/2010 | 10:38 | 361.21 | 23.12 | 338.09 |
| MW-97 | 12/20/2010 | 9:39 | 357.39 | 0.9375 | 356.45 |
| MW-98D | 12/20/2010 | 10:44 | 361.41 | 21.15 | 340.26 |
| MW-98I | 12/20/2010 | 10:41 | 360.78 | 21.61 | 339.17 |
| MW-98S | 12/20/2010 | 10:40 | 360.77 | 21.5 | 339.27 |
| MW-99D | 12/20/2010 | 10:55 | 359.91 | 19.81 | 340.1 |
| MW-99S | 12/20/2010 | 10:53 | 360.37 | 20.48 | 339.89 |
| MW-100D | 12/20/2010 | 11:01 | 362.14 | 21.78 | 340.36 |

*Note:*

A= Location was artesian.

D= Location was dry.

*= Active extraction well.

DDC= Gauged on different date due to inaccessibility.

OG= Water was over the gauge.

# 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-100I | 12/20/2010 | 11:03 | 361.81 | 21.98 | 339.83 |
| MW-100S | 12/20/2010 | 11:04 | 362.28 | 21.52 | 340.76 |
| MW-101D | 12/20/2010 | 11:11 | 356.22 | 16.67 | 339.55 |
| MW-101S | 12/20/2010 | 11:09 | 356.54 | 17.06 | 339.48 |
| MW-102D | 12/20/2010 | 8:25 | 401.71 | 14.18 | 387.53 |
| MW-102S | 12/20/2010 | 8:22 | 401.95 | 41.26 | 360.69 |
| MW-103D | 12/20/2010 | 8:50 | 397.62 | 20.42 | 377.2 |
| MW-103S | 12/20/2010 | 8:48 | 397.96 | 18.42 | 379.54 |
| MW-104 | 12/20/2010 | 8:37 | 428.72 | 29.01 | 399.71 |
| MW-105 | 12/20/2010 | 10:26 | 362.05 | 23.71 | 338.34 |
| MW-106 | 12/20/2010 | 9:32 | 360.15 | 26.26 | 333.89 |
| MW-107 | 12/20/2010 | 10:01 | 363.56 | 23.61 | 339.95 |
| MW-108D | 12/20/2010 | 10:54 | 426.35 | 22.48 | 403.87 |
| MW-108S | 12/20/2010 | 10:50 | 425.46 | 31.15 | 394.31 |
| MW-109D | 12/20/2010 | 11:10 | 389.12 | 35.84 | 353.28 |
| MW-109S | 12/20/2010 | 11:07 | 388.39 | 36.13 | 352.26 |
| MW-110 | 12/20/2010 | 11:00 | 378.36 | 26.18 | 352.18 |
| MW-111 | 12/20/2010 | 11:45 | 433.63 | 22.47 | 411.16 |
| MW-112 | 12/20/2010 | 8:15 | 393.52 | 49.15 | 344.37 |
| MW-113 | 12/20/2010 | 9:30 | 371.02 | 25.71 | 345.31 |
| MW-114 | 12/20/2010 | 8:47 | 360.71 | 18.61 | 342.1 |
| MW-115 | 12/20/2010 | 9:09 | 373.3 | 21.96 | 351.34 |
| MW-116 | 12/20/2010 | 8:10 | 364.59 | 20.03 | 344.56 |
| MW-117 | 12/20/2010 | 8:18 | 365.19 | 13.5 | 351.69 |
| RU-MW-1 | 12/20/2010 | 11:17 | 389.69 | 36.31 | 353.38 |
| RU-MW-2 | 12/20/2010 | 11:19 | 391.5 | 38.71 | 352.79 |
| RU-MW-4 | 12/20/2010 | 11:21 | 394.17 | 41.42 | 352.75 |
| RU-MW-5 | 12/20/2010 | 11:23 | 378.8 | 25.94 | 352.86 |
| RU-MW-6 | 12/20/2010 | 11:25 | 383.28 | 30.51 | 352.77 |
| WPL-SS-7 | 12/20/2010 | 9:17 | 357.78 | 24.22 | 333.56 |
| WPL-SS-8 | 12/20/2010 | 9:52 | 364.4 | 25.4 | 339 |

*Note:*

A= Location was artesian.
D= Location was dry.
*= Active extraction well.
DDC= Gauged on different date due to inaccessibility.
OG= Water was over the gauge.

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

| Location/ID<br>Sample Date<br>Parameter | MSC<br>Used Aquifer R<br>(ug/L) | MSC<br>Used Aquifer NR<br>(ug/L) | Federal<br>MCL<br>(ug/L) | EPA RSL<br>Tap Water<br>(ug/L) | CW-1<br>7/7/2010 | CW-1<br>12/21/2010 | CW-1A<br>7/7/2010 | CW-1A<br>12/21/2010 | CW-2<br>7/7/2010 | CW-2<br>12/21/2010 | CW-3<br>7/7/2010 | CW-3 Dup<br>7/7/2010 | CW-3<br>12/21/2010 | CW-4<br>7/7/2010 | CW-4<br>12/21/2010 | CW-5<br>7/7/2010 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***1,4-Dioxane*** | | | | | | | | | | | | | | | | |
| 1,4-Dioxane | 5.6 | 24 | | 6.1 | | | | | | | | | | | | |
| ***METAL (Dissolved)*** | | | | | | | | | | | | | | | | |
| Calcium | | | | | 14300 | | 6110 | | 22400 | | 19100 | 19300 | | 28700 | | 32300 |
| Iron | | | | 26000 | 7580 J | | 100 U | | 663 J | | 6990 J | 7040 J | | 6650 J | | 173 J |
| Magnesium | | | | | 7200 | | 5870 | | 9200 | | 8380 | 8490 | | 10800 | | 7550 |
| Manganese | 300 | 300 | | 880 | 764 | | 35.9 | | 1520 | | 488 | 495 | | 483 | | 435 |
| Potassium | | | | | 1530 B | | 3410 B | | 1920 B | | 1490 B | 1590 B | | 1250 B | | 2270 B |
| Sodium | | | | | 7370 | | 35400 | | 10500 | | 12600 | 12700 | | 10700 | | 18500 |
| ***TDS*** | | | | | | | | | | | | | | | | |
| Total Dissolved Solids | | | | | 129000 | | 183000 | | 154000 | | 170000 | 172000 | | 196000 | | 255000 |
| ***TOTAL VOC*** | | | | | | | | | | | | | | | | |
| | | | | | 49.92 | 52.5 | 68.46 | 41.86 | 23.41 | 18.7 | 53.31 | 50.43 | 29.42 | 80.3 | 80.9 | 30.39 |
| ***Volatile Organic Compound*** | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 70 | 70 | | 0.52 | 1 U | 2 U | 2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | 2 U | 1 U |
| 1,1,1-Trichloroethane | 200 | 200 | 200 | 9100 | 1 U | 2 U | 2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | 2 U | 1 U |
| 1,1,2,2-Tetrachloroethane | 0.3 | 0.3 | | 0.067 | 1 U | 2 U | 2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | 2 U | 1 U |
| 1,1,2-Trichloroethane | 5 | 5 | 5 | 0.24 | 1 U | 2 U | 2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | 2 U | 1 U |
| 1,1-Dichloroethane | 27 | 110 | | 2.4 | 1 U | 2 U | 2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | 2 U | 1 U |
| 1,1-Dichloroethene | 7 | 7 | 7 | 340 | 1 U | 2 U | 2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | 2 U | 1 U |
| 1,2-Dibromoethane | 0.05 | 0.05 | 0.05 | 0.0065 | 1 U | 2 U | 2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | 2 U | 1 U |
| 1,2-Dichloroethane | 5 | 5 | 5 | 0.15 | 1 U | 2 U | 2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | 2 U | 1 U |
| 1,2-Dichloropropane | 5 | 5 | 5 | 0.39 | 1 U | 2 U | 2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | 2 U | 1 U |
| 1,4-Dioxane | 5.6 | 24 | | 6.1 | 200 U | 400 U | 400 U | 200 U | 200 U | 200 U | 200 U | 200 U | 200 U | 400 U | 400 U | 200 U |
| 2-Butanone | 4000 | 4000 | | 7100 | 10 U | 20 U | 20 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 20 U | 20 U | 10 U |
| 2-Hexanone | | | | | 10 U | 20 U | 20 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 20 U | 20 U | 10 U |
| 4-Methyl-2-Pentanone | 190 | 410 | | 2000 | 10 U | 20 U | 20 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 20 U | 20 U | 10 U |
| Acetone | 3700 | 10000 | | 22000 | 10 U | 20 U | 20 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 20 U | 20 U | 10 U |
| Acrylonitrile | 0.63 | 2.7 | | 0.045 | 20 U | 40 U | 40 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 40 U | 40 U | 20 U |
| Benzene | 5 | 5 | 5 | 0.41 | 1 U | 2 U | 2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | 2 U | 1 U |
| Bromochloromethane | 90 | 90 | | | 1 U | 2 U | 2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | 2 U | 1 U |
| Bromodichloromethane | 100 | 100 | | 0.12 | 1 U | 2 U | 2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | 2 U | 1 U |
| Bromoform | 80 | 80 | | 8.5 | 1 U | 2 U | 2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | 2 U | 1 U |
| Bromomethane | 10 | 10 | | 8.7 | 1 U | 2 U | 2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | 2 U | 1 U |
| Carbon Disulfide | 1900 | 4100 | | 1000 | 0.47 J | 2 U | 17 | 1 U | 2.7 B | 1 U | 0.41 J B | 0.33 J | 1 U | 2.5 | 2 U | 0.49 J B |
| Carbon Tetrachloride | 5 | 5 | 5 | 0.2 | 1 U | 2 U | 2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | 2 U | 1 U |
| Chlorobenzene | 100 | 100 | 100 | 91 | 1 U | 2 U | 2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | 2 U | 1 U |
| Chlorodibromomethane | 80 | 80 | | 0.15 | 1 U | 2 U | 2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | 2 U | 1 U |
| Chloroethane | 230 | 900 | | 21000 | 1 U | 2 U | 2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | 2 U | 1 U |
| Chloroform | 80 | 80 | | 0.19 | 1 U | 2 U | 2 U | 0.33 J | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | 2 U | 1 U |
| Chloromethane | 30 | 30 | | 190 | 0.45 J | 2 U | 2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | 2 U | 1 U |
| cis-1,2-Dichloroethene | 70 | 70 | 70 | 370 | 11 | 9.5 | 0.54 J | 0.58 J | 4.4 | 4.5 | 29 | 28 | 20 | 28 | 30 | 5 |
| cis-1,3-Dichloropropene | 6.6 | 26 | | 0.43 | 1 U | 2 U | 2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | 2 U | 1 U |
| Ethylbenzene | 700 | 700 | 700 | 1.5 | 1 U | 2 U | 2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | 2 U | 1 U |
| Methyl tert-butyl ether | 20 | 20 | | 12 | 1 U | 2 U | 2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | 2 U | 1 U |
| Methylene chloride | 5 | 5 | | 4.8 | 1 U | 2 U | 1 J B | 0.19 J | 1 U | 1 U | 1 U | 1 U | 1 U | 1.5 J B | 2.2 | 1 U |
| Styrene | 100 | 100 | 100 | 1600 | 1 U | 2 U | 2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | 2 U | 1 U |
| Tetrachloroethene | 5 | 5 | 5 | 0.11 | 1 U | 2 U | 0.92 J | 0.76 J | 0.31 J | 0.2 J | 6.9 | 6.1 | 0.92 J | 4.3 | 4.7 | 17 |
| Toluene | 1000 | 1000 | 1000 | 2300 | 1 U | 2 U | 2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | 2 U | 1 U |
| trans-1,2-Dichloroethene | 100 | 100 | 100 | 110 | 1 U | 2 U | 2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | 2 U | 1 U |
| trans-1,3-Dichloropropene | 6.6 | 26 | | 0.43 | 1 U | 2 U | 2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | 2 U | 1 U |
| Trichloroethene | 5 | 5 | 5 | 1.7 | 38 | 43 | 49 | 40 | 16 B | 14 | 17 B | 16 | 8.5 | 44 | 44 | 7.9 B |
| Vinyl Chloride | 2 | 2 | 2 | 0.016 | 1 U | 2 U | 2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | 2 U | 1 U |
| Xylenes (Total) | 10000 | 10000 | 10000 | 200 | 3 U | 6 U | 6 U | 3 U | 3 U | 3 U | 3 U | 3 U | 3 U | 6 U | 6 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-2.**
**Collection Well Groundwater Data Summary**
**Former York Naval Ordnance Plant - York, PA**

| Location/ID<br>Sample Date<br>Parameter | MSC<br>Used Aquifer R<br>(ug/L) | MSC<br>Used Aquifer NR<br>(ug/L) | Federal<br>MCL<br>(ug/L) | EPA RSL<br>Tap Water<br>(ug/L) | CW-5<br>12/21/2010 | CW-6<br>7/7/2010 | CW-6<br>12/21/2010 | CW-7<br>7/7/2010 | CW-7<br>12/21/2010 | CW-7A<br>7/7/2010 | CW-7A<br>12/21/2010 | CW-8<br>12/21/2010 | CW-9<br>7/7/2010 | CW-9<br>12/21/2010 | CW-13<br>7/7/2010 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***1,4-Dioxane*** | | | | | | | | | | | | | | | |
| 1,4-Dioxane | 5.6 | 24 | | 6.1 | | | | | | | | 5.6 | | | |
| ***METAL (Dissolved)*** | | | | | | | | | | | | | | | |
| Calcium | | | | | | 32500 | | 4280 B | | 4840 B | | | 72400 | | 116000 |
| Iron | | | | 26000 | | 6240 J | | 100 U | | 100 U | | | 100 U | | 100 U |
| Magnesium | | | | | | 11100 | | 3670 B | | 3930 B | | | 18400 | | 19100 |
| Manganese | 300 | 300 | | 880 | | 385 | | 54 | | 89.8 | | | 3.5 B | | 159 |
| Potassium | | | | | | 1170 B | | 2520 B | | 3040 B | | | 13300 | | 15600 |
| Sodium | | | | | | 9540 | | 10600 | | 29200 | | | 37500 | | 44800 |
| ***TDS*** | | | | | | | | | | | | | | | |
| Total Dissolved Solids | | | | | | 213000 | | 81000 | | 151000 | | | 461000 | | 656000 |
| ***TOTAL VOC*** | | | | | | | | | | | | | | | |
| | | | | | 14.2 | 71.8 | 139.2 | 7.92 | 8.79 | 398 | 109.2 | 492.2 | 1474.7 | 1703.4 | 1150 |
| ***Volatile Organic Compound*** | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 70 | 70 | | 0.52 | 1 U | 2 U | 5 U | 1 U | 1 U | 20 U | 5 U | 20 U | 25 U | 25 U | 25 U |
| 1,1,1-Trichloroethane | 200 | 200 | 200 | 9100 | 1 U | 2 U | 5 U | 1 U | 1 U | 20 U | 5 U | 9.1 J | 35 | 60 | 25 U |
| 1,1,2,2-Tetrachloroethane | 0.3 | 0.3 | | 0.067 | 1 U | 2 U | 5 U | 1 U | 1 U | 20 U | 5 U | 20 U | 25 U | 25 U | 25 U |
| 1,1,2-Trichloroethane | 5 | 5 | 5 | 0.24 | 1 U | 2 U | 5 U | 1 U | 1 U | 20 U | 5 U | 20 U | 25 U | 25 U | 25 U |
| 1,1-Dichloroethane | 27 | 110 | | 2.4 | 1 U | 2 U | 5 U | 1 U | 1 U | 20 U | 5 U | 20 U | 4.7 J | 25 U | 3.8 J |
| 1,1-Dichloroethene | 7 | 7 | 7 | 340 | 1 U | 2 U | 5 U | 1 U | 1 U | 20 U | 5 U | 9.7 J | 12 J | 15 J | 9 J |
| 1,2-Dibromoethane | 0.05 | 0.05 | 0.05 | 0.0065 | 1 U | 2 U | 5 U | 1 U | 1 U | 20 U | 5 U | 20 U | 25 U | 25 U | 25 U |
| 1,2-Dichloroethane | 5 | 5 | 5 | 0.15 | 1 U | 2 U | 5 U | 1 U | 1 U | 20 U | 5 U | 20 U | 25 U | 25 U | 25 U |
| 1,2-Dichloropropane | 5 | 5 | 5 | 0.39 | 1 U | 2 U | 5 U | 1 U | 1 U | 20 U | 5 U | 20 U | 25 U | 25 U | 25 U |
| 1,4-Dioxane | 5.6 | 24 | | 6.1 | 200 U | 400 U | 1000 U | 200 U | 200 U | 4000 U | 1000 U | 4000 U | 5000 U | 5000 U | 5000 U |
| 2-Butanone | 4000 | 4000 | | 7100 | 10 U | 20 U | 50 U | 10 U | 10 U | 200 U | 50 U | 200 U | 250 U | 250 U | 250 U |
| 2-Hexanone | | | | | 10 U | 20 U | 50 U | 10 U | 10 U | 200 U | 50 U | 200 U | 250 U | 250 U | 250 U |
| 4-Methyl-2-Pentanone | 190 | 410 | | 2000 | 10 U | 20 U | 50 U | 10 U | 10 U | 200 U | 50 U | 200 U | 250 U | 250 U | 250 U |
| Acetone | 3700 | 10000 | | 22000 | 10 U | 20 U | 50 U | 10 U | 10 U | 200 U | 50 U | 200 U | 250 U | 250 U | 250 U |
| Acrylonitrile | 0.63 | 2.7 | | 0.045 | 20 U | 40 U | 100 U | 20 U | 20 U | 400 U | 100 U | 400 U | 500 U | 500 U | 500 U |
| Benzene | 5 | 5 | 5 | 0.41 | 1 U | 2 U | 5 U | 1 U | 1 U | 20 U | 5 U | 20 U | 25 U | 25 U | 25 U |
| Bromochloromethane | 90 | 90 | | | 1 U | 2 U | 5 U | 1 U | 1 U | 20 U | 5 U | 20 U | 25 U | 25 U | 25 U |
| Bromodichloromethane | 100 | 100 | | 0.12 | 1 U | 2 U | 5 U | 1 U | 1 U | 20 U | 5 U | 20 U | 25 U | 25 U | 25 U |
| Bromoform | 80 | 80 | | 8.5 | 1 U | 2 U | 5 U | 1 U | 1 U | 20 U | 5 U | 20 U | 25 U | 25 U | 25 U |
| Bromomethane | 10 | 10 | | 8.7 | 1 U | 2 U | 5 U | 1 U | 1 U | 20 U | 5 U | 20 U | 25 U | 25 U | 25 U |
| Carbon Disulfide | 1900 | 4100 | | 1000 | 1 U | 4.1 | 5 U | 0.45 J | 1 U | 240 | 5 U | 11 J | 310 B | 9.4 J | 280 B |
| Carbon Tetrachloride | 5 | 5 | 5 | 0.2 | 1 U | 2 U | 5 U | 1 U | 1 U | 20 U | 5 U | 20 U | 25 U | 25 U | 25 U |
| Chlorobenzene | 100 | 100 | 100 | 91 | 1 U | 2 U | 5 U | 1 U | 1 U | 20 U | 5 U | 20 U | 25 U | 25 U | 25 U |
| Chlorodibromomethane | 80 | 80 | | 0.15 | 1 U | 2 U | 5 U | 1 U | 1 U | 20 U | 5 U | 20 U | 25 U | 25 U | 25 U |
| Chloroethane | 230 | 900 | | 21000 | 1 U | 2 U | 5 U | 1 U | 1 U | 20 U | 5 U | 20 U | 25 U | 25 U | 25 U |
| Chloroform | 80 | 80 | | 0.19 | 1 U | 2 U | 5 U | 1 | 1.4 | 20 U | 1.1 J | 20 U | 25 U | 25 U | 25 U |
| Chloromethane | 30 | 30 | | 190 | 1 U | 2 U | 5 U | 1 U | 1 U | 20 U | 5 U | 20 U | 25 U | 25 U | 25 U |
| cis-1,2-Dichloroethene | 70 | 70 | 70 | 370 | 5.4 | 15 | 36 | 0.27 J | 0.28 J | 20 U | 5 U | 120 | 73 | 79 | 350 |
| cis-1,3-Dichloropropene | 6.6 | 26 | | 0.43 | 1 U | 2 U | 5 U | 1 U | 1 U | 20 U | 5 U | 20 U | 25 U | 25 U | 25 U |
| Ethylbenzene | 700 | 700 | 700 | 1.5 | 1 U | 2 U | 5 U | 1 U | 1 U | 20 U | 5 U | 20 U | 25 U | 25 U | 25 U |
| Methyl tert-butyl ether | 20 | 20 | | 12 | 1 U | 2 U | 5 U | 1 U | 1 U | 20 U | 5 U | 20 U | 25 U | 25 U | 25 U |
| Methylene chloride | 5 | 5 | | 4.8 | 0.2 J | 1.4 J B | 6.2 | 1 U | 0.21 J | 14 J B | 6 | 3.4 J | 25 U | 25 U | 25 U |
| Styrene | 100 | 100 | 100 | 1600 | 1 U | 2 U | 5 U | 1 U | 1 U | 20 U | 5 U | 20 U | 25 U | 25 U | 25 U |
| Tetrachloroethene | 5 | 5 | 5 | 0.11 | 3.6 | 42 | 76 | 1 U | 1 U | 4 J | 2.1 J | 29 | 660 | 990 | 150 |
| Toluene | 1000 | 1000 | 1000 | 2300 | 1 U | 2 U | 5 U | 1 U | 1 U | 20 U | 5 U | 20 U | 25 U | 25 U | 25 U |
| trans-1,2-Dichloroethene | 100 | 100 | 100 | 110 | 1 U | 2 U | 5 U | 1 U | 1 U | 20 U | 5 U | 20 U | 25 U | 25 U | 25 U |
| trans-1,3-Dichloropropene | 6.6 | 26 | | 0.43 | 1 U | 2 U | 5 U | 1 U | 1 U | 20 U | 5 U | 20 U | 25 U | 25 U | 25 U |
| Trichloroethene | 5 | 5 | 5 | 1.7 | 5 | 9.3 | 21 | 6.2 | 6.9 | 140 | 100 | 310 | 380 B | 550 | 350 B |
| Vinyl Chloride | 2 | 2 | 2 | 0.016 | 1 U | 2 U | 5 U | 1 U | 1 U | 20 U | 5 U | 20 U | 25 U | 25 U | 7.2 J |
| Xylenes (Total) | 10000 | 10000 | 10000 | 200 | 3 U | 6 U | 15 U | 3 U | 3 U | 60 U | 15 U | 60 U | 75 U | 75 U | 75 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<br>Sample Date<br>Parameter | MSC<br>Used Aquifer R<br>(ug/L) | MSC<br>Used Aquifer NR<br>(ug/L) | Federal<br>MCL<br>(ug/L) | EPA RSL<br>Tap Water<br>(ug/L) | CW-13<br>12/21/2010 | CW-15A<br>7/7/2010 | CW-15A<br>12/21/2010 | CW-17<br>7/7/2010 | CW-17<br>12/21/2010 | CW-20<br>7/8/2010 |
|---|---|---|---|---|---|---|---|---|---|---|
| ***1,4-Dioxane*** | | | | | | | | | | |
| 1,4-Dioxane | 5.6 | 24 | | 6.1 | | 180 | 110 | | | |
| ***METAL (Dissolved)*** | | | | | | | | | | |
| Calcium | | | | | | 187000 | | 99200 | | 81400 |
| Iron | | | | 26000 | | 100 U | | 100 U | | 41.1 B J |
| Magnesium | | | | | | 23600 | | 11900 | | 18700 |
| Manganese | 300 | 300 | | 880 | | 315 | | 4 B | | 15.8 |
| Potassium | | | | | | 12800 | | 6250 | | 4040 B |
| Sodium | | | | | | 45700 | | 25800 | | 36200 |
| ***TDS*** | | | | | | | | | | |
| Total Dissolved Solids | | | | | | 1040000 | | 464000 | | 421000 |
| ***TOTAL VOC*** | | | | | | | | | | |
| | | | | | 768.6 | 12151 | 14312 | 270.9 | 176.6 | 1610 |
| ***Volatile Organic Compound*** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 70 | 70 | | 0.52 | 25 U | 250 U | 250 U | 10 U | 5 U | 50 U |
| 1,1,1-Trichloroethane | 200 | 200 | 200 | 9100 | 11 J | 3100 | 4100 | 10 U | 5.4 | 39 J |
| 1,1,2,2-Tetrachloroethane | 0.3 | 0.3 | | 0.067 | 25 U | 250 U | 250 U | 10 U | 5 U | 50 U |
| 1,1,2-Trichloroethane | 5 | 5 | 5 | 0.24 | 25 U | 250 U | 250 U | 10 U | 5 U | 50 U |
| 1,1-Dichloroethane | 27 | 110 | | 2.4 | 25 U | 81 J | 82 J | 3.3 J | 2.3 J | 50 U |
| 1,1-Dichloroethene | 7 | 7 | 7 | 340 | 10 J | 860 | 990 | 6.6 J | 4.7 J | 50 U |
| 1,2-Dibromoethane | 0.05 | 0.05 | 0.05 | 0.0065 | 25 U | 250 U | 250 U | 10 U | 5 U | 50 U |
| 1,2-Dichloroethane | 5 | 5 | 5 | 0.15 | 25 U | 250 U | 250 U | 10 U | 5 U | 50 U |
| 1,2-Dichloropropane | 5 | 5 | 5 | 0.39 | 25 U | 250 U | 250 U | 10 U | 5 U | 50 U |
| 1,4-Dioxane | 5.6 | 24 | | 6.1 | 5000 U | 50000 U | 50000 U | 2000 U | 1000 U | 10000 U |
| 2-Butanone | 4000 | 4000 | | 7100 | 250 U | 2500 U | 2500 U | 100 U | 50 U | 500 U |
| 2-Hexanone | | | | | 250 U | 2500 U | 2500 U | 100 U | 50 U | 500 U |
| 4-Methyl-2-Pentanone | 190 | 410 | | 2000 | 250 U | 2500 U | 2500 U | 100 U | 50 U | 500 U |
| Acetone | 3700 | 10000 | | 22000 | 250 U | 2500 U | 2500 U | 100 U | 50 U | 500 U |
| Acrylonitrile | 0.63 | 2.7 | | 0.045 | 500 U | 5000 U | 5000 U | 200 U | 100 U | 1000 U |
| Benzene | 5 | 5 | 5 | 0.41 | 25 U | 250 U | 250 U | 10 U | 5 U | 50 U |
| Bromochloromethane | 90 | 90 | | | 25 U | 250 U | 250 U | 10 U | 5 U | 50 U |
| Bromodichloromethane | 100 | 100 | | 0.12 | 25 U | 250 U | 250 U | 10 U | 5 U | 50 U |
| Bromoform | 80 | 80 | | 8.5 | 25 U | 250 U | 250 U | 10 U | 5 U | 50 U |
| Bromomethane | 10 | 10 | | 8.7 | 25 U | 250 U | 250 U | 10 U | 5 U | 50 U |
| Carbon Disulfide | 1900 | 4100 | | 1000 | 7.6 J | 600 B | 140 J | 28 B | 1.3 J | 26 J |
| Carbon Tetrachloride | 5 | 5 | 5 | 0.2 | 25 U | 250 U | 250 U | 10 U | 5 U | 50 U |
| Chlorobenzene | 100 | 100 | 100 | 91 | 25 U | 250 U | 250 U | 10 U | 5 U | 50 U |
| Chlorodibromomethane | 80 | 80 | | 0.15 | 25 U | 250 U | 250 U | 10 U | 5 U | 50 U |
| Chloroethane | 230 | 900 | | 21000 | 25 U | 250 U | 250 U | 10 U | 5 U | 50 U |
| Chloroform | 80 | 80 | | 0.19 | 25 U | 250 U | 250 U | 10 U | 5 U | 50 U |
| Chloromethane | 30 | 30 | | 190 | 25 U | 250 U | 250 U | 10 U | 5 U | 50 U |
| cis-1,2-Dichloroethene | 70 | 70 | 70 | 370 | 270 | 4100 | 4400 | 60 | 43 | 90 |
| cis-1,3-Dichloropropene | 6.6 | 26 | | 0.43 | 25 U | 250 U | 250 U | 10 U | 5 U | 50 U |
| Ethylbenzene | 700 | 700 | 700 | 1.5 | 25 U | 250 U | 250 U | 10 U | 5 U | 50 U |
| Methyl tert-butyl ether | 20 | 20 | | 12 | 25 U | 250 U | 250 U | 10 U | 5 U | 50 U |
| Methylene chloride | 5 | 5 | | 4.8 | 25 U | 250 U | 250 U | 10 U | 6.9 | 55 B |
| Styrene | 100 | 100 | 100 | 1600 | 25 U | 250 U | 250 U | 10 U | 5 U | 50 U |
| Tetrachloroethene | 5 | 5 | 5 | 0.11 | 140 | 910 | 1200 | 53 | 25 | 880 |
| Toluene | 1000 | 1000 | 1000 | 2300 | 25 U | 250 U | 250 U | 10 U | 5 U | 50 U |
| trans-1,2-Dichloroethene | 100 | 100 | 100 | 110 | 25 U | 250 U | 250 U | 10 U | 5 U | 50 U |
| trans-1,3-Dichloropropene | 6.6 | 26 | | 0.43 | 25 U | 250 U | 250 U | 10 U | 5 U | 50 U |
| Trichloroethene | 5 | 5 | 5 | 1.7 | 330 | 2500 B | 3400 | 120 B | 88 | 520 |
| Vinyl Chloride | 2 | 2 | 2 | 0.016 | 25 U | 250 U | 250 U | 10 U | 5 U | 50 U |
| Xylenes (Total) | 10000 | 10000 | 10000 | 200 | 75 U | 750 U | 750 U | 30 U | 15 U | 150 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, 2010 - December 31, 2010)
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 | Outfall #003 GWTS | Outfall #003 GWTS |
|---|---|---|---|---|---|---|---|
| Lab ID | | 9826081001 | 9835793001 | 9837894001 | 9845675001 | 9853054001 | 9868606001 |
| Sample Date | | 01/08/10 | 3/18/2010* | 04/01/10 | 5/19/2010* | 07/02/10 | 10/01/10 |
| Parameter | Units | Result | Result | Result | Result | Result | Result |
| 1,1-DICHLOROETHENE | µg/l | N.D.@1 | N.D.@1 | 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 | N.D.@1 | N.D.@1 |
| TRICHLOROETHENE | µg/l | N.D.@1 | N.D.@1 | 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 | N.D.@1 | N.D.@1 |
| VINYL CHLORIDE | µg/l | N.D.@1 | N.D.@1 | N.D.@1 | N.D.@1 | N.D.@1 | N.D.@1 |
| TOTAL VOCs | µg/l | 0 | 0 | 0 | 0 | 0 | 0 |

| Sample ID | | Influent to #003 GWTS | Influent to #003 GWTS | Influent to #003 GWTS | Influent to #003 GWTS |
|---|---|---|---|---|---|
| Lab ID | | 9826082001 | 9837874001 | 9853054001 | 9868606001 |
| Sample Date | | 01/08/10 | 04/01/10 | 07/02/10 | 10/01/10 |
| Parameter | Units | Result | Result | Result | Result |
| 1,1,1-TRICHLOROETHANE | µg/l | 90.5 | 68.5 | 99.2 | 62.7 |
| 1,1-DICHLOROETHANE | µg/l | 5.9 | 5.5 | 7.2 | 4,9 |
| 1,1-DICHLOROETHENE | µg/l | 30.2 | 26.1 | 28.6 | 22 |
| 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 | 1.1 | 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 | 242 | 193 | 428 | 340 |
| TRICHLOROETHENE | µg/l | 398 | 340 | 433 | 420 |
| VINYL CHLORIDE | µg/l | 3.1 | 3.1 | 3.3 | 1.6 |
| CIS 1,2-DICHLOROETHENE | µg/l | 240 | 216 | 278 | 191 |
| TRANS 1,2-DICHLOROETHENE | µg/l | N.D.@1 | N.D.@1 | 1.3 | 4.2 |
| | | | | | |
| TOTAL VOCs | µg/l | 1010 | 852 | 1280 | 1042 |

ALL ANALYSES PERFORMED BY ANALYTICAL LABORATORY SERVICES, INC - MIDDLETOWN, PA

* Outfall #003 samples collected in March and May were collected to ensure the packing material was function properly. The packing material was changed in June, 2010.

µg/l - micrograms per liter

N.D.@1 - not detected at indicated concentration

N.A. - not analyzed

PTA Infl. - Official sample name is "influent to #003 GWTS"

PTA Effl. - Official sample name is "outfall #003 GWTS"

# APPENDIX B

# 2010 Access® Database Summary
# Groundwater Treatment Plant Operations

# Harley-Davidson Motor Company

## Groundwater Treatment Plant Operations

From: 01/01/10
To: 12/31/10

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01/01/10 | 1 | 23.97 | 1 | 23.97 | 491106 | 1 | 23.98 | 1 | 23.98 | 2021 | 8.0 | 6080 | 0 | 0.00 |
| 01/02/10 | 1 | 23.97 | 1 | 23.97 | 491062.8 | 1 | 23.98 | 1 | 23.98 | 2041 | 8.0 | 5260 | 0 | 0.00 |
| 01/03/10 | 1 | 23.97 | 1 | 23.97 | 491013.3 | 1 | 23.97 | 1 | 23.98 | 2057 | 8.0 | 4150 | 0 | 0.00 |
| 01/04/10 | 1 | 23.97 | 1 | 23.97 | 491010.3 | 1 | 23.97 | 1 | 23.97 | 2034 | 8.0 | 3430 | 0 | 0.00 |
| 01/05/10 | 1 | 23.97 | 1 | 23.97 | 491035 | 1 | 23.97 | 1 | 23.97 | 2029 | 8.0 | 3350 | 0 | 0.00 |
| 01/06/10 | 1 | 23.97 | 1 | 23.97 | 491049.4 | 1 | 23.98 | 1 | 23.97 | 2079 | 8.0 | 3160 | 0 | 0.00 |
| 01/07/10 | 1 | 23.97 | 1 | 23.97 | 491087.5 | 1 | 23.98 | 1 | 23.98 | 2077 | 8.0 | 2870 | 0 | 0.00 |
| 01/08/10 | 1 | 23.97 | 1 | 23.97 | 491092.7 | 1 | 23.98 | 1 | 23.98 | 2353 | 8.0 | 2870 | 0 | 0.00 |
| 01/09/10 | 1 | 23.97 | 1 | 23.97 | 491130.8 | 1 | 23.97 | 1 | 23.98 | 2103 | 8.0 | 2630 | 0 | 0.00 |
| 01/10/10 | 1 | 23.97 | 1 | 23.97 | 491154.5 | 1 | 23.98 | 1 | 23.97 | 2100 | 8.0 | 2180 | 0 | 0.00 |
| 01/11/10 | 1 | 23.97 | 1 | 23.97 | 489000.7 | 2 | 23.35 | 1 | 20.78 | 2078 | 8.0 | 1890 | 0 | 0.00 |
| 01/12/10 | 1 | 23.97 | 1 | 23.97 | 478348.5 | 4 | 12.07 | 3 | 12.20 | 2049 | 8.0 | 1670 | 0 | 0.00 |
| 01/13/10 | 1 | 23.97 | 1 | 23.97 | 480836.9 | 4 | 12.07 | 3 | 12.50 | 2032 | 8.0 | 1460 | 2 | 17.45 |
| 01/14/10 | 1 | 23.97 | 1 | 23.97 | 487602 | 2 | 20.17 | 2 | 21.78 | 2019 | 8.0 | 1650 | 1 | 23.97 |
| 01/15/10 | 1 | 23.97 | 1 | 23.97 | 483376.9 | 4 | 14.17 | 2 | 20.00 | 1949 | 8.0 | 1410 | 1 | 23.97 |
| 01/16/10 | 1 | 23.97 | 1 | 23.97 | 483584 | 4 | 12.50 | 3 | 19.75 | 1949 | 8.0 | 1630 | 1 | 23.97 |
| 01/17/10 | 1 | 23.97 | 1 | 23.97 | 482464.3 | 3 | 16.85 | 3 | 12.82 | 1987 | 8.0 | 6130 | 1 | 23.97 |
| 01/18/10 | 1 | 23.97 | 1 | 23.97 | 489576.5 | 2 | 21.27 | 2 | 20.42 | 2044 | 8.0 | 4160 | 1 | 23.97 |
| 01/19/10 | 1 | 23.97 | 1 | 23.97 | 491043.2 | 1 | 23.97 | 1 | 23.97 | 2069 | 8.0 | 0 | 1 | 23.97 |
| 01/20/10 | 1 | 23.97 | 1 | 23.97 | 490259.4 | 1 | 23.97 | 2 | 22.37 | 2063 | 8.0 | 0 | 1 | 23.97 |
| 01/21/10 | 1 | 23.97 | 1 | 23.97 | 490029.7 | 1 | 23.98 | 1 | 23.98 | 2033 | 8.0 | 0 | 1 | 23.97 |
| 01/22/10 | 1 | 23.97 | 1 | 23.97 | 490792.9 | 1 | 23.98 | 1 | 23.97 | 2054 | 8.0 | 0 | 1 | 23.97 |
| 01/23/10 | 1 | 23.97 | 1 | 23.97 | 490981.4 | 1 | 23.98 | 1 | 23.97 | 2067 | 8.0 | 0 | 1 | 23.97 |
| 01/24/10 | 1 | 23.97 | 1 | 23.97 | 489731 | 1 | 23.97 | 1 | 23.98 | 2031 | 8.0 | 0 | 1 | 23.97 |
| 01/25/10 | 1 | 23.97 | 1 | 23.97 | 490398.4 | 1 | 23.97 | 1 | 23.98 | 1993 | 8.0 | 0 | 1 | 23.97 |
| 01/26/10 | 1 | 23.97 | 1 | 23.97 | 490709.5 | 1 | 23.98 | 1 | 23.98 | 2037 | 8.0 | 0 | 1 | 23.97 |
| 01/27/10 | 1 | 23.97 | 1 | 23.97 | 489857.7 | 1 | 23.97 | 1 | 23.98 | 2034 | 8.0 | 0 | 1 | 23.97 |
| 01/28/10 | 1 | 23.97 | 1 | 23.97 | 488721.6 | 1 | 23.98 | 1 | 23.97 | 2030 | 8.0 | 0 | 1 | 23.97 |
| 01/29/10 | 1 | 23.97 | 1 | 23.97 | 488899.8 | 1 | 23.98 | 1 | 23.97 | 2012 | 8.0 | 0 | 1 | 23.97 |
| 01/30/10 | 1 | 23.97 | 1 | 23.97 | 489358.1 | 1 | 23.97 | 1 | 23.97 | 2029 | 8.0 | 0 | 1 | 23.97 |
| 01/31/10 | 1 | 23.97 | 1 | 23.97 | 489030.6 | 1 | 23.97 | 1 | 23.98 | 2045 | 8.0 | 0 | 1 | 23.97 |
| 02/01/10 | 1 | 23.97 | 1 | 23.97 | 488413.6 | 1 | 23.98 | 1 | 23.98 | 2052 | 8.0 | 0 | 1 | 23.97 |
| 02/02/10 | 1 | 23.97 | 1 | 23.97 | 488189.1 | 1 | 23.98 | 1 | 23.98 | 2039 | 8.0 | 0 | 1 | 23.97 |
| 02/03/10 | 1 | 23.97 | 1 | 23.97 | 489032.7 | 1 | 23.98 | 1 | 23.97 | 2037 | 8.0 | 0 | 1 | 23.97 |
| 02/04/10 | 1 | 23.97 | 1 | 23.97 | 490234.7 | 1 | 23.98 | 1 | 23.97 | 2035 | 8.0 | 0 | 1 | 23.97 |
| 02/05/10 | 1 | 23.97 | 1 | 23.97 | 488225.1 | 1 | 23.97 | 1 | 23.98 | 2032 | 8.0 | 0 | 1 | 23.97 |
| 02/06/10 | 1 | 23.97 | 1 | 23.97 | 487008.7 | 1 | 23.98 | 1 | 23.98 | 2046 | 8.0 | 0 | 1 | 23.97 |
| 02/07/10 | 1 | 23.97 | 1 | 23.97 | 485030.1 | 1 | 23.97 | 1 | 23.98 | 2043 | 8.0 | 0 | 1 | 23.97 |
| 02/08/10 | 1 | 23.97 | 1 | 23.97 | 398459.6 | 4 | 13.98 | 4 | 11.98 | 1752 | 8.0 | 0 | 1 | 23.97 |
| 02/09/10 | 1 | 23.97 | 1 | 23.97 | 392710.2 | 3 | 12.00 | 4 | 11.98 | 1724 | 8.0 | 0 | 1 | 23.97 |
| 02/10/10 | 1 | 23.97 | 1 | 23.97 | 396286.3 | 3 | 12.00 | 4 | 11.97 | 1741 | 8.0 | 0 | 1 | 23.97 |

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02/11/10 | 1 | 23.97 | 1 | 23.97 | 396647.8 | 3 | 12.00 | 4 | 11.97 | 1732 | 8.0 | 0 | 1 | 23.97 |
| 02/12/10 | 1 | 23.97 | 1 | 23.97 | 397670.6 | 3 | 12.00 | 4 | 11.97 | 1725 | 8.0 | 0 | 1 | 23.97 |
| 02/13/10 | 1 | 23.97 | 1 | 23.97 | 399777 | 3 | 12.00 | 4 | 11.98 | 1738 | 8.0 | 0 | 1 | 23.97 |
| 02/14/10 | 1 | 23.97 | 1 | 23.97 | 400698.8 | 3 | 12.00 | 4 | 11.98 | 1739 | 8.0 | 0 | 1 | 23.97 |
| 02/15/10 | 1 | 23.97 | 1 | 23.97 | 400926.5 | 3 | 12.00 | 4 | 11.97 | 1721 | 8.0 | 0 | 1 | 23.97 |
| 02/16/10 | 1 | 23.97 | 2 | 23.93 | 402370.5 | 3 | 12.00 | 5 | 11.77 | 1716 | 8.0 | 0 | 2 | 23.88 |
| 02/17/10 | 1 | 23.97 | 1 | 23.97 | 402661 | 3 | 12.00 | 4 | 11.97 | 1706 | 8.0 | 0 | 1 | 23.97 |
| 02/18/10 | 1 | 23.97 | 1 | 23.97 | 403176 | 3 | 12.00 | 4 | 11.98 | 1698 | 8.0 | 0 | 1 | 23.97 |
| 02/19/10 | 1 | 23.97 | 1 | 23.97 | 403926.8 | 3 | 12.00 | 4 | 11.97 | 1699 | 8.0 | 0 | 1 | 23.97 |
| 02/20/10 | 1 | 23.97 | 1 | 23.97 | 404876.5 | 3 | 12.00 | 4 | 11.98 | 1710 | 8.0 | 0 | 1 | 23.97 |
| 02/21/10 | 1 | 23.97 | 1 | 23.97 | 405329.7 | 3 | 12.00 | 4 | 11.97 | 1714 | 8.0 | 0 | 1 | 23.97 |
| 02/22/10 | 3 | 23.52 | 3 | 23.50 | 395969.1 | 3 | 11.72 | 4 | 11.80 | 1680 | 8.0 | 0 | 1 | 8.12 |
| 02/23/10 | 1 | 23.97 | 1 | 23.97 | 403893.9 | 4 | 11.98 | 3 | 12.00 | 1717 | 8.0 | 0 | 1 | 10.30 |
| 02/24/10 | 1 | 23.97 | 1 | 23.97 | 441321 | 3 | 15.67 | 3 | 19.40 | 1851 | 8.0 | 0 | 1 | 23.97 |
| 02/25/10 | 1 | 23.97 | 1 | 23.97 | 510247.6 | 1 | 23.98 | 1 | 23.98 | 2059 | 8.0 | 0 | 1 | 23.97 |
| 02/26/10 | 1 | 23.97 | 1 | 23.97 | 520050.1 | 1 | 23.98 | 1 | 23.98 | 2099 | 8.0 | 0 | 1 | 23.97 |
| 02/27/10 | 1 | 23.97 | 1 | 23.97 | 502881 | 2 | 23.62 | 1 | 20.52 | 2039 | 8.0 | 0 | 1 | 23.97 |
| 02/28/10 | 1 | 23.97 | 1 | 23.97 | 413964.2 | 4 | 11.98 | 3 | 12.00 | 1792 | 8.0 | 0 | 1 | 23.97 |
| 03/01/10 | 1 | 23.97 | 1 | 23.97 | 493039.3 | 3 | 16.82 | 3 | 17.87 | 1994 | 8.0 | 0 | 1 | 23.97 |
| 03/02/10 | 1 | 23.97 | 1 | 23.97 | 520125.3 | 1 | 23.98 | 1 | 23.98 | 2066 | 8.0 | 0 | 1 | 23.97 |
| 03/03/10 | 1 | 23.97 | 1 | 23.97 | 518944.9 | 1 | 23.97 | 1 | 23.97 | 2070 | 8.0 | 0 | 1 | 23.97 |
| 03/04/10 | 1 | 23.97 | 1 | 23.97 | 517868.5 | 1 | 23.98 | 1 | 23.97 | 2072 | 8.0 | 0 | 1 | 23.97 |
| 03/05/10 | 1 | 23.97 | 1 | 23.97 | 518726.5 | 1 | 23.98 | 1 | 23.98 | 2078 | 8.0 | 0 | 1 | 23.97 |
| 03/06/10 | 1 | 23.97 | 1 | 23.97 | 519293 | 1 | 23.97 | 1 | 23.97 | 2080 | 8.0 | 0 | 1 | 23.97 |
| 03/07/10 | 1 | 23.97 | 1 | 23.97 | 519188 | 1 | 23.98 | 1 | 23.97 | 2075 | 8.0 | 0 | 1 | 23.97 |
| 03/08/10 | 1 | 23.97 | 1 | 23.97 | 519265.2 | 1 | 23.97 | 1 | 23.97 | 2054 | 8.0 | 0 | 1 | 23.97 |
| 03/09/10 | 1 | 23.97 | 1 | 23.97 | 513035.8 | 1 | 23.97 | 1 | 23.97 | 2037 | 8.0 | 0 | 1 | 23.97 |
| 03/10/10 | 2 | 16.72 | 2 | 16.70 | 341577.9 | 2 | 16.63 | 2 | 16.38 | 1400 | 8.0 | 0 | 2 | 16.58 |
| 03/11/10 | 1 | 23.97 | 1 | 23.97 | 467330.6 | 4 | 12.07 | 3 | 12.40 | 1933 | 8.0 | 0 | 1 | 23.97 |
| 03/12/10 | 11 | 17.88 | 3 | 4.73 | 367480.3 | 2 | 14.08 | 2 | 12.35 | 1500 | 8.0 | 0 | 2 | 17.35 |
| 03/13/10 | 3 | 22.12 | 3 | 10.98 | 472603.1 | 2 | 22.00 | 2 | 21.75 | 1889 | 8.0 | 0 | 2 | 21.90 |
| 03/14/10 | 2 | 23.04 | 2 | 17.48 | 493734.1 | 1 | 22.99 | 2 | 22.44 | 1958 | 8.0 | 0 | 1 | 22.93 |
| 03/15/10 | 2 | 23.04 | 2 | 17.48 | 493734.1 | 1 | 22.99 | 2 | 22.44 | 1958 | 8.0 | 0 | 1 | 22.93 |
| 03/16/10 | 2 | 23.04 | 2 | 17.48 | 493734.1 | 1 | 22.99 | 2 | 22.44 | 1958 | 8.0 | 0 | 1 | 22.93 |
| 03/17/10 | 2 | 23.04 | 2 | 17.48 | 493734.1 | 1 | 22.99 | 2 | 22.44 | 1958 | 8.0 | 0 | 1 | 22.93 |
| 03/18/10 | 1 | 23.97 | 1 | 23.97 | 514865.1 | 1 | 23.98 | 2 | 23.13 | 2027 | 8.0 | 0 | 1 | 23.97 |
| 03/19/10 | 1 | 23.97 | 1 | 23.97 | 516564.6 | 1 | 23.98 | 2 | 21.30 | 2032 | 8.0 | 0 | 1 | 23.97 |
| 03/20/10 | 1 | 23.97 | 1 | 23.97 | 511191 | 1 | 23.98 | 1 | 23.98 | 2028 | 8.0 | 0 | 1 | 23.97 |
| 03/21/10 | 1 | 23.97 | 1 | 23.97 | 508820 | 1 | 23.97 | 1 | 23.97 | 2021 | 8.0 | 0 | 1 | 23.97 |
| 03/22/10 | 1 | 23.97 | 1 | 23.97 | 507218.3 | 1 | 23.97 | 1 | 23.97 | 1997 | 8.0 | 0 | 1 | 23.97 |
| 03/23/10 | 1 | 23.97 | 1 | 23.97 | 508605.8 | 1 | 23.97 | 1 | 23.97 | 2016 | 8.0 | 0 | 1 | 23.97 |
| 03/24/10 | 1 | 23.97 | 1 | 23.97 | 507086.5 | 1 | 23.98 | 1 | 23.98 | 2021 | 8.0 | 0 | 1 | 23.97 |
| 03/25/10 | 1 | 23.97 | 1 | 23.97 | 506138.9 | 1 | 23.98 | 1 | 23.98 | 2019 | 8.0 | 0 | 1 | 23.97 |
| 03/26/10 | 1 | 23.97 | 1 | 23.97 | 506481.9 | 1 | 23.98 | 1 | 23.98 | 2046 | 8.0 | 0 | 1 | 23.97 |
| 03/27/10 | 1 | 23.97 | 1 | 23.97 | 506565.3 | 1 | 23.97 | 1 | 23.97 | 2068 | 8.0 | 0 | 1 | 23.97 |
| 03/28/10 | 1 | 23.97 | 1 | 23.97 | 504297.3 | 1 | 23.97 | 1 | 23.97 | 2054 | 8.0 | 0 | 1 | 23.97 |
| 03/29/10 | 1 | 23.97 | 1 | 23.97 | 506775.4 | 1 | 23.97 | 1 | 23.97 | 2012 | 8.0 | 0 | 1 | 23.97 |

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03/30/10 | 1 | 23.97 | 1 | 23.97 | 509348.4 | 1 | 23.98 | 1 | 23.98 | 2056 | 8.0 | 0 | 1 | 23.97 |
| 03/31/10 | 1 | 23.97 | 1 | 23.97 | 509268 | 1 | 23.98 | 1 | 23.98 | 2026 | 8.0 | 0 | 1 | 23.97 |
| 04/01/10 | 1 | 23.97 | 1 | 23.97 | 508286.4 | 1 | 23.98 | 1 | 23.98 | 2023 | 8.0 | 0 | 1 | 23.97 |
| 04/02/10 | 1 | 23.97 | 1 | 23.97 | 507398.6 | 1 | 23.97 | 1 | 23.97 | 2025 | 8.0 | 0 | 1 | 23.97 |
| 04/03/10 | 1 | 23.97 | 1 | 23.97 | 506795 | 1 | 23.97 | 1 | 23.97 | 2015 | 8.0 | 0 | 1 | 23.97 |
| 04/04/10 | 1 | 23.97 | 1 | 23.97 | 505581.7 | 1 | 23.97 | 1 | 23.97 | 2012 | 8.0 | 0 | 1 | 23.97 |
| 04/05/10 | 11 | 21.22 | 2 | 20.93 | 441177.8 | 2 | 20.83 | 2 | 20.67 | 1736 | 8.0 | 0 | 2 | 19.95 |
| 04/06/10 | 1 | 23.97 | 1 | 23.97 | 504056.3 | 1 | 23.98 | 1 | 23.97 | 1953 | 8.0 | 0 | 1 | 23.97 |
| 04/07/10 | 1 | 23.97 | 1 | 23.97 | 501837.6 | 1 | 23.97 | 1 | 23.98 | 1953 | 8.0 | 0 | 1 | 23.97 |
| 04/08/10 | 1 | 23.97 | 1 | 23.97 | 500583.1 | 1 | 23.97 | 1 | 23.98 | 1955 | 8.0 | 0 | 1 | 23.97 |
| 04/09/10 | 1 | 23.97 | 1 | 23.97 | 503022.1 | 1 | 23.97 | 1 | 23.98 | 1992 | 8.0 | 0 | 1 | 23.97 |
| 04/10/10 | 1 | 23.97 | 1 | 23.97 | 445456.4 | 3 | 16.00 | 3 | 15.98 | 1828 | 8.0 | 0 | 1 | 23.97 |
| 04/11/10 | 1 | 23.97 | 1 | 23.97 | 502597.8 | 1 | 23.97 | 1 | 23.97 | 1988 | 8.0 | 0 | 1 | 23.97 |
| 04/12/10 | 1 | 23.97 | 1 | 23.97 | 494714.1 | 1 | 23.97 | 1 | 23.97 | 1961 | 8.0 | 0 | 1 | 23.97 |
| 04/13/10 | 1 | 23.97 | 1 | 23.97 | 492112.3 | 1 | 23.98 | 1 | 23.98 | 1993 | 8.0 | 0 | 1 | 23.97 |
| 04/14/10 | 1 | 23.97 | 1 | 23.97 | 491888.8 | 1 | 23.98 | 1 | 23.98 | 1989 | 8.0 | 0 | 1 | 23.97 |
| 04/15/10 | 1 | 23.97 | 1 | 23.97 | 491792 | 1 | 23.97 | 1 | 23.97 | 1968 | 8.0 | 0 | 1 | 23.97 |
| 04/16/10 | 2 | 23.48 | 2 | 23.48 | 478173.4 | 2 | 23.30 | 2 | 23.47 | 1892 | 7.0 | 0 | 3 | 23.38 |
| 04/17/10 | 1 | 23.97 | 1 | 23.97 | 485463.7 | 1 | 23.97 | 1 | 23.97 | 1957 | 7.0 | 0 | 1 | 23.97 |
| 04/18/10 | 1 | 23.97 | 1 | 23.97 | 488532.1 | 1 | 23.97 | 1 | 23.98 | 1984 | 7.0 | 0 | 1 | 23.97 |
| 04/19/10 | 1 | 23.97 | 1 | 23.97 | 489869 | 1 | 23.98 | 1 | 23.98 | 1969 | 7.0 | 0 | 1 | 23.97 |
| 04/20/10 | 1 | 23.97 | 1 | 23.97 | 487050.9 | 1 | 23.98 | 1 | 23.97 | 1928 | 7.0 | 0 | 1 | 23.97 |
| 04/21/10 | 1 | 23.97 | 1 | 23.97 | 486365 | 1 | 23.97 | 1 | 23.97 | 1921 | 7.0 | 0 | 1 | 23.97 |
| 04/22/10 | 1 | 23.97 | 1 | 23.97 | 486753.3 | 1 | 23.97 | 1 | 23.97 | 1918 | 7.0 | 0 | 1 | 23.97 |
| 04/23/10 | 1 | 23.97 | 1 | 23.97 | 458362.3 | 3 | 14.57 | 4 | 14.72 | 1833 | 7.0 | 0 | 1 | 23.97 |
| 04/24/10 | 1 | 23.97 | 1 | 23.97 | 451368.7 | 3 | 12.00 | 4 | 11.98 | 1810 | 7.0 | 0 | 1 | 23.97 |
| 04/25/10 | 1 | 23.97 | 1 | 23.97 | 453457.5 | 3 | 12.00 | 4 | 12.00 | 1814 | 7.0 | 0 | 1 | 23.97 |
| 04/26/10 | 1 | 23.97 | 1 | 23.97 | 469965.3 | 1 | 21.42 | 2 | 19.97 | 1839 | 7.0 | 0 | 1 | 23.97 |
| 04/27/10 | 1 | 23.97 | 1 | 23.97 | 475517 | 1 | 23.97 | 1 | 23.97 | 1858 | 7.0 | 0 | 1 | 23.97 |
| 04/28/10 | 1 | 23.97 | 1 | 23.97 | 475936.2 | 1 | 23.98 | 1 | 23.98 | 1881 | 7.0 | 0 | 1 | 23.97 |
| 04/29/10 | 1 | 23.97 | 1 | 23.97 | 475535.5 | 1 | 23.98 | 1 | 23.98 | 1871 | 7.0 | 0 | 1 | 23.97 |
| 04/30/10 | 1 | 23.97 | 1 | 23.97 | 474431.4 | 2 | 20.88 | 1 | 23.98 | 1855 | 7.0 | 0 | 1 | 23.97 |
| 05/01/10 | 1 | 23.97 | 1 | 23.97 | 474144 | 1 | 23.97 | 1 | 23.97 | 1857 | 7.0 | 0 | 1 | 23.97 |
| 05/02/10 | 1 | 23.97 | 1 | 23.97 | 473091.3 | 1 | 23.97 | 1 | 23.97 | 1849 | 7.0 | 0 | 1 | 23.97 |
| 05/03/10 | 1 | 23.97 | 1 | 23.97 | 473017.2 | 1 | 23.97 | 1 | 23.97 | 1841 | 7.0 | 0 | 1 | 23.97 |
| 05/04/10 | 1 | 23.97 | 1 | 23.97 | 474539.5 | 1 | 23.98 | 1 | 23.98 | 1846 | 7.0 | 0 | 1 | 23.97 |
| 05/05/10 | 1 | 23.97 | 1 | 23.97 | 474838.2 | 1 | 23.98 | 1 | 23.98 | 1850 | 7.0 | 0 | 1 | 23.97 |
| 05/06/10 | 1 | 23.97 | 1 | 23.97 | 474666.2 | 1 | 23.97 | 1 | 23.98 | 1849 | 7.0 | 0 | 1 | 23.97 |
| 05/07/10 | 1 | 23.97 | 1 | 23.97 | 474650.8 | 1 | 23.97 | 1 | 23.97 | 1861 | 7.0 | 0 | 1 | 23.97 |
| 05/08/10 | 1 | 23.97 | 1 | 23.97 | 474953.6 | 2 | 21.52 | 1 | 23.97 | 1873 | 7.0 | 0 | 1 | 23.97 |
| 05/09/10 | 1 | 23.97 | 1 | 23.97 | 474874.3 | 3 | 15.53 | 3 | 17.45 | 1876 | 7.0 | 0 | 1 | 23.97 |
| 05/10/10 | 1 | 23.97 | 1 | 23.97 | 474255.3 | 3 | 12.48 | 4 | 13.17 | 1863 | 7.0 | 0 | 1 | 23.97 |
| 05/11/10 | 2 | 20.12 | 2 | 20.12 | 396106.1 | 2 | 15.00 | 4 | 9.67 | 1579 | 7.0 | 0 | 2 | 19.78 |
| 05/12/10 | 2 | 19.52 | 2 | 19.52 | 382291.7 | 4 | 14.80 | 3 | 8.28 | 1509 | 7.0 | 0 | 2 | 19.47 |
| 05/13/10 | 2 | 17.33 | 2 | 17.25 | 334670.7 | 4 | 10.08 | 2 | 8.00 | 1326 | 7.0 | 0 | 2 | 17.17 |
| 05/14/10 | 1 | 23.97 | 1 | 23.97 | 462334 | 4 | 12.00 | 3 | 12.02 | 1801 | 7.0 | 0 | 1 | 23.97 |
| 05/15/10 | 1 | 23.97 | 1 | 23.97 | 461843.8 | 4 | 11.98 | 3 | 12.00 | 1806 | 7.0 | 0 | 1 | 23.97 |

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 05/16/10 | 1 | 23.97 | 1 | 23.97 | 460881.7 | 4 | 11.98 | 3 | 12.02 | 1821 | 7.0 | 0 | 1 | 23.97 |
| 05/17/10 | 1 | 23.97 | 1 | 23.97 | 460961 | 4 | 12.00 | 3 | 12.00 | 1809 | 7.0 | 0 | 1 | 23.97 |
| 05/18/10 | 1 | 23.97 | 1 | 23.97 | 460778.7 | 4 | 11.98 | 3 | 12.00 | 1816 | 7.0 | 0 | 1 | 23.97 |
| 05/19/10 | 1 | 23.97 | 1 | 23.97 | 460758.1 | 4 | 11.97 | 3 | 12.00 | 1806 | 7.0 | 0 | 1 | 23.97 |
| 05/20/10 | 1 | 23.97 | 1 | 23.97 | 460620.1 | 4 | 11.97 | 3 | 12.00 | 1796 | 7.0 | 0 | 1 | 23.97 |
| 05/21/10 | 1 | 23.97 | 1 | 23.97 | 459784.8 | 4 | 11.98 | 3 | 12.00 | 1786 | 7.0 | 0 | 1 | 23.97 |
| 05/22/10 | 1 | 23.97 | 1 | 23.97 | 459019.5 | 4 | 11.97 | 3 | 12.00 | 1796 | 7.0 | 0 | 1 | 23.97 |
| 05/23/10 | 1 | 23.97 | 1 | 23.97 | 459954.7 | 4 | 11.98 | 3 | 12.00 | 1806 | 7.0 | 0 | 1 | 23.97 |
| 05/24/10 | 1 | 23.97 | 1 | 23.97 | 459959.9 | 4 | 11.98 | 3 | 12.00 | 1794 | 7.0 | 0 | 1 | 23.97 |
| 05/25/10 | 1 | 23.97 | 1 | 23.97 | 460138.1 | 4 | 11.97 | 3 | 12.00 | 1791 | 7.0 | 0 | 1 | 23.97 |
| 05/26/10 | 1 | 23.97 | 1 | 23.97 | 460377 | 4 | 11.98 | 3 | 12.00 | 1783 | 7.0 | 0 | 1 | 23.97 |
| 05/27/10 | 1 | 23.97 | 1 | 23.97 | 460706.6 | 4 | 11.98 | 3 | 12.00 | 1785 | 7.0 | 0 | 1 | 23.97 |
| 05/28/10 | 1 | 23.97 | 1 | 23.97 | 460399.7 | 4 | 11.97 | 3 | 12.00 | 1799 | 7.0 | 0 | 1 | 23.97 |
| 05/29/10 | 1 | 23.97 | 1 | 23.97 | 461138.2 | 4 | 11.98 | 3 | 12.00 | 1801 | 7.0 | 0 | 1 | 23.97 |
| 05/30/10 | 1 | 23.97 | 1 | 23.97 | 461294.8 | 4 | 11.97 | 3 | 12.00 | 1802 | 7.0 | 0 | 1 | 23.97 |
| 05/31/10 | 1 | 23.97 | 1 | 23.97 | 460643.8 | 4 | 11.97 | 3 | 12.00 | 1807 | 7.0 | 0 | 1 | 23.97 |
| 06/01/10 | 1 | 23.97 | 1 | 23.97 | 460191.6 | 4 | 11.97 | 3 | 12.00 | 1790 | 7.0 | 0 | 1 | 23.97 |
| 06/02/10 | 1 | 23.97 | 1 | 23.97 | 453108.3 | 4 | 11.98 | 3 | 12.00 | 1750 | 7.0 | 0 | 1 | 23.97 |
| 06/03/10 | 1 | 23.97 | 2 | 23.12 | 441481.7 | 4 | 11.10 | 4 | 12.62 | 1741 | 7.0 | 0 | 1 | 23.97 |
| 06/04/10 | 1 | 23.97 | 1 | 23.97 | 462583.3 | 4 | 11.98 | 3 | 12.00 | 1808 | 7.0 | 0 | 1 | 23.97 |
| 06/05/10 | 1 | 23.97 | 1 | 23.97 | 462424.7 | 4 | 11.98 | 3 | 12.00 | 1806 | 7.0 | 0 | 1 | 23.97 |
| 06/06/10 | 1 | 23.97 | 1 | 23.97 | 462193.9 | 4 | 11.98 | 3 | 12.02 | 1803 | 7.0 | 0 | 1 | 23.97 |
| 06/07/10 | 1 | 23.97 | 1 | 23.97 | 462211.5 | 4 | 11.98 | 3 | 12.00 | 1810 | 7.0 | 0 | 1 | 23.97 |
| 06/08/10 | 1 | 23.97 | 1 | 23.97 | 461311.3 | 4 | 11.98 | 3 | 12.02 | 1818 | 7.0 | 0 | 1 | 23.97 |
| 06/09/10 | 1 | 23.97 | 1 | 23.97 | 461843.8 | 4 | 11.98 | 3 | 12.00 | 1824 | 7.0 | 0 | 1 | 23.97 |
| 06/10/10 | 1 | 23.97 | 1 | 23.97 | 462656.4 | 4 | 11.97 | 3 | 12.00 | 1817 | 7.0 | 0 | 1 | 23.97 |
| 06/11/10 | 1 | 23.97 | 1 | 23.97 | 462241.3 | 4 | 11.97 | 3 | 12.00 | 1820 | 7.0 | 0 | 1 | 23.97 |
| 06/12/10 | 1 | 23.97 | 1 | 23.97 | 462076.5 | 4 | 11.97 | 3 | 12.00 | 1823 | 7.0 | 0 | 1 | 23.97 |
| 06/13/10 | 1 | 23.97 | 1 | 23.97 | 461915.8 | 4 | 11.98 | 3 | 12.00 | 1830 | 7.0 | 0 | 1 | 23.97 |
| 06/14/10 | 1 | 23.97 | 1 | 23.97 | 460836.4 | 4 | 11.98 | 3 | 12.00 | 1837 | 7.0 | 0 | 1 | 23.97 |
| 06/15/10 | 1 | 23.97 | 1 | 23.97 | 460231.8 | 4 | 11.98 | 3 | 12.00 | 1818 | 7.0 | 0 | 1 | 23.97 |
| 06/16/10 | 1 | 23.97 | 1 | 23.97 | 460325.5 | 4 | 12.32 | 4 | 15.12 | 1819 | 7.0 | 0 | 1 | 23.97 |
| 06/17/10 | 1 | 23.97 | 1 | 23.97 | 459925.9 | 4 | 12.65 | 4 | 23.82 | 1817 | 7.0 | 0 | 1 | 23.97 |
| 06/18/10 | 1 | 15.02 | 1 | 14.90 | 286258.6 | 2 | 7.42 | 2 | 14.95 | 1135 | 0.0 | 0 | 1 | 15.02 |
| 06/19/10 | 0 | 0.00 | 0 | 0.00 | 0 | 0 | 0.00 | 0 | 0.00 | -19 | 0.0 | 0 | 0 | 0.00 |
| 06/20/10 | 0 | 0.00 | 0 | 0.00 | 0 | 0 | 0.00 | 0 | 0.00 | -19 | 0.0 | 0 | 0 | 0.00 |
| 06/21/10 | | | | | | | | | | | | | | |
| 06/22/10 | | | | | | | | | | | | | | |
| 06/23/10 | | | | | | | | | | | | | | |
| 06/24/10 | | | | | | | | | | | | | | |
| 06/25/10 | | | | | | | | | | | | | | |
| 06/26/10 | | | | | | | | | | | | | | |
| 06/27/10 | | | | | | | | | | | | | | |
| 06/28/10 | 1 | 12.52 | 1 | 12.52 | 177276.4 | 1 | 12.42 | 5 | 0.00 | 790 | 7.0 | 0 | 0 | 0.00 |
| 06/29/10 | 1 | 23.97 | 1 | 23.97 | 331620.8 | 1 | 23.98 | 0 | 0.00 | 1498 | 7.0 | 0 | 0 | 0.00 |
| 06/30/10 | 1 | 23.97 | 1 | 23.97 | 331055.4 | 4 | 23.93 | 0 | 0.00 | 1512 | 7.0 | 0 | 1 | 14.28 |
| 07/01/10 | 1 | 23.97 | 1 | 23.97 | 335811.9 | 1 | 23.98 | 0 | 0.00 | 1511 | 7.0 | 0 | 1 | 23.97 |

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 07/02/10 | 1 | 23.97 | 1 | 23.97 | 343794.4 | 1 | 23.98 | 0 | 0.00 | 1539 | 7.0 | 0 | 1 | 23.97 |
| 07/03/10 | 1 | 23.97 | 1 | 23.97 | 345142.7 | 1 | 23.97 | 0 | 0.00 | 1565 | 7.0 | 0 | 1 | 23.97 |
| 07/04/10 | 1 | 23.97 | 1 | 23.97 | 343906.7 | 1 | 23.97 | 0 | 0.00 | 1524 | 7.0 | 0 | 1 | 23.97 |
| 07/05/10 | 1 | 23.97 | 1 | 23.97 | 343433.9 | 1 | 23.98 | 0 | 0.00 | 1517 | 7.0 | 0 | 1 | 23.97 |
| 07/06/10 | 1 | 23.97 | 1 | 23.97 | 343042.5 | 1 | 23.98 | 0 | 0.00 | 1508 | 7.0 | 0 | 1 | 23.97 |
| 07/07/10 | 7 | 16.55 | 5 | 16.45 | 236295.4 | 10 | 16.20 | 0 | 0.00 | 1030 | 7.0 | 0 | 1 | 16.20 |
| 07/08/10 | 1 | 18.13 | 1 | 18.13 | 264995.3 | 1 | 18.28 | 0 | 0.00 | 1142 | 7.0 | 0 | 1 | 18.05 |
| 07/09/10 | 2 | 23.62 | 13 | 21.75 | 319241.3 | 3 | 22.07 | 0 | 0.00 | 1451 | 7.0 | 0 | 1 | 6.15 |
| 07/10/10 | 2 | 23.97 | 2 | 21.17 | 310803.5 | 4 | 21.13 | 0 | 0.00 | 1447 | 7.0 | 0 | 1 | 10.95 |
| 07/11/10 | 1 | 23.97 | 1 | 23.97 | 349813.8 | 1 | 23.98 | 0 | 0.00 | 1553 | 7.0 | 0 | 1 | 23.97 |
| 07/12/10 | 1 | 23.97 | 1 | 23.97 | 349170 | 1 | 23.98 | 0 | 0.00 | 1546 | 7.0 | 0 | 1 | 23.97 |
| 07/13/10 | 1 | 23.97 | 1 | 23.97 | 349077.3 | 1 | 23.97 | 0 | 0.00 | 1553 | 7.0 | 0 | 1 | 23.97 |
| 07/14/10 | 1 | 23.97 | 1 | 23.97 | 349912.6 | 1 | 23.97 | 0 | 0.00 | 1559 | 7.0 | 0 | 1 | 23.97 |
| 07/15/10 | 1 | 23.97 | 1 | 23.97 | 350529.6 | 1 | 23.97 | 0 | 0.00 | 1555 | 7.0 | 0 | 1 | 23.97 |
| 07/16/10 | 1 | 23.97 | 1 | 23.97 | 350377.2 | 1 | 23.98 | 0 | 0.00 | 1546 | 7.0 | 0 | 1 | 23.97 |
| 07/17/10 | 1 | 23.97 | 1 | 23.97 | 352129.2 | 1 | 23.98 | 0 | 0.00 | 1547 | 7.0 | 0 | 1 | 23.97 |
| 07/18/10 | 1 | 23.97 | 1 | 23.97 | 352654.5 | 1 | 23.97 | 0 | 0.00 | 1542 | 7.0 | 0 | 1 | 23.97 |
| 07/19/10 | 1 | 23.97 | 1 | 23.97 | 352792.5 | 1 | 23.97 | 0 | 0.00 | 1547 | 7.0 | 0 | 1 | 23.97 |
| 07/20/10 | 1 | 23.97 | 1 | 23.97 | 352724.5 | 1 | 23.98 | 0 | 0.00 | 1559 | 7.0 | 0 | 1 | 23.97 |
| 07/21/10 | 1 | 23.97 | 1 | 23.97 | 352343.4 | 1 | 23.98 | 0 | 0.00 | 1541 | 7.0 | 0 | 1 | 23.97 |
| 07/22/10 | 1 | 23.97 | 1 | 23.97 | 352133.3 | 1 | 23.98 | 0 | 0.00 | 1548 | 7.0 | 0 | 1 | 23.97 |
| 07/23/10 | 1 | 23.97 | 1 | 23.97 | 351734.7 | 1 | 23.97 | 0 | 0.00 | 1527 | 7.0 | 0 | 1 | 23.97 |
| 07/24/10 | 1 | 23.97 | 1 | 23.97 | 351763.5 | 1 | 23.97 | 0 | 0.00 | 1526 | 7.0 | 0 | 1 | 23.97 |
| 07/25/10 | 1 | 23.97 | 1 | 23.97 | 351717.2 | 1 | 23.97 | 0 | 0.00 | 1552 | 7.0 | 0 | 1 | 23.97 |
| 07/26/10 | 1 | 23.97 | 1 | 23.97 | 351453.5 | 1 | 23.98 | 0 | 0.00 | 1557 | 7.0 | 0 | 1 | 23.97 |
| 07/27/10 | 2 | 15.95 | 2 | 15.93 | 234875 | 2 | 15.87 | 0 | 0.00 | 1041 | 7.0 | 0 | 2 | 8.10 |
| 07/28/10 | 1 | 23.97 | 1 | 23.97 | 355467.4 | 1 | 23.97 | 0 | 0.00 | 1551 | 7.0 | 0 | 1 | 23.97 |
| 07/29/10 | 1 | 23.97 | 1 | 23.97 | 355884.6 | 1 | 23.97 | 0 | 0.00 | 1557 | 7.0 | 0 | 1 | 23.97 |
| 07/30/10 | 1 | 23.97 | 1 | 23.97 | 360433 | 1 | 23.98 | 0 | 0.00 | 1565 | 7.0 | 5560 | 1 | 23.97 |
| 07/31/10 | 1 | 23.97 | 1 | 23.97 | 355186.2 | 1 | 23.98 | 0 | 0.00 | 1561 | 7.0 | 110 | 1 | 23.97 |
| 08/01/10 | 1 | 23.97 | 1 | 23.97 | 354813.4 | 1 | 23.98 | 0 | 0.00 | 1557 | 7.0 | 100 | 1 | 23.97 |
| 08/02/10 | 2 | 23.33 | 3 | 23.27 | 432759.6 | 3 | 23.23 | 2 | 14.58 | 1754 | 7.0 | 0 | 2 | 23.27 |
| 08/03/10 | 1 | 23.97 | 1 | 23.97 | 493978.7 | 1 | 23.98 | 1 | 23.97 | 1929 | 7.0 | 0 | 1 | 23.97 |
| 08/04/10 | 1 | 23.97 | 1 | 23.97 | 486521.5 | 1 | 23.97 | 1 | 23.98 | 1896 | 7.0 | 0 | 1 | 23.97 |
| 08/05/10 | 1 | 23.97 | 1 | 23.97 | 486761.5 | 1 | 23.97 | 1 | 23.98 | 1908 | 7.0 | 0 | 1 | 23.97 |
| 08/06/10 | 2 | 23.08 | 2 | 23.07 | 469340.1 | 2 | 23.07 | 2 | 22.87 | 1838 | 7.0 | 0 | 2 | 18.93 |
| 08/07/10 | 1 | 23.97 | 1 | 23.97 | 487161.2 | 1 | 23.97 | 1 | 23.98 | 1928 | 7.0 | 0 | 1 | 23.97 |
| 08/08/10 | 1 | 23.97 | 1 | 23.97 | 472202.5 | 1 | 20.02 | 2 | 23.85 | 1874 | 7.0 | 0 | 1 | 23.97 |
| 08/09/10 | 1 | 23.97 | 1 | 23.97 | 465623.8 | 2 | 17.83 | 1 | 19.98 | 1826 | 7.0 | 0 | 1 | 23.97 |
| 08/10/10 | 1 | 23.97 | 1 | 23.97 | 469231.9 | 4 | 13.67 | 1 | 23.98 | 1865 | 7.0 | 0 | 1 | 23.97 |
| 08/11/10 | 1 | 23.97 | 1 | 23.97 | 473408.6 | 1 | 23.98 | 1 | 23.97 | 1925 | 7.0 | 0 | 1 | 23.97 |
| 08/12/10 | 1 | 23.97 | 1 | 23.97 | 473483.8 | 1 | 23.98 | 1 | 23.97 | 1911 | 7.0 | 0 | 1 | 23.97 |
| 08/13/10 | 1 | 23.97 | 1 | 23.97 | 475399.6 | 1 | 23.97 | 1 | 23.97 | 1916 | 7.0 | 0 | 1 | 23.97 |
| 08/14/10 | 1 | 23.97 | 1 | 23.97 | 475582.9 | 1 | 23.97 | 1 | 23.98 | 1929 | 7.0 | 0 | 1 | 23.97 |
| 08/15/10 | 1 | 23.97 | 1 | 23.97 | 475319.3 | 1 | 23.98 | 1 | 23.98 | 1923 | 7.0 | 0 | 1 | 23.97 |
| 08/16/10 | 1 | 23.97 | 1 | 23.97 | 474383 | 4 | 12.80 | 1 | 23.97 | 1895 | 7.0 | 0 | 1 | 23.97 |
| 08/17/10 | 1 | 23.97 | 1 | 23.97 | 475454.2 | 4 | 12.88 | 1 | 23.97 | 1906 | 7.0 | 0 | 1 | 23.97 |

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08/18/10 | 1 | 23.97 | 1 | 23.97 | 475688 | 4 | 12.97 | 1 | 23.98 | 1916 | 7.0 | 0 | 1 | 23.97 |
| 08/19/10 | 1 | 23.97 | 1 | 23.97 | 464879.2 | 4 | 12.47 | 2 | 19.55 | 1814 | 7.0 | 0 | 1 | 23.97 |
| 08/20/10 | 1 | 23.97 | 1 | 23.97 | 468868.3 | 4 | 12.80 | 2 | 16.45 | 1842 | 7.0 | 0 | 1 | 23.97 |
| 08/21/10 | 1 | 23.97 | 1 | 23.97 | 475024.7 | 4 | 12.82 | 2 | 19.97 | 1896 | 7.0 | 0 | 1 | 23.97 |
| 08/22/10 | 1 | 23.97 | 1 | 23.97 | 474746.6 | 4 | 12.80 | 1 | 23.97 | 1906 | 7.0 | 0 | 1 | 23.97 |
| 08/23/10 | 1 | 23.97 | 1 | 23.97 | 475472.7 | 4 | 12.90 | 1 | 23.98 | 1903 | 7.0 | 0 | 1 | 23.97 |
| 08/24/10 | 1 | 23.97 | 1 | 23.97 | 475340.9 | 4 | 12.80 | 1 | 23.98 | 1908 | 7.0 | 0 | 1 | 23.97 |
| 08/25/10 | 1 | 23.97 | 1 | 23.97 | 473850.5 | 4 | 12.72 | 1 | 23.28 | 1901 | 7.0 | 0 | 2 | 23.95 |
| 08/26/10 | 2 | 17.40 | 2 | 17.38 | 342632.6 | 4 | 11.70 | 2 | 9.97 | 1376 | 7.0 | 0 | 2 | 16.73 |
| 08/27/10 | 1 | 23.97 | 1 | 23.97 | 475685.9 | 4 | 12.90 | 1 | 23.97 | 1906 | 7.0 | 0 | 1 | 23.97 |
| 08/28/10 | 1 | 23.97 | 1 | 23.97 | 474593.1 | 4 | 12.85 | 1 | 23.98 | 1903 | 7.0 | 0 | 1 | 23.97 |
| 08/29/10 | 1 | 23.97 | 1 | 23.97 | 473757.8 | 4 | 12.77 | 1 | 23.98 | 1902 | 7.0 | 0 | 1 | 23.97 |
| 08/30/10 | 1 | 23.97 | 1 | 23.97 | 473526 | 4 | 12.73 | 1 | 22.60 | 1895 | 7.0 | 0 | 1 | 23.97 |
| 08/31/10 | 2 | 17.60 | 2 | 17.58 | 348748.7 | 3 | 13.72 | 2 | 13.62 | 1400 | 7.0 | 0 | 2 | 17.50 |
| 09/01/10 | 2 | 18.03 | 2 | 18.02 | 358077.4 | 4 | 14.28 | 2 | 17.77 | 1428 | 7.0 | 0 | 2 | 17.97 |
| 09/02/10 | 1 | 23.97 | 1 | 23.97 | 474708.4 | 4 | 13.07 | 1 | 23.98 | 1894 | 7.0 | 0 | 1 | 23.97 |
| 09/03/10 | 1 | 23.97 | 1 | 23.97 | 474056.5 | 4 | 12.93 | 1 | 23.98 | 1905 | 7.0 | 0 | 1 | 23.97 |
| 09/04/10 | 1 | 23.97 | 1 | 23.97 | 442341.7 | 4 | 12.48 | 2 | 18.82 | 1790 | 7.0 | 0 | 1 | 23.97 |
| 09/05/10 | 1 | 23.97 | 1 | 23.97 | 385796.8 | 4 | 11.98 | 3 | 12.00 | 1598 | 7.0 | 0 | 1 | 23.97 |
| 09/06/10 | 1 | 23.97 | 1 | 23.97 | 374791.3 | 5 | 9.55 | 8 | 12.00 | 1566 | 7.0 | 0 | 1 | 23.97 |
| 09/07/10 | 1 | 23.97 | 1 | 23.97 | 417826.7 | 12 | 11.82 | 3 | 8.88 | 1719 | 7.0 | 0 | 1 | 23.97 |
| 09/08/10 | 2 | 20.18 | 2 | 20.18 | 386193.3 | 3 | 9.80 | 3 | 15.08 | 1574 | 7.0 | 0 | 2 | 20.12 |
| 09/09/10 | 1 | 23.97 | 1 | 23.97 | 458139.9 | 4 | 12.18 | 3 | 12.00 | 1877 | 7.0 | 0 | 1 | 23.97 |
| 09/10/10 | 1 | 23.97 | 1 | 23.97 | 458919.6 | 4 | 12.17 | 3 | 12.00 | 1882 | 7.0 | 0 | 5 | 23.73 |
| 09/11/10 | 1 | 23.97 | 1 | 23.97 | 458768.2 | 4 | 12.17 | 3 | 12.00 | 1883 | 7.0 | 0 | 1 | 23.97 |
| 09/12/10 | 1 | 23.97 | 1 | 23.97 | 457356 | 4 | 12.15 | 3 | 12.00 | 1890 | 7.0 | 0 | 1 | 23.97 |
| 09/13/10 | 2 | 23.42 | 2 | 23.40 | 446825.3 | 5 | 11.60 | 2 | 15.98 | 1830 | 7.0 | 0 | 2 | 23.32 |
| 09/14/10 | 1 | 23.97 | 1 | 23.97 | 457313.8 | 4 | 12.13 | 3 | 12.00 | 1871 | 7.0 | 0 | 1 | 23.97 |
| 09/15/10 | 1 | 23.97 | 1 | 23.97 | 456683.4 | 4 | 12.13 | 3 | 12.00 | 1874 | 7.0 | 0 | 1 | 23.97 |
| 09/16/10 | 1 | 23.97 | 1 | 23.97 | 456599 | 4 | 12.10 | 3 | 12.00 | 1880 | 7.0 | 0 | 1 | 23.97 |
| 09/17/10 | 1 | 23.97 | 1 | 23.97 | 452906.4 | 4 | 11.98 | 3 | 12.00 | 1873 | 7.0 | 0 | 2 | 23.97 |
| 09/18/10 | 1 | 23.97 | 1 | 23.97 | 452660.3 | 4 | 11.98 | 3 | 12.00 | 1886 | 7.0 | 0 | 1 | 23.97 |
| 09/19/10 | 1 | 23.97 | 1 | 23.97 | 452332.7 | 4 | 12.00 | 3 | 12.00 | 1876 | 7.0 | 0 | 1 | 23.97 |
| 09/20/10 | 1 | 23.97 | 1 | 23.97 | 451665.3 | 4 | 11.98 | 3 | 12.00 | 1868 | 7.0 | 0 | 1 | 23.97 |
| 09/21/10 | 1 | 23.97 | 1 | 23.97 | 450894.8 | 4 | 12.00 | 3 | 12.00 | 1865 | 7.0 | 0 | 1 | 23.97 |
| 09/22/10 | 1 | 23.97 | 1 | 23.97 | 443742.5 | 4 | 12.00 | 3 | 12.00 | 1852 | 7.0 | 0 | 1 | 23.97 |
| 09/23/10 | 1 | 23.97 | 1 | 23.97 | 443742.5 | 4 | 12.00 | 3 | 12.00 | 1852 | 7.0 | 0 | 1 | 23.97 |
| 09/24/10 | 1 | 23.97 | 1 | 23.97 | 442049.2 | 4 | 11.98 | 3 | 12.00 | 1837 | 7.0 | 0 | 1 | 23.97 |
| 09/25/10 | 1 | 23.97 | 1 | 23.97 | 442168.7 | 4 | 11.98 | 3 | 12.00 | 1846 | 7.0 | 0 | 1 | 23.97 |
| 09/26/10 | 1 | 23.97 | 1 | 23.97 | 442317 | 4 | 11.97 | 3 | 12.00 | 1856 | 7.0 | 0 | 1 | 23.97 |
| 09/27/10 | 1 | 23.97 | 1 | 23.97 | 441988.4 | 4 | 11.98 | 3 | 12.00 | 1841 | 7.0 | 0 | 1 | 23.97 |
| 09/28/10 | 1 | 23.97 | 1 | 23.97 | 441908.1 | 4 | 11.97 | 3 | 12.00 | 1849 | 7.0 | 0 | 1 | 23.97 |
| 09/29/10 | 1 | 23.97 | 1 | 23.97 | 441053.2 | 4 | 11.98 | 3 | 12.00 | 1870 | 7.0 | 0 | 1 | 11.40 |
| 09/30/10 | 1 | 23.97 | 1 | 23.97 | 438645.1 | 4 | 11.98 | 3 | 12.00 | 1852 | 7.0 | 0 | 0 | 0.00 |
| 10/01/10 | 1 | 23.97 | 1 | 23.97 | 447632.8 | 4 | 12.00 | 3 | 12.00 | 1917 | 7.0 | 0 | 0 | 0.00 |
| 10/02/10 | 1 | 23.97 | 1 | 23.97 | 449972 | 4 | 11.98 | 3 | 12.00 | 1887 | 7.0 | 0 | 0 | 0.00 |
| 10/03/10 | 1 | 23.97 | 1 | 23.97 | 449383.8 | 4 | 12.00 | 3 | 12.00 | 1881 | 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/04/10 | 1 | 23.97 | 1 | 23.97 | 454144.5 | 4 | 12.02 | 3 | 12.00 | 1892 | 7.0 | 0 | 0 | 0.00 |
| 10/05/10 | 1 | 23.97 | 1 | 23.97 | 458526.1 | 4 | 12.10 | 3 | 12.00 | 1909 | 7.0 | 0 | 0 | 0.00 |
| 10/06/10 | 1 | 23.97 | 1 | 23.97 | 461146.4 | 4 | 12.17 | 2 | 15.98 | 1926 | 7.0 | 0 | 0 | 0.00 |
| 10/07/10 | 1 | 23.97 | 1 | 23.97 | 466292.3 | 4 | 12.33 | 3 | 12.00 | 1919 | 7.0 | 0 | 0 | 0.00 |
| 10/08/10 | 1 | 23.97 | 1 | 23.97 | 468875.6 | 4 | 12.35 | 2 | 15.98 | 1932 | 7.0 | 0 | 0 | 0.00 |
| 10/09/10 | 1 | 23.97 | 1 | 23.97 | 467741.5 | 4 | 12.30 | 3 | 13.85 | 1926 | 7.0 | 0 | 0 | 0.00 |
| 10/10/10 | 1 | 23.97 | 1 | 23.97 | 466941.2 | 4 | 12.32 | 1 | 22.07 | 1935 | 7.0 | 0 | 0 | 0.00 |
| 10/11/10 | 1 | 23.97 | 1 | 23.97 | 466697.1 | 4 | 12.30 | 2 | 17.92 | 1925 | 7.0 | 0 | 0 | 0.00 |
| 10/12/10 | 1 | 23.97 | 1 | 23.97 | 466669.3 | 4 | 12.35 | 2 | 19.98 | 1929 | 7.0 | 0 | 0 | 0.00 |
| 10/13/10 | 1 | 23.97 | 1 | 23.97 | 466884.6 | 4 | 12.30 | 3 | 13.98 | 1935 | 7.0 | 0 | 0 | 0.00 |
| 10/14/10 | 1 | 23.97 | 1 | 23.97 | 467338.8 | 4 | 12.32 | 2 | 15.98 | 1945 | 7.0 | 0 | 0 | 0.00 |
| 10/15/10 | 1 | 23.97 | 1 | 23.97 | 467235.8 | 4 | 12.30 | 3 | 12.00 | 1935 | 7.0 | 0 | 0 | 0.00 |
| 10/16/10 | 1 | 23.97 | 1 | 23.97 | 466310.8 | 4 | 12.28 | 3 | 12.00 | 1932 | 7.0 | 0 | 0 | 0.00 |
| 10/17/10 | 1 | 23.97 | 1 | 23.97 | 458045.1 | 4 | 12.28 | 2 | 15.98 | 1898 | 7.0 | 0 | 0 | 0.00 |
| 10/18/10 | 1 | 23.97 | 1 | 23.97 | 443710.6 | 4 | 12.17 | 2 | 15.98 | 1844 | 7.0 | 0 | 0 | 0.00 |
| 10/19/10 | 1 | 23.97 | 1 | 23.97 | 461785 | 4 | 12.18 | 3 | 12.00 | 1913 | 7.0 | 0 | 0 | 0.00 |
| 10/20/10 | 1 | 23.97 | 1 | 23.97 | 461918.9 | 4 | 12.18 | 2 | 15.98 | 1920 | 7.0 | 0 | 0 | 0.00 |
| 10/21/10 | 1 | 23.97 | 1 | 23.97 | 461662.5 | 4 | 12.18 | 3 | 12.00 | 1903 | 7.0 | 0 | 0 | 0.00 |
| 10/22/10 | 1 | 23.97 | 1 | 23.97 | 459909.4 | 4 | 12.12 | 3 | 12.00 | 1905 | 7.0 | 0 | 0 | 0.00 |
| 10/23/10 | 1 | 23.97 | 1 | 23.97 | 460690.2 | 4 | 12.17 | 3 | 12.00 | 1915 | 7.0 | 0 | 0 | 0.00 |
| 10/24/10 | 1 | 23.97 | 1 | 23.97 | 460815.8 | 4 | 12.17 | 3 | 12.00 | 1897 | 7.0 | 0 | 0 | 0.00 |
| 10/25/10 | 1 | 23.97 | 1 | 23.97 | 451334.7 | 4 | 12.03 | 3 | 12.00 | 1873 | 7.0 | 0 | 0 | 0.00 |
| 10/26/10 | 1 | 23.97 | 1 | 23.97 | 439706 | 4 | 11.97 | 3 | 12.00 | 1851 | 7.0 | 0 | 0 | 0.00 |
| 10/27/10 | 1 | 23.97 | 1 | 23.97 | 440168.4 | 4 | 11.97 | 3 | 12.00 | 1850 | 7.0 | 0 | 0 | 0.00 |
| 10/28/10 | 1 | 23.97 | 1 | 23.97 | 440861.6 | 4 | 12.00 | 3 | 12.00 | 1854 | 7.0 | 0 | 0 | 0.00 |
| 10/29/10 | 1 | 23.97 | 1 | 23.97 | 440986.3 | 4 | 11.98 | 3 | 12.00 | 1885 | 7.0 | 0 | 0 | 0.00 |
| 10/30/10 | 1 | 23.97 | 1 | 23.97 | 438077.5 | 4 | 11.97 | 3 | 12.00 | 1855 | 7.0 | 0 | 0 | 0.00 |
| 10/31/10 | 1 | 23.97 | 1 | 23.97 | 438400.9 | 4 | 11.97 | 3 | 12.00 | 1856 | 7.0 | 0 | 0 | 0.00 |
| 11/01/10 | 1 | 23.97 | 1 | 23.97 | 440625.8 | 4 | 11.98 | 3 | 12.00 | 1873 | 7.0 | 0 | 0 | 0.00 |
| 11/02/10 | 1 | 23.97 | 1 | 23.97 | 440841 | 4 | 11.98 | 3 | 12.00 | 1877 | 7.0 | 0 | 0 | 0.00 |
| 11/03/10 | 1 | 23.97 | 1 | 23.97 | 441717.6 | 4 | 11.98 | 3 | 12.00 | 1882 | 7.0 | 0 | 1 | 14.02 |
| 11/04/10 | 1 | 23.97 | 1 | 23.97 | 442632.2 | 4 | 11.98 | 3 | 12.00 | 1887 | 7.0 | 0 | 1 | 23.97 |
| 11/05/10 | 1 | 23.97 | 1 | 23.97 | 443878.5 | 4 | 11.98 | 3 | 12.00 | 1900 | 7.0 | 0 | 1 | 23.97 |
| 11/06/10 | 1 | 23.97 | 1 | 23.97 | 443588 | 4 | 11.98 | 3 | 12.00 | 1923 | 7.0 | 0 | 1 | 23.97 |
| 11/07/10 | 1 | 23.97 | 1 | 23.97 | 443951.6 | 4 | 11.98 | 3 | 12.00 | 1924 | 7.0 | 0 | 1 | 23.97 |
| 11/08/10 | 1 | 22.97 | 1 | 22.97 | 427678.7 | 4 | 10.98 | 3 | 12.00 | 1821 | 7.0 | 0 | 1 | 22.97 |
| 11/09/10 | 1 | 22.97 | 1 | 22.97 | 427695.1 | 4 | 10.97 | 3 | 12.00 | 1810 | 7.0 | 0 | 1 | 22.97 |
| 11/10/10 | 2 | 21.33 | 2 | 21.33 | 397756.1 | 5 | 12.58 | 3 | 8.73 | 1686 | 7.0 | 0 | 2 | 20.80 |
| 11/11/10 | 1 | 22.97 | 1 | 22.97 | 428092.7 | 3 | 12.00 | 4 | 10.98 | 1821 | 7.0 | 0 | 1 | 22.97 |
| 11/12/10 | 1 | 22.97 | 1 | 22.97 | 427959.8 | 3 | 12.00 | 4 | 10.97 | 1820 | 7.0 | 0 | 1 | 22.97 |
| 11/13/10 | 1 | 22.97 | 1 | 22.97 | 427993.8 | 3 | 12.00 | 4 | 10.98 | 1823 | 7.0 | 0 | 1 | 22.97 |
| 11/14/10 | 2 | 22.97 | 1 | 21.03 | 392145.7 | 5 | 10.88 | 3 | 10.25 | 1740 | 2.0 | 0 | 1 | 22.97 |
| 11/15/10 | 1 | 23.97 | 1 | 16.15 | 302590.3 | 3 | 8.38 | 2 | 8.00 | 1544 | 7.0 | 0 | 1 | 23.97 |
| 11/16/10 | 1 | 23.97 | 1 | 23.97 | 449185.1 | 4 | 11.97 | 3 | 12.00 | 1883 | 7.0 | 0 | 1 | 23.97 |
| 11/17/10 | 1 | 23.97 | 1 | 23.97 | 449279.8 | 4 | 11.98 | 3 | 12.00 | 1864 | 7.0 | 0 | 3 | 23.85 |
| 11/18/10 | 1 | 23.97 | 1 | 23.97 | 449080 | 4 | 11.97 | 3 | 12.00 | 1879 | 7.0 | 0 | 1 | 23.97 |
| 11/19/10 | 2 | 17.13 | 2 | 17.12 | 321751.4 | 4 | 9.12 | 2 | 8.00 | 1371 | 7.0 | 0 | 2 | 15.42 |

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/20/10 | 1 | 23.97 | 1 | 23.97 | 450083.2 | 4 | 11.98 | 3 | 12.00 | 1911 | 7.0 | 0 | 1 | 23.97 |
| 11/21/10 | 1 | 23.97 | 1 | 23.97 | 449139.7 | 4 | 11.97 | 3 | 12.00 | 1899 | 7.0 | 0 | 1 | 23.97 |
| 11/22/10 | 1 | 23.97 | 1 | 23.97 | 448664.9 | 4 | 11.98 | 3 | 12.00 | 1865 | 7.0 | 0 | 1 | 23.97 |
| 11/23/10 | 1 | 23.97 | 1 | 23.97 | 448191.1 | 4 | 11.97 | 3 | 12.00 | 1863 | 7.0 | 0 | 1 | 23.97 |
| 11/24/10 | 1 | 23.97 | 1 | 23.97 | 448653.6 | 4 | 11.98 | 3 | 12.00 | 1896 | 7.0 | 0 | 1 | 23.97 |
| 11/25/10 | 1 | 23.97 | 1 | 23.97 | 448955.3 | 4 | 11.98 | 3 | 12.00 | 1918 | 7.0 | 0 | 1 | 23.97 |
| 11/26/10 | 1 | 23.97 | 1 | 23.97 | 448613.4 | 4 | 11.98 | 3 | 12.00 | 1895 | 7.0 | 0 | 1 | 23.97 |
| 11/27/10 | 1 | 23.97 | 1 | 23.97 | 445453.3 | 4 | 11.97 | 3 | 12.00 | 1907 | 7.0 | 0 | 1 | 23.97 |
| 11/28/10 | 1 | 23.97 | 1 | 23.97 | 446953 | 4 | 12.00 | 3 | 12.00 | 1907 | 7.0 | 0 | 1 | 23.97 |
| 11/29/10 | 1 | 23.97 | 1 | 23.97 | 447688.5 | 4 | 11.98 | 3 | 12.00 | 1909 | 7.0 | 0 | 1 | 23.97 |
| 11/30/10 | 1 | 23.97 | 1 | 23.97 | 447386.7 | 4 | 11.98 | 3 | 12.00 | 1876 | 7.0 | 0 | 1 | 23.97 |
| 12/01/10 | 1 | 23.97 | 1 | 23.97 | 448308.5 | 4 | 11.98 | 3 | 12.00 | 1889 | 7.0 | 0 | 1 | 23.97 |
| 12/02/10 | 1 | 23.97 | 1 | 23.97 | 448477.4 | 4 | 11.98 | 3 | 12.00 | 1915 | 7.0 | 0 | 1 | 23.97 |
| 12/03/10 | 1 | 23.97 | 1 | 23.97 | 449896.8 | 4 | 11.98 | 3 | 12.00 | 1930 | 7.0 | 0 | 1 | 23.97 |
| 12/04/10 | 1 | 23.97 | 1 | 23.97 | 450345.8 | 4 | 11.98 | 3 | 12.00 | 1938 | 7.0 | 0 | 1 | 23.97 |
| 12/05/10 | 1 | 23.97 | 1 | 23.97 | 450250.1 | 4 | 11.98 | 3 | 12.00 | 1944 | 7.0 | 0 | 1 | 23.97 |
| 12/06/10 | 2 | 17.93 | 2 | 17.88 | 336498.9 | 4 | 9.92 | 2 | 8.00 | 1470 | 7.0 | 0 | 2 | 17.85 |
| 12/07/10 | 2 | 20.90 | 2 | 20.83 | 399209.4 | 5 | 11.33 | 2 | 13.75 | 1722 | 7.0 | 0 | 7 | 11.32 |
| 12/08/10 | 1 | 23.97 | 1 | 23.97 | 445178.3 | 6 | 12.03 | 4 | 11.35 | 1940 | 7.0 | 0 | 0 | 0.00 |
| 12/09/10 | 1 | 23.97 | 1 | 23.97 | 457893.7 | 3 | 12.03 | 4 | 11.98 | 1968 | 7.0 | 0 | 0 | 0.00 |
| 12/10/10 | 1 | 23.97 | 1 | 23.97 | 457649.6 | 3 | 12.00 | 4 | 12.02 | 1964 | 7.0 | 0 | 3 | 5.30 |
| 12/11/10 | 1 | 23.97 | 1 | 23.97 | 457240.7 | 3 | 12.00 | 4 | 12.00 | 1953 | 7.0 | 0 | 0 | 0.00 |
| 12/12/10 | 1 | 23.97 | 1 | 23.97 | 457605.3 | 3 | 12.02 | 4 | 12.00 | 1927 | 7.0 | 0 | 0 | 0.00 |
| 12/13/10 | 1 | 23.97 | 1 | 23.97 | 458099.7 | 3 | 12.00 | 4 | 12.00 | 1967 | 7.0 | 0 | 0 | 0.00 |
| 12/14/10 | 1 | 23.97 | 1 | 23.97 | 457813.3 | 3 | 12.00 | 4 | 12.00 | 2252 | 7.0 | 0 | 0 | 0.00 |
| 12/15/10 | 1 | 23.97 | 1 | 23.97 | 457264.4 | 3 | 12.00 | 4 | 12.00 | 2492 | 7.0 | 0 | 0 | 0.00 |
| 12/16/10 | 1 | 23.97 | 1 | 23.97 | 457089.3 | 3 | 12.00 | 4 | 12.02 | 2234 | 7.0 | 0 | 0 | 0.00 |
| 12/17/10 | 1 | 23.97 | 1 | 23.97 | 452274 | 3 | 12.00 | 5 | 11.78 | 2218 | 7.0 | 0 | 0 | 0.00 |
| 12/18/10 | 1 | 23.97 | 1 | 23.97 | 455318.7 | 3 | 12.00 | 4 | 11.98 | 2219 | 7.0 | 0 | 0 | 0.00 |
| 12/19/10 | 1 | 23.97 | 1 | 23.97 | 455039.6 | 3 | 12.00 | 4 | 11.98 | 2223 | 7.0 | 0 | 0 | 0.00 |
| 12/20/10 | 1 | 23.97 | 1 | 23.97 | 454986 | 3 | 12.00 | 4 | 11.98 | 2213 | 7.0 | 0 | 0 | 0.00 |
| 12/21/10 | 1 | 23.97 | 1 | 23.97 | 453437.9 | 3 | 12.00 | 4 | 12.00 | 2201 | 7.0 | 0 | 0 | 0.00 |
| 12/22/10 | 1 | 23.97 | 1 | 23.97 | 453012.5 | 3 | 12.00 | 4 | 11.98 | 2203 | 7.0 | 0 | 0 | 0.00 |
| 12/23/10 | 1 | 23.97 | 1 | 23.97 | 420826.1 | 3 | 12.00 | 4 | 11.95 | 2128 | 7.0 | 0 | 0 | 0.00 |
| 12/24/10 | 1 | 23.97 | 1 | 23.97 | 453490.4 | 3 | 12.00 | 4 | 11.98 | 2221 | 7.0 | 0 | 0 | 0.00 |
| 12/25/10 | 1 | 23.97 | 1 | 23.97 | 452967.2 | 3 | 12.00 | 4 | 11.98 | 2477 | 7.0 | 0 | 0 | 0.00 |
| 12/26/10 | 2 | 11.63 | 2 | 11.62 | 218723.6 | 2 | 5.00 | 2 | 6.63 | 1209 | 7.0 | 0 | 0 | 0.00 |
| 12/27/10 | 1 | 23.97 | 1 | 23.97 | 449540.4 | 3 | 12.00 | 4 | 11.98 | 2464 | 7.0 | 0 | 0 | 0.00 |
| 12/28/10 | 1 | 23.97 | 1 | 23.97 | 449294.2 | 3 | 12.00 | 4 | 11.98 | 2208 | 7.0 | 0 | 0 | 0.00 |
| 12/29/10 | 1 | 23.97 | 1 | 23.97 | 448705.1 | 3 | 12.00 | 4 | 11.98 | 2195 | 7.0 | 0 | 0 | 0.00 |
| 12/30/10 | 1 | 23.97 | 1 | 23.97 | 448094.3 | 3 | 12.00 | 4 | 11.97 | 2201 | 7.0 | 0 | 0 | 0.00 |
| 12/31/10 | 1 | 23.97 | 1 | 23.97 | 447316.6 | 3 | 12.00 | 4 | 11.98 | 2191 | 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Sum* | 411 | 8391.00 | 405 | 8328.22 | 159042802 | 974 | 5967.37 | 764 | 5406.25 | 661563 | | 61750 | 323 | 6567.12 |
| *Max* | 11 | 23.97 | 13 | 23.97 | 520125 | 12 | 23.98 | 8 | 23.98 | 2492 | 8.0 | 6130 | 7 | 23.97 |
| *Average* | 1 | 23.44 | 1 | 23.26 | 444254 | 3 | 16.67 | 2 | 15.10 | 1848 | 7.2 | 172 | 1 | 18.34 |

# *Harley-Davidson Motor Company*

*Gallons Pumped*

*From:* 01/01/10

*To:* 12/31/10

## *TCA and West Parking Lot Area Well Flow Data*

| *DATE* | *CW-8* | *CW-16* | *CW-9* | *CW-20* | *CW-13* | *CW-17* | *CW-15A* |
|---|---|---|---|---|---|---|---|
| 01/01/10 | 130700 | 0 | 116702 | 0 | 110243 | 102421 | 6057 |
| 01/02/10 | 134900 | 0 | 113588 | 0 | 110078 | 100512 | 6058 |
| 01/03/10 | 136100 | 0 | 114843 | 0 | 109902 | 100646 | 6052 |
| 01/04/10 | 138200 | 0 | 112478 | 0 | 110946 | 102629 | 6052 |
| 01/05/10 | 137100 | 0 | 112308 | 0 | 111882 | 102256 | 6054 |
| 01/06/10 | 145900 | 0 | 112605 | 0 | 104054 | 101323 | 6054 |
| 01/07/10 | 147600 | 0 | 112693 | 0 | 102367 | 101024 | 6058 |
| 01/08/10 | 143100 | 0 | 113239 | 0 | 102348 | 100469 | 6056 |
| 01/09/10 | 144000 | 0 | 112861 | 0 | 102315 | 102727 | 6059 |
| 01/10/10 | 147900 | 0 | 112321 | 0 | 102336 | 103894 | 6057 |
| 01/11/10 | 146500 | 0 | 112956 | 0 | 102249 | 101396 | 6054 |
| 01/12/10 | 146400 | 0 | 113209 | 0 | 102388 | 90634 | 6053 |
| 01/13/10 | 146300 | 0 | 113905 | 0 | 102386 | 90320 | 6057 |
| 01/14/10 | 146200 | 0 | 114518 | 0 | 105977 | 90245 | 6056 |
| 01/15/10 | 146200 | 0 | 113845 | 0 | 108423 | 90194 | 6061 |
| 01/16/10 | 146100 | 0 | 113391 | 0 | 109228 | 90097 | 6059 |
| 01/17/10 | 146300 | 0 | 112474 | 0 | 108632 | 93988 | 6061 |
| 01/18/10 | 146400 | 0 | 112728 | 0 | 109591 | 100201 | 6057 |
| 01/19/10 | 146300 | 0 | 112194 | 0 | 105994 | 100365 | 6056 |
| 01/20/10 | 146300 | 0 | 111254 | 0 | 110723 | 100351 | 6056 |
| 01/21/10 | 146200 | 0 | 111210 | 0 | 107873 | 99791 | 6059 |
| 01/22/10 | 146100 | 0 | 111399 | 0 | 108948 | 100162 | 6060 |
| 01/23/10 | 146000 | 0 | 111192 | 0 | 109127 | 100444 | 6058 |

| DATE | CW-8 | CW-16 | CW-9 | CW-20 | CW-13 | CW-17 | CW-15A |
|---|---|---|---|---|---|---|---|
| 01/24/10 | 146000 | 0 | 110645 | 0 | 108558 | 100405 | 6059 |
| 01/25/10 | 146200 | 0 | 110626 | 0 | 108498 | 100178 | 6059 |
| 01/26/10 | 146400 | 0 | 111429 | 0 | 107398 | 100855 | 6061 |
| 01/27/10 | 146200 | 0 | 111782 | 0 | 104859 | 101452 | 6062 |
| 01/28/10 | 146400 | 0 | 111659 | 0 | 104900 | 101163 | 6057 |
| 01/29/10 | 146800 | 0 | 112276 | 0 | 104886 | 101041 | 6055 |
| 01/30/10 | 146300 | 0 | 112921 | 0 | 104986 | 101187 | 6059 |
| 01/31/10 | 145600 | 0 | 112978 | 0 | 104915 | 101518 | 6059 |
| 02/01/10 | 145200 | 0 | 113041 | 0 | 104871 | 101327 | 6058 |
| 02/02/10 | 145100 | 0 | 112590 | 0 | 104865 | 101285 | 6055 |
| 02/03/10 | 145000 | 0 | 112448 | 0 | 106683 | 101290 | 6056 |
| 02/04/10 | 144900 | 0 | 112567 | 0 | 109588 | 101138 | 6060 |
| 02/05/10 | 144900 | 0 | 110901 | 0 | 108149 | 101166 | 6057 |
| 02/06/10 | 145000 | 0 | 110549 | 0 | 107473 | 101154 | 6060 |
| 02/07/10 | 144900 | 0 | 110106 | 0 | 107450 | 100895 | 6060 |
| 02/08/10 | 144800 | 0 | 109383 | 0 | 108720 | 8354 | 6058 |
| 02/09/10 | 144500 | 0 | 109124 | 0 | 110782 | 0 | 6055 |
| 02/10/10 | 145300 | 0 | 108754 | 0 | 114662 | 0 | 6062 |
| 02/11/10 | 145300 | 0 | 109164 | 0 | 114679 | 0 | 6061 |
| 02/12/10 | 145200 | 0 | 109562 | 0 | 115723 | 0 | 6056 |
| 02/13/10 | 145300 | 0 | 109692 | 0 | 117927 | 0 | 6056 |
| 02/14/10 | 145400 | 0 | 109675 | 0 | 119417 | 0 | 6060 |
| 02/15/10 | 145300 | 0 | 109187 | 0 | 120437 | 0 | 6003 |
| 02/16/10 | 144700 | 0 | 106592 | 0 | 121734 | 0 | 6024 |
| 02/17/10 | 145300 | 0 | 107406 | 0 | 123812 | 0 | 6058 |
| 02/18/10 | 145200 | 0 | 107493 | 0 | 124616 | 0 | 6055 |
| 02/19/10 | 145200 | 0 | 107442 | 0 | 124720 | 0 | 6055 |

| DATE | CW-8 | CW-16 | CW-9 | CW-20 | CW-13 | CW-17 | CW-15A |
|---|---|---|---|---|---|---|---|
| 02/20/10 | 145400 | 0 | 108027 | 0 | 124724 | 0 | 6056 |
| 02/21/10 | 145400 | 0 | 108285 | 0 | 124881 | 0 | 6053 |
| 02/22/10 | 142400 | 0 | 103874 | 0 | 124627 | 0 | 5924 |
| 02/23/10 | 145600 | 0 | 105937 | 0 | 128039 | 0 | 6058 |
| 02/24/10 | 146100 | 0 | 107157 | 0 | 112192 | 55083 | 5986 |
| 02/25/10 | 141800 | 0 | 110609 | 0 | 118255 | 124804 | 6054 |
| 02/26/10 | 137500 | 0 | 112072 | 0 | 123047 | 131127 | 6061 |
| 02/27/10 | 143400 | 0 | 112697 | 0 | 101250 | 131042 | 6056 |
| 02/28/10 | 146800 | 0 | 112945 | 0 | 0 | 131747 | 6057 |
| 03/01/10 | 137300 | 0 | 113326 | 0 | 96631 | 131246 | 6054 |
| 03/02/10 | 137100 | 0 | 113463 | 0 | 126963 | 130710 | 6059 |
| 03/03/10 | 146100 | 0 | 113416 | 0 | 120894 | 119124 | 6058 |
| 03/04/10 | 146600 | 0 | 114159 | 0 | 117689 | 116051 | 6058 |
| 03/05/10 | 146600 | 0 | 114514 | 0 | 118179 | 115993 | 6056 |
| 03/06/10 | 146600 | 0 | 114833 | 0 | 118541 | 115935 | 6054 |
| 03/07/10 | 146600 | 0 | 114864 | 0 | 118481 | 115840 | 6058 |
| 03/08/10 | 146400 | 0 | 112259 | 0 | 121049 | 115604 | 6058 |
| 03/09/10 | 146200 | 0 | 112758 | 0 | 116566 | 115657 | 6056 |
| 03/10/10 | 88300 | 0 | 81567 | 0 | 78415 | 80796 | 4214 |
| 03/11/10 | 108300 | 0 | 116706 | 0 | 112800 | 115927 | 6059 |
| 03/12/10 | 98000 | 0 | 86526 | 0 | 80718 | 85292 | 4457 |
| 03/13/10 | 134900 | 0 | 107798 | 0 | 98319 | 106332 | 5567 |
| 03/14/10 | 139150 | 0 | 111671 | 0 | 102944 | 116172 | 6084 |
| 03/15/10 | 139150 | 0 | 111671 | 0 | 102944 | 116172 | 6084 |
| 03/16/10 | 139150 | 0 | 111671 | 0 | 102944 | 116172 | 6084 |
| 03/17/10 | 139150 | 0 | 111671 | 0 | 102944 | 116172 | 6084 |
| 03/18/10 | 143400 | 0 | 115543 | 0 | 107568 | 126011 | 6600 |

| DATE | CW-8 | CW-16 | CW-9 | CW-20 | CW-13 | CW-17 | CW-15A |
|---|---|---|---|---|---|---|---|
| 03/19/10 | 147300 | 0 | 114083 | 0 | 107566 | 124593 | 6775 |
| 03/20/10 | 147300 | 0 | 112040 | 0 | 107582 | 119350 | 6775 |
| 03/21/10 | 147100 | 0 | 111622 | 0 | 107552 | 119298 | 6772 |
| 03/22/10 | 146900 | 0 | 111588 | 0 | 107493 | 119103 | 6773 |
| 03/23/10 | 147000 | 0 | 112467 | 0 | 107482 | 119017 | 6775 |
| 03/24/10 | 146800 | 0 | 112208 | 0 | 107494 | 118764 | 6774 |
| 03/25/10 | 146700 | 0 | 111635 | 0 | 107501 | 119016 | 6773 |
| 03/26/10 | 146700 | 0 | 111742 | 0 | 107484 | 119008 | 6721 |
| 03/27/10 | 146600 | 0 | 112480 | 0 | 107279 | 119023 | 6318 |
| 03/28/10 | 146500 | 0 | 111588 | 0 | 107249 | 118987 | 6487 |
| 03/29/10 | 146400 | 0 | 111790 | 0 | 107182 | 118758 | 6484 |
| 03/30/10 | 146400 | 0 | 112463 | 0 | 107159 | 118789 | 6489 |
| 03/31/10 | 146100 | 0 | 112209 | 0 | 107181 | 118707 | 6488 |
| 04/01/10 | 146200 | 0 | 112351 | 0 | 107460 | 118951 | 6485 |
| 04/02/10 | 146200 | 0 | 112409 | 0 | 107495 | 119071 | 6487 |
| 04/03/10 | 146000 | 0 | 112576 | 0 | 107475 | 119096 | 6486 |
| 04/04/10 | 145900 | 0 | 112124 | 0 | 107474 | 119071 | 6488 |
| 04/05/10 | 127100 | 0 | 97586 | 0 | 93847 | 103609 | 5662 |
| 04/06/10 | 145800 | 0 | 110771 | 0 | 107513 | 118558 | 6484 |
| 04/07/10 | 145600 | 0 | 109907 | 0 | 107502 | 118846 | 6486 |
| 04/08/10 | 145400 | 0 | 109055 | 0 | 107498 | 119027 | 6483 |
| 04/09/10 | 145800 | 0 | 111204 | 0 | 107324 | 118957 | 6486 |
| 04/10/10 | 145800 | 0 | 112715 | 0 | 107864 | 51970 | 6310 |
| 04/11/10 | 145500 | 0 | 111565 | 0 | 107331 | 118148 | 6487 |
| 04/12/10 | 145300 | 0 | 111361 | 0 | 107299 | 112362 | 6482 |
| 04/13/10 | 145500 | 0 | 111085 | 0 | 107121 | 109793 | 6406 |
| 04/14/10 | 145300 | 0 | 111228 | 0 | 106602 | 109639 | 6107 |

| DATE | CW-8 | CW-16 | CW-9 | CW-20 | CW-13 | CW-17 | CW-15A |
|---|---|---|---|---|---|---|---|
| 04/15/10 | 145100 | 0 | 110911 | 0 | 106583 | 109709 | 6203 |
| 04/16/10 | 142100 | 0 | 107593 | 0 | 105063 | 99013 | 6007 |
| 04/17/10 | 145200 | 0 | 110052 | 0 | 107236 | 98288 | 6055 |
| 04/18/10 | 145300 | 0 | 113219 | 0 | 106398 | 98802 | 5990 |
| 04/19/10 | 144900 | 0 | 115827 | 0 | 106243 | 99119 | 5815 |
| 04/20/10 | 144800 | 0 | 114617 | 0 | 106283 | 99262 | 5773 |
| 04/21/10 | 144800 | 0 | 113262 | 0 | 106299 | 98752 | 5771 |
| 04/22/10 | 144600 | 0 | 114030 | 0 | 106241 | 98403 | 5767 |
| 04/23/10 | 144700 | 0 | 114065 | 0 | 107119 | 70491 | 5772 |
| 04/24/10 | 144600 | 0 | 114017 | 0 | 107403 | 63286 | 5775 |
| 04/25/10 | 144800 | 0 | 113973 | 0 | 107449 | 64341 | 5774 |
| 04/26/10 | 144800 | 0 | 114264 | 0 | 106580 | 81266 | 5769 |
| 04/27/10 | 144800 | 0 | 115448 | 0 | 106309 | 85405 | 5773 |
| 04/28/10 | 145000 | 0 | 115543 | 0 | 106450 | 85140 | 5723 |
| 04/29/10 | 145000 | 0 | 115098 | 0 | 106483 | 84556 | 5775 |
| 04/30/10 | 144900 | 0 | 114847 | 0 | 106839 | 84212 | 5772 |
| 05/01/10 | 144800 | 0 | 114315 | 0 | 107286 | 84376 | 5773 |
| 05/02/10 | 144500 | 0 | 113763 | 0 | 107437 | 84245 | 5775 |
| 05/03/10 | 144800 | 0 | 113830 | 0 | 107368 | 83020 | 5774 |
| 05/04/10 | 145000 | 0 | 115261 | 0 | 107296 | 83014 | 5771 |
| 05/05/10 | 144800 | 0 | 115860 | 0 | 107250 | 83568 | 5771 |
| 05/06/10 | 144600 | 0 | 115732 | 0 | 107410 | 84225 | 5776 |
| 05/07/10 | 144600 | 0 | 115812 | 0 | 107365 | 84486 | 5771 |
| 05/08/10 | 144900 | 0 | 115727 | 0 | 107434 | 84669 | 5774 |
| 05/09/10 | 145100 | 0 | 115863 | 0 | 106908 | 85142 | 5341 |
| 05/10/10 | 144700 | 0 | 115934 | 0 | 106385 | 86002 | 4883 |
| 05/11/10 | 121600 | 0 | 94694 | 0 | 89734 | 72152 | 4127 |

| DATE | CW-8 | CW-16 | CW-9 | CW-20 | CW-13 | CW-17 | CW-15A |
|---|---|---|---|---|---|---|---|
| 05/12/10 | 118200 | 0 | 88693 | 0 | 87319 | 69512 | 4006 |
| 05/13/10 | 102900 | 0 | 76764 | 0 | 77660 | 61788 | 3558 |
| 05/14/10 | 144800 | 0 | 105202 | 0 | 107427 | 85700 | 4922 |
| 05/15/10 | 145000 | 0 | 105062 | 0 | 107450 | 85337 | 4920 |
| 05/16/10 | 144900 | 0 | 104111 | 0 | 107439 | 85007 | 4924 |
| 05/17/10 | 144700 | 0 | 104052 | 0 | 107391 | 84921 | 4923 |
| 05/18/10 | 144900 | 0 | 103941 | 0 | 107090 | 84267 | 4915 |
| 05/19/10 | 144500 | 0 | 103574 | 0 | 106943 | 83802 | 4920 |
| 05/20/10 | 144600 | 0 | 103025 | 0 | 107022 | 84085 | 4922 |
| 05/21/10 | 144500 | 0 | 103028 | 0 | 107126 | 84332 | 4918 |
| 05/22/10 | 144500 | 0 | 102949 | 0 | 107227 | 84570 | 4924 |
| 05/23/10 | 144600 | 0 | 104036 | 0 | 107052 | 84445 | 4920 |
| 05/24/10 | 144400 | 0 | 104922 | 0 | 106671 | 84500 | 4922 |
| 05/25/10 | 144300 | 0 | 105198 | 0 | 106664 | 84037 | 4919 |
| 05/26/10 | 144200 | 0 | 105642 | 0 | 106697 | 84327 | 4921 |
| 05/27/10 | 144100 | 0 | 105468 | 0 | 106769 | 84275 | 4920 |
| 05/28/10 | 144400 | 0 | 106141 | 0 | 106849 | 84210 | 4926 |
| 05/29/10 | 144400 | 0 | 106625 | 0 | 106952 | 84193 | 4921 |
| 05/30/10 | 144200 | 0 | 106215 | 0 | 107154 | 83460 | 4926 |
| 05/31/10 | 144200 | 0 | 105904 | 0 | 107259 | 83650 | 4928 |
| 06/01/10 | 144100 | 0 | 105504 | 0 | 107003 | 83383 | 4923 |
| 06/02/10 | 144100 | 0 | 105348 | 0 | 107053 | 83338 | 4925 |
| 06/03/10 | 138900 | 0 | 102787 | 0 | 103547 | 80101 | 4750 |
| 06/04/10 | 144300 | 0 | 108510 | 0 | 107397 | 83428 | 4926 |
| 06/05/10 | 144300 | 0 | 108532 | 0 | 107405 | 83203 | 4922 |
| 06/06/10 | 144200 | 0 | 108332 | 0 | 107401 | 83111 | 4924 |
| 06/07/10 | 144100 | 0 | 108408 | 0 | 107307 | 83047 | 4923 |

| DATE | CW-8 | CW-16 | CW-9 | CW-20 | CW-13 | CW-17 | CW-15A |
|---|---|---|---|---|---|---|---|
| 06/08/10 | 144100 | 0 | 108107 | 0 | 107161 | 83015 | 4918 |
| 06/09/10 | 144200 | 0 | 108058 | 0 | 107121 | 84158 | 4923 |
| 06/10/10 | 144300 | 0 | 108653 | 0 | 107009 | 83623 | 4925 |
| 06/11/10 | 144100 | 0 | 108775 | 0 | 107209 | 83524 | 4919 |
| 06/12/10 | 144000 | 0 | 108342 | 0 | 107414 | 83011 | 4927 |
| 06/13/10 | 144300 | 0 | 108414 | 0 | 107445 | 82783 | 4928 |
| 06/14/10 | 144200 | 0 | 106524 | 0 | 107446 | 82260 | 4920 |
| 06/15/10 | 144100 | 0 | 105075 | 0 | 107443 | 82697 | 4926 |
| 06/16/10 | 144000 | 0 | 105531 | 0 | 107465 | 82385 | 4922 |
| 06/17/10 | 144000 | 0 | 104964 | 0 | 107474 | 82013 | 4921 |
| 06/18/10 | 89500 | 0 | 65106 | 0 | 66795 | 51228 | 3059 |
| 06/19/10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06/20/10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06/21/10 | 0 | 0 | 39 | 0 | 0 | 0 | 0 |
| 06/22/10 | 0 | 0 | 23 | 0 | 0 | 0 | 0 |
| 06/23/10 | 0 | 0 | 23 | 0 | 0 | 0 | 0 |
| 06/24/10 | 0 | 0 | 51 | 0 | 0 | 0 | 0 |
| 06/25/10 | 0 | 0 | 28 | 0 | 0 | 0 | 0 |
| 06/26/10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06/27/10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06/28/10 | 2000 | 0 | 62378 | 0 | 57656 | 46765 | 2580 |
| 06/29/10 | 0 | 0 | 119713 | 0 | 109635 | 89218 | 4930 |
| 06/30/10 | 0 | 0 | 120437 | 0 | 108786 | 88977 | 4929 |
| 07/01/10 | 0 | 0 | 120729 | 0 | 108777 | 93658 | 4935 |
| 07/02/10 | 0 | 0 | 120692 | 0 | 108248 | 98912 | 4932 |
| 07/03/10 | 0 | 0 | 120465 | 0 | 107765 | 99805 | 4928 |
| 07/04/10 | 0 | 0 | 120610 | 0 | 107491 | 99564 | 4929 |

| DATE | CW-8 | CW-16 | CW-9 | CW-20 | CW-13 | CW-17 | CW-15A |
|---|---|---|---|---|---|---|---|
| 07/05/10 | 0 | 0 | 120739 | 0 | 107481 | 99277 | 4937 |
| 07/06/10 | 0 | 0 | 120567 | 0 | 107397 | 99124 | 4931 |
| 07/07/10 | 0 | 0 | 82529 | 0 | 73616 | 67848 | 3385 |
| 07/08/10 | 0 | 0 | 90514 | 0 | 81718 | 75212 | 3731 |
| 07/09/10 | 1900 | 0 | 108477 | 0 | 97312 | 90397 | 4519 |
| 07/10/10 | 0 | 0 | 106091 | 0 | 95287 | 88610 | 4372 |
| 07/11/10 | 0 | 0 | 119846 | 0 | 107481 | 100188 | 4932 |
| 07/12/10 | 0 | 0 | 119799 | 0 | 107462 | 100169 | 4929 |
| 07/13/10 | 0 | 0 | 119866 | 0 | 107455 | 99797 | 4929 |
| 07/14/10 | 0 | 0 | 120273 | 0 | 107465 | 100020 | 4984 |
| 07/15/10 |  | 0 | 120545 | 0 | 107480 | 100052 | 5072 |
| 07/16/10 | 0 | 0 | 120455 | 0 | 107702 | 99990 | 5074 |
| 07/17/10 | 0 | 0 | 120079 | 0 | 107860 | 102390 | 5169 |
| 07/18/10 | 0 | 0 | 120154 | 0 | 107808 | 103123 | 5209 |
| 07/19/10 | 0 | 0 | 120319 | 0 | 107699 | 102976 | 5753 |
| 07/20/10 | 0 | 0 | 120480 | 0 | 107564 | 102395 | 6055 |
| 07/21/10 | 0 | 0 | 120528 | 0 | 107497 | 102404 | 6055 |
| 07/22/10 | 0 | 0 | 120579 | 0 | 107523 | 102427 | 6059 |
| 07/23/10 | 0 | 0 | 120509 | 0 | 107511 | 102417 | 6059 |
| 07/24/10 | 0 | 0 | 120145 | 0 | 107484 | 102416 | 6056 |
| 07/25/10 | 0 | 0 | 119986 | 0 | 107475 | 102357 | 6057 |
| 07/26/10 | 0 | 0 | 119833 | 0 | 107498 | 102370 | 6061 |
| 07/27/10 | 0 | 0 | 79705 | 0 | 71912 | 68920 | 4025 |
| 07/28/10 | 0 | 0 | 119912 | 0 | 107909 | 106940 | 6060 |
| 07/29/10 | 0 | 0 | 119849 | 0 | 107614 | 107663 | 6060 |
| 07/30/10 | 0 | 0 | 119862 | 0 | 107529 | 107657 | 6056 |
| 07/31/10 | 0 | 0 | 119866 | 0 | 107495 | 107575 | 6057 |

| DATE | CW-8 | CW-16 | CW-9 | CW-20 | CW-13 | CW-17 | CW-15A |
|---|---|---|---|---|---|---|---|
| 08/01/10 | 0 | 0 | 119747 | 0 | 107473 | 107507 | 6060 |
| 08/02/10 | 98200 | 0 | 116202 | 0 | 104381 | 104369 | 5878 |
| 08/03/10 | 158700 | 0 | 119590 | 0 | 107454 | 107328 | 6058 |
| 08/04/10 | 151000 | 0 | 119488 | 0 | 107457 | 101296 | 6058 |
| 08/05/10 | 153900 | 0 | 119335 | 0 | 107467 | 99830 | 6058 |
| 08/06/10 | 150600 | 0 | 114920 | 0 | 103392 | 96126 | 5826 |
| 08/07/10 | 160500 | 0 | 119505 | 0 | 107477 | 99913 | 6059 |
| 08/08/10 | 160000 | 0 | 119357 | 0 | 107696 | 82295 | 6061 |
| 08/09/10 | 159500 | 0 | 119035 | 0 | 107814 | 71289 | 6057 |
| 08/10/10 | 159500 | 0 | 101632 | 0 | 107557 | 92510 | 6055 |
| 08/11/10 | 159500 | 0 | 105227 | 0 | 107471 | 92473 | 6058 |
| 08/12/10 | 160000 | 0 | 105122 | 0 | 107472 | 92488 | 6058 |
| 08/13/10 | 160500 | 0 | 105304 | 0 | 107483 | 92604 | 6061 |
| 08/14/10 | 160400 | 0 | 105554 | 0 | 107484 | 92545 | 6060 |
| 08/15/10 | 160200 | 0 | 105543 | 0 | 107492 | 92571 | 6058 |
| 08/16/10 | 160000 | 0 | 105442 | 0 | 107494 | 92409 | 6060 |
| 08/17/10 | 160500 | 0 | 105347 | 0 | 107497 | 92353 | 6060 |
| 08/18/10 | 160500 | 0 | 105276 | 0 | 107503 | 92300 | 6059 |
| 08/19/10 | 160300 | 0 | 105078 | 0 | 107498 | 92277 | 6055 |
| 08/20/10 | 160100 | 0 | 104904 | 0 | 107498 | 91747 | 6060 |
| 08/21/10 | 160000 | 0 | 104894 | 0 | 107484 | 91384 | 6055 |
| 08/22/10 | 160000 | 0 | 104916 | 0 | 107479 | 91359 | 6058 |
| 08/23/10 | 159900 | 0 | 104779 | 0 | 107484 | 91403 | 6057 |
| 08/24/10 | 160000 | 0 | 105033 | 0 | 107482 | 91631 | 6023 |
| 08/25/10 | 160000 | 0 | 104973 | 0 | 107483 | 91165 | 5997 |
| 08/26/10 | 113700 | 0 | 76389 | 0 | 78176 | 66344 | 4354 |
| 08/27/10 | 160100 | 0 | 105540 | 0 | 107493 | 91902 | 5998 |

| DATE | CW-8 | CW-16 | CW-9 | CW-20 | CW-13 | CW-17 | CW-15A |
|---|---|---|---|---|---|---|---|
| 08/28/10 | 160000 | 0 | 105455 | 0 | 107486 | 91798 | 5986 |
| 08/29/10 | 160000 | 0 | 105297 | 0 | 107500 | 91699 | 6026 |
| 08/30/10 | 159800 | 0 | 105345 | 0 | 107507 | 91756 | 6052 |
| 08/31/10 | 117200 | 0 | 77331 | 0 | 79120 | 67385 | 4440 |
| 09/01/10 | 119900 | 0 | 79310 | 0 | 81282 | 69115 | 4554 |
| 09/02/10 | 159000 | 0 | 105371 | 0 | 107629 | 91772 | 6060 |
| 09/03/10 | 159700 | 0 | 105319 | 0 | 107525 | 91734 | 6059 |
| 09/04/10 | 159800 | 0 | 73765 | 0 | 107888 | 91877 | 5985 |
| 09/05/10 | 159800 | 0 | 73280 | 0 | 108796 | 28074 | 5630 |
| 09/06/10 | 159800 | 0 | 87701 | 0 | 108887 | 0 | 5620 |
| 09/07/10 | 159600 | 0 | 77067 | 0 | 107848 | 65887 | 5861 |
| 09/08/10 | 134400 | 0 | 84667 | 0 | 91082 | 72374 | 5004 |
| 09/09/10 | 159800 | 0 | 100550 | 0 | 107741 | 85990 | 5699 |
| 09/10/10 | 159800 | 0 | 100421 | 0 | 107359 | 85844 | 5107 |
| 09/11/10 | 159800 | 0 | 100416 | 0 | 107370 | 85824 | 5448 |
| 09/12/10 | 160000 | 0 | 100427 | 0 | 107388 | 83533 | 5387 |
| 09/13/10 | 156200 | 0 | 98152 | 0 | 104875 | 81145 | 5225 |
| 09/14/10 | 159800 | 0 | 100441 | 0 | 107373 | 82999 | 5587 |
| 09/15/10 | 159700 | 0 | 100375 | 0 | 107348 | 83023 | 5519 |
| 09/16/10 | 159700 | 0 | 100271 | 0 | 107327 | 82902 | 5416 |
| 09/17/10 | 159800 | 0 | 100375 | 0 | 107368 | 78500 | 5431 |
| 09/18/10 | 159900 | 0 | 100480 | 0 | 107335 | 78358 | 5214 |
| 09/19/10 | 159700 | 0 | 100445 | 0 | 107333 | 78310 | 5332 |
| 09/20/10 | 159700 | 0 | 100375 | 0 | 107353 | 78162 | 5391 |
| 09/21/10 | 159700 | 0 | 100315 | 0 | 107309 | 78055 | 4949 |
| 09/22/10 | 159600 | 0 | 100352 | 0 | 107378 | 74520 | 5282 |
| 09/23/10 | 159600 | 0 | 100352 | 0 | 107378 | 74520 | 5282 |

| DATE | CW-8 | CW-16 | CW-9 | CW-20 | CW-13 | CW-17 | CW-15A |
|---|---|---|---|---|---|---|---|
| 09/24/10 | 159500 | 0 | 100346 | 0 | 107369 | 68063 | 5330 |
| 09/25/10 | 159600 | 0 | 100413 | 0 | 107439 | 67981 | 5302 |
| 09/26/10 | 159600 | 0 | 100365 | 0 | 107427 | 67983 | 5132 |
| 09/27/10 | 159600 | 0 | 100178 | 0 | 107370 | 67825 | 5001 |
| 09/28/10 | 159700 | 0 | 100220 | 0 | 107341 | 67737 | 5072 |
| 09/29/10 | 159800 | 0 | 100393 | 0 | 107382 | 67781 | 4813 |
| 09/30/10 | 160300 | 0 | 100459 | 0 | 107343 | 64642 | 4781 |
| 10/01/10 | 161700 | 0 | 100915 | 0 | 107585 | 70014 | 5892 |
| 10/02/10 | 161900 | 0 | 101025 | 0 | 108250 | 72034 | 6367 |
| 10/03/10 | 161700 | 0 | 101080 | 0 | 108607 | 71990 | 6048 |
| 10/04/10 | 161600 | 0 | 101008 | 0 | 108274 | 76960 | 5062 |
| 10/05/10 | 161700 | 0 | 101069 | 0 | 108001 | 83135 | 3902 |
| 10/06/10 | 161500 | 0 | 101038 | 0 | 107818 | 84596 | 4896 |
| 10/07/10 | 161200 | 0 | 100938 | 0 | 107741 | 92682 | 5530 |
| 10/08/10 | 160900 | 0 | 100871 | 0 | 107688 | 96375 | 5791 |
| 10/09/10 | 160800 | 0 | 100863 | 0 | 107747 | 96301 | 6010 |
| 10/10/10 | 160700 | 0 | 100852 | 0 | 107655 | 96263 | 5998 |
| 10/11/10 | 160400 | 0 | 100795 | 0 | 107596 | 96350 | 6098 |
| 10/12/10 | 160400 | 0 | 100770 | 0 | 107520 | 96173 | 6133 |
| 10/13/10 | 160500 | 0 | 100842 | 0 | 107397 | 96213 | 5849 |
| 10/14/10 | 160700 | 0 | 100813 | 0 | 107406 | 96289 | 4906 |
| 10/15/10 | 161000 | 0 | 100844 | 0 | 107394 | 96192 | 4330 |
| 10/16/10 | 160600 | 0 | 100806 | 0 | 107395 | 96123 | 4323 |
| 10/17/10 | 160400 | 0 | 100751 | 0 | 107546 | 86038 | 4422 |
| 10/18/10 | 160100 | 0 | 100811 | 0 | 107765 | 68912 | 4377 |
| 10/19/10 | 160200 | 0 | 100787 | 0 | 107425 | 88978 | 4285 |
| 10/20/10 | 160200 | 0 | 100794 | 0 | 107425 | 88812 | 4248 |

| DATE | CW-8 | CW-16 | CW-9 | CW-20 | CW-13 | CW-17 | CW-15A |
|---|---|---|---|---|---|---|---|
| 10/21/10 | 160100 | 0 | 100722 | 0 | 107441 | 88766 | 4259 |
| 10/22/10 | 160000 | 0 | 100654 | 0 | 107327 | 88769 | 1317 |
| 10/23/10 | 160000 | 0 | 100621 | 0 | 107433 | 88747 | 3109 |
| 10/24/10 | 159800 | 0 | 100460 | 0 | 107369 | 88426 | 4645 |
| 10/25/10 | 159800 | 0 | 100428 | 0 | 107334 | 78646 | 4701 |
| 10/26/10 | 159800 | 0 | 100450 | 0 | 107329 | 67676 | 4790 |
| 10/27/10 | 160100 | 0 | 100512 | 0 | 107314 | 67374 | 4833 |
| 10/28/10 | 160300 | 0 | 100703 | 0 | 107390 | 67744 | 4668 |
| 10/29/10 | 160200 | 0 | 100795 | 0 | 107452 | 67790 | 4259 |
| 10/30/10 | 160100 | 0 | 100719 | 0 | 107297 | 67717 | 915 |
| 10/31/10 | 160100 | 0 | 100717 | 0 | 107481 | 67489 | 2709 |
| 11/01/10 | 160000 | 0 | 100627 | 0 | 107435 | 67051 | 4009 |
| 11/02/10 | 160000 | 0 | 100511 | 0 | 107436 | 66940 | 3497 |
| 11/03/10 | 159900 | 0 | 100396 | 0 | 107400 | 66865 | 2451 |
| 11/04/10 | 160200 | 0 | 100357 | 0 | 107452 | 66905 | 2321 |
| 11/05/10 | 160500 | 0 | 100491 | 0 | 107446 | 68032 | 2325 |
| 11/06/10 | 160300 | 0 | 100646 | 0 | 107474 | 68138 | 2246 |
| 11/07/10 | 160300 | 0 | 100609 | 0 | 107417 | 68020 | 2033 |
| 11/08/10 | 153400 | 0 | 96209 | 0 | 102935 | 67770 | 1980 |
| 11/09/10 | 153300 | 0 | 96181 | 0 | 102967 | 68501 | 2227 |
| 11/10/10 | 142400 | 0 | 89382 | 0 | 95641 | 63032 | 2523 |
| 11/11/10 | 153300 | 0 | 96172 | 0 | 102925 | 68209 | 2623 |
| 11/12/10 | 153200 | 0 | 96150 | 0 | 102918 | 68156 | 2484 |
| 11/13/10 | 153200 | 0 | 96179 | 0 | 102907 | 68130 | 2494 |
| 11/14/10 | 140500 | 0 | 88263 | 0 | 94440 | 62530 | 2271 |
| 11/15/10 | 107200 | 0 | 67811 | 0 | 72964 | 47979 | 2150 |
| 11/16/10 | 159900 | 0 | 100556 | 0 | 107499 | 72946 | 2651 |

| DATE | CW-8 | CW-16 | CW-9 | CW-20 | CW-13 | CW-17 | CW-15A |
|---|---|---|---|---|---|---|---|
| 11/17/10 | 160200 | 0 | 100609 | 0 | 107342 | 72488 | 2951 |
| 11/18/10 | 160200 | 0 | 100703 | 0 | 107457 | 72565 | 2330 |
| 11/19/10 | 114300 | 0 | 71913 | 0 | 76855 | 52117 | 1636 |
| 11/20/10 | 159900 | 0 | 100678 | 0 | 107464 | 73326 | 2322 |
| 11/21/10 | 159800 | 0 | 100491 | 0 | 107454 | 73330 | 2379 |
| 11/22/10 | 159600 | 0 | 100326 | 0 | 107379 | 73336 | 2691 |
| 11/23/10 | 159600 | 0 | 100333 | 0 | 107387 | 73380 | 2687 |
| 11/24/10 | 159600 | 0 | 100421 | 0 | 107425 | 73334 | 2320 |
| 11/25/10 | 159800 | 0 | 100483 | 0 | 107439 | 73317 | 2302 |
| 11/26/10 | 159800 | 0 | 100504 | 0 | 107402 | 73150 | 2300 |
| 11/27/10 | 159800 | 0 | 100448 | 0 | 107190 | 73049 | 585 |
| 11/28/10 | 159800 | 0 | 100451 | 0 | 107181 | 73058 | 1547 |
| 11/29/10 | 159600 | 0 | 100315 | 0 | 106824 | 72984 | 1759 |
| 11/30/10 | 159600 | 0 | 100345 | 0 | 107141 | 72999 | 1775 |
| 12/01/10 | 160000 | 0 | 100465 | 0 | 107257 | 72715 | 1972 |
| 12/02/10 | 160500 | 0 | 100720 | 0 | 107011 | 72801 | 1540 |
| 12/03/10 | 160300 | 0 | 100816 | 0 | 107340 | 72923 | 1569 |
| 12/04/10 | 160300 | 0 | 100755 | 0 | 107368 | 72964 | 1373 |
| 12/05/10 | 160300 | 0 | 100713 | 0 | 107323 | 73071 | 1162 |
| 12/06/10 | 119800 | 0 | 75089 | 0 | 79820 | 54402 | 971 |
| 12/07/10 | 139700 | 0 | 87339 | 0 | 92451 | 71940 | 2422 |
| 12/08/10 | 144500 | 0 | 100271 | 0 | 106188 | 84872 | 2739 |
| 12/09/10 | 160500 | 0 | 100286 | 0 | 106199 | 83492 | 3141 |
| 12/10/10 | 160400 | 0 | 100333 | 0 | 106174 | 83497 | 3485 |
| 12/11/10 | 160500 | 0 | 100362 | 0 | 106173 | 83588 | 3669 |
| 12/12/10 | 160500 | 0 | 100350 | 0 | 106192 | 83652 | 4576 |
| 12/13/10 | 160600 | 0 | 100338 | 0 | 106151 | 83526 | 3579 |

| DATE | CW-8 | CW-16 | CW-9 | CW-20 | CW-13 | CW-17 | CW-15A |
|---|---|---|---|---|---|---|---|
| 12/14/10 | 160600 | 0 | 100363 | 0 | 106054 | 83340 | 1890 |
| 12/15/10 | 160500 | 0 | 100277 | 0 | 105879 | 83277 | 2024 |
| 12/16/10 | 160400 | 0 | 100313 | 0 | 105837 | 83255 | 2208 |
| 12/17/10 | 155800 | 0 | 100317 | 0 | 105958 | 82377 | 2666 |
| 12/18/10 | 159500 | 0 | 100298 | 0 | 106119 | 82003 | 3391 |
| 12/19/10 | 159800 | 0 | 100298 | 0 | 106134 | 81981 | 3223 |
| 12/20/10 | 160000 | 0 | 100182 | 0 | 105683 | 81874 | 3087 |
| 12/21/10 | 159900 | 0 | 100213 | 0 | 105844 | 81907 | 4012 |
| 12/22/10 | 159900 | 0 | 100408 | 0 | 105954 | 81966 | 4429 |
| 12/23/10 | 159900 | 0 | 100538 | 0 | 70656 | 82008 | 3714 |
| 12/24/10 | 159900 | 0 | 100505 | 0 | 104922 | 81960 | 3881 |
| 12/25/10 | 160000 | 0 | 99795 | 0 | 104829 | 81988 | 4228 |
| 12/26/10 | 77200 | 0 | 46229 | 0 | 51094 | 39596 | 1832 |
| 12/27/10 | 159900 | 0 | 94375 | 0 | 105268 | 81942 | 2866 |
| 12/28/10 | 159900 | 0 | 94438 | 0 | 105196 | 82033 | 3739 |
| 12/29/10 | 159900 | 0 | 94526 | 0 | 105542 | 82090 | 3996 |
| 12/30/10 | 159800 | 0 | 94593 | 0 | 105204 | 82059 | 3852 |
| 12/31/10 | 159800 | 0 | 94566 | 0 | 105257 | 81469 | 4069 |
| *Sum* | 47887400 | 0 | 37674793 | 0 | 37651900 | 30356663 | 1800233 |
| *Average* | 131559 | 0 | 103219 | 0 | 103156 | 83169 | 4932 |

# Harley-Davidson Motor Company

## Northeast Property Boundary Area Well Flow Data

*Gallons Pumped*

*From:* 01/01/10

*To:* 12/31/10

| DATE | CW-1 | CW-1A | CW-2 | CW-3 | CW-4 | CW-5 | CW-6 | CW-7 | CW-7A |
|---|---|---|---|---|---|---|---|---|---|
| 01/01/10 | 4049 | 493 | 0 | 5245 | 2054 | 4748 | 0 | 2815 | 2291 |
| 01/02/10 | 3971 | 480 | 0 | 5070 | 2052 | 4748 | 0 | 2330 | 2268 |
| 01/03/10 | 3929 | 475 | 0 | 4974 | 2062 | 4748 | 0 | 2200 | 2250 |
| 01/04/10 | 3916 | 463 | 0 | 5189 | 2061 | 4694 | 0 | 2051 | 2246 |
| 01/05/10 | 3902 | 449 | 0 | 5324 | 2030 | 4516 | 0 | 2193 | 2238 |
| 01/06/10 | 3952 | 440 | 0 | 5332 | 2050 | 4384 | 0 | 2285 | 2235 |
| 01/07/10 | 3959 | 427 | 0 | 5315 | 2049 | 4273 | 0 | 2155 | 2176 |
| 01/08/10 | 3959 | 417 | 0 | 5198 | 2942 | 4194 | 2365 | 2391 | 2160 |
| 01/09/10 | 3918 | 395 | 5 | 4927 | 3854 | 4041 | 2031 | 2264 | 2071 |
| 01/10/10 | 3891 | 381 | 0 | 5018 | 3724 | 3926 | 0 | 1994 | 2001 |
| 01/11/10 | 3873 | 364 | 0 | 5064 | 3618 | 3918 | 0 | 2166 | 2015 |
| 01/12/10 | 3844 | 360 | 9 | 5112 | 3313 | 3891 | 0 | 2106 | 1987 |
| 01/13/10 | 3570 | 371 | 31 | 4835 | 879 | 3747 | 2955 | 2264 | 1853 |
| 01/14/10 | 3661 | 366 | 6 | 4627 | 0 | 3752 | 4407 | 2261 | 1886 |
| 01/15/10 | 3771 | 356 | 13 | 4628 | 0 | 3750 | 294 | 2576 | 1912 |
| 01/16/10 | 3746 | 356 | 15 | 4617 | 0 | 3701 | 3 | 2570 | 1890 |
| 01/17/10 | 3699 | 351 | 6 | 804 | 0 | 3899 | 1 | 2543 | 1902 |
| 01/18/10 | 3754 | 370 | 3 | 2749 | 2503 | 4121 | 2757 | 2669 | 1885 |
| 01/19/10 | 3808 | 380 | 15 | 4772 | 3965 | 4333 | 4595 | 2805 | 1918 |
| 01/20/10 | 3824 | 361 | 14 | 4290 | 3643 | 4160 | 4110 | 2594 | 1895 |
| 01/21/10 | 3775 | 338 | 0 | 4759 | 3513 | 3977 | 5 | 2837 | 1834 |
| 01/22/10 | 3730 | 332 | 501 | 4603 | 3396 | 3911 | 2650 | 2528 | 1806 |
| 01/23/10 | 3705 | 308 | 738 | 4665 | 3227 | 3722 | 4463 | 2439 | 1769 |
| 01/24/10 | 3629 | 314 | 714 | 4865 | 3143 | 3619 | 445 | 2439 | 1748 |
| 01/25/10 | 3559 | 326 | 732 | 5016 | 3095 | 4194 | 5 | 2659 | 1793 |
| 01/26/10 | 3523 | 378 | 708 | 4955 | 3005 | 4618 | 5 | 2605 | 1861 |
| 01/27/10 | 3506 | 389 | 623 | 4893 | 2942 | 4752 | 1 | 2280 | 1868 |
| 01/28/10 | 3499 | 385 | 545 | 4814 | 2903 | 4422 | 1 | 2286 | 1861 |
| 01/29/10 | 3480 | 367 | 500 | 4727 | 2879 | 4137 | 0 | 1716 | 1825 |
| 01/30/10 | 3468 | 336 | 470 | 4646 | 2870 | 4028 | 1 | 2356 | 1821 |
| 01/31/10 | 3376 | 313 | 420 | 4447 | 2861 | 3934 | 0 | 2275 | 1806 |
| 02/01/10 | 3366 | 322 | 372 | 4360 | 2856 | 3793 | 0 | 2210 | 1779 |
| 02/02/10 | 3444 | 324 | 263 | 4361 | 2847 | 3716 | 0 | 2690 | 1769 |
| 02/03/10 | 3454 | 305 | 514 | 4228 | 2824 | 3603 | 6 | 2622 | 1756 |
| 02/04/10 | 3408 | 285 | 682 | 4221 | 2802 | 3425 | 1 | 2515 | 1717 |

| DATE | CW-1 | CW-1A | CW-2 | CW-3 | CW-4 | CW-5 | CW-6 | CW-7 | CW-7A |
|---|---|---|---|---|---|---|---|---|---|
| 02/05/10 | 3479 | 284 | 703 | 4284 | 3805 | 3339 | 13 | 2631 | 1699 |
| 02/06/10 | 3498 | 288 | 688 | 4567 | 4385 | 3389 | 4 | 2490 | 1705 |
| 02/07/10 | 3490 | 265 | 629 | 4505 | 4404 | 3310 | 3 | 2838 | 1684 |
| 02/08/10 | 3489 | 260 | 576 | 4451 | 4403 | 3290 | 2 | 2756 | 1664 |
| 02/09/10 | 3423 | 253 | 527 | 4375 | 4412 | 3312 | 1 | 2642 | 1655 |
| 02/10/10 | 3362 | 260 | 693 | 4279 | 4401 | 3400 | 1 | 2437 | 1659 |
| 02/11/10 | 3323 | 247 | 678 | 4176 | 4333 | 3325 | 0 | 2473 | 1627 |
| 02/12/10 | 3283 | 234 | 639 | 4084 | 4297 | 3282 | 0 | 2661 | 1601 |
| 02/13/10 | 3267 | 235 | 616 | 4012 | 4276 | 3307 | 0 | 2506 | 1593 |
| 02/14/10 | 3250 | 234 | 595 | 3939 | 4247 | 3205 | 0 | 2468 | 1570 |
| 02/15/10 | 3275 | 245 | 553 | 3573 | 4230 | 3140 | 0 | 2218 | 1561 |
| 02/16/10 | 3224 | 236 | 533 | 3160 | 4248 | 3125 | 2879 | 2603 | 1549 |
| 02/17/10 | 3262 | 207 | 521 | 4309 | 4227 | 3091 | 5 | 2582 | 1538 |
| 02/18/10 | 3249 | 220 | 511 | 4647 | 4194 | 3059 | 4 | 2554 | 1525 |
| 02/19/10 | 3251 | 216 | 489 | 4783 | 4166 | 3159 | 1 | 2499 | 1507 |
| 02/20/10 | 3278 | 215 | 460 | 4809 | 4140 | 3265 | 1 | 2515 | 1497 |
| 02/21/10 | 3288 | 221 | 424 | 4750 | 4097 | 3321 | 0 | 2516 | 1498 |
| 02/22/10 | 2970 | 232 | 628 | 4855 | 3603 | 3553 | 0 | 2523 | 1521 |
| 02/23/10 | 2954 | 249 | 691 | 5051 | 3492 | 3885 | 0 | 2517 | 1567 |
| 02/24/10 | 3031 | 280 | 743 | 5171 | 3623 | 4687 | 0 | 2439 | 1625 |
| 02/25/10 | 3122 | 331 | 749 | 5158 | 3610 | 5453 | 0 | 2526 | 1723 |
| 02/26/10 | 3101 | 374 | 661 | 5257 | 3583 | 5469 | 2445 | 2344 | 1805 |
| 02/27/10 | 3131 | 381 | 554 | 5242 | 3506 | 5189 | 0 | 2065 | 1845 |
| 02/28/10 | 3171 | 388 | 631 | 5174 | 3463 | 5017 | 0 | 2090 | 1878 |
| 03/01/10 | 3295 | 400 | 720 | 5309 | 3508 | 4988 | 0 | 2095 | 1899 |
| 03/02/10 | 3209 | 414 | 758 | 5440 | 3515 | 5321 | 0 | 2274 | 1984 |
| 03/03/10 | 3334 | 447 | 818 | 5409 | 3499 | 5943 | 0 | 2307 | 2020 |
| 03/04/10 | 3314 | 476 | 830 | 5351 | 3474 | 6609 | 0 | 2266 | 2023 |
| 03/05/10 | 3274 | 503 | 758 | 5494 | 3569 | 6690 | 0 | 2319 | 2020 |
| 03/06/10 | 3259 | 516 | 699 | 5730 | 3633 | 6590 | 0 | 2206 | 2009 |
| 03/07/10 | 3270 | 522 | 652 | 5741 | 3597 | 6494 | 0 | 2168 | 1997 |
| 03/08/10 | 3401 | 522 | 668 | 5775 | 3656 | 6405 | 0 | 2328 | 2262 |
| 03/09/10 | 3398 | 512 | 700 | 5744 | 3659 | 6241 | 0 | 2349 | 2382 |
| 03/10/10 | 2271 | 382 | 553 | 3983 | 2544 | 4503 | 0 | 1630 | 1576 |
| 03/11/10 | 3288 | 515 | 750 | 5649 | 3852 | 5127 | 0 | 2248 | 2144 |
| 03/12/10 | 2488 | 401 | 619 | 4175 | 3026 | 0 | 2192 | 1567 | 1615 |
| 03/13/10 | 3368 | 493 | 811 | 5145 | 3766 | 0 | 4023 | 1956 | 2035 |
| 03/14/10 | 3492 | 564 | 775 | 5343 | 3786 | 3585 | 2012 | 2289 | 2354 |
| 03/15/10 | 3492 | 564 | 775 | 5343 | 3786 | 3585 | 2012 | 2289 | 2354 |
| 03/16/10 | 3492 | 564 | 775 | 5343 | 3786 | 3585 | 2012 | 2289 | 2354 |

| DATE | CW-1 | CW-1A | CW-2 | CW-3 | CW-4 | CW-5 | CW-6 | CW-7 | CW-7A |
|---|---|---|---|---|---|---|---|---|---|
| 03/17/10 | 3492 | 564 | 775 | 5343 | 3786 | 3585 | 2012 | 2289 | 2354 |
| 03/18/10 | 3616 | 634 | 738 | 5540 | 3805 | 7170 | 0 | 2622 | 2673 |
| 03/19/10 | 3606 | 612 | 711 | 5735 | 3783 | 7651 | 0 | 2411 | 2599 |
| 03/20/10 | 3616 | 590 | 667 | 5769 | 3730 | 6831 | 0 | 2396 | 2667 |
| 03/21/10 | 3609 | 571 | 634 | 5741 | 3691 | 5983 | 0 | 2286 | 2641 |
| 03/22/10 | 3594 | 563 | 627 | 5656 | 3651 | 5643 | 0 | 2658 | 2643 |
| 03/23/10 | 3726 | 542 | 585 | 5627 | 3613 | 5487 | 0 | 2460 | 2634 |
| 03/24/10 | 3705 | 524 | 560 | 5581 | 3556 | 4995 | 0 | 2330 | 2570 |
| 03/25/10 | 3604 | 512 | 541 | 5688 | 3581 | 4760 | 0 | 2344 | 2470 |
| 03/26/10 | 3580 | 492 | 586 | 5740 | 3570 | 4757 | 0 | 2451 | 2434 |
| 03/27/10 | 3550 | 461 | 565 | 5636 | 3503 | 4559 | 0 | 2350 | 2469 |
| 03/28/10 | 3525 | 475 | 564 | 5551 | 3424 | 4472 | 0 | 2357 | 2463 |
| 03/29/10 | 3540 | 490 | 639 | 5673 | 3515 | 5841 | 0 | 2306 | 2526 |
| 03/30/10 | 3527 | 524 | 689 | 5665 | 3383 | 6438 | 0 | 2364 | 2502 |
| 03/31/10 | 3500 | 527 | 700 | 5582 | 3358 | 6533 | 0 | 2345 | 2569 |
| 04/01/10 | 3524 | 518 | 713 | 5568 | 3406 | 6112 | 0 | 2426 | 2536 |
| 04/02/10 | 3511 | 503 | 706 | 5484 | 3379 | 5694 | 0 | 2318 | 2504 |
| 04/03/10 | 3499 | 488 | 710 | 5400 | 3283 | 5322 | 0 | 2356 | 2474 |
| 04/04/10 | 3478 | 475 | 724 | 5334 | 3273 | 5087 | 0 | 2346 | 2434 |
| 04/05/10 | 2986 | 428 | 660 | 4818 | 2951 | 4400 | 0 | 1978 | 2193 |
| 04/06/10 | 3380 | 456 | 716 | 5606 | 3383 | 4871 | 0 | 2654 | 2423 |
| 04/07/10 | 3377 | 444 | 683 | 5527 | 3249 | 4713 | 0 | 2371 | 2348 |
| 04/08/10 | 3371 | 419 | 660 | 5463 | 3328 | 4593 | 0 | 2413 | 2319 |
| 04/09/10 | 3377 | 407 | 642 | 5443 | 3379 | 4140 | 0 | 2333 | 2315 |
| 04/10/10 | 3326 | 397 | 630 | 5352 | 3370 | 3710 | 0 | 2335 | 2206 |
| 04/11/10 | 3262 | 389 | 626 | 5038 | 3347 | 3490 | 0 | 2312 | 2162 |
| 04/12/10 | 3231 | 379 | 630 | 4351 | 3388 | 3363 | 0 | 2383 | 2121 |
| 04/13/10 | 3222 | 362 | 645 | 4294 | 3399 | 3165 | 0 | 2299 | 2086 |
| 04/14/10 | 3214 | 355 | 643 | 4197 | 3390 | 3151 | 0 | 2271 | 2001 |
| 04/15/10 | 3213 | 346 | 642 | 4152 | 3371 | 3293 | 0 | 2211 | 1942 |
| 04/16/10 | 3184 | 341 | 643 | 4092 | 3365 | 3427 | 0 | 2274 | 1895 |
| 04/17/10 | 3170 | 346 | 638 | 4025 | 3358 | 3342 | 0 | 2269 | 1869 |
| 04/18/10 | 3159 | 330 | 637 | 3945 | 3352 | 3410 | 0 | 2216 | 1842 |
| 04/19/10 | 2993 | 319 | 634 | 4610 | 3327 | 3343 | 0 | 2368 | 1841 |
| 04/20/10 | 1 | 325 | 669 | 5055 | 3329 | 3347 | 0 | 2204 | 1829 |
| 04/21/10 | 1 | 340 | 697 | 5443 | 3301 | 3317 | 0 | 2305 | 1880 |
| 04/22/10 | 45 | 346 | 705 | 5454 | 3251 | 3298 | 0 | 2261 | 1890 |
| 04/23/10 | 0 | 341 | 705 | 5400 | 3246 | 3257 | 0 | 2231 | 1875 |
| 04/24/10 | 1 | 331 | 703 | 5382 | 3242 | 3225 | 0 | 2375 | 1864 |
| 04/25/10 | 0 | 334 | 708 | 5378 | 3232 | 3217 | 0 | 2275 | 1860 |

| DATE | CW-1 | CW-1A | CW-2 | CW-3 | CW-4 | CW-5 | CW-6 | CW-7 | CW-7A |
|---|---|---|---|---|---|---|---|---|---|
| 04/26/10 | 0 | 334 | 706 | 5367 | 3219 | 2919 | 0 | 2275 | 1857 |
| 04/27/10 | 1 | 332 | 707 | 5367 | 3209 | 2817 | 0 | 2176 | 1833 |
| 04/28/10 | 0 | 327 | 707 | 5352 | 3185 | 2565 | 0 | 2237 | 1809 |
| 04/29/10 | 0 | 317 | 699 | 5342 | 3167 | 2743 | 0 | 2323 | 1783 |
| 04/30/10 | 0 | 306 | 715 | 5367 | 3034 | 2710 | 0 | 2888 | 1634 |
| 05/01/10 | 1 | 304 | 781 | 5411 | 3402 | 2694 | 0 | 3105 | 1679 |
| 05/02/10 | 1 | 297 | 760 | 5406 | 3398 | 2661 | 0 | 3086 | 1665 |
| 05/03/10 | 1 | 281 | 734 | 5392 | 3354 | 2447 | 0 | 3149 | 1635 |
| 05/04/10 | 0 | 274 | 725 | 5377 | 3344 | 2165 | 0 | 3123 | 1623 |
| 05/05/10 | 0 | 272 | 698 | 5362 | 3334 | 2031 | 0 | 3170 | 1608 |
| 05/06/10 | 1 | 272 | 675 | 5352 | 3318 | 1967 | 0 | 3240 | 1591 |
| 05/07/10 | 0 | 269 | 661 | 5457 | 3354 | 1851 | 0 | 3482 | 1527 |
| 05/08/10 | 0 | 269 | 658 | 5471 | 3365 | 1806 | 0 | 3545 | 1450 |
| 05/09/10 | 0 | 267 | 647 | 5445 | 3354 | 1726 | 0 | 3479 | 1425 |
| 05/10/10 | 0 | 268 | 641 | 5409 | 3334 | 1647 | 0 | 3403 | 1432 |
| 05/11/10 | 1 | 245 | 627 | 4610 | 2939 | 1559 | 0 | 2119 | 1209 |
| 05/12/10 | 1 | 240 | 635 | 4577 | 2802 | 1669 | 0 | 1652 | 1154 |
| 05/13/10 | 2 | 217 | 591 | 4156 | 2539 | 1561 | 0 | 1623 | 1042 |
| 05/14/10 | 0 | 250 | 764 | 5757 | 3527 | 2185 | 0 | 2452 | 1374 |
| 05/15/10 | 0 | 244 | 708 | 5644 | 3513 | 2052 | 0 | 2606 | 1380 |
| 05/16/10 | 0 | 237 | 685 | 5521 | 3489 | 2153 | 0 | 2552 | 1364 |
| 05/17/10 | 0 | 240 | 676 | 5441 | 3435 | 2097 | 0 | 2417 | 1365 |
| 05/18/10 | 0 | 237 | 669 | 5390 | 3409 | 2164 | 0 | 2567 | 1344 |
| 05/19/10 | 0 | 233 | 661 | 5362 | 3448 | 2127 | 0 | 2490 | 1385 |
| 05/20/10 | 0 | 232 | 658 | 5311 | 3443 | 1953 | 0 | 2400 | 1378 |
| 05/21/10 | 0 | 225 | 676 | 5256 | 3100 | 1874 | 0 | 2487 | 1375 |
| 05/22/10 | 0 | 221 | 679 | 5252 | 2787 | 1831 | 0 | 2651 | 1362 |
| 05/23/10 | 0 | 220 | 681 | 5203 | 2784 | 1769 | 0 | 2611 | 1333 |
| 05/24/10 | 0 | 214 | 677 | 5149 | 2776 | 1739 | 0 | 2669 | 1324 |
| 05/25/10 | 0 | 218 | 675 | 5275 | 2763 | 1656 | 0 | 2517 | 1313 |
| 05/26/10 | 0 | 212 | 674 | 5452 | 2751 | 1637 | 0 | 2604 | 1301 |
| 05/27/10 | 0 | 210 | 673 | 5450 | 2736 | 1652 | 0 | 2490 | 1281 |
| 05/28/10 | 0 | 205 | 666 | 5296 | 2719 | 1520 | 0 | 2656 | 1296 |
| 05/29/10 | 0 | 206 | 665 | 5392 | 2699 | 1515 | 0 | 2604 | 1308 |
| 05/30/10 | 0 | 202 | 662 | 5372 | 2684 | 1502 | 0 | 2629 | 1289 |
| 05/31/10 | 0 | 193 | 659 | 5219 | 2674 | 1475 | 0 | 2717 | 1269 |
| 06/01/10 | 0 | 200 | 656 | 5222 | 2805 | 1446 | 0 | 2664 | 1242 |
| 06/02/10 | 2043 | 50 | 668 | 1312 | 794 | 419 | 0 | 691 | 326 |
| 06/03/10 | 3122 | 148 | 592 | 2945 | 1595 | 981 | 209 | 867 | 743 |
| 06/04/10 | 1066 | 225 | 714 | 5747 | 3149 | 1569 | 1 | 1536 | 1190 |

| DATE | CW-1 | CW-1A | CW-2 | CW-3 | CW-4 | CW-5 | CW-6 | CW-7 | CW-7A |
|---|---|---|---|---|---|---|---|---|---|
| 06/05/10 | 605 | 203 | 700 | 5850 | 3231 | 1493 | 0 | 1946 | 1156 |
| 06/06/10 | 1700 | 201 | 693 | 5756 | 3171 | 1458 | 0 | 2756 | 1122 |
| 06/07/10 | 1235 | 195 | 683 | 5779 | 3072 | 1414 | 0 | 2600 | 1170 |
| 06/08/10 | 59 | 196 | 672 | 5644 | 3008 | 1017 | 0 | 2605 | 1158 |
| 06/09/10 | 1 | 187 | 669 | 5546 | 2955 | 1560 | 0 | 2581 | 1246 |
| 06/10/10 | 9 | 191 | 665 | 5590 | 2890 | 1553 | 0 | 2677 | 1176 |
| 06/11/10 | 394 | 190 | 661 | 5437 | 2827 | 1453 | 0 | 2735 | 1146 |
| 06/12/10 | 40 | 184 | 658 | 5237 | 2765 | 809 | 0 | 2622 | 1323 |
| 06/13/10 | 11 | 183 | 658 | 5122 | 2694 | 455 | 0 | 2730 | 1473 |
| 06/14/10 | 436 | 185 | 663 | 5153 | 2610 | 774 | 0 | 2719 | 1395 |
| 06/15/10 | 387 | 187 | 663 | 5150 | 2577 | 968 | 0 | 2839 | 1381 |
| 06/16/10 | 188 | 183 | 658 | 4988 | 2576 | 930 | 0 | 2796 | 1362 |
| 06/17/10 | 34 | 188 | 657 | 4626 | 2571 | 1090 | 0 | 2894 | 1331 |
| 06/18/10 | 38 | 114 | 416 | 2585 | 1607 | 627 | 0 | 1918 | 859 |
| 06/19/10 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| 06/20/10 | 0 | 0 | 0 | 22 | 0 | 1048 | 0 | 0 | 0 |
| 06/21/10 | | | | 0 | | | | | |
| 06/22/10 | | | | 0 | | | | | |
| 06/23/10 | | | | 0 | | | | | |
| 06/24/10 | | | | 0 | | | | | |
| 06/25/10 | | | | 0 | | | | | |
| 06/26/10 | | | | 0 | | | | | |
| 06/27/10 | | | | 0 | | | | | |
| 06/28/10 | 1056 | 145 | 3927 | 2108 | 1448 | 5308 | 0 | 573 | 649 |
| 06/29/10 | 66 | 65 | 748 | 3939 | 3030 | 1058 | 0 | 953 | 361 |
| 06/30/10 | 45 | 0 | 698 | 4201 | 3209 | 944 | 0 | 946 | 0 |
| 07/01/10 | 45 | 0 | 660 | 4932 | 3160 | 928 | 0 | 819 | 560 |
| 07/02/10 | 2279 | 160 | 657 | 4988 | 3037 | 891 | 0 | 869 | 1258 |
| 07/03/10 | 3103 | 176 | 604 | 5060 | 2871 | 712 | 0 | 886 | 1231 |
| 07/04/10 | 2970 | 155 | 592 | 4996 | 2737 | 510 | 0 | 884 | 1230 |
| 07/05/10 | 2959 | 150 | 570 | 5011 | 2644 | 489 | 0 | 971 | 1210 |
| 07/06/10 | 2922 | 138 | 537 | 5036 | 2501 | 622 | 0 | 1021 | 1198 |
| 07/07/10 | 1713 | 98 | 379 | 3051 | 1423 | 509 | 1363 | 535 | 657 |
| 07/08/10 | 2292 | 135 | 525 | 3989 | 2089 | 675 | 3379 | 873 | 817 |
| 07/09/10 | 2447 | 135 | 516 | 3668 | 2057 | 907 | 4426 | 930 | 950 |
| 07/10/10 | 2810 | 131 | 589 | 4140 | 2427 | 1186 | 5559 | 1069 | 1235 |
| 07/11/10 | 2978 | 126 | 626 | 4802 | 2628 | 1183 | 6193 | 1314 | 1269 |
| 07/12/10 | 2888 | 110 | 597 | 5125 | 2563 | 1110 | 6147 | 1344 | 1208 |
| 07/13/10 | 2798 | 118 | 645 | 6067 | 2524 | 1898 | 6056 | 1354 | 1176 |
| 07/14/10 | 2810 | 153 | 603 | 7687 | 2501 | 2052 | 5998 | 1484 | 1315 |

| DATE | CW-1 | CW-1A | CW-2 | CW-3 | CW-4 | CW-5 | CW-6 | CW-7 | CW-7A |
|---|---|---|---|---|---|---|---|---|---|
| 07/15/10 | 2928 | 176 | 604 | 7375 | 2484 | 2024 | 6021 | 1676 | 1423 |
| 07/16/10 | 2929 | 199 | 595 | 8336 | 2474 | 1700 | 6099 | 1754 | 1440 |
| 07/17/10 | 2855 | 193 | 583 | 7527 | 2451 | 1434 | 6089 | 1815 | 1424 |
| 07/18/10 | 2844 | 179 | 565 | 8489 | 2424 | 1259 | 6053 | 1794 | 1394 |
| 07/19/10 | 2841 | 174 | 565 | 8513 | 2406 | 1252 | 5962 | 1971 | 1333 |
| 07/20/10 | 2858 | 173 | 554 | 8777 | 2386 | 1267 | 5927 | 2007 | 1316 |
| 07/21/10 | 2919 | 167 | 567 | 8729 | 2332 | 1242 | 5947 | 2113 | 1304 |
| 07/22/10 | 2952 | 160 | 584 | 9012 | 2309 | 1022 | 5890 | 2153 | 1278 |
| 07/23/10 | 2970 | 157 | 589 | 8667 | 2299 | 1043 | 5878 | 2266 | 1278 |
| 07/24/10 | 3015 | 153 | 577 | 8773 | 2290 | 1094 | 5867 | 2328 | 1271 |
| 07/25/10 | 3047 | 153 | 564 | 8936 | 2281 | 1104 | 5860 | 2376 | 1249 |
| 07/26/10 | 2944 | 146 | 566 | 8889 | 2270 | 1263 | 5845 | 2351 | 1234 |
| 07/27/10 | 2004 | 125 | 434 | 5948 | 1526 | 865 | 3940 | 1478 | 977 |
| 07/28/10 | 3100 | 152 | 612 | 8922 | 2399 | 1162 | 6053 | 2259 | 1296 |
| 07/29/10 | 3083 | 150 | 591 | 7960 | 2450 | 1088 | 6096 | 2215 | 1204 |
| 07/30/10 | 3069 | 151 | 578 | 7497 | 2427 | 1036 | 5916 | 2207 | 1192 |
| 07/31/10 | 3058 | 141 | 567 | 7800 | 2402 | 980 | 5848 | 2316 | 1194 |
| 08/01/10 | 3050 | 146 | 560 | 8365 | 2382 | 1002 | 5800 | 2196 | 1185 |
| 08/02/10 | 2990 | 140 | 563 | 8382 | 2308 | 958 | 5679 | 2106 | 1145 |
| 08/03/10 | 3067 | 135 | 578 | 7891 | 2360 | 957 | 5773 | 2276 | 1142 |
| 08/04/10 | 2973 | 134 | 569 | 8150 | 2348 | 958 | 5748 | 2373 | 1125 |
| 08/05/10 | 3047 | 133 | 561 | 8056 | 2343 | 882 | 5750 | 2378 | 1112 |
| 08/06/10 | 2830 | 130 | 557 | 6613 | 2296 | 829 | 5649 | 1949 | 1079 |
| 08/07/10 | 2831 | 133 | 586 | 6910 | 2395 | 709 | 5792 | 1993 | 1094 |
| 08/08/10 | 2833 | 131 | 577 | 7021 | 2391 | 632 | 5744 | 2144 | 1087 |
| 08/09/10 | 3009 | 133 | 567 | 7547 | 2384 | 807 | 5723 | 2272 | 1090 |
| 08/10/10 | 2968 | 130 | 565 | 7348 | 2378 | 813 | 5723 | 2287 | 1094 |
| 08/11/10 | 3303 | 126 | 562 | 7951 | 2349 | 767 | 5711 | 2390 | 1098 |
| 08/12/10 | 2749 | 127 | 553 | 7789 | 2327 | 797 | 5693 | 2379 | 1096 |
| 08/13/10 | 3062 | 127 | 544 | 8122 | 2320 | 905 | 5657 | 2307 | 1091 |
| 08/14/10 | 2963 | 131 | 539 | 8083 | 2313 | 872 | 5636 | 2312 | 1090 |
| 08/15/10 | 2913 | 129 | 533 | 8112 | 2299 | 855 | 5622 | 2375 | 1086 |
| 08/16/10 | 2911 | 126 | 560 | 8324 | 2284 | 797 | 5615 | 2531 | 1084 |
| 08/17/10 | 2866 | 127 | 558 | 8611 | 2274 | 1026 | 5593 | 2498 | 1082 |
| 08/18/10 | 2866 | 129 | 569 | 8636 | 2258 | 1020 | 5565 | 2506 | 1089 |
| 08/19/10 | | | | 0 | | | | | |
| 08/20/10 | 2555 | 141 | 642 | 8177 | 1907 | 886 | 5221 | 1945 | 1165 |
| 08/21/10 | 2915 | 128 | 629 | 8618 | 2176 | 298 | 6084 | 2334 | 1710 |
| 08/22/10 | 2866 | 124 | 595 | 8159 | 2141 | 381 | 5972 | 2285 | 1592 |
| 08/23/10 | 3175 | 124 | 581 | 7158 | 2448 | 910 | 5813 | 2416 | 1561 |

| DATE | CW-1 | CW-1A | CW-2 | CW-3 | CW-4 | CW-5 | CW-6 | CW-7 | CW-7A |
|---|---|---|---|---|---|---|---|---|---|
| 08/24/10 | 3210 | 123 | 567 | 7607 | 2586 | 862 | 5690 | 2512 | 1469 |
| 08/25/10 | 3223 | 117 | 613 | 8751 | 2529 | 797 | 5625 | 2397 | 1478 |
| 08/26/10 | 2229 | 110 | 496 | 4269 | 1822 | 585 | 4133 | 1581 | 845 |
| 08/27/10 | 3162 | 114 | 645 | 6162 | 2549 | 744 | 5863 | 2390 | 1097 |
| 08/28/10 | 3185 | 114 | 630 | 5490 | 2494 | 719 | 5628 | 2362 | 1144 |
| 08/29/10 | 3151 | 110 | 603 | 4990 | 2455 | 690 | 5546 | 2361 | 1120 |
| 08/30/10 | 3281 | 111 | 592 | 7425 | 2424 | 635 | 5496 | 2379 | 1106 |
| 08/31/10 | 2428 | 100 | 501 | 5152 | 1850 | 499 | 4191 | 1464 | 862 |
| 09/01/10 | 2408 | 97 | 533 | 5386 | 1923 | 532 | 4369 | 1601 | 893 |
| 09/02/10 | 3157 | 101 | 620 | 8854 | 2526 | 642 | 5798 | 2429 | 1137 |
| 09/03/10 | 3291 | 108 | 696 | 6744 | 3118 | 706 | 5681 | 1284 | 1230 |
| 09/04/10 | 3301 | 118 | 633 | 5991 | 3375 | 691 | 5526 | 706 | 1045 |
| 09/05/10 | 3301 | 119 | 615 | 6142 | 3375 | 664 | 5414 | 708 | 44 |
| 09/06/10 | 3294 | 127 | 606 | 6195 | 3352 | 627 | 5337 | 707 | 0 |
| 09/07/10 | 3292 | 120 | 603 | 6055 | 3346 | 584 | 5297 | 705 | 0 |
| 09/08/10 | 2759 | 110 | 583 | 4602 | 2756 | 534 | 4487 | 639 | 0 |
| 09/09/10 | 3218 | 106 | 641 | 5323 | 3205 | 579 | 5326 | 711 | 0 |
| 09/10/10 | 3181 | 102 | 636 | 5124 | 3350 | 542 | 5282 | 709 | 661 |
| 09/11/10 | 3171 | 102 | 638 | 4940 | 3421 | 530 | 5274 | 707 | 1140 |
| 09/12/10 | 3163 | 99 | 638 | 5004 | 3435 | 572 | 5313 | 705 | 1097 |
| 09/13/10 | 3132 | 95 | 747 | 4839 | 3340 | 589 | 5168 | 702 | 1085 |
| 09/14/10 | 3033 | 89 | 632 | 4937 | 3408 | 546 | 5274 | 705 | 1089 |
| 09/15/10 | 3112 | 90 | 630 | 4915 | 3402 | 517 | 5278 | 703 | 1066 |
| 09/16/10 | 3136 | 91 | 629 | 4790 | 3390 | 510 | 5278 | 699 | 1054 |
| 09/17/10 | 3132 | 90 | 628 | 7406 | 3376 | 546 | 5250 | 699 | 1021 |
| 09/18/10 | 3182 | 90 | 621 | 8715 | 3371 | 498 | 5148 | 698 | 996 |
| 09/19/10 | 3154 | 83 | 629 | 8519 | 3357 | 487 | 5145 | 697 | 999 |
| 09/20/10 | 3178 | 86 | 615 | 8356 | 3349 | 447 | 5141 | 696 | 999 |
| 09/21/10 | 3213 | 87 | 605 | 8240 | 3337 | 382 | 5120 | 695 | 987 |
| 09/22/10 | 3150 | 84 | 599 | 6822 | 3281 | 298 | 5043 | 692 | 986 |
| 09/23/10 | 3150 | 84 | 599 | 6822 | 3281 | 298 | 5043 | 692 | 986 |
| 09/24/10 | 3119 | 83 | 590 | 6795 | 3256 | 371 | 5025 | 689 | 983 |
| 09/25/10 | 3138 | 86 | 584 | 6046 | 3259 | 400 | 5040 | 691 | 982 |
| 09/26/10 | 3151 | 90 | 594 | 6723 | 3266 | 348 | 5062 | 689 | 974 |
| 09/27/10 | 3156 | 83 | 588 | 7943 | 3263 | 324 | 5081 | 689 | 961 |
| 09/28/10 | 3132 | 85 | 579 | 7899 | 3249 | 441 | 5089 | 688 | 949 |
| 09/29/10 | 3063 | 83 | 570 | 3987 | 3242 | 397 | 5105 | 695 | 933 |
| 09/30/10 | 3044 | 83 | 580 | 3303 | 3418 | 666 | 5129 | 697 | 932 |
| 10/01/10 | 3040 | 97 | 674 | 7090 | 3508 | 1453 | 5145 | 704 | 1004 |
| 10/02/10 | 3027 | 118 | 642 | 6166 | 3484 | 1047 | 5119 | 701 | 1030 |

| DATE | CW-1 | CW-1A | CW-2 | CW-3 | CW-4 | CW-5 | CW-6 | CW-7 | CW-7A |
|---|---|---|---|---|---|---|---|---|---|
| 10/03/10 | 2981 | 117 | 638 | 6960 | 3446 | 819 | 5076 | 702 | 1049 |
| 10/04/10 | 2981 | 113 | 632 | 5581 | 3446 | 800 | 5090 | 706 | 1071 |
| 10/05/10 | 2985 | 120 | 657 | 8398 | 3461 | 879 | 5129 | 708 | 1136 |
| 10/06/10 | 2963 | 129 | 652 | 8636 | 3459 | 884 | 5124 | 711 | 1167 |
| 10/07/10 | 2929 | 130 | 651 | 8741 | 3448 | 1120 | 5095 | 714 | 1184 |
| 10/08/10 | 2906 | 131 | 638 | 8760 | 3446 | 992 | 5071 | 716 | 1171 |
| 10/09/10 | 2857 | 127 | 643 | 8737 | 3440 | 848 | 5054 | 719 | 1174 |
| 10/10/10 | 2779 | 121 | 639 | 8722 | 3435 | 770 | 5037 | 719 | 1180 |
| 10/11/10 | 2720 | 122 | 643 | 8692 | 3426 | 728 | 5006 | 722 | 1186 |
| 10/12/10 | 2814 | 112 | 637 | 8771 | 3404 | 733 | 4986 | 722 | 1202 |
| 10/13/10 | 3007 | 115 | 625 | 8794 | 3404 | 782 | 4984 | 719 | 1223 |
| 10/14/10 | 2994 | 114 | 621 | 8764 | 3392 | 817 | 4989 | 716 | 1221 |
| 10/15/10 | 2955 | 131 | 641 | 8742 | 3387 | 909 | 5011 | 715 | 1220 |
| 10/16/10 | 2880 | 137 | 637 | 8640 | 3382 | 820 | 5031 | 716 | 1205 |
| 10/17/10 | 2947 | 117 | 632 | 8920 | 3359 | 943 | 5009 | 716 | 1198 |
| 10/18/10 | 2952 | 120 | 618 | 9027 | 3348 | 923 | 5008 | 719 | 1177 |
| 10/19/10 | 2886 | 115 | 626 | 9002 | 3333 | 966 | 5020 | 719 | 1173 |
| 10/20/10 | 2960 | 118 | 618 | 8947 | 3314 | 1002 | 5014 | 720 | 1176 |
| 10/21/10 | 2949 | 118 | 622 | 8921 | 3297 | 1083 | 4995 | 720 | 1181 |
| 10/22/10 | 2870 | 117 | 601 | 8884 | 3283 | 990 | 4959 | 718 | 1150 |
| 10/23/10 | 2731 | 114 | 588 | 8835 | 3261 | 874 | 4921 | 717 | 1153 |
| 10/24/10 | 2613 | 125 | 607 | 8825 | 3235 | 819 | 4873 | 716 | 1154 |
| 10/25/10 | 2854 | 119 | 601 | 8802 | 3355 | 815 | 4838 | 713 | 1158 |
| 10/26/10 | 2907 | 128 | 590 | 8780 | 3410 | 719 | 4811 | 710 | 1161 |
| 10/27/10 | 2869 | 115 | 588 | 8769 | 3393 | 783 | 4812 | 711 | 1157 |
| 10/28/10 | 2928 | 104 | 604 | 8869 | 3368 | 814 | 4824 | 712 | 1140 |
| 10/29/10 | 2516 | 117 | 595 | 8993 | 3348 | 795 | 4845 | 710 | 948 |
| 10/30/10 | 362 | 122 | 635 | 8940 | 3337 | 852 | 4861 | 716 | 944 |
| 10/31/10 | 0 | 127 | 661 | 8890 | 3312 | 845 | 4837 | 719 | 938 |
| 11/01/10 | 658 | 123 | 651 | 8866 | 3388 | 814 | 4834 | 718 | 1009 |
| 11/02/10 | 0 | 124 | 652 | 8828 | 3374 | 795 | 4823 | 718 | 1008 |
| 11/03/10 | 2110 | 117 | 655 | 8924 | 3333 | 823 | 4765 | 713 | 1039 |
| 11/04/10 | 3416 | 105 | 610 | 9116 | 3094 | 940 | 4802 | 714 | 1053 |
| 11/05/10 | 3033 | 113 | 624 | 9063 | 2964 | 1356 | 4770 | 711 | 1097 |
| 11/06/10 | 2967 | 115 | 606 | 9044 | 2896 | 1162 | 4796 | 709 | 1067 |
| 11/07/10 | 2922 | 106 | 604 | 9025 | 2774 | 929 | 4814 | 709 | 1045 |
| 11/08/10 | 2668 | 102 | 573 | 8607 | 2560 | 840 | 4614 | 679 | 1009 |
| 11/09/10 | 2518 | 103 | 568 | 8586 | 2472 | 830 | 4588 | 678 | 1003 |
| 11/10/10 | 2635 | 109 | 584 | 8266 | 2217 | 784 | 4259 | 660 | 957 |
| 11/11/10 | 2984 | 98 | 613 | 9034 | 2329 | 750 | 4575 | 671 | 966 |

| DATE | CW-1 | CW-1A | CW-2 | CW-3 | CW-4 | CW-5 | CW-6 | CW-7 | CW-7A |
|---|---|---|---|---|---|---|---|---|---|
| 11/12/10 | 2983 | 96 | 587 | 8947 | 2273 | 707 | 4544 | 670 | 953 |
| 11/13/10 | 2996 | 96 | 584 | 8892 | 2766 | 716 | 4494 | 671 | 956 |
| 11/14/10 | 2790 | 87 | 524 | 8155 | 2552 | 681 | 4077 | 646 | 915 |
| 11/15/10 | 2100 | 83 | 547 | 6517 | 2197 | 598 | 3345 | 502 | 685 |
| 11/16/10 | 3043 | 86 | 648 | 9578 | 3260 | 839 | 4985 | 722 | 1024 |
| 11/17/10 | 3163 | 111 | 647 | 9327 | 3082 | 788 | 4736 | 725 | 1008 |
| 11/18/10 | 3194 | 113 | 630 | 9198 | 2923 | 750 | 4478 | 722 | 953 |
| 11/19/10 | 2149 | 92 | 487 | 5810 | 2080 | 599 | 3303 | 572 | 726 |
| 11/20/10 | 2854 | 95 | 619 | 9044 | 2876 | 818 | 4663 | 718 | 969 |
| 11/21/10 | 2854 | 88 | 576 | 9075 | 2901 | 689 | 4528 | 720 | 932 |
| 11/22/10 | 3097 | 102 | 561 | 9148 | 2906 | 637 | 4446 | 721 | 983 |
| 11/23/10 | 3178 | 97 | 561 | 9085 | 2896 | 625 | 4417 | 717 | 965 |
| 11/24/10 | 3062 | 90 | 539 | 9016 | 2865 | 573 | 4392 | 717 | 954 |
| 11/25/10 | 3048 | 89 | 521 | 8941 | 2863 | 576 | 4377 | 713 | 966 |
| 11/26/10 | 3006 | 97 | 507 | 8899 | 2899 | 562 | 4372 | 711 | 991 |
| 11/27/10 | 2992 | 89 | 517 | 8876 | 2875 | 537 | 4358 | 708 | 1000 |
| 11/28/10 | 2991 | 90 | 522 | 8857 | 2905 | 484 | 4358 | 705 | 993 |
| 11/29/10 | 3020 | 88 | 502 | 8842 | 2831 | 411 | 4363 | 709 | 960 |
| 11/30/10 | 3044 | 90 | 505 | 8827 | 2757 | 392 | 4381 | 708 | 948 |
| 12/01/10 | 3066 | 92 | 568 | 8978 | 2723 | 859 | 4367 | 709 | 955 |
| 12/02/10 | 3062 | 105 | 597 | 9115 | 623 | 1111 | 4399 | 712 | 972 |
| 12/03/10 | 3044 | 106 | 579 | 9123 | 2277 | 933 | 4369 | 709 | 969 |
| 12/04/10 | 3058 | 111 | 624 | 9113 | 2977 | 876 | 4404 | 714 | 986 |
| 12/05/10 | 3073 | 112 | 659 | 9047 | 2885 | 813 | 4390 | 715 | 989 |
| 12/06/10 | 2371 | 112 | 534 | 6731 | 2183 | 646 | 3272 | 569 | 770 |
| 12/07/10 | 2752 | 126 | 620 | 5164 | 2574 | 720 | 4035 | 653 | 923 |
| 12/08/10 | 3250 | 130 | 636 | 5523 | 2878 | 755 | 4600 | 717 | 1016 |
| 12/09/10 | 2959 | 129 | 594 | 5494 | 2867 | 746 | 4401 | 716 | 997 |
| 12/10/10 | 2914 | 113 | 574 | 5441 | 2863 | 687 | 4351 | 719 | 988 |
| 12/11/10 | 2867 | 110 | 553 | 5388 | 2899 | 670 | 4346 | 720 | 986 |
| 12/12/10 | 2850 | 104 | 542 | 5319 | 2907 | 843 | 4425 | 717 | 1006 |
| 12/13/10 | 2951 | 105 | 604 | 5264 | 2897 | 1029 | 4402 | 717 | 1026 |
| 12/14/10 | 3002 | 115 | 798 | 5228 | 2880 | 900 | 4368 | 716 | 1016 |
| 12/15/10 | 3099 | 102 | 641 | 5202 | 2795 | 821 | 4371 | 718 | 1001 |
| 12/16/10 | 3061 | 100 | 610 | 5172 | 2766 | 939 | 4362 | 719 | 984 |
| 12/17/10 | 3058 | 100 | 579 | 5146 | 2740 | 1011 | 4343 | 720 | 958 |
| 12/18/10 | 3054 | 101 | 544 | 5124 | 2725 | 950 | 4351 | 718 | 955 |
| 12/19/10 | 3058 | 102 | 527 | 5109 | 2727 | 872 | 4343 | 717 | 959 |
| 12/20/10 | 3060 | 111 | 511 | 5388 | 2723 | 848 | 4335 | 717 | 974 |
| 12/21/10 | 1662 | 118 | 601 | 5486 | 2733 | 829 | 4332 | 717 | 992 |

| DATE | CW-1 | CW-1A | CW-2 | CW-3 | CW-4 | CW-5 | CW-6 | CW-7 | CW-7A |
|---|---|---|---|---|---|---|---|---|---|
| 12/22/10 | 1574 | 115 | 687 | 5610 | 2730 | 800 | 4305 | 717 | 1001 |
| 12/23/10 | 2231 | 108 | 669 | 9244 | 2715 | 744 | 4289 | 709 | 999 |
| 12/24/10 | 2234 | 108 | 659 | 9155 | 2706 | 720 | 4285 | 712 | 990 |
| 12/25/10 | 2217 | 103 | 659 | 9059 | 2703 | 722 | 4280 | 712 | 994 |
| 12/26/10 | 1353 | 75 | 361 | 4355 | 1455 | 432 | 2106 | 555 | 556 |
| 12/27/10 | 2965 | 101 | 639 | 8963 | 3131 | 846 | 4369 | 585 | 1088 |
| 12/28/10 | 2982 | 103 | 603 | 9209 | 3051 | 813 | 4576 | 709 | 1024 |
| 12/29/10 | 2950 | 119 | 582 | 9186 | 2986 | 709 | 4460 | 739 | 968 |
| 12/30/10 | 2825 | 110 | 570 | 9068 | 2809 | 646 | 4388 | 735 | 963 |
| 12/31/10 | 2740 | 102 | 567 | 8991 | 2739 | 612 | 4353 | 733 | 953 |
| *Sum* | 906524 | 78775 | 210816 | 2214869 | 1058466 | 739336 | 933409 | 618652 | 496636 |
| *Average* | 2539 | 221 | 591 | 6068 | 2965 | 2071 | 2615 | 1733 | 1391 |

# APPENDIX C

# 2010 Operation and Maintenance Data Summary

# TABLE C-1
# 2010 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | | 1/8/2010 | 1/18/2010 | 2/5/2010 | 2/26/2010 | 3/5/2010 | 3/18/2010 | 4/1/2010 | 4/16/2010 | 5/7/2010 | 5/19/2010 | 6/4/2010 | 6/14/2010 | 7/2/2010 | 7/21/2010 | 8/6/2010 | 8/25/2010 | 9/3/2010 | 9/17/2010 | 10/1/2010 | 10/17/2010 | 11/5/2010 | 11/17/2010 | 12/3/2010 | 12/17/2010 |
| **PTA INFL. PUMP** | | | | | | | | | | | | | | | | | | | | | | | | |
| Full Load = 17 | AMPS | NM | NM | 15.42 | NM | NM | NM | NM | NM | 14.24 | NM | NM | NM | NM | NM | 15.72 | NM | NM | NM | NM | NM | 13.93 | NM | NM | NM |
| | FLOW RATE gpm | 354 | 350 | 350 | 373 | 367 | 368 | 364 | 345 | 341 | 330 | 336 | 332 | 327 | 243 | 345 | 330 | 336 | 319 | 322 | 346 | 319 | 324 | 315 | 333 |
| **PTA BLOWER** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Full Load = 24 | AMP READINGS | NM | NM | 20.48 | NM | NM | NM | NM | NM | 15.94 | NM | NM | NM | NM | NM | 20.53 | NM | NM | NM | NM | NM | 21.31 | NM | NM | NM |
| | PRESSURE inches water | 15.75 | 15.5 | 16.5 | 16.5 | 16.3 | 16.75 | 16.75 | 15.5 | 16 | 16 | 15.25 | 15 | 15.5 | 14.75 | 14.75 | 15 | 14.8 | 15 | 14.8 | 15.5 | 15.75 | 15.5 | 15.5 | 16.75 |
| **TOWER PANEL** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | VISUAL INSPECT | NA | NA | OK | NA | NA | NA | NA | NA | OK | NA | NA | NA | NA | NA | OL | NA | NA | NA | NA | NA | OK | NA | NA | NA |
| | WARWICK SECURE | NA | NA | OK | NA | NA | NA | NA | NA | OK | NA | NA | NA | NA | NA | OK | NA | NA | NA | NA | NA | OK | NA | NA | NA |
| **TOWER SAMPLING** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | AST EFFLUENT pH | 8.2 | NM | 7.9 | NM | 8.1 | 7.83 | 8.4 | NM | 8.4 | NM | 8.41 | NM | 8.5 | NM | 8.3 | NM | 8.3 | NM | 8.4 | NM | 7.8 | NM | 8.2 | NM |
| | AST INFLUENT pH | 7.2 | 7.80 | 7.00 | 7.77 | 7.1 | 6.95 | 7.28 | 7.9 | 7.4 | 6.7 | 7.2 | 7.0 | 7.6 | 6.90 | 7.3 | 6.95 | 7.3 | 6.95 | 7.1 | 6.90 | 7.4 | 6.89 | 7.2 | 6.90 |
| **TFO PROPANE TANK** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PRE-REGULATOR psi | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL |
| | POST-REGULATOR psi | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| **TCA WELLS** | | | | | | | | | | | | | | | | | | | | | | | | | |
| CW-8; Full Load = 15.9 | AMPS | NM | NM | 12.59 | NM | NM | NM | NM | NM | 12.96 | NM | NM | NM | NM | NM | 12.97 | NM | NM | NM | NM | NM | 12.63 | NM | NM | NM |
| CW-8 | FLOW RATE gpm | 102 | 102 | 100 | 102 | 101 | 103 | 102 | 102 | 100 | 100 | 99.7 | 99.8 | OL | OL | 101 | 111 | 110 | 110 | 110 | 110 | 110.0 | 110 | 112 | 111 |
| CW-8 | PRESSURE psi | 65 | 65 | 65 | 68 | 65 | 65 | 65 | 65 | 65 | 68 | 68 | 68 | OL | OL | 68 | 65 | 65 | 68 | 65 | 65 | 68 | 68 | 65 | 68 |
| CW-8 | 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-8 | CLEAN CK. VALVE | 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-8 | HIGH LEVEL ALARM | Y | Y | Y | Y | Y | Y | Y | N | Y | Y | Y | N | Y | Y | Y | N | N | N | N | N | N | N | N | N |
| **WPL WELLS** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | TOTAL FLOW RATE gpm | 228.6 | 223.6 | 228 | 264 | 248 | 245 | 241 | 225 | 219 | 210 | 212 | 206 | 230 | 271 | 230 | 215 | 215 | 203 | 191 | 215 | 196 | 198 | 197 | 203 |
| CW-9; Full Load = 15.9 | AMPS | NM | NM | 15.62 | NM | NM | NM | NM | NM | 15.85 | NM | NM | NM | NM | NM | 16.03 | NM | NM | NM | NM | NM | 16.21 | NM | NM | NM |
| CW-9 | FLOW RATE gpm | 78.9 | 78.9 | 77.1 | 79.5 | 80.1 | 81.5 | 79.1 | 75.3 | 80.5 | 71.9 | 76.9 | 74.5 | 84.9 | 84.5 | 83.4 | 72.5 | 74.1 | 69.5 | 70.4 | 70.1 | 70.1 | 70.5 | 70.5 | 68.9 |
| CW-9 | PRESSURE psi | 17 | 19 | 18 | 19 | 19 | 19 | 10 | 19 | 10 | 18 | 18 | 10 | 19 | 19 | 19 | 19 | 18 | 18 | 10 | 10 | 18 | 18 | 18 | 18 |
| 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 | Y | N | Y | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N |
| CW-13; Full Load = 11.5 | AMPS | NM | NM | 9.93 | NM | NM | NM | NM | NM | 9.87 | NM | NM | NM | NM | NM | 9.92 | NM | NM | NM | NM | NM | 10.02 | NM | NM | NM |
| CW-13 | FLOW RATE gpm | 71.4 | 72.7 | 77.4 | 85.1 | 82.1 | 75.0 | 74.5 | 74.5 | 74.4 | 74.4 | 74.5 | 74.4 | 75.1 | 75.4 | 74.9 | 74.9 | 75.1 | 75.1 | 75.1 | 75.0 | 75.1 | 75.1 | 74.5 | 73.5 |
| CW-13 | PRESSURE psi | 16 | 18 | 18 | 20 | 19 | 18 | 18 | 17 | 17 | 17 | 16 | 17 | 17 | 17 | 16 | 17 | 16 | 16 | 16 | 17 | 16 | 16 | 17 | 17 |
| 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 | Y | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N |
| CW-17; Full Load = 11.5 | AMPS | NM | NM | 11.98 | NM | NM | NM | NM | NM | 11.82 | NM | NM | NM | NM | NM | 11.58 | NM | NM | NM | NM | NM | 11.05 | NM | NM | NM |
| CW-17 | FLOW RATE gpm | 74.2 | 67.8 | 72.4 | 91.8 | 81.5 | 84.5 | 83 | 75.5 | 59.5 | 60.5 | 57.5 | 53.5 | 66.5 | 71.4 | 70.1 | 63.5 | 64.5 | 74.9 | 44.1 | 67.1 | 46.4 | 50.4 | 50.5 | 59.9 |
| CW-17 | PRESSURE psi | 15 | 17 | 17 | 19 | 18 | 18 | 18 | 17 | 17 | 17 | 16 | 16 | 17 | 18 | 17 | 17 | 16 | 16 | 15 | 17 | 15 | 16 | 16 | 17 |
| 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 | Y | N | N | N | N | N | N | N | N | N | N | N | N | N | N | Y | N | N | N |
| CW-15A; Full Load = 1.6 | AMPS | NM | NM | 1.52 | NM | NM | NM | NM | NM | 1.48 | NM | NM | NM | NM | NM | 1.43 | NM | NM | NM | NM | NM | 1.34 | NM | NM | NM |
| CW-15A | FLOW RATE gpm | 4.1 | 4.2 | 4.1 | 4.1 | 4 | 4.5 | 4.4 | 4.4 | 4.1 | 3.5 | 3.1 | 3.5 | 3.5 | 4.0 | 4.1 | 4.0 | 4.1 | 4.9 | 3.0 | 2.8 | 2.0 | 2.0 | 1.0 | 1.5 |
| CW-15A | PRESSURE psi | NR | 35 | 38 | 42 | 40 | 34 | 31 | 34 | 24 | 26 | 30 | 25 | 38 | 33 | 24 | 12 | 12 | 10 | 10 | 40 | 78 | 80 | 76 | 73 |
| 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 |
| SVE influent pressure | inches of water | OL | 12 | 12 | 11 | 12 | 11 | 10 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | OL | OL | 12 | 11 | 12 | OL |
| AST influent pressure | inches of water | 10.9 | 10.60 | 11.5 | 11.4 | 11.5 | 11.0 | 10.3 | 10.2 | 10.4 | 10.3 | 10.1 | 9.9 | 10.8 | 10.1 | 10.1 | 10.1 | 10.1 | 9.8 | 9.7 | 9.8 | 10.3 | 10.2 | 12.1 | 11.7 |
| GAC influent pressure | inches of water | 7.6 | 8.2 | 8.8 | 8.9 | 9 | 8.8 | 8.2 | 7 | 8.1 | 7.9 | 8.1 | 7.9 | 8.5 | 7.9 | 7.8 | 7.6 | 7.4 | 7.5 | 7.7 | 7.9 | 8.1 | 8.3 | 9.1 | 9.1 |
| SVE pitot pressure | inches of water | OL | 0.04 | 0.025 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.06 | 0.06 | 0.06 | 0.06 | 0.006 | 0.06 | 0.06 | 0.05 | 0.05 | OL | OL | 0.04 | 0.04 | 0.04 | OL |
| AST pitot pressure | inches of water | 0.33 | 0.29 | 0.31 | 0.29 | 0.3 | 0.29 | 0.29 | 0.29 | 0.29 | 0.26 | 0.24 | 0.26 | 0.28 | 0.28 | 0.27 | 0.27 | 0.28 | 0.26 | 0.27 | 0.29 | 0.26 | 0.27 | 0.26 | 0.28 |
| SVE vacuum | inches of water | OL | 44 | 11.5 | 38 | 38 | 38 | 44 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | OL | OL | 38 | 38 | 38 | OL |

Notes:

Y - Yes NA - Not Applicable

N - No NM - Not Measured

# TABLE C-1
# 2010 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | | 1/8/2010 | 1/18/2010 | 2/5/2010 | 2/26/2010 | 3/5/2010 | 3/18/2010 | 4/1/2010 | 4/16/2010 | 5/7/2010 | 5/19/2010 | 6/4/2010 | 6/14/2010 | 7/2/2010 | 7/21/2010 | 8/6/2010 | 8/25/2010 | 9/3/2010 | 9/17/2010 | 10/1/2010 | 10/17/2010 | 11/5/2010 | 11/17/2010 | 12/3/2010 | 12/17/2010 |
| **NPBA WELLS** | | | | | | | | | | | | | | | | | | | | | | | | |
| | V.I.S. INSP. CONTR. PANEL | NA | NA | OK | NA | NA | NA | NA | NA | OK | NA | NA | NA | NA | NA | OK | NA | NA | NA | NA | NA | OK | NA | NA | NA |
| | WARWICK SECURE | NA | NA | OK | NA | NA | NA | NA | NA | OK | NA | NA | NA | NA | NA | OK | NA | NA | NA | NA | NA | OK | NA | NA | NA |
| | SUMP PUMP OPR. CHK. | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK |
| | MANIFOLD PRESS. psi | 7 | 0 | 0 | 0 | 5 | 5 | 5.5 | 7 | 2 | 3 | 0 | NM | 9 | 5 | 6 | 5 | 5 | 1 | 0 | 4 | 2 | 3 | 4 | 0 |
| CW-1; Full Load = 1.6 | AMPS | NM | NM | 1.47 | NM | NM | NM | NM | NM | OL | NM | NM | NM | NM | NM | 1.42 | NM | NM | NM | NM | NM | 1.52 | NM | NM | NM |
| CW-1 | FLOW-RATE gpm | 2.1 | 2.7 | 2.4 | 2.2 | 2.3 | 2.5 | 2.4 | 2.2 | OL | OL | OL | OL | 2.5 | 2.0 | 2.1 | 2.2 | 2.2 | 2.2 | 2.1 | 2.0 | 2.2 | 2.2 | 2.1 | 2.1 |
| CW-1 | PRESSURE psi | 92 | 85 | 72 | 60 | 50 | 50 | 42 | 40 | OL | OL | OL | OL | 100 | 96 | 90 | 105 | 106 | 108 | 100 | 68 | 106 | 106 | 105 | 104 |
| CW-1 | CLEAN "Y" STRAINER | Y | Y | Y | Y | Y | Y | Y | Y | OL | OL | OI | OL | 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 | OL | OL | OL | OL | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| CW-1 | CLEAN FLOWSENSOR | Y | Y | Y | Y | Y | Y | Y | Y | OL | OL | OL | OL | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| CW-1 | HIGH LEVEL ALARM? | N | N | N | N | N | N | N | N | N | Y | N | N | Y | N | N | N | N | N | N | Y | N | N | N | N |
| CW-1A; Full Load = 1.6 | AMPS | NM | NM | 1.53 | NM | NM | NM | NM | NM | 1.47 | NM | NM | NM | NM | NM | 1.47 | NM | NM | NM | NM | NM | 1.48 | NM | NM | NM |
| CW-1A | FLOW-RATE gpm | 0.4 | 0.3 | 0.3 | 0.2 | 0.3 | 0.4 | 0.4 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| CW-1A | PRESSURE psi | 18 | 10 | 16 | 10 | 20 | 20 | 18 | 18 | 20 | 18 | 10 | 18 | 20 | 20 | 20 | 20 | 20 | 20 | 10 | 10 | 15 | 20 | 15 | 15 |
| 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 | 1.51 | NM | NM | NM | NM | NM | 1.52 | NM | NM | NM | NM | NM | 1.60 | NM | NM | NM | NM | NM | 1.67 | NM | NM | NM |
| CW-2 | FLOW-RATE gpm | OL | OL | 0.4 | 0.5 | 0.5 | 0.5 | 0.5 | 0.4 | 0.5 | 0.4 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 1.0 | 0.5 | 1.0 | 0.5 |
| CW-2 | PRESSURE psi | OL | OL | 30 | 50 | 20 | 22 | 24 | 20 | 30 | 30 | 10 | 15 | 16 | 30 | 20 | 20 | 30 | 20 | 20 | 20 | 20 | 20 | 30 | 20 |
| CW-2 | CLEAN "Y" STRAINER | OL | OL | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| CW-2 | CLEAN CK. VALVE | OL | OL | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| CW-2 | CLEAN FLOWSENSOR | OL | OL | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| CW-2 | HIGH LEVEL ALARM? | OL | OL | N | N | N | 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 | 1.36 | NM | NM | NM | NM | NM | 1.37 | NM | NM | NM | NM | NM | 1.35 | NM | NM | NM | NM | NM | 1.36 | NM | NM | NM |
| CW-3 | FLOW-RATE gpm | 4 | 3.3 | 2.6 | 3.5 | 3.7 | 3.8 | 3.8 | 2.8 | 3.7 | 3.7 | 3.7 | 3.4 | 3.3 | 6.7 | 3.5 | 3.7 | 6.3 | 3.1 | 2.5 | 6.1 | 6.4 | 6.6 | 6.2 | 3.6 |
| CW-3 | PRESSURE psi | 42 | 65 | 18 | 60 | 56 | 58 | 30 | 14 | 62 | 56 | 50 | 28 | 69 | 72 | 66 | 60 | 58 | 55 | 0 | 70 | 58 | 62 | 52 | 42 |
| 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 | Y | Y | Y | Y | N | N | N | N | N | Y | Y | N | N | N | N | N | Y | Y | Y | N | N | Y | N |
| CW-4; Full Load = 1.6 | AMPS | NM | NM | 1.35 | NM | NM | NM | NM | NM | 1.3 | NM | NM | NM | NM | NM | 1.30 | NM | NM | NM | NM | NM | 1.34 | NM | NM | NM |
| CW-4 | FLOW-RATE gpm | 2.8 | 2.9 | 2.4 | 2.5 | 2.4 | 2.7 | 2.3 | 2.3 | 2.2 | 2.3 | 2.1 | 1.9 | 2.3 | 1.8 | 1.6 | 2.2 | 2.1 | 2.3 | 2.2 | 2.4 | 2.0 | 2.2 | 2.0 | 1.9 |
| CW-4 | PRESSURE psi | 80 | 88 | 54 | 42 | 38 | 22 | 10 | 66 | 62 | 72 | 85 | 78 | 77 | 66 | 56 | 30 | 42 | 46 | 44 | 36 | 0 | 100 | 98 | 95 |
| 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 | N | Y | N | N | N | N | N | N | N | Y | N | N | Y | Y | N |
| CW-5; Full Load = 6 | AMPS | NM | NM | 1.35 | NM | NM | NM | NM | NM | 1.28 | NM | NM | NM | NM | NM | 1.37 | NM | NM | NM | NM | NM | 1.36 | NM | NM | NM |
| CW-5 | FLOW-RATE gpm | 3.1 | 2.8 | 2.4 | 4.0 | 4.9 | 4.7 | 4.5 | 2.4 | 1.3 | 1.6 | 1.2 | 1.3 | 1.0 | 1.6 | 1.5 | 1.4 | 1.4 | 0.6 | 0.6 | 0.5 | 0.8 | 0.6 | 0.8 | 0.7 |
| CW-5 | PRESSURE psi | 70 | 82 | 54 | 48 | 26 | 26 | 42 | 66 | 74 | 70 | 70 | 58 | 64 | 66 | 66 | 65 | 74 | 80 | 80 | 88 | 84 | 80 | 72 | 72 |
| 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 | Y | Y | N | Y | Y | N | N | N | N | Y | N | N | N | N | N | N | N | N | Y | Y | Y | N | N |
| CW-6; Full Load = 1.6 | AMPS | NM | NM | OL | NM | NM | NM | NM | NM | OL | NM | NM | NM | NM | NM | 1.40 | NM | NM | NM | NM | NM | 1.33 | NM | NM | NM |
| CW-6 | FLOW-RATE gpm | 3.1 | 3.2 | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL | 4.3 | 4.3 | 4.0 | 4.0 | 3.7 | 3.5 | 3.5 | 3.3 | 3.5 | 2.0 | 3.0 |
| CW-6 | PRESSURE psi | 46 | 40 | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL | 40 | 40 | 38 | 32 | 40 | 42 | 36 | 32 | 28 | 48 | 48 |
| CW-6 | CLEAN "Y" STRAINER | Y | Y | Y | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| CW-6 | CLEAN CK. VALVE | Y | Y | Y | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| CW-6 | CLEAN FLOWSENSOR | Y | Y | Y | OL | OL | OL | OL | OL | OL | OL | OL | OL | OL | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| CW-6 | HIGH LEVEL ALARM? | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | N | N | N | N | N | N | N | N | N | N | N |
| CW-7; Full Load = 1.6 | AMPS | NM | NM | 1.5 | NM | NM | NM | NM | NM | 1.47 | NM | NM | NM | NM | NM | 1.46 | NM | NM | NM | NM | NM | 1.48 | NM | NM | NM |
| CW-7 | FLOW-RATE gpm | 1 | 1 | 0.8 | 0.4 | 0.5 | 0.6 | 0.4 | 0.7 | 0.6 | 0.5 | 0.7 | 0.7 | 0.4 | 0.6 | 0.5 | 0.7 | 1.0 | 0.5 | 1.0 | 0.8 | 1.0 | 1.0 | 1.0 | 1.0 |
| CW-7 | PRESSURE psi | 22 | 20 | 10 | 0 | 10 | 12 | 15 | 18 | 30 | 30 | 60 | 40 | 30 | 40 | 30 | 30 | 30 | 60 | 80 | 90 | 110 | 100 | 90 | 95 |
| 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 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N |
| CW-7A; Full Load = 1.6 | AMPS | NM | NM | 1.3 | NM | NM | NM | NM | NM | 1.56 | NM | NM | NM | NM | NM | 1.57 | NM | NM | NM | NM | NM | 1.49 | NM | NM | NM |
| CW-7A | FLOW-RATE gpm | 1.5 | 1.5 | 1.4 | 1.4 | 1.4 | 1.7 | 2.0 | 0.7 | 1.4 | 0.7 | 1.2 | 0.9 | 1.1 | 0.8 | 0.6 | 0.7 | 1.6 | 0.9 | 1.0 | 0.8 | 1.0 | 0.9 | 1.1 | 1.0 |
| CW-7A | PRESSURE psi | 108 | 100 | 80 | 76 | 74 | 86 | 86 | 22 | 64 | 20 | 60 | 40 | 36 | 30 | 30 | 30 | 128 | 127 | 126 | 120 | 105 | 95 | 90 | 90 |
| 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 | Y | N | N | N | N | N | N |

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

# APPENDIX D

# TFO Demolition Report

# MEMORANDUM

SAIC From Science to Solutions

To: File - Harley-Davidson Motor Company Operations, Inc. (Harley-Davidson) York Facility Remediation Trust Fund
From: Rodney G. Myers/Emily M. Wade (SAIC)

Date: February 10, 2011
Re: Demolition of the Thermal Fume Oxidizer (TFO), Groundwater Treatment System
Distribution: Sharon Fisher (Harley-Davidson), Ralph Golia (AMO Environmental Decisions), Nicki Fatherly (USACE, Baltimore District)

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The purpose of this memorandum is to summarize the demolition of the TFO. An illustration of the TFO before it was demolished is shown on Figure 1, below.


Figure 1. Photo of Thermal Fume Oxidizer before demolition (arrows show direction of off-gas flow).

## SUMMARY

Abandonment and removal/salvage of the TFO (and associated Lower Flammability Limit (LFL) monitoring equipment) was recommended, due to deterioration and resultant airflow restriction found in the heat exchanger unit; uncertainty regarding the long term reliability of other TFO components; and the high cost of heat exchanger replacement. The TFO was in operation since 1994 (for over 15 years) and has exceeded its life expectancy. Replacement was not recommended, due to availability of the existing granular-activated carbon (GAC) for off-gas VOC treatment.

## DEMOLITION OF THE TFO

Prior to the demolition activities, SAIC removed all monitoring and electrical equipment and secured the control panel from all electrical sources. Wiring was pulled from the active TFO components to the TFO control panel and disconnected. SAIC will attempt to return the Lower Flammability Limit (LFL) meter for refund or resale. Unused portions of compressed hydrogen cylinders were returned to the manufacturer.

SAIC subcontracted with Stewart & Tate, Inc. to remove the remaining TFO and LFL equipment (with the exception of the moisture knock-out tank, blower and associated control panel). York Waste Disposal was used for transportation and disposal of non-salvageable construction/demolition waste and refractory material, using existing Harley-Davidson waste profiles. Consolidated Scrap Resources (CSR) was contacted and scheduled for salvage of metallic scrap from the TFO to include carbon steel, stainless steel, aluminum, and insulated copper wiring. CSR provided individual roll-off containers for salvage/credit of each type of scrap metal.

The demolition activities began on September 28, 2010. Stewart & Tate (S&T) disassembled, removed, and segregated metal for salvage/scrap or for disposal of all TFO and LFL components. The existing moisture knock-out tank and TFO blower were retained, in the event that future or additional off-gas scrubbing is required for the GWTS. The LFL utilities and compressed gas supply pad (block wall and fencing) was removed and disposed as construction/demolition waste. Photographs of the demolition process are included in Appendix A. Items segregated for salvage (via Consolidated Scrap Resources [CSR]) included exterior aluminum sheeting, stainless steel (from the heat exchanger); carbon steel (from structures, pipe, etc); and wiring. Items for disposal included all refractory, fire brick and insulation; non-metalic ductwork; and miscellaneous construction debris (block, etc). Stewart & Tate completed the demolition work on October 29, 2010.

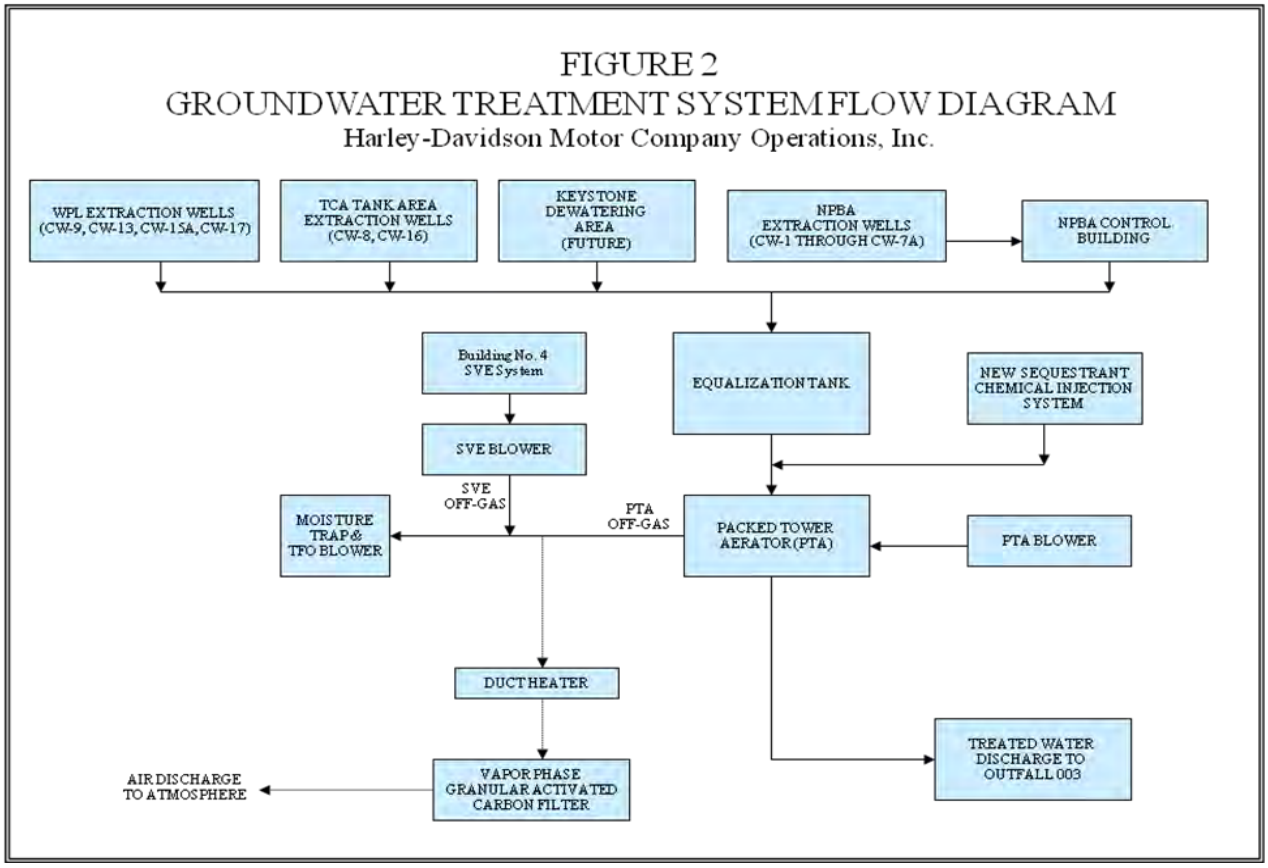
CSR issued a salvage credit settlement directly to the Trust Fund for the amount of $20,470.78 in accordance with current salvage rates and net weights shipped of each salvage material. The credit settlement for the salvaged material is included in Appendix B. The York waste invoice for disposal of the refractory, insulation, and other construction/demolition debris (two loads) totaled $666.16, which is included in Appendix C.

## COMPLETION OF TFO ABANDONMENT

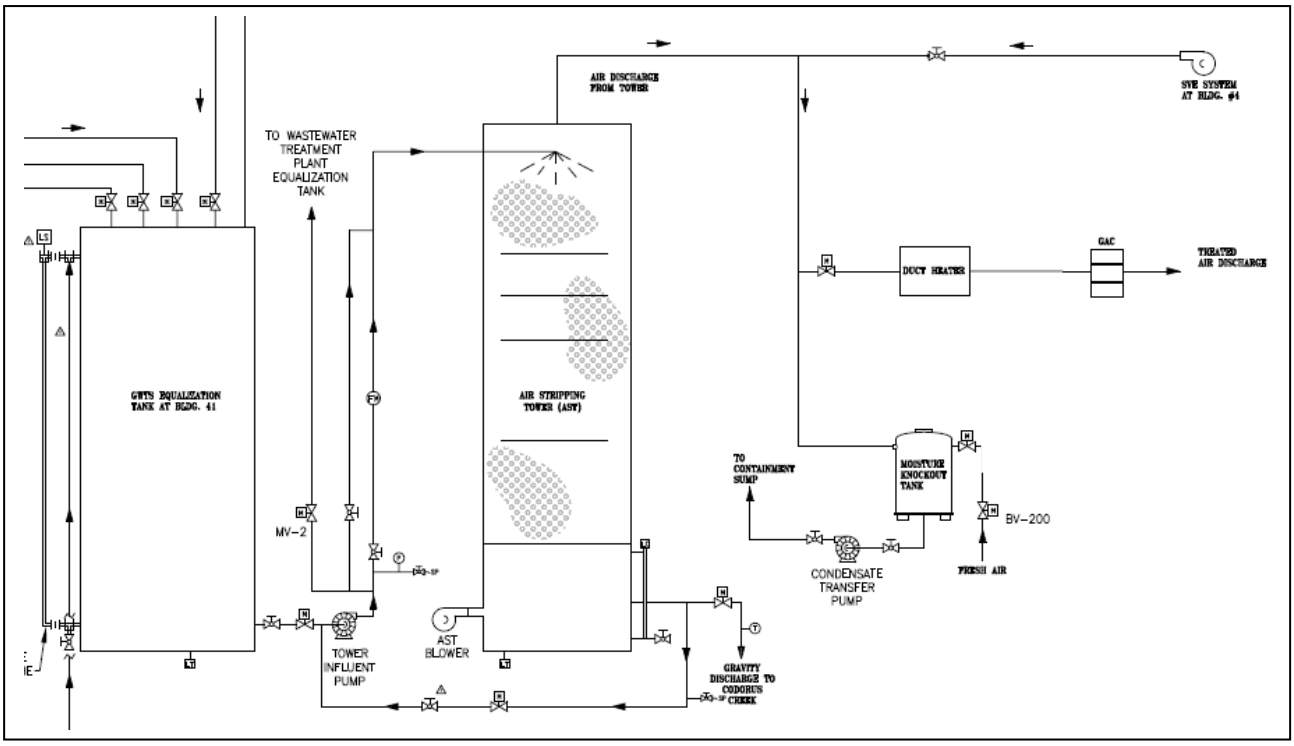
Following demolition, Stewart & Tate restored the surrounding area and installed a guardrail along the east side of the former TFO pad. All wall penetrations were sealed. SAIC completed the removal and securing of the electrical control panel components, and exterior conduit connections. Wiring and control capacity was retained for the moisture knock-out tank pump and monitoring sensor; and for the

TFO blower. The exterior disconnect switch for the TFO blower was secured in the off position with a pad lock and lock-out tag. The former waste air valve actuator was disconnected, and secured in the closed position with a manual valve. In addition, the discharge opening to the former TFO blower was sealed with a PVC cap.

All off-gas treatment for the groundwater treatment system (GWTS) is now facilitated solely via the GAC unit for VOC treatment. A chemical sequestering agent injection system was added to address scale buildup on the PTA packing, and should help to eliminate the need for any future acid washing of the PTA. Figure 2 illustrates the current groundwater treatment system flow diagram and schematic.




**GROUNDWATER AND SVE TREATMENT SYSTEM SCHEMATIC**



# APPENDIX A
# Photographs


TFO before demolition.


S&T removing the bolts in the flexible joint.


Crane used to lift stacks.


TFO western stack lying on the ground looking at the refractory bricks.


TFO burner on left side of stack and insulation can be seen on the right side of the stack.


TFO recuperator rods are being removed for scrap. The near side is carbon steel and the far side is stainless steel. These corroded rods restricted air flow through the TFO.


Stainless steel recuperator rods.


The bottom of the recuperator where the air passed from the carbon steel to the stainless steel rods.


Looking east inside the recuperator once the rods were removed.

View of the east stack of the TFO (effluent side) being lifted off.


TFO looking east. Both stacks, the recuperator, and the platform was removed.


The eastern stack is on the ground for demolition.


Looking east at the TFO pad after the TFO and hydrogen storage area were removed.


Looking northeast at the TFO pad after the TFO was removed.

# APPENDIX B
# CSR Settlement Credit Statement

**SETTLEMENT**

CSR
Consolidated Scrap Resources, Inc.

PO BOX 389
YORK, PA 17405

**Account:** YORK102
YORK FACILITY REMED TRUST FUND
C/O RALPH GOLIA/AMO ENVIRON
P O BOX 410
DANBORO PA 18916

11/10/2010

Page 1 of 1

| Invoice # | Recv Date | Description | Comment | Reference | Net | Price / UM | Amount |
|---|---|---|---|---|---|---|---|
| 37507 | 10/01/2010 | UNPREPARED STEEL/SHEA | | 37507 | 7,980 | 200.00 / GT | 712.50 |
| 1207685 | 10/07/2010 | UNPREPARED STEEL/SHEA | | 1207685 | 8,020 | 200.00 / GT | 716.07 |
| 1208726 | 10/08/2010 | 18/8 PREPARED SS SOLIDS | | 1208726 | 10,180 | 0.90 / LB | 9,162.00 |
| 1208726 | 10/08/2010 | 18/8 UNPREPARED SS SOLI | | 1208726 | 8,040 | 0.85 / LB | 6,834.00 |
| 1208870 | 10/08/2010 | UNPREPARED STEEL/SHEA | | 1208870 | 7,140 | 200.00 / GT | 637.50 |
| 1209894 | 10/11/2010 | UNPREPARED STEEL/SHEA | | 1209894 | 6,360 | 200.00 / GT | 567.86 |
| 1210520 | 10/12/2010 | UNPREPARED STEEL/SHEA | | 1210520 | 6,720 | 200.00 / GT | 600.00 |
| 1211644 | 10/13/2010 | UNPREPARED STEEL/SHEA | | 1211644 | 6,280 | 200.00 / GT | 560.71 |
| 1211644 | 10/13/2010 | UNPREPARED STEEL/SHEA | | 1211644 | 3,300 | 200.00 / GT | 294.64 |
| 1215085 | 10/14/2010 | LOW GRADE INSULATED CC | | 1215085 | 17 | 0.90 / LB | 15.30 |
| 1215085 | 10/14/2010 | 18/8 PREPARED SS SOLIDS | | 1215085 | 67 | 0.90 / LB | 60.30 |
| 1215085 | 10/14/2010 | PAINTED ALUMINUM SIDINC | | 1215085 | 516 | 0.60 / LB | 309.60 |
| | | | | **Totals** | 64,620 | | 20,470.48 |

CONSOLIDATED SCRAP RESOURCES, INC.
120 HOKES MILL ROAD - YORK, PA 17405

**Check Date:** 11/10/2010 **Check #:** 224335

| Transaction | Type | Tran-Date | Comment | Amount |
|---|---|---|---|---|
| | | | Refer to enclosed statement for additional payment detail. | |

**Vendor:** YORK102 YORK FACILITY REMED TRUST FUND **Amount:** 20,470.48

THIS DOCUMENT CONTAINS ULTRAVIOLET FIBERS, A CHEMICAL VOID STAIN FEATURE, BLEED THRU MICR NUMBERS AND A WATERMARK ON THE BACK

CSR

Consolidated Scrap Resources, Inc.
120 HOKES MILL ROAD, P.O. BOX 389
YORK, PA 17405-0389

M&T BANK
HARRISBURG, PENNSYLVANIA

60-295
313

| CHECK # | DATE | AMOUNT |
|---|---|---|
| 224335 | 11/10/2010 | **********20,470.48 |

PAY EXACTLY**********20,470 DOLLARS AND 48 CENTS

PAY TO THE ORDER OF

YORK FACILITY REMED TRUST FUND
C/O RALPH GOLIA/AMO ENVIRON
P O BOX 410
DANBORO, PA 18916

CONSOLIDATED SCRAP RESOURCES, INC.

MP

MP

VOID AFTER 180 DAYS

⑈224335⑈ ⑆031302955⑆ 8886752⑆

# APPENDIX C
# York Waste Invoice

YORK WASTE DISPOSAL
REPUBLIC SERVICES
3730 Sandhurst Drive
York, PA 17406

## Account Summary

| | |
|---|---|
| Account Number | 3-0611-0105167 |
| Invoice Date | October 31, 2010 |
| Invoice Number | 0611-000443928 |
| Previous Balance | $0.00 |
| Payments/Adjustments | $0.00 |
| Unpaid Balance | $0.00 |
| Current Invoice Charges | $666.16 |

## Pay This Amount

**$666.16**
**Due By: 11/20/10**

## Contact Information

| | |
|---|---|
| Customer Service | (717) 845-1557 |
| Customer Service | (800) 210-9675 |

## Important Information

FOR YOUR CONVENIENCE TWO ALTERNATIVE METHODS TO PAY: WWW.DISPOSAL.COM OR PAY BY PHONE @ 877-892-9729 BOTH METHODS HAVE NO PROCESSING FEE

**To pay on-line or sign up for convenient auto pay, go to:**

A division of REPUBLIC SERVICES
Visit us at www.disposal.com

## BENHAM AN SAIC COMPANY

**Invoice**
Page 1 of 2

### Current Invoice Charges

Benham/Harley Davidson Bldg #41 (L1) PO SUBK#450MR00188
York, PA

1 - Rolloff (30 Yd) On Call Service (S1) Construction/Demolition Debris

| Date | Description | | Reference | Quantity | Unit Price | Amount |
|---|---|---|---|---|---|---|
| 10/27 | Disposal/Recycling | | 104478 | 3.7900 Tons | | $181.92 |
| | Receipt Number | 30940 | | | | |
| 10/27 | Basic Service | | Ju/Jm | 1.0000 | $95.00 | $95.00 |
| | Receipt Number | 30940 | | | | |

1 - Rolloff (30 Yd) On Call Service (S2) Special Waste

| Date | Description | | Reference | Quantity | Unit Price | Amount |
|---|---|---|---|---|---|---|
| 10/27 | Disposal/Recycling | | 104578 | 6.1300 Tons | | $294.24 |
| | Receipt Number | 30941 | | | | |
| 10/27 | Basic Service | | Ju/Jm | 1.0000 | $95.00 | $95.00 |
| | Receipt Number | 30941 | | | | |
| | **Current Invoice Charges** | | | | | **$666.16** |

450MR00188
R2'd 11/8/10

OK. 11/8/10

| CURRENT | 30 DAY | 60 DAY | 90+ DAY |
|---|---|---|---|
| 666.16 | 0.00 | 0.00 | 0.00 |

S A

- Visit our website, www.disposal.com to make your payment electronically or to sign up for our convenient automatic payment plan.
- Please see reverse side for terms and conditions

YORK WASTE DISPOSAL
REPUBLIC SERVICES
3730 Sandhurst Drive
York, PA 17406

Please Return This Portion With Payment

| | |
|---|---|
| Pay This Amount | $666.16 |
| Account Number | 3-0611-0105167 |
| Invoice Date | October 31, 2010 |
| Invoice Number | 0611-000443928 |
| Payment Due Date | November 20, 2010 |

Return Service Requested
003215-000001-003215 2067910 2240ST03_S 3
BENHAM AN SAIC COMPANY
SUBK#450MR00188
6310 ALLENTOWN BLVD
HARRISBURG PA 17112-2739

Make Checks Payable To:
YORK WASTE DISPOSAL #611
PO BOX 9001099
LOUISVILLE, KY 40290-1099

3061101051670000000443928000006661600006661611