26 March 2025

Ms. Brenda Fruchtl, PG
Pennsylvania Department of Environmental Protection
Clean Water Program
Southcentral Regional Office Building
909 Elmerton Avenue
Harrisburg, PA 17110-8200

Re: 2024 Annual Operations Report
Former York Naval Ordnance Plant, York, Pennsylvania
Harley-Davidson NPDES Permit No. PA 0085677

Dear Brenda:

On behalf of Harley-Davidson Motor Company Operations, Inc. (Harley-Davidson), Hydro-Terra Group (HTG) is providing you with a copy of the attached report entitled "Groundwater Extraction and Treatment System Annual Operations Report for the Period January 1, 2024, through December 31, 2024."

Please contact me with any questions or comments.

Respectfully submitted,

HYDRO-TERRA GROUP

Emily M. Wade
Senior Geologist/Project Manager

Attachment

cc: James Rea – PADEP (w/ enclosure)
Ignazio Sabella - Harley-Davidson (w/ electronic copy)
Timothy Scripko – Harley-Davidson (w/ electronic copy)
Ralph Golia – AMO Environmental Decisions (w/ electronic copy)
Hamid Rafiee – USACE (w/ electronic copy)
Kristin Koroncai – USEPA (w/ electronic copy)
Greg Norris – NorthPoint Development (w/ electronic copy)
Chantelle Jackson-Gaines - NorthPoint Development (w/ electronic copy)
Todd Eaby – Susquehanna River Basin Commission (w/ electronic copy)
Chris O'Neil – Groundwater Sciences Corporation (w/ electronic copy)
Rodney Myers – HTG (w/enclosure)

www.hydro-terra.com

GROUNDWATER EXTRACTION
AND TREATMENT SYSTEM
ANNUAL OPERATIONS REPORT
FOR THE PERIOD
JANUARY 1 THROUGH DECEMBER 31, 2024
FORMER YORK NAVAL ORDNANCE PLANT

Prepared for:

former York Naval Ordnance Plant Remediation Team

March 2025

7420 Derry Street, Harrisburg, PA 17111 717.980.5150 fax 717.980.5937

Groundwater Extraction and Treatment System
Annual Operations Report
for the Period
January 1 through December 31, 2024
Former York Naval Ordnance Plant

Prepared for:

former York Naval Ordnance Plant Remediation Team

By:

Hydro-Terra Group
7420 Derry Street
Harrisburg, PA 17111
(717) 980-5150

March 2025

Respectfully submitted,

Emily M. Wade
Senior Geologist/Project Manager

Rodney G. Myers, CHMM
Senior Program Manager

TABLE OF CONTENTS

Page

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

LIST OF ACRONYMS

1,1-DCE	-	1,1-dichloroethene
Act 2	-	Land Recycling and Environmental Remediation Standards Act
AWQC	-	applicable water quality criteria
cfm	-	cubic feet per minute
cis-1,2-DCE	-	cis-1,2-dichloroethene
DMR	-	Discharge Monitoring Report
EPA	-	United States Environmental Protection Agency
fYNOP	-	former York Naval Ordnance Plant
GAC	-	granular-activated carbon
GIS	-	Global Information Services
gpd	-	gallons per day
gpm	-	gallons per minute
GSC	-	Groundwater Sciences Corporation
GWTS	-	groundwater extraction and treatment system
Harley-Davidson	-	Harley-Davidson Motor Company Operations, Inc.
HDPE	-	high density polyethylene
HTG	-	Hydro-Terra Group
lbs/day	-	pounds per day
NB4	-	North Building 4
NPBA	-	Northeast Property Boundary Area
NPDES	-	National Pollutant Discharge Elimination System
NP York	-	NP York 58, LLC
O&M	-	operation and maintenance
PADEP	-	Pennsylvania Department of Environmental Protection
PCE	-	tetrachloroethene
PLC	-	programmable logic controller
ppm	-	parts per million
PRCP	-	Post-Remediation Care Plan
PTA	-	packed tower aerator
SPBA	-	Southern Property Boundary Area
SRBC	-	Susquehanna River Basin Commission
TCA	-	1,1,1-trichloroethane
TCE	-	trichloroethene
µg/L	-	micrograms per liter
VFD	-	variable frequency drive
VOCs	-	volatile organic compounds
WPL	-	West Parking Lot

EXECUTIVE SUMMARY

This report presents a summary of the groundwater extraction and treatment system (GWTS) operations and maintenance (O&M) and groundwater extraction well monitoring during 2024 at the former York Naval Ordnance Plant (fYNOP). The fYNOP GWTS is located at the Harley-Davidson Motor Company Operations, Inc. (Harley-Davidson) facility in York, Pennsylvania. The fYNOP GWTS has been in operation for over 34 years (since November 1990) and consists of numerous collection wells in two areas (the West Parking Lot (WPL) and Southern Property Boundary Area (SPBA) of fYNOP.

During 2024, three active collection wells (CW-21, CW-22, and CW-23) were operational in the SPBA and five collection wells (CW-9, CW-13, CW-15A, CW-17, and CW-20) in the WPL were off, but remain functional.

Approximately one and a half (1.5) pounds of volatile organic compounds (VOCs) were removed by the GWTS during 2024. The total amount of groundwater extracted during 2024 was approximately 3.3 million gallons. Cumulatively, approximately 49,130 pounds of VOCs and 3.88 billion gallons of groundwater have been removed by the GWTS since 1990.

Monthly, quarterly, and annual sampling data were collected in 2024, and site-wide groundwater elevations were collected in September 2024. These data, along with laboratory analytical data, will be presented in the 2024 Annual Groundwater and Surface Water Monitoring Report (to be prepared by Groundwater Sciences Corporation [GSC]).

1.0 INTRODUCTION

This report presents a summary of the operating record for the fYNOP GWTS and includes collection well water quality data obtained during 2024. The fYNOP facility consists of the Harley-Davidson York facility and the West Campus property (as described below). The fYNOP is located in Springettsbury Township, York County, Pennsylvania, as shown on **Figure 1-1**. This report covers the 12-month period from January 1 through December 31, 2024. Hydro-Terra Group (HTG) operated the GWTS during the reporting period.

Harley-Davidson sold 58 acres of the western portion of the fYNOP in June 2012. NP York 58, LLC (NP York) constructed a 755,000 square-foot warehouse in 2016. The parcel is now addressed as 1445 Eden Road, York, Pennsylvania, and extends from west of the current manufacturing operations through the WPL and is identified as the "West Campus". The fYNOP retains responsibility for the cleanup of the West Campus and maintains an easement agreement with the owners to continue remediation, monitoring, and maintenance activities.

The GWTS consists of a groundwater extraction system, a groundwater treatment plant, and a force main discharge system. Collectively, the fYNOP GWTS was designed to extract and treat groundwater containing VOCs of concern that consist of trichloroethene (TCE), tetrachloroethene (PCE), 1,1,1-trichloroethane (TCA), and their degradation products, including cis-1,2-dichloroethene (cis-1,2-DCE) and 1,1-dichloroethene (1,1-DCE). The extraction wells, conveyance piping, treatment plant, and force main discharge piping locations are shown on **Figure 1-2.**

Operation, monitoring, and maintenance of the SPBA groundwater extraction system is a required engineering control necessary to comply with the approved Post-Remediation Care Plan (PRCP, GSC, 2024a). During 2024, groundwater was extracted from three (3) collection wells (CW-21, CW-22, and CW-23) operating in the SPBA. The SPBA groundwater extraction system operates to capture shallow groundwater containing VOCs and mitigates potential vapor intrusion in off-site inhabited structures along the southeast corner of the property.

According to the approved PRCP, the WPL groundwater extraction system is to remain off while surface water monitoring and data evaluation is conducted monthly for two additional years (September 2023 through August 2025). If the results verify continued compliance with applicable water quality criteria (AWQC) in the Codorus Creek under non-pumping conditions, proposed changes to discontinue or modify the frequency of surface water monitoring will be submitted for approval of PADEP and EPA prior to implementation.

According to the results of ongoing surface water monitoring conducted during 2024, the results confirm continued compliance with AWQC in Codorus Creek. Therefore, the WPL system will remain off, but operational, while continued surface water sampling is conducted through August 2025, in accordance with the PRCP.

All extracted groundwater is piped to the groundwater treatment building (Building 41A) for processing through a packed tower aerator (PTA) prior to discharge to the Codorus Creek, designated as Outfall No. 003 (see **Figures 1-1** and **1-2**). Operation, monitoring and maintenance of the groundwater treatment system is also a required engineering control necessary to comply with the approved Post-Remediation Care Plan (PRCP, GSC, 2024a).

Figure 1-3 presents a schematic flow diagram for the treatment system. A chemical sequestering agent (Redux 525) injection system reduces mineral fouling of the GWTS PTA, effluent discharge pumps, and components. This sequestrant chemical injection system continued to operate throughout 2024. PTA off-gases are treated by a vapor phase, granular-activated carbon (GAC) filter system for removal of VOCs prior to emitting to the atmosphere.

Treated groundwater is collected in a wet well pump station located immediately north of Building 41A and pumped from the wet well through a force main, to Outfall 003 near the confluence of Johnsons Run and Codorus Creek (refer to **Figure 1-2**).

The treatment system operates and discharges under a National Pollutant Discharge Elimination System (NPDES) permit No. PA0085677 issued by PADEP. The permit is effective through November 20, 2024. The GWTS operated in full compliance with the NPDES permit throughout 2024. The permit renewal application was submitted to the PADEP on May 23, 2024, the application is pending PADEP review.

2.0 GEOLOGY AND HYDROGEOLOGY

Two geologic rock formations underlie the site. Solution-prone (karst) gray carbonate bedrock (limestone and dolostone) underlies the flat lowland (western) portion of the site (i.e. the WPL extraction area). Quartzitic sandstone underlies the more steeply sloping hills or upland area present on the eastern part of the site. The SPBA extraction area lies near a contact between the quartzitic sandstone and limestone geologic formations. Natural groundwater flow direction is generally westward, from the upland area at the eastern part of the site towards Codorus Creek. A detailed discussion of the regional and site geology and hydrogeology is included in the revised report entitled "Supplemental Remedial Investigation Groundwater Report (Part 2)." (GSC, 2018).

3.0 SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING

The groundwater monitoring program at the fYNOP site in 2024 consisted of:

- Measuring depth to water in all available monitoring and observation wells one time.
- Sampling and chemical analysis of groundwater from the collection wells throughout the year (see results summary in **Table A-1 in Appendix A**).
- Sampling and chemical analysis of the GWTS influent from the combined active collection wells throughout the year (see results summary in **Table A-2 in Appendix A**).
- Site-wide groundwater and surface water sampling (onsite and offsite wells, and Codorus Creek) was conducted monthly, quarterly, or annually during 2024 following the program detailed in the Post Remediation Care Plan (GSC, 2024a). The results of this monitoring and sampling program, including evaluation of groundwater extraction goals, will be provided and discussed in a separate annual groundwater monitoring report.

4.0 GROUNDWATER TREATMENT SYSTEM

4.1 System Description

Collection wells within the WPL groundwater extraction area and the SPBA remove groundwater by means of electric submersible pumps. The pumping water level within each collection well in the WPL is maintained by liquid level probes and control circuitry between the "on" and "off" probes. The pumping water level is controlled by a transducer in the SPBA wells. The groundwater extraction portion of the system consists of eight (8) potentially active wells (CW-9, CW-13, CW-15A, CW-17, CW-20, CW-21, CW-22, and CW-23). The WPL wells were shutdown in 2024. An average of 6gpm is extracted by the SPBA wells. The extracted groundwater is conveyed via underground piping to the treatment system where the dissolved VOCs are removed from the groundwater.

The GWTS is housed in Building 41A. The process flow diagram for the system is presented on **Figure 1-3**. The treatment system consists of a 2,600-gallon equalization tank; a PTA capable of treating up to 400 gallons per minute (gpm) of groundwater; and a 10,000-pound vapor-phase GAC unit for PTA off-gas treatment. Operation of the GWTS was modified from continuous treatment to batch treatment when the WPL wells were shutdown in 2021. In batch treatment mode the PTA will cycle on and off in response to the equalization tank level. The PTA remains off until the equalization tank fills to a level of 100 inches. Then the influent/transfer pump will activate, once the blower has established adequate airflow, and extracted groundwater will be pumped out of the equalization tank and through the PTA until the tank level reaches 25 inches, the influent/transfer pump will cycle off, and the blower will continue to run for three minutes before cycling off.

Extracted groundwater is pumped from the equalization tank through the PTA for treatment. Redux 525 sequestering agent is injected into this flow at a rate of approximately 20 parts per million (ppm) to prevent calcium scale deposits on the packing material and effluent pumping system. Simultaneous with the downward flow of contaminated water, a 4,000-cubic-foot-per-minute (cfm) centrifugal blower directs fresh air into the lower section of the tower, and up through the packing material. VOCs present in the influent groundwater are "stripped" from the water, transferred into the air, and then adsorbed to the GAC in the air-phase. The treated groundwater flows by gravity to a wet well (effluent pump station) on the north side of Building 41A. It is then pumped approximately 1,600 feet via an 8-inch underground force main to Outfall No. 003 and discharged to Codorus Creek (see **Figure 1-2**).

Automated monitoring and control of the GWTS are facilitated through a series of control panels, Allen-Bradley programmable logic controllers (PLCs) and patented operator software packages called RS View® and Factory View Talk®. Remote computer terminals monitor collection well pumping rates and treatment processes, and the collection wells may be

remotely adjusted. System operational data, recorded in an Excel® database during 2024, are provided in **Appendix B**.

4.2 System Maintenance and Modifications

One preventive maintenance inspection and one general maintenance visit are completed each month when the GWTS is operating. These inspections ensure effective operation of the system. A summary of O&M data recorded during these visits is included in **Appendix C**. Inspections include the following:

- Check for system alarms and address as required.
- Inspect control panels for proper conditions and settings.
- 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 draw on all motors (quarterly).
- Record flow rates on recovery wells and transfer pump.

The GWTS operated under normal conditions in 2024, except for the following interruptions:

- A brief shutdown occurred on January 27 for annual PTA blower maintenance. The belts were replaced, and the blower was balanced.
- A shutdown occurred on October 18 for a planned site-wide plant power outage. The GWTS was restarted within 24 hours.
- A brief shutdown occurred on December 29 due to a PTA blower fault. The fuses were replaced and the GWTS was restarted.

Several noteworthy treatment system maintenance, repairs, or modifications were identified and addressed during 2024. A summary is presented below:

- Two GWTS effluent discharge pumps were removed for annual routine inspection, cleaning, and repair (as needed).
- Annual pH meter calibration was completed.
- Annual maintenance was completed to clean the PTA tower windows, remove debris from the PTA sump pit, calibrate the influent pH meter, check PTA tower plumbness, exercise effluent pump valves, and verify that the sequestrant (Redux 525) chemical pump is dosing at 20 ppm.

4.3 Groundwater Withdrawal and VOC Removal

Table 4-1 presents the recorded monthly and annual groundwater withdrawals and VOC mass removals by the GWTS. A system-wide total of approximately 49,130 pounds of VOCs were removed since the GWTS began operation in November 1990.

The total amount of groundwater extracted during 2024 was approximately 3.29 million gallons (an average of 8,977 gallons per day [gpd] or 6 gpm) using the PTA totalizer. A graphical comparison of groundwater volumes treated is presented on **Figure 4-1**. The 2024 extraction volumes are slightly lower than the previous year (2023) when the flows were approximately 3.64 million gallons (or 9,969 gpd, or 7 gpm). The primary reason for the slight decrease in treatment systems flows during 2024 is due to drought conditions during the summer and fall, and because additional water was treated from other site remedial activities during 2023. The five WPL collection wells were activated for a short duration in November 2024 to test the functionality of the WPL extraction system.

Quarterly PTA influent (untreated) analyses (shown in **Table A-2, Appendix A**), along with the measured extraction volumes, are used to calculate the mass of VOCs removed from site groundwater during the reporting period. Quarterly influent samples were collected in January, April, July, and October 2024. These samples represent combined flow-weighted sampling of the three active collection wells in the SPBA (CW-21, CW-22, and CW-23).

The untreated influent samples contained total VOCs ranging in concentrations from 50 micrograms per liter (µg/L) to 65 µg/L during 2024. Using these data, the total estimated mass of VOCs removed from January through December 2024 was approximately 1.5 pounds. The calculated VOC mass removal rates (pounds per day [lbs/day]) extracted by the GWTS for the last five calendar years are shown below:

- 2024 – 0.004 lbs/day
- 2023 – 0.005 lbs/day
- 2022 – 0.005 lbs/day
- 2021 Average – 1.1 lbs/day
    - 2021 January through August - 1.7 lbs/day
    - 2021 September through December - 0.007 lbs/day
- 2020 – 1.9 lbs/day

The predominant VOCs identified in the PTA influent samples have historically included TCE, TCA, and PCE (see **Figure 4-2)**. Levels of influent total VOCs were somewhat stable over the last few years but have decreased during this reporting period. The predominant influent VOC during 2024 was PCE, with traces of TCE and cis 1,2 DCE (see **Figure 4-2**).

4.4 Groundwater System Inspection and Reporting

Groundwater system compliance reporting includes routine monthly and quarterly NPDES permit required Discharge Monitoring Reports (DMRs), and an annual operations report for the GWTS. Additionally, PADEP requires an annual Chapter 110 (formerly Act 220) groundwater withdrawal report for this facility.

In accordance with the NPDES permit, the PTA effluent was sampled and reported quarterly in 2024. Analytical testing results for the 2024 PTA effluent and influent sampling is presented in **Table A-2 (Appendix A)**. The treatment system effluent has maintained non-detectable concentrations of target VOCs during this reporting period.

The Susquehanna River Basin Commission (SRBC) requires submittal of quarterly groundwater withdrawal reports regarding non-consumptive groundwater withdrawals identified in SRBC docket No. 19980901-1. Docket 19980901-1 includes the active WPL extraction wells and the SPBA extraction wells. Information provided to the SRBC includes daily groundwater withdrawal totals (i.e., groundwater volumes extracted) from all collection wells identified in the respective dockets.

SRBC Docket No. 1998091-1 expired in September 2023 and an application for continued withdrawal under General Permit (GP-01) was submitted to the SRBC in March 2023. On January 23, 2024, the SRBC issued approval of General Permit No. GP-01-20240101 to Harley-Davidson for the GWTS. The GP-01 permit applies only to groundwater withdrawals associated with remediation systems having state or federal environmental regulatory agency oversight; is valid for groundwater discharges averaging up to 0.576 million gpd; and expires on December 31, 2050. The SRBC completed a site inspection on November 19, 2024. No action items were identified during the inspection.

5.0 WEST PARKING LOT GROUNDWATER EXTRACTION SYSTEM

Four (4) groundwater collection wells (CW-9, CW-13, CW-17, and CW-20) are in the WPL Area of the West Campus. One additional collection well (CW-15A) is in a trailer parking area of the West Campus (formerly NB4 area).

Groundwater extraction from the five WPL wells is conducted via underground piping to the GWTS in Building 41A. The wells are individually piped to the GWTS so that flow control, flow measurements, and water samples may be obtained for each well at this central location. Water is piped the following distances from the wells to the treatment plant: CW-20 (1,600 feet), CW-9 (1,400 feet), CW-13 (890 feet), CW-15A (310 feet), and CW-17 (590 feet).

The WPL wells were shutdown on August 31, 2021, for attainment testing, as discussed previously. According to the Act 2 Final Report for this site (GSC, 2024b), surface water monitoring results collected to date demonstrate that operation of the WPL extraction system is not necessary to attain or maintain compliance with AWQC in Codorus Creek. Therefore, the WPL wells remained off in 2024, but will remain in-place while continued surface water sampling is conducted through August 2025, in accordance with the PRCP.

5.1 Maintenance

The WPL wells were briefly cycled on in November 2024 to ensure operation and CW-9 and CW-17 were briefly cycled on in December 2024 to fill up the EQ tank to test effluent pumps.

5.2 Groundwater Chemistry

Groundwater samples were not collected from the WPL collection wells in 2024.

6.0 SPBA GROUNDWATER EXTRACTION SYSTEM

The SPBA groundwater extraction system captures shallow groundwater containing PCE and TCE from the fine-grained residual soil and bedrock along the eastern-most portion of the south fYNOP property boundary. Three SPBA collection wells (CW-21, CW-22, CW-23) were installed, and the SPBA collection wells pumping started on October 31, 2018. Following startup, an effectiveness report concluded “the SPBA groundwater extraction system is currently operating as designed and meets the objective of pumping to establish a groundwater gradient that slopes from off-Site wells located along Canterbury Lane toward on-site wells located in the SPBA” (GSC, 2019). The effectiveness of the SPBA system is evaluated quarterly.

Each SPBA collection well is fitted with an electric submersible pump controlled by variable frequency drives (VFDs) and a submersible level transducer to maintain design drawdown

conditions. Groundwater extracted from the SPBA wells is conducted via underground piping from the well heads to the SPBA control building (located in the SPBA). The SPBA control building houses the PLC, control panel, and separate pressure and flow transmitters, piping and valves for each of the extraction wells. The wells are individually piped to the SPBA control building so that flow control, flow measurements, and water samples may be obtained for each well at this central location. Untreated groundwater is combined into a manifold in the SPBA control building, and then discharged together via a single conveyance pipe that extends approximately 3,900 feet to the treatment plant in Building 41A.

The SPBA collection well pumping rates generally range from 0.5 to 6 gpm among the three wells. Approximately 3,159,322 gallons of groundwater were extracted from the SPBA Area during 2024 (see **Table 5-1**).

6.1 Maintenance

A summary of maintenance actions for the SPBA Area in 2024 is presented below:

- The SPBA system experienced brief electrical shutdowns in January, February, April, July, August, and September due to storms in the area.
- CW-21 experienced level transmitter faults in January and February. The level transmitter fuse was replaced, and the well was restarted.
- The uninterruptible power supply backup power supply was replaced in October.
- A temperature transmitter fault occurred on October 11, and the wells were shutdown on October 12 because water was detected in the sump pit. No groundwater was released to the environment. The heater misfunctioned and did not cycle off, the high temperature in the building caused the PVC piping manifold to melt. Fittings on the piping manifold were tightened or replaced. The system was shutdown for less than 24 hours.
- Annual maintenance was completed on the collection wells in November. The CW-22 pump assembly was pulled and inspected for damage and mineral fouling, the transducer setting was verified, and the high-pressure switch was tested.

6.2 Groundwater Chemistry

The groundwater quality analytical data from the 2024 collection well sampling is presented in **Table A-1 (Appendix A)**. Samples were collected in March, June, September, and December. The concentrations and trends of the dominant VOCs (TCE, PCE, TCA, and cis-1,2-DCE) are also illustrated in **Figures 6-1 through 6-3** for CW-21, CW-22, and CW-23, respectively. Collection wells CW-21 and CW-22 exhibited a relatively straight trend for PCE and CW-23 displayed a slightly increasing trend in PCE during 2024.

7.0 REFERENCES

Groundwater Sciences Corporation (GSC), 2018. Supplemental Remedial Investigation Groundwater Report (Part 2), Former York Naval Ordnance Plant, March (Revised).

GSC, 2019. Southern Property Boundary Area Groundwater Extraction System Operation Effectiveness Report, Former York Naval Ordnance Plant, October 28.

GSC, 2024a. Post-Remediation Care Plan, Former York Naval Ordnance Plant, 1425 Eden Road, Springettsbury Township, York, Pennsylvania, January 30 Revised.

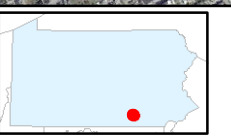
GSC, 2024b. Final Report, Former York Naval Ordnance Plant, 1425 Eden Road, Springettsbury Township, York, Pennsylvania, January 30 Revised.

FIGURES

Legend

Property Boundary (Former York Naval Ordnance Plant; Approximately 229 Acres)

West Campus Boundary



N

0 1,000 2,000 4,000

Feet

Former York Naval Ordnance Plant

1425 Eden Road
York, Pennsylvania

Hydro-Terra Group
www.hydro-terra.com

Groundwater Systems Operations

Site Location Map

drawn:	LPD	03/18/21	figure: 1-1
checked:	EMW	03/18/21	
approved:	RGM	03/18/21	

Document Path: J:\Harley-Davidson\Maps\HD-Site Location Map_20210218.mxd

Coordinate System: NAD 1983 2011 StatePlane Pennsylvania South FIPS 3702 Ft US

Completion of post-shut down monitoring for the NPBA was approved by PADEP and EPA in early 2019.

NPBA Control Bldg

NPBA Groundwater Conveyance Pipe to Treatment Plant

NPBA Groundwater Collection Pipe to Control Building

Treatment System Discharge Line

Groundwater Treatment Plant (Bldg 41A)

Outfall No. 003

WPL Collection Pipes to Treatment Plant

SPBA Conveyance Pipe

Former Lift Station

SPBA Control Building

N

- Monitoring Well & Designation
- Extraction Well & Designation
- Treatment System Feature
- Streams, Creeks, and Ponds
- Roads, Curbs, & Boundaries
- West Campus Boundary
- Property Boundary
- Existing Buildings
- Northeast Property Boundary Area
- Southern Property Boundary Area
- West Parking Lot (WPL) Area
- Stormwater Basin

420 210 0 420

Scale in Feet

Former York Naval Ordnance Plant

1425 Eden Road York, PA 17402

Hydro-Terra GROUP

www.hydro-terra.com

Groundwater System Operations

Groundwater Treatment System Location

drawn:	LDitzler	01/20/23	figure: 1-2
checked:	EWade	01/20/23	
approved:	RMyers	01/20/23	

J:\Harley-Davidson\Job - 2023 Groundwater System Operations Report\Maps\Report Figures.aprx

Coordinate System: NAD 1983 2011 StatePlane Pennsylvania South FIPS 3702 Ft US

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

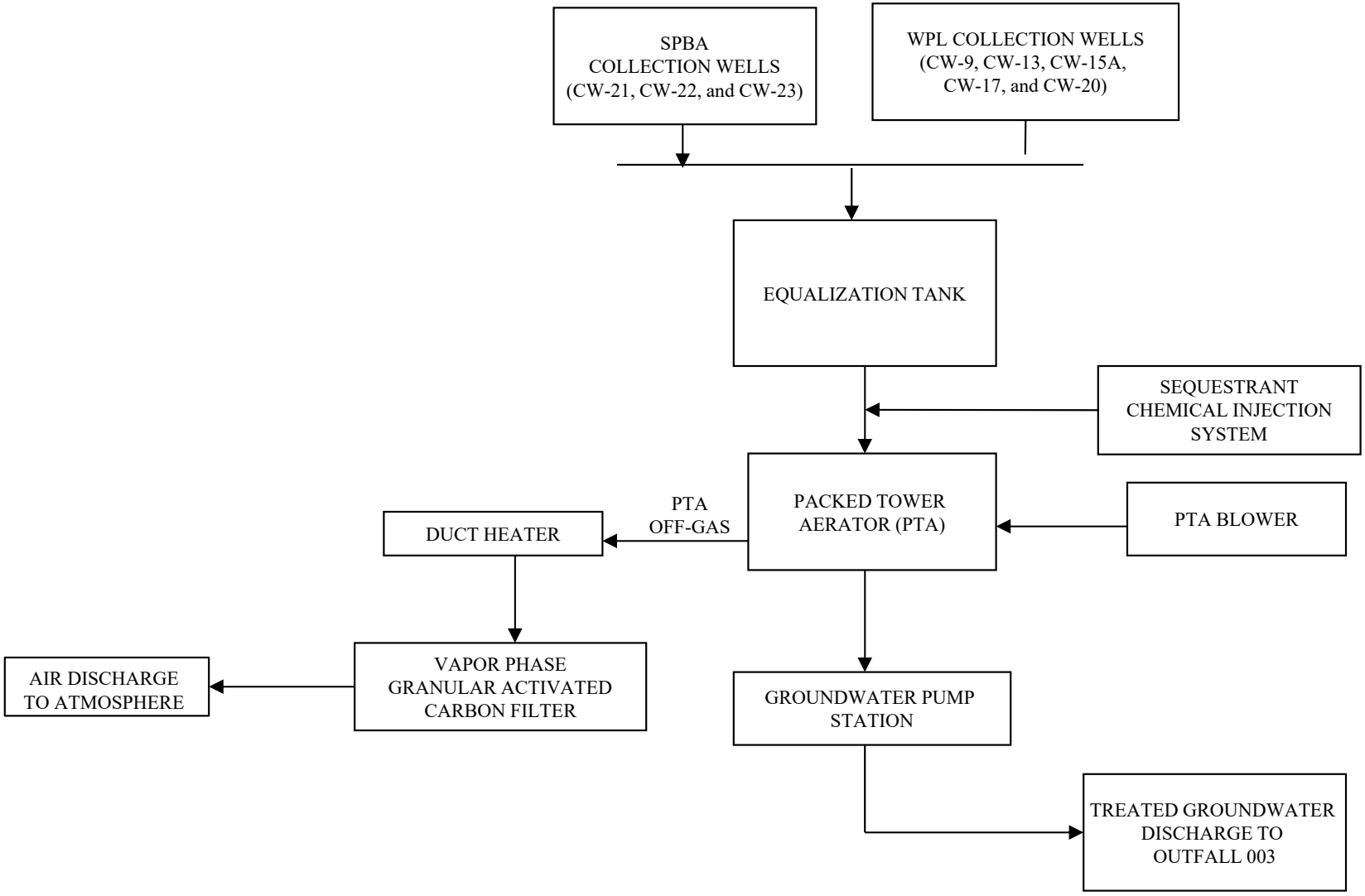
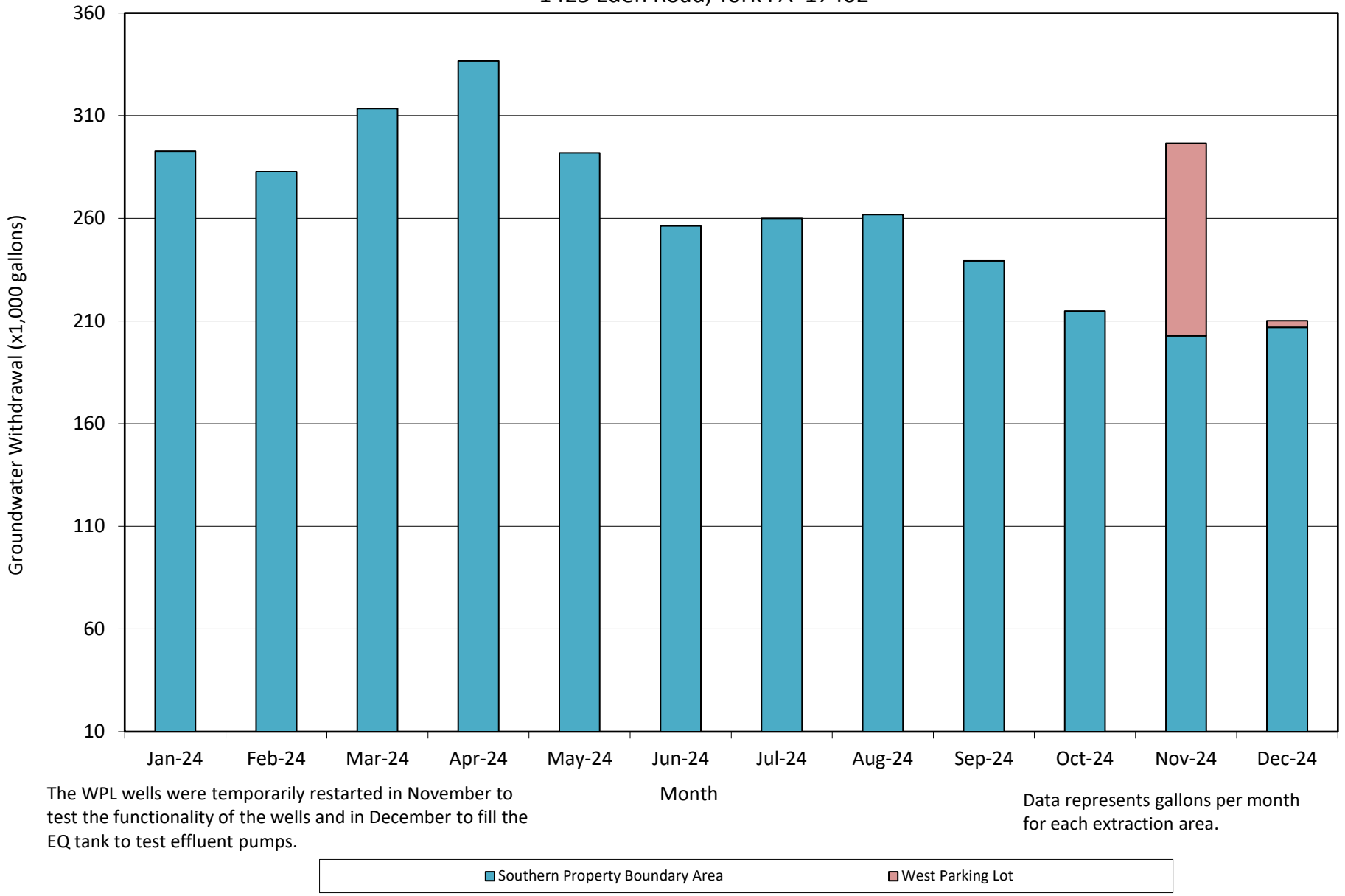


Figure 4-1
2024 Groundwater Withdrawals
Former York Naval Ordnance Plant
1425 Eden Road, York PA 17402



The WPL wells were temporarily restarted in November to test the functionality of the wells and in December to fill the EQ tank to test effluent pumps.

Data represents gallons per month for each extraction area.

Figure 4-2
Packed Tower Aerator Influent Chemistry
Former York Naval Ordnance Plant
1425 Eden Road, York PA 17402

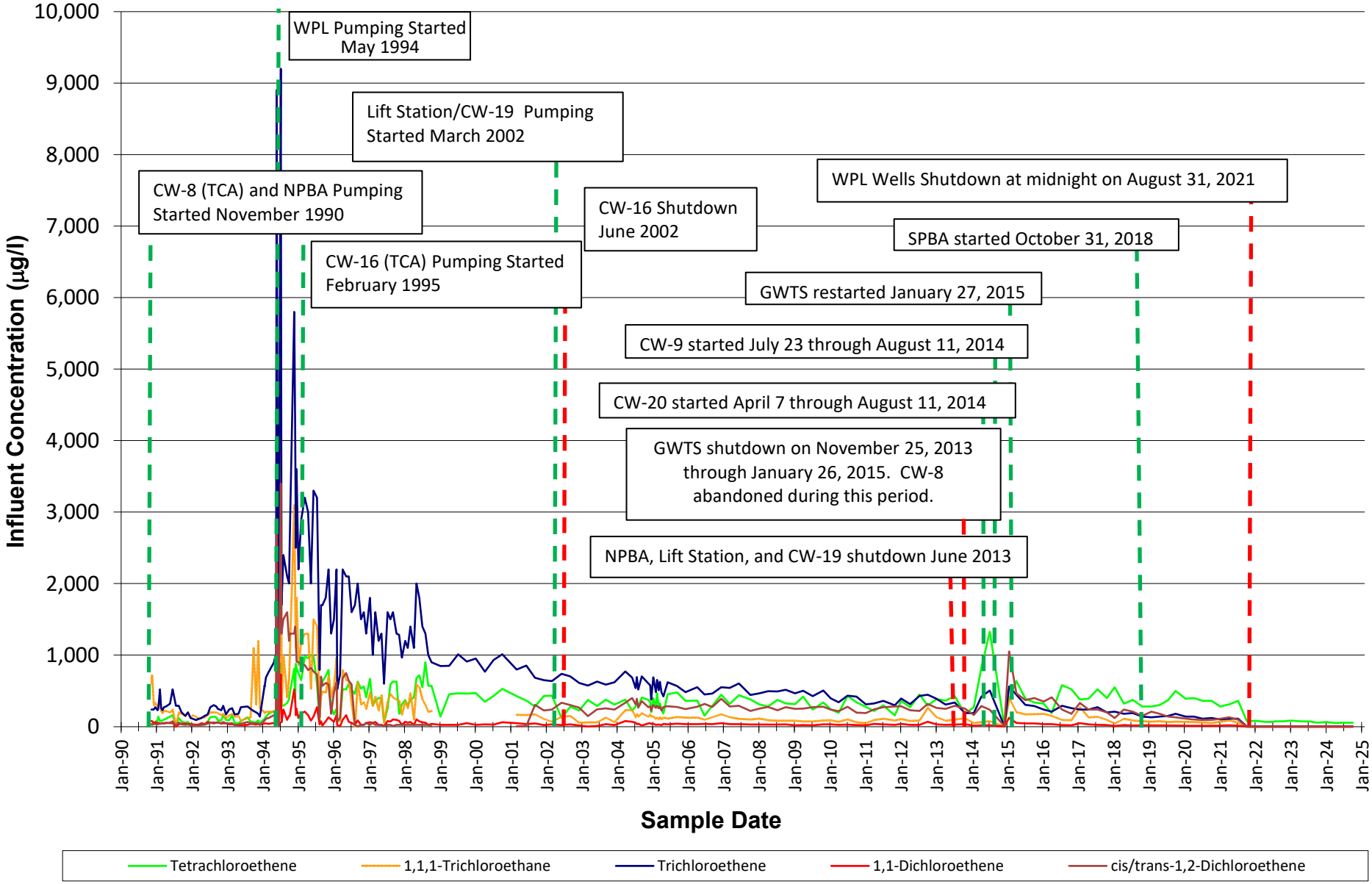


Figure 6-1
Predominate VOC Concentrations - Collection Well CW-21
Former York Naval Ordnance Plant
1425 Eden Road, York PA 17402

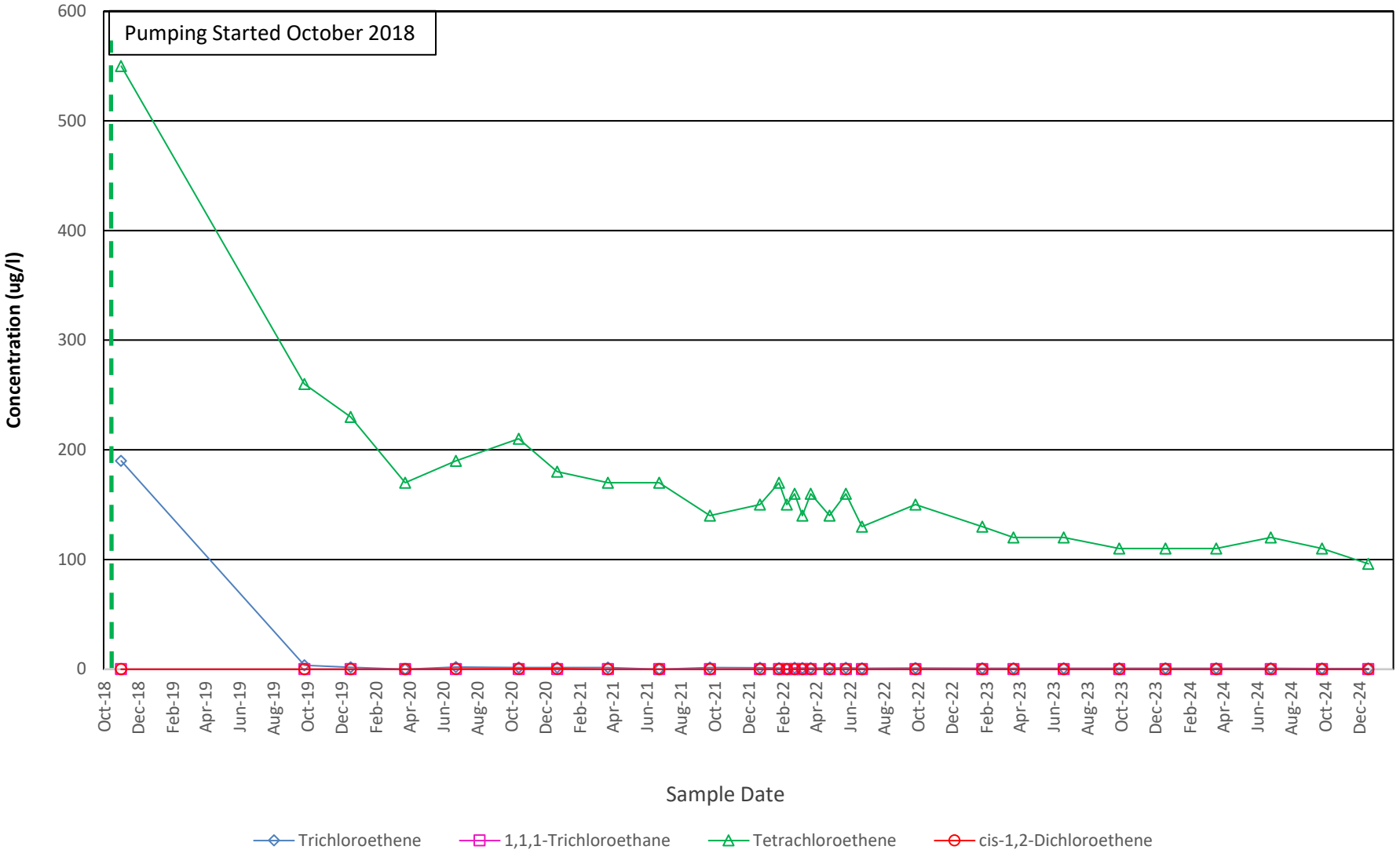


Figure 6-2
Predominate VOC Concentrations - Collection Well CW-22
Former York Naval Ordnance Plant
1425 Eden Road, York PA 17402

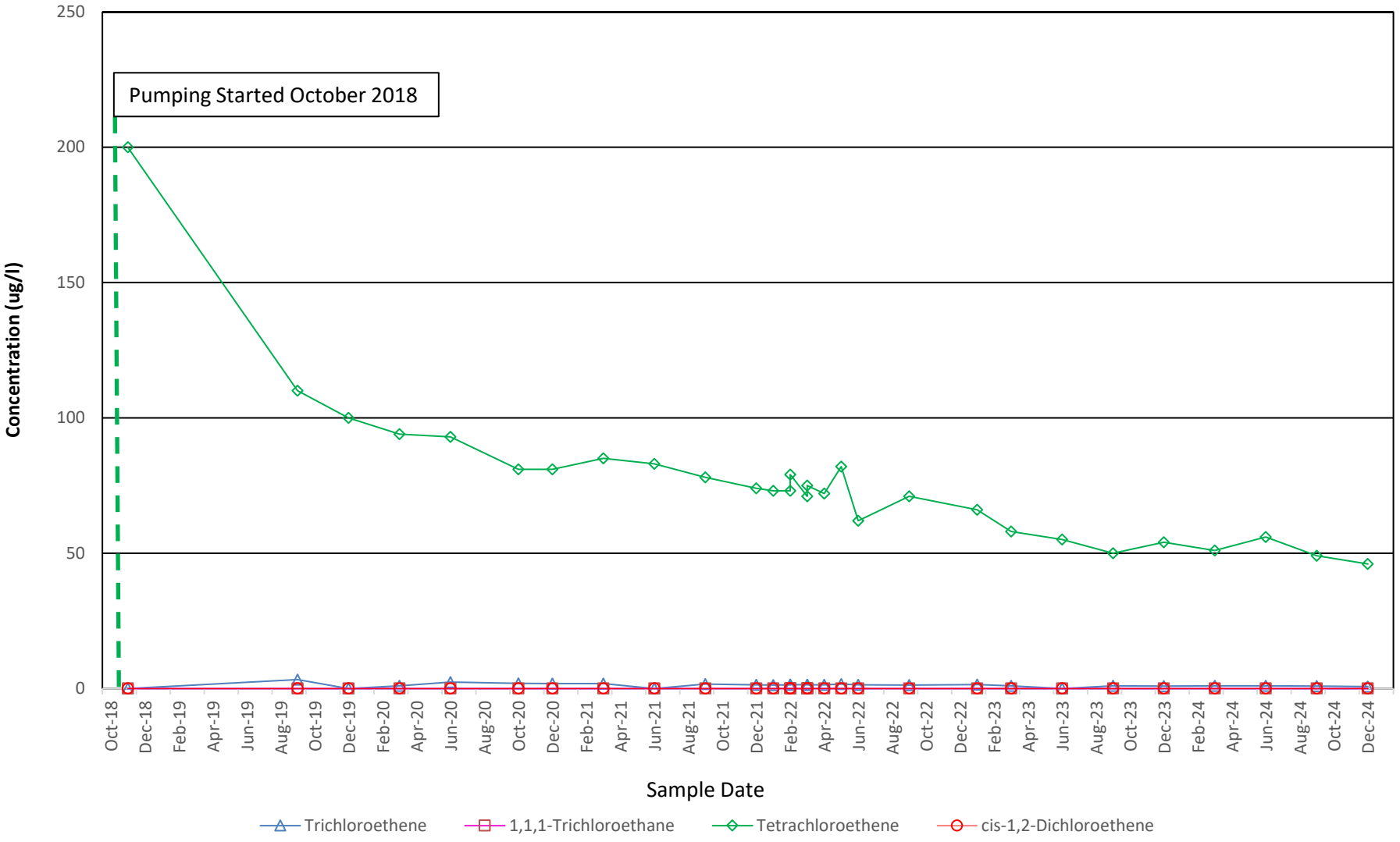
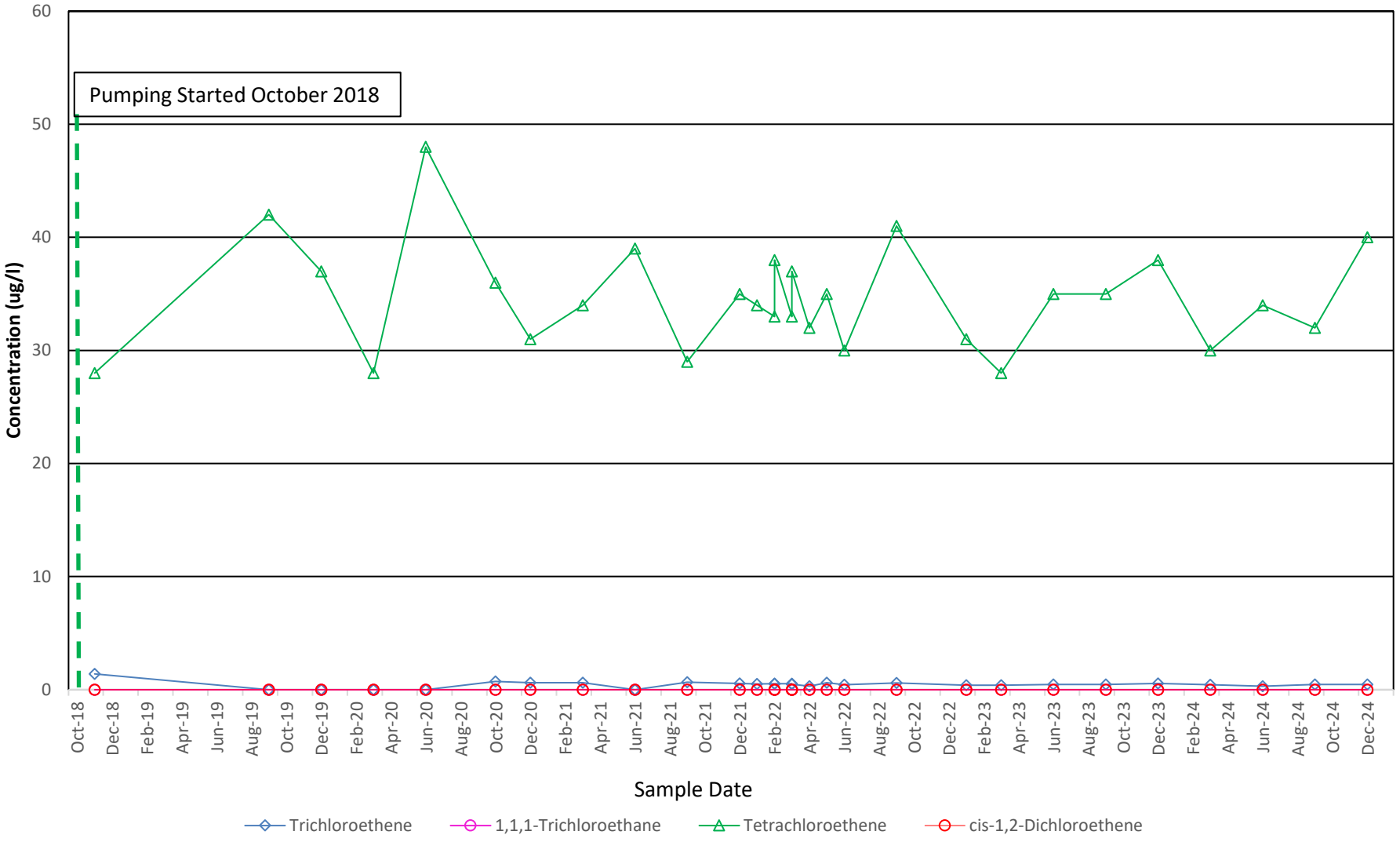


Figure 6-3
Predominate VOC Concentrations - Collection Well CW-23
Former York Naval Ordnance Plant
1425 Eden Road, York PA 17402



TABLES

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

JANUARY 1, 2024 - DECEMBER 31, 2024				
DATE	MONTHLY GROUNDWATER WITHDRAWAL (AST Totalizer, gallons)	AVERAGE MONTHLY TOTAL VOCs (ppb)		ESTIMATED MONTHLY VOC REMOVAL (pounds)
Jan-24	284,915	65		0.15
Feb-24	279,529	65	*	0.15
Mar-24	316,608	65	*	0.17
Apr-24	343,012	50		0.14
May-24	292,898	50	*	0.12
Jun-24	257,540	50	*	0.11
Jul-24	263,364	56		0.12
Aug-24	266,332	56	*	0.12
Sep-24	242,815	56	*	0.11
Oct-24	220,996	56		0.10
Nov-24	274,478	56	*	0.13
Dec-24	243,277	56	*	0.11
TOTAL	**3,285,764**	**NA**		**1.56**

NOTES:

* - No sample collected this month; concentration is the most recent

As part of the approved Site-Wide Cleanup Plan, the collection wells in the WPL were shutdown on August 31, 2021 for attainment testing.

ANNUAL TOTALS		
YEAR	GROUNDWATER WITHDRAWAL (gallons)	ESTIMATED VOC REMOVAL (pounds)
1990 (NOV & DEC)	12,954,886	92
1991	62,458,393	357
1992	66,081,120	322
1993	72,198,940	421
1994	88,387,251	3,905
1995	141,357,856	5,572
1996	152,168,899	3,631
1997	150,246,400	2,675
1998	157,461,800	2,795
1999	133,687,100	1,464
2000	152,839,477	1,785
2001	134,557,249	1,659
2002	121,290,897	1269
2003	153,097,508	1,599
2004	140,725,167	1,786
2005	134,503,508	1,550
2006	125,192,364	1,295
2007	149,331,940	1,734
2008	155,341,655	1,560
2009	161,171,721	1,584
2010	159,042,802	1,388
2011	154,368,351	1,196
2012	153,624,656	1,519
2013	145,516,783	1,321
2014	17,300,548	262
2015	105,746,121	1,501
2016	113,974,022	1,058
2017	112,873,883	1,041
2018	121,853,402	856
2019	127,551,117	821
2020	121,622,926	694
2021	79,954,253	413
2022	3,371,466	2.06
2023	3,638,700	2.18
2024	3,285,764	1.56
Total	**3,888,778,925**	**49,130**

TABLE 5-1
2024 RECORD OF GROUNDWATER WITHDRAWALS
Former York Naval Ordnance Plant
1425 Eden Road, York PA 17402

MONTH	West Parking Lot (WPL) Wells (gallons)[1]						Southern Property Boundary Area (SPBA) Wells (gallons)[2]				Monthly[3]
	CW-9	CW-13	CW-15A	CW-17	CW-20	SUBTOTAL	CW-21	CW-22	CW-23	SUBTOTAL	TOTAL (gallons)
Jan-24	0	0	0	0	0	0	179,406	83,558	29,721	292,685	292,685
Feb-24	0	0	0	0	0	0	172,397	77,265	33,089	282,751	282,751
Mar-24	0	0	0	0	0	0	189,311	84,846	39,309	313,466	313,466
Apr-24	0	0	0	0	0	0	208,102	81,878	46,594	336,574	336,574
May-24	0	0	0	0	0	0	180,724	75,308	35,887	291,919	291,919
Jun-24	0	0	0	0	0	0	159,919	68,408	27,973	256,300	256,300
Jul-24	0	0	0	0	0	0	144,805	93,157	21,980	259,942	259,942
Aug-24	0	0	0	0	0	0	149,695	93,447	18,665	261,807	261,807
Sep-24	0	0	0	0	0	0	141,360	84,137	13,827	239,324	239,324
Oct-24	0	0	0	0	0	0	115,747	90,703	8,401	214,851	214,851
Nov-24[4]	49,950	5,884	1,268	14,148	22,452	93,702	116,242	84,212	2,345	202,799	296,501
12/1/2024[5]	2,499	0	0	697	0	3,196	132,430	73,503	971	206,904	210,100
TOTALS	52,449	5,884	1,268	14,845	22,452	96,898	1,890,138	990,422	278,762	3,159,322	3,256,220

Notes:

[1] As part of the approved Site-Wide Cleanup Plan, the collection wells in the WPL were shutdown on August 31, 2021 for attainment testing.

[2] SPBA collection wells pumping started October 31. 2018.

[3] Monthly groundwater withdrawal value from Table 4-1 differs slightly from the monthly total. The value in Table 4-1 is taken from the PTA totalizer. The monthly total is the sum of the individual well totalizers.

[4] The WPL wells were briefly restarted to test the functionality of the wells.

[5] CW-9 and CW-17 were used to fill the Equalization Tank to test effluent pumps.

APPENDIX A

Data Tables

Table A-1.
2024 Groundwater Data Summary - Collection Wells
Former York Naval Ordnance Plant
1425 Eden Road, York PA 17402

					SPBA Collection Wells											
Location/ID **Sample Date** **Parameter**	**MSC UA R (ug/L)**	**MSC UA NR (ug/L)**	**Federal MCL (ug/L)**	**EPA RSL Tap Water (ug/L)**	CW-21 3/20/2024	Qual	CW-22 3/20/2024	Qual	CW-23 3/20/2024	Qual	CW-21 6/26/2024	Qual	CW-22 6/26/2024	Qual	CW-23 6/26/2024	Qual
1,1,1,2-Tetrachloroethane	70	70		0.57	1	U	1	U	1	U	1	U	1	U	1	U
1,1,1-Trichloroethane	200	200	200	8000	1	U	1	U	1	U	1	U	1	U	1	U
1,1,2,2-Tetrachloroethane	0.84	4.3		0.076	1	U	1	U	1	U	1	U	1	U	1	U
1,1,2-Trichloroethane	5	5	5	0.28	1	U	1	U	1	U	1	U	1	U	1	U
1,1-Dichloroethane	31	160		2.8	1	U	1	U	1	U	1	U	1	U	1	U
1,1-Dichloroethene	7	7	7	280	1	U	1	U	1	U	1	U	1	U	1	U
1,2-Dibromoethane	0.05	0.05	0.05	0.0075	1	U	1	U	1	U	1	U	1	U	1	U
1,2-Dichloroethane	5	5	5	0.17	1	U	1	U	1	U	1	U	1	U	1	U
1,2-Dichloropropane	5	5	5	0.44	1	U	1	U	1	U	1	U	1	U	1	U
2-Butanone	4000	4000		5600	10	U	10	U	10	U	10	U	10	U	10	U
2-Hexanone	63	260		38	10	U	10	U	10	U	10	U	10	U	10	U
4-Methyl-2-Pentanone	3300	9300		6300	10	U	10	U	10	U	10	U	10	U	10	U
Acetone	38000	110000		14000	20	U	20	U	20	U	20	U	20	U	20	U
Benzene	5	5	5	0.46	1	U	1	U	1	U	1	U	1	U	1	U
Bromochloromethane	90	90		83	5	U	5	U	5	U	5	U	5	U	5	U
Bromodichloromethane	80	80		0.13	1	U	1	U	1	U	1	U	1	U	1	U
Bromoform	80	80		3.3	4	U	4	U	4	U	4	U	4	U	4	U
Bromomethane	10	10		7.5	1	U	1	U	1	U	1	U	1	U	1	U
Carbon Disulfide	1500	6200		810	5	U	5	U	5	U	5	U	5	U	5	U
Carbon Tetrachloride	5	5	5	0.46	1	U	1	U	1	U	1	U	1	U	1	U
Chlorobenzene	100	100	100	78	1	U	1	U	1	U	1	U	1	U	1	U
Chlorodibromomethane	80	80		0.87	1	U	1	U	1	U	1	U	1	U	1	U
Chloroethane	250	1200		21000	1	U	1	U	1	U	1	U	1	U	1	U
Chloroform	80	80		0.22	0.53	J	0.62	J	0.44	J	1	U	1	U	1	U
Chloromethane	30	30		190	2	U	2	U	2	U	2	UJ	2	UJ	2	UJ
cis-1,2-Dichloroethene	70	70	70	36	1	U	1	U	1	U	1	U	1	U	1	U
cis-1,3-Dichloropropene	7.3	34		0.47	1	U	1	U	1	U	1	U	1	U	1	U
Ethylbenzene	700	700	700	1.5	1	U	1	U	1	U	1	U	1	U	1	U
Methyl tert-butyl ether	20	20		14	1	U	1	U	1	U	1	U	1	U	1	U
Methylene chloride	5	5		11	1	U	1	U	1	U	1	U	1	U	1	U
Styrene	100	100	100	1200	5	U	5	U	5	U	5	U	5	U	5	U
Tetrachloroethene	5	5	5	11	110		51		30		120		56		34	
Toluene	1000	1000	1000	1100	1	U	1	U	1	U	1	U	1	U	1	U
trans-1,2-Dichloroethene	100	100	100	360	2	U	2	U	2	U	2	U	2	U	2	U
trans-1,3-Dichloropropene	7.3	34		0.47	1	U	1	U	1	U	1	U	1	U	1	U
Trichloroethene	5	5	5	0.49	0.68	J	1		0.42	J	0.73	J	1		0.43	J
Vinyl Chloride	2	2	2	0.019	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ
Xylenes (Total)	10000	10000	10000	190	1	U	1	U	1	U	1	U	1	U	1	U

U - Indicates the analyte was analyzed for but not detected.
J - Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
^c - Continuing calibration verification recovery is outside acceptance limits.
cn - Refer to case narrative for further detail.
B - Analyte was found in the blank.

Table A-1.
2024 Groundwater Data Summary - Collection Wells
Former York Naval Ordnance Plant
1425 Eden Road, York PA 17402

					SPBA Collection Wells											
Location/ID	**MSC**	**MSC**	**Federal**	**EPA RSL**	CW-21		CW-22		CW-23		CW-21		CW-22		CW-23	
Sample Date	**UA R**	**UA NR**	**MCL**	**Tap Water**	9/26/2024		9/26/2024		9/26/2024		12/18/2024		12/18/2024		12/18/2024	
Parameter	**(ug/L)**	**(ug/L)**	**(ug/L)**	**(ug/L)**		Qual		Qual		Qual		Qual		Qual		Qual
1,1,1,2-Tetrachloroethane	70	70		0.57	1	U	1	U	1	U	1	U ^c *- cn	1	U ^c *- cn	1	U ^c *- cn
1,1,1-Trichloroethane	200	200	200	8000	1	U	1	U	1	U	1	U ^c cn	1	U ^c cn	1	U ^c cn
1,1,2,2-Tetrachloroethane	0.84	4.3		0.076	1	U	1	U	1	U	1	U	1	U	1	U
1,1,2-Trichloroethane	5	5	5	0.28	1	U	1	U	1	U	1	U cn	1	U cn	1	U cn
1,1-Dichloroethane	31	160		2.8	1	U	1	U	1	U	1	U	1	U	1	U
1,1-Dichloroethene	7	7	7	280	1	U	1	U	1	U	1	U	1	U	1	U
1,2-Dibromoethane	0.05	0.05	0.05	0.0075	1	U	1	U	1	U	1	U	1	U	1	U
1,2-Dichloroethane	5	5	5	0.17	1	U	1	U	1	U	1	U	1	U	1	U
1,2-Dichloropropane	5	5	5	0.44	1	U	1	U	1	U	1	U	1	U	1	U
2-Butanone	4000	4000		5600	10	U	10	U	10	U	10	U	10	U	10	U
2-Hexanone	63	260		38	10	U	10	U	10	U	10	U	10	U	10	U
4-Methyl-2-Pentanone	3300	9300		6300	10	U	10	U	10	U	10	U	10	U	10	U
Acetone	38000	110000		14000	20	U	20	U	20	U	20	U ^c cn	20	U ^c cn	20	U ^c cn
Benzene	5	5	5	0.46	1	U	1	U	1	U	1	U	1	U	1	U
Bromochloromethane	90	90		83	5	U	5	U	5	U	5	U	5	U	5	U
Bromodichloromethane	80	80		0.13	1	U	1	U	1	U	1	U	1	U	1	U
Bromoform	80	80		3.3	4	U	4	U	4	U	4	U ^c cn	4	U ^c cn	4	U ^c cn
Bromomethane	10	10		7.5	1	U	1	U	1	U	1	U	1	U	1	U
Carbon Disulfide	1500	6200		810	5	U ^c cn	5	U ^c cn	5	U ^c cn	5	U	5	U	5	U
Carbon Tetrachloride	5	5	5	0.46	1	U	1	U	1	U	1	U ^c cn	1	U ^c cn	1	U ^c cn
Chlorobenzene	100	100	100	78	1	U	1	U	1	U	1	U	1	U	1	U
Chlorodibromomethane	80	80		0.87	1	U	1	U	1	U	1	U	1	U	1	U
Chloroethane	250	1200		21000	1	U	1	U	1	U	1	U	1	U	1	U
Chloroform	80	80		0.22	0.52	J	0.64	J	0.47	J	0.49	J	0.62	J	0.46	J
Chloromethane	30	30		190	2	U	2	U	2	U	2	U ^c *+ cn	2	U ^c *+ cn	2	U ^c *+ cn
cis-1,2-Dichloroethene	70	70	70	36	1	U	1	U	1	U	1	U	1	U	1	U
cis-1,3-Dichloropropene	7.3	34		0.47	1	U	1	U	1	U	1	U	1	U	1	U
Ethylbenzene	700	700	700	1.5	1	U	1	U	1	U	1	U	1	U	1	U
Methyl tert-butyl ether	20	20		14	1	U ^c cn	1	U ^c cn	1	U ^c cn	1	U	1	U	1	U
Methylene chloride	5	5		11	1	U	1	U	1	U	1	U	1	U	1	U
Styrene	100	100	100	1200	5	U	5	U	5	U	5	U	5	U	5	U
Tetrachloroethene	5	5	5	11	110		49		32		96		46		40	
Toluene	1000	1000	1000	1100	1	U	1	U	1	U	1	U	1	U	1	U
trans-1,2-Dichloroethene	100	100	100	360	2	U	2	U	2	U	2	U	2	U	2	U
trans-1,3-Dichloropropene	7.3	34		0.47	1	U	1	U	1	U	1	U	1	U	1	U
Trichloroethene	5	5	5	0.49	0.6	J	0.85	J	0.49	J	0.59	J	0.86	J	0.72	J
Vinyl Chloride	2	2	2	0.019	1	U	1	U	1	U	1	U	1	U	1	U
Xylenes (Total)	10000	10000	10000	190	1	U	1	U	1	U	1	U	1	U	1	U

U - Indicates the analyte was analyzed for but not detected.
J - Result is less than the reporting limit but greater than or equal to the method detection lir
^c - Continuing calibration verification recovery is outside acceptance limits.
cn - Refer to case narrative for further detail.
B - Analyte was found in the blank.

TABLE A-2

WATER QUALITY ANALYSES

2024 PACKED TOWER AERATOR SAMPLES SUMMARY

Former York Naval Ordnance Plant

1425 Eden Road, York PA 17402

Sample ID Lab ID Sample Date Parameter	Units	Outfall #003 410-156177-2 1/2/2024	Outfall #003 410-166516-2 4/4/2024	Outfall #003 410-178261-2 7/2/2024	Outfall #003 410-190688-2 10/3/2024
1,1-DICHLOROETHENE	ug/l	N.D. @ 1	N.D. @ 1	N.D. @ 1	N.D. @ 1
CIS 1,2-DICHLOROETHENE	ug/l	N.D. @ 1	N.D. @ 1	N.D. @ 1	N.D. @ 1
TETRACHLOROETHENE	ug/l	N.D. @ 1	N.D. @ 1	N.D. @ 1	N.D. @ 1
TRICHLOROETHENE	ug/l	N.D. @ 1	N.D. @ 1	N.D. @ 1	N.D. @ 1
VINYL CHLORIDE	ug/l	N.D. @ 1	N.D. @ 1	N.D. @ 1	N.D. @ 1
TOTAL VOCs	ug/l	0	0	0	0

Sample ID Lab ID Sample Date Parameter	Units	Influent to #003 [1] 410-156177-1 1/2/2024	Influent to #003 [1] 410-166516-1 4/4/2024	Influent to #003 [1] 410-178264-1 7/2/2024	Influent to #003 [1] 410-190688-1 10/3/2024
1,1,2-TRICHOLORETHANE	ug/L	N.D. @ 1	N.D. @ 1	N.D. @ 1	N.D. @ 1
1,1,1-TRICHLOROETHANE	ug/l	N.D. @ 1	N.D. @ 1	N.D. @ 1	N.D. @ 1
1,1-DICHLOROETHANE	ug/l	N.D. @ 1	N.D. @ 1	N.D. @ 1	N.D. @ 1
1,1-DICHLOROETHENE	ug/l	N.D. @ 1	N.D. @ 1	N.D. @ 1	N.D. @ 1
1,2-DICHLOROETHANE	ug/l	N.D. @ 1	N.D. @ 1	N.D. @ 1	N.D. @ 1
CHLOROBENZENE	ug/l	N.D. @ 1	N.D. @ 1	N.D. @ 1	N.D. @ 1
CHLOROFORM	ug/l	0.51 J	0.45 J	1.1	0.55 J
METHYLENE CHLORIDE	ug/l	N.D. @ 1	N.D. @ 1	N.D. @ 1	N.D. @ 1
TETRACHLOROETHENE	ug/l	65	50	55	56
TRICHLOROETHENE	ug/l	0.59 J	0.62 J	0.54 J	0.68 J
VINYL CHLORIDE	ug/l	N.D. @ 1	N.D. @ 1	N.D. @ 1	N.D. @ 1
CIS 1,2-DICHLOROETHENE	ug/l	N.D. @ 1	N.D. @ 1	N.D. @ 1	N.D. @ 1
TRANS 1,2-DICHLOROETHENE	ug/l	N.D. @ 2	N.D. @ 2	N.D. @ 2	N.D. @ 2
TOTAL VOCs	ug/l	65	50	56	56

Notes:

All Analysis Performed by Eurofins Lancaster Laboratories Environmental (ELLE) - Lancaster, PA

ug/l - micrograms per liter

J - Estimated value ≥ the Method Detection Limit (MDL) N.D. < the Limit of Quantitation (LOQ or RL)

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

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

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

1 The West Parking Lot (WPL) area wells were shutdown at midnight on August 31, 2021 for testing, which is anticipated to continue for one year. The shutdown plan was approved by Pennsylvania Department of Environmental Protection (PADEP) on February 28, 2020 as part of the Land Recycling and Environmental Remediation Standards Act (Act 2) and the One Cleanup Program for this site. The West Campus/WPL pumping wells will remain off, but functional, pending completion and approval of the shutdown monitoring studies.

APPENDIX B

2024 Excel® Database Summary
Groundwater Treatment Plant Operations

Table B-1
2024
Groundwater Treatment Plant Operations Summary
Former York Naval Ordnance Plant
1425 Eden Road, York, PA 17402

Date	AST Blower Cycles	AST Blower Hours	AST Pump Cycles	AST Pump Hours	Discharge Flow (gallons)	Influent pH (S.U.)	GWTS KWH	Effluent Pump P1 Cycles	Effluent Pump P2 Cycles	Effluent Pump P1 Hours	Effluent Pump P2 Hours
1/1/2024	7	1.3	7	0.9	8550	7.5241251	92	4	3	0.5	0.4
1/2/2024	7	1.3	7	0.9	8534	7.53900003	117	3	4	0.4	0.6
1/3/2024	7	1.3	7	0.9	8547	7.52149963	118	4	3	0.5	0.4
1/4/2024	7	1.3	7	0.9	8539	7.4550004	121	3	4	0.4	0.6
1/5/2024	7	1.3	7	0.9	8521	7.29400063	118	4	3	0.5	0.4
1/6/2024	6	1.1	6	0.8	7321	7.58275032	121	3	3	0.4	0.4
1/7/2024	7	1.3	7	0.9	8525	7.51362514	123	3	4	0.4	0.6
1/8/2024	7	1.3	7	0.9	8525	7.46987486	118	4	3	0.5	0.4
1/9/2024	7	1.3	7	0.9	8537	7.44450045	123	3	4	0.4	0.6
1/10/2024	8	1.5	8	1.1	9779	7.19775009	131	4	4	0.5	0.6
1/11/2024	7	1.3	7	0.9	8583	7.40862513	118	4	3	0.5	0.4
1/12/2024	8	1.5	8	1.1	9788	7.32900047	130	4	4	0.5	0.6
1/13/2024	8	1.5	8	1.1	9811	7.24850035	128	4	4	0.5	0.6
1/14/2024	8	1.5	8	1.1	9798	7.18987513	130	4	4	0.4	0.6
1/15/2024	7	1.3	7	0.9	8593	7.45937443	127	4	4	0.4	0.6
1/16/2024	8	1.5	8	1.1	9813	7.39812469	136	4	4	0.5	0.6
1/17/2024	8	1.5	8	1.1	9825	7.38850021	137	4	4	0.5	0.6
1/18/2024	8	1.5	8	1.1	9805	7.30362511	133	4	4	0.5	0.6
1/19/2024	8	1.5	8	1.1	9810	7.18287468	131	4	4	0.5	0.6
1/20/2024	7	1.3	7	0.9	8588	7.41650009	132	4	3	0.5	0.4
1/21/2024	8	1.5	8	1.1	9786	7.33862495	130	4	4	0.5	0.6
1/22/2024	7	1.3	7	0.9	8590	7.47074986	122	3	4	0.4	0.6
1/23/2024	8	1.5	8	1.1	9550	7.32900047	129	4	4	0.5	0.6
1/24/2024	8	1.5	8	1.1	9677	7.02975035	128	4	4	0.5	0.4
1/25/2024	8	1.4	7	0.9	8544	7.29750013	120	4	4	0.5	0.5
1/26/2024	8	1.5	8	1.1	9806	7.11812496	123	4	4	0.5	0.6
1/27/2024	7	1.3	7	0.9	8589	7.38675022	122	3	4	0.4	0.6
1/28/2024	8	1.5	8	1.1	9836	7.35962534	135	4	4	0.5	0.6
1/29/2024	8	1.5	8	1.1	9829	7.35175037	132	4	4	0.5	0.6
1/30/2024	9	1.7	9	1.2	11067	6.99387503	131	5	4	0.6	0.6
1/31/2024	8	1.5	8	1.1	9849	7.18724966	127	4	4	0.5	0.6
2/1/2024	8	1.5	8	1.1	9845	7.28525019	128	4	4	0.5	0.6
2/2/2024	8	1.5	8	1.1	9847	7.38850021	132	4	4	0.5	0.6
2/3/2024	9	1.7	9	1.2	11065	6.87050009	129	4	5	0.5	0.6
2/4/2024	9	1.5	8	1.1	9835	7.04200029	124	4	5	0.5	0.6
2/5/2024	8	1.5	8	1.1	9830	7.13999987	124	4	4	0.5	0.5
2/6/2024	8	1.5	8	1.1	9823	7.05512476	125	4	4	0.5	0.5
2/7/2024	8	1.4	8	1	8902	7.18287468	119	4	3	0.5	0.4
2/8/2024	8	1.5	8	1	9162	7.36924982	121	4	4	0.5	0.5
2/9/2024	8	1.5	8	1.1	9826	7.48212481	125	4	4	0.5	0.5
2/10/2024	8	1.5	8	1.1	9830	7.42437458	126	4	4	0.5	0.5
2/11/2024	8	1.5	8	1.1	9823	7.30362511	128	4	4	0.5	0.5
2/12/2024	7	1.3	7	0.9	8583	7.53112507	120	3	4	0.4	0.5
2/13/2024	8	1.5	8	1.1	9810	7.2642498	127	4	4	0.5	0.5
2/14/2024	8	1.5	8	1.1	9814	7.1548748	122	4	4	0.5	0.5
2/15/2024	8	1.5	8	1.1	9853	6.93962526	127	4	4	0.5	0.5
2/16/2024	7	1.3	7	0.9	8627	7.36924982	118	4	3	0.5	0.4
2/17/2024	8	1.5	8	1.1	9835	7.33949947	126	4	4	0.5	0.5
2/18/2024	8	1.5	8	1.1	9825	7.34125042	127	4	4	0.5	0.5
2/19/2024	8	1.5	8	1.1	9823	7.30099964	124	4	4	0.5	0.5
2/20/2024	8	1.5	8	1.1	9813	7.2239995	125	4	4	0.5	0.5
2/21/2024	8	1.5	8	1.1	9829	6.99387503	124	4	4	0.5	0.5
2/22/2024	8	1.5	8	1.1	9835	6.98162508	128	4	4	0.5	0.5
2/23/2024	7	1.3	7	0.9	8598	7.31150007	125	3	4	0.4	0.5
2/24/2024	8	1.5	8	1.1	9827	7.34125042	123	4	4	0.5	0.5
2/25/2024	8	1.5	8	1.1	9833	7.1960001	126	4	4	0.5	0.5
2/26/2024	8	1.5	8	1.1	9822	7.11812496	121	4	4	0.5	0.5
2/27/2024	18	1.8	8	1.1	9584	7.22837448	132	4	4	0.5	0.5
2/28/2024	8	1.5	8	1.1	9838	7.19775009	123	4	4	0.5	0.5
2/29/2024	7	1.3	7	0.9	8592	7.40774965	120	4	3	0.5	0.4
3/1/2024	8	1.5	8	1.1	9820	7.32462502	128	4	4	0.5	0.5
3/2/2024	8	1.5	8	1.1	9838	7.20650005	129	4	4	0.5	0.5
3/3/2024	8	1.5	8	1.1	9820	7.19512463	123	4	4	0.5	0.5

Table B-1
2024
Groundwater Treatment Plant Operations Summary
Former York Naval Ordnance Plant
1425 Eden Road, York, PA 17402

Date	AST Blower Cycles	AST Blower Hours	AST Pump Cycles	AST Pump Hours	Discharge Flow (gallons)	Influent pH (S.U.)	GWTS KWH	Effluent Pump P1 Cycles	Effluent Pump P2 Cycles	Effluent Pump P1 Hours	Effluent Pump P2 Hours
3/4/2024	8	1.5	8	1.1	9837	7.08050013	119	4	4	0.5	0.5
3/5/2024	8	1.5	8	1.1	9840	6.95712519	129	4	4	0.5	0.5
3/6/2024	8	1.5	8	1.1	9865	6.95624971	126	4	4	0.5	0.5
3/7/2024	8	1.5	8	1.1	9839	7.14787483	122	4	4	0.5	0.5
3/8/2024	8	1.5	8	1.1	9849	7.00874996	125	4	4	0.5	0.5
3/9/2024	8	1.5	8	1.1	9857	7.09975052	135	4	4	0.5	0.5
3/10/2024	8	1.5	8	1.1	9894	7.20037508	126	4	4	0.5	0.5
3/11/2024	9	1.7	9	1.2	11122	7.00612497	129	4	5	0.5	0.6
3/12/2024	8	1.5	8	1.1	9902	7.39987469	121	4	5	0.5	0.6
3/13/2024	9	1.7	9	1.2	11165	7.31412506	126	5	4	0.6	0.5
3/14/2024	9	1.7	9	1.2	11144	7.0918746	125	4	5	0.5	0.7
3/15/2024	8	1.5	8	1.1	9906	7.41300011	110	4	4	0.5	0.5
3/16/2024	9	1.7	9	1.2	11132	7.14349937	118	5	4	0.6	0.5
3/17/2024	8	1.5	8	1.1	9915	7.46287537	111	4	4	0.5	0.5
3/18/2024	9	1.7	9	1.2	11130	7.19250011	120	4	5	0.5	0.7
3/19/2024	8	1.5	8	1.1	9888	7.32375002	118	4	4	0.5	0.5
3/20/2024	9	1.7	9	1.2	11110	7.11287498	126	5	4	0.6	0.5
3/21/2024	8	1.5	8	1.1	9871	7.18200016	119	4	4	0.5	0.5
3/22/2024	8	1.5	8	1.1	9876	7.26687527	121	4	4	0.5	0.5
3/23/2024	8	1.5	8	1.1	9883	7.3333745	122	4	4	0.5	0.5
3/24/2024	8	1.5	8	1.1	9887	7.37975025	119	4	4	0.5	0.5
3/25/2024	9	1.7	9	1.2	11113	7.13562489	124	4	5	0.5	0.7
3/26/2024	8	1.5	8	1.1	9904	7.09975052	122	4	4	0.5	0.5
3/27/2024	9	1.7	9	1.1	10426	7.23887491	131	5	4	0.6	0.5
3/28/2024	8	1.5	8	1.1	9903	7.34037495	124	4	4	0.5	0.5
3/29/2024	9	1.7	9	1.2	11116	7.29224968	129	4	5	0.5	0.7
3/30/2024	8	1.5	8	1.1	9873	7.44362497	123	4	4	0.5	0.5
3/31/2024	8	1.5	8	1.1	9883	7.49000025	120	4	4	0.5	0.5
4/1/2024	8	1.5	8	1.1	9854	7.54075003	125	4	4	0.4	0.5
4/2/2024	9	1.7	9	1.2	11124	7.27737522	135	5	4	0.4	0.5
4/3/2024	10	1.9	10	1.4	12440	7.08574963	144	5	5	0.5	0.7
4/4/2024	10	2	10	1.4	12497	7.18812513	138	5	5	0.5	0.7
4/5/2024	10	2	10	1.4	12511	7.26949978	144	5	5	0.5	0.7
4/6/2024	11	2.1	11	1.5	13577	7.08925009	144	5	6	0.6	0.8
4/7/2024	10	1.9	10	1.4	12482	7.15925026	134	5	5	0.5	0.7
4/8/2024	10	1.9	10	1.4	12493	7.35874987	131	5	5	0.5	0.7
4/9/2024	10	1.9	10	1.4	12490	7.37187529	134	5	5	0.5	0.7
4/10/2024	10	1.9	10	1.4	12447	7.36137486	137	5	5	0.5	0.7
4/11/2024	10	1.9	10	1.4	12478	7.33599997	138	5	5	0.5	0.7
4/12/2024	10	1.9	10	1.4	12462	7.29487514	160	5	5	0.5	0.7
4/13/2024	10	1.8	10	1.3	11722	7.23887491	167	5	4	0.4	0.5
4/14/2024	10	1.8	10	1.3	11610	7.36750031	158	5	5	0.5	0.7
4/15/2024	10	1.9	10	1.4	12441	7.11112499	152	5	5	0.5	0.7
4/16/2024	9	1.7	9	1.2	11188	7.35437489	150	4	5	0.5	0.7
4/17/2024	9	1.7	9	1.2	11169	7.43837547	150	5	4	0.4	0.5
4/18/2024	9	1.7	9	1.2	11174	7.46987486	144	4	5	0.5	0.7
4/19/2024	9	1.7	9	1.2	11175	7.47249985	147	5	4	0.4	0.5
4/20/2024	9	1.7	9	1.2	11158	7.47337532	139	4	5	0.5	0.7
4/21/2024	9	1.7	9	1.2	11155	7.42787552	147	5	4	0.4	0.5
4/22/2024	9	1.7	9	1.2	11147	7.20825005	141	4	5	0.5	0.7
4/23/2024	8	1.5	8	1.1	9925	7.53287506	125	4	4	0.4	0.5
4/24/2024	9	1.7	9	1.2	11138	7.41037464	117	5	4	0.4	0.5
4/25/2024	8	1.5	8	1.1	9898	7.41562557	117	4	4	0.4	0.5
4/26/2024	9	1.6	9	1.2	10743	7.35699987	120	4	5	0.5	0.6
4/27/2024	9	1.6	9	1.1	9971	7.43049955	124	4	5	0.5	0.6
4/28/2024	8	1.5	8	1.1	9889	7.47862482	113	4	4	0.4	0.5
4/29/2024	8	1.5	8	1.1	9890	7.28962517	108	4	4	0.4	0.5
4/30/2024	9	1.6	9	1.2	10764	6.69637489	110	5	4	0.4	0.5
5/1/2024	9	1.6	9	1.1	9938	6.81187487	109	5	4	0.6	0.5
5/2/2024	8	1.5	8	1.1	9869	6.85737514	117	6	4	0.5	0.6
5/3/2024	8	1.5	8	1.1	9882	6.98950005	111	4	4	0.5	0.6
5/4/2024	8	1.4	8	0.9	8737	7.60374975	105	3	4	0.4	0.6
5/5/2024	8	1.5	8	1	9448	7.57137489	108	4	4	0.5	0.6

Table B-1
2024
Groundwater Treatment Plant Operations Summary
Former York Naval Ordnance Plant
1425 Eden Road, York, PA 17402

Date	AST Blower Cycles	AST Blower Hours	AST Pump Cycles	AST Pump Hours	Discharge Flow (gallons)	Influent pH (S.U.)	GWTS KWH	Effluent Pump P1 Cycles	Effluent Pump P2 Cycles	Effluent Pump P1 Hours	Effluent Pump P2 Hours
5/6/2024	8	1.5	8	1.1	9882	7.56874943	108	4	4	0.5	0.6
5/7/2024	8	1.5	8	1.1	9876	7.27999973	110	4	4	0.5	0.6
5/8/2024	8	1.5	8	1.1	9882	7.2414999	111	4	4	0.5	0.6
5/9/2024	8	1.5	8	1.1	9863	7.38412523	109	4	4	0.5	0.6
5/10/2024	8	1.5	8	1.1	9862	7.62212563	109	4	4	0.5	0.6
5/11/2024	8	1.5	8	1.1	9876	7.52587509	109	4	4	0.5	0.6
5/12/2024	8	1.5	8	1.1	9890	7.49524975	108	4	4	0.5	0.6
5/13/2024	8	1.3	8	0.9	8678	7.51362514	102	4	3	0.5	0.4
5/14/2024	8	1.5	8	1	9492	7.58887529	105	4	4	0.5	0.6
5/15/2024	8	1.5	8	1.1	9864	7.48474979	105	4	4	0.5	0.6
5/16/2024	8	1.5	8	1.1	9869	7.47774982	108	4	4	0.5	0.6
5/17/2024	8	1.5	8	1.1	9869	7.40162468	108	4	4	0.5	0.6
5/18/2024	7	1.3	7	0.9	8650	7.57837534	101	3	4	0.4	0.6
5/19/2024	8	1.5	8	1.1	9870	7.27562475	110	4	4	0.5	0.6
5/20/2024	8	1.5	8	1.1	9867	7.05162525	111	4	4	0.5	0.6
5/21/2024	7	1.3	7	0.9	8621	7.26862526	108	4	3	0.5	0.4
5/22/2024	8	1.5	8	1.1	9842	7.07437515	115	4	4	0.5	0.6
5/23/2024	7	1.3	7	0.9	8628	7.30800009	107	3	4	0.4	0.6
5/24/2024	8	1.5	8	1.1	9858	7.16100025	117	4	4	0.5	0.6
5/25/2024	7	1.3	7	0.9	8620	7.35874987	109	4	3	0.5	0.4
5/26/2024	8	1.5	8	1.1	9848	7.15925026	115	4	4	0.5	0.6
5/27/2024	7	1.3	7	0.9	8616	7.22224998	108	3	4	0.4	0.6
5/28/2024	8	1.5	8	1.1	9841	6.89674997	113	4	4	0.5	0.6
5/29/2024	7	1.3	7	0.9	8615	7.3053751	106	4	3	0.5	0.4
5/30/2024	7	1.3	7	0.9	8620	7.30099964	105	3	4	0.4	0.5
5/31/2024	7	1.3	7	0.9	8625	7.32549953	106	4	3	0.5	0.4
6/1/2024	8	1.5	8	1.1	9829	6.90899992	114	4	4	0.5	0.5
6/2/2024	7	1.3	7	0.9	8619	7.05425024	108	3	4	0.4	0.5
6/3/2024	7	1.3	7	0.9	8619	7.18025017	108	4	3	0.5	0.4
6/4/2024	7	1.3	7	0.9	8609	7.25637531	112	3	4	0.4	0.5
6/5/2024	7	1.3	7	0.9	8620	7.35262489	107	4	3	0.5	0.4
6/6/2024	8	1.5	8	1.1	9852	6.87225008	113	4	4	0.5	0.5
6/7/2024	7	1.3	7	0.9	8629	7.13300037	108	3	4	0.4	0.5
6/8/2024	7	1.3	7	0.9	8613	7.20212507	108	4	3	0.5	0.4
6/9/2024	7	1.3	7	0.9	8624	7.27125025	107	3	4	0.4	0.5
6/10/2024	7	1.3	7	0.9	8618	7.36312485	106	4	3	0.5	0.4
6/11/2024	7	1.3	7	0.9	8613	7.38499975	104	3	4	0.4	0.5
6/12/2024	7	1.3	7	0.9	8613	7.36400032	107	4	3	0.5	0.4
6/13/2024	8	1.4	8	1	9184	6.74274969	111	3	4	0.4	0.5
6/14/2024	8	1.4	8	1	8938	6.79349995	112	4	4	0.5	0.5
6/15/2024	7	1.3	7	0.9	8613	6.87137508	109	4	3	0.4	0.4
6/16/2024	7	1.1	7	0.8	7426	7.07174969	104	4	3	0.4	0.4
6/17/2024	7	1.3	7	0.9	8211	7.15575027	110	3	4	0.4	0.5
6/18/2024	7	1.3	7	0.9	8623	7.09887505	113	4	3	0.5	0.4
6/19/2024	7	1.3	7	0.9	8600	7.04112482	112	3	4	0.4	0.5
6/20/2024	7	1.3	7	0.9	8602	6.80924988	116	4	3	0.5	0.4
6/21/2024	7	1.3	7	0.9	8595	6.76287508	114	3	4	0.3	0.5
6/22/2024	7	1.3	7	0.9	8630	6.73749971	114	4	3	0.5	0.4
6/23/2024	7	1.3	7	0.9	8645	6.59837484	114	3	4	0.3	0.5
6/24/2024	7	1.1	7	0.8	7534	6.7593751	103	3	3	0.3	0.4
6/25/2024	7	1.3	7	0.9	8167	7.13562489	109	4	3	0.5	0.4
6/26/2024	7	1.3	7	0.9	8647	6.94312477	113	3	4	0.3	0.5
6/27/2024	7	1.3	7	0.9	8633	6.78562498	109	4	3	0.5	0.4
6/28/2024	6	1.1	6	0.8	7374	7.24587536	104	3	3	0.3	0.4
6/29/2024	7	1.3	7	0.9	8619	7.09012461	111	3	4	0.3	0.5
6/30/2024	7	1.3	7	0.9	8641	6.96062469	110	4	3	0.5	0.4
7/1/2024	6	1.1	6	0.8	7393	7.34212494	102	3	3	0.3	0.4
7/2/2024	8	1.4	8	0.9	8832	7.16800022	116	3	4	0.3	0.6
7/3/2024	7	1.3	7	0.9	8671	7.0918746	114	4	3	0.5	0.4
7/4/2024	8	1.4	8	1	9539	6.44787502	118	4	4	0.4	0.5
7/5/2024	8	1.4	8	0.9	8729	6.73049974	118	4	4	0.4	0.5
7/6/2024	7	1.3	7	0.9	8644	6.85912514	119	4	3	0.5	0.4
7/7/2024	7	1.3	7	0.9	8663	6.95975018	117	3	4	0.3	0.5

Table B-1
2024
Groundwater Treatment Plant Operations Summary
Former York Naval Ordnance Plant
1425 Eden Road, York, PA 17402

Date	AST Blower Cycles	AST Blower Hours	AST Pump Cycles	AST Pump Hours	Discharge Flow (gallons)	Influent pH (S.U.)	GWTS KWH	Effluent Pump P1 Cycles	Effluent Pump P2 Cycles	Effluent Pump P1 Hours	Effluent Pump P2 Hours
7/8/2024	7	1.3	7	0.9	8644	6.97200012	123	4	3	0.5	0.4
7/9/2024	7	1.3	7	0.9	8646	7.00262547	125	3	4	0.3	0.5
7/10/2024	7	1.3	7	0.9	8643	7.07087517	112	4	3	0.5	0.4
7/11/2024	7	1.3	7	0.9	8622	7.16624975	109	3	4	0.3	0.5
7/12/2024	7	1.3	7	0.9	8631	7.28962517	108	4	3	0.5	0.4
7/13/2024	7	1.3	7	0.9	8635	7.13475037	112	3	4	0.3	0.5
7/14/2024	7	1.3	7	0.9	8640	7.02012491	114	4	3	0.5	0.4
7/15/2024	7	1.3	7	0.9	8660	6.95800018	112	3	4	0.3	0.5
7/16/2024	7	1.3	7	0.9	8634	6.83812523	117	4	3	0.5	0.4
7/17/2024	7	1.2	7	0.9	8312	6.78912497	109	3	4	0.3	0.4
7/18/2024	7	1.2	7	0.8	7429	7.36575031	105	3	4	0.3	0.5
7/19/2024	7	1.3	7	0.9	8645	7.31237507	112	4	3	0.5	0.4
7/20/2024	7	1.3	7	0.9	8651	7.21087503	111	3	4	0.3	0.5
7/21/2024	7	1.3	7	0.9	8633	7.11025047	113	4	3	0.5	0.4
7/22/2024	7	1.3	7	0.9	8627	7.0052495	109	3	4	0.3	0.5
7/23/2024	7	1.3	7	0.9	8633	6.59224987	111	4	3	0.5	0.4
7/24/2024	6	1.1	6	0.8	7395	7.36049986	105	3	3	0.3	0.4
7/25/2024	7	1.3	7	0.9	8628	7.28700018	109	3	4	0.3	0.5
7/26/2024	7	1.3	7	0.9	8625	7.21000004	111	4	3	0.5	0.4
7/27/2024	7	1.3	7	0.9	8639	7.04724979	111	3	4	0.3	0.5
7/28/2024	7	1.2	7	0.8	7987	6.78474998	109	3	3	0.3	0.4
7/29/2024	7	1.2	7	0.8	7697	7.22312498	107	4	3	0.5	0.4
7/30/2024	7	1.3	7	0.9	8614	7.16449976	109	3	4	0.3	0.5
7/31/2024	7	1.3	7	0.9	8623	7.01925039	112	4	3	0.5	0.4
8/1/2024	6	1.1	6	0.8	7379	7.17412519	111	3	3	0.3	0.4
8/2/2024	7	1.3	7	0.9	8638	7.36137486	113	3	4	0.3	0.5
8/3/2024	7	1.3	7	0.9	8634	7.23012447	112	4	3	0.5	0.4
8/4/2024	6	1.1	6	0.8	7404	7.44712448	105	3	3	0.3	0.4
8/5/2024	7	1.3	7	0.9	8662	7.19862509	113	3	4	0.3	0.5
8/6/2024	7	1.3	7	0.9	8649	7.07875013	111	4	3	0.5	0.4
8/7/2024	6	1.1	6	0.8	7420	7.54337502	101	3	3	0.3	0.4
8/8/2024	7	1.3	7	0.9	8651	7.4550004	105	3	4	0.3	0.5
8/9/2024	7	1.3	7	0.9	8660	7.41125011	108	4	3	0.5	0.4
8/10/2024	8	1.5	8	1.1	9938	7.07875013	116	4	4	0.5	0.5
8/11/2024	7	1.3	7	0.9	8669	7.26687527	110	3	4	0.3	0.5
8/12/2024	7	1.3	7	0.9	8680	7.44624996	109	4	3	0.5	0.4
8/13/2024	7	1.3	7	0.9	8675	7.52850008	110	3	4	0.3	0.5
8/14/2024	8	1.5	8	1.1	9917	7.07612514	115	4	4	0.5	0.5
8/15/2024	7	1.3	7	0.9	8670	7.02975035	110	4	3	0.5	0.4
8/16/2024	7	1.3	7	0.9	8679	7.2826252	112	3	4	0.3	0.5
8/17/2024	7	1.3	7	0.9	8674	7.34212494	109	4	3	0.5	0.4
8/18/2024	7	1.3	7	0.9	8667	7.28437471	110	3	4	0.3	0.5
8/19/2024	8	1.4	8	1	9715	7.10849953	112	4	4	0.5	0.4
8/20/2024	8	1.4	7	0.9	8664	7.27037525	107	4	4	0.5	0.4
8/21/2024	7	1.3	7	0.9	8659	7.24762487	106	3	4	0.3	0.5
8/22/2024	7	1.3	7	0.9	8660	7.36750031	107	4	3	0.5	0.4
8/23/2024	7	1.3	7	0.9	8612	7.22487497	111	3	4	0.3	0.5
8/24/2024	7	1.3	7	0.9	8660	6.93874979	109	4	3	0.5	0.4
8/25/2024	6	1.1	6	0.8	7412	7.31324959	104	3	3	0.3	0.4
8/26/2024	7	1.3	7	0.9	8665	7.26949978	111	3	4	0.3	0.5
8/27/2024	7	1.3	7	0.9	8645	7.12599993	112	4	3	0.5	0.4
8/28/2024	7	1.3	7	0.9	8652	7.14875031	110	3	4	0.3	0.5
8/29/2024	7	1.3	7	0.9	8665	7.06737471	109	4	3	0.5	0.4
8/30/2024	7	1.3	7	0.9	8646	7.02624989	107	3	4	0.3	0.5
8/31/2024	7	1.2	7	0.8	8011	6.95800018	104	3	3	0.3	0.4
9/1/2024	7	1.2	7	0.8	7729	7.3456254	107	4	3	0.5	0.4
9/2/2024	7	1.3	7	0.9	8656	7.27912521	109	3	4	0.3	0.5
9/3/2024	7	1.3	7	0.9	8634	7.22049999	109	4	3	0.5	0.4
9/4/2024	6	1.1	6	0.8	7427	7.44624996	101	3	3	0.3	0.4
9/5/2024	7	1.3	7	0.9	8636	7.37887478	107	3	4	0.3	0.5
9/6/2024	7	1.3	7	0.9	8632	7.23187542	106	4	3	0.5	0.4
9/7/2024	6	1.1	6	0.8	7402	7.43924999	98	3	3	0.3	0.4
9/8/2024	7	1.3	7	0.9	8629	7.47249985	105	3	4	0.3	0.5

Table B-1
2024
Groundwater Treatment Plant Operations Summary
Former York Naval Ordnance Plant
1425 Eden Road, York, PA 17402

Date	AST Blower Cycles	AST Blower Hours	AST Pump Cycles	AST Pump Hours	Discharge Flow (gallons)	Influent pH (S.U.)	GWTS KWH	Effluent Pump P1 Cycles	Effluent Pump P2 Cycles	Effluent Pump P1 Hours	Effluent Pump P2 Hours
9/9/2024	7	1.3	7	0.9	8625	7.31937504	103	4	3	0.5	0.4
9/10/2024	5	0.9	5	0.6	6180	7.34300041	91	2	3	0.2	0.4
9/11/2024	7	1.3	7	0.9	8621	7.29137516	103	4	3	0.5	0.4
9/12/2024	7	1.3	7	0.9	8633	7.25549984	104	3	4	0.3	0.5
9/13/2024	7	1.3	7	0.9	8607	6.91775036	104	4	3	0.5	0.4
9/14/2024	6	1.1	6	0.8	7379	7.3508749	99	3	3	0.3	0.4
9/15/2024	7	1.3	7	0.9	8614	7.19250011	105	3	4	0.3	0.5
9/16/2024	6	1.1	6	0.8	7382	7.4147501	97	3	3	0.3	0.4
9/17/2024	7	1.3	7	0.9	8601	7.10500002	101	4	3	0.5	0.4
9/18/2024	6	1.1	6	0.8	7365	7.32200003	95	3	3	0.3	0.4
9/19/2024	7	1.3	7	0.9	8608	7.25812531	101	3	4	0.3	0.5
9/20/2024	6	1.1	6	0.8	7384	7.40250015	95	3	3	0.3	0.4
9/21/2024	7	1.3	7	0.9	8602	7.21875	102	4	3	0.5	0.4
9/22/2024	6	1.1	6	0.8	7376	7.4147501	97	3	3	0.3	0.4
9/23/2024	7	1.3	7	0.9	8588	7.50312471	102	3	4	0.3	0.5
9/24/2024	6	1.1	6	0.8	7367	7.56874943	96	3	3	0.3	0.4
9/25/2024	7	1.3	7	0.9	8596	7.48125029	104	4	3	0.5	0.4
9/26/2024	6	1.1	6	0.8	7375	7.47249985	95	3	3	0.3	0.4
9/27/2024	7	1.3	7	0.9	8597	7.48912525	101	3	4	0.3	0.5
9/28/2024	7	1.3	7	0.9	8606	7.42700005	103	4	3	0.5	0.4
9/29/2024	6	1.1	6	0.8	7369	7.57137489	98	3	3	0.3	0.4
9/30/2024	7	1.3	7	0.9	8595	7.57924986	103	3	4	0.3	0.5
10/1/2024	7	1.3	7	0.9	8587	7.42787552	103	4	3	0.5	0.4
10/2/2024	6	1.1	6	0.8	7368	7.59412479	98	3	3	0.3	0.4
10/3/2024	7	1.3	7	0.9	8598	7.4147501	107	3	4	0.3	0.5
10/4/2024	7	1.3	7	0.9	8516	7.50837517	103	4	3	0.5	0.4
10/5/2024	7	1.3	7	0.9	8593	7.40162468	103	3	4	0.3	0.5
10/6/2024	6	1.1	6	0.8	7361	7.50924969	99	3	3	0.3	0.4
10/7/2024	7	1.3	7	0.9	8583	7.48125029	102	4	3	0.5	0.4
10/8/2024	6	1.1	6	0.8	7356	7.58887529	98	3	3	0.3	0.4
10/9/2024	7	1.3	7	0.9	8584	7.61424971	106	3	4	0.3	0.5
10/10/2024	6	1.1	6	0.8	7356	7.70000029	102	3	3	0.3	0.4
10/11/2024	7	1.3	7	0.9	8592	7.70524979	109	4	3	0.5	0.4
10/12/2024	4	0.7	4	0.5	4899	7.83387518	87	2	2	0.2	0.2
10/13/2024	2	0.3	2	0.2	2151	7.68074989	70	1	1	0	0.1
10/14/2024	3	0.4	2	0.2	2400	7.90387487	74	2	1	0.1	0.1
10/15/2024	3	0.5	3	0.4	3594	7.99399948	84	1	2	0.1	0.2
10/16/2024	3	0.5	3	0.4	3600	8.05962563	86	2	1	0.2	0.1
10/17/2024	2	0.3	2	0.2	2399	7.96512461	80	1	1	0.1	0.1
10/18/2024	6	1	5	0.7	6213	7.93624973	70	2	3	0.2	0.4
10/19/2024	8	1.5	8	1.1	9926	7.85050011	116	4	4	0.5	0.5
10/20/2024	7	1.3	7	0.9	8628	7.90212536	109	4	3	0.5	0.4
10/21/2024	7	1.3	7	0.9	8613	7.82162523	106	3	4	0.3	0.5
10/22/2024	7	1.3	7	0.9	8589	7.71487522	105	4	3	0.5	0.4
10/23/2024	7	1.1	7	0.8	7414	7.80150032	96	3	3	0.3	0.4
10/24/2024	7	1.3	7	0.9	8188	7.85837507	100	3	4	0.3	0.5
10/25/2024	7	1.3	7	0.9	8586	7.82862473	109	4	3	0.5	0.4
10/26/2024	6	1.1	6	0.8	7343	7.92399979	101	3	3	0.3	0.4
10/27/2024	6	1.1	6	0.8	7343	7.98349953	106	3	3	0.3	0.4
10/28/2024	7	1.3	7	0.9	8574	7.87062502	110	3	4	0.3	0.5
10/29/2024	6	1.1	6	0.8	7339	7.88987541	102	3	3	0.3	0.4
10/30/2024	6	1.1	6	0.8	7345	7.86625004	100	3	3	0.3	0.4
10/31/2024	7	1.3	7	0.9	8358	7.69474983	103	4	3	0.5	0.4
11/1/2024	6	1.1	6	0.8	7337	7.81375027	98	3	3	0.3	0.4
11/2/2024	6	1.1	6	0.8	7340	7.92925024	103	3	3	0.3	0.4
11/3/2024	7	1.3	7	0.9	8463	8.00800037	115	3	4	0.3	0.5
11/4/2024	6	1.1	6	0.8	7334	7.96250057	103	3	3	0.3	0.4
11/5/2024	7	5.2	7	4.8	61788	6.67799997	322	3	6	4.4	0.4
11/6/2024	6	1.1	6	0.8	7351	6.6491251	93	3	3	0.4	0.4
11/7/2024	6	1.1	6	0.8	7359	6.72700024	93	3	3	0.4	0.4
11/8/2024	6	1.1	6	0.8	7353	6.78474998	100	3	3	0.4	0.4
11/9/2024	6	1.1	6	0.8	7360	6.88537502	104	3	3	0.4	0.4
11/10/2024	7	1.3	7	0.9	8571	6.81537485	112	4	3	0.5	0.4

Table B-1
2024
Groundwater Treatment Plant Operations Summary
Former York Naval Ordnance Plant
1425 Eden Road, York, PA 17402

Date	AST Blower Cycles	AST Blower Hours	AST Pump Cycles	AST Pump Hours	Discharge Flow (gallons)	Influent pH (S.U.)	GWTS KWH	Effluent Pump P1 Cycles	Effluent Pump P2 Cycles	Effluent Pump P1 Hours	Effluent Pump P2 Hours
11/11/2024	6	1.1	6	0.8	7332	6.782125	97	3	3	0.4	0.4
11/12/2024	5	0.9	5	0.6	6166	6.79437494	110	2	3	0.2	0.4
11/13/2024	6	1.1	6	0.8	7366	6.82587528	108	3	3	0.4	0.4
11/14/2024	7	1.3	7	0.9	8569	6.75062513	116	4	3	0.5	0.4
11/15/2024	6	1.2	6	0.8	7323	6.72700024	106	3	3	0.4	0.5
11/16/2024	6	1.1	6	0.8	7324	6.78474998	106	3	3	0.4	0.4
11/17/2024	6	1.2	6	0.9	7323	6.88537502	106	3	3	0.4	0.5
11/18/2024	6	1.1	6	0.8	7324	6.81537485	106	3	3	0.4	0.4
11/19/2024	6	1.1	6	0.8	7320	6.78912497	104	3	3	0.4	0.4
11/20/2024	6	1.1	6	0.8	7325	6.79262495	105	3	3	0.4	0.4
11/21/2024	7	1.3	7	0.9	8541	6.76200008	117	3	4	0.4	0.6
11/22/2024	6	1.1	6	0.8	7322	6.77862501	112	3	3	0.4	0.4
11/23/2024	6	1.1	6	0.8	7323	6.78737497	107	3	3	0.4	0.4
11/24/2024	6	1.1	6	0.8	7310	6.80137491	110	3	3	0.4	0.4
11/25/2024	4	0.7	4	0.5	4839	6.81187487	106	2	2	0.2	0.2
11/26/2024	2	0.3	2	0.2	2381	6.83899975	101	1	1	0.1	0.1
11/27/2024	6	1.1	6	0.8	7404	6.78912497	115	3	3	0.4	0.4
11/28/2024	8	1.5	8	1.1	9830	6.75412464	128	4	4	0.5	0.6
11/29/2024	6	1.1	6	0.8	7345	6.79437494	113	3	3	0.4	0.4
11/30/2024	7	1.3	7	0.9	8555	6.76025009	118	4	3	0.5	0.4
12/1/2024	6	1.1	6	0.8	7336	6.782125	114	3	3	0.4	0.4
12/2/2024	7	1.3	7	0.9	8539	6.74362469	117	3	4	0.4	0.5
12/3/2024	6	1.1	6	0.8	7337	6.60712528	117	3	3	0.4	0.4
12/4/2024	7	1.3	7	0.9	8539	6.39712477	315	4	3	0.5	0.4
12/5/2024	6	1.1	6	0.8	7320	6.51087475	113	3	3	0.4	0.4
12/6/2024	6	1.1	6	0.8	7298	6.57649994	113	3	3	0.4	0.4
12/7/2024	7	1.1	6	0.8	7302	6.57387495	113	3	3	0.4	0.4
12/8/2024	7	1.3	7	0.9	8260	6.44787502	151	3	4	0.4	0.5
12/9/2024	6	1.1	6	0.8	7310	6.49162531	149	3	3	0.4	0.4
12/10/2024	6	1.1	6	0.8	7315	6.52925014	112	3	3	0.4	0.4
12/11/2024	6	1.1	6	0.8	7322	6.5852499	111	3	3	0.4	0.4
12/12/2024	7	1.3	7	0.9	8523	6.44437504	115	4	3	0.5	0.4
12/13/2024	6	1.1	6	0.8	7299	6.54675007	115	3	3	0.4	0.4
12/14/2024	6	1.1	6	0.8	7326	6.59487534	118	3	3	0.4	0.4
12/15/2024	7	1.3	7	0.9	8526	6.47412491	123	3	4	0.4	0.5
12/16/2024	6	1.1	6	0.8	7322	6.54675007	113	3	3	0.4	0.4
12/17/2024	7	1.3	7	0.9	8543	6.42775011	117	4	3	0.5	0.4
12/18/2024	6	1.2	6	0.8	7563	6.40937471	114	3	3	0.4	0.4
12/19/2024	7	1.3	7	0.9	8549	6.34025002	122	3	4	0.4	0.5
12/20/2024	6	1.1	6	0.8	7335	6.42862511	113	3	3	0.4	0.4
12/21/2024	7	1.3	7	0.9	8536	6.29474974	120	4	3	0.5	0.4
12/22/2024	6	1.1	6	0.8	7342	6.42162514	118	3	4	0.3	0.5
12/23/2024	8	1.7	8	1.2	11304	5.90275002	142	9	10	0.3	0.9
12/24/2024	6	1.1	6	0.8	7326	6.15474987	116	3	3	0.4	0.4
12/25/2024	6	1.2	6	0.9	7926	6.15474987	114	3	3	0.4	0.4
12/26/2024	7	1.3	7	0.9	7926	5.89837503	114	4	3	0.5	0.5
12/27/2024	6	1.1	6	0.8	7327	6.09087515	113	3	3	0.4	0.4
12/28/2024	6	1.1	6	0.8	7312	6.1713748	115	3	3	0.4	0.4
12/29/2024	8	1.2	7	0.8	7557	6.13987541	108	3	3	0.4	0.4
12/30/2024	7	1.3	7	0.9	8539	5.84850025	115	3	4	0.4	0.6
12/31/2024	6	1.1	6	0.8	7318	6.09000015	108	3	3	0.4	0.4

APPENDIX C

2024 Operation and Maintenance Data Summary

Table C-1
2024 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		1/2/2024	1/17/2024	2/1/2024	2/23/2024	3/5/2024	3/26/2024	4/4/2024	4/18/2024	5/2/2024	5/24/2024	6/4/2024	6/20/2024	7/7/2024	7/16/2024	8/1/2024	8/23/2024	9/3/2024	9/25/2024	10/3/2024	10/22/2024	11/1/2024	11/20/2024	12/3/2024	12/18/2024
PTA INFL. PUMP																									
Full Load = 17	AMPS	NM	7.4	NM	NM	NM	NM	NM	7.30	NM	NM	NM	NM	NM	7.40	NM	NM	NM	NM	NM	7.60	NM	NM	NM	NM
	FLOW RATE gpm	157	161	161	161	161	161	161	160	161	161	161	161	161	161	161	161	161	161	161	161	161	161	161	161
PTA BLOWER																									
Full Load = 24	AMP READINGS	NM	24.57	NM	NM	NM	NM	NM	23.87	NM	NM	NM	NM	NM	22.16	NM	NM	NM	NM	NM	22.75	NM	NM	NM	NM
	PRESSURE inches water	15.6	15.8	15.9	15.3	15.3	15.4	15.4	15.2	15.1	14.6	14.4	14.9	14.8	14.1	14.7	14.8	14.5	14.9	14.8	15.2	14.4	15.1	15.8	15.7
TOWER PANEL																									
	VISUAL INSPECT	NA	OK	NA	NA	NA	NA	NA	OK	NA	NA	NA	NA	NA	OK	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	WARWICK SECURE	NA	OK	NA	NA	NA	NA	NA	OK	NA	NA	NA	NA	NA	OK	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOWER SAMPLING																									
	AST EFFLUENT pH	7.38	NM	7.36	NM	NM	7.21	7.17	NM	7.26	NM	7.4	NM	7.47	NM	7.5	NM	7.6	NM	7.5	NM	7.3	NM	7.5	NM
	AST INFLUENT pH	6.50	7.32	6.46	7.20	2.59	6.41	6.12	7.37	6.45	6.9	6.5	6.71	6.58	6.79	6.4	7.52	6.6	7.58	6.5	7.94	6.4	6.72	6.5	6.40
REDUX CHEMICAL INJECTION																									
	LMI PUMP SPEED (%)	27	29	29	28	28	28	29	28	29	27	29	29	27	29	29	29	29	29	29	29	28	29	28	29
	LMI INJECTION RATE (milis/min)	8.2	8.3	8.1	8.3	8.3	8.3	8.1	7.7	8.8	8.3	8.3	8.3	8.3	8.2	8.5	8.4	8.3	8.4	8.2	8.2	8.3	8.2	8.1	8.5
WPL WELLS																									
	TOTAL FLOW RATE gpm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CW-9; Full Load = 5.5	AMPS	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
CW-9	FLOW RATE gpm	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
CW-9	PRESSURE 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
CW-9	CLEAN "Y" STRAINER	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
CW-9	HIGH LEVEL ALARM?	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
CW-13; Full Load = 11.5	AMPS	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
CW-13	FLOW RATE gpm	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
CW-13	PRESSURE 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
CW-13	CLEAN "Y" STRAINER	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
CW-13	HIGH LEVEL ALARM?	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
CW-17; Full Load = 11.5	AMPS	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
CW-17	FLOW RATE gpm	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
CW-17	PRESSURE 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
CW-17	CLEAN "Y" STRAINER	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
CW-17	HIGH LEVEL ALARM?	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
CW-15A; Full Load = 1.6	AMPS	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
CW-15A	FLOW RATE gpm	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
CW-15A	PRESSURE 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
CW-15A	CLEAN "Y" STRAINER	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
CW-15A	HIGH LEVEL ALARM?	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
CW-20 Full Load = 17.3	AMPS	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
CW-20	FLOW RATE gpm	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
CW-20	PRESSURE 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
CW-20	CLEAN "Y" STRAINER	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
CW-20	HIGH LEVEL ALARM?	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
AST influent pressure	inches of water	10.3	11.0	10.4	10.1	10.1	10.1	10	10	9.8	9.8	9.4	9.7	9.7	9.0	9.3	9.6	9.8	9.7	9.7	10	9.5	9.8	10.5	10.3
GAC influent pressure	inches of water	8.5	9	8.5	8.2	8.3	8.3	8.2	8.2	8.1	8.0	7.7	7.9	8.0	7.4	7.9	7.7	8.1	8.0	8.1	8.2	7.8	8.1	8.6	8.5
AST pitot pressure	inches of water	0.23	0.23	0.23	0.22	0.23	0.22	0.25	0.22	0.23	0.24	0.22	0.22	0.22	0.22	0.21	0.22	0.23	0.22	0.22	0.23	0.22	0.25	0.24	0.23

Table C-1
2024 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		1/2/2024	1/17/2024	2/1/2024	2/23/2024	3/5/2024	3/26/2024	4/4/2024	4/18/2024	5/2/2024	5/24/2024	6/4/2024	6/20/2024	7/7/2024	7/16/2024	8/1/2024	8/23/2024	9/3/2024	9/25/2024	10/3/2024	10/22/2024	11/1/2024	11/20/2024	12/3/2024	12/18/2024
SPBA WELLS																								
TOTAL FLOW RATE gpm		5.9	7	7.2	6.8	6.7	7.1	8.6	8	7	6.6	5.8	5.7	5.9	5.8	5.9	6	5.9	5.5	5.5	5.7	5.2	5	5.1	5
CW-21; Full Load = 5	AMPS	NM	NM	NM	NM	NM	NM	NM	2.9	NM	NM	NM	NM	NM	2.55	NM	NM	NM	NM	NM	2.68	NM	NM	NM	NM
CW-21	FLOW-RATE gpm	3.7	4.1	4.4	4.1	4	4.5	5.3	4.8	4.2	3.9	3.8	3.7	3.7	3.3	3.2	3.4	3.2	3.3	3.2	3.2	3.1	2.6	2.9	2.9
CW-21	PRESSURE psi	9.1	9.1	9.2	9.2	9.4	9.4	9.7	10	10	10.1	10.1	10.3	10.6	10.3	10.7	10.7	10.4	10.6	10.3	10.4	10.3	10.1	9.8	9.5
CW-21	TARGET LEVEL	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95
CW-21	TRANSDUCER READING	95	95	95	95	95	95	93.2	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95
CW-21	PUMP SPEED %	74	76	76	76	76	77	80	79	77	76	76	76	76	75	74	75	74	74	74	75	74	74	74	74
CW-21	CLEAN TRANSDUCER	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-21	WATER CLARITY	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR
CW-21	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-22; Full Load = 3.9	AMPS	NM	NM	NM	NM	NM	NM	NM	2.26	NM	NM	NM	NM	NM	2.14	NM	NM	NM	NM	NM	2.16	NM	NM	NM	NM
CW-22	FLOW-RATE gpm	1.8	1.9	1.8	1.8	2	1.9	2.3	1.9	1.7	1.7	1.4	1.6	1.6	2.1	2.3	2.2	2.0	1.9	1.9	2.1	2.1	2.1	1.5	1.8
CW-22	PRESSURE psi	9.4	9.2	9.5	9.5	9.5	9.6	9.8	10.1	10.1	10.3	10.4	10.6	10.7	10.5	11.0	10.7	10.7	10.8	10.4	10.5	10.4	10.2	9.8	9.5
CW-22	TARGET LEVEL	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97
CW-22	TRANSDUCER READING	97	97	97	97	97	97	97	97	97	97	97	97	97	96.9	97	97.1	97	97	97	97	97	97	97	97
CW-22	PUMP SPEED %	73	73	73	73	73	73	74	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73	72	73
CW-22	CLEAN TRANSDUCER	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-22	WATER CLARITY	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR
CW-22	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-23; Full Load = 3.9	AMPS	NM	NM	NM	NM	NM	NM	NM	1.73	NM	NM	NM	NM	NM	1.65	NM	NM	NM	NM	NM	1.7	NM	NM	NM	NM
CW-23	FLOW-RATE gpm	0.4	1	0.8	0.8	0.7	0.8	1.4	1.2	0.8	0.6	0.4	0.6	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.3	0.4	0.3
CW-23	PRESSURE psi	9.3	9.2	9.4	9.5	9.4	9.5	9.7	10.1	10	10.3	10.3	10.5	10.7	10.7	10.9	10.7	10.6	10.7	10.3	10.3	10.3	10.1	9.7	9.4
CW-23	TARGET LEVEL	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57
CW-23	TRANSDUCER READING	57	57.1	57.1	57	57	57.1	57	57	56.9	57.7	57	57	57	57.1	56.9	57	57.1	57	56.9	57	57	57	57	57
CW-22	PUMP SPEED %	68	64	69	69	69	70	72	71	70	73	70	70	70	69	69	69	69	69	69	68	69	67	68	68
CW-23	CLEAN TRANSDUCER	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-23	WATER CLARITY	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR
CW-23	HIGH LEVEL ALARM?	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

Notes: Y - Yes N - No NA - Not Applicat - Not Applicavl - Not Measurl - Not Measu OL - Off Line