QUARTERLY SITE OPERATION MAINTENANCE & MONITORING REPORT

FORMER DARBY DRUGS DISTRIBUTION CENTER
80-100 BANKS AVENUE
ROCKVILLE CENTER, NEW YORK 11570
NYSDEC BROWNFIELD CLEANUP PROGRAM ID: C130140

PREPARED FOR:

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION
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NOVEMBER 10, 2023
***LAUREL* PROJECT #12-190**

LAUREL ENVIRONMENTAL GEOSCIENCES, D.P.C.
ENVIRONMENTAL CERTIFICATION

BROWNFIELD CLEANUP PROGRAM ID: C130140
***LAUREL* Project #12-190**

Report: Quarterly Site Operation Maintenance & Monitoring Report

Reporting Period: May 1, 2023, through July 31, 2023

Field Work Dates: May 1, 2023, through July 31, 2023

Report Date: November 10, 2023

Site: Former Darby Drugs Distribution Center
80-100 Banks Avenue, Rockville Center, New York 11570
Located on the northwest corner of Nassau Street and Banks Avenue

Weather Conditions: Variable

Client: Avalon Bay Communities, Inc.
Richard Regitano, Senior Director of Engineering

Report Prepared By:

Dina Stammers
Environmental Scientist III

Brian McCabe, QA/QC
Senior Geologist

ENVIRONMENTAL PROFESSIONAL CERTIFICATION

I declare that, to the best of my professional knowledge and belief, we meet the definition of *Environmental Professional* as defined in § 312.10 of 40 Code of Federal Regulations (CFR) 312.

The Environmental Professional who directed this project has the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the site.

Scott A. Yanuck, P.G. (NYS 000330)
Principal Hydrogeologist
11/14/23

Date

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REPORT SPECIFICATIONS

This report contains (33) pages of text.

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1.0 INTRODUCTION

Laurel Environmental Geosciences, D.P.C. (Laurel) has prepared this quarterly site operation maintenance and monitoring report on behalf of Avalon Bay Communities Inc. (Avalon Bay). This report documents the operational status of the groundwater extraction and treatment system during the reporting period and provides the current groundwater quality and volatile organic compound (VOC) concentrations in groundwater. This work is being performed under the NYSDEC Brownfield Cleanup Program, Site ID #C130140 located at 80-100 Banks Avenue, Rockville Centre, New York (Section 38, Block 539, Lots 27 and 30; the Site). The Site is a 7.1-acre parcel that has been re-developed with multiple story residential apartment buildings. The Site is located at the northwest corner of the intersection of Nassau Street and Banks Avenue.

2.0 SCOPE OF WORK

Laurel conducted a system-wide inspection that included checking the operation of the groundwater extraction and treatment system components, performing necessary repairs, and the collection of groundwater samples.

Laurel completed the following required tasks:

1. Inspected the groundwater extraction and treatment system on a monthly basis. This inspection included the evaluation of exposed piping for evidence of leaks. Checked all pressure gauges and flow meters for operational status and checked all valves for functionality.
2. Gauged groundwater levels in the sixteen (16) on-site monitoring wells, calculated standing water volumes, and purged a minimum of three well volumes from each well when possible. Groundwater quality readings were collected and recorded prior to the collection of each sample when possible. Samples were submitted to a NYSDOH Certified Laboratory for analysis using USEPA Method 8260 to test for VOCs. In addition to the well samples, one (1) duplicate and one (1) trip blank sample were submitted for laboratory analysis.
3. Gauged groundwater levels in the ten (10) on-site piezometric wells, and the storm water management sump.
4. Collected monthly system effluent groundwater samples in accordance with the State Pollution Discharge Elimination System (SPDES) Permit equivalent. The samples were submitted to a NYSDOH Certified Laboratory for analysis of select volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and metals in accordance with the NYSDEC SPDES Permit equivalent.
5. Collected continuous groundwater elevation data from six (6) shallow groundwater monitoring point to evaluate groundwater flow beneath the subject property utilizing on-Site groundwater data logger.

All sampling equipment not considered disposable were decontaminated using *Alconox*, a laboratory grade detergent and standard potable water before and after each use to ensure that cross-contamination of samples was eliminated.

3.0 GROUNDWATER EXTRACTION AND TREATMENT SYSTEM

The groundwater extraction and treatment (GWET) system was designed to establish and maintain hydraulic control of the shallow groundwater on-site, thereby preventing impacted groundwater from migrating off-site. **Section 3.1** provides a brief summary of the system components as they were originally designed and installed as well as modifications that were made to the system to improve its operational performance. A detailed description of the original designed and installed GWET system can be found in the Groundwater Extraction and Treatment System, System Start-up Report, prepared and submitted by P.W. Grosser Consulting Inc. (PWGC), dated February 2012. **Section 3.2** provides a brief summary of the SSWMS components and their operation. **Sections 3.3** and **3.4** describe the installation and operation of the pH adjustment system, and carbon treatment system, respectively. **Section 3.5** discusses past groundwater flow studies. **Section 3.6** describes repairs to piping associated with the GWET system.

3.1 GROUNDWATER EXTRACTION AND TREATMENT SYSTEM COMPONENTS

The GWET system contains the following components:

- Three (3) shallow groundwater recovery wells and submersible pumps
- Three (3) Pre-treatment bag filters (in parallel)
- One (1) shallow tray air stripper with blower
- Two (2) acid metering pumps
- Five (5) 55-gallon activated carbon liquid treatment drums

3.1.1 Groundwater Recovery Wells

The three (3) shallow groundwater recovery wells were installed to capture the groundwater above a clay layer encountered on-site, at a depth of approximately 12-15-feet below ground surface (bgs). The three (3) recovery wells were designed to each have an operational flow rate of approximately 5 gallons per minute (gpm) producing a 0.1 ft drawdown at a radius of 340 feet when in operation. The groundwater recovery well pumps were not in operation during the reporting period, as further discussed in the following section. These wells are still present and can be brought on-line if warranted or required.

3.1.2 Groundwater Extraction and Treatment System (GWET)

When the recovery wells are in operation, potentially impacted groundwater is piped from the recovery wells to the GWET system, where groundwater is treated utilizing an air stripping method. The treated groundwater is collected in an equalization tank at the base of the air stripper, and then pumped into the municipal storm water system. The groundwater recovery well pumps have been off-line as an active portion of the GWET since the groundwater flow study was performed in September 2019. These wells have remained temporarily off-line to facilitate the determination as to whether the Sub-Slab Water Management System (SSWMS) collection sump provides sufficient hydraulic control to prevent the migration of contaminants off site.

3.2 SUB-SLAB WATER MANAGEMENT SYSTEM COMPONENTS

The SSWMS contains the following components:

- A subgrade water infiltration gallery and collection sump
- Two (2) submersible sump pumps
- One (1) pre-treatment bag filter located between the submersible pumps and piped to the shallow tray air stripper tower.

3.2.1 Sub-Slab Water Management System

Due to the shallow groundwater table and the partially sub-grade parking garage in the south building, parts of the garage had been experiencing routine flooding during times of heavy rainfall. To address this situation, a French drain system and sump were installed in the southwestern portion of the parking garage of the south building. The sump contains two (2) submersible sump pumps, which are tied into the GWET system between the bag filters and the stripper tower. The volume of water passing through the stripper tower is increased by this sub-slab water management system. In addition to the incorporation of the sub-slab water management system to the GWET system, several modifications were made, which included the addition of a liquid bypass to the transfer pump system and its associated piping. The piping at the base of the stripper was formerly a two (2)-inch diameter pipe that utilized the transfer pump to push the liquid into the storm water sewer system. The two (2)-inch diameter pipe was replaced with a three (3)-inch diameter pipe, that allows the system to operate as a gravity feed system to the municipal storm sewer system. This change allows for a continuously higher volume flow through the stripper tower and into the storm sewer system. The SSWMS has the potential to add a maximum of 30 gallons of water per minute to the stripper tower. The SPDES permit equivalent was amended to reflect this change in flow rate.

3.3 pH Adjustment System

Elevated pH in groundwater pumped at the Site has been a longstanding issue which has been addressed with the addition of a pH reduction system. The elevated pH of the groundwater has been accompanied by occasional exceedances of the SPDES permit equivalent's pH limit. In addition, what was perceived to be excessive scaling may have been attributed, in part, to the elevated pH. In order to reduce the pH of groundwater entering the GWET system, ***Laurel*** obtained approval from the NYSDEC on July 23, 2019, to install the pH adjustment system and completed that installation. The pH adjustment system is comprised of a 60-gallon sulfuric acid storage tank and metering pumps that inject acid into the groundwater entering the GWET system. The first metering pump is controlled by a pH sensor and programmable controller and supplies acid to the sub-slab sump influent. The second metering pump, also controlled by a pH sensor and programmable controller, is capable of supplying acid to an inline mixer at the entry point to the air stripper, where groundwater from the recovery wells and sub-slab sump combine prior to entering the air stripper. The pH adjustment system is programmed to maintain the pH of groundwater effluent within the SPDES permit equivalent pH limits of 6.5 to 8.5.

On September 10, 2019, through November 6, 2019, ***Laurel*** installed and calibrated the pH adjustment system. After the initial installation, the pH adjustment system was tested periodically to verify the acid was successfully neutralizing the groundwater influent from the recovery wells and sub-slab sump. During the testing of the pH adjustment system, the pH of groundwater was monitored to prevent over-acidification of the system effluent. After equilibrating the acid system, the system became fully operational on November 6, 2019. Acid consumption is approximately 1.5 gallons per day using 93% sulfuric acid.

3.4 Carbon Treatment System

The GWET system's air stripper has historically encountered scaling issues, which reduce the GWET system's effectiveness in reducing chemicals of concern (COC). As a result, concentrations of COC detected in the monthly effluent groundwater samples collected have periodically exceeded SPDES permit equivalent limits. To prevent occasional SPDES permit exceedances, ***Laurel*** installed a carbon treatment system that is used to further treat groundwater effluent when the GWET system's air stripper is not effectively reducing COCs. The carbon treatment system's design consists of a sump pump connected directly to the air stripper, which pumps groundwater from the air stripper through five (5) drums of activated carbon prior to discharge.

The carbon treatment system was not utilized during this quarter.

3.5 Past Groundwater flow Studies

Two (2) groundwater flow studies were previously conducted by EnviroTrac. The first was conducted in 2019, with the data collection portion being performed by PWGC. The second groundwater flow study was solely performed by EnviroTrac in 2020. The 2019 groundwater flow study was conducted to assess groundwater flow within sandy deposits overlying a clay layer located approximately 12 feet bgs. EnviroTrac analyzed the 2019 data which, when plotted on the site map, revealed a consistent groundwater

flow direction converging at the SSWMS sump during the study period. Based on results of that study, it appears that routine operation of the sump pump may produce, on a continuous basis, a sufficient depression in the water table to maintain hydraulic control of the shallow groundwater to the west and southwest sides of the building, extending to the property boundary. To confirm this, a more extensive groundwater study using the existing piezometers and four (4) additional piezometers was conducted during the second quarter of 2020 by EnviroTrac. The groundwater elevations collected were used to generate groundwater flow maps, which show groundwater flow direction towards the sump during the one-month period. The data loggers installed on the two (2) pumps show the sump pumps cycle on and off during the course of each day as needed to keep water in the sump below a set level, pumping on average approximately 50% of the time and run for extended periods during rainfall events.

The adjacent property to the west of the area of concern is a public park. A refurbishing project consisting of the installation of a flood wall along the boundaries of the park and the former Darby Drugs Distribution Center site was undertaken in Fall of 2022. This flood wall consists of sheet piles installed to an approximate depth of 15 feet bgs, effectively cutting off shallow groundwater flow along the entire west side of the Site. At this point it is not clear what impact the flood wall will have on groundwater movement below the Site, and what type of impact it will have on the SSWMS sump's ability to maintain hydraulic control across the area of concern. To verify that sump is maintaining hydraulic control, ***Laurel*** and EnviroTrac agreed that an active groundwater elevation and pump monitoring system should be installed to evaluate the impact of the sheet piling/flood wall on groundwater movement through the residual impact zone. The pump voltage logger and groundwater elevation telemetry were installed during this monitoring event and are discussed below.

3.6 GROUNDWATER TELEMETRY

In May 2023, ***Laurel*** deployed a set of data loggers in the existing shallow piezometer wells (PZ-1 through PZ-6 and PZ-SUMP) at the Site. The data loggers measure groundwater elevation in each of the wells. The loggers collect data every hour, except for the PZ-SUMP logger, which collects data every 15 minutes. Utilizing the data generated from the loggers, ***Laurel*** generated groundwater contour maps to identify when hydraulic control is lost. ***Laurel*** interprets these groundwater contour maps to determine what actions may be required to maintain hydraulic control at the Site and ensure that the remediation system functions as designed. The groundwater contour maps are included in ***Laurel's*** Groundwater Telemetry Study letters issued on August 1 and August 24, 2023, included as Appendix A.

Laurel's findings from the Groundwater Telemetry Study determined that the bag filter conditions associated with the on-Site system appears to influence hydraulic control at the Site. When the bag filter becomes clogged, hydraulic control of groundwater at the Site appears to diminish. Two days following a bag filter change, a localized depression formed at the sump, which resulted in groundwater flowing towards the sump and confirmed hydraulic control of the Site. Over time, as the bag filter becomes clogged, the system appears to lose efficiency and hydraulic control begins to lessen. In addition, ***Laurel*** observed that when the sump is offline or otherwise not operating for one day or longer, hydraulic control at the Site is also lost.

4.0 GROUNDWATER EXTRACTION AND TREATMENT SYSTEM OPERATIONS

The GWET system at the Site is designed to operate continuously. To evaluate the effectiveness of the GWET system, the Site is monitored by physical site inspections. A liquid effluent sample is collected on a monthly basis to meet the state pollutant discharge elimination system (SPDES) permit equivalent requirement. In addition, liquid influent and air effluent samples are collected from the system on a quarterly basis.

This reporting period is from May 1, 2023, through July 31, 2023; a Site activity log is presented in Table I. During the reporting period, the groundwater recovery wells were not in operation based on the interpretation of the September 2019 and the May 2020 groundwater flow studies, which indicated the SSWMS is likely maintaining sufficient hydraulic control of the Site as long as groundwater levels remain above the base elevation of the sump. The SSWMS was operating automatically on an as-needed basis throughout the reporting period, controlled by a float switch within the sump. The hours of operation for each extraction well and sump pumps for the SSWMS are presented in Table II. As noted, a flood wall was installed surrounding Morgan Days Park, which is immediately west of the Site, consisting of sheet piles driven to a depth of approximately 15 feet bgs. The long-term effect of this flood wall on the local groundwater flow is not fully known and will require ongoing groundwater elevation and flow monitoring to determine its effect.

The SSWMS cycles on and off depending on the water level in the accumulation sump. The sump contains two (2) sump pumps that are activated by float switches. The pumps are sequenced to alternate, so that only one pump will operate at a time, when needed. During the second quarter of the 2023 operational year the sump pump meters, which record hours operated, indicated the sump pump 1 and pump 2 operated for an average of 20.20 and 17.01 hours per day, respectively. During this quarter's monitoring period, on May 18, 2023, ***Laurel*** installed a voltage meter on the pumps to obtain more accurate pump run times. The voltage meter data was used to calculate the average gallons per minute for June and July. Based on the total gallons recorded over the reporting period, the overall average pumping rate between May 1, 2023, through July 31, 2023, was 12.09 gallons per minute. Any liquid being discharged from the Site is subject to the requirements of the current SPDES permit equivalent that authorizes discharges from April 1, 2022, to March 31, 2027. The pumps run times and total liquids pumped through each portion of the SSWMS and GWET system are recorded during the monthly site visits and during sampling events. Discharge quantities are consistent with the SPDES permit requirements.

Table I, Site Activities Log

Date	Location	Description
05/05/23	***Laurel on site***	Changed bag filter
05/18/23	***Laurel on site***	Installed Data Loggers SSWMS Totalizer Reading was 47,550,857 gallons
05/19/23	***Laurel on site***	Performed stripper tower cleaning Changed bag filter SSWMS Totalizer Reading was 47,558,853
05/22/23	***Laurel on site***	Tested the metering pump, assembled pumping system Restarted the system SSWMS Totalizer Reading was 47,580,612

Date	Location	Description
05/30/23	***Laurel on site***	Performed SPDES Sampling
06/01/23	***Laurel on site***	Acid transfer of 55 gallons Changed bag filter Assessed the system pump, fan, and metering pump – all running SSWMS Totalizer Reading was 47,678,228
06/22/2023	***Laurel on site***	Changed bag filter Collected data logger readings SSWMS Totalizer Reading was 47,892,610
06/27/23	***Laurel on site***	Performed SPDES Sampling Re-deployed data loggers in the piezometer wells SSWMS Totalizer Reading was 47,947,688
06/29/23	***Laurel on site***	Received acid delivery of two 55-gallon drums H_2SO_4
07/11/23	***Laurel on site***	Changed bag filter Collected data logger readings
07/25/23	***Laurel on site***	Performed Quarterly Groundwater Sampling Performed SPDES Sampling Acid transfer of 55 gallons SSWMS Totalizer Reading was 48,247,352 gallons
07/26/23	***Laurel on site***	Collected system effluent air sample, which was unable to be collected on 7/25 due to a faulty summa canister

Table II; System Operation Log

Date	Average monthly GPM*
05/22/23	19.85
06/27/23	7.57
07/25/23	8.85

Notes: *Average monthly GPM calculated using totalizer readings recorded during site visits and pump run time in May 2023. The Average monthly GPM calculated using data logger run time in June and July 2023.

5.0 QUARTERLY MONITORING WELL SAMPLING

The monitoring of the ongoing GWET at the Site consists of liquid and air sampling to evaluate the effectiveness of the GWET system, on a quarterly basis. To perform this, the groundwater elevations of all onsite groundwater monitoring wells are gauged and sampled to evaluate the groundwater conditions throughout the Site. When the GWET system is in operation, composite liquid samples are collected from the influent and effluent lines of the GWET system on a quarterly basis to determine the effectiveness of the GWET system, and an effluent air sample is collected from the air discharge line of the air stripper to determine what contaminants are being removed from the groundwater, and their concentrations. As noted, the groundwater recovery wells associated with the GWET system were not in operation during this reporting period due to the use of the SSWMS to maintain hydraulic control of the shallow groundwater on-site. The SSWMS, when in operation, can pump at a rate of approximately 30-GPM. The average monthly pumping rate has been approximately 12.09-GPM based on the total number of gallons pumped over the duration of the reporting period.

5.1 GROUNDWATER MONITORING WELL GAUGING

The groundwater levels were measured in each of the sixteen (16) monitoring wells and the five (5) piezometer wells using a water level meter. The groundwater elevations for the monitoring and piezometer wells are shown on Table III below.

Table III
Groundwater Monitoring Well Gauging
Former Darby Drugs Distribution Center

Well ID	PZ-1	PZ-2	PZ-3	PZ-4	PZ-5
Depth to Water (ft)	5.67	4.99	5.99	5.03	5.08
Depth to Bottom (ft)	12.90	12.39	12.99	12.96	13.41
Groundwater Elevation (ft)	4.87	5.02	5.07	6.53	6.99

Table III(Cont.)
Groundwater Monitoring Well Gauging
Former Darby Drugs Distribution Center

Well ID	2010-01A	2010-01B	2010-01C	2010-01D
Depth to Water (ft)	6.63	5.55	6.43	5.58
Depth to Bottom (ft)	100	70	50	15
Groundwater Elevation (ft)	6.49	7.58	6.68	7.82

Table III(Cont.)
Groundwater Monitoring Well Gauging
Former Darby Drugs Distribution Center

Well ID	2010-02A	2010-02B	2010-02C	2010-02D
Depth to Water (ft)	5.20	5.77	5.81	8.39
Depth to Bottom (ft)	100	70	50	15
Groundwater Elevation (ft)	8.88	8.29	8.07	5.58

Table III(Cont.)				
Groundwater Monitoring Well Gauging				
Former Darby Drugs Distribution Center				
Well ID	**2020-03A-R**	**2020-03B-R**	**2020-03C-R**	**2010-03D**
Depth to Water (ft)	6.63	5.55	6.43	5.58
Depth to Bottom (ft)	100	70	50	15
Groundwater Elevation (ft)	4.54	5.27	4.74	5.45

Table III(Cont.)				
Groundwater Monitoring Well Gauging				
Former Darby Drugs Distribution Center				
Well ID	**2013-04A**	**2013-04B**	**2013-04C**	**2010-04D**
Depth to Water (ft)	5.20	5.77	5.81	8.39
Depth to Bottom (ft)	100	70	50	15
Groundwater Elevation (ft)	5.38	4.83	4.82	4.83

The groundwater levels were measured in each of the sixteen (16) monitoring wells and the five (5) piezometer wells using a water level meter. The groundwater elevations in the monitoring wells ranged from 4.54 feet in monitoring well 2020-03A-R to 8.88 feet in monitoring well 2010-02A. Groundwater elevation in the piezometer wells ranged from 4.28 feet in piezometer well PZ-SUMP to 6.99 feet in piezometer well PZ-5. Groundwater potentiometric maps were generated for each of the well depth ranges, as presented in Figures 3.0 through 6.0, attached.

Groundwater monitoring wells 2010-01A, 2010-02A, 2020-03A-R, and 2013-04A were used to generate a groundwater potentiometric map at a 100-foot depth, attached as Figure 3.0. Groundwater elevations generally decrease in the four (4) wells from southwest to northeast, with groundwater flow generally towards the northeast.

Groundwater monitoring wells 2010-01B, 2010-02B, 2020-03B-R, and 2013-04B were used to generate a groundwater potentiometric map at a 70-foot depth, attached as Figure 4.0. Groundwater elevations generally decrease from west to the east, with groundwater flow generally towards the east.

Groundwater monitoring wells 2010-01C, 2010-02C, 2020-03C-R, and 2013-04C were used to generate a groundwater potentiometric map at a 50-foot depth, attached as Figure 5.0. Groundwater elevations generally decrease in the four (4) wells from west to the east, with groundwater flow generally towards the east.

Groundwater monitoring wells 2010-01D, 2010-02D, 2010-03D, 2010-04D, and piezometer wells PZ-1 through PZ-5, and PZ-Sump were used to generate a groundwater potentiometric map at shallow depths between 12 feet and 15 feet, attached as Figure 6.0. The overall groundwater flow direction at the time of the July 2023 sampling event was towards the southeast, with a localized depression around the PZ-Sump.

5.2 GROUNDWATER MONITORING WELL SAMPLING

As part of the Site GWET, quarterly groundwater sampling is performed on the sixteen (16) on-site groundwater monitoring wells. The monitoring wells are grouped into four (4) well clusters, with each

cluster including four monitoring wells screened at specific depths. The monitoring wells are designated as such: MW-2010-01A, B, C, and D; MW-2010-02A, B, C, and D; MW-2020-03A, B-R, C-R; MW-2010-03-D; MW- 2013-04 A, B, C; and MW-2010-04D. Wells with an "A" designation are screened from 90 to 100 feet below ground surface (bgs), "B" designation are screened from 60 to 70 feet bgs, "C" designation are screened from 40 to 50 feet bgs, and "D" designation are screened from 10 to 15 feet bgs. Please refer to Figure 2.0, Monitoring Well Location Map.

Groundwater samples were collected from each of the sixteen (16) groundwater monitoring wells on July 25, 2023. Prior to sampling, each well was gauged utilizing a groundwater level meter for the depth to water below the ground surface. Utilizing a down well submersible electric pump and disposable polyethylene tubing, each of the two-inch diameter wells was purged of a minimum of three (3) well volumes of water. Each one-inch diameter well was purged utilizing a peristaltic pump. The amount of water was determined by measuring the height of the water column within each well and multiplying the water column height by the known volume of water per foot of well. All water removed during the process was disposed of on-site.

Upon completion of purging, groundwater quality data were collected utilizing an YSI 600 XL MP Sonde Multiparameter water quality meter and a Hanna® turbidity meter or similar instruments. Three (3) groundwater quality readings were taken at five-minute intervals from each well. The readings were recorded and evaluated to confirm that the groundwater conditions had stabilized and that a representative groundwater sample was being obtained. Please refer to Appendix B for the groundwater quality data sheets. Each monitoring well sample was collected from dedicated polyethylene tubing connected to a variable speed peristaltic pump set to a low flow operating speed. Sample bottles were filled directly from dedicated tubing and were immediately placed in a cooler maintained at 4ºC, under strict chain of custody procedures.

Samples were transported via laboratory courier to York Analytical Laboratories, Inc. located in Stratford, Connecticut (ELAP #10854). The samples were analyzed for volatile organic compounds (VOCs) utilizing EPA Method 8260. All analytical results were compared to the NYSDEC Class GA Groundwater Quality Standards (AWQS) as provided in the Technical Operation and Guidance Series (TOGS 1.1.1) guidance document dated June 1998 and its addendum dated April 2000. The laboratory analytical results for the groundwater samples collected are presented in the following section.

5.3 GROUNDWATER ANALYTICAL RESULTS

The laboratory analytical results from each of the sixteen (16) groundwater samples, collected from the four (4) well clusters, are presented in Tables IV through VII on the following pages. A copy of the laboratory analytical report is attached as Appendix C.

Table IV					
Tabulated Groundwater Analytical Results Sampled 07/25/23					
Former Darby Drugs Distribution Center					
Well ID	**2010-01A**	**2010-01B**	**2010-01C**	**2010-01D**	**Groundwater (GW) Standards**
Screened Interval (ft)	90-100	60-70	40-50	10-15	
1,1,1-Trichloroethane	ND	ND	ND	ND	5
1,1-Dichloroethane	ND	ND	ND	ND	5
1,1-Dichloroethylene	ND	ND	ND	0.34	5
1,2,4-Trichlorobenzene	ND	ND	ND	ND	5
Acetone	ND	ND	ND	1.35	50
Benzene	NA	ND	ND	ND	1
Bromomethane	0.13	0.12	ND	ND	5
Chloroform	ND	ND	0.51	ND	7
cis-1,2-Dichloroethylene	ND	ND	ND	**46.6**	5
Methylene chloride	ND	ND	ND	ND	5
Sec-Butylbenzene	ND	ND	ND	ND	5
Tetrachloroethylene	NA	ND	ND	**146**	5
trans-1,2-Dichloroethylene	ND	ND	ND	0.360	5
Trichloroethylene	ND	ND	ND	**8.67**	5
Vinyl Chloride	ND	ND	ND	ND	2
Total CVOCs	0.00	0.00	0.51	201.97	N/A

All concentrations are in All results in microgram per liter (µg/L)

ND = Non-Detect

Volatile Organic Compound Analysis using EPA Method 8260

"**Bold**"= concentration over the NYSDEC Ambient GW Standards"

Analytes that makeup Total chlorinated volatile organic compounds (CVOC) compounds are highlighted in blue.

Table V Tabulated Groundwater Analytical Results Sampled 07/25/23 Former Darby Drugs Distribution Center					
Well ID	**2010-02A**	**2010-02B**	**2010-02C**	**2010-02D**	
Screened Interval (ft)	90-100	60-70	40-50	10-15	**GW Standards**
1,1,1-Trichloroethane	ND	ND	ND	0.70	5
1,1-Dichloroethane	ND	ND	ND	0.28	5
1,1-Dichloroethylene	ND	ND	ND	**13.40**	5
1,2,4-Trichlorobenzene	ND	ND	ND	0.33	5
Acetone	1.57	ND	ND	1.73	50
Benzene	ND	ND	ND	ND	1
Bromomethane	0.15	ND	ND	ND	5
Chloroform	ND	ND	0.98	**13.4**	7
cis-1,2-Dichloroethylene	ND	ND	**10.70**	**4,070**	5
Methylene chloride	ND	ND	ND	0.46	5
Sec-Butylbenzene	ND	ND	ND	ND	5
Tetrachloroethylene	0.50	0.78	**12**	**3,300**	5
trans-1,2-Dichloroethylene	ND	ND	ND	**141**	5
Trichloroethylene	ND	ND	**6.68**	**1,840**	5
Vinyl Chloride	ND	ND	0.670	**292**	2
Total CVOCs	0.50	0.78	31.03	9,671.57	N/A

All concentrations are in µg/L

ND = Non-Detect

Volatile Organic Compound Analysis using EPA Method 8260

"**Bold**"= concentration over the NYSDEC Ambient GW Standards"

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Table VI					
Tabulated Groundwater Analytical Results Sampled 07/25/23					
Former Darby Drugs Distribution Center					
Well ID	**2020-03A-R**	**2020-03B-R**	**2020-03C-R**	**2010-03D**	**GW Standards**
Screened Interval (ft)	90-100	60-70	40-50	10-15	
1,1,1-Trichloroethane	ND	ND	ND	ND	5
1,1-Dichloroethane	ND	ND	ND	ND	5
1,1-Dichloroethylene	ND	ND	ND	0.96	5
1,2,4-Trichlorobenzene	ND	ND	ND	ND	5
Acetone	ND	ND	ND	ND	50
Benzene	ND	ND	0.64	ND	1
Bromomethane	ND	ND	ND	ND	5
Chloroform	ND	ND	ND	ND	7
cis-1,2-Dichloroethylene	ND	**5.31**	ND	**300**	5
Methylene chloride	ND	ND	ND	ND	5
Sec-Butylbenzene	ND	ND	1.14	ND	5
Tetrachloroethylene	2.35	4.70	ND	**1,980**	5
trans-1,2-Dichloroethylene	ND	ND	ND	**12.50**	5
Trichloroethylene	ND	1.01	ND	**118**	5
Vinyl Chloride	ND	1.14	ND	1.92	2
Total CVOCs	2.35	12.16	0.00	2,413.38	N/A

All concentrations are in µg/L

ND = Non-Detect

Volatile Organic Compound Analysis using EPA Method 8260

"**Bold**"= concentration over the NYSDEC Ambient GW Standards"

Table VII					
Tabulated Groundwater Analytical Results Sampled 07/25/23					
Former Darby Drugs Distribution Center					
Well ID	**2013-04A**	**2013-04B**	**2013-04C**	**2010-04D**	**GW Standards**
Screened Interval (ft)	90-100	60-70	40-50	10-15	
1,1,1-Trichloroethane	ND	ND	ND	ND	5
1,1-Dichloroethane	ND	ND	ND	ND	5
1,1-Dichloroethylene	ND	ND	ND	ND	5
1,2,4-Trichlorobenzene	ND	ND	ND	ND	5
Acetone	ND	ND	ND	1.48	50
Benzene	ND	ND	ND	ND	1
Bromomethane	ND	ND	ND	ND	5
Chloroform	ND	ND	ND	ND	7
cis-1,2-Dichloroethylene	ND	ND	0.34	7.70	5
Methylene chloride	ND	ND	ND	ND	5
Sec-Butylbenzene	ND	ND	ND	ND	5
Tetrachloroethylene	ND	0.36	ND	**13.80**	5
trans-1,2-Dichloroethylene	ND	ND	ND	ND	5
Trichloroethylene	ND	ND	ND	1.49	5
Vinyl Chloride	ND	ND	ND	ND	2
Total CVOCs	0.00	0.36	0.34	22.99	5

All concentrations are in µg/L

ND = Non-Detect

Volatile Organic Compound Analysis using EPA Method 8260

"**Bold**"= concentration over the NYSDEC Ambient GW Standards"

Analytes that make up Total CVOC compounds are highlighted.

Groundwater Samples 2010-01A, 2010-02A, 2020-03A, & 2013-04A – Wells screened 90 to 100 ft bgs

Concentrations of CVOCs detected in groundwater monitoring wells 2010-01A, 2010-02A, 2020-03A and 2013-04A were below the NYSDEC AWQS.

Groundwater samples 2010-01B, 2010-02B, 2020-03B, & 2013-04B – Wells Screened 60 to 70 ft bgs

Concentrations of CVOCs detected in groundwater monitoring wells 2010-01B, 2010-02B, and 2013-04B were below the NYSDEC AWQS. One CVOC, cis-1,2-dichloroethylene, was detected in monitoring well 2020-03B-R at a concentration of 5.31 µg/L above its NYSDEC AWQS of 5 µg/L.

Groundwater samples 2010-01C, 2010-02C, 2020-03C, & 2013-04C – Wells Screened 40 to 50 ft bgs

Concentrations of CVOCs detected in groundwater monitoring wells 2010-01C, 2020-03C-R, and 2013-04C were below the NYSDEC AWQS. Several CVOCs, cis-1,2-Dichloroethylene, tetrachloroethylene, and trichloroethylene, were detected at concentrations exceeding their respective NYSDEC AWQS in monitoring well 2010-02C.

Groundwater samples 2010-01D, 2010-02D, 2010-3D, & 2010-04D – Wells Screened 10 to 15 ft bgs

CVOC concentrations were identified in exceedance of their respective NYSDEC AWQS in each of the four (4) monitoring wells screened from 10 to 15 feet bgs. The highest CVOC concentrations were observed in the 2010-02D well, followed by 2010-03D, 2010-01D, and 2010-04D. As such, groundwater in the 10 to 15 feet zone remains the interval of groundwater with high CVOC impacts observed.

5.4 HISTORICAL GROUNDWATER CONCENTRATIONS

The current round of groundwater sampling has been compared with previous rounds of sampling to identify any trends in groundwater quality at the Site and to identify any anomalies in the analytical data. The comparison was made between the total CVOC concentrations in all the wells beginning in October 2011 to the present. The following constituents were tabulated for total CVOC concentrations: 1,1,1-trichloroethane; 1,1-dichloroethane; 1,1-dichloroethylene; carbon tetrachloride; chloroethane; chloroform; chloromethane; cis-1,2-dichloroethylene; dichlorodifluoromethane; methylene chloride; tetrachloroethylene; trans-1,2-dichlorethylene; trichloroethylene; vinyl chloride. A review of the analytical data for the total CVOCs concentrations for the periods when the system was in full operation under the current and previous SPDES permits equivalent up to and including the July 2023 sampling event shows results that are relatively consistent with previous monitoring event. Please refer to Table VIII on the following pages for tabulated Historical Total CVOC concentrations.

Table VIII				
Historical Total CVOC concentration, Former Darby Drugs				
80-100 Banks Avenue, Rockville Center, New York				
Well ID	**2010-01A**	**2010-01B**	**2010-01C**	**2010-01D**
DTB (feet)	100	70	50	15
Date				
October 19, 2011*	0.5	0.5	0.48	120
January 19, 2012*	0.5	0.5	0.5	1,100
July 20, 2012	ND	3.2	3.1	411
October 24, 2012	ND	ND	ND	542.3
January 31, 2013	ND	4.4	ND	461
June 11, 2013	ND	ND	ND	492
July 29, 2013	ND	ND	ND	468
October 24, 2013	ND	ND	ND	356
January 28, 2014	ND	ND	ND	421
April 23, 2014	1.2	1.5	1.47	394.17
July 24, 2014	5.66	1.7	382.54**	ND**
October 27, 2014	ND	ND	ND	441.07
February 4, 2015	ND	ND	ND	321.67
April 27, 2015	ND	ND	ND	245.06
July 29, 2015	1.1	ND	0.86	198.08
October 29, 2015	ND	8.4	ND	1,075.47
January 27, 2016	0.55	0.5	0.44	611.7
April 28, 2016	ND	ND	ND	261.55
July 27, 2016	ND	0.47	2.13	117.6
October 26, 2016	ND	ND	1.8	151.64
January 18, 2017	ND	ND	0.38	522
April 20, 2017	ND	ND	1.4	80.4
July 25, 2017	ND	ND	2.4	70.7
October 31, 2017	ND	ND	2.63	152.2
January 25, 2018	ND	ND	0.25	232.2
April 24, 2018	ND	ND	ND	85.8
July 31, 2018	ND	ND	ND	183.03
October 29, 2018	ND	ND	278.14	79.94
January 29, 2019	ND	ND	ND	98.31
April 30, 2019	ND	ND	ND	191.71
July 30, 2019	ND	ND	ND	233.06
October 31, 2019	ND	1.06	ND	100
January 29, 2020	ND	ND	ND	184.87
July 20, 2020	0.49	0.44	3.12	354.54
October 27, 2020	ND	ND	0.9	182.35
January 27, 2021	ND	ND	0.78	626.99
April 29, 2021	ND	ND	0.42	127.85
July 28, 2021	ND	ND	0.65	84.69
October 27, 2021	ND	ND	0.33	301.98
January 21, 2022	1.11	ND	0.69	403.99
April 26, 2022	0.31	0.33	0.31	392.57
July 26, 2022	0.22	2.48	0.32	416.24
October 27, 2022	0.22	ND	0.31	452.68
January 26, 2023	ND	ND	0.410	269.09
April 25, 2023	ND	ND	0.29	245.66
July 25, 2023	ND	ND	0.51	201.97

Table VIII (Continued)				
Historical Total CVOC Concentration Former Darby Drugs				
80-100 Banks Avenue, Rockville Center, New York				
Well ID	**2010-02A**	**2010-02B**	**2010-02C**	**2010-02D**
DTB (feet)	100	70	50	15
Date				
October 19, 2011*	0.42	12	7.9	990
January 19, 2012*	1.5	10	3.2	820
July 20, 2012	4.2	11.1	81.5	508
October 24, 2012	1.5	4	2.1	637.7
January 31, 2013	2.2	4.7	3.4	493
June 11, 2013	ND	3.5	31	542
July 29, 2013	ND	3.6	67	489
October 24, 2013	ND	2.7	13	407
January 28, 2014	ND	2.5	4	243
April 23, 2014	1.2	1.71	50.32	409
July 24, 2014	2.81	6.9	25.27	399.28
October 27, 2014	2.3	6.47	2.7	425.93
February 4, 2015	5.7	4.4	18.53	452.11
April 27, 2015	2.83	2.97	43.1	1,365
July 29, 2015	9.85	4	20.45	1,054
October 29, 2015	1.8	1.9	10.93	1,396
January 27, 2016	4.38	2.42	0.59	950
April 28, 2016	2.1	1.6	3	843
July 27, 2016	1.57	2.1	2.51	1,879
October 26, 2016	1.5	1.6	16.83	718.4
January 18, 2017	2.32	1.69	5.57	425.7
April 20, 2017	0.63	1.4	26.08	421.91
July 25, 2017	0.78	1.1	9.19	227
October 31, 2017	0.8	5.5	21.95	3,026
January 25, 2018	1.64	0.94	49.29	13,032
April 24, 2018	1.05	0.98	24	3,902
July 31, 2018	2.11	0.88	26.01	4,081
October 29, 2018	0.71	0.62	286	7,195
January 29, 2019	0.57	16.25	5.14	2,686.4
April 30, 2019	0.85	0.6	10.57	3,417.95
July 30, 2019	0.58	0.7	12.82	1,646.43
October 31, 2019	1.18	235.16	3.19	17,958
January 29, 2020	0.64	0.56	26.64	2,939.67
July 20, 2020	0.88	0.82	3.76	1,498.47
October 27, 2020	0.34	0.25	7.7	1,128.9
January 27, 2021	1.89	0.73	2.39	1,549.41
April 29, 2021	0.39	0.44	1.21	1,654.80
July 28, 2021	0.46	0.50	1.93	3,732
October 27, 2021	0.46	0.40	1.80	1,127.64
January 21, 2022	0.39	0.72	3.06	2,985
April 26, 2022	0.77	0.83	1.38	2,550.25
July 26, 2022	0.30	0.50	1.31	1,045.00
October 27, 2022	0.59	1.20	0.69	2,158.96
January 26, 2023	0.55	ND	1.01	1,216.61
April 25, 2023	2.24	ND	1.14	10,753.42
July 25, 2023	0.65	0.78	31.03	9,671.57

Table VIII (Continued)				
Historical Total CVOC Concentration, Former Darby Drugs				
80-100 Banks Avenue, Rockville Center, New York				
Well ID	**2020-03A**	**2020-03B**	**2020-03C**	**2010-03D**
DTB (feet)	100	70	50	15
Date				
October 19, 2011*	56	46	260	350
January 19, 2012*	28	44	86	230
July 20, 2012	53.6	46.9	172	526
October 24, 2012	26.1	174	464.54	943.9
January 31, 2013	42.2	86	124.4	643
June 11, 2013	45.5	86.8	630.1	1,000
July 29, 2013	67.8	44	668.1	1,014
October 24, 2013	45.5	190	180.7	606
January 28, 2014	30.3	575	172.9	758
April 23, 2014	21	68.8	177	541
July 24, 2014	67.92	32.97	62.18	555.17
October 27, 2014	48.66	71.97	73	1,521.58
February 4, 2015	100.07	63.04	73.12	1,802
April 27, 2015	N/A	33.08	40.28	1,583
July 29, 2015	N/A	36.82	439.14	4,157
October 29, 2015	50.91	42.97	117.46	1,836
January 27, 2016	48.66	24.23	42	1,899.5
April 28, 2016	N/A	20.37	13.19	1318
July 27, 2016	49.4	11.41	6.34	1,612.15
October 26, 2016	15.7	44.15	23	1,020.04
January 18, 2017	33.98	27.44	25.02	2,850
April 20, 2017	25.66	50.81	52	705.23
July 25, 2017	12	184.56	193	313
October 31, 2017	57.93	65.81	172.26	2,980
January 25, 2018	ND	251.8	288	622
April 24, 2018	245.11	363.9	2024	3,764
July 31, 2018	382	240.9	472	2,997
October 29, 2018	1,195.08	0.23	566.2	1,473.54
January 29, 2019	5,012.73	40.23	664.7	1,867.45
April 30, 2019	N/A	427.68	1,922.67	2,810.35
July 30, 2019	3,772	1,972.35	4,521.13	1,289.78
October 31, 2019	161	173.39	2,164.45	4,170.02
January 29, 2020	3,494.13	191.91	1,610.46	446.65
July 20, 2020	29.22	18.64	18.3	2,299.85
October 27, 2020	12.6	12.75	2.42	960.4
January 27, 2021	18.86	11.7	1.32	2,094.04
April 29, 2021	5.77	4.92	0.32	2,211.07
July 28, 2021	5.42	12.33	1.06	1,885.1
October 27, 2021	5.63	8.16	0.310	1,650.48
January 21, 2022	1.92	14.46	1.97	1,858.53
April 26, 2022	2.49	7.89	3.04	546.32
July 26, 2022	2.48	11.95	9.92	3,413.75
October 27, 2022	1.13	7.61	3.59	1,361.91
January 26, 2023	ND	3.62	4.17	3,607.43
April 25, 2023	0.91	9.13	3.86	4,891.86
July 25, 2023	2.35	12.16	1.78	2,413.38

Table VIII (Continued)				
Historical Total CVOC Concentration, Former Darby Drugs				
80-100 Banks Avenue, Rockville Center, New York				
Well ID	**2013-04A**	**2013-04B**	**2013-04C**	**2010-04D**
DTB (feet)	100	70	50	15
Date				
October 19, 2011*	56	46	260	350
January 19, 2012*	28	44	86	230
July 20, 2012	N/A	N/A	N/A	339
October 24, 2012	N/A	N/A	N/A	507.5
January 31, 2013	N/A	N/A	N/A	179.4
June 11, 2013	ND	ND	4.3	252
July 29, 2013	8	10	3.4	209
October 24, 2013	3.6	ND	4.4	241
January 28, 2014	23.6	8.9	5.4	128.4
April 23, 2014	4.39	2.94	2	41.3
July 24, 2014	35.4	13.04	10.15	22.9
October 27, 2014	25.49	28.65	18.33	25.6
February 4, 2015	39.8	72.7	8.8	80.1
April 27, 2015	8.66	5.6	2.85	62.1
July 29, 2015	33.7	47.7	17.71	97.6
October 29, 2015	ND	1.92	0.58	171.69
January 27, 2016	32.8	62.9	10.12	288.94
April 28, 2016	8.52	10.29	10.26	161.6
July 27, 2016	25.7	33.02	9.93	90
October 26, 2016	6.75	10.95	4.13	56.63
January 18, 2017	25.32	27	9.13	51.18
April 20, 2017	6.94	8.71	10.54	34.52
July 25, 2017	5.31	11.38	7.28	26.94
October 31, 2017	16.38	50.61	8.5	65.5
January 25, 2018	35.2	63.1	21.06	137.62
April 24, 2018	79.1	79.4	41.6	73.4
July 31, 2018	21.88	21.6	5.72	47.76
October 29, 2018	3.65	2.59	0.91	29.92
January 29, 2019	42.76	78.28	14.64	39.04
April 30, 2019	24.6	21.03	6.73	32.93
July 30, 2019	0.61	2.49	1.64	45.27
October 31, 2019	69	146.72	94.57	155.82
January 29, 2020	2.76	9.41	0.67	86.05
July 20, 2020	1.06	0.39	0.26	59.44
October 27, 2020	ND	0.48	ND	56.03
January 27, 2021	0.24	0.30	ND	34.51
April 29, 2021	ND	0.27	ND	26.03
July 28, 2021	0.67	0.36	0.25	14.28
October 27, 2021	ND	ND	ND	14.86
January 21, 2022	1.53	ND	0.50	42.68
April 26, 2022	0.35	ND	ND	21.6
July 26, 2022	1.13	0.25	ND	32.84
October 27, 2022	ND	ND	ND	13.18
January 26, 2023	1.350	0.44	0.25	32.35
April 25, 2023	1.13	2.33	1.03	24.34
July 25, 2023	ND	0.36	0.34	22.99

Notes: All concentrations are in parts per billion (ppb), VOCs analyzed using EPA method 8260
N/A = not analyzed * = Concentrations are PCE only, ** = sample labeling error

Historical groundwater total CVOC data have been utilized to prepare Historical Total CVOC Concentration graphs for each depth interval. The vertical scale of the graphs for the various monitoring wells have been adjusted to accommodate the maximum concentration detected. Please refer to Graphs 1.0 through 5.0 found at the end of this report.

5.5 GROUNDWATER INFLUENT AND EFFLUENT SAMPLING

To evaluate the effectiveness of the GWET system, influent and effluent samples are collected from the flow stream. The influent and effluent samples are compared to each other to determine the amounts of contaminants of concern (COC) being removed by the GWET system. This sampling also provides a means of monitoring the system's efficiency and determining the scheduling of system maintenance.

On July 25, 2023 ***Laurel*** staff performed quarterly groundwater sampling, including the sampling of the GWET system influent and effluent groundwater. One (1) influent sample and one (1) effluent sample were collected. The influent sample designated "System Influent" was collected from the SSWMS sump influent as a representative of the influent into the GWET system. The Sump Influent sample was collected from the sampling port installed in the system, between the SSWMS and the stripper tower. The groundwater recovery wells were not in operation during the monitoring event, therefore an influent sample from the groundwater recovery wells was not collected.

The effluent sample designated "System Effluent Liquid" was collected through the sampling port installed in the discharge line between the stripper tower and the point at which the discharge line exits the building. The influent and effluent samples were collected directly into laboratory supplied glassware and immediately placed in a cooler maintained at 4ºC, under strict chain of custody procedures.

The samples were transported via courier to York Analytical Laboratories, Inc. located in Stratford, Connecticut (ELAP #10854). The samples were analyzed for the presence of VOCs utilizing USEPA Method 8260.

The concentrations of VOCs detected in the Sump Influent and System Effluent Liquid groundwater samples were compared to each other and to Class GA Groundwater Quality Standards. Comparison of the groundwater samples showed the air stripper tower is removing contaminants from the groundwater in the GWET system.

Please refer to Table IX on the following page for tabulated analytical data for treatment system influent and effluent results for samples collected during the July 25, 2023, events.

Table IX Treatment System Influent and Effluent Sample Results July 2023 Sampling Events			
Parameter	**System Influent**	**System Effluent Liquid**	**Water Quality Standard**
Cis-1,2-Dichloroethylene	**18.8**	NA	5
Acetone	1.49	ND	50
Chloroform	ND	NA	7
Tetrachloroethylene	**146**	ND	5
Trans-1,2-Dichloroethylene	0.39	ND	5
Trichloroethylene	**13.6**	ND	5
Vinyl chloride	0.84	ND	2
Total CVOCs	181.12	ND	NA
pH	NA	7.46	NA

All results in µg/l
ND = non-detect. Concentration below laboratory method detection limit.
NA=Data not available

5.6 SYSTEM EFFLUENT AIR

The groundwater pump and treat system at the Site includes a shallow tray stripper. The COC are stripped from the liquid as it passes through the system and are volatilized into the air, which is discharged to the atmosphere through the air discharge line that extends above the roof of the Site building. This discharge line is equipped with a sampling port, which allows for monitoring of the effluent air stream.

On July 25, 2023, ***Laurel*** collected an effluent air sample by direct grab. The collected sample was transported via courier to York Analytical Laboratories, Inc. located in Stratford, Connecticut (ELAP #10854) and analyzed for the presence of VOCs utilizing USEPA Method TO-15. The system effluent air sample collected represents the contaminants generated from the stripping of the sub-slab storm water management system liquids.

Laboratory analysis of the sample identified CVOC present in the airstream at concentrations that indicate that the GWET system is operating correctly. Please refer to Table X: Treatment System Air Effluent Sample on the following page.

Table X Treatment System Air Effluent Sample July 26, 2023	
Analytes	**System Effluent**
1,1-Dichloroethylene	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
cis-1,2-Dichloroethylene	270
Dichlorodifluoromethane	ND
Methylene chloride	ND
Tetrachloroethylene	2,500
Toluene	6.3
trans-1,2-Dichloroethylene	ND
Trichloroethylene	150
Vinyl Chloride	9.4

All results are in micrograms per cubic meter ($\mu g/m^3$)

5.7 DATA VALIDATION

All groundwater samples collected as part of the quarterly groundwater sampling requirements are analyzed in accordance with EPA Method 8260. An Analytical Service Protocol Category B deliverable data package is provided by the laboratory and submitted to a third-party data validator. As of the date of this report the result of the data validation has not yet been received by ***Laurel***. Upon receipt of the data usability summary report, (DUSR) It will be forwarded to the NYSDEC in the form of an addendum to this report.

6.0 STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM

The GWET system is designed to operate 24 hours per day, seven days a week, with minimal shutdown periods for maintenance. The system is designed to pump a total of approximately 15 gallons of water per minute for the three (3) on site groundwater recovery wells. However, the system is capable of processing up to 30 gallons per minute, based on the system performance estimate presented in the final engineering report, prepared by PWGC. Due to the shallow groundwater table at the Site, on-site disposal of remediated groundwater is not possible. Therefore, treated water is discharged into the municipal storm water sewer system. As required by the NYSDEC Division of Water, a state pollutant discharge elimination system (SPDES) permit equivalent is required. The permit requires monthly sampling of the liquid being discharged to the public sewer system. The SPDES permit equivalent was renewed in March 2022. At the time of the permit renewal in 2017, the additional water generated by the sub-slab pumping system and subsequently discharged to the public sewer system was added to the SPDES permit equivalent.

6.1 SAMPLING AND ANALYSIS

Laurel staff sampled the system effluent, as required by the NYSDEC SPDES Permit equivalent on May 30, June 27, and July 25, 2023. Sample bottles were filled directly from a sampling port installed along the system effluent line. The samples were immediately placed in a cooler maintained at 4ºC, under strict chain of custody procedures. Samples were delivered via courier to York Analytical Laboratories, Inc. located in Stratford, Connecticut (ELAP #10854). The samples were submitted for analysis in accordance with the NYSDEC SPDES Permit equivalent requirements.

Laboratory analytical results for the system effluent samples collected in May did not indicate exceedances of the SPDES permit limits. Laboratory analytical results for the system effluent samples collected in February and March indicated the following exceedances:

- Copper was detected at a concentration of 35.7 µg/L and 25.2 µg/L in June and July, respectively, which exceeded the discharge permit limit of 17 µg/L.

Copper piping is not used in the system and is likely endemic to the soil, and therefore present in the groundwater. Laboratory analytical results for the remaining target compounds were within the NYSDEC SPDES Permit equivalent requirements.

The pH of the system in May and June 2023 was 6.48 and 6.42 below the lower limit of 6.5. ***Laurel*** adjusted the acid and the pH of system effluent was within SPDES permit limits for July 2023.

Please refer to Table XI, XII, and XIII on the following pages for tabulated analytical data for Effluent Limits and Monitoring Requirements results. SPDES equivalent analytical results are provided in Appendix D.

Table XI, May 2023 SPDES Results

Permit Equivalent - Site # C130140

Effluent Limitations and Monitoring Requirements Sampled May 30, 2023

Former Darby Drugs Distribution Center

Outfall Number and Parameter	Discharge Locations		Units	Minimum Monitoring Requirements		DMR
	Monthly Average	Daily Max		Measurement Frequency	Sample type	Lb/day
Outfall 001 - Treated Groundwater Remediation Discharge:						
Flow	0.01	0.648	MGD	Continuous	Meter	
pH (range)	6.48	6.5-8.5	SU	Monthly	Grab	
Solids, Total Suspended	8.6	40	mg/l	1/month	Grab	
Acetone	ND	Monitor	µg/l	1/month	Grab	ND
Dichloroethylene 1,2-trans-	ND	10	µg/l	1/month	Grab	ND
Methyl Tert Butyl Ether	ND	Monitor	µg/l	1/month	Grab	ND
Nitroaniline 3-	ND	Monitor	µg/l	1/month	Grab	ND
Tetrachloroethylene	3.8	5	µg/l	1/month	Grab	0.000022
Toluene	ND	5	µg/l	1/month	Grab	ND
Total Arsenic	ND	315	µg/l	1/month	24-hr. Comp.	ND
Total Barium	38.3	Monitor	µg/l	1/month	24-hr. Comp.	0.000224
Total Beryllium	ND	Monitor	µg/l	1/month	24-hr. Comp.	ND
Total Cadmium	ND	39	µg/l	1/month	24-hr. Comp.	ND
Total Chromium	12.5	Monitor	µg/l	1/month	24-hr. Comp.	0.000073
Total Cobalt	ND	Monitor	µg/l	1/month	24-hr. Comp.	ND
Total Copper	ND	17	µg/l	1/month	24-hr. Comp.	ND
Total Iron	ND	Monitor	µg/l	1/month	24-hr. Comp.	ND
Total Lead	ND	40	µg/l	1/month	24-hr. Comp.	ND
Total Magnesium	268	Monitor	µg/l	1/month	24-hr. Comp.	0.001570
Total Manganese	ND	Monitor	µg/l	1/month	24-hr. Comp.	ND
Total Mercury	ND	50	µg/l	1/month	Grab	ND
Total Nickel	ND	41	µg/l	1/month	24-hr. Comp.	ND
Total Vanadium	ND	Monitor	µg/l	1/month	24-hr. Comp.	ND
Total Zinc	ND	330	µg/l	1/month	24-hr. Comp.	ND
Trichloroethene	ND	10	µg/l	1/month	24-hr. Comp.	ND
Vinyl Chloride	ND	10	µg/l	1/month	24-hr. Comp.	ND

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Table XII, June 2023 SPDES Results

Permit Equivalent - Site # C130140

Effluent Limitations and Monitoring Requirements Sampled June 27, 2023

Former Darby Drugs Distribution Center

Outfall Number and Parameter	Discharge Locations		Units	Minimum Monitoring Requirements		DMR
	Monthly Average	Daily Max		Measurement Frequency	Sample type	Lb/day
Outfall 001 - Treated Groundwater Remediation Discharge:						
Flow	0.01	0.648	MGD	Continuous	Meter	
pH (range)	6.42	6.5-8.5	SU	Monthly	Grab	
Solids, Total Suspended	5.4	40	mg/l	1/month	Grab	
Acetone	ND	Monitor	µg/l	1/month	Grab	ND
Dichloroethylene 1,2-trans-	ND	10	µg/l	1/month	Grab	ND
Methyl Tert Butyl Ether	ND	Monitor	µg/l	1/month	Grab	ND
Nitroaniline 3-	ND	Monitor	µg/l	1/month	Grab	ND
Tetrachloroethylene	ND	5	µg/l	1/month	Grab	ND
Toluene	ND	5	µg/l	1/month	Grab	ND
Total Arsenic	ND	315	µg/l	1/month	24-hr. Comp.	ND
Total Barium	34.1	Monitor	µg/l	1/month	24-hr. Comp.	0.000203
Total Beryllium	ND	Monitor	µg/l	1/month	24-hr. Comp.	ND
Total Cadmium	ND	39	µg/l	1/month	24-hr. Comp.	ND
Total Chromium	11.1	Monitor	µg/l	1/month	24-hr. Comp.	0.000066
Total Cobalt	ND	Monitor	µg/l	1/month	24-hr. Comp.	ND
Total Copper	**35.7**	17	µg/l	1/month	24-hr. Comp.	0.000212
Total Iron	ND	Monitor	µg/l	1/month	24-hr. Comp.	ND
Total Lead	ND	40	µg/l	1/month	24-hr. Comp.	ND
Total Magnesium	335	Monitor	µg/l	1/month	24-hr. Comp.	0.001989
Total Manganese	ND	Monitor	µg/l	1/month	24-hr. Comp.	ND
Total Mercury	ND	50	µg/l	1/month	Grab	ND
Total Nickel	ND	41	µg/l	1/month	24-hr. Comp.	ND
Total Vanadium	ND	Monitor	µg/l	1/month	24-hr. Comp.	ND
Total Zinc	52.2	330	µg/l	1/month	24-hr. Comp.	0.000310
Trichloroethene	ND	10	µg/l	1/month	24-hr. Comp.	ND
Vinyl Chloride	ND	10	µg/l	1/month	24-hr. Comp.	ND

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Table XIII, July 2023 SPDES Results

Permit Equivalent - Site # C130140

Effluent Limitations and Monitoring Requirements Sampled July 25, 2023

Former Darby Drugs Distribution Center

Outfall Number and Parameter	Discharge Locations		Units	Minimum Monitoring Requirements		DMR
	Monthly Average	Daily Max		Measurement Frequency	Sample type	Lb/day
Outfall 001 - Treated Groundwater Remediation Discharge:						
Flow	0.01	0.648	MGD	Continuous	Meter	
pH (range)	7.46	6.5 -- 8.5	SU	Monthly	Grab	
Solids, Total Suspended	ND	40	mg/l	1/month	Grab	
Acetone	ND	Monitor	µg/l	1/month	Grab	ND
Dichloroethylene, 1,2-trans-	ND	10	µg/l	1/month	Grab	ND
Dichloroethylene, cis-1,2	ND	10	µg/l	1/month	Grab	ND
Methyl Tert Butyl Ether	ND	Monitor	µg/l	1/month	Grab	ND
Nitroaniline 3-	ND	Monitor	µg/l	1/month	Grab	ND
Tetrachloroethylene	ND	5	µg/l	1/month	Grab	ND
Toluene	ND	5	µg/l	1/month	Grab	ND
Total Arsenic	ND	315	µg/l	1/month	24-hr. Comp.	ND
Total Barium	50.5	Monitor	µg/l	1/month	24-hr. Comp.	0.000315
Total Beryllium	0.61	Monitor	µg/l	1/month	24-hr. Comp.	0.000004
Total Cadmium	ND	39	µg/l	1/month	24-hr. Comp.	ND
Total Chromium	25.2	Monitor	µg/l	1/month	24-hr. Comp.	0.000157
Total Cobalt	ND	Monitor	µg/l	1/month	24-hr. Comp.	ND
Total Copper	**25.2**	17	µg/l	1/month	24-hr. Comp.	0.000157
Total Iron	2,190	Monitor	µg/l	1/month	24-hr. Comp.	0.013650
Total Lead	ND	40	µg/l	1/month	24-hr. Comp.	ND
Total Magnesium	441	Monitor	µg/l	1/month	24-hr. Comp.	0.002749
Total Manganese	6.53	Monitor	µg/l	1/month	24-hr. Comp.	0.000041
Total Mercury	ND	50	µg/l	1/month	Grab	ND
Total Nickel	ND	41	µg/l	1/month	24-hr. Comp.	ND
Total Vanadium	ND	Monitor	µg/l	1/month	24-hr. Comp.	ND
Total Zinc	175	330	µg/l	1/month	24-hr. Comp.	0.001091
Trichloroethene	ND	10	µg/l	1/month	24-hr. Comp.	ND
Vinyl Chloride	ND	10	µg/l	1/month	24-hr. Comp.	ND

7.0 CONCLUSIONS

The quarterly monitoring report covers the period between May 1, 2023 through July 31, 2023. This report covers the operational status of the groundwater treatment and extraction system, the groundwater monitoring event on July 25, 2023, and the SPDES sampling events.

Based on the work conducted to date, ***Laurel*** has determined the following:

- Groundwater samples were collected from sixteen (16) groundwater monitoring wells on July 25, 2023, as a quarterly groundwater sampling event. The samples were submitted to York Analytical Laboratories in Stratford, CT for VOC analysis. The results of the analysis found elevated levels of chlorinated solvents present in groundwater monitoring wells screened in the 10 to 15 feet bgs interval (2010-01D, 2010-02D, 2010-03D, and 2010-04D), in one monitoring well screened in the 40 to 50 feet bgs interval (2010-02C), and in one monitoring well screened in the 60 to 70 feet bgs interval (2020-03B-R).
- The pH adjustment system is regulating the pH levels of groundwater effluent to within SPDES permit limits.
- Groundwater elevations in the 100-foot groundwater monitoring wells generally decrease in the four (4) wells from southwest to northeast, with groundwater flow generally towards the northeast.
- Groundwater elevations in the 70-foot groundwater monitoring wells generally decrease in the four (4) wells from west to the east, with groundwater flow generally towards the east.
- Groundwater elevations in the 50-foot groundwater monitoring wells generally decrease in the four (4) wells from west to east, with groundwater generally flow towards the east.
- Groundwater monitoring wells 2010-01D, 2010-02D, 2010-03D, 2010-04D, and piezometer wells PZ-1 through PZ-5, and PZ-Sump were used to generate a groundwater potentiometric map at shallow depths between 12 feet and 15 feet, attached as Figure 6.0. The overall groundwater flow direction at the time of the July 2023 sampling event was generally towards the southeast with a localized depression around the PZ-Sump.
- The bag filter becomes clogged about every 14 days and results in loss of hydraulic control.
- Hydraulic control is lost if the sump pumps turn off for longer than one day.

8.0 RECOMMENDATIONS

Laurel recommends the following:

- Continue on-going maintenance of the GWET system; change bag filter bi-weekly, and replace and/or repair any system components as needed to assure ongoing operation.
- Continue to evaluate data from data loggers to identify solution to maintaining hydraulic control at the Site.
- Continue to monitor system operations and perform routine maintenance, consisting of cleaning the stripper tower after every 4 months of operation, when the observed flow rate drops by more than 25%, or effluent sample concentration exceeds the NYSDEC SPDES permit equivalent discharge limits.
- Continue to monitor the pH adjustment system to control pH level and reduce fouling of the stripper tower.
- Continue quarterly groundwater monitoring and sampling of the monitoring well network for the presence of VOCs.
- Submit a quarterly status report that documents field observations, system operational status, with current and historical groundwater analytical data.
- Continue to utilize the carbon treatment system when needed (at stripper tower maintenance intervals which occur when under 25% efficiency) to maintain VOC concentrations within SPDES permit equivalent discharge limits.

FIGURES

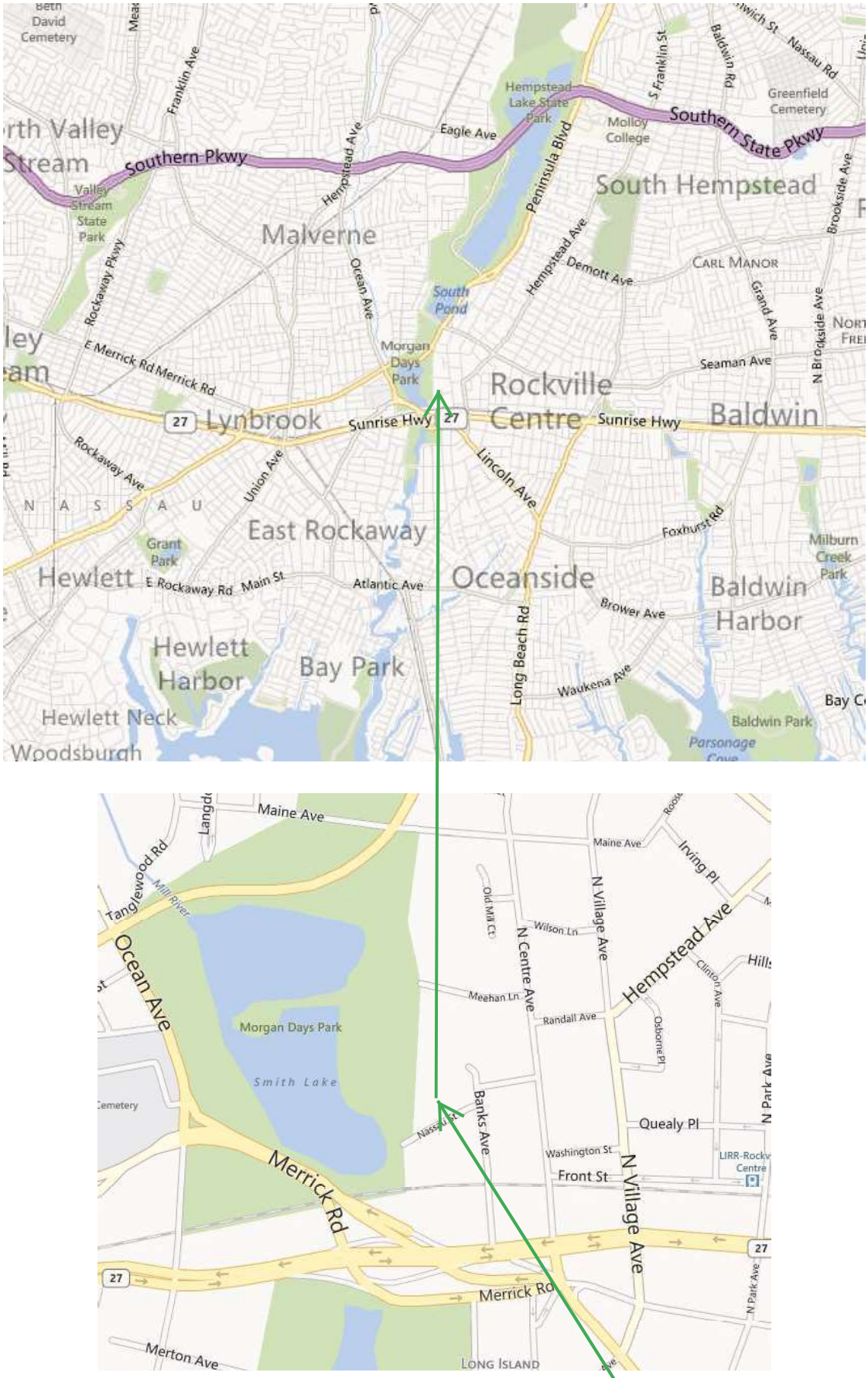


Figure 1.0 Site Location
80 Banks Avenue
Rockville Center, New York



Laurel ENVIRONMENTAL GEOSCIENCES, D.P.C.

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FIGURE 2.0
MONITORING WELL
LOCATION MAP

80 Banks Avenue
Rockville Centre, New York

Laurel makes no guarantees as to the accuracy of this drawing and it should only be used for informational purposes.

PROJECT #: 12-190
DRAWING DATE: 4/7/23
DRAWN BY: LG
CHECKED BY:BMC
REVISIONS: DS

KEY

- Building
- MW Monitoring Well
- MW Abandoned Monitoring Well
- PZ Piezometer
- Sump

N W E S

0 40' 80'
Scale: 1" = 40'



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FIGURE 3.0
GROUNDWATER POTENTIOMETRIC MAP - 100 FT WELLS

JULY 25, 2023

80 BANKS AVENUE
ROCKVILLE CENTRE, NEW YORK

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PROJECT #: 12-190
DRAWING DATE: 08/07/23
DRAWN BY:EB
CHECKED BY:DS

REVISIONS:

KEY
- Building
- MW Monitoring Well
- PZ Piezometer
- Sump
- Groundwater Flow Direction

0 40' 80'
Scale: 1" = 40'

N W E S



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FIGURE 4.0
GROUNDWATER POTENTIOMETRIC MAP - 70 FT WELLS

JULY 25, 2023

80 BANKS AVENUE
ROCKVILLE CENTRE, NEW YORK

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PROJECT #: 12-190
DRAWING DATE: 08/08/23
DRAWN BY :EB
CHECKED BY:DS
REVISIONS:

KEY
- Building
- MW Monitoring Well
- PZ Piezometer
- Sump
- Groundwater Flow Direction

0 40' 80'
Scale: 1" = 40'

N W E S



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Huntington Station, NY 11746

PHONE: 631-673-0612
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FIGURE 5.0
GROUNDWATER POTENTIOMETRIC MAP - 50 FT WELLS

JULY 25, 2023

80 BANKS AVENUE
ROCKVILLE CENTRE, NEW YORK

Laurel makes no guarantees as to the accuracy of this drawing and it should only be used for informational purposes.

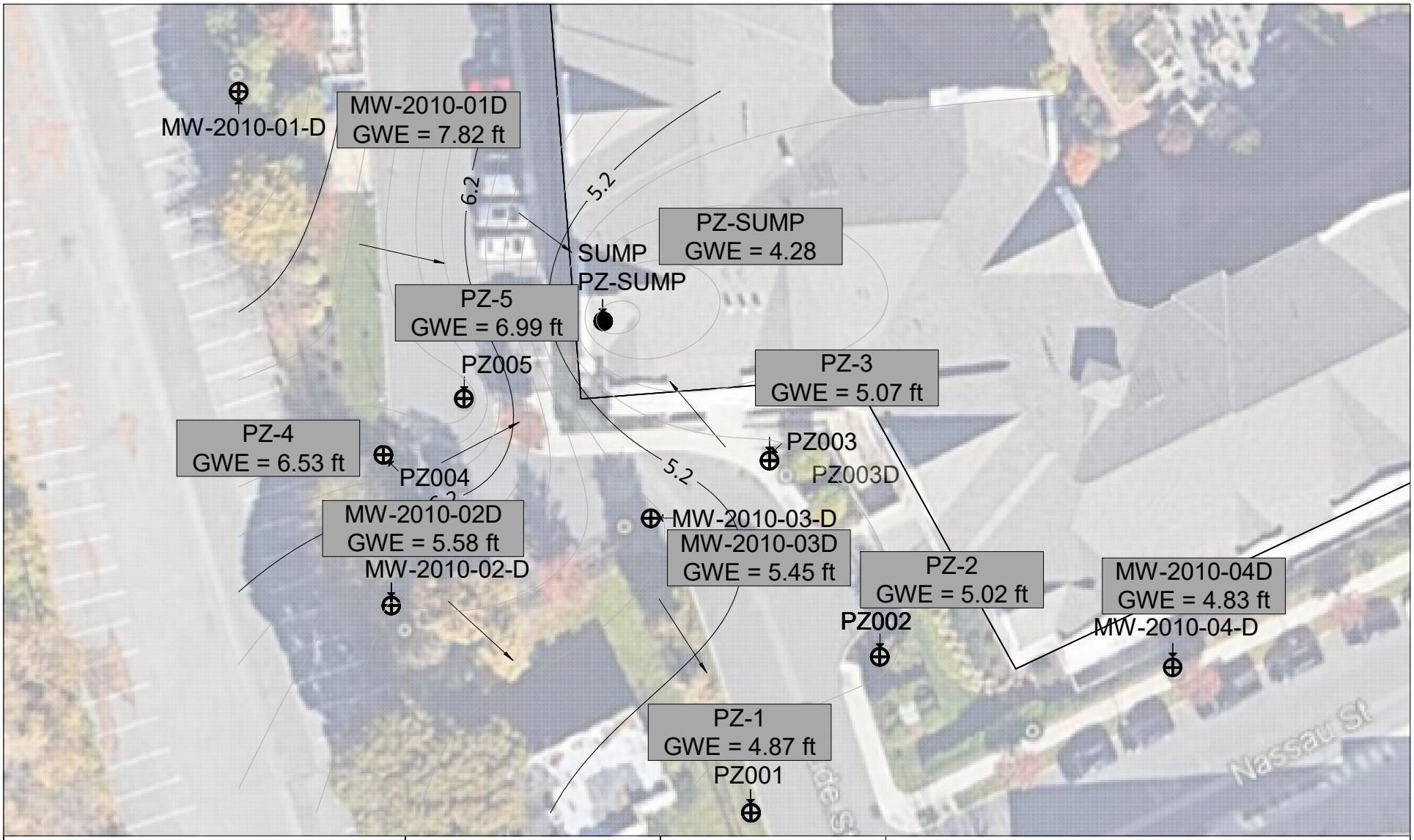
PROJECT #: 12-190
DRAWING DATE: 08/08/23
DRAWN BY:EB
CHECKED BY:DS
REVISIONS:

KEY

- Building
- MW Monitoring Well
- PZ Piezometer
- Sump
- Groundwater Flow Direction

0 40' 80'
Scale: 1" = 40'

N W E S



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53 West Hills Road
Huntington Station, NY 11746

PHONE: 631-673-0612
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FIGURE 6.0
GROUNDWATER POTENTIOMETRIC MAP - 15 FT WELLS

JULY 25, 2023

80 BANKS AVENUE
ROCKVILLE CENTRE, NEW YORK

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PROJECT #: 12-190
DRAWING DATE: 08/08/23
DRAWN BY:EB
CHECKED BY:DS
REVISIONS:

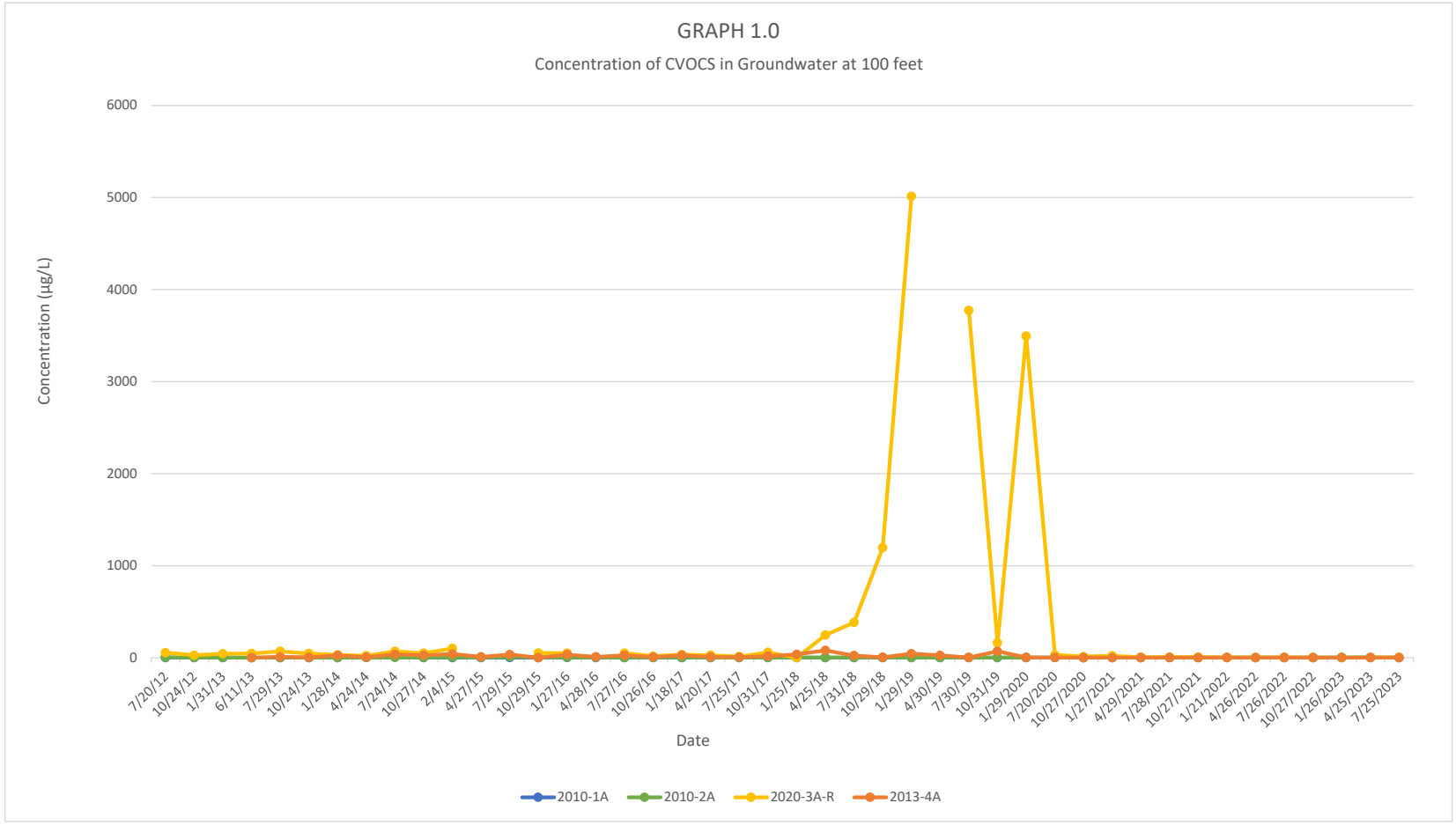
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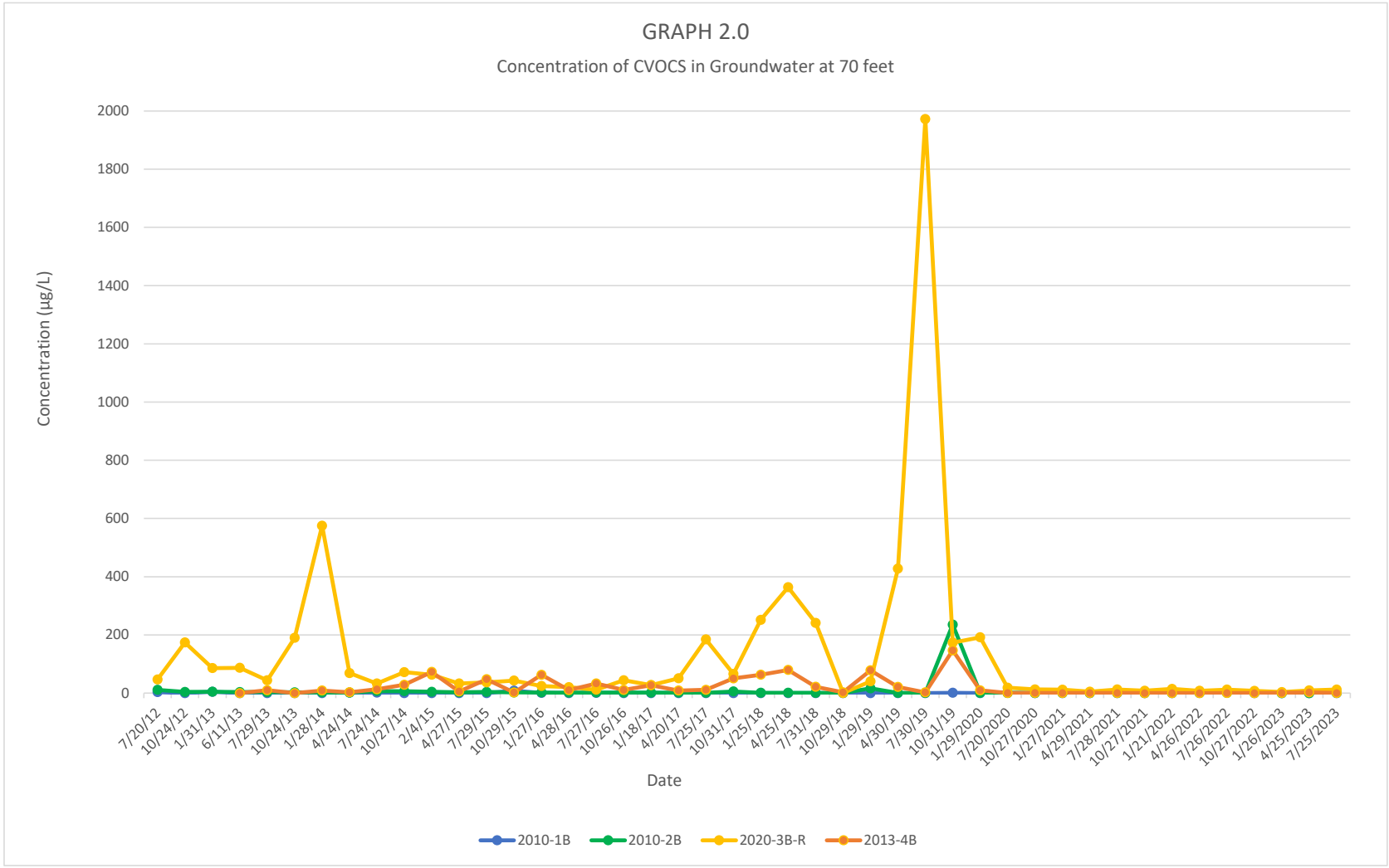
- Building
- MW Monitoring Well
- PZ Piezometer
- Sump
- Groundwater Flow Direction

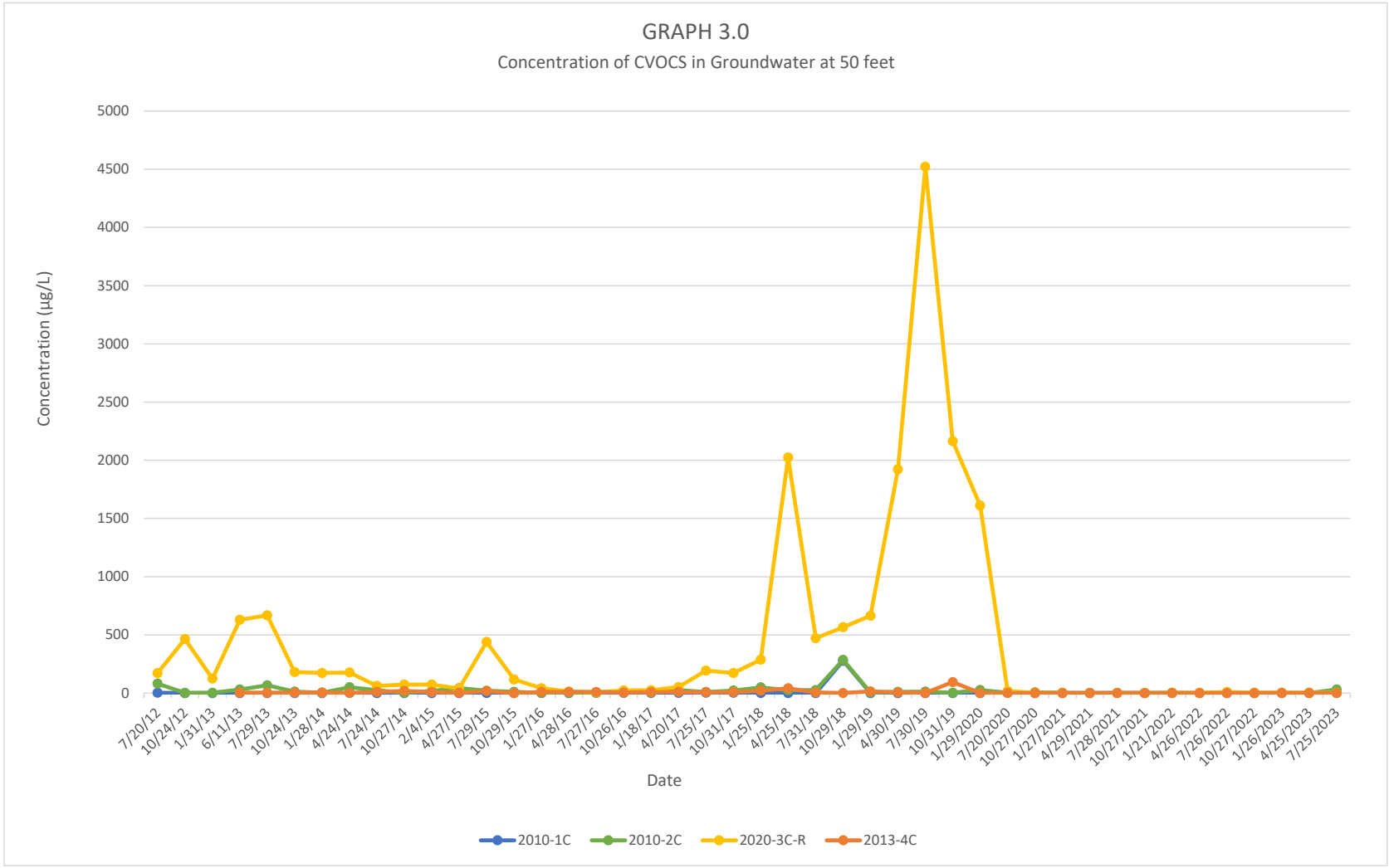
0 40' 80'
Scale: 1" = 40'

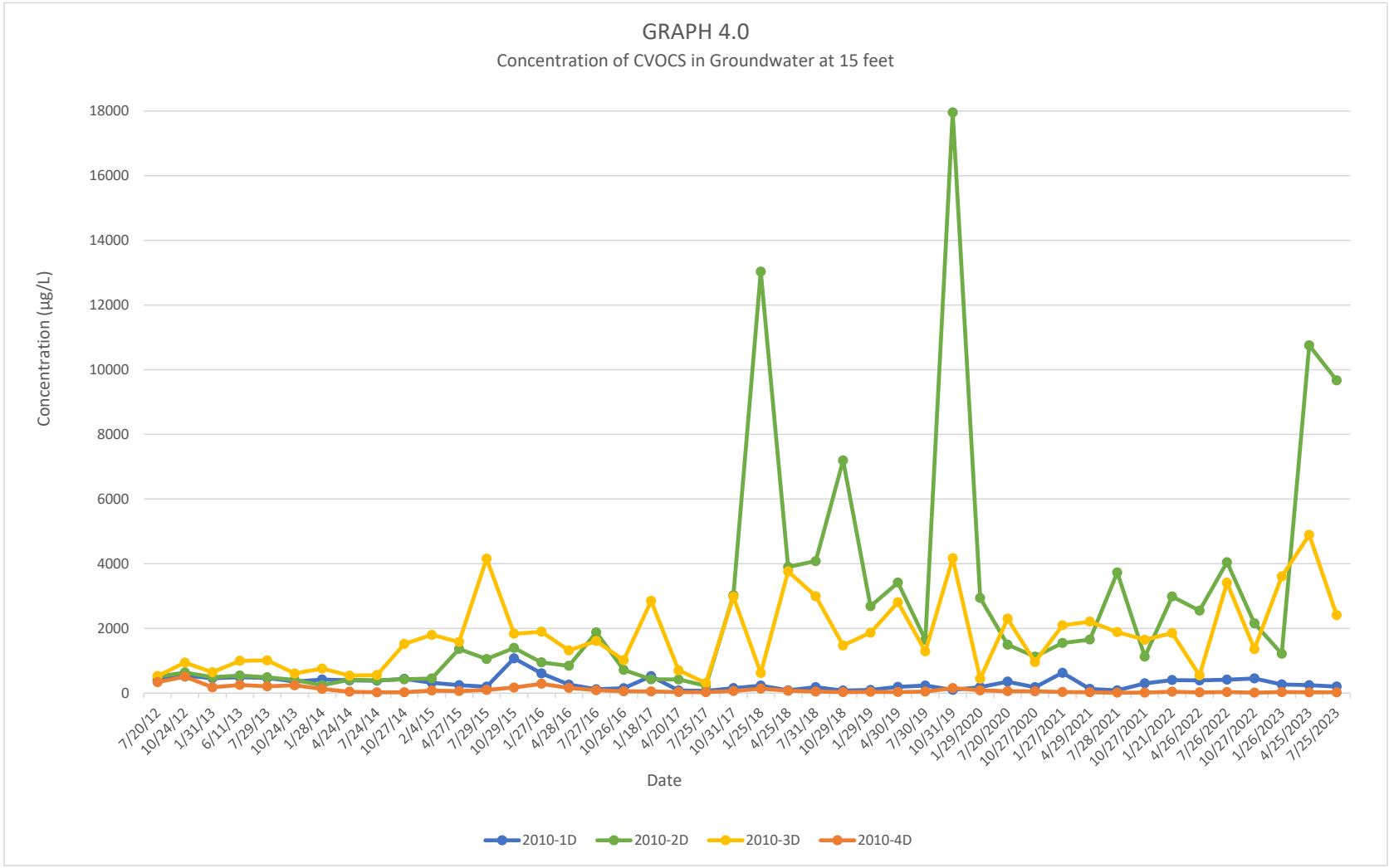
N W E S

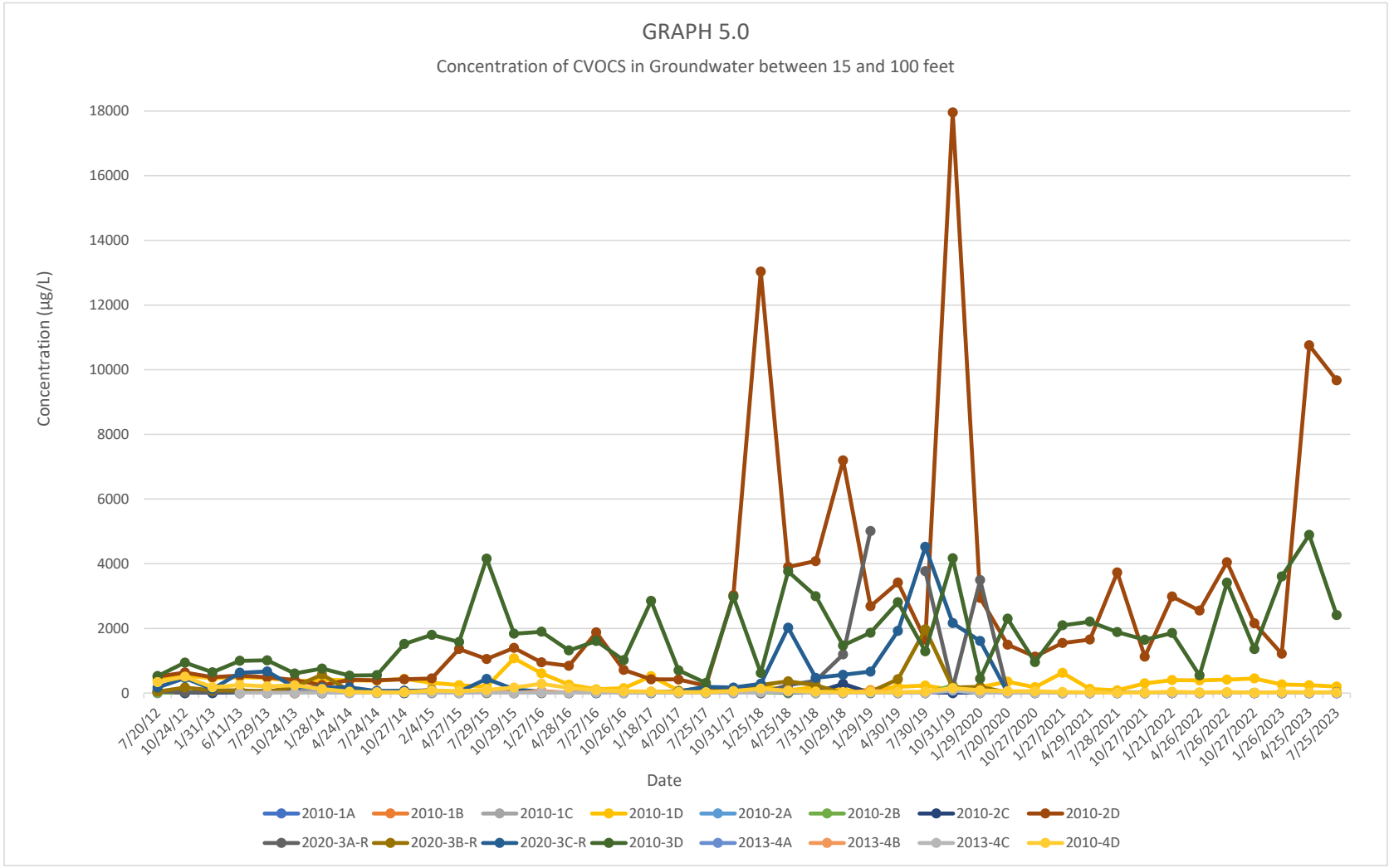
GRAPHS


GRAPH 1.0
Concentration of CVOCS in Groundwater at 100 feet
Concentration (µg/L)
6000
5000
4000
3000
2000
1000
0
7/20/12
10/24/12
1/31/13
6/11/13
7/29/13
10/24/13
1/28/14
4/24/14
7/24/14
10/27/14
2/4/15
4/27/15
7/29/15
10/29/15
1/27/16
4/28/16
7/27/16
10/26/16
1/18/17
4/20/17
7/25/17
10/31/17
1/25/18
4/25/18
7/31/18
10/29/18
1/29/19
4/30/19
7/30/19
10/31/19
1/29/2020
7/20/2020
10/27/2020
1/27/2021
4/29/2021
7/28/2021
10/27/2021
1/21/2022
4/26/2022
7/26/2022
10/27/2022
1/26/2023
4/25/2023
7/25/2023
Date
2010-1A
2010-2A
2020-3A-R
2013-4A


GRAPH 2.0
Concentration of CVOCS in Groundwater at 70 feet
Concentration (µg/L)
2000
1800
1600
1400
1200
1000
800
600
400
200
0
7/20/12
10/24/12
1/31/13
6/11/13
7/29/13
10/24/13
1/28/14
4/24/14
7/24/14
10/27/14
2/4/15
4/27/15
7/29/15
10/29/15
1/27/16
4/28/16
7/27/16
10/26/16
1/18/17
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4/30/19
7/30/19
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1/29/2020
7/20/2020
10/27/2020
1/27/2021
4/29/2021
7/28/2021
10/27/2021
1/21/2022
4/26/2022
7/26/2022
10/27/2022
1/26/2023
4/25/2023
7/25/2023
Date
2010-1B
2010-2B
2020-3B-R
2013-4B


GRAPH 3.0
Concentration of CVOCS in Groundwater at 50 feet
Concentration (µg/L)
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
7/20/12
10/24/12
1/31/13
6/11/13
7/29/13
10/24/13
1/28/14
4/24/14
7/24/14
10/27/14
2/4/15
4/27/15
7/29/15
10/29/15
1/27/16
4/28/16
7/27/16
10/26/16
1/18/17
4/20/17
7/25/17
10/31/17
1/25/18
4/25/18
7/31/18
10/29/18
1/29/19
4/30/19
7/30/19
10/31/19
1/29/2020
7/20/2020
10/27/2020
1/27/2021
4/29/2021
7/28/2021
10/27/2021
1/21/2022
4/26/2022
7/26/2022
10/27/2022
1/26/2023
4/25/2023
7/25/2023
Date
2010-1C
2010-2C
2020-3C-R
2013-4C


GRAPH 4.0
Concentration of CVOCS in Groundwater at 15 feet
Concentration (µg/L)
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
7/20/12
10/24/12
1/31/13
6/11/13
7/29/13
10/24/13
1/28/14
4/24/14
7/24/14
10/27/14
2/4/15
4/27/15
7/29/15
10/29/15
1/27/16
4/28/16
7/27/16
10/26/16
1/18/17
4/20/17
7/25/17
10/31/17
1/25/18
4/25/18
7/31/18
10/29/18
1/29/19
4/30/19
7/30/19
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4/29/2021
7/28/2021
10/27/2021
1/21/2022
4/26/2022
7/26/2022
10/27/2022
1/26/2023
4/25/2023
7/25/2023
Date
2010-1D
2010-2D
2010-3D
2010-4D


GRAPH 5.0
Concentration of CVOCS in Groundwater between 15 and 100 feet
Concentration (µg/L)
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
7/20/12
10/24/12
1/31/13
6/11/13
7/29/13
10/24/13
1/28/14
4/24/14
7/24/14
10/27/14
2/4/15
4/27/15
7/29/15
10/29/15
1/27/16
4/28/16
7/27/16
10/26/16
1/18/17
4/20/17
7/25/17
10/31/17
1/25/18
4/25/18
7/31/18
10/29/18
1/29/19
4/30/19
7/30/19
10/31/19
1/29/2020
7/20/2020
10/27/2020
1/27/2021
4/29/2021
7/28/2021
10/27/2021
1/21/2022
4/26/2022
7/26/2022
10/27/2022
1/26/2023
4/25/2023
7/25/2023
Date
2010-1A
2010-1B
2010-1C
2010-1D
2010-2A
2010-2B
2010-2C
2010-2D
2020-3A-R
2020-3B-R
2020-3C-R
2010-3D
2013-4A
2013-4B
2013-4C
2010-4D

APPENDIX A

Groundwater Telemetry Study Letters

LAUREL ENVIRONMENTAL GEOSCIENCES, DPC
53 WEST HILLS ROAD • HUNTINGTON STATION, NEW YORK • 11746
PHONE: (631) 673-0612 • FAX: (631) 427-5323
WWW.LAURELENV.COM

August 1, 2023

Mr. Matt Gibbons
AvalonBay Communities, Inc.
51 Sleeper Street, Suite 750
Boston, MA 02210

RE: Groundwater Telemetry Study – Initial Review
80 Banks Avenue, Rockville Centre
Laurel Project # 12-190

Dear Mr. Gibbons,

Laurel Environmental Geosciences, D.P.C. (Laurel) has prepared a Groundwater Telemetry Summary letter regarding ongoing monitoring of the groundwater flow conditions associated with 80 Banks Avenue in Rockville Centre, New York (the Site). The purpose of this study is to determine groundwater flow direction and evaluate hydraulic control of groundwater beneath the Site overtime, including whether additional actions may be necessary.

In May 2023, ***Laurel*** deployed a set of data loggers in the existing shallow piezometer wells (PZ-1 through PZ-5 and PZ-SUMP) at the Site. The data loggers measure groundwater elevations in each of the wells. ***Laurel*** generated a set of groundwater contour maps over a three-week timeframe using the data collected from the loggers that show groundwater flow conditions. The groundwater contour maps are attached as Figures 2.0 through 13.0.

Laurel observed that the bag filter conditions associated with the on-Site system appears to influence hydraulic control at the Site. When the bag filter becomes clogged, hydraulic control of groundwater at the Site appears to diminish. Two days following the bag filter change, a localized depression formed at the sump, which resulted in groundwater flowing towards the sump and confirmed hydraulic control of the Site. Over time as the bag filter becomes clogged, the system appears to lose efficiency and hydraulic control begins to lessen. Figure 12.0 represents groundwater conditions, approximately eighteen (18) days after the bag filter had been replaced.

Based on these findings, ***Laurel*** recommends scheduling a bag filter change every fourteen (14) days to better maintain hydraulic control at the Site. Now that we have increased the interval of bag filter changes based on this data, ***Laurel*** will download the datalogger data during the next round of groundwater monitoring, scheduled to take place the week of July 24th. We will review

this data and look closely at the effects of pumping on the groundwater gradient and will produce updated maps and a summary letter.

Additionally, we noticed that PZ-5 is in a drainage area that receives water from the drainage galleries that causes a temporary mounding effect and the groundwater elevation is not representative of the Site. We plan to move the datalogger from PZ-5 to 2010-01D to get better coverage across a wider area of the Site. ***Laurel*** will continue to monitor groundwater conditions at the Site and provide updates as appropriate.

Please contact me if you have any questions or require additional information.

Respectfully Submitted,
Laurel Environmental Geosciences, DPC.



Environmental Scientist III
Project Manager
Mrs. Dina Stammers



Scott A. Yanuck, P.G. President
Laurel Environmental Geosciences, DPC.



Laurel
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GEOSCIENCES, D.P.C.

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FIGURE 2.0
GROUNDWATER POTENTIOMETRIC MAP - 15 FT WELLS

MAY 30, 2023 - BAG FILTER CLOGGED

80 BANKS AVENUE
ROCKVILLE CENTRE, NEW YORK

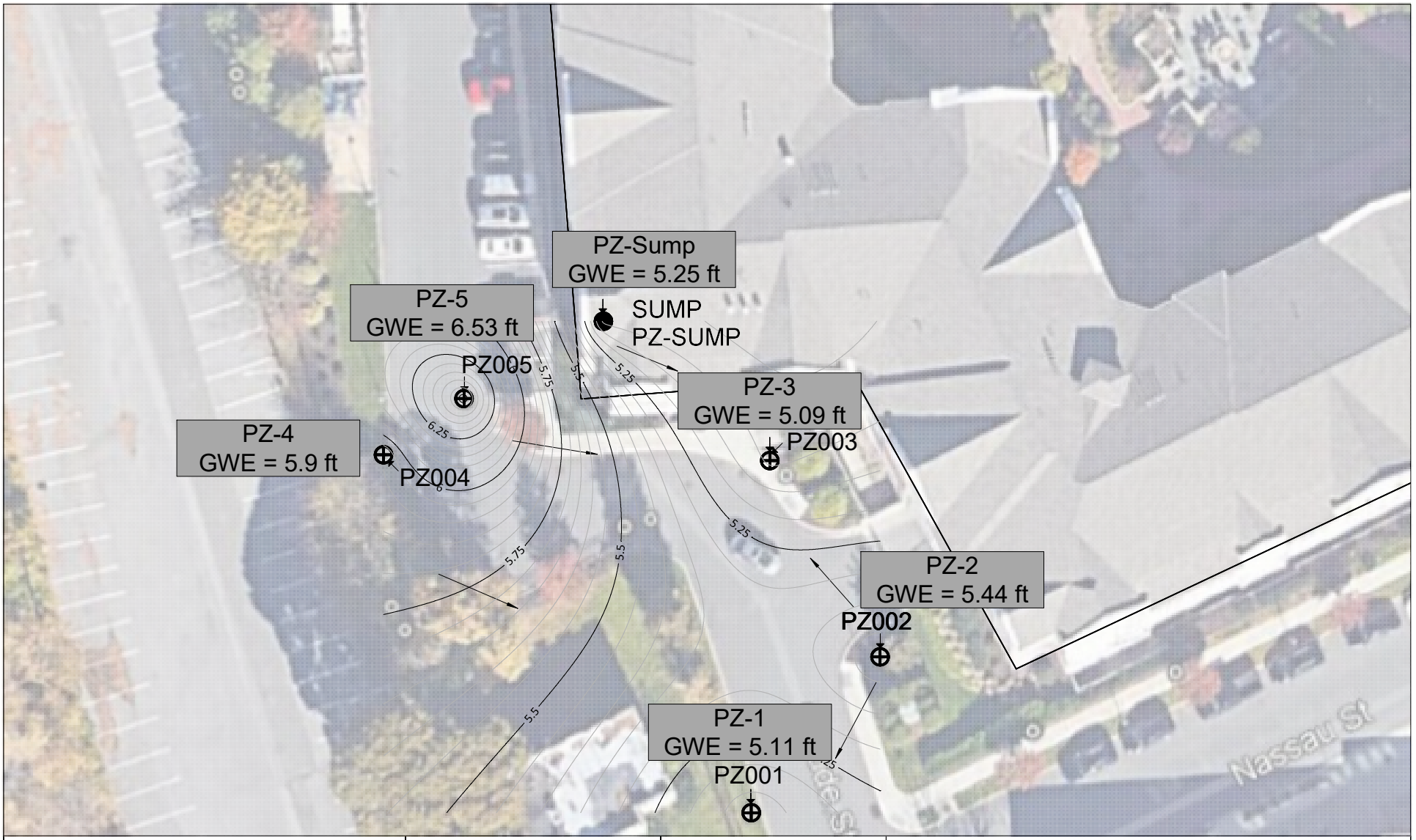
Laurel makes no guarantees as to the accuracy of this drawing and it should only be used for informational purposes.

PROJECT #: 12-190
DRAWING DATE: 06/30/23
DRAWN BY: EB
CHECKED BY: DS
REVISIONS:

KEY
- Building
- MW Monitoring Well
- PZ Piezometer
- Sump
- Groundwater Flow Direction

0 40' 80'
Scale: 1" = 40'

N W E S



Laurel
ENVIRONMENTAL GEOSCIENCES, D.P.C.

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FIGURE 3.0
GROUNDWATER POTENTIOMETRIC MAP - 15 FT WELLS

JUNE 01, 2023
(BAG FILTER CHANGED)

80 BANKS AVENUE
ROCKVILLE CENTRE, NEW YORK

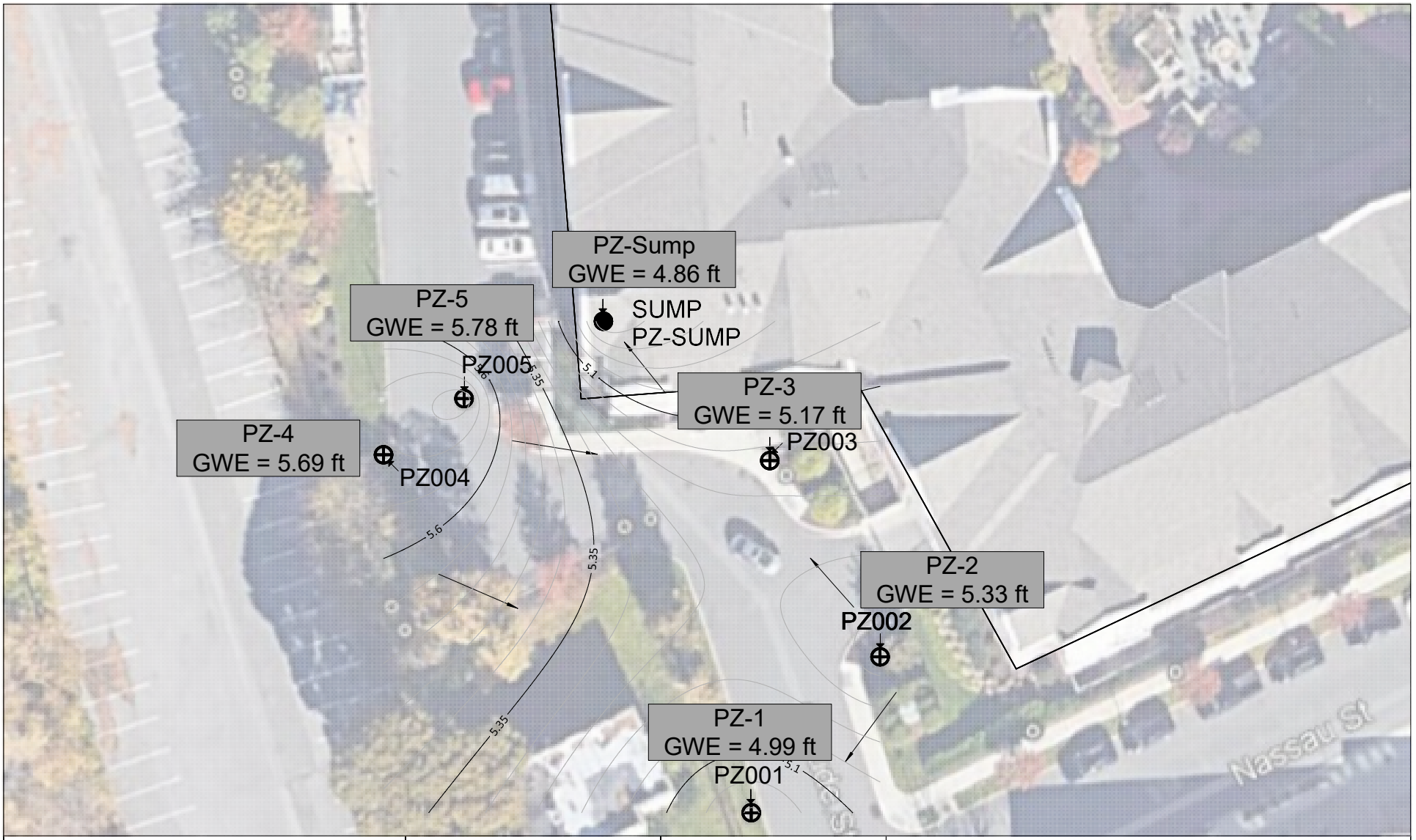
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PROJECT #: 12-190
DRAWING DATE: 06/30/23
DRAWN BY: EB
CHECKED BY: DS
REVISIONS:

KEY
- Building
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- Sump
- Groundwater Flow Direction

0 40' 80'
Scale: 1" = 40'

N W E S



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FIGURE 4.0
GROUNDWATER POTENTIOMETRIC MAP - 15 FT WELLS

JUNE 03, 2023
(2 DAYS FROM BAG FILTER SWAP)

80 BANKS AVENUE
ROCKVILLE CENTRE, NEW YORK

Laurel makes no guarantees as to the accuracy of this drawing and it should only be used for informational purposes.

PROJECT #: 12-190
DRAWING DATE: 06/30/23
DRAWN BY: EB
CHECKED BY: DS
REVISIONS:

KEY
- Building
- MW Monitoring Well
- PZ Piezometer
- Sump
- Groundwater Flow Direction

0 40' 80'
Scale: 1" = 40'

N W E S



Laurel
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FIGURE 5.0
GROUNDWATER POTENTIOMETRIC MAP - 15 FT WELLS

JUNE 05, 2023
(4 DAYS SINCE BAG FILTER SWAP)

80 BANKS AVENUE
ROCKVILLE CENTRE, NEW YORK

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PROJECT #: 12-190
DRAWING DATE: 06/30/23
DRAWN BY: EB
CHECKED BY: DS
REVISIONS:

KEY
- Building
- MW Monitoring Well
- PZ Piezometer
- Sump
- Groundwater Flow Direction

0 40' 80'
Scale: 1" = 40'

N W E S



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FIGURE 6.0
GROUNDWATER POTENTIOMETRIC MAP - 15 FT WELLS

JUNE 07, 2023
(6 DAYS SINCE BAG FILTER SWAP)

80 BANKS AVENUE
ROCKVILLE CENTRE, NEW YORK

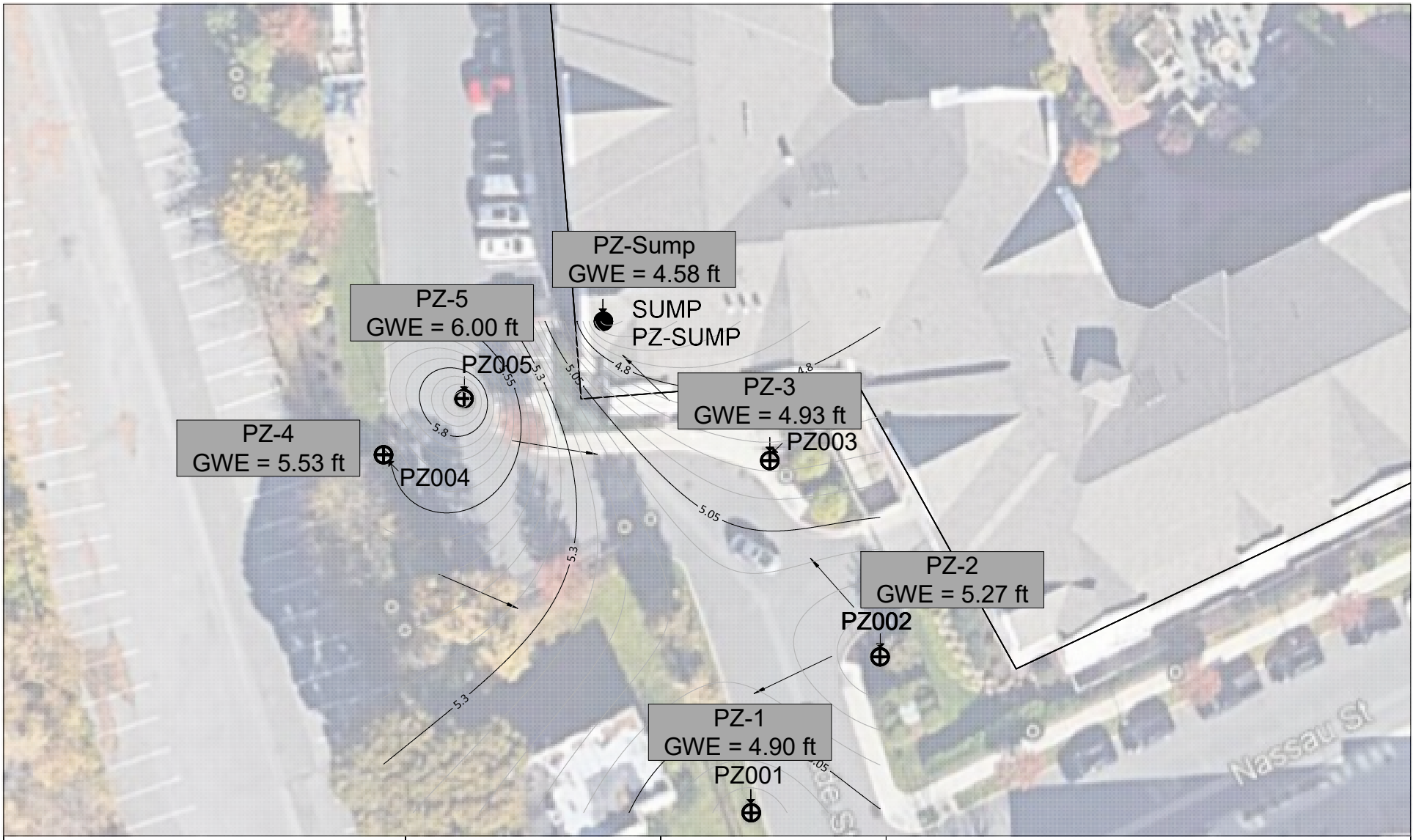
Laurel makes no guarantees as to the accuracy of this drawing and it should only be used for informational purposes.

PROJECT #: 12-190
DRAWING DATE: 06/30/23
DRAWN BY: EB
CHECKED BY: DS
REVISIONS:

KEY
- Building
- MW Monitoring Well
- PZ Piezometer
- Sump
- Groundwater Flow Direction

0 40' 80'
Scale: 1" = 40'

N W E S



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FIGURE 7.0
GROUNDWATER POTENTIOMETRIC MAP - 15 FT WELLS

JUNE 09, 2023
(8 DAYS SINCE BAG FILTER SWAP)

80 BANKS AVENUE
ROCKVILLE CENTRE, NEW YORK

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DRAWING DATE: 06/30/23
DRAWN BY: EB
CHECKED BY: DS
REVISIONS:

KEY
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- PZ Piezometer
- Sump
- Groundwater Flow Direction

0 40' 80'
Scale: 1" = 40'

N W E S



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FIGURE 8.0
GROUNDWATER POTENTIOMETRIC MAP - 15 FT WELLS

JUNE 11, 2023
(10 DAYS SINCE BAG FILTER SWAP)

80 BANKS AVENUE
ROCKVILLE CENTRE, NEW YORK

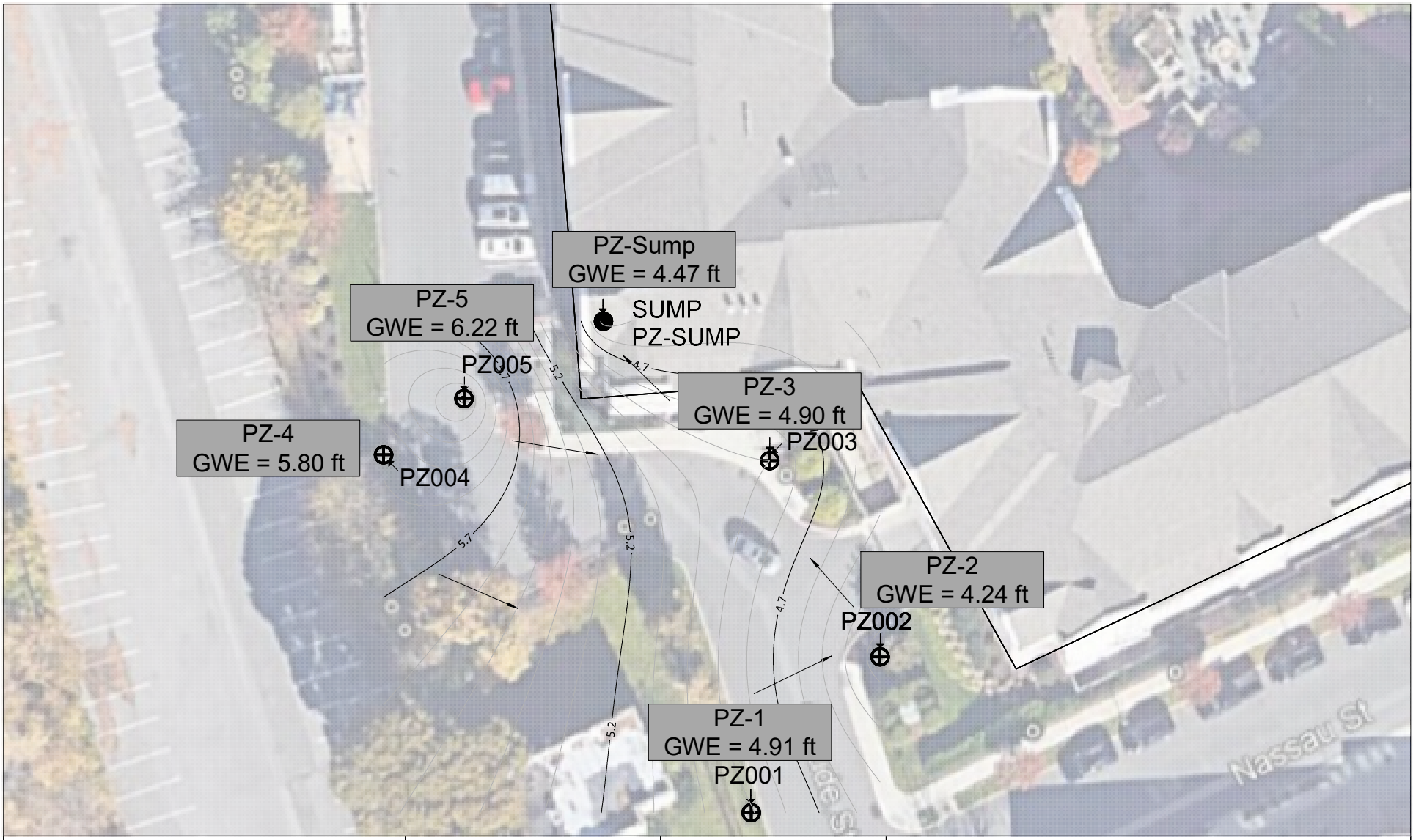
Laurel makes no guarantees as to the accuracy of this drawing and it should only be used for informational purposes.

PROJECT #: 12-190
DRAWING DATE: 06/30/23
DRAWN BY: EB
CHECKED BY: DS
REVISIONS:

KEY
- Building
- MW Monitoring Well
- PZ Piezometer
- Sump
- Groundwater Flow Direction

0 40' 80'
Scale: 1" = 40'

N W E S



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Huntington Station, NY 11746

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FIGURE 9.0
GROUNDWATER POTENTIOMETRIC MAP - 15 FT WELLS

JUNE 13, 2023
(12 DAYS SINCE BAG FILTER SWAP)

80 BANKS AVENUE
ROCKVILLE CENTRE, NEW YORK

Laurel makes no guarantees as to the accuracy of this drawing and it should only be used for informational purposes.

PROJECT #: 12-190
DRAWING DATE: 06/30/23
DRAWN BY: EB
CHECKED BY: DS
REVISIONS:

KEY
- Building
- MW Monitoring Well
- PZ Piezometer
- Sump
- Groundwater Flow Direction

0 40' 80'
Scale: 1" = 40'

N W E S



Laurel
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FIGURE 10.0
GROUNDWATER POTENTIOMETRIC MAP - 15 FT WELLS

JUNE 15, 2023
(14 DAYS SINCE BAG FILTER SWAP)

80 BANKS AVENUE
ROCKVILLE CENTRE, NEW YORK

Laurel makes no guarantees as to the accuracy of this drawing and it should only be used for informational purposes.

PROJECT #: 12-190
DRAWING DATE: 06/30/23
DRAWN BY: EB
CHECKED BY: DS
REVISIONS:

KEY
- Building
- MW Monitoring Well
- PZ Piezometer
- Sump
- Groundwater Flow Direction

0 40' 80'
Scale: 1" = 40'

N W E S



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FIGURE 11.0
GROUNDWATER POTENTIOMETRIC MAP - 15 FT WELLS

JUNE 17, 2023
(16 DAYS SINCE BAG FILTER SWAP)

80 BANKS AVENUE
ROCKVILLE CENTRE, NEW YORK

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PROJECT #: 12-190
DRAWING DATE: 06/30/23
DRAWN BY: EB
CHECKED BY: DS
REVISIONS:

KEY
- Building
- MW Monitoring Well
- PZ Piezometer
- Sump
- Groundwater Flow Direction

0 40' 80'
Scale: 1" = 40'

N W E S



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FIGURE 12.0
GROUNDWATER POTENTIOMETRIC MAP - 15 FT WELLS

JUNE 18, 2023
(18 DAYS SINCE BAG FILTER SWAP)

80 BANKS AVENUE
ROCKVILLE CENTRE, NEW YORK

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PROJECT #: 12-190
DRAWING DATE: 06/30/23
DRAWN BY: EB
CHECKED BY: DS
REVISIONS:

KEY
- Building
- MW Monitoring Well
- PZ Piezometer
- Sump
- Groundwater Flow Direction

0 40' 80'
Scale: 1" = 40'

N W E S



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FIGURE 13.0
GROUNDWATER POTENTIOMETRIC MAP - 15 FT WELLS

JUNE 21, 2023
(20 DAYS SINCE BAG FILTER SWAP)

80 BANKS AVENUE
ROCKVILLE CENTRE, NEW YORK

Laurel makes no guarantees as to the accuracy of this drawing and it should only be used for informational purposes.

PROJECT #: 12-190
DRAWING DATE: 06/30/23
DRAWN BY: EB
CHECKED BY: DS
REVISIONS:

KEY
- Building
- MW Monitoring Well
- PZ Piezometer
- Sump
- Groundwater Flow Direction

0 40' 80'
Scale: 1" = 40'

N W E S

LAUREL ENVIRONMENTAL GEOSCIENCES, DPC
53 WEST HILLS ROAD • HUNTINGTON STATION, NEW YORK • 11746
PHONE: (631) 673-0612 • FAX: (631) 427-5323
WWW.LAURELENV.COM

August 24, 2023

Mr. Matt Gibbons
AvalonBay Communities, Inc.
51 Sleeper Street, Suite 750
Boston, MA 02210

RE: Groundwater Telemetry Study – Second Review
80 Banks Avenue, Rockville Centre
Laurel Project # 12-190

Dear Mr. Gibbons,

Laurel Environmental Geosciences, D.P.C. (Laurel) has prepared a Groundwater Telemetry Summary letter regarding ongoing monitoring of the groundwater flow conditions associated with 80 Banks Avenue in Rockville Centre, New York (the Site). The purpose of this study is to determine groundwater flow direction and evaluate hydraulic control of groundwater beneath the Site overtime, including whether additional actions may be necessary.

In May 2023, ***Laurel*** deployed a set of data loggers in the existing shallow piezometer wells (PZ-1 through PZ-5 and PZ-SUMP) at the Site. The data loggers measure groundwater elevations in each of the wells.

In June 2023, ***Laurel*** observed that bag filter conditions associated with the on-Site system appear to influence hydraulic control at the Site. When the bag filter becomes clogged, hydraulic control of groundwater at the Site appears to diminish. Once the bag filter is changed, hydraulic control is regained at the Site.

For this second review of data, ***Laurel*** generated a set of groundwater contour maps over an eight day timeframe using the data collected from the loggers at the end of July 2023. The groundwater contour maps are attached as Figures 2.0 through 6.0. The purpose of this study was to determine the effect that the sump pumps have on hydraulic control of the Site when they are offline for an extended period of time. The sump pumps at the Site are designed to create a localized depression near the system to avoid groundwater leaving the Site. This study collected groundwater elevations during the following five instances:

- The pumps at the Site initially turned off (Figure 2.0);
- The pumps at the Site offline for one day (Figure 3.0);
- The pumps at the Site offline for three days (Figure 4.0);
- The pumps at the Site initially turned online (Figure 5.0); and
- The pumps at the Site online for three consecutive days (Figure 6.0).

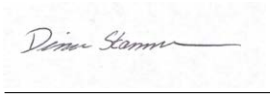
Figure 2.0 represents groundwater elevation when the sump pumps had initially gone offline and shows hydraulic control at the Site, as the pumps had been running regularly leading up to the pumps turning off. The day after the pumps go offline (Figure 3.0), hydraulic control at the Site is lost and groundwater is observed to be flowing southward and off the Site. Hydraulic control is not regained until the pumps resumed operation and continued to run for 3 days (Figure 6.0), and the localized depression around the sump returned.

Based on these findings, ***Laurel*** recommends deepening the sump to ensure that the sump has sufficient water to keep the sump pumps running. Deepening the sump would increase the amount of water the sump pumps would be required to remove, reducing the frequency that the sump pumps would turn off. This would also ensure that during times of drought and diminished ground water elevation, that the sump pumps would remain running and maintain hydraulic control at the Site.

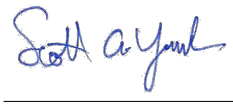
Additionally**,** ***Laurel*** noticed that PZ-5 is in a drainage area that receives water from the drainage galleries that causes a temporary mounding effect during rain events, and the groundwater elevation is not representative of the Site. In July 2023, ***Laurel*** moved the data logger from PZ-5 to 2010-01D to get better coverage across a wider area of the Site. Due to the short time interval between the moving of the data logger and the data relevant to the study, data collected from the 2010-01D data logger was not used in this study. ***Laurel*** plans on using the data from the datalogger in upcoming investigations. ***Laurel*** will continue to monitor groundwater conditions at the Site and provide updates as appropriate.

Please contact me if you have any questions or require additional information.

Respectfully Submitted,
Laurel Environmental Geosciences, DPC.



Environmental Scientist III
Project Manager
Mrs. Dina Stammers



Scott A. Yanuck, P.G. President
Laurel Environmental Geosciences, DPC.

Attachments: Figures 1 – 6 showing well locations and groundwater flow contours



Laurel ENVIRONMENTAL GEOSCIENCES, D.P.C.

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Huntington Station, NY 11746

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FIGURE 1.0
MONITORING WELL
LOCATION MAP

80 Banks Avenue
Rockville Centre, New York

Laurel makes no guarantees as to the accuracy of this drawing and it should only be used for informational purposes.

PROJECT #: 12-190
DRAWING DATE: 01/24/20
DRAWN BY: LG
CHECKED BY:BMC
REVISIONS: 06/29/20

KEY

- Building
- MW Monitoring Well
- MW Abandoned Monitoring Well
- PZ Piezometer
- Sump

N W E S

0 40' 80'
Scale: 1" = 40'



Laurel
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FIGURE 2.0
GROUNDWATER POTENTIOMETRIC MAP - 15 FT WELLS

JULY 14, 2023 - Pumps Off

80 BANKS AVENUE
ROCKVILLE CENTRE, NEW YORK

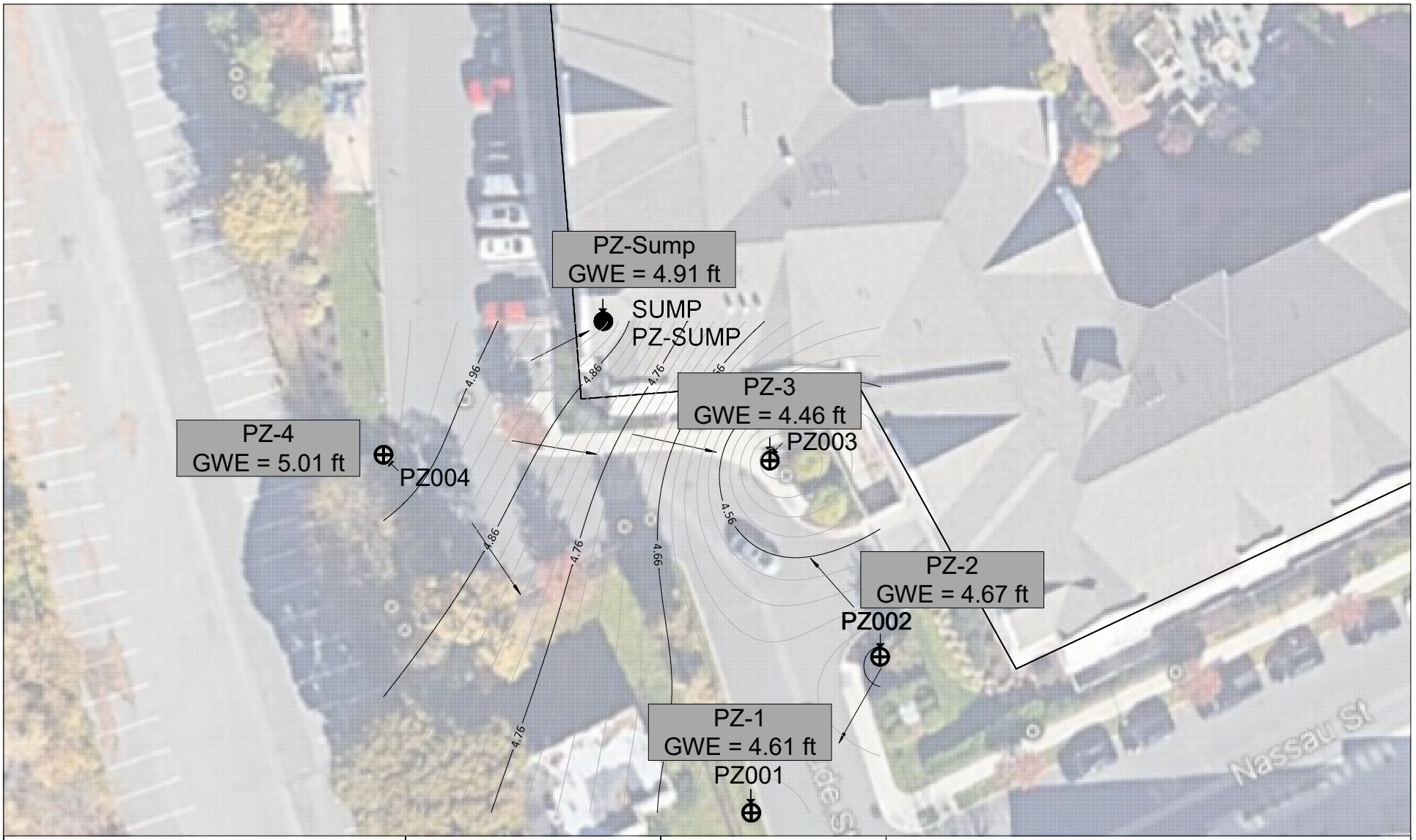
Laurel makes no guarantees as to the accuracy of this drawing and it should only be used for informational purposes.

PROJECT #: 12-190
DRAWING DATE: 08/08/23
DRAWN BY: EB
CHECKED BY:DS
REVISIONS:

KEY
- Building
- MW Monitoring Well
- PZ Piezometer
- Sump
- Groundwater Flow Direction

0 40' 80'
Scale: 1" = 40'

N W E S



Laurel
ENVIRONMENTAL GEOSCIENCES, D.P.C.

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FIGURE 3.0
GROUNDWATER POTENTIOMETRIC MAP - 15 FT WELLS

JULY 15, 2023 - Pumps Off for 1 Day

80 BANKS AVENUE
ROCKVILLE CENTRE, NEW YORK

Laurel makes no guarantees as to the accuracy of this drawing and it should only be used for informational purposes.

PROJECT #: 12-190
DRAWING DATE: 08/08/23
DRAWN BY: EB
CHECKED BY:DS
REVISIONS:

KEY

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- Sump
- Groundwater Flow Direction

0 40' 80'
Scale: 1" = 40'

N W E S



Laurel
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FIGURE 4.0
GROUNDWATER POTENTIOMETRIC MAP - 15 FT WELLS

JULY 17, 2023 - Pumps Off for 3 Days

80 BANKS AVENUE
ROCKVILLE CENTRE, NEW YORK

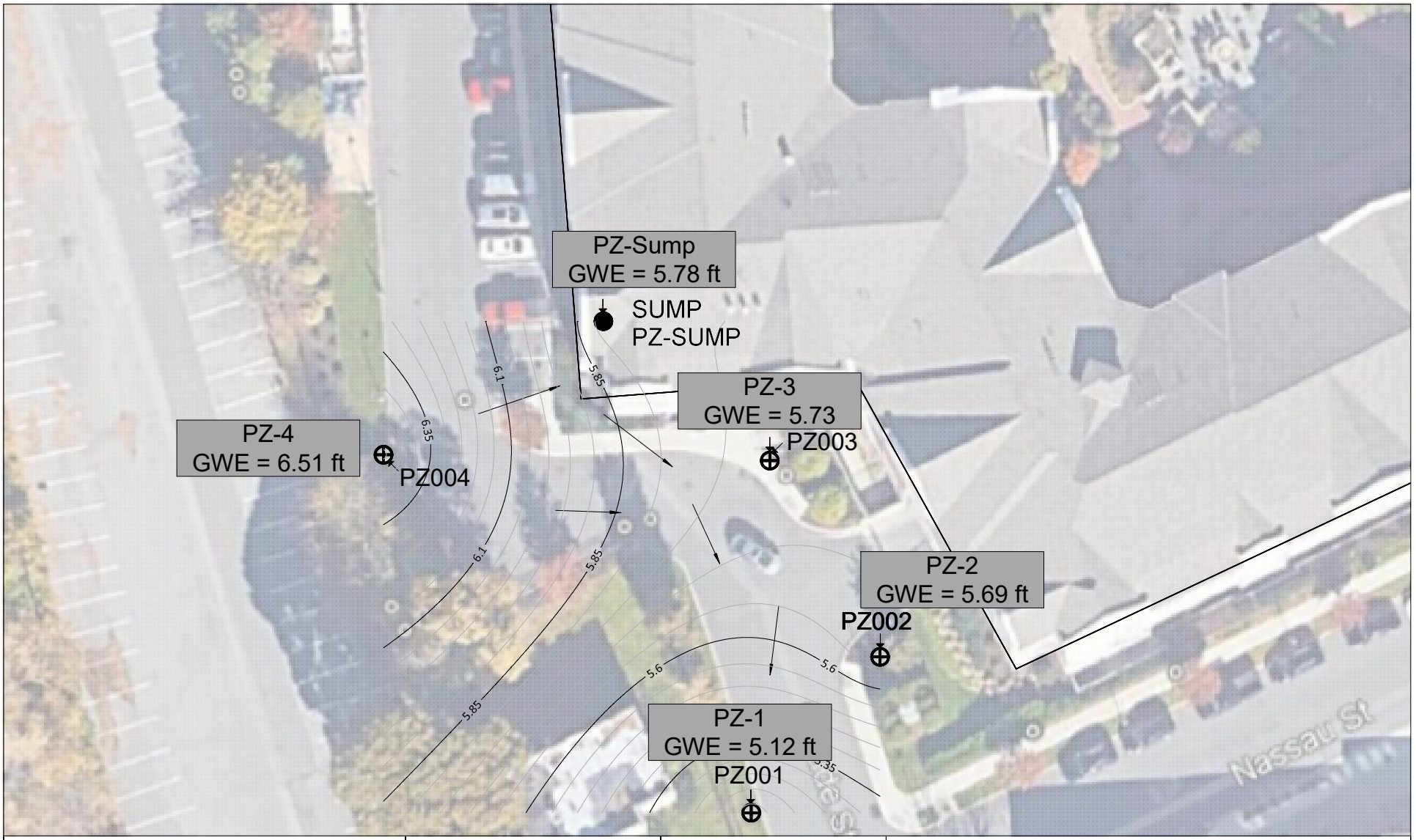
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PROJECT #: 12-190
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DRAWN BY: EB
CHECKED BY:DS
REVISIONS:

KEY
- Building
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- PZ Piezometer
- Sump
- Groundwater Flow Direction

0 40' 80'
Scale: 1" = 40'

N W E S



Laurel
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FIGURE 5.0
GROUNDWATER POTENTIOMETRIC MAP - 15 FT WELLS

JULY 19, 2023 - Pumps Online

80 BANKS AVENUE
ROCKVILLE CENTRE, NEW YORK

Laurel makes no guarantees as to the accuracy of this drawing and it should only be used for informational purposes.

PROJECT #: 12-190
DRAWING DATE: 08/08/23
DRAWN BY: EB
CHECKED BY:DS
REVISIONS:

KEY
- Building
- MW Monitoring Well
- PZ Piezometer
- Sump
- Groundwater Flow Direction

0 40' 80'
Scale: 1" = 40'

N W E S



Laurel
ENVIRONMENTAL
GEOSCIENCES, D.P.C.

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Huntington Station, NY 11746

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FAX: 631-427-5323

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FIGURE 6.0
GROUNDWATER POTENTIOMETRIC MAP - 15 FT WELLS

JULY 22, 2023 - Pumps On for 3 Days

80 BANKS AVENUE
ROCKVILLE CENTRE, NEW YORK

Laurel makes no guarantees as to the accuracy of this drawing and it should only be used for informational purposes.

PROJECT #: 12-190
DRAWING DATE: 08/08/23
DRAWN BY: EB
CHECKED BY:DS
REVISIONS:

KEY
- Building
- MW Monitoring Well
- PZ Piezometer
- Sump
- Groundwater Flow Direction

0 40' 80'
Scale: 1" = 40'

N W E S

APPENDIX B

Groundwater Quality Data

Groundwater Monitoring Well Depths and Chemistry

80 Banks Avenue, Rockville Center, New York

25-Jul-23

Monitoring Well #	***2010-01A***			***2010-01B***			***2010-01C***			***2010-01D***		
Test Number	1	2	3	1	2	3	1	2	3	1	2	3
Depth to Water (ft bgs)	6.63			5.55			6.43			5.58		
Depth to Bottom (ft bgs)	102.89			73.55			49.12			18.37		
Water Column Height (ft)	96.26			68.00			42.69			12.79		
Well elevation (ft)	13.12			13.13			13.11			13.40		
Water elevation (ft)	6.49			7.58			6.68			7.82		
Temperature (°C)	20.82	21.0	21.05	19.88	19.90	18.87	19.62	19.43	19.45	22.52	22.54	22.51
Conductivity (µS/cm)	246.000	246.000	247.000	191.000	190.000	187.000	359.000	361.000	362.000	266.000	265.000	265.000
Dissolved Oxygen (mg/L)	3.23	3.22	3.14	3.50	3.57	3.48	3.76	3.25	3.41	5.46	5.80	5.99
pH	11.10	11.10	11.12	12.10	12.11	12.17	11.93	11.67	11.68	12.82	12.83	12.83
Oxygen Reduction Potential	-15.0	-1.2	-1.3	-67.60	-67.90	-68.00	21.80	34.70	34.90	-158.80	-158.70	-159.90
Turbidity	36.1	34.4	35.6	35.7	34.09	35.10	29.20	27.90	28.10	33.80	28.80	30.00

Monitoring Well #	***2010-02A***			***2010-02B***			***2010-02C***			***2010-02D***		
Test Number		2	3	1	2	3	1	2	3	1	2	3
Depth To Water	5.20			5.77			5.81			8.39		
Depth To Bottom	45.69			74.16			53.42			16.98		
Water Column Height (ft)	40.49			68.39			47.61			8.59		
Well elevation (ft)	14.08			14.06			13.88			13.97		
Water elevation (ft)	8.88			8.29			8.07			5.58		
Temperature (°C)	16.84	16.81	16.80	17.07	17.02	17.01	17.04	17.02	16.98	20.77	20.76	20.75
Conductivity (µS/cm)	67.000	66.000	66.000	82.000	82.000	81.000	332.000	331.000	333.000	1358.00	1360.00	1363.00
Dissolved Oxygen (mg/L)	3.25	3.26	2.96	4.30	4.07	3.81	7.57	7.73	7.13	4.72	4.77	4.73
pH	12.92	12.91	12.94	12.71	12.73	12.74	12.93	12.94	12.91	13.86	13.85	13.81
Oxygen Reduction Potential	-172.1	-172.2	-171.2	-101.5	-102.4	-102.8	-101.4	-101.8	-102.0	-175.2	-177.9	-172.2
Turbidity	31.6	30.5	30.8	28.2	29.7	28.1	39.0	33.0	30.7	27.2	27.3	27.4

Groundwater Monitoring Well Depths and Chemistry

80 Banks Avenue, Rockville Center, New York

25-Jul-23

Monitoring Well #	***2020-03A-R***			***2020-03B-R***			***2020-03C-R***			***2010-03D***		
Test Number	1	2	3	1	2	3	1	2	3	1	2	3
Depth to Water (ft bgs)	6.63			5.55			6.43			5.58		
Depth to Bottom (ft bgs)	100.83			63.70			49.61			13.58		
Water Column Height (ft)	94.20			58.15			43.18			8.00		
Well elevation (ft)	11.17			10.82			11.17			11.03		
Water elevation (ft)	4.54			5.27			4.74			5.45		
Temperature (°C)	20.82	20.97	21.05	19.88	19.90	18.87	19.62	19.43	19.45	22.52	22.54	22.51
Conductivity (µS/cm)	246.000	246.000	247.000	191.000	190.000	187.000	359.000	361.000	362.000	266.000	265.000	265.000
Dissolved Oxygen (mg/L)	3.23	3.22	3.14	3.50	3.57	3.48	3.76	3.25	3.41	5.46	5.80	5.99
pH	11.10	11.10	11.12	12.10	12.11	12.17	11.93	11.67	11.68	12.82	12.83	12.83
Oxygen Reduction Potential	-15.0	-1.2	-1.3	-67.60	-67.90	-68.00	21.80	34.70	34.90	-158.80	-158.70	-159.90
Turbidity	36.1	34.4	35.6	35.7	34.1	35.10	29.20	27.90	28.10	33.80	28.80	30.00

Monitoring Well #	***2013-04A***			***2013-04B***			***2013-04C***			***2010-04D***		
Test Number		2	3	1	2	3	1	2	3	1	2	3
	5.20			5.77			5.81			8.39		
Depth to Bottom (ft bgs)	98.49			67.06			49.33			16.97		
Water Column Height (ft)	93.29			61.29			43.52			8.58		
Well elevation (ft)	10.58			10.60			10.63			13.22		
Water elevation (ft)	5.38			4.83			4.82			4.83		
Temperature (°C)	16.84	16.81	16.80	17.07	17.02	17.01	17.04	17.02	16.98	20.77	20.76	20.75
Conductivity (µS/cm)	67.000	66.000	66.000	82.000	82.000	81.000	332.000	331.000	333.000	1358.00	1360.00	1363.00
Dissolved Oxygen (mg/L)	3.25	3.26	2.96	4.30	4.07	3.81	7.57	7.73	7.13	4.72	4.77	4.73
pH	12.92	12.91	12.94	12.71	12.73	12.74	12.93	12.94	12.91	13.86	13.85	13.81
Oxygen Reduction Potential	-172.1	-172.2	-171.2	-101.5	-102.4	-102.8	-101.4	-101.8	-102.0	-175.2	-177.9	-172.2
Turbidity	31.6	30.5	30.8	28.2	29.7	28.1	39.0	33.0	30.7	27.2	27.3	27.4

Groundwater Monitoring Well Depths and Chemistry

80 Banks Avenue, Rockville Center, New York

25-Jul-23

Piezometer Well ID#:	***PZ-1***	***PZ-2***	***PZ-3***	***PZ-4***	***PZ-5***
Depth to Water (ft bgs)	5.67	4.99	5.99	5.03	5.08
Depth to Bottom (ft bgs)	12.90	12.39	12.99	12.96	13.41
Water Column Height (ft)	7.23	7.40	7.00	7.93	8.33
Well elevation (ft)	10.54	10.01	11.06	11.56	12.07
Water elevation (ft)	4.87	5.02	5.07	6.53	6.99

Piezometer Well ID#:	***PZ-SUMP***	***PZ-SUMP-D***	***PZ-3D***	***PZ-4D***	***PZ-5D***	***PZ-6D***
Depth to Water (ft bgs)	1.53	NA	5.92	5.83	5.35	5.81
Depth to Bottom (ft bgs)	NA	10.03	14.36	14.43	14.25	13.91
Water Column Height (ft)	NA	NA	8.44	8.60	8.90	8.10
Well elevation (ft)	5.81	5.66	10.9	11.49	11.6	10.99
Water elevation (ft)	4.28	NA	4.98	5.66	6.25	5.18

*NA = Not Applicable

APPENDIX C

Groundwater and Air Analytical Results

Technical Report

prepared for:

Laurel Environmental Geosciences, D.P.C.
53 W Hills Road, Suite 1
Huntington Station NY, 11746
Attention: Scott Yanuck

Report Date: 08/04/2023
Client Project ID: 80 Banks Ave Rockville Centre, NY 12-190 DS
York Project (SDG) No.: 23G1535

CT Cert. No. PH-0723 New Jersey Cert. No. CT005 and NY037 New York Cert. Nos. 10854 and 12058 PA Cert. No. 68-04440

120 RESEARCH DRIVE STRATFORD, CT 06615 ■ 132-02 89th AVENUE RICHMOND HILL, NY 11418
www.YORKLAB.com (203) 325-1371 FAX (203) 357-0166 ClientServices@yorklab.com

Report Date: 08/04/2023
Client Project ID: 80 Banks Ave Rockville Centre, NY 12-190 DS
York Project (SDG) No.: 23G1535

Laurel Environmental Geosciences, D.P.C.
53 W Hills Road, Suite 1
Huntington Station NY, 11746
Attention: Scott Yanuck

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on July 26, 2023 and listed below. The project was identified as your project: **80 Banks Ave Rockville Centre, NY 12-190 DS**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
23G1535-01	System Effluent	Water	07/25/2023	07/26/2023

General Notes for York Project (SDG) No.: 23G1535

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By: Cassie L. Mosher **Date:** 08/04/2023

Cassie L. Mosher
Laboratory Manager

Sample Information

Client Sample ID: **System Effluent** **York Sample ID:** **23G1535-01**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23G1535	80 Banks Ave Rockville Centre, NY 12-190 DS	Water	July 25, 2023 12:15 pm	07/26/2023

Volatile Organics, 624 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
67-64-1	* Acetone	ND		ug/L	6.1	10	1	EPA 624.1 Certifications:	07/27/2023 09:00	07/27/2023 12:51	SMA
1634-04-4	* Methyl tert-butyl ether (MTBE)	ND		ug/L	0.53	5.0	1	EPA 624.1 Certifications:	07/27/2023 09:00	07/27/2023 12:51	SMA
127-18-4	Tetrachloroethylene	ND	QL-02	ug/L	3.3	5.0	1	EPA 624.1 Certifications:	07/27/2023 09:00 CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP	07/27/2023 12:51	SMA
108-88-3	Toluene	ND		ug/L	0.81	5.0	1	EPA 624.1 Certifications:	07/27/2023 09:00 CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP	07/27/2023 12:51	SMA
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	3.5	5.0	1	EPA 624.1 Certifications:	07/27/2023 09:00 CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP	07/27/2023 12:51	SMA
79-01-6	Trichloroethylene	ND		ug/L	1.2	5.0	1	EPA 624.1 Certifications:	07/27/2023 09:00 CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP	07/27/2023 12:51	SMA
75-01-4	Vinyl Chloride	ND		ug/L	1.3	5.0	1	EPA 624.1 Certifications:	07/27/2023 09:00 CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP	07/27/2023 12:51	SMA

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: SURR: 1,2-Dichloroethane-d4*	*110 %*	*78-126*
2037-26-5	*Surrogate: SURR: Toluene-d8*	*97.7 %*	*84-117*
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*104 %*	*71-130*

Semi-Volatiles, 8270 Base/Neutrals

Log-in Notes:

Sample Notes: **EXT-EM**

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
120-82-1	1,2,4-Trichlorobenzene	ND		ug/L	2.82	5.71	1	EPA 8270D Certifications:	07/29/2023 08:18 CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP	08/01/2023 17:19	KH
99-09-2	3-Nitroaniline	ND		ug/L	1.92	5.71	1	EPA 8270D Certifications:	07/29/2023 08:18 CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP	08/01/2023 17:19	KH

	Surrogate Recoveries	Result	Acceptance Range
4165-60-0	*Surrogate: SURR: Nitrobenzene-d5*	*62.8 %*	*50.2-113*
321-60-8	*Surrogate: SURR: 2-Fluorobiphenyl*	*62.9 %*	*39.9-105*
1718-51-0	*Surrogate: SURR: Terphenyl-d14*	*70.0 %*	*30.7-106*

Arsenic by EPA 200.7

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	ND		ug/L	16.7	1	EPA 200.7 Certifications:	08/01/2023 08:29 CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP	08/04/2023 12:02	CEG

Barium by EPA 200.7

Log-in Notes:

Sample Notes:

Sample Information

Client Sample ID: System Effluent **York Sample ID:** 23G1535-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23G1535	80 Banks Ave Rockville Centre, NY 12-190 DS	Water	July 25, 2023 12:15 pm	07/26/2023

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-39-3	**Barium**	**50.5**		ug/L	27.8	1	EPA 200.7	08/01/2023 08:29	08/04/2023 12:02	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Beryllium by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-41-7	**Beryllium**	**0.612**		ug/L	0.556	1	EPA 200.7	08/01/2023 08:29	08/04/2023 12:02	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Cadmium by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-43-9	Cadmium	ND		ug/L	3.33	1	EPA 200.7	08/01/2023 08:29	08/04/2023 12:02	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Chromium by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-47-3	**Chromium**	**25.2**		ug/L	5.56	1	EPA 200.7	08/01/2023 08:29	08/04/2023 12:02	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Cobalt by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-48-4	Cobalt	ND		ug/L	4.44	1	EPA 200.7	08/01/2023 08:29	08/04/2023 12:02	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Copper by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-50-8	**Copper**	**25.2**		ug/L	22.2	1	EPA 200.7	08/01/2023 08:29	08/04/2023 12:02	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Iron by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	**Iron**	**2190**		ug/L	278	1	EPA 200.7	08/01/2023 08:29	08/04/2023 12:02	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Lead by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst

Sample Information

Client Sample ID: **System Effluent** **York Sample ID:** **23G1535-01**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23G1535	80 Banks Ave Rockville Centre, NY 12-190 DS	Water	July 25, 2023 12:15 pm	07/26/2023

Lead by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-92-1	Lead	ND		ug/L	5.56	1	EPA 200.7	08/01/2023 08:29	08/04/2023 12:02	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Magnesium by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-95-4	**Magnesium**	**441**		ug/L	55.6	1	EPA 200.7	08/01/2023 08:29	08/04/2023 12:02	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Manganese by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-96-5	**Manganese**	**6.53**		ug/L	5.56	1	EPA 200.7	08/01/2023 08:29	08/04/2023 12:02	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Nickel by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-02-0	Nickel	ND		ug/L	11.1	1	EPA 200.7	08/01/2023 08:29	08/04/2023 12:02	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Vanadium by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-62-2	Vanadium	ND		ug/L	11.1	1	EPA 200.7	08/01/2023 08:29	08/04/2023 12:02	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Zinc by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-66-6	**Zinc**	**175**		ug/L	27.8	1	EPA 200.7	08/01/2023 08:29	08/04/2023 12:02	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Mercury by EPA 245.1

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 245.1 Mercury

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		ug/L	0.2000	1	EPA 245.1	07/27/2023 09:09	07/27/2023 12:01	PA
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Sample Information

Client Sample ID: System Effluent

York Sample ID: 23G1535-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23G1535	80 Banks Ave Rockville Centre, NY 12-190 DS	Water	July 25, 2023 12:15 pm	07/26/2023

pH

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	*** pH**	**7.46**	HT-pH	pH units	0.500	1	SM 4500 HB	07/27/2023 17:13	07/27/2023 22:38	SL
							Certifications: CTDOH-PH-0723			

Total Suspended Solids (EPA)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	* Total Suspended Solids	ND		ug/L	5000	1	EPA 160.2	07/31/2023 07:26	07/31/2023 15:27	sgs
							Certifications:			

Analytical Batch Summary

Batch ID: BG31558 **Preparation Method:** EPA 5030B **Prepared By:** SMA

YORK Sample ID	Client Sample ID	Preparation Date
23G1535-01	System Effluent	07/27/23
BG31558-BLK1	Blank	07/27/23
BG31558-BS1	LCS	07/27/23
BG31558-BSD1	LCS Dup	07/27/23

Batch ID: BG31559 **Preparation Method:** EPA 245.1 Mercury **Prepared By:** PFA

YORK Sample ID	Client Sample ID	Preparation Date
23G1535-01	System Effluent	07/27/23
BG31559-BLK1	Blank	07/27/23
BG31559-BLK2	Blank	07/27/23
BG31559-BS1	LCS	07/27/23
BG31559-BS2	LCS	07/27/23

Batch ID: BG31606 **Preparation Method:** Analysis Preparation **Prepared By:** SL

YORK Sample ID	Client Sample ID	Preparation Date
23G1535-01	System Effluent	07/27/23
BG31606-DUP1	Duplicate	07/27/23

Batch ID: BG31686 **Preparation Method:** EPA 3510C **Prepared By:** JG

YORK Sample ID	Client Sample ID	Preparation Date
23G1535-01	System Effluent	07/29/23
BG31686-BLK1	Blank	07/29/23
BG31686-BS1	LCS	07/29/23
BG31686-BSD1	LCS Dup	07/29/23

Batch ID: BG31735 **Preparation Method:** % Solids Prep **Prepared By:** sgs

YORK Sample ID	Client Sample ID	Preparation Date
23G1535-01	System Effluent	07/31/23
BG31735-BLK1	Blank	07/31/23
BG31735-DUP1	Duplicate	07/31/23
BG31735-DUP2	Duplicate	07/31/23

Batch ID: BH30013 **Preparation Method:** EPA 200.7 **Prepared By:** AD2

YORK Sample ID	Client Sample ID	Preparation Date
23G1535-01	System Effluent	08/01/23
BH30013-BLK1	Blank	08/01/23
BH30013-BS1	LCS	08/01/23

BH30013-DUP1	Duplicate	08/01/23
BH30013-MS1	Matrix Spike	08/01/23
BH30013-MS2	Matrix Spike	08/01/23
BH30013-PS1	Post Spike	08/01/23

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BG31558 - EPA 5030B											
Blank (BG31558-BLK1)								Prepared & Analyzed: 07/27/2023			
Acetone	ND	10	ug/L								
Methyl tert-butyl ether (MTBE)	ND	5.0	"								
Tetrachloroethylene	ND	5.0	"								
Toluene	ND	5.0	"								
trans-1,2-Dichloroethylene	ND	5.0	"								
Trichloroethylene	ND	5.0	"								
Vinyl Chloride	ND	5.0	"								
Surrogate: SURR: 1,2-Dichloroethane-d4	*10.8*		*"*	*10.0*		*108*	*78-126*				
Surrogate: SURR: Toluene-d8	*9.83*		*"*	*10.0*		*98.3*	*84-117*				
Surrogate: SURR: p-Bromofluorobenzene	*10.1*		*"*	*10.0*		*101*	*71-130*				
LCS (BG31558-BS1)								Prepared & Analyzed: 07/27/2023			
Acetone	8.2		ug/L	20.0		41.0	30-112				
Methyl tert-butyl ether (MTBE)	18		"	20.0		91.1	59-135				
Tetrachloroethylene	11		"	20.0		54.2	77-133	Low Bias			
Toluene	18		"	20.0		89.2	83-122				
trans-1,2-Dichloroethylene	19		"	20.0		93.6	59-145				
Trichloroethylene	18		"	20.0		88.7	80-125				
Vinyl Chloride	24		"	20.0		118	41-136				
Surrogate: SURR: 1,2-Dichloroethane-d4	*9.60*		*"*	*10.0*		*96.0*	*78-126*				
Surrogate: SURR: Toluene-d8	*9.70*		*"*	*10.0*		*97.0*	*84-117*				
Surrogate: SURR: p-Bromofluorobenzene	*9.55*		*"*	*10.0*		*95.5*	*71-130*				
LCS Dup (BG31558-BSD1)								Prepared & Analyzed: 07/27/2023			
Acetone	12		ug/L	20.0		58.2	30-112		34.6	30	Non-dir.
Methyl tert-butyl ether (MTBE)	20		"	20.0		102	59-135		10.8	30	
Tetrachloroethylene	10		"	20.0		52.0	77-133	Low Bias	4.33	30	
Toluene	17		"	20.0		86.4	83-122		3.30	30	
trans-1,2-Dichloroethylene	19		"	20.0		93.6	59-145		0.107	30	
Trichloroethylene	17		"	20.0		85.2	80-125		3.97	30	
Vinyl Chloride	23		"	20.0		115	41-136		2.44	30	
Surrogate: SURR: 1,2-Dichloroethane-d4	*10.1*		*"*	*10.0*		*101*	*78-126*				
Surrogate: SURR: Toluene-d8	*9.50*		*"*	*10.0*		*95.0*	*84-117*				
Surrogate: SURR: p-Bromofluorobenzene	*9.37*		*"*	*10.0*		*93.7*	*71-130*				

Semivolatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BG31686 - EPA 3510C											
Blank (BG31686-BLK1)									Prepared: 07/29/2023 Analyzed: 08/01/2023		
1,2,4-Trichlorobenzene	ND	5.00	ug/L								
3-Nitroaniline	ND	5.00	"								
Surrogate: SURR: Nitrobenzene-d5	*19.3*		*"*	*25.0*		*77.1*	*50.2-113*				
Surrogate: SURR: 2-Fluorobiphenyl	*18.7*		*"*	*25.0*		*75.0*	*39.9-105*				
Surrogate: SURR: Terphenyl-d14	*21.7*		*"*	*25.0*		*86.9*	*30.7-106*				
LCS (BG31686-BS1)									Prepared: 07/29/2023 Analyzed: 08/01/2023		
1,2,4-Trichlorobenzene	14.3	5.00	ug/L	25.0		57.3	35-91				
3-Nitroaniline	11.3	5.00	"	25.0		45.2	29-128				
Surrogate: SURR: Nitrobenzene-d5	*15.9*		*"*	*25.0*		*63.7*	*50.2-113*				
Surrogate: SURR: 2-Fluorobiphenyl	*15.3*		*"*	*25.0*		*61.2*	*39.9-105*				
Surrogate: SURR: Terphenyl-d14	*17.9*		*"*	*25.0*		*71.7*	*30.7-106*				
LCS Dup (BG31686-BSD1)									Prepared: 07/29/2023 Analyzed: 08/01/2023		
1,2,4-Trichlorobenzene	15.9	5.00	ug/L	25.0		63.5	35-91		10.3	20	
3-Nitroaniline	13.1	5.00	"	25.0		52.6	29-128		15.0	20	
Surrogate: SURR: Nitrobenzene-d5	*18.0*		*"*	*25.0*		*71.9*	*50.2-113*				
Surrogate: SURR: 2-Fluorobiphenyl	*16.8*		*"*	*25.0*		*67.1*	*39.9-105*				
Surrogate: SURR: Terphenyl-d14	*19.7*		*"*	*25.0*		*78.9*	*30.7-106*				

Metals by ICP - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BH30013 - EPA 200.7											
Blank (BH30013-BLK1)										Prepared & Analyzed: 08/01/2023	
Arsenic	ND	16.7	ug/L								
Barium	ND	27.8	"								
Beryllium	ND	0.556	"								
Cadmium	ND	3.33	"								
Chromium	ND	5.56	"								
Cobalt	ND	4.44	"								
Copper	ND	22.2	"								
Iron	ND	278	"								
Lead	ND	5.56	"								
Magnesium	ND	55.6	"								
Manganese	ND	5.56	"								
Nickel	ND	11.1	"								
Vanadium	ND	11.1	"								
Zinc	ND	27.8	"								
LCS (BH30013-BS1)										Prepared & Analyzed: 08/01/2023	
Arsenic	1.79		ug/mL	2.00		89.4	85-115				
Barium	1.98		"	2.00		99.0	85-115				
Beryllium	0.0479		"	0.0500		95.9	85-115				
Cadmium	0.0470		"	0.0500		93.9	85-115				
Chromium	0.189		"	0.200		94.5	85-115				
Cobalt	0.487		"	0.500		97.4	85-115				
Copper	0.251		"	0.250		100	85-115				
Iron	0.967		"	1.00		96.7	85-115				
Lead	0.479		"	0.500		95.9	85-115				
Magnesium	0.967		"	1.00		96.7	85-115				
Manganese	0.491		"	0.500		98.2	85-115				
Nickel	0.493		"	0.500		98.5	85-115				
Vanadium	0.485		"	0.500		96.9	85-115				
Zinc	0.471		"	0.500		94.3	85-115				

Metals by ICP - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BH30013 - EPA 200.7											
Duplicate (BH30013-DUP1)	*Source sample: 23G1833-01 (Duplicate)								Prepared: 08/01/2023 Analyzed: 08/03/2023		
Arsenic	ND	16.7	ug/L		ND					20	
Barium	235	27.8	"		255				8.13	20	
Beryllium	ND	0.556	"		0.774					20	
Cadmium	ND	3.33	"		ND					20	
Chromium	ND	5.56	"		ND					20	
Cobalt	ND	4.44	"		ND					20	
Copper	ND	22.2	"		ND					20	
Iron	12300	278	"		13100				6.53	20	
Lead	ND	5.56	"		ND					20	
Magnesium	15700	55.6	"		16800				6.79	20	
Manganese	3240	5.56	"		3590				10.4	20	
Nickel	ND	11.1	"		ND					20	
Vanadium	ND	11.1	"		ND					20	
Zinc	47.3	27.8	"		35.2				29.4	20	Non-dir.
Matrix Spike (BH30013-MS1)	*Source sample: 23G1833-01 (Matrix Spike)								Prepared: 08/01/2023 Analyzed: 08/03/2023		
Arsenic	2200	16.7	ug/L	2220	ND	98.9	75-125				
Barium	2470	27.8	"	2220	255	99.5	75-125				
Beryllium	54.3	0.556	"	55.6	0.774	96.4	75-125				
Cadmium	54.2	3.33	"	55.6	ND	97.6	75-125				
Chromium	217	5.56	"	222	ND	97.8	75-125				
Cobalt	550	4.44	"	556	ND	98.9	75-125				
Copper	306	22.2	"	278	ND	110	75-125				
Iron	13700	278	"	1110	13100	56.1	75-125	Low Bias			
Lead	532	5.56	"	556	ND	95.8	75-125				
Magnesium	17200	55.6	"	1110	16800	34.7	75-125	Low Bias			
Manganese	3880	5.56	"	556	3590	50.9	75-125	Low Bias			
Nickel	572	11.1	"	556	ND	103	75-125				
Vanadium	563	11.1	"	556	ND	101	75-125				
Zinc	572	27.8	"	556	35.2	96.7	75-125				

Metals by ICP - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BH30013 - EPA 200.7											
Matrix Spike (BH30013-MS2)	*Source sample: 23G1354-05 (Matrix Spike)							Prepared: 08/01/2023 Analyzed: 08/04/2023			
Arsenic	2400	16.7	ug/L	2220	ND	108	75-125				
Barium	2940	27.8	"	2220	579	106	75-125				
Beryllium	54.5	0.556	"	55.6	ND	98.1	75-125				
Cadmium	53.9	3.33	"	55.6	ND	97.1	75-125				
Chromium	215	5.56	"	222	ND	96.8	75-125				
Cobalt	542	4.44	"	556	ND	97.6	75-125				
Copper	332	22.2	"	278	ND	120	75-125				
Iron	3060	278	"	1110	1790	114	75-125				
Lead	497	5.56	"	556	ND	89.4	75-125				
Magnesium	279000	55.6	"	1110	235000	NR	75-125	High Bias			
Manganese	2480	5.56	"	556	1650	149	75-125	High Bias			
Nickel	581	11.1	"	556	ND	105	75-125				
Vanadium	563	11.1	"	556	ND	101	75-125				
Zinc	565	27.8	"	556	30.8	96.1	75-125				
Post Spike (BH30013-PS1)	*Source sample: 23G1833-01 (Post Spike)							Prepared: 08/01/2023 Analyzed: 08/03/2023			
Arsenic	1.96		ug/mL	2.00	-0.0165	98.0	75-125				
Barium	2.13		"	2.00	0.230	95.0	75-125				
Beryllium	0.0474		"	0.0500	0.000697	93.5	75-125				
Cadmium	0.0476		"	0.0500	-0.0000668	95.2	75-125				
Chromium	0.187		"	0.200	0.00151	92.5	75-125				
Cobalt	0.489		"	0.500	0.000677	97.6	75-125				
Copper	0.263		"	0.250	0.00336	104	75-125				
Iron	12.6		"	1.00	11.8	81.8	75-125				
Lead	0.465		"	0.500	-0.00159	93.0	75-125				
Magnesium	15.8		"	1.00	15.1	64.5	75-125	Low Bias			
Manganese	3.48		"	0.500	3.23	48.8	75-125	Low Bias			
Nickel	0.497		"	0.500	-0.00289	99.4	75-125				
Vanadium	0.483		"	0.500	0.000206	96.6	75-125				
Zinc	0.500		"	0.500	0.0317	93.7	75-125				

Mercury by EPA 7000/200 Series Methods - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BG31559 - EPA 245.1 Mercury											
Blank (BG31559-BLK1)								Prepared & Analyzed: 07/27/2023			
Mercury	ND	0.2000	ug/L								
Blank (BG31559-BLK2)								Prepared & Analyzed: 07/27/2023			
Mercury	ND	0.2000	ug/L								
LCS (BG31559-BS1)								Prepared & Analyzed: 07/27/2023			
Mercury	1.895	0.2000	ug/L	2.00		94.7	75-125				
LCS (BG31559-BS2)								Prepared & Analyzed: 07/27/2023			
Mercury	1.933	0.2000	ug/L	2.00		96.6	75-125				

Wet Chemistry Parameters - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BG31606 - Analysis Preparation											
Duplicate (BG31606-DUP1)	*Source sample: 23G1404-01 (Duplicate)								Prepared & Analyzed: 07/27/2023		
pH	7.82	0.500	pH units		7.79				0.384	10	

Miscellaneous Physical Parameters - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BG31735 - % Solids Prep											
Blank (BG31735-BLK1)								Prepared & Analyzed: 07/31/2023			
Total Suspended Solids	ND	1000	ug/L								
Duplicate (BG31735-DUP1)	*Source sample: 23G1516-03 (Duplicate)							Prepared & Analyzed: 07/31/2023			
Total Suspended Solids	ND	5000	ug/L		ND					15	
Duplicate (BG31735-DUP2)	*Source sample: 23G1622-01 (Duplicate)							Prepared & Analyzed: 07/31/2023			
Total Suspended Solids	23000	5000	ug/L		23000				0.00	15	

Volatile Analysis Sample Containers

Lab ID	Client Sample ID	Volatile Sample Container
23G1535-01	System Effluent	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C

Sample and Data Qualifiers Relating to This Work Order

QR-04	The RPD exceeded control limits for the LCS/LCSD QC.
QL-02	This LCS analyte is outside Laboratory Recovery limits due the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature.
HT-pH	HOLDING TIME EXCEEDED. Samples for pH must be measured in the field or within 15 minutes of sample collection.
EXT-EM	The sample exhibited emulsion formation during the extraction process. This may affect surrogate recoveries.

Definitions and Other Explanations

*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

Field Chain-of-Custody Record

YORK ANALYTICAL LABORATORIES INC

York Analytical Laboratories, Inc. (YORK)'s Standard Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization for YORK to proceed with the analyses requested below.
Your signature binds you to YORK's Standard Terms & Conditions.

YORK Project No. 23G1535

120 Research Drive Stratford, CT 06615 132-02 89th Ave Queens, NY 11418 clientservices@yorklab.com www.yorklab.com 800-306-YORK 800-306-9675

YOUR Information	Report To:	Invoice To:
Company: Laurel Environmental	Company:	Company:
Address: 53 West Hills Road Huntington Station, NY 11746	Address: SCOTT	Address: Kathy
Phone.: (631) 673-0612	Phone.:	Phone.:
Contact: Scott Yanuck	Contact:	Contact:
E-mail: labresults@laurelenv.com	E-mail:	E-mail:

YOUR Project Number: 12-190 DS

YOUR Project Name: 80 Banks Avenue Rockville Centre, New York

YOUR PO#:

Turn-Around Time

RUSH - Next Day	
RUSH - Two Day	
RUSH - Three Day	
RUSH - Four Day	
Standard (5-7 Day)	X

Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.

Nicholas Kideis

Samples Collected by: (print AND sign your name)

Matrix Codes

S - soil / solid
GW - groundwater
DW - drinking water
WW - wastewater
O - Oil | Other

Samples From

New York X
New Jersey
Connecticut
Pennsylvania
Other:

Report / EDD Type (circle selections)

Summary Report | CT RCP | Standard Excel EDD
QA Report | CT RCP DQA/DUE | EQuIS (Standard)
NY ASP A Package | NJDEP Reduced Deliverables | ~~NYSDEC EQuIS~~
~~NY ASP B Package~~ | NJDEP SRP HazSite
NJDKQP | Other:

YORK Reg. Comp.

Compared to the following Regulation(s): (please fill in)

Sample Identification	Sample Matrix	Date/Time Sampled	Analysis Requested	Container Description
System Effluent		7/25/23 1215	NYSDEC SPDES + TSS	(3) 40mL, (2) 1L, (2) 250mL

Comments: Only Summary Report

Samples iced/chilled at time of lab pickup? circle Yes or No

Preservation: (check all that apply)

HCl ✓ MeOH ___ HNO3 ✓ H2SO4 ___ NaOH ___
ZnAc ___ Ascorbic Acid ___ Other: ___

Special Instruction

Field Filtered
Lab to Filter

1. Samples Relinquished by / Company	Date/Time	1. Samples Received by / Company	Date/Time	2. Samples Relinquished by / Company	Date/Time
	1045 AM 7/26/23	K Barden York	7/26/23 1045 AM	K Barden York	7/26/23 16:50
Samples Received by / Company	**Date/Time**	**3. Samples Relinquished by / Company**	**Date/Time**	**3. Samples Received by / Company**	**Date/Time**
Samples Relinquished by / Company	**Date/Time**	**4. Samples Received by / Company**	**Date/Time**	**Samples Received in LAB by**	**Date/Time** / **Temperature**
					7/26 16:50 / 5.6 Degrees C

Technical Report

prepared for:

Laurel Environmental Geosciences, D.P.C.
53 W Hills Road, Suite 1
Huntington Station NY, 11746
Attention: Scott Yanuck

Report Date: 08/04/2023
Client Project ID: 80 Banks Avenue, Rockville Centre NY 12-190 DS
York Project (SDG) No.: 23G1570

CT Cert. No. PH-0723 New Jersey Cert. No. CT005 and NY037 New York Cert. Nos. 10854 and 12058 PA Cert. No. 68-04440

120 RESEARCH DRIVE STRATFORD, CT 06615 ■ 132-02 89th AVENUE RICHMOND HILL, NY 11418
www.YORKLAB.com (203) 325-1371 FAX (203) 357-0166 ClientServices@yorklab.com

Report Date: 08/04/2023
Client Project ID: 80 Banks Avenue, Rockville Centre NY 12-190 DS
York Project (SDG) No.: 23G1570

Laurel Environmental Geosciences, D.P.C.
53 W Hills Road, Suite 1
Huntington Station NY, 11746
Attention: Scott Yanuck

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on July 27, 2023 and listed below. The project was identified as your project: **80 Banks Avenue, Rockville Centre NY 12-190 DS**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
23G1570-01	System Effluent	Vapor Extraction	07/26/2023	07/27/2023

General Notes for York Project (SDG) No.: 23G1570

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By: Cassie L. Mosher **Date:** 08/04/2023

Cassie L. Mosher
Laboratory Manager

Sample Information

Client Sample ID: **System Effluent** **York Sample ID:** **23G1570-01**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23G1570	80 Banks Avenue, Rockville Centre NY 12-190 DS	Vapor Extraction	July 26, 2023 12:00 pm	07/27/2023

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	* 1,1,1,2-Tetrachloroethane	ND		ug/m³	10	15.25	EPA TO-15 Certifications:	07/28/2023 09:00	07/28/2023 22:32	YR
71-55-6	1,1,1-Trichloroethane	ND		ug/m³	8.3	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m³	10	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m³	12	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR
79-00-5	1,1,2-Trichloroethane	ND		ug/m³	8.3	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR
75-34-3	1,1-Dichloroethane	ND		ug/m³	6.2	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR
75-35-4	1,1-Dichloroethylene	ND		ug/m³	1.5	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m³	11	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR
95-63-6	1,2,4-Trimethylbenzene	ND		ug/m³	7.5	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR
106-93-4	1,2-Dibromoethane	ND		ug/m³	12	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR
95-50-1	1,2-Dichlorobenzene	ND		ug/m³	9.2	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR
107-06-2	1,2-Dichloroethane	ND		ug/m³	6.2	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR
78-87-5	1,2-Dichloropropane	ND		ug/m³	7.0	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m³	11	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR
108-67-8	1,3,5-Trimethylbenzene	ND		ug/m³	7.5	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR
106-99-0	1,3-Butadiene	ND		ug/m³	10	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR
541-73-1	1,3-Dichlorobenzene	ND		ug/m³	9.2	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR
142-28-9	* 1,3-Dichloropropane	ND		ug/m³	7.0	15.25	EPA TO-15 Certifications:	07/28/2023 09:00	07/28/2023 22:32	YR
106-46-7	1,4-Dichlorobenzene	ND		ug/m³	9.2	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR
123-91-1	1,4-Dioxane	ND		ug/m³	11	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR
78-93-3	2-Butanone	ND		ug/m³	4.5	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR
591-78-6	* 2-Hexanone	ND		ug/m³	12	15.25	EPA TO-15 Certifications:	07/28/2023 09:00	07/28/2023 22:32	YR

Sample Information

Client Sample ID: **System Effluent** **York Sample ID:** **23G1570-01**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23G1570	80 Banks Avenue, Rockville Centre NY 12-190 DS	Vapor Extraction	July 26, 2023 12:00 pm	07/27/2023

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
107-05-1	3-Chloropropene	ND		ug/m³	24	15.25	EPA TO-15 Certifications:	07/28/2023 09:00 NELAC-NY12058,NJDEP-Queens	07/28/2023 22:32	YR
108-10-1	4-Methyl-2-pentanone	ND		ug/m³	6.2	15.25	EPA TO-15 Certifications:	07/28/2023 09:00 NELAC-NY12058,NJDEP-Queens	07/28/2023 22:32	YR
67-64-1	Acetone	ND		ug/m³	7.2	15.25	EPA TO-15 Certifications:	07/28/2023 09:00 NELAC-NY12058,NJDEP-Queens	07/28/2023 22:32	YR
107-13-1	Acrylonitrile	ND		ug/m³	3.3	15.25	EPA TO-15 Certifications:	07/28/2023 09:00 NELAC-NY12058,NJDEP-Queens	07/28/2023 22:32	YR
71-43-2	Benzene	ND		ug/m³	4.9	15.25	EPA TO-15 Certifications:	07/28/2023 09:00 NELAC-NY12058,NJDEP-Queens	07/28/2023 22:32	YR
100-44-7	Benzyl chloride	ND		ug/m³	7.9	15.25	EPA TO-15 Certifications:	07/28/2023 09:00 NELAC-NY12058,NJDEP-Queens	07/28/2023 22:32	YR
75-27-4	Bromodichloromethane	ND		ug/m³	10	15.25	EPA TO-15 Certifications:	07/28/2023 09:00 NELAC-NY12058,NJDEP-Queens	07/28/2023 22:32	YR
75-25-2	Bromoform	ND		ug/m³	16	15.25	EPA TO-15 Certifications:	07/28/2023 09:00 NELAC-NY12058,NJDEP-Queens	07/28/2023 22:32	YR
74-83-9	Bromomethane	ND		ug/m³	5.9	15.25	EPA TO-15 Certifications:	07/28/2023 09:00 NELAC-NY12058,NJDEP-Queens	07/28/2023 22:32	YR
75-15-0	Carbon disulfide	ND		ug/m³	4.7	15.25	EPA TO-15 Certifications:	07/28/2023 09:00 NELAC-NY12058,NJDEP-Queens	07/28/2023 22:32	YR
56-23-5	Carbon tetrachloride	ND		ug/m³	2.4	15.25	EPA TO-15 Certifications:	07/28/2023 09:00 NELAC-NY12058,NJDEP-Queens	07/28/2023 22:32	YR
108-90-7	Chlorobenzene	ND		ug/m³	7.0	15.25	EPA TO-15 Certifications:	07/28/2023 09:00 NELAC-NY12058,NJDEP-Queens	07/28/2023 22:32	YR
75-00-3	Chloroethane	ND		ug/m³	4.0	15.25	EPA TO-15 Certifications:	07/28/2023 09:00 NELAC-NY12058,NJDEP-Queens	07/28/2023 22:32	YR
67-66-3	Chloroform	ND		ug/m³	7.4	15.25	EPA TO-15 Certifications:	07/28/2023 09:00 NELAC-NY12058,NJDEP-Queens	07/28/2023 22:32	YR
74-87-3	Chloromethane	ND		ug/m³	3.1	15.25	EPA TO-15 Certifications:	07/28/2023 09:00 NELAC-NY12058,NJDEP-Queens	07/28/2023 22:32	YR
156-59-2	**cis-1,2-Dichloroethylene**	**270**		ug/m³	1.5	15.25	EPA TO-15 Certifications:	07/28/2023 09:00 NELAC-NY12058,NJDEP-Queens	07/28/2023 22:32	YR
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m³	6.9	15.25	EPA TO-15 Certifications:	07/28/2023 09:00 NELAC-NY12058,NJDEP-Queens	07/28/2023 22:32	YR
110-82-7	Cyclohexane	ND		ug/m³	5.2	15.25	EPA TO-15 Certifications:	07/28/2023 09:00 NELAC-NY12058,NJDEP-Queens	07/28/2023 22:32	YR
124-48-1	Dibromochloromethane	ND		ug/m³	13	15.25	EPA TO-15 Certifications:	07/28/2023 09:00 NELAC-NY12058,NJDEP-Queens	07/28/2023 22:32	YR
75-71-8	Dichlorodifluoromethane	ND		ug/m³	7.5	15.25	EPA TO-15 Certifications:	07/28/2023 09:00 NELAC-NY12058,NJDEP-Queens	07/28/2023 22:32	YR
141-78-6	* Ethyl acetate	ND		ug/m³	11	15.25	EPA TO-15 Certifications:	07/28/2023 09:00	07/28/2023 22:32	YR
100-41-4	Ethyl Benzene	ND		ug/m³	6.6	15.25	EPA TO-15 Certifications:	07/28/2023 09:00 NELAC-NY12058,NJDEP-Queens	07/28/2023 22:32	YR
87-68-3	Hexachlorobutadiene	ND		ug/m³	16	15.25	EPA TO-15 Certifications:	07/28/2023 09:00 NELAC-NY12058,NJDEP-Queens	07/28/2023 22:32	YR

Sample Information

Client Sample ID: **System Effluent** **York Sample ID:** **23G1570-01**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23G1570	80 Banks Avenue, Rockville Centre NY 12-190 DS	Vapor Extraction	July 26, 2023 12:00 pm	07/27/2023

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
67-63-0	Isopropanol	ND		ug/m³	19	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR
80-62-6	Methyl Methacrylate	ND		ug/m³	6.2	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m³	5.5	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR
75-09-2	Methylene chloride	ND		ug/m³	11	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR
142-82-5	n-Heptane	ND		ug/m³	6.3	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR
110-54-3	n-Hexane	ND		ug/m³	5.4	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR
95-47-6	o-Xylene	ND		ug/m³	6.6	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR
179601-23-1	p- & m- Xylenes	ND		ug/m³	13	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR
622-96-8	* p-Ethyltoluene	ND		ug/m³	7.5	15.25	EPA TO-15 Certifications:	07/28/2023 09:00	07/28/2023 22:32	YR
115-07-1	* Propylene	ND		ug/m³	2.6	15.25	EPA TO-15 Certifications:	07/28/2023 09:00	07/28/2023 22:32	YR
100-42-5	Styrene	ND		ug/m³	6.5	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR
127-18-4	**Tetrachloroethylene**	**2500**		ug/m³	10	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR
109-99-9	* Tetrahydrofuran	ND		ug/m³	9.0	15.25	EPA TO-15 Certifications:	07/28/2023 09:00	07/28/2023 22:32	YR
108-88-3	**Toluene**	**6.3**		ug/m³	5.7	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m³	6.0	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m³	6.9	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR
79-01-6	**Trichloroethylene**	**150**		ug/m³	2.0	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR
75-69-4	Trichlorofluoromethane (Freon 11)	ND		ug/m³	8.6	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR
108-05-4	Vinyl acetate	ND		ug/m³	5.4	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR
593-60-2	Vinyl bromide	ND		ug/m³	6.7	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR
75-01-4	**Vinyl Chloride**	**9.4**		ug/m³	1.9	15.25	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/28/2023 09:00	07/28/2023 22:32	YR

Analytical Batch Summary

Batch ID: BG31311 **Preparation Method:** EPA TO15 PREP **Prepared By:** VH

YORK Sample ID	Client Sample ID	Preparation Date
23G1570-01	System Effluent	07/28/23
BG31311-BLK1	Blank	07/28/23
BG31311-BS1	LCS	07/28/23
BG31311-DUP1	Duplicate	07/28/23

Volatile Organic Compounds in Air by GC/MS - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BG31311 - EPA TO15 PREP											
Blank (BG31311-BLK1)											Prepared & Analyzed: 07/28/2023
1,1,1,2-Tetrachloroethane	ND	0.69	ug/m³								
1,1,1-Trichloroethane	ND	0.55	"								
1,1,2,2-Tetrachloroethane	ND	0.69	"								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.77	"								
1,1,2-Trichloroethane	ND	0.55	"								
1,1-Dichloroethane	ND	0.40	"								
1,1-Dichloroethylene	ND	0.099	"								
1,2,4-Trichlorobenzene	ND	0.74	"								
1,2,4-Trimethylbenzene	ND	0.49	"								
1,2-Dibromoethane	ND	0.77	"								
1,2-Dichlorobenzene	ND	0.60	"								
1,2-Dichloroethane	ND	0.40	"								
1,2-Dichloropropane	ND	0.46	"								
1,2-Dichlorotetrafluoroethane	ND	0.70	"								
1,3,5-Trimethylbenzene	ND	0.49	"								
1,3-Butadiene	ND	0.66	"								
1,3-Dichlorobenzene	ND	0.60	"								
1,3-Dichloropropane	ND	0.46	"								
1,4-Dichlorobenzene	ND	0.60	"								
1,4-Dioxane	ND	0.72	"								
2-Butanone	ND	0.29	"								
2-Hexanone	ND	0.82	"								
3-Chloropropene	ND	1.6	"								
4-Methyl-2-pentanone	ND	0.41	"								
Acetone	ND	0.48	"								
Acrylonitrile	ND	0.22	"								
Benzene	ND	0.32	"								
Benzyl chloride	ND	0.52	"								
Bromodichloromethane	ND	0.67	"								
Bromoform	ND	1.0	"								
Bromomethane	ND	0.39	"								
Carbon disulfide	ND	0.31	"								
Carbon tetrachloride	ND	0.16	"								
Chlorobenzene	ND	0.46	"								
Chloroethane	ND	0.26	"								
Chloroform	ND	0.49	"								
Chloromethane	ND	0.21	"								
cis-1,2-Dichloroethylene	ND	0.099	"								
cis-1,3-Dichloropropylene	ND	0.45	"								
Cyclohexane	ND	0.34	"								
Dibromochloromethane	ND	0.85	"								
Dichlorodifluoromethane	ND	0.49	"								
Ethyl acetate	ND	0.72	"								
Ethyl Benzene	ND	0.43	"								
Hexachlorobutadiene	ND	1.1	"								
Isopropanol	0.71	0.49	"								
Methyl Methacrylate	ND	0.41	"								
Methyl tert-butyl ether (MTBE)	ND	0.36	"								
Methylene chloride	ND	0.69	"								

Volatile Organic Compounds in Air by GC/MS - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BG31311 - EPA TO15 PREP											
Blank (BG31311-BLK1)											Prepared & Analyzed: 07/28/2023
n-Heptane	ND	0.41	ug/m³								
n-Hexane	ND	0.35	"								
o-Xylene	ND	0.43	"								
p- & m- Xylenes	ND	0.87	"								
p-Ethyltoluene	ND	0.49	"								
Propylene	ND	0.17	"								
Styrene	ND	0.43	"								
Tetrachloroethylene	ND	0.68	"								
Tetrahydrofuran	ND	0.59	"								
Toluene	ND	0.38	"								
trans-1,2-Dichloroethylene	ND	0.40	"								
trans-1,3-Dichloropropylene	ND	0.45	"								
Trichloroethylene	ND	0.13	"								
Trichlorofluoromethane (Freon 11)	ND	0.56	"								
Vinyl acetate	ND	0.35	"								
Vinyl bromide	ND	0.44	"								
Vinyl Chloride	ND	0.13	"								
LCS (BG31311-BS1)											Prepared & Analyzed: 07/28/2023
1,1,1,2-Tetrachloroethane	9.53		ppbv	10.0		95.3	70-130				
1,1,1-Trichloroethane	11.2		"	10.0		112	70-130				
1,1,2,2-Tetrachloroethane	8.12		"	10.0		81.2	70-130				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	11.1		"	10.0		111	70-130				
1,1,2-Trichloroethane	8.79		"	10.0		87.9	70-130				
1,1-Dichloroethane	9.34		"	10.0		93.4	70-130				
1,1-Dichloroethylene	9.88		"	10.0		98.8	70-130				
1,2,4-Trichlorobenzene	10.0		"	10.0		100	70-130				
1,2,4-Trimethylbenzene	9.06		"	10.0		90.6	70-130				
1,2-Dibromoethane	8.86		"	10.0		88.6	70-130				
1,2-Dichlorobenzene	9.72		"	10.0		97.2	70-130				
1,2-Dichloroethane	10.1		"	10.0		101	70-130				
1,2-Dichloropropane	7.67		"	10.0		76.7	70-130				
1,2-Dichlorotetrafluoroethane	10.5		"	10.0		105	70-130				
1,3,5-Trimethylbenzene	9.01		"	10.0		90.1	70-130				
1,3-Butadiene	12.7		"	10.0		127	70-130				
1,3-Dichlorobenzene	9.81		"	10.0		98.1	70-130				
1,3-Dichloropropane	7.85		"	10.0		78.5	70-130				
1,4-Dichlorobenzene	9.82		"	10.0		98.2	70-130				
1,4-Dioxane	9.42		"	10.0		94.2	70-130				
2-Butanone	9.18		"	10.0		91.8	70-130				
2-Hexanone	7.97		"	10.0		79.7	70-130				
3-Chloropropene	8.71		"	10.0		87.1	70-130				
4-Methyl-2-pentanone	7.43		"	10.0		74.3	70-130				
Acetone	9.51		"	10.0		95.1	70-130				
Acrylonitrile	9.34		"	10.0		93.4	70-130				
Benzene	9.81		"	10.0		98.1	70-130				
Benzyl chloride	9.74		"	10.0		97.4	70-130				
Bromodichloromethane	8.94		"	10.0		89.4	70-130				
Bromoform	10.5		"	10.0		105	70-130				
Bromomethane	10.9		"	10.0		109	70-130				
Carbon disulfide	9.77		"	10.0		97.7	70-130				

Volatile Organic Compounds in Air by GC/MS - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BG31311 - EPA TO15 PREP											
LCS (BG31311-BS1)								Prepared & Analyzed: 07/28/2023			
Carbon tetrachloride	12.3		ppbv	10.0		123	70-130				
Chlorobenzene	9.00		"	10.0		90.0	70-130				
Chloroethane	10.3		"	10.0		103	70-130				
Chloroform	10.6		"	10.0		106	70-130				
Chloromethane	13.1		"	10.0		131	70-130	High Bias			
cis-1,2-Dichloroethylene	9.60		"	10.0		96.0	70-130				
cis-1,3-Dichloropropylene	8.41		"	10.0		84.1	70-130				
Cyclohexane	9.21		"	10.0		92.1	70-130				
Dibromochloromethane	9.97		"	10.0		99.7	70-130				
Dichlorodifluoromethane	10.4		"	10.0		104	70-130				
Ethyl acetate	9.31		"	10.0		93.1	70-130				
Ethyl Benzene	8.26		"	10.0		82.6	70-130				
Hexachlorobutadiene	8.25		"	10.0		82.5	70-130				
Isopropanol	9.96		"	10.0		99.6	70-130				
Methyl Methacrylate	7.73		"	10.0		77.3	70-130				
Methyl tert-butyl ether (MTBE)	10.2		"	10.0		102	70-130				
Methylene chloride	9.27		"	10.0		92.7	70-130				
n-Heptane	9.49		"	10.0		94.9	70-130				
n-Hexane	9.40		"	10.0		94.0	70-130				
o-Xylene	8.25		"	10.0		82.5	70-130				
p- & m- Xylenes	16.8		"	20.0		84.0	70-130				
p-Ethyltoluene	8.90		"	10.0		89.0	70-130				
Propylene	8.87		"	10.0		88.7	70-130				
Styrene	9.03		"	10.0		90.3	70-130				
Tetrachloroethylene	9.22		"	10.0		92.2	70-130				
Tetrahydrofuran	8.53		"	10.0		85.3	70-130				
Toluene	8.08		"	10.0		80.8	70-130				
trans-1,2-Dichloroethylene	9.92		"	10.0		99.2	70-130				
trans-1,3-Dichloropropylene	8.68		"	10.0		86.8	70-130				
Trichloroethylene	8.24		"	10.0		82.4	70-130				
Trichlorofluoromethane (Freon 11)	11.0		"	10.0		110	70-130				
Vinyl acetate	9.56		"	10.0		95.6	70-130				
Vinyl bromide	12.2		"	10.0		122	70-130				
Vinyl Chloride	12.0		"	10.0		120	70-130				

Volatile Organic Compounds in Air by GC/MS - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BG31311 - EPA TO15 PREP											
Duplicate (BG31311-DUP1)	*Source sample: 23G1570-01 (System Effluent)								Prepared: 07/28/2023 Analyzed: 07/29/2023		
1,1,1,2-Tetrachloroethane	ND	10	ug/m³		ND					25	
1,1,1-Trichloroethane	ND	8.3	"		ND					25	
1,1,2,2-Tetrachloroethane	ND	10	"		ND					25	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	12	"		ND					25	
1,1,2-Trichloroethane	ND	8.3	"		ND					25	
1,1-Dichloroethane	ND	6.2	"		ND					25	
1,1-Dichloroethylene	ND	1.5	"		ND					25	
1,2,4-Trichlorobenzene	ND	11	"		ND					25	
1,2,4-Trimethylbenzene	ND	7.5	"		ND					25	
1,2-Dibromoethane	ND	12	"		ND					25	
1,2-Dichlorobenzene	ND	9.2	"		ND					25	
1,2-Dichloroethane	ND	6.2	"		ND					25	
1,2-Dichloropropane	ND	7.0	"		ND					25	
1,2-Dichlorotetrafluoroethane	ND	11	"		ND					25	
1,3,5-Trimethylbenzene	ND	7.5	"		ND					25	
1,3-Butadiene	ND	10	"		ND					25	
1,3-Dichlorobenzene	ND	9.2	"		ND					25	
1,3-Dichloropropane	ND	7.0	"		ND					25	
1,4-Dichlorobenzene	ND	9.2	"		ND					25	
1,4-Dioxane	ND	11	"		ND					25	
2-Butanone	ND	4.5	"		ND					25	
2-Hexanone	ND	12	"		ND					25	
3-Chloropropene	ND	24	"		ND					25	
4-Methyl-2-pentanone	ND	6.2	"		ND					25	
Acetone	ND	7.2	"		ND					25	
Acrylonitrile	ND	3.3	"		ND					25	
Benzene	ND	4.9	"		ND					25	
Benzyl chloride	ND	7.9	"		ND					25	
Bromodichloromethane	ND	10	"		ND					25	
Bromoform	ND	16	"		ND					25	
Bromomethane	ND	5.9	"		ND					25	
Carbon disulfide	ND	4.7	"		ND					25	
Carbon tetrachloride	ND	2.4	"		ND					25	
Chlorobenzene	ND	7.0	"		ND					25	
Chloroethane	ND	4.0	"		ND					25	
Chloroform	ND	7.4	"		ND					25	
Chloromethane	ND	3.1	"		ND					25	
cis-1,2-Dichloroethylene	280	1.5	"		270				4.36	25	
cis-1,3-Dichloropropylene	ND	6.9	"		ND					25	
Cyclohexane	ND	5.2	"		ND					25	
Dibromochloromethane	ND	13	"		ND					25	
Dichlorodifluoromethane	ND	7.5	"		ND					25	
Ethyl acetate	ND	11	"		ND					25	
Ethyl Benzene	ND	6.6	"		ND					25	
Hexachlorobutadiene	ND	16	"		ND					25	
Isopropanol	12	7.5	"		ND					25	
Methyl Methacrylate	ND	6.2	"		ND					25	
Methyl tert-butyl ether (MTBE)	ND	5.5	"		ND					25	
Methylene chloride	ND	11	"		ND					25	
n-Heptane	ND	6.3	"		ND					25	

Volatile Organic Compounds in Air by GC/MS - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BG31311 - EPA TO15 PREP											
Duplicate (BG31311-DUP1)	*Source sample: 23G1570-01 (System Effluent)								Prepared: 07/28/2023 Analyzed: 07/29/2023		
n-Hexane	ND	5.4	ug/m³		ND					25	
o-Xylene	ND	6.6	"		ND					25	
p- & m- Xylenes	ND	13	"		ND					25	
p-Ethyltoluene	ND	7.5	"		ND					25	
Propylene	ND	2.6	"		ND					25	
Styrene	ND	6.5	"		ND					25	
Tetrachloroethylene	2400	10	"		2500				4.36	25	
Tetrahydrofuran	ND	9.0	"		ND					25	
Toluene	6.3	5.7	"		6.3				0.00	25	
trans-1,2-Dichloroethylene	ND	6.0	"		ND					25	
trans-1,3-Dichloropropylene	ND	6.9	"		ND					25	
Trichloroethylene	150	2.0	"		150				3.24	25	
Trichlorofluoromethane (Freon 11)	ND	8.6	"		ND					25	
Vinyl acetate	ND	5.4	"		ND					25	
Vinyl bromide	ND	6.7	"		ND					25	
Vinyl Chloride	12	1.9	"		9.4				28.6	25	Non-dir.

Sample and Data Qualifiers Relating to This Work Order

B — Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants.

Definitions and Other Explanations

*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

York Analytical Laboratories, Inc.
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clientservices@yorklab.com
www.yorklab.com

Field Chain-of-Custody Record - AIR

NOTE: YORK's Standard Terms & Conditions are listed on the back side of this document. This document serves as your written authorization for YORK to proceed with the analyses requested below. Your signature binds you to YORK's Standard Terms & Conditions.

YORK Project No. 23G1570

YOUR Information	Report To:	Invoice To:	YOUR Project Number	Turn-Around Time
Company: Lyon Environmental Geo.	Company:	Company:		RUSH - Next Day
Address: 53 West Hills Rd	Address: Scott	Address: Kathy	YOUR Project Name: 80 Banks Avenue, Rockville Centre, New York	RUSH - Two Day
Phone.:	Phone.:	Phone.:		RUSH - Three Day
Contact:	Contact:	Contact:		RUSH - Four Day
E-mail:	E-mail:	E-mail:	YOUR PO#:	Standard (5-7 Day) X

Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.

Samples Collected by: (print your name above and sign below)
Nicholas Kibler

Air Matrix Codes
AI - Indoor Ambient Air
AO - Outdoor Amb. Air
AE - Vapor Extraction Well/ Process Gas/Effluent
AS - Soil Vapor/Sub-Slab

Samples From
New York X
New Jersey
Connecticut
Pennsylvania
Other

Report / EDD Type (circle selections)
Summary Report | CT RCP | Standard Excel EDD
QA Report | CT RCP DQA/DUE | EQuIS (Standard)
NY ASP A Package | NJDEP Reduced Deliv. | NYSDEC EQuIS
NY ASP B Package | NJDKQP | NJDEP SRP HazSite
Other:

YORK Reg. Comp.
Compared to the following Regulation(s): (please fill in)

Certified Canisters: Batch ___ Individual ___

Please enter the following REQUIRED Field Data

Reporting Units: ug/m³ ___ ppbv ___ ppmv ___

Sample Identification	Date/Time Sampled	Air Matrix	Canister Vacuum Before Sampling (in Hg)	Canister Vacuum After Sampling (in Hg)	Canister ID	Flow Cont. ID	Analysis Requested
System Effluent	7/26/23 1200	AE	-30	-5	36988	—	TO-15

Comments:

Detection Limits Required
≤ 1 ug/m³ ____ NYSDEC V1 Limits ____
Routine Survey ____ Other ____

Sampling Media
6 Liter Canister
Tedlar Bag

Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time
	7/27/23 1710	KBaker York	7/27/23 10AM	KBaker York	7/27/23 1710
Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time
	7/27/23 1710	KBlocker / York	7/27/23	Ramon York	7/27 2020
Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Received in LAB by	Date/Time
Ramon York	7/27			York	7/28/23 10:00 AM

APPENDIX D

SPDES Analytical Results

Technical Report

prepared for:

Laurel Environmental Geosciences, D.P.C.
53 W Hills Road, Suite 1
Huntington Station NY, 11746
Attention: Scott Yanuck

Report Date: 06/08/2023
Client Project ID: 80 Banks Avenue Rockville Centre 12-190
York Project (SDG) No.: 23E1737

Report Date: 06/08/2023
Client Project ID: 80 Banks Avenue Rockville Centre 12-190
York Project (SDG) No.: 23E1737

Laurel Environmental Geosciences, D.P.C.
53 W Hills Road, Suite 1
Huntington Station NY, 11746
Attention: Scott Yanuck

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on May 31, 2023 and listed below. The project was identified as your project: **80 Banks Avenue Rockville Centre 12-190**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
23E1737-01	System Effluent	Ground Water	05/30/2023	05/31/2023

General Notes for York Project (SDG) No.: 23E1737

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By: Cassie L. Mosher **Date:** 06/08/2023

Cassie L. Mosher
Laboratory Manager

Sample Information

Client Sample ID: System Effluent

York Sample ID: 23E1737-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23E1737	80 Banks Avenue Rockville Centre 12-190	Ground Water	May 30, 2023 10:30 am	05/31/2023

Volatile Organics, 624 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
67-64-1	* Acetone	ND		ug/L	6.1	10	1	EPA 624.1 Certifications:	06/01/2023 12:30	06/01/2023 23:10	SMA
1634-04-4	* Methyl tert-butyl ether (MTBE)	ND		ug/L	0.53	5.0	1	EPA 624.1 Certifications:	06/01/2023 12:30	06/01/2023 23:10	SMA
127-18-4	Tetrachloroethylene	ND		ug/L	3.3	5.0	1	EPA 624.1 Certifications:	06/01/2023 12:30 CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP	06/01/2023 23:10	SMA
108-88-3	Toluene	ND		ug/L	0.81	5.0	1	EPA 624.1 Certifications:	06/01/2023 12:30 CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP	06/01/2023 23:10	SMA
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	3.5	5.0	1	EPA 624.1 Certifications:	06/01/2023 12:30 CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP	06/01/2023 23:10	SMA
79-01-6	Trichloroethylene	ND		ug/L	1.2	5.0	1	EPA 624.1 Certifications:	06/01/2023 12:30 CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP	06/01/2023 23:10	SMA
75-01-4	Vinyl Chloride	ND		ug/L	1.3	5.0	1	EPA 624.1 Certifications:	06/01/2023 12:30 CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP	06/01/2023 23:10	SMA

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: SURR: 1,2-Dichloroethane-d4*	*104 %*	*78-126*
2037-26-5	*Surrogate: SURR: Toluene-d8*	*97.1 %*	*84-117*
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*94.7 %*	*71-130*

Semi-Volatiles, 8270 Base/Neutrals

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
120-82-1	1,2,4-Trichlorobenzene	ND		ug/L	2.60	5.26	1	EPA 8270D Certifications:	06/01/2023 08:49 CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP	06/07/2023 01:59	KH
99-09-2	3-Nitroaniline	ND		ug/L	1.77	5.26	1	EPA 8270D Certifications:	06/01/2023 08:49 CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP	06/07/2023 01:59	KH

	Surrogate Recoveries	Result	Acceptance Range
4165-60-0	*Surrogate: SURR: Nitrobenzene-d5*	*81.2 %*	*50.2-113*
321-60-8	*Surrogate: SURR: 2-Fluorobiphenyl*	*63.3 %*	*39.9-105*
1718-51-0	*Surrogate: SURR: Terphenyl-d14*	*70.3 %*	*30.7-106*

Arsenic by EPA 200.7

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	ND		ug/L	16.7	1	EPA 200.7 Certifications:	06/06/2023 14:22 CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP	06/07/2023 14:51	CEG

Barium by EPA 200.7

Log-in Notes:

Sample Notes:

Sample Information

Client Sample ID: **System Effluent** **York Sample ID:** **23E1737-01**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23E1737	80 Banks Avenue Rockville Centre 12-190	Ground Water	May 30, 2023 10:30 am	05/31/2023

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-39-3	**Barium**	**38.3**		ug/L	27.8	1	EPA 200.7	06/06/2023 14:22	06/07/2023 14:51	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Beryllium by EPA 200.7

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-41-7	Beryllium	ND		ug/L	0.556	1	EPA 200.7	06/06/2023 14:22	06/07/2023 14:51	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Cadmium by EPA 200.7

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-43-9	Cadmium	ND		ug/L	3.33	1	EPA 200.7	06/06/2023 14:22	06/07/2023 14:51	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Chromium by EPA 200.7

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-47-3	**Chromium**	**12.5**		ug/L	5.56	1	EPA 200.7	06/06/2023 14:22	06/07/2023 14:51	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Cobalt by EPA 200.7

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-48-4	Cobalt	ND		ug/L	4.44	1	EPA 200.7	06/06/2023 14:22	06/07/2023 14:51	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Copper by EPA 200.7

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-50-8	Copper	ND		ug/L	22.2	1	EPA 200.7	06/06/2023 14:22	06/07/2023 14:51	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Iron by EPA 200.7

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	Iron	ND		ug/L	278	1	EPA 200.7	06/06/2023 14:22	06/07/2023 14:51	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Lead by EPA 200.7

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst

Sample Information

Client Sample ID: System Effluent **York Sample ID:** 23E1737-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23E1737	80 Banks Avenue Rockville Centre 12-190	Ground Water	May 30, 2023 10:30 am	05/31/2023

Lead by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-92-1	Lead	ND		ug/L	5.56	1	EPA 200.7	06/06/2023 14:22	06/07/2023 14:51	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Magnesium by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-95-4	**Magnesium**	**268**		ug/L	55.6	1	EPA 200.7	06/06/2023 14:22	06/07/2023 14:51	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Manganese by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-96-5	Manganese	ND		ug/L	5.56	1	EPA 200.7	06/06/2023 14:22	06/07/2023 14:51	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Nickel by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-02-0	Nickel	ND		ug/L	11.1	1	EPA 200.7	06/06/2023 14:22	06/07/2023 14:51	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Vanadium by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-62-2	Vanadium	ND		ug/L	11.1	1	EPA 200.7	06/06/2023 14:22	06/07/2023 14:51	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Zinc by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-66-6	Zinc	ND		ug/L	27.8	1	EPA 200.7	06/06/2023 14:22	06/07/2023 14:51	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Mercury by EPA 245.1

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 245.1 Mercury

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		ug/L	0.2000	1	EPA 245.1	06/05/2023 08:25	06/05/2023 08:25	PA
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Sample Information

Client Sample ID: **System Effluent** **York Sample ID:** **23E1737-01**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23E1737	80 Banks Avenue Rockville Centre 12-190	Ground Water	May 30, 2023 10:30 am	05/31/2023

pH

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	*** pH**	**6.48**	HT-pH	pH units	0.500	1	SM 4500 HB	06/01/2023 08:05	06/01/2023 10:44	VR
							Certifications: CTDOH-PH-0723			

Total Suspended Solids (EPA)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	*** Total Suspended Solids**	**8600**		ug/L	2000	1	EPA 160.2	06/01/2023 07:21	06/02/2023 08:48	PMB
							Certifications:			

Analytical Batch Summary

Batch ID: BF30001 **Preparation Method:** % Solids Prep **Prepared By:** sgs

YORK Sample ID	Client Sample ID	Preparation Date
23E1737-01	System Effluent	06/01/23
BF30001-BLK1	Blank	06/01/23
BF30001-DUP1	Duplicate	06/01/23
BF30001-DUP2	Duplicate	06/01/23

Batch ID: BF30013 **Preparation Method:** Analysis Preparation **Prepared By:** VR

YORK Sample ID	Client Sample ID	Preparation Date
23E1737-01	System Effluent	06/01/23
BF30013-DUP1	Duplicate	06/01/23

Batch ID: BF30026 **Preparation Method:** EPA 3510C **Prepared By:** JM

YORK Sample ID	Client Sample ID	Preparation Date
23E1737-01	System Effluent	06/01/23
BF30026-BLK1	Blank	06/01/23
BF30026-BS1	LCS	06/01/23
BF30026-BSD1	LCS Dup	06/01/23

Batch ID: BF30079 **Preparation Method:** EPA 5030B **Prepared By:** SMA

YORK Sample ID	Client Sample ID	Preparation Date
23E1737-01	System Effluent	06/01/23
BF30079-BLK1	Blank	06/01/23
BF30079-BS1	LCS	06/01/23
BF30079-BSD1	LCS Dup	06/01/23

Batch ID: BF30222 **Preparation Method:** EPA 245.1 Mercury **Prepared By:** PFA

YORK Sample ID	Client Sample ID	Preparation Date
23E1737-01	System Effluent	06/05/23
BF30222-BLK1	Blank	06/05/23
BF30222-BLK2	Blank	06/05/23
BF30222-BS1	LCS	06/05/23
BF30222-BS2	LCS	06/05/23

Batch ID: BF30345 **Preparation Method:** EPA 200.7 **Prepared By:** MCS

YORK Sample ID	Client Sample ID	Preparation Date
23E1737-01	System Effluent	06/06/23
BF30345-BLK1	Blank	06/06/23
BF30345-BS1	LCS	06/06/23

BF30345-DUP1	Duplicate	06/06/23
BF30345-MS1	Matrix Spike	06/06/23
BF30345-MS2	Matrix Spike	06/06/23
BF30345-PS1	Post Spike	06/06/23

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BF30079 - EPA 5030B											
Blank (BF30079-BLK1)								Prepared & Analyzed: 06/01/2023			
Acetone	ND	10	ug/L								
Methyl tert-butyl ether (MTBE)	ND	5.0	"								
Tetrachloroethylene	ND	5.0	"								
Toluene	ND	5.0	"								
trans-1,2-Dichloroethylene	ND	5.0	"								
Trichloroethylene	ND	5.0	"								
Vinyl Chloride	ND	5.0	"								
Surrogate: SURR: 1,2-Dichloroethane-d4	*10.0*		*"*	*10.0*		*100*	*78-126*				
Surrogate: SURR: Toluene-d8	*9.84*		*"*	*10.0*		*98.4*	*84-117*				
Surrogate: SURR: p-Bromofluorobenzene	*9.85*		*"*	*10.0*		*98.5*	*71-130*				
LCS (BF30079-BS1)								Prepared & Analyzed: 06/01/2023			
Acetone	14		ug/L	20.0		70.8	30-112				
Methyl tert-butyl ether (MTBE)	22		"	20.0		110	59-135				
Tetrachloroethylene	11		"	20.0		55.7	77-133	Low Bias			
Toluene	21		"	20.0		105	83-122				
trans-1,2-Dichloroethylene	22		"	20.0		108	59-145				
Trichloroethylene	18		"	20.0		89.0	80-125				
Vinyl Chloride	20		"	20.0		102	41-136				
Surrogate: SURR: 1,2-Dichloroethane-d4	*10.1*		*"*	*10.0*		*101*	*78-126*				
Surrogate: SURR: Toluene-d8	*9.65*		*"*	*10.0*		*96.5*	*84-117*				
Surrogate: SURR: p-Bromofluorobenzene	*10.0*		*"*	*10.0*		*100*	*71-130*				
LCS Dup (BF30079-BSD1)								Prepared & Analyzed: 06/01/2023			
Acetone	14		ug/L	20.0		68.5	30-112		3.23	30	
Methyl tert-butyl ether (MTBE)	22		"	20.0		108	59-135		2.29	30	
Tetrachloroethylene	11		"	20.0		54.9	77-133	Low Bias	1.45	30	
Toluene	21		"	20.0		103	83-122		1.35	30	
trans-1,2-Dichloroethylene	21		"	20.0		106	59-145		1.68	30	
Trichloroethylene	18		"	20.0		87.8	80-125		1.30	30	
Vinyl Chloride	20		"	20.0		99.4	41-136		2.48	30	
Surrogate: SURR: 1,2-Dichloroethane-d4	*9.93*		*"*	*10.0*		*99.3*	*78-126*				
Surrogate: SURR: Toluene-d8	*9.74*		*"*	*10.0*		*97.4*	*84-117*				
Surrogate: SURR: p-Bromofluorobenzene	*10.2*		*"*	*10.0*		*102*	*71-130*				

Semivolatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BF30026 - EPA 3510C											
Blank (BF30026-BLK1)									Prepared: 06/01/2023 Analyzed: 06/06/2023		
1,2,4-Trichlorobenzene	ND	5.00	ug/L								
3-Nitroaniline	ND	5.00	"								
Surrogate: SURR: Nitrobenzene-d5	*12.5*		*"*	*25.0*		*49.8*	*50.2-113*				
Surrogate: SURR: 2-Fluorobiphenyl	*9.80*		*"*	*25.0*		*39.2*	*39.9-105*				
Surrogate: SURR: Terphenyl-d14	*16.0*		*"*	*25.0*		*64.1*	*30.7-106*				
LCS (BF30026-BS1)									Prepared: 06/01/2023 Analyzed: 06/06/2023		
1,2,4-Trichlorobenzene	9.92	5.00	ug/L	25.0		39.7	35-91				
3-Nitroaniline	11.8	5.00	"	25.0		47.2	29-128				
Surrogate: SURR: Nitrobenzene-d5	*15.3*		*"*	*25.0*		*61.2*	*50.2-113*				
Surrogate: SURR: 2-Fluorobiphenyl	*12.6*		*"*	*25.0*		*50.4*	*39.9-105*				
Surrogate: SURR: Terphenyl-d14	*19.2*		*"*	*25.0*		*76.6*	*30.7-106*				
LCS Dup (BF30026-BSD1)									Prepared: 06/01/2023 Analyzed: 06/06/2023		
1,2,4-Trichlorobenzene	8.57	5.00	ug/L	25.0		34.3	35-91	Low Bias	14.6	20	
3-Nitroaniline	10.1	5.00	"	25.0		40.2	29-128		16.0	20	
Surrogate: SURR: Nitrobenzene-d5	*11.3*		*"*	*25.0*		*45.2*	*50.2-113*				
Surrogate: SURR: 2-Fluorobiphenyl	*9.26*		*"*	*25.0*		*37.0*	*39.9-105*				
Surrogate: SURR: Terphenyl-d14	*15.6*		*"*	*25.0*		*62.4*	*30.7-106*				

Metals by ICP - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BF30345 - EPA 200.7											
Blank (BF30345-BLK1)											Prepared: 06/06/2023 Analyzed: 06/07/2023
Arsenic	ND	16.7	ug/L								
Barium	ND	27.8	"								
Beryllium	ND	0.556	"								
Cadmium	ND	3.33	"								
Chromium	ND	5.56	"								
Cobalt	ND	4.44	"								
Copper	ND	22.2	"								
Iron	ND	278	"								
Lead	ND	5.56	"								
Magnesium	ND	55.6	"								
Manganese	ND	5.56	"								
Nickel	ND	11.1	"								
Vanadium	ND	11.1	"								
Zinc	ND	27.8	"								
LCS (BF30345-BS1)											Prepared: 06/06/2023 Analyzed: 06/07/2023
Arsenic	1.84		ug/mL	2.00		92.0	85-115				
Barium	2.09		"	2.00		104	85-115				
Beryllium	0.0505		"	0.0500		101	85-115				
Cadmium	0.0471		"	0.0500		94.1	85-115				
Chromium	0.198		"	0.200		99.1	85-115				
Cobalt	0.514		"	0.500		103	85-115				
Copper	0.258		"	0.250		103	85-115				
Iron	1.01		"	1.00		101	85-115				
Lead	0.462		"	0.500		92.5	85-115				
Magnesium	0.989		"	1.00		98.9	85-115				
Manganese	0.517		"	0.500		103	85-115				
Nickel	0.505		"	0.500		101	85-115				
Vanadium	0.506		"	0.500		101	85-115				
Zinc	0.508		"	0.500		102	85-115				

Metals by ICP - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BF30345 - EPA 200.7											
Duplicate (BF30345-DUP1)	*Source sample: 23F0121-01 (Duplicate)								Prepared: 06/06/2023 Analyzed: 06/07/2023		
Arsenic	ND	16.7	ug/L		ND					20	
Barium	ND	27.8	"		ND					20	
Beryllium	ND	0.556	"		ND					20	
Cadmium	ND	3.33	"		ND					20	
Chromium	ND	5.56	"		ND					20	
Cobalt	ND	4.44	"		ND					20	
Copper	ND	22.2	"		ND					20	
Iron	ND	278	"		ND					20	
Lead	ND	5.56	"		ND					20	
Magnesium	67.6	55.6	"		68.4				1.21	20	
Manganese	40.1	5.56	"		38.0				5.44	20	
Nickel	15.4	11.1	"		17.0				10.4	20	
Vanadium	ND	11.1	"		ND					20	
Zinc	ND	27.8	"		ND					20	
Matrix Spike (BF30345-MS1)	*Source sample: 23F0121-01 (Matrix Spike)								Prepared: 06/06/2023 Analyzed: 06/07/2023		
Arsenic	2290	16.7	ug/L	2220	ND	103	75-125				
Barium	2450	27.8	"	2220	ND	110	75-125				
Beryllium	59.7	0.556	"	55.6	ND	107	75-125				
Cadmium	54.9	3.33	"	55.6	ND	98.8	75-125				
Chromium	228	5.56	"	222	ND	103	75-125				
Cobalt	598	4.44	"	556	ND	108	75-125				
Copper	332	22.2	"	278	ND	119	75-125				
Iron	1190	278	"	1110	ND	107	75-125				
Lead	536	5.56	"	556	ND	96.4	75-125				
Magnesium	1230	55.6	"	1110	68.4	105	75-125				
Manganese	644	5.56	"	556	38.0	109	75-125				
Nickel	606	11.1	"	556	17.0	106	75-125				
Vanadium	589	11.1	"	556	ND	106	75-125				
Zinc	640	27.8	"	556	ND	115	75-125				

Metals by ICP - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BF30345 - EPA 200.7											
Matrix Spike (BF30345-MS2)	*Source sample: 23E1737-01 (System Effluent)								Prepared: 06/06/2023 Analyzed: 06/07/2023		
Arsenic	2110	16.7	ug/L	2220	ND	95.0	75-125				
Barium	2290	27.8	"	2220	38.3	101	75-125				
Beryllium	56.4	0.556	"	55.6	ND	102	75-125				
Cadmium	50.4	3.33	"	55.6	ND	90.8	75-125				
Chromium	227	5.56	"	222	12.5	96.4	75-125				
Cobalt	560	4.44	"	556	ND	101	75-125				
Copper	311	22.2	"	278	ND	112	75-125				
Iron	1180	278	"	1110	ND	106	75-125				
Lead	489	5.56	"	556	ND	88.0	75-125				
Magnesium	1350	55.6	"	1110	268	97.4	75-125				
Manganese	564	5.56	"	556	ND	102	75-125				
Nickel	565	11.1	"	556	ND	102	75-125				
Vanadium	564	11.1	"	556	ND	101	75-125				
Zinc	580	27.8	"	556	ND	104	75-125				
Post Spike (BF30345-PS1)	*Source sample: 23F0121-01 (Post Spike)								Prepared: 06/06/2023 Analyzed: 06/07/2023		
Arsenic	1.83		ug/mL	2.00	0.0000312	91.3	75-125				
Barium	1.94		"	2.00	0.000468	97.2	75-125				
Beryllium	0.0471		"	0.0500	-0.000141	94.3	75-125				
Cadmium	0.0438		"	0.0500	0.000190	87.3	75-125				
Chromium	0.182		"	0.200	0.000532	90.9	75-125				
Cobalt	0.472		"	0.500	0.000223	94.4	75-125				
Copper	0.261		"	0.250	0.00760	102	75-125				
Iron	0.935		"	1.00	0.0116	92.3	75-125				
Lead	0.426		"	0.500	-0.000167	85.2	75-125				
Magnesium	0.993		"	1.00	0.0615	93.2	75-125				
Manganese	0.512		"	0.500	0.0342	95.5	75-125				
Nickel	0.506		"	0.500	0.0153	98.1	75-125				
Vanadium	0.466		"	0.500	-0.000112	93.2	75-125				
Zinc	0.512		"	0.500	0.00971	100	75-125				

Mercury by EPA 7000/200 Series Methods - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BF30222 - EPA 245.1 Mercury											
Blank (BF30222-BLK1)								Prepared & Analyzed: 06/05/2023			
Mercury	ND	0.2000	ug/L								
Blank (BF30222-BLK2)								Prepared & Analyzed: 06/05/2023			
Mercury	ND	0.2000	ug/L								
LCS (BF30222-BS1)								Prepared & Analyzed: 06/05/2023			
Mercury	2.233	0.2000	ug/L	2.00		112	75-125				
LCS (BF30222-BS2)								Prepared & Analyzed: 06/05/2023			
Mercury	1.930	0.2000	ug/L	2.00		96.5	75-125				

Wet Chemistry Parameters - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BF30013 - Analysis Preparation											
Duplicate (BF30013-DUP1)	*Source sample: 23E1791-02 (Duplicate)								Prepared & Analyzed: 06/01/2023		
pH	6.75	0.500	pH units		6.80				0.738	10	

Miscellaneous Physical Parameters - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BF30001 - % Solids Prep											
Blank (BF30001-BLK1)									Prepared: 06/01/2023 Analyzed: 06/02/2023		
Total Suspended Solids	ND	1000	ug/L								
Duplicate (BF30001-DUP1)	*Source sample: 23E1753-01 (Duplicate)								Prepared: 06/01/2023 Analyzed: 06/02/2023		
Total Suspended Solids	22000	10000	ug/L		22000				0.00	15	
Duplicate (BF30001-DUP2)	*Source sample: 23E1788-04 (Duplicate)								Prepared: 06/01/2023 Analyzed: 06/02/2023		
Total Suspended Solids	ND	4000	ug/L		ND					15	

Volatile Analysis Sample Containers

Lab ID	Client Sample ID	Volatile Sample Container
23E1737-01	System Effluent	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C

Sample and Data Qualifiers Relating to This Work Order

QL-02 This LCS analyte is outside Laboratory Recovery limits due the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature.

HT-pH HOLDING TIME EXCEEDED. Samples for pH must be measured in the field or within 15 minutes of sample collection.

Definitions and Other Explanations

*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

Field Chain-of-Custody Record

YORK ANALYTICAL LABORATORIES INC

York Analytical Laboratories, Inc. (YORK)'s Standard Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization for YORK to proceed with the analyses requested below.
Your signature binds you to YORK's Standard Terms & Conditions.

YORK Project No. 23E1737

120 Research Drive Stratford, CT 06615 132-02 89th Ave Queens, NY 11418 56 Church Hill Rd. #2 Newtown, CT 06470 clientservices@yorklab.com www.yorklab.com 800-306-YORK

Page 1 of 1

YOUR Information	Report To:	Invoice To:
Company: Laurel Env.	Company:	Company:
Address: 53 Westhills Rd Huntington Station, NY 11746	Address: SCott	Address: Kathy
Phone.: (631) 673-0626	Phone.:	Phone.:
Contact: Scott Yanacek	Contact:	Contact:
E-mail: lab results@laurelenv.com	E-mail:	E-mail:

YOUR Project Number: 12-190

YOUR Project Name: 80 Banks Avenue Rockville Centre

YOUR PO#:

Turn-Around Time

- RUSH - Next Day
- RUSH - Two Day
- RUSH - Three Day
- RUSH - Four Day
- RUSH - Five Day
- Standard (6-9 Day) X

PFAS Standard is 7-10 Days

Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.

Samples Collected by: (print AND sign your name)

Matrix Codes

S - soil / solid
GW - groundwater
DW - drinking water
WW - wastewater
O - Oil | Other

Samples From

New York X
New Jersey
Connecticut
Pennsylvania
Other:

Report / EDD Type (circle selections)

Summary Report | CT RCP | EQuIS (Standard)
QA Report | CT RCP DQA/DUE | NYSDEC EQuIS
CMDP | NJDEP Reduced Deliverables | NJDKQP
Standard Excel EDD | NJDEP SRP HazSite
NY ASP B Package | Other:

YORK Reg. Comp.

Compared to the following Regulation(s): (please fill in)

Sample Identification	Sample Matrix	Date/Time Sampled	Analyses Requested	Container Type	No.
System Effluent	GW	5/30/23 1030	NYSDEC SPDES+TSS	40mL(3) 2LC(1) 2LP(2)	6

Comments:

Preservation: (check all that apply)
HCl ____ MeOH ____ HNO3 ____ H2SO4 ____ NaOH ____
ZnAc ____ Ascorbic Acid ____ Other: ____

Special Instruction
Field Filtered
Lab to Filter

Samples iced/chilled at time of lab pickup? circle Yes or No

1. Samples Relinquished by / Company	Date/Time	1. Samples Received by / Company	Date/Time	2. Samples Relinquished by / Company	Date/Time
[signature]	5/31/22 1010 AM	[signature]	5/31/23 1010AM	[signature] 5/31/23	1738
2. Samples Received by / Company	Date/Time	3. Samples Relinquished by / Company	Date/Time	3. Samples Received by / Company	Date/Time
4. Samples Relinquished by / Company	Date/Time	4. Samples Received by / Company	Date/Time	Samples Received in LAB by	Date/Time / Temperature
				[signature]	5/31/23 1738 / 2.2 Degrees C

Technical Report

prepared for:

Laurel Environmental Geosciences, D.P.C.
53 W Hills Road, Suite 1
Huntington Station NY, 11746
Attention: Scott Yanuck

Report Date: 07/07/2023
Client Project ID: 80 Banks Avenue, Rockville Centre, NY 12-190 DS
York Project (SDG) No.: 23F1782

CT Cert. No. PH-0723 New Jersey Cert. No. CT005 and NY037 New York Cert. Nos. 10854 and 12058 PA Cert. No. 68-04440

120 RESEARCH DRIVE STRATFORD, CT 06615 ■ 132-02 89th AVENUE RICHMOND HILL, NY 11418
www.YORKLAB.com (203) 325-1371 FAX (203) 357-0166 ClientServices@yorklab.com

Report Date: 07/07/2023
Client Project ID: 80 Banks Avenue, Rockville Centre, NY 12-190 DS
York Project (SDG) No.: 23F1782

Laurel Environmental Geosciences, D.P.C.
53 W Hills Road, Suite 1
Huntington Station NY, 11746
Attention: Scott Yanuck

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on June 28, 2023 and listed below. The project was identified as your project: **80 Banks Avenue, Rockville Centre, NY 12-190 DS**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
23F1782-01	System Effluent	Ground Water	06/27/2023	06/28/2023

General Notes for York Project (SDG) No.: 23F1782

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By: Cassie L. Mosher **Date:** 07/07/2023

Cassie L. Mosher
Laboratory Manager

Sample Information

Client Sample ID: System Effluent

York Sample ID: 23F1782-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1782	80 Banks Avenue, Rockville Centre, NY 12-190 DS	Ground Water	June 27, 2023 12:00 pm	06/28/2023

Volatile Organics, 624 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
67-64-1	* Acetone	ND		ug/L	6.1	10	1	EPA 624.1 Certifications:	07/05/2023 09:00	07/05/2023 13:49	SMA
1634-04-4	* Methyl tert-butyl ether (MTBE)	ND		ug/L	0.53	5.0	1	EPA 624.1 Certifications:	07/05/2023 09:00	07/05/2023 13:49	SMA
127-18-4	Tetrachloroethylene	ND	QL-02	ug/L	3.3	5.0	1	EPA 624.1 Certifications:	07/05/2023 09:00 CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP	07/05/2023 13:49	SMA
108-88-3	Toluene	ND		ug/L	0.81	5.0	1	EPA 624.1 Certifications:	07/05/2023 09:00 CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP	07/05/2023 13:49	SMA
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	3.5	5.0	1	EPA 624.1 Certifications:	07/05/2023 09:00 CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP	07/05/2023 13:49	SMA
79-01-6	Trichloroethylene	ND		ug/L	1.2	5.0	1	EPA 624.1 Certifications:	07/05/2023 09:00 CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP	07/05/2023 13:49	SMA
75-01-4	Vinyl Chloride	ND		ug/L	1.3	5.0	1	EPA 624.1 Certifications:	07/05/2023 09:00 CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP	07/05/2023 13:49	SMA

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: SURR: 1,2-Dichloroethane-d4*	*107 %*	*78-126*
2037-26-5	*Surrogate: SURR: Toluene-d8*	*93.9 %*	*84-117*
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*97.6 %*	*71-130*

Semi-Volatiles, 8270 Base/Neutrals

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
120-82-1	1,2,4-Trichlorobenzene	ND		ug/L	2.47	5.00	1	EPA 8270D Certifications:	06/29/2023 09:30 CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP	06/30/2023 12:23	KH
99-09-2	3-Nitroaniline	ND		ug/L	1.68	5.00	1	EPA 8270D Certifications:	06/29/2023 09:30 CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP	06/30/2023 12:23	KH

	Surrogate Recoveries	Result	Acceptance Range
4165-60-0	*Surrogate: SURR: Nitrobenzene-d5*	*82.3 %*	*50.2-113*
321-60-8	*Surrogate: SURR: 2-Fluorobiphenyl*	*72.3 %*	*39.9-105*
1718-51-0	*Surrogate: SURR: Terphenyl-d14*	*94.5 %*	*30.7-106*

Arsenic by EPA 200.7

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	ND		ug/L	16.7	1	EPA 200.7 Certifications:	07/06/2023 08:39 CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP	07/06/2023 21:01	CEG

Barium by EPA 200.7

Log-in Notes:

Sample Notes:

Sample Information

Client Sample ID: **System Effluent** **York Sample ID:** **23F1782-01**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1782	80 Banks Avenue, Rockville Centre, NY 12-190 DS	Ground Water	June 27, 2023 12:00 pm	06/28/2023

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-39-3	**Barium**	**34.1**		ug/L	27.8	1	EPA 200.7	07/06/2023 08:39	07/06/2023 21:01	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Beryllium by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-41-7	Beryllium	ND		ug/L	0.556	1	EPA 200.7	07/06/2023 08:39	07/06/2023 21:01	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Cadmium by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-43-9	Cadmium	ND		ug/L	3.33	1	EPA 200.7	07/06/2023 08:39	07/06/2023 21:01	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Chromium by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-47-3	**Chromium**	**11.1**		ug/L	5.56	1	EPA 200.7	07/06/2023 08:39	07/06/2023 21:01	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Cobalt by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-48-4	Cobalt	ND		ug/L	4.44	1	EPA 200.7	07/06/2023 08:39	07/06/2023 21:01	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Copper by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-50-8	**Copper**	**35.7**		ug/L	22.2	1	EPA 200.7	07/06/2023 08:39	07/06/2023 21:01	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Iron by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	Iron	ND		ug/L	278	1	EPA 200.7	07/06/2023 08:39	07/06/2023 21:01	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Lead by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst

Sample Information

Client Sample ID: System Effluent **York Sample ID:** 23F1782-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1782	80 Banks Avenue, Rockville Centre, NY 12-190 DS	Ground Water	June 27, 2023 12:00 pm	06/28/2023

Lead by EPA 200.7

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-92-1	Lead	ND		ug/L	5.56	1	EPA 200.7	07/06/2023 08:39	07/06/2023 21:01	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Magnesium by EPA 200.7

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-95-4	**Magnesium**	**335**		ug/L	55.6	1	EPA 200.7	07/06/2023 08:39	07/06/2023 21:01	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Manganese by EPA 200.7

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-96-5	Manganese	ND		ug/L	5.56	1	EPA 200.7	07/06/2023 08:39	07/06/2023 21:01	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Nickel by EPA 200.7

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-02-0	Nickel	ND		ug/L	11.1	1	EPA 200.7	07/06/2023 08:39	07/06/2023 21:01	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Vanadium by EPA 200.7

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-62-2	Vanadium	ND		ug/L	11.1	1	EPA 200.7	07/06/2023 08:39	07/06/2023 21:01	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Zinc by EPA 200.7

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-66-6	**Zinc**	**52.2**		ug/L	27.8	1	EPA 200.7	07/06/2023 08:39	07/06/2023 21:01	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Mercury by EPA 245.1

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 245.1 Mercury

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		ug/L	0.2000	1	EPA 245.1	07/03/2023 08:23	07/03/2023 12:00	PA
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Sample Information

Client Sample ID: **System Effluent** **York Sample ID:** **23F1782-01**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1782	80 Banks Avenue, Rockville Centre, NY 12-190 DS	Ground Water	June 27, 2023 12:00 pm	06/28/2023

pH

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	*** pH**	**6.42**	HT-pH	pH units	0.500	1	SM 4500 HB	07/03/2023 08:54	07/03/2023 15:48	S_S
							Certifications: CTDOH-PH-0723			

Total Suspended Solids (EPA)

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	*** Total Suspended Solids**	**5400**		ug/L	2000	1	EPA 160.2	07/03/2023 07:25	07/03/2023 15:04	sgs
							Certifications:			

Analytical Batch Summary

Batch ID: BF31952 **Preparation Method:** EPA 3510C **Prepared By:** SS

YORK Sample ID	Client Sample ID	Preparation Date
23F1782-01	System Effluent	06/29/23
BF31952-BLK1	Blank	06/29/23
BF31952-BS1	LCS	06/29/23
BF31952-BSD1	LCS Dup	06/29/23

Batch ID: BG30035 **Preparation Method:** % Solids Prep **Prepared By:** sgs

YORK Sample ID	Client Sample ID	Preparation Date
23F1782-01	System Effluent	07/03/23
BG30035-BLK1	Blank	07/03/23
BG30035-DUP1	Duplicate	07/03/23
BG30035-DUP2	Duplicate	07/03/23

Batch ID: BG30049 **Preparation Method:** EPA 245.1 Mercury **Prepared By:** PFA

YORK Sample ID	Client Sample ID	Preparation Date
23F1782-01	System Effluent	07/03/23
BG30049-BLK1	Blank	07/03/23
BG30049-BLK2	Blank	07/03/23
BG30049-BS1	LCS	07/03/23
BG30049-BS2	LCS	07/03/23

Batch ID: BG30057 **Preparation Method:** Analysis Preparation **Prepared By:** S_S

YORK Sample ID	Client Sample ID	Preparation Date
23F1782-01	System Effluent	07/03/23
BG30057-DUP1	Duplicate	07/03/23

Batch ID: BG30080 **Preparation Method:** EPA 5030B **Prepared By:** SMA

YORK Sample ID	Client Sample ID	Preparation Date
23F1782-01	System Effluent	07/05/23
BG30080-BLK1	Blank	07/05/23
BG30080-BS1	LCS	07/05/23
BG30080-BSD1	LCS Dup	07/05/23

Batch ID: BG30225 **Preparation Method:** EPA 200.7 **Prepared By:** AD2

YORK Sample ID	Client Sample ID	Preparation Date
23F1782-01	System Effluent	07/06/23
BG30225-BLK1	Blank	07/06/23
BG30225-BS1	LCS	07/06/23

BG30225-DUP1	Duplicate	07/06/23
BG30225-MS1	Matrix Spike	07/06/23
BG30225-MS2	Matrix Spike	07/06/23
BG30225-PS1	Post Spike	07/06/23

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BG30080 - EPA 5030B											
Blank (BG30080-BLK1)								Prepared & Analyzed: 07/05/2023			
Acetone	ND	10	ug/L								
Methyl tert-butyl ether (MTBE)	ND	5.0	"								
Tetrachloroethylene	ND	5.0	"								
Toluene	ND	5.0	"								
trans-1,2-Dichloroethylene	ND	5.0	"								
Trichloroethylene	ND	5.0	"								
Vinyl Chloride	ND	5.0	"								
Surrogate: SURR: 1,2-Dichloroethane-d4	*10.3*		*"*	*10.0*		*103*	*78-126*				
Surrogate: SURR: Toluene-d8	*9.51*		*"*	*10.0*		*95.1*	*84-117*				
Surrogate: SURR: p-Bromofluorobenzene	*9.90*		*"*	*10.0*		*99.0*	*71-130*				
LCS (BG30080-BS1)								Prepared & Analyzed: 07/05/2023			
Acetone	14		ug/L	20.0		69.8	30-112				
Methyl tert-butyl ether (MTBE)	24		"	20.0		121	59-135				
Tetrachloroethylene	12		"	20.0		62.0	77-133	Low Bias			
Toluene	22		"	20.0		108	83-122				
trans-1,2-Dichloroethylene	25		"	20.0		126	59-145				
Trichloroethylene	21		"	20.0		107	80-125				
Vinyl Chloride	25		"	20.0		123	41-136				
Surrogate: SURR: 1,2-Dichloroethane-d4	*10.2*		*"*	*10.0*		*102*	*78-126*				
Surrogate: SURR: Toluene-d8	*9.54*		*"*	*10.0*		*95.4*	*84-117*				
Surrogate: SURR: p-Bromofluorobenzene	*9.64*		*"*	*10.0*		*96.4*	*71-130*				
LCS Dup (BG30080-BSD1)								Prepared & Analyzed: 07/05/2023			
Acetone	15		ug/L	20.0		75.1	30-112		7.32	30	
Methyl tert-butyl ether (MTBE)	26		"	20.0		128	59-135		5.21	30	
Tetrachloroethylene	12		"	20.0		59.0	77-133	Low Bias	4.87	30	
Toluene	21		"	20.0		103	83-122		3.93	30	
trans-1,2-Dichloroethylene	24		"	20.0		119	59-145		5.73	30	
Trichloroethylene	20		"	20.0		102	80-125		5.56	30	
Vinyl Chloride	23		"	20.0		115	41-136		7.10	30	
Surrogate: SURR: 1,2-Dichloroethane-d4	*10.5*		*"*	*10.0*		*105*	*78-126*				
Surrogate: SURR: Toluene-d8	*9.58*		*"*	*10.0*		*95.8*	*84-117*				
Surrogate: SURR: p-Bromofluorobenzene	*9.55*		*"*	*10.0*		*95.5*	*71-130*				

Semivolatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BF31952 - EPA 3510C											
Blank (BF31952-BLK1)									Prepared: 06/29/2023 Analyzed: 06/30/2023		
1,2,4-Trichlorobenzene	ND	5.00	ug/L								
3-Nitroaniline	ND	5.00	"								
Surrogate: SURR: Nitrobenzene-d5	*12.0*		*"*	*25.0*		*48.1*	*50.2-113*				
Surrogate: SURR: 2-Fluorobiphenyl	*10.4*		*"*	*25.0*		*41.6*	*39.9-105*				
Surrogate: SURR: Terphenyl-d14	*13.4*		*"*	*25.0*		*53.8*	*30.7-106*				
LCS (BF31952-BS1)									Prepared: 06/29/2023 Analyzed: 06/30/2023		
1,2,4-Trichlorobenzene	13.3	5.00	ug/L	25.0		53.0	35-91				
3-Nitroaniline	12.9	5.00	"	25.0		51.6	29-128				
Surrogate: SURR: Nitrobenzene-d5	*14.0*		*"*	*25.0*		*55.9*	*50.2-113*				
Surrogate: SURR: 2-Fluorobiphenyl	*11.8*		*"*	*25.0*		*47.2*	*39.9-105*				
Surrogate: SURR: Terphenyl-d14	*12.2*		*"*	*25.0*		*49.0*	*30.7-106*				
LCS Dup (BF31952-BSD1)									Prepared: 06/29/2023 Analyzed: 06/30/2023		
1,2,4-Trichlorobenzene	15.4	5.00	ug/L	25.0		61.4	35-91		14.7	20	
3-Nitroaniline	15.6	5.00	"	25.0		62.2	29-128		18.6	20	
Surrogate: SURR: Nitrobenzene-d5	*14.6*		*"*	*25.0*		*58.3*	*50.2-113*				
Surrogate: SURR: 2-Fluorobiphenyl	*12.3*		*"*	*25.0*		*49.1*	*39.9-105*				
Surrogate: SURR: Terphenyl-d14	*13.7*		*"*	*25.0*		*54.6*	*30.7-106*				

Metals by ICP - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BG30225 - EPA 200.7											
Blank (BG30225-BLK1)										Prepared & Analyzed: 07/06/2023	
Arsenic	ND	16.7	ug/L								
Barium	ND	27.8	"								
Beryllium	ND	0.556	"								
Cadmium	ND	3.33	"								
Chromium	ND	5.56	"								
Cobalt	ND	4.44	"								
Copper	ND	22.2	"								
Iron	ND	278	"								
Lead	ND	5.56	"								
Magnesium	ND	55.6	"								
Manganese	ND	5.56	"								
Nickel	ND	11.1	"								
Vanadium	ND	11.1	"								
Zinc	ND	27.8	"								
LCS (BG30225-BS1)										Prepared & Analyzed: 07/06/2023	
Arsenic	2.03		ug/mL	2.00		101	85-115				
Barium	2.24		"	2.00		112	85-115				
Beryllium	0.0539		"	0.0500		108	85-115				
Cadmium	0.0527		"	0.0500		105	85-115				
Chromium	0.219		"	0.200		109	85-115				
Cobalt	0.564		"	0.500		113	85-115				
Copper	0.283		"	0.250		113	85-115				
Iron	1.14		"	1.00		114	85-115				
Lead	0.530		"	0.500		106	85-115				
Magnesium	1.11		"	1.00		111	85-115				
Manganese	0.555		"	0.500		111	85-115				
Nickel	0.551		"	0.500		110	85-115				
Vanadium	0.540		"	0.500		108	85-115				
Zinc	0.544		"	0.500		109	85-115				

Metals by ICP - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BG30225 - EPA 200.7											
Duplicate (BG30225-DUP1)	*Source sample: 23F2086-03 (Duplicate)								Prepared & Analyzed: 07/06/2023		
Arsenic	ND	16.7	ug/L		ND					20	
Barium	42.1	27.8	"		42.6				1.06	20	
Beryllium	ND	0.556	"		ND					20	
Cadmium	ND	3.33	"		ND					20	
Chromium	ND	5.56	"		ND					20	
Cobalt	ND	4.44	"		ND					20	
Copper	ND	22.2	"		ND					20	
Iron	ND	278	"		ND					20	
Lead	ND	5.56	"		ND					20	
Magnesium	4070	55.6	"		4100				0.820	20	
Manganese	22.4	5.56	"		22.3				0.595	20	
Nickel	ND	11.1	"		ND					20	
Vanadium	ND	11.1	"		ND					20	
Zinc	ND	27.8	"		ND					20	
Matrix Spike (BG30225-MS1)	*Source sample: 23F2086-03 (Matrix Spike)								Prepared & Analyzed: 07/06/2023		
Arsenic	2420	16.7	ug/L	2220	ND	109	75-125				
Barium	2570	27.8	"	2220	42.6	114	75-125				
Beryllium	63.2	0.556	"	55.6	ND	114	75-125				
Cadmium	60.7	3.33	"	55.6	ND	109	75-125				
Chromium	251	5.56	"	222	ND	113	75-125				
Cobalt	620	4.44	"	556	ND	112	75-125				
Copper	332	22.2	"	278	ND	119	75-125				
Iron	1230	278	"	1110	ND	110	75-125				
Lead	592	5.56	"	556	ND	107	75-125				
Magnesium	5250	55.6	"	1110	4100	103	75-125				
Manganese	655	5.56	"	556	22.3	114	75-125				
Nickel	636	11.1	"	556	ND	115	75-125				
Vanadium	625	11.1	"	556	ND	112	75-125				
Zinc	658	27.8	"	556	ND	118	75-125				

Metals by ICP - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BG30225 - EPA 200.7											
Matrix Spike (BG30225-MS2)	*Source sample: 23F1711-07 (Matrix Spike)							Prepared & Analyzed: 07/06/2023			
Arsenic	2280	16.7	ug/L	2220	ND	102	75-125				
Barium	2460	27.8	"	2220	ND	111	75-125				
Beryllium	59.7	0.556	"	55.6	ND	107	75-125				
Cadmium	58.1	3.33	"	55.6	ND	105	75-125				
Chromium	239	5.56	"	222	ND	108	75-125				
Cobalt	600	4.44	"	556	ND	108	75-125				
Copper	800	22.2	"	278	479	115	75-125				
Iron	1420	278	"	1110	ND	128	75-125	High Bias			
Lead	582	5.56	"	556	ND	105	75-125				
Magnesium	2230	55.6	"	1110	1050	106	75-125				
Manganese	700	5.56	"	556	86.9	110	75-125				
Nickel	612	11.1	"	556	ND	110	75-125				
Vanadium	594	11.1	"	556	ND	107	75-125				
Zinc	789	27.8	"	556	175	111	75-125				
Post Spike (BG30225-PS1)	*Source sample: 23F2086-03 (Post Spike)							Prepared & Analyzed: 07/06/2023			
Arsenic	1.94		ug/mL	2.00	-0.0187	97.1	75-125				
Barium	2.09		"	2.00	0.0383	103	75-125				
Beryllium	0.0511		"	0.0500	0.0000845	102	75-125				
Cadmium	0.0486		"	0.0500	0.0000393	97.2	75-125				
Chromium	0.204		"	0.200	0.00103	101	75-125				
Cobalt	0.509		"	0.500	0.000232	102	75-125				
Copper	0.270		"	0.250	0.00142	107	75-125				
Iron	0.998		"	1.00	-0.0142	99.8	75-125				
Lead	0.472		"	0.500	-0.00268	94.5	75-125				
Magnesium	4.64		"	1.00	3.69	94.2	75-125				
Manganese	0.534		"	0.500	0.0201	103	75-125				
Nickel	0.512		"	0.500	-0.00215	102	75-125				
Vanadium	0.505		"	0.500	0.000905	101	75-125				
Zinc	0.528		"	0.500	0.0196	102	75-125				

Mercury by EPA 7000/200 Series Methods - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BG30049 - EPA 245.1 Mercury											
Blank (BG30049-BLK1)								Prepared & Analyzed: 07/03/2023			
Mercury	ND	0.2000	ug/L								
Blank (BG30049-BLK2)								Prepared & Analyzed: 07/03/2023			
Mercury	ND	0.2000	ug/L								
LCS (BG30049-BS1)								Prepared & Analyzed: 07/03/2023			
Mercury	1.934	0.2000	ug/L	2.00		96.7	75-125				
LCS (BG30049-BS2)								Prepared & Analyzed: 07/03/2023			
Mercury	2.124	0.2000	ug/L	2.00		106	75-125				

Wet Chemistry Parameters - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BG30057 - Analysis Preparation											
Duplicate (BG30057-DUP1)	*Source sample: 23F1725-01 (Duplicate)								Prepared & Analyzed: 07/03/2023		
pH	7.89	0.500	pH units		7.86				0.381	10	

Miscellaneous Physical Parameters - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BG30035 - % Solids Prep											
Blank (BG30035-BLK1)								Prepared & Analyzed: 07/03/2023			
Total Suspended Solids	ND	1000	ug/L								
Duplicate (BG30035-DUP1)	*Source sample: 23F1675-02 (Duplicate)							Prepared & Analyzed: 07/03/2023			
Total Suspended Solids	6000	5000	ug/L		5500				8.70	15	
Duplicate (BG30035-DUP2)	*Source sample: 23F2097-01 (Duplicate)							Prepared & Analyzed: 07/03/2023			
Total Suspended Solids	ND	5000	ug/L		ND					15	

Volatile Analysis Sample Containers

Lab ID	Client Sample ID	Volatile Sample Container
23F1782-01	System Effluent	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C

Sample and Data Qualifiers Relating to This Work Order

QL-02 This LCS analyte is outside Laboratory Recovery limits due the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature.

HT-pH HOLDING TIME EXCEEDED. Samples for pH must be measured in the field or within 15 minutes of sample collection.

Definitions and Other Explanations

*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

Field Chain-of-Custody Record

YORK ANALYTICAL LABORATORIES INC

York Analytical Laboratories, Inc. (YORK)'s Standard Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization for YORK to proceed with the analyses requested below.
Your signature binds you to YORK's Standard Terms & Conditions.

120 Research Drive Stratford, CT 06615 - 132-02 89th Ave Queens, NY 11418 - 56 Church Hill Rd. #2 Newtown, CT 06470 clientservices@yorklab.com www.yorklab.com 800-306-YORK

YORK Project No. 23F1782

Page 1 of 1

YOUR Information	Report To:	Invoice To:
Company: Laurel Environmental Group	Company:	Company:
Address: 53 West Hills Road Huntington Station, NY 11746	Address: Scott	Address: Kathy
Phone.: (631) 673-0022	Phone.:	Phone.:
Contact: Scott Yarnell	Contact:	Contact:
E-mail: labresults@laurelenv.com	E-mail:	E-mail:

YOUR Project Number: 12-140 DS

YOUR Project Name: 80 Bennis Avenue, Rockville Centre, NY

YOUR PO#:

Turn-Around Time

- RUSH - Next Day
- RUSH - Two Day
- RUSH - Three Day
- RUSH - Four Day
- Standard (5-7 Day) [X]
- (7-10 for PFAS)

Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.

Nicholas Kideris

Samples Collected by: (print AND sign your name)

Matrix Codes

S - soil / solid
GW - groundwater
DW - drinking water
WW - wastewater
O - Oil | Other

Samples From

- New York [X]
- New Jersey
- Connecticut
- Pennsylvania
- Other:

Report / EDD Type (circle selections)

Summary Report | CT RCP | EQuIS (Standard)
QA Report | CT RCP DQA/DUE | NYSDEC EQuIS
Standard Excel EDD | NJDEP Reduced Deliverables | NJDKQP
NY ASP B Package | NJDEP SRP HazSite
Other:

YORK Reg. Comp.

Compared to the following Regulation(s): (please fill in)

Sample Identification	Sample Matrix	Date/Time Sampled	Analyses Requested	Container Type	No.
System Effluent	GW	6/27/23 1200	NYSDEC SPDES + TSS	(2) 1L, (2) 250mL, (3) 40mL	

Comments:

Samples iced/chilled at time of lab pickup? circle Yes or No

Preservation: (check all that apply)

HCl ✓ MeOH ___ HNO3 ✓ H2SO4 ✓ NaOH ___
ZnAc ___ Ascorbic Acid ___ Other: ___

Special Instruction

Field Filtered
Lab to Filter

1. Samples Relinquished by / Company	Date/Time	1. Samples Received by / Company	Date/Time	2. Samples Relinquished by / Company	Date/Time
	6/28/23 KW	KBarbyak	6/28/23 11AM	KBarbyak	6/28/23
2. Samples Received by / Company	Date/Time	3. Samples Relinquished by / Company	Date/Time	3. Samples Received by / Company	Date/Time
4. Samples Relinquished by / Company	Date/Time	4. Samples Received by / Company	Date/Time	Samples Received in LAB by	Date/Time / Temperature
					6/29/23 17:20 / 5.2 Degrees C

Technical Report

prepared for:

Laurel Environmental Geosciences, D.P.C.
53 W Hills Road, Suite 1
Huntington Station NY, 11746
Attention: Scott Yanuck

Report Date: 08/04/2023
Client Project ID: 80 Banks Ave Rockville Centre, NY 12-190 DS
York Project (SDG) No.: 23G1535

CT Cert. No. PH-0723 New Jersey Cert. No. CT005 and NY037 New York Cert. Nos. 10854 and 12058 PA Cert. No. 68-04440

120 RESEARCH DRIVE STRATFORD, CT 06615 ■ 132-02 89th AVENUE RICHMOND HILL, NY 11418
www.YORKLAB.com (203) 325-1371 FAX (203) 357-0166 ClientServices@yorklab.com

Report Date: 08/04/2023
Client Project ID: 80 Banks Ave Rockville Centre, NY 12-190 DS
York Project (SDG) No.: 23G1535

Laurel Environmental Geosciences, D.P.C.
53 W Hills Road, Suite 1
Huntington Station NY, 11746
Attention: Scott Yanuck

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on July 26, 2023 and listed below. The project was identified as your project: **80 Banks Ave Rockville Centre, NY 12-190 DS**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
23G1535-01	System Effluent	Water	07/25/2023	07/26/2023

General Notes for York Project (SDG) No.: 23G1535

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By: Cassie L. Mosher **Date:** 08/04/2023

Cassie L. Mosher
Laboratory Manager

Sample Information

Client Sample ID: **System Effluent** **York Sample ID:** **23G1535-01**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23G1535	80 Banks Ave Rockville Centre, NY 12-190 DS	Water	July 25, 2023 12:15 pm	07/26/2023

Volatile Organics, 624 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
67-64-1	* Acetone	ND		ug/L	6.1	10	1	EPA 624.1 Certifications:	07/27/2023 09:00	07/27/2023 12:51	SMA
1634-04-4	* Methyl tert-butyl ether (MTBE)	ND		ug/L	0.53	5.0	1	EPA 624.1 Certifications:	07/27/2023 09:00	07/27/2023 12:51	SMA
127-18-4	Tetrachloroethylene	ND	QL-02	ug/L	3.3	5.0	1	EPA 624.1 Certifications:	07/27/2023 09:00 CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP	07/27/2023 12:51	SMA
108-88-3	Toluene	ND		ug/L	0.81	5.0	1	EPA 624.1 Certifications:	07/27/2023 09:00 CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP	07/27/2023 12:51	SMA
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	3.5	5.0	1	EPA 624.1 Certifications:	07/27/2023 09:00 CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP	07/27/2023 12:51	SMA
79-01-6	Trichloroethylene	ND		ug/L	1.2	5.0	1	EPA 624.1 Certifications:	07/27/2023 09:00 CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP	07/27/2023 12:51	SMA
75-01-4	Vinyl Chloride	ND		ug/L	1.3	5.0	1	EPA 624.1 Certifications:	07/27/2023 09:00 CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP	07/27/2023 12:51	SMA

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: SURR: 1,2-Dichloroethane-d4*	*110 %*	*78-126*
2037-26-5	*Surrogate: SURR: Toluene-d8*	*97.7 %*	*84-117*
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*104 %*	*71-130*

Semi-Volatiles, 8270 Base/Neutrals

Log-in Notes:

Sample Notes: **EXT-EM**

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
120-82-1	1,2,4-Trichlorobenzene	ND		ug/L	2.82	5.71	1	EPA 8270D Certifications:	07/29/2023 08:18 CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP	08/01/2023 17:19	KH
99-09-2	3-Nitroaniline	ND		ug/L	1.92	5.71	1	EPA 8270D Certifications:	07/29/2023 08:18 CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP	08/01/2023 17:19	KH

	Surrogate Recoveries	Result	Acceptance Range
4165-60-0	*Surrogate: SURR: Nitrobenzene-d5*	*62.8 %*	*50.2-113*
321-60-8	*Surrogate: SURR: 2-Fluorobiphenyl*	*62.9 %*	*39.9-105*
1718-51-0	*Surrogate: SURR: Terphenyl-d14*	*70.0 %*	*30.7-106*

Arsenic by EPA 200.7

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	ND		ug/L	16.7	1	EPA 200.7 Certifications:	08/01/2023 08:29 CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP	08/04/2023 12:02	CEG

Barium by EPA 200.7

Log-in Notes:

Sample Notes:

Sample Information

Client Sample ID: System Effluent **York Sample ID:** 23G1535-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23G1535	80 Banks Ave Rockville Centre, NY 12-190 DS	Water	July 25, 2023 12:15 pm	07/26/2023

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-39-3	**Barium**	**50.5**		ug/L	27.8	1	EPA 200.7	08/01/2023 08:29	08/04/2023 12:02	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Beryllium by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-41-7	**Beryllium**	**0.612**		ug/L	0.556	1	EPA 200.7	08/01/2023 08:29	08/04/2023 12:02	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Cadmium by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-43-9	Cadmium	ND		ug/L	3.33	1	EPA 200.7	08/01/2023 08:29	08/04/2023 12:02	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Chromium by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-47-3	**Chromium**	**25.2**		ug/L	5.56	1	EPA 200.7	08/01/2023 08:29	08/04/2023 12:02	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Cobalt by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-48-4	Cobalt	ND		ug/L	4.44	1	EPA 200.7	08/01/2023 08:29	08/04/2023 12:02	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Copper by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-50-8	**Copper**	**25.2**		ug/L	22.2	1	EPA 200.7	08/01/2023 08:29	08/04/2023 12:02	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Iron by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	**Iron**	**2190**		ug/L	278	1	EPA 200.7	08/01/2023 08:29	08/04/2023 12:02	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Lead by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst

Sample Information

Client Sample ID: **System Effluent** **York Sample ID:** **23G1535-01**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23G1535	80 Banks Ave Rockville Centre, NY 12-190 DS	Water	July 25, 2023 12:15 pm	07/26/2023

Lead by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-92-1	Lead	ND		ug/L	5.56	1	EPA 200.7	08/01/2023 08:29	08/04/2023 12:02	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Magnesium by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-95-4	**Magnesium**	**441**		ug/L	55.6	1	EPA 200.7	08/01/2023 08:29	08/04/2023 12:02	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Manganese by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-96-5	**Manganese**	**6.53**		ug/L	5.56	1	EPA 200.7	08/01/2023 08:29	08/04/2023 12:02	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Nickel by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-02-0	Nickel	ND		ug/L	11.1	1	EPA 200.7	08/01/2023 08:29	08/04/2023 12:02	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Vanadium by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-62-2	Vanadium	ND		ug/L	11.1	1	EPA 200.7	08/01/2023 08:29	08/04/2023 12:02	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Zinc by EPA 200.7

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 200.7

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-66-6	**Zinc**	**175**		ug/L	27.8	1	EPA 200.7	08/01/2023 08:29	08/04/2023 12:02	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Mercury by EPA 245.1

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 245.1 Mercury

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		ug/L	0.2000	1	EPA 245.1	07/27/2023 09:09	07/27/2023 12:01	PA
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Sample Information

Client Sample ID: System Effluent

York Sample ID: 23G1535-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23G1535	80 Banks Ave Rockville Centre, NY 12-190 DS	Water	July 25, 2023 12:15 pm	07/26/2023

pH

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	*** pH**	**7.46**	HT-pH	pH units	0.500	1	SM 4500 HB	07/27/2023 17:13	07/27/2023 22:38	SL
							Certifications: CTDOH-PH-0723			

Total Suspended Solids (EPA)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	* Total Suspended Solids	ND		ug/L	5000	1	EPA 160.2	07/31/2023 07:26	07/31/2023 15:27	sgs
							Certifications:			

Analytical Batch Summary

Batch ID: BG31558 **Preparation Method:** EPA 5030B **Prepared By:** SMA

YORK Sample ID	Client Sample ID	Preparation Date
23G1535-01	System Effluent	07/27/23
BG31558-BLK1	Blank	07/27/23
BG31558-BS1	LCS	07/27/23
BG31558-BSD1	LCS Dup	07/27/23

Batch ID: BG31559 **Preparation Method:** EPA 245.1 Mercury **Prepared By:** PFA

YORK Sample ID	Client Sample ID	Preparation Date
23G1535-01	System Effluent	07/27/23
BG31559-BLK1	Blank	07/27/23
BG31559-BLK2	Blank	07/27/23
BG31559-BS1	LCS	07/27/23
BG31559-BS2	LCS	07/27/23

Batch ID: BG31606 **Preparation Method:** Analysis Preparation **Prepared By:** SL

YORK Sample ID	Client Sample ID	Preparation Date
23G1535-01	System Effluent	07/27/23
BG31606-DUP1	Duplicate	07/27/23

Batch ID: BG31686 **Preparation Method:** EPA 3510C **Prepared By:** JG

YORK Sample ID	Client Sample ID	Preparation Date
23G1535-01	System Effluent	07/29/23
BG31686-BLK1	Blank	07/29/23
BG31686-BS1	LCS	07/29/23
BG31686-BSD1	LCS Dup	07/29/23

Batch ID: BG31735 **Preparation Method:** % Solids Prep **Prepared By:** sgs

YORK Sample ID	Client Sample ID	Preparation Date
23G1535-01	System Effluent	07/31/23
BG31735-BLK1	Blank	07/31/23
BG31735-DUP1	Duplicate	07/31/23
BG31735-DUP2	Duplicate	07/31/23

Batch ID: BH30013 **Preparation Method:** EPA 200.7 **Prepared By:** AD2

YORK Sample ID	Client Sample ID	Preparation Date
23G1535-01	System Effluent	08/01/23
BH30013-BLK1	Blank	08/01/23
BH30013-BS1	LCS	08/01/23

BH30013-DUP1	Duplicate	08/01/23
BH30013-MS1	Matrix Spike	08/01/23
BH30013-MS2	Matrix Spike	08/01/23
BH30013-PS1	Post Spike	08/01/23

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BG31558 - EPA 5030B											
Blank (BG31558-BLK1)								Prepared & Analyzed: 07/27/2023			
Acetone	ND	10	ug/L								
Methyl tert-butyl ether (MTBE)	ND	5.0	"								
Tetrachloroethylene	ND	5.0	"								
Toluene	ND	5.0	"								
trans-1,2-Dichloroethylene	ND	5.0	"								
Trichloroethylene	ND	5.0	"								
Vinyl Chloride	ND	5.0	"								
Surrogate: SURR: 1,2-Dichloroethane-d4	*10.8*		*"*	*10.0*		*108*	*78-126*				
Surrogate: SURR: Toluene-d8	*9.83*		*"*	*10.0*		*98.3*	*84-117*				
Surrogate: SURR: p-Bromofluorobenzene	*10.1*		*"*	*10.0*		*101*	*71-130*				
LCS (BG31558-BS1)								Prepared & Analyzed: 07/27/2023			
Acetone	8.2		ug/L	20.0		41.0	30-112				
Methyl tert-butyl ether (MTBE)	18		"	20.0		91.1	59-135				
Tetrachloroethylene	11		"	20.0		54.2	77-133	Low Bias			
Toluene	18		"	20.0		89.2	83-122				
trans-1,2-Dichloroethylene	19		"	20.0		93.6	59-145				
Trichloroethylene	18		"	20.0		88.7	80-125				
Vinyl Chloride	24		"	20.0		118	41-136				
Surrogate: SURR: 1,2-Dichloroethane-d4	*9.60*		*"*	*10.0*		*96.0*	*78-126*				
Surrogate: SURR: Toluene-d8	*9.70*		*"*	*10.0*		*97.0*	*84-117*				
Surrogate: SURR: p-Bromofluorobenzene	*9.55*		*"*	*10.0*		*95.5*	*71-130*				
LCS Dup (BG31558-BSD1)								Prepared & Analyzed: 07/27/2023			
Acetone	12		ug/L	20.0		58.2	30-112		34.6	30	Non-dir.
Methyl tert-butyl ether (MTBE)	20		"	20.0		102	59-135		10.8	30	
Tetrachloroethylene	10		"	20.0		52.0	77-133	Low Bias	4.33	30	
Toluene	17		"	20.0		86.4	83-122		3.30	30	
trans-1,2-Dichloroethylene	19		"	20.0		93.6	59-145		0.107	30	
Trichloroethylene	17		"	20.0		85.2	80-125		3.97	30	
Vinyl Chloride	23		"	20.0		115	41-136		2.44	30	
Surrogate: SURR: 1,2-Dichloroethane-d4	*10.1*		*"*	*10.0*		*101*	*78-126*				
Surrogate: SURR: Toluene-d8	*9.50*		*"*	*10.0*		*95.0*	*84-117*				
Surrogate: SURR: p-Bromofluorobenzene	*9.37*		*"*	*10.0*		*93.7*	*71-130*				

Semivolatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BG31686 - EPA 3510C											
Blank (BG31686-BLK1)									Prepared: 07/29/2023 Analyzed: 08/01/2023		
1,2,4-Trichlorobenzene	ND	5.00	ug/L								
3-Nitroaniline	ND	5.00	"								
Surrogate: SURR: Nitrobenzene-d5	*19.3*		*"*	*25.0*		*77.1*	*50.2-113*				
Surrogate: SURR: 2-Fluorobiphenyl	*18.7*		*"*	*25.0*		*75.0*	*39.9-105*				
Surrogate: SURR: Terphenyl-d14	*21.7*		*"*	*25.0*		*86.9*	*30.7-106*				
LCS (BG31686-BS1)									Prepared: 07/29/2023 Analyzed: 08/01/2023		
1,2,4-Trichlorobenzene	14.3	5.00	ug/L	25.0		57.3	35-91				
3-Nitroaniline	11.3	5.00	"	25.0		45.2	29-128				
Surrogate: SURR: Nitrobenzene-d5	*15.9*		*"*	*25.0*		*63.7*	*50.2-113*				
Surrogate: SURR: 2-Fluorobiphenyl	*15.3*		*"*	*25.0*		*61.2*	*39.9-105*				
Surrogate: SURR: Terphenyl-d14	*17.9*		*"*	*25.0*		*71.7*	*30.7-106*				
LCS Dup (BG31686-BSD1)									Prepared: 07/29/2023 Analyzed: 08/01/2023		
1,2,4-Trichlorobenzene	15.9	5.00	ug/L	25.0		63.5	35-91		10.3	20	
3-Nitroaniline	13.1	5.00	"	25.0		52.6	29-128		15.0	20	
Surrogate: SURR: Nitrobenzene-d5	*18.0*		*"*	*25.0*		*71.9*	*50.2-113*				
Surrogate: SURR: 2-Fluorobiphenyl	*16.8*		*"*	*25.0*		*67.1*	*39.9-105*				
Surrogate: SURR: Terphenyl-d14	*19.7*		*"*	*25.0*		*78.9*	*30.7-106*				

Metals by ICP - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BH30013 - EPA 200.7											
Blank (BH30013-BLK1)										Prepared & Analyzed: 08/01/2023	
Arsenic	ND	16.7	ug/L								
Barium	ND	27.8	"								
Beryllium	ND	0.556	"								
Cadmium	ND	3.33	"								
Chromium	ND	5.56	"								
Cobalt	ND	4.44	"								
Copper	ND	22.2	"								
Iron	ND	278	"								
Lead	ND	5.56	"								
Magnesium	ND	55.6	"								
Manganese	ND	5.56	"								
Nickel	ND	11.1	"								
Vanadium	ND	11.1	"								
Zinc	ND	27.8	"								
LCS (BH30013-BS1)										Prepared & Analyzed: 08/01/2023	
Arsenic	1.79		ug/mL	2.00		89.4	85-115				
Barium	1.98		"	2.00		99.0	85-115				
Beryllium	0.0479		"	0.0500		95.9	85-115				
Cadmium	0.0470		"	0.0500		93.9	85-115				
Chromium	0.189		"	0.200		94.5	85-115				
Cobalt	0.487		"	0.500		97.4	85-115				
Copper	0.251		"	0.250		100	85-115				
Iron	0.967		"	1.00		96.7	85-115				
Lead	0.479		"	0.500		95.9	85-115				
Magnesium	0.967		"	1.00		96.7	85-115				
Manganese	0.491		"	0.500		98.2	85-115				
Nickel	0.493		"	0.500		98.5	85-115				
Vanadium	0.485		"	0.500		96.9	85-115				
Zinc	0.471		"	0.500		94.3	85-115				

Metals by ICP - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BH30013 - EPA 200.7											
Duplicate (BH30013-DUP1)	*Source sample: 23G1833-01 (Duplicate)								Prepared: 08/01/2023 Analyzed: 08/03/2023		
Arsenic	ND	16.7	ug/L		ND					20	
Barium	235	27.8	"		255				8.13	20	
Beryllium	ND	0.556	"		0.774					20	
Cadmium	ND	3.33	"		ND					20	
Chromium	ND	5.56	"		ND					20	
Cobalt	ND	4.44	"		ND					20	
Copper	ND	22.2	"		ND					20	
Iron	12300	278	"		13100				6.53	20	
Lead	ND	5.56	"		ND					20	
Magnesium	15700	55.6	"		16800				6.79	20	
Manganese	3240	5.56	"		3590				10.4	20	
Nickel	ND	11.1	"		ND					20	
Vanadium	ND	11.1	"		ND					20	
Zinc	47.3	27.8	"		35.2				29.4	20	Non-dir.
Matrix Spike (BH30013-MS1)	*Source sample: 23G1833-01 (Matrix Spike)								Prepared: 08/01/2023 Analyzed: 08/03/2023		
Arsenic	2200	16.7	ug/L	2220	ND	98.9	75-125				
Barium	2470	27.8	"	2220	255	99.5	75-125				
Beryllium	54.3	0.556	"	55.6	0.774	96.4	75-125				
Cadmium	54.2	3.33	"	55.6	ND	97.6	75-125				
Chromium	217	5.56	"	222	ND	97.8	75-125				
Cobalt	550	4.44	"	556	ND	98.9	75-125				
Copper	306	22.2	"	278	ND	110	75-125				
Iron	13700	278	"	1110	13100	56.1	75-125	Low Bias			
Lead	532	5.56	"	556	ND	95.8	75-125				
Magnesium	17200	55.6	"	1110	16800	34.7	75-125	Low Bias			
Manganese	3880	5.56	"	556	3590	50.9	75-125	Low Bias			
Nickel	572	11.1	"	556	ND	103	75-125				
Vanadium	563	11.1	"	556	ND	101	75-125				
Zinc	572	27.8	"	556	35.2	96.7	75-125				

Metals by ICP - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BH30013 - EPA 200.7											
Matrix Spike (BH30013-MS2)	*Source sample: 23G1354-05 (Matrix Spike)							Prepared: 08/01/2023 Analyzed: 08/04/2023			
Arsenic	2400	16.7	ug/L	2220	ND	108	75-125				
Barium	2940	27.8	"	2220	579	106	75-125				
Beryllium	54.5	0.556	"	55.6	ND	98.1	75-125				
Cadmium	53.9	3.33	"	55.6	ND	97.1	75-125				
Chromium	215	5.56	"	222	ND	96.8	75-125				
Cobalt	542	4.44	"	556	ND	97.6	75-125				
Copper	332	22.2	"	278	ND	120	75-125				
Iron	3060	278	"	1110	1790	114	75-125				
Lead	497	5.56	"	556	ND	89.4	75-125				
Magnesium	279000	55.6	"	1110	235000	NR	75-125	High Bias			
Manganese	2480	5.56	"	556	1650	149	75-125	High Bias			
Nickel	581	11.1	"	556	ND	105	75-125				
Vanadium	563	11.1	"	556	ND	101	75-125				
Zinc	565	27.8	"	556	30.8	96.1	75-125				
Post Spike (BH30013-PS1)	*Source sample: 23G1833-01 (Post Spike)							Prepared: 08/01/2023 Analyzed: 08/03/2023			
Arsenic	1.96		ug/mL	2.00	-0.0165	98.0	75-125				
Barium	2.13		"	2.00	0.230	95.0	75-125				
Beryllium	0.0474		"	0.0500	0.000697	93.5	75-125				
Cadmium	0.0476		"	0.0500	-0.0000668	95.2	75-125				
Chromium	0.187		"	0.200	0.00151	92.5	75-125				
Cobalt	0.489		"	0.500	0.000677	97.6	75-125				
Copper	0.263		"	0.250	0.00336	104	75-125				
Iron	12.6		"	1.00	11.8	81.8	75-125				
Lead	0.465		"	0.500	-0.00159	93.0	75-125				
Magnesium	15.8		"	1.00	15.1	64.5	75-125	Low Bias			
Manganese	3.48		"	0.500	3.23	48.8	75-125	Low Bias			
Nickel	0.497		"	0.500	-0.00289	99.4	75-125				
Vanadium	0.483		"	0.500	0.000206	96.6	75-125				
Zinc	0.500		"	0.500	0.0317	93.7	75-125				

Mercury by EPA 7000/200 Series Methods - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BG31559 - EPA 245.1 Mercury											
Blank (BG31559-BLK1)								Prepared & Analyzed: 07/27/2023			
Mercury	ND	0.2000	ug/L								
Blank (BG31559-BLK2)								Prepared & Analyzed: 07/27/2023			
Mercury	ND	0.2000	ug/L								
LCS (BG31559-BS1)								Prepared & Analyzed: 07/27/2023			
Mercury	1.895	0.2000	ug/L	2.00		94.7	75-125				
LCS (BG31559-BS2)								Prepared & Analyzed: 07/27/2023			
Mercury	1.933	0.2000	ug/L	2.00		96.6	75-125				

Wet Chemistry Parameters - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BG31606 - Analysis Preparation											
Duplicate (BG31606-DUP1)	*Source sample: 23G1404-01 (Duplicate)								Prepared & Analyzed: 07/27/2023		
pH	7.82	0.500	pH units		7.79				0.384	10	

Miscellaneous Physical Parameters - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BG31735 - % Solids Prep											
Blank (BG31735-BLK1)								Prepared & Analyzed: 07/31/2023			
Total Suspended Solids	ND	1000	ug/L								
Duplicate (BG31735-DUP1)	*Source sample: 23G1516-03 (Duplicate)							Prepared & Analyzed: 07/31/2023			
Total Suspended Solids	ND	5000	ug/L		ND					15	
Duplicate (BG31735-DUP2)	*Source sample: 23G1622-01 (Duplicate)							Prepared & Analyzed: 07/31/2023			
Total Suspended Solids	23000	5000	ug/L		23000				0.00	15	

Volatile Analysis Sample Containers

Lab ID	Client Sample ID	Volatile Sample Container
23G1535-01	System Effluent	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C

Sample and Data Qualifiers Relating to This Work Order

QR-04	The RPD exceeded control limits for the LCS/LCSD QC.
QL-02	This LCS analyte is outside Laboratory Recovery limits due the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature.
HT-pH	HOLDING TIME EXCEEDED. Samples for pH must be measured in the field or within 15 minutes of sample collection.
EXT-EM	The sample exhibited emulsion formation during the extraction process. This may affect surrogate recoveries.

Definitions and Other Explanations

*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

Field Chain-of-Custody Record

YORK ANALYTICAL LABORATORIES INC

York Analytical Laboratories, Inc. (YORK)'s Standard Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization for YORK to proceed with the analyses requested below.
Your signature binds you to YORK's Standard Terms & Conditions.

YORK Project No. 23G1535

120 Research Drive Stratford, CT 06615 132-02 89th Ave Queens, NY 11418 clientservices@yorklab.com www.yorklab.com 800-306-YORK 800-306-9675

YOUR Information	Report To:	Invoice To:
Company: Laurel Environmental	Company:	Company:
Address: 53 West Hills Road Huntington Station, NY 11746	Address: SCOTT	Address: Kathy
Phone.: (631) 673-0612	Phone.:	Phone.:
Contact: Scott Yanuck	Contact:	Contact:
E-mail: labresults@laurelenv.com	E-mail:	E-mail:

YOUR Project Number: 12-190 DS

YOUR Project Name: 80 Banks Avenue Rockville Centre, New York

YOUR PO#:

Turn-Around Time

RUSH - Next Day	
RUSH - Two Day	
RUSH - Three Day	
RUSH - Four Day	
Standard (5-7 Day)	X

Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.

Nicholas Kideis

Samples Collected by: (print AND sign your name)

Matrix Codes

S - soil / solid
GW - groundwater
DW - drinking water
WW - wastewater
O - Oil | Other

Samples From

New York X
New Jersey
Connecticut
Pennsylvania
Other:

Report / EDD Type (circle selections)

Summary Report | CT RCP | Standard Excel EDD
QA Report | CT RCP DQA/DUE | EQuIS (Standard)
NY ASP A Package | NJDEP Reduced Deliverables | ~~NYSDEC EQuIS~~
~~NY ASP B Package~~ | NJDEP SRP HazSite
NJDKQP | Other:

YORK Reg. Comp.

Compared to the following Regulation(s): (please fill in)

Sample Identification	Sample Matrix	Date/Time Sampled	Analysis Requested	Container Description
System Effluent		7/25/23 1215	NYSDEC SPDES + TSS	(3) 40mL, (2) 1L, (2) 250mL

Comments: Only Summary Report

Samples iced/chilled at time of lab pickup? circle Yes or No

Preservation: (check all that apply)

HCl ✓ MeOH ___ HNO3 ✓ H2SO4 ___ NaOH ___
ZnAc ___ Ascorbic Acid ___ Other: ___

Special Instruction

Field Filtered
Lab to Filter

1. Samples Relinquished by / Company	Date/Time	1. Samples Received by / Company	Date/Time	2. Samples Relinquished by / Company	Date/Time
	1045 AM 7/26/23	K Barden York	7/26/23 1045 AM	K Barden York	7/26/23 16:50
Samples Received by / Company	**Date/Time**	**3. Samples Relinquished by / Company**	**Date/Time**	**3. Samples Received by / Company**	**Date/Time**
Samples Relinquished by / Company	**Date/Time**	**4. Samples Received by / Company**	**Date/Time**	**Samples Received in LAB by**	**Date/Time** / **Temperature**
					7/26 16:50 / 5.6 Degrees C

APPENDIX E

Data Usability Summary Report