

City of Alexandria's Semi-Annual Report
ATG-Oronoco Site Summary
July 1, 2025 to December 31, 2025

This Semi-Annual Report summarizes site remedial activities for the former Alexandria Town Gas – Oronoco manufactured gas plant site (ATG-Oronoco) as described in Appendices A, B, and C of the Consent Decree between Potomac Riverkeeper Network and the City of Alexandria, Virginia, as filed January 9, 2024 in the U.S. District Court for the Eastern District of Virginia (Case No. 1:22-cv-00506-CMH-WEF).

March 1, 2026

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Acronyms / Abbreviations

ATG	Alexandria Town Gas
City	City of Alexandria
CIPP	Cured-in-Place Pipe
DEQ	Virginia Department of Environmental Quality
DNAPL	Dense non-aqueous phase liquid
ft	Feet
ft bgs	Feet below ground surface
LSS	Lee Street Square commercial/office townhouse complex
MGP	Manufactured Gas Plant
NAPL	Non-aqueous phase liquid
PAH	Polycyclic Aromatic Hydrocarbons
PRKN	Potomac Riverkeeper Network
RTN	Robinson Terminal North
Site	Alexandria Town Gas (ATG)-Oronoco Site
TarGOST	Tar-specific Green Optical Screening Tool
USEPA	United States Environmental Protection Agency
VRP	Voluntary Remediation Program

1 Introduction

This Semi-Annual Report summarizes site activities at the former Alexandria Town Gas – Oronoco (ATG-Oronoco) Manufactured Gas Plant site (the “Site”) in accordance with the Consent Decree between Potomac Riverkeeper, Inc. and the City of Alexandria, entered by the United States District Court for the Eastern District of Virginia on January 9, 2024. This summary covers the period from July 1, 2025, to December 31, 2025. The site of the former manufactured gas plant (MGP) is in the Old Town section of the City of Alexandria, Virginia, at the southeast corner of North Lee and Oronoco Streets (**Figure 1**). The Site boundaries also include the Oronoco Street right-of-way (R/W) from the North Lee/Oronoco Street intersection, eastward to the Potomac River. Since 2000, the City has been implementing a long-term remediation plan for the Site in coordination with the Virginia Department of Environmental Quality’s Voluntary Remediation Program (VRP Site No. 00241). The actions documented in this Semi-Annual Report complement the City’s long-standing remediation plan and, together, are intended to remediate the effects of historical pollution at the Site as soon as practicable.

1.1 Site Background

The ATG-Oronoco Voluntary Remediation Program (VRP) Site occupies an approximately 1-acre group of privately owned parcels at the corner of Oronoco and North Lee Streets in Old Town Alexandria (see **Figure 1**). The City operated the ATG MGP near the corner of North Lee and Oronoco Streets between 1851 and 1946. After closing, most of the ATG plant was demolished and the remaining buildings were repurposed by various businesses until the mid-1970s. In 1977, the former MGP property, including the last two remaining MGP buildings, was redeveloped into the Lee Street Square commercial/office townhouse complex (LSS), which now occupies the Site. In 1975, just prior to the redevelopment of the former MGP Site, a 44-inch x 72-inch-diameter arch-style stormwater pipeline was installed beneath the centerline of Oronoco Street adjacent to the former MGP Site to improve drainage and flood control in the area.

The surrounding urban area is occupied by a mixture of commercial and residential properties bordering the west bank of the Potomac River. The VRP Site boundaries also encompass the bordering City-owned public rights-of-way along Oronoco Street, from the intersection of North Lee Street to the end of Oronoco Street. However, in some cases, Site-related impacts extend beyond these boundaries to areas beneath adjoining private property and public rights-of-way, including the river bottom at the Oronoco Outfall. **Figure 2** presents a full site layout, including the VRP Site boundary and remedial activities and systems that have been installed prior to the Consent Decree.

ATG-Oronoco Site Summary July 1, 2025 to December 31, 2025

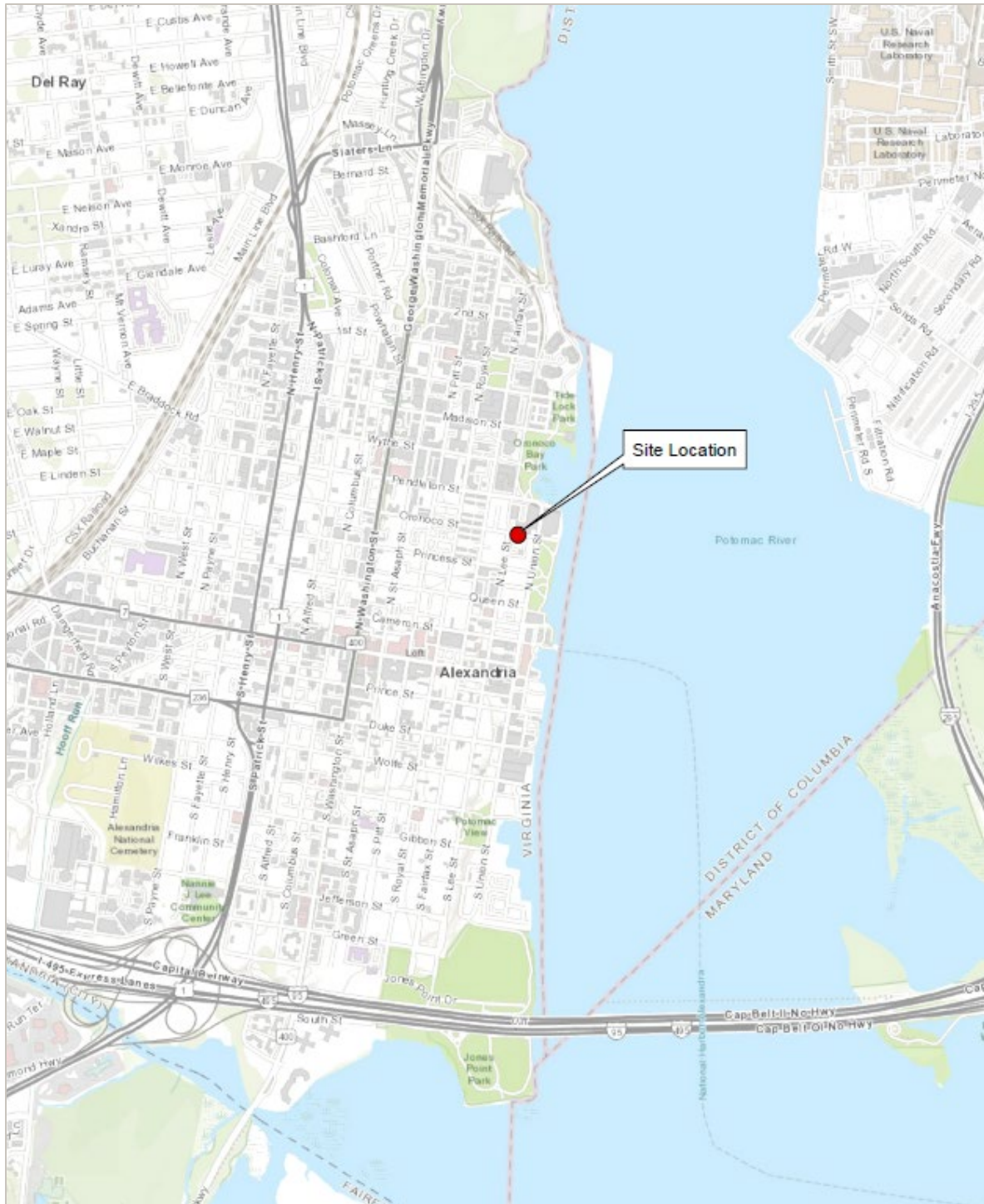


Figure 1 - Site Location

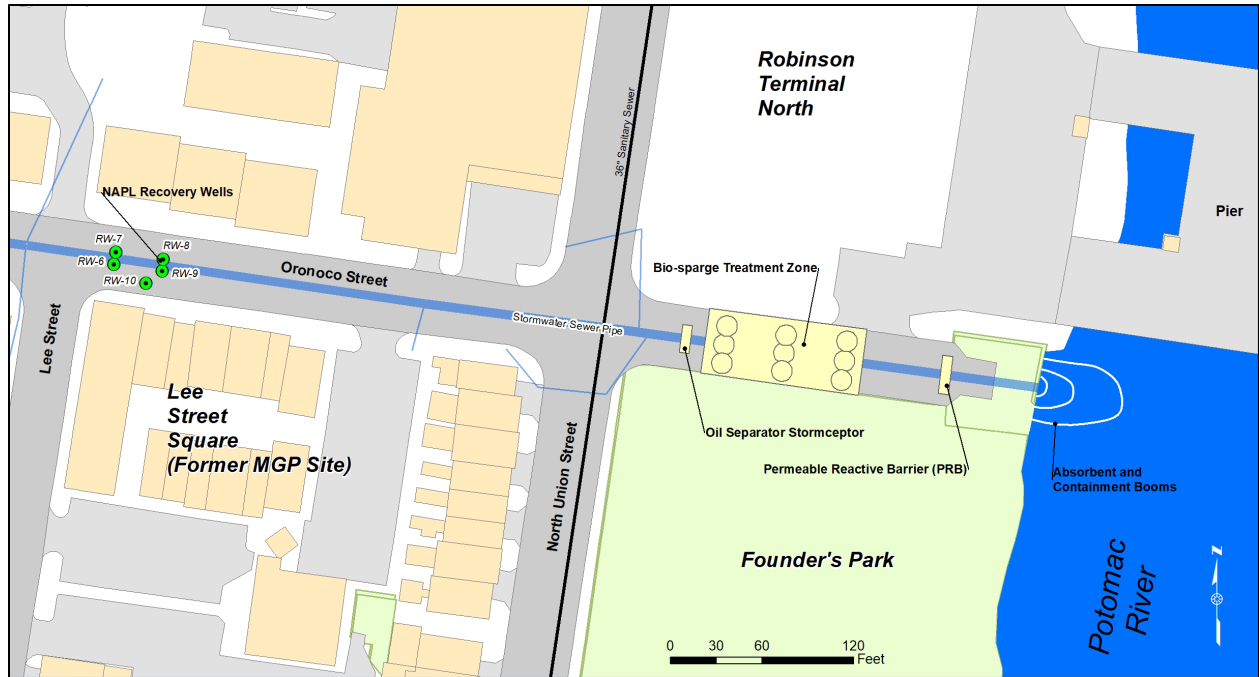


Figure 2 - Site Layout with Remedial Systems

1.2 Scope of Work

The City of Alexandria Office of Environmental Quality (OEQ) oversees ongoing remedial operations at the Site. The operations focus on reducing contaminant mass at the source area and reducing or eliminating off-site discharges through the stormwater outfall located at the foot of Oronoco Street.

The remedial activities discussed in this report include:

1. Implementation of an Upland Remediation Program, to include:
 - a. Completion of an in-well heating study on two existing recovery wells
 - b. Completion of a non-aqueous phase liquid (NAPL) mapping subsurface exploration program using the Tar-Specific Green Optical Scanning Tool (TarGOST) technology
 - c. Using the TarGOST data, installation of additional NAPL recovery wells in the source area
 - d. Completion of a recovery frequency study following the installation of new wells
 - e. Summary of NAPL recovery from existing wells and new wells installed following the TarGOST survey
2. Implementation of a Pipe Integrity and Inspection Program, to include:
 - a. Cured-In-Place Pipe (CIPP) rehabilitation of the existing storm sewer on Oronoco Street
 - b. Pipe inspections and repairs (if required)
 - c. Ongoing outfall inspection and boom maintenance program

ATG-Oronoco Site Summary July 1, 2025 to December 31, 2025

- d. Ongoing water quality sampling to test for constituents of concern
- 3. Implementation of a Pier Removal and Sediment Remediation Program, to include:
 - a. Removal of the Robinson Terminal North (RTN) pier
 - b. Sediment sampling for total Polycyclic Aromatic Hydrocarbons (PAHs) in the vicinity of the RTN pier
 - c. Remediation of sediment underneath the RTN pier, if warranted

The following sections summarize activities pursuant to the above outlined scope completed during the second half of 2025 (July 1 through December 31), starting from the effective date of the Consent Decree, as well as preparatory actions taken prior to this period.

2 Upland Area Remediation Program Summary

The upland remediation program's goal is to recover legacy contaminants from the former MGP, commonly referred to as "free product" or NAPL, in the subsurface so that it does not reach the storm sewer pipe that discharges to the Potomac River. Prior to the Consent Decree and as part of the VRP, the City installed recovery wells to collect and remove free product from the subsurface. The Consent Decree requires the City to continue its efforts to recover free product in the upland area.

2.1 Recovery Well Installation

Five new recovery wells (designated RW-11, RW-12, RW-13, RW-14, and RW-15) were installed in 2024 to replace the recovery wells installed in 2021 (except RW-9, which still contains small amounts of recoverable NAPL). Each of the wells is four inches in diameter with five-foot long stainless steel screens and a five-foot sump located below the screened interval. Each well is screened from about 17 feet to 22 feet below ground surface, corresponding to the depth zone of highest NAPL saturation.

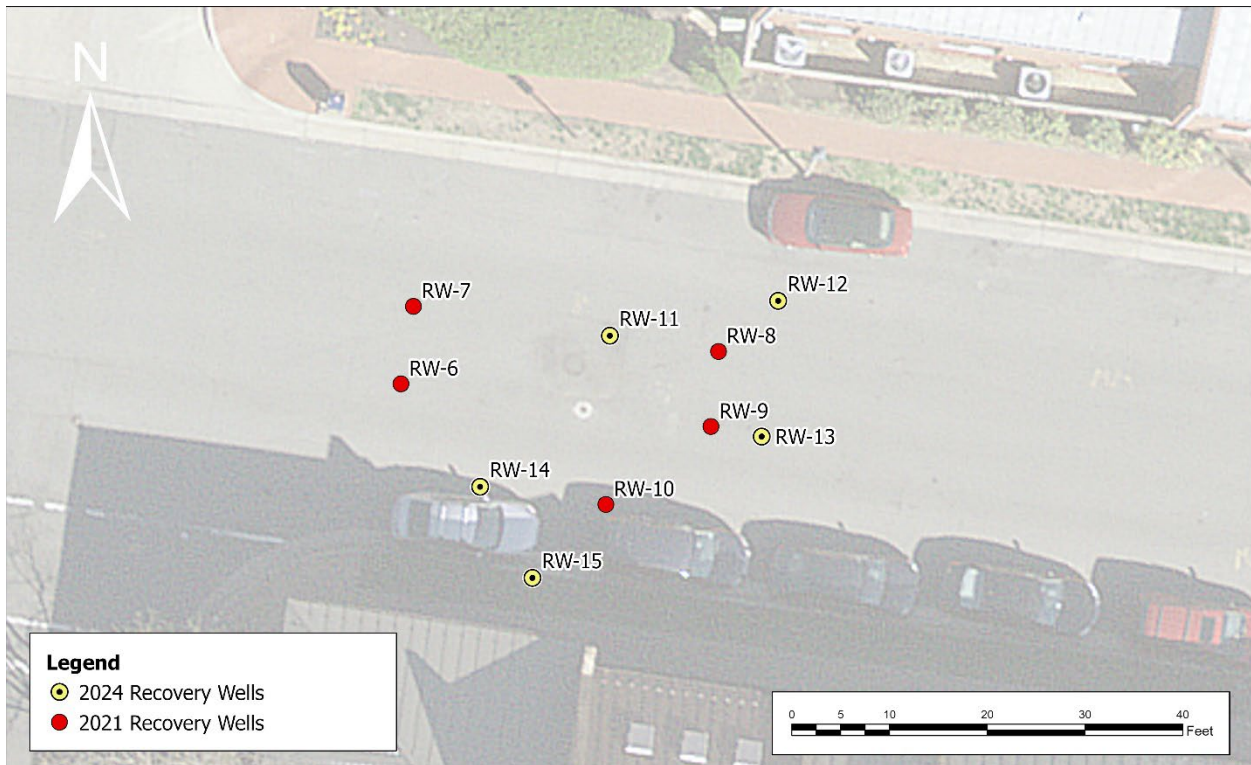


Figure 3 - Locations of New NAPL Recovery Wells

2.2 NAPL Recovery

Free product was gauged and/or collected from recovery wells RW-9 and RW-11 through RW-15 on a bi-weekly basis during the second half of 2025. **Table 1** below summarizes recovery activity from the recovery wells. The total recovered free product per event decreased during the first half of 2025 as product levels declined in the recovery wells and remained low throughout the remainder of 2025. The total amount of recoverable NAPL by month fell below 10 gallons in May 2025, triggering the requirement under the Consent Decree of a second TarGOST survey. Following consultations, the Potomac Riverkeeper Network (PRKN) notified the City on August 5, 2025, that it concurred with the City’s proposal to delay the survey until Manhole 92 is replaced—which is expected to occur in Spring 2026. Significant recovery of NAPL may be possible during the manhole replacement and the amount of NAPL removed will be documented and estimated. A total of 22 gallons of NAPL was recovered during the second half of 2025. Records of free product recovery activities are attached in the maintenance logs presented in **Appendix 1**.

Table 1 - Summary of Free Product Recovery – Second Half 2025

Date	Product recovered from RW-9 (gallons)	Product recovered from RW-12 (gallons)	Product recovered from RW-13 (gallons)	Product recovered from RW-15 (gallons)	Product recovered By Event (gallons)
7/16/2025	0	0	0	0	0.0
7/31/2025	0	0	1.5	1.5	3.0
8/15/2025	0	0	2.0	1.0	3.0
8/27/2025	0	1.0	1.5	0	2.5
9/8/2025	0	1.0	1.0	0	2.0
9/17/2025	0	0	0	0	0.0
10/2/2025	0	0.5	0	0	0.5
10/31/2025	0	1.5	2.0	0	3.5
11/11/2025	0	0	1.0	1.0	2.0
11/24/2025	1.5	0	2.0	0	3.5
12/16/2025	0	0	0	2.0	2.0
Totals	1.5	4.0	11.0	5.5	22.0
Note: Recovery wells RW-11 and RW-14 did not exhibit DNAPL during this period and therefore no DNAPL was recovered from these wells					

3 Annual Review of Recovery Well Performance

Recovery wells RW-11 through RW-15 were constructed in August 2024. A DNAPL Recovery Optimization study was performed from December 2, 2024, to March 6, 2025. The data and conclusions from the DNAPL Recovery Optimization study were summarized in a report provide to PRKN in March 2025. Recovery wells RW-11 and RW-14 have never exhibited the presence of DNAPL. Recovery wells RW-12, RW-13, and RW-15 exhibited significant volume of DNAPL at the start of the recovery optimization study.

The study concluded that recharge rates to wells RW-12, RW-13, and RW-15 exhibited a significant decline during late January 2025 (between days 52 and 59 of the data collection period). After this period, the average number of days to fully recharge a well so that the collection sump became full (maximum well storage) was calculated as 30 days.

The following **Figure 4** shows the measured thickness of DNAPL in the recovery wells RW-11 through RW-15 during 2025. The graph shows a marked decline in DNAPL thickness during January 2025 (frequent DNAPL recovery was completed during the prior month in December 2024) in wells RW-12, RW-13, and RW-15. The presence and thickness of DNAPL then cycles throughout the remainder of the year from non-detection to three feet thick or more (returning to non-detection after recovery efforts). This suggests that recharge rates are variable and potentially influenced by seasonal fluctuations in groundwater levels or other factors.

Table 2 summarizes the DNAPL recovery from wells RW-11 through RW-15 during 2025. A total of 93 gallons of product was recovered from wells RW-12, RW-13, and RW-15 during the year, with each of the three wells contributing approximately equal volumes (29, 36, and 28 gallons recovered, respectively). As monthly recovery has declined to less than 10 gallons per month, the City will implement a new TarGOST survey in accordance with the Consent Decree to locate remaining NAPL in the subsurface. However, as the pending replacement of Manhole 92 is likely to significantly alter subsurface conditions (and provide an opportunity for significant recovery of DNAPL during the construction), the TarGOST survey will be completed after the manhole replacement has been completed. Additionally, the proposed design of the MH-92 replacement will include interceptor trenches and sumps to facilitate DNAPL recovery around the new structure.

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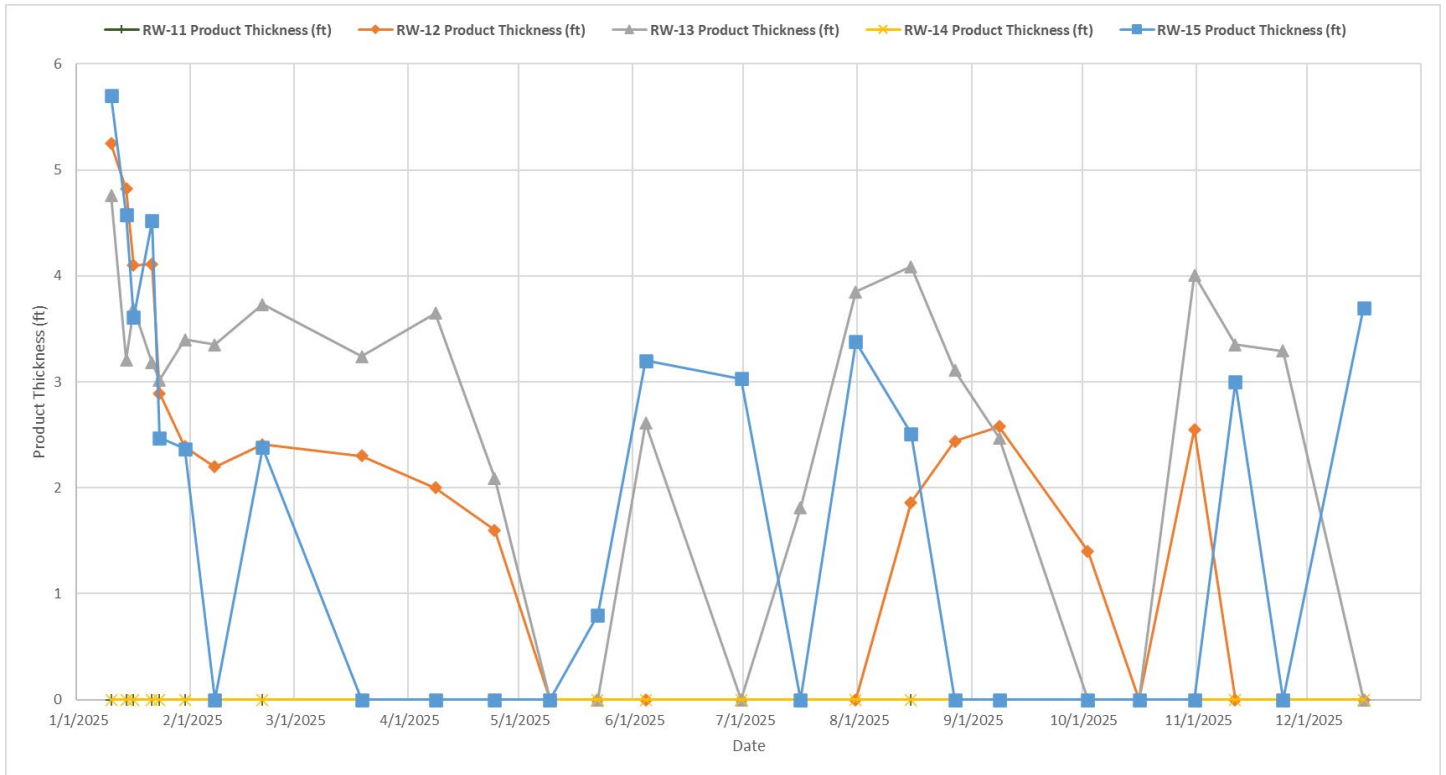


Figure 4 - DNAPL Thickness Over Time in 2025

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Table 2 - Summary of DNAPL Recovery, Wells RW-11 Through RW-15 in 2025

Date	Product recovered from RW-11 (gallons)	Product recovered from RW-12 (gallons)	Product recovered from RW-13 (gallons)	Product recovered from RW-14 (gallons)	Product recovered from RW-15 (gallons)	Total Gallons Recovered per Event
1/2/2025	0.0	3.5	2.0	0.0	2.5	8.0
1/10/2024	0.0	2.5	2.0	0.0	2.0	6.5
1/14/2025	0.0	2.5	2.0	0.0	1.5	6.0
1/16/2025	0.0	2.0	1.5	0.0	2.0	5.5
1/21/2025	0.0	3.0	2.0	0.0	2.5	7.5
1/23/2025	0.0	2.0	1.0	0.0	2.5	5.5
1/30/2025	0.0	1.0	1.5	0.0	1.5	4.0
2/7/2025	0.0	1.0	1.5	0.0	1.5	4.0
2/20/2025	0.0	1.5	2.5	0.0	1.0	5.0
3/6/2025	0.0	1.5	2.5	0.0	1.5	5.5
3/19/2025	0.0	1.5	1.0	0.0	1.5	4.0
4/8/2025	0.0	2.0	3.0	0.0	0.0	5.0
4/24/2025	0.0	1.0	1.5	0.0	0.0	2.5
5/9/2025	0.0	0.0	0.0	0.0	0.0	0.0
5/22/2025	0.0	0.0	0.0	0.0	0.0	0.0
6/4/2025	0.0	0.0	1.0	0.0	1.5	2.5
6/16/2025	0.0	0.0	0.0	0.0	0.0	0.0
6/30/2025	0.0	0.0	0.0	0.0	1.0	1.0
7/16/2025	0.0	0.0	0.0	0.0	0.0	0.0
7/31/2025	0.0	0.0	1.5	0.0	1.5	3.0
8/15/2025	0.0	0.0	2.0	0.0	1.0	3.0
8/27/2025	0.0	1.0	1.5	0.0	0.0	2.5
9/8/2025	0.0	1.0	1.0	0.0	0.0	2.0
9/17/2025	0.0	0.0	0.0	0.0	0.0	0.0
10/2/2025	0.0	0.5	0.0	0.0	0.0	0.5
10/31/2025	0.0	1.5	2.0	0.0	0.0	3.5
11/11/2025	0.0	0.0	1.0	0.0	1.0	2.0
11/24/2025	0.0	0.0	2.0	0.0	0.0	2.0
12/16/2025	0.0	0.0	0.0	0.0	2.0	2.0
Totals	0	29	36	0	28	93

4 Pipe Integrity and Inspection Program Summary

The pipe program is designed to rehabilitate the Oronoco Street storm sewer to prevent the intrusion of pollutants from the Site into the pipe. The Consent Decree requires that the pipe be rehabilitated by March 31, 2025. Rehabilitation was done by installation using the cured-in-place pipe (CIPP) liner process. Following the installation of the CIPP liner, the City is required to do annual pipe inspections to ensure that CIPP liner is intact without defects that would allow intrusion of free or dissolved product into the pipe.

The Consent Decree also requires the City to implement an outfall monitoring and maintenance program, similar to the program the City follows under the VRP. The requirements include weekly or biweekly in-person inspections at the outfall, continuously available electronic monitoring of the outfall, and maintaining the existing containment system at the outfall. Finally, the Consent Decree requires routine water quality testing of the storm sewer and outfall following completion of the pipe rehabilitation.

4.1 Cured-in-Place Pipe Relining

The City completed the installation of 420 linear feet of CIPP for the storm sewer starting from Manhole 92A (more than 50 feet upstream of Manhole 92) and ending at Manhole 93. This CIPP was completed on November 11, 2024. Beginning on February 14, 2025, multiple sheens were observed at the outfall. CCTV performed on February 21, 2025, confirmed lining failure and coal tar infiltration at Manhole 92. The liner is intact and in good condition both upstream and downstream of Manhole 92.

The City's Contractor took full responsibility for the failure and, working with the City, developed a repair plan. The repair at Manhole 92 was completed on April 23, 2025, and included injection of grout at the points of intrusion, followed by spray-on rehabilitation of the entire manhole structure. Shortly thereafter sheens were observed at the outfall. The contractor performed CCTV and observed active infiltration coming into the manhole. The contractor provided another proposal to repair the failure which was completed on July 8, 2025. From September 12 through December 8, no sheens were observed through in-person inspections and electronic monitoring. Sheens were observed regularly starting on December 9, leading to a CCTV inspection being conducted along the pipe and Manhole 92. While no active infiltration of NAPL was observed, there was defects and NAPL staining observed at Manhole 92. The Contractor completed those repairs on January 23, 2026.

The City considers these repairs as a short-term solution and has engaged an engineering consultant to design replacement of Manhole 92 as the long-term solution. The City's Consultant completed the manhole replacement design in September of 2025. Afterwards, the City put out the design package for bid by their two on-call contractors. The bids provided by the on-call contractors were not acceptable to the City, and therefore an open procurement was started. This procurement is currently ongoing with a bid due date of February 12, 2026. It should be noted this work includes removal of free-phase coal tar during excavation and installation of two interceptor trenches and permanent sumps.

4.2 Pipe Inspections

As part of the Consent Decree, the City must conduct annual inspections of the storm sewer pipe along Oronoco Street from the outfall to at least 25 feet upstream of the planned CIPP lining. Annual inspections must be conducted once per calendar year and may not be conducted less than 10 months apart or more than 14 months apart. The inspections must include the pipe, manholes and lateral connections and be performed by a licensed/certified professional. Separate from the annual inspections, inspections are also required if there is evidence of a potential new source of NAPL intrusion into the pipe. Annual inspections were completed ahead of the lining in March 2024 and following the lining in February 2025. The next annual inspection is expected to be performed by April 2026. Additional details about the City's monitoring and corrective actions are provided in Section 4.3, below.

4.3 Outfall Monitoring and Maintenance

The Consent Decree requires both in-person and electronic monitoring of the outfall. In-person monitoring is conducted weekly for visible sheens and to check on the containment system. Pictures are taken and notes are made as to observations and any work performed. Copies of these inspection reports are provided in **Appendix 1**. The Consent Decree allows for a reduction in outfall monitoring from weekly to every two weeks if no sheens are observed for 12 consecutive weeks, or when the City completes installation of a webcam pursuant to Paragraph 6 of Appendix B of the Consent Decree, whichever is earlier. The City currently monitors the outfall on a weekly basis and will notify PRKN of any plan to move from weekly to biweekly inspections.

The City also installed a webcam that allows for electronic monitoring at the outfall site. The camera was installed and the link to the live feed was provided to PRKN on April 5, 2024, within 90 days of the Consent Decree effective date. City staff typically check the camera on weekdays and when sheens are recorded. Notification of observed sheens is provided to PRKN within 10 days of observance.

The City is required to install a containment system at the outfall and implement a maintenance program. The booms are required to be repaired/replaced within 30-90 days of damage to the booms depending on the type of damage. The City's contractor provides maintenance, including boom repairs and replacement of absorbents and in-pipe sweeps, as needed. A log of maintenance activities is appended to this report as **Appendix 1. Table 3** below summarizes in-person inspection and maintenance activities.

Sheens were observed throughout the second half of 2025. A repair was made to Manhole 92 to prevent infiltration of coal tar into the stormwater pipe after the completion of the CIPP Lining July 2025. After the July 2025 repair, sheen size and frequency of occurrence declined over time. Sheens were not observed during in-person observations of the outfall during September, October, or November of 2025. One small, spotty sheen was observed in December (Dec 11). This sheen was also observed as part of the electronic monitoring. As discussed above in Section 4.1, the City began working with the lining Contractor in December to investigate the source of the sheens observed by the electronic and in-person monitoring after the July 2025 repairs. An additional repair was made to MH-92 in January 2026.

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Table 33- Summary of Outfall Inspection/Maintenance – Second Half of 2025

Date	Inspect	Repair/Replace	Comments
7/3/2025	X	X	Spotty sheen, reconnected intermediate absorbent boom
7/8/2025	X		Moderate sheen, contained within booms
7/15/2025	X		Spotty sheen, contained within booms
7/18/2025	X	X	Moderate sheen, replaced inner absorbent booms, contractor on site cleaning pipe for CCTV survey
7/23/2025	X	X	Spotty sheen, contained within booms, sweep replaced in MH-93
7/28/2025	X	X	Spotty sheen, replaced outer absorbent booms
7/31/2025	X		Small spotty sheen, contained within booms
8/8/2025	X		No sheen, no odor
8/15/2025	X		Small spotty sheen, contained within booms
8/21/2025	X	X	No sheen, no odor, replaced sweep in MH-93
8/27/2025	X		No sheen, no odor
9/3/2025	X	X	No sheen, no odor, re-anchored outer booms, debris removed
9/8/2025	X		No sheen, no odor
9/17/2025	X	X	No sheen, absorbent booms replaced
9/24/2025	X		No sheen, no odor
10/2/2025	X		No sheen, no odor
10/10/2025	X		No sheen, no odor
10/16/2025	X	X	No sheen, no odor
10/21/2025	X	X	No sheen, no odor, re-anchored outer booms, debris removed
10/31/2025	X		No sheen, no odor

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Date	Inspect	Repair/Replace	Comments
11/6/2025	X		No sheen, no odor
11/11/2025	X		No sheen, no odor
11/13/2025	X	X	No sheen, no odor, replaced absorbent booms
11/17/2025	X		No sheen, no odor
11/24/2025	X	X	No sheen, no odor, replaced sweep in MH-93
12/4/2025	X		No sheen, no odor
12/11/2025	X		Small spotty sheen, contained within booms
12/16/2025	X		No sheen, no odor
12/23/2025	X		No sheen, no odor
12/26/2025	X		No sheen, no odor

4.4 Water Quality Testing

The City is required to conduct quarterly sampling at Manhole 93 and at the outfall for the following constituents: naphthalene, benzene and total petroleum hydrocarbons within detection limits low enough to detect exceedances as stated in the Consent Decree. Field parameters including temperature, pH and total dissolved solids will also be collected and a description of each sample recorded, noting any NAPL sheen. During the second half of 2025, the City collected stormwater samples on September 16, 2025, and December 4, 2025. The sampling results were reported to PKRN on October 20, 2025, and February 10, 2026. Results from sampling events during the second half of 2025 are presented below.

4.4.1 September 16, 2025, Sampling

The City collected grab samples directly from flowing water in the pipe from Manhole 93 (near the intersection of Lee Street and Union Street) and from the pipe mouth at the outfall at the Potomac River (sampling locations are shown below). Sampling was completed during low tide conditions during fair weather. Samples were kept on ice under chain-of-custody protocol and transported to Enthalpy Laboratories in Richmond, Virginia for analysis of benzene and naphthalene by EPA Test Method 8260, Total Petroleum Hydrocarbons – Diesel Range Organics (TPH-DRO) by EPA Method 8015M, and Total Dissolved Solids by Method SM2540C-2020. pH and temperature were recorded in the field at the time of

collection. No sheen was observed at the outfall at the time of sample collection. **Table 4** below summarizes the analytical results.

Table 44 - Summary of September 2025 Stormwater Sampling Results

Analyte/Parameter	Consent Decree Limit (Outfall Only)	Sample Location		
		MH-93	Outfall	Trip Blank
Benzene (µg/L)	5.8 ug/L	34.4	BLOD	BLOD
Naphthalene (µg/L)	8.9 ug/L	138	BLOD	BLOD
Total Dissolved Solids (mg/L)	NA	433	378	
TPH-Diesel Range Organics (DRO) (mg/L)	15 mg/L	0.857	BLOD	
pH	NA	7.35	7.76	
Temperature (° C)	NA	22.4	22.0	

BLOD – Below Limit of Detection

NA – Not Applicable

4.4.2 December 4, 2025, Sampling

The City collected grab samples directly from flowing water in the pipe from Manhole 93 (near the intersection of Lee Street and Union Street) and from the pipe mouth at the outfall at the Potomac River (sampling locations are shown below). Sampling was completed during low tide conditions during fair weather. Samples were kept on ice under chain-of-custody protocol and transported to Enthalpy Laboratories in Richmond, Virginia for analysis of benzene and naphthalene by EPA Test Method 8260, Total Petroleum Hydrocarbons – Diesel Range Organics (TPH-DRO) by EPA Method 8015M, and Total Dissolved Solids by Method SM2540C-2020. pH and temperature were recorded in the field at the time of collection. No sheen was observed at the outfall at the time of sampling. **Table 5** summarizes the analytical results.

Table 55 - Summary of December 2025 Stormwater Sampling Results

Analyte/Parameter	Consent Decree Limit (Outfall Only)	Sample Location		
		MH-93	Outfall	Trip Blank
Benzene (µg/L)	5.8 ug/L	54.3	11.4	BLOD
Naphthalene (µg/L)	8.9 ug/L	235	41.7	BLOD
Total Dissolved Solids (mg/L)	NA	434	435	
TPH-Diesel Range Organics (DRO) (mg/L)	15 mg/L	0.877	BLOD	
pH	NA	7.11	7.49	
Temperature (° C)	NA	14.1	14.1	

BLOD – Below Limit of Detection

NA – Not Applicable

5 Robinson Terminal North Pier Removal and Sediment Remediation Program Summary

The goal of the pier removal and sediment remediation program is to quantify and remediate, if warranted, contaminated Potomac River sediments. To achieve these goals, a series of steps need to take place including (and in order): removal and/or stabilization of the Robinson Terminal North (RTN) pier by RTN East LLC, development of a sediment sampling plan, application of and receipt of necessary permits, completion of sediment sampling in accordance with the sampling plan, and development of a sediment sampling report and sediment remediation plan, and implementation of the sediment remediation plan. While the Consent Decree includes dates and milestones for achieving the relevant goals, these dates and timelines may need to be adjusted dependent on factors outside the City’s control, primarily the work to be done by others and approvals from outside third parties.

5.1 Pier Removal

The Consent Decree requires the City to ensure that the privately owned RTN pier is removed and/or stabilized so that the area around and under the pier is ready for sampling by September 25, 2025. This

requirement is consistent with the City's preexisting actions to ensure the owner, RTN East LLC, implements appropriate measures to secure the hazardous pier structure. A small portion of the site is currently occupied by AlexRenew as part of the RiverRenew combined sewer tunnel construction, but their occupancy is located at the Pendleton Street combined sewer outfall and does not impact access to the pier. The City has executed an agreement with the RTN pier owner that obligates the owner to commence the pier removal/stabilization project as soon as practicable after February 28, 2025. Activities to remove the RTN pier began in June 2025 and were completed in October 2025. All pilings and structures associated with the RTN-owned pier were removed or cut at (or below) the sediment line.

5.2 Sediment Sampling

The City has agreed in the Consent Decree to collect sediment samples at approximately 68 locations as shown on Figure 1 of the Consent Decree. The sediment samples will be analyzed for total polycyclic aromatic hydrocarbons (PAHs) as defined by the Wisconsin Department of Natural Resources Guidance with the sum of 18 PAHs normalized to 1% total organic carbon.

In accordance with the VRP program, the City submitted a sediment sampling work plan to DEQ for approval on February 19, 2025. Minor comments were received from DEQ on March 5, 2025. The final Work Plan was prepared and is dated March 2025. The City submitted permit applications to the United States Army Corps of Engineers (USACE) and the State of Virginia. Approval was received from the USACE and State of Virginia and the City subsequently submitted a permit application to the National Park Service (NPS). Following a delay due to the shutdown of the federal government, approval from NPS was received on November 18, 2025. Sediment sampling took place December 1, 2025, through December 17, 2025. A minimum of one sample from each of the 68 proposed locations was collected. Analytical data from this sampling event is currently undergoing validation. The results will be summarized in a report to follow.

5.3 Sediment Remediation

If the sediment sampling discussed above reveals probable effect concentrations exceeding 22.8 mg/kg total PAHs as defined in the Wisconsin Department of Natural Resources guidance, the City will prepare and submit a sediment remediation plan to PRKN and DEQ within 60 days of finalization of the sampling report. The plan will include an analysis of and selection among various remedial alternatives, including a dredging and capping alternative. Once DEQ approves the plan, the City will file applications for any necessary permits within 45 days of approval. In terms of schedule, the City must initiate any remediation actions recommended in the finalized plan by July 1, 2026, with a completion report due 90 days after completion of any remedial actions.

Appendices

Appendix 1 Operations and Maintenance Logs

ATG-Oronoco Site O&M Record

Date:

July 15, 2025 9:18 AM

Personnel:

Damian Murphy

Weather and Tide Conditions:

Outfall Boom Material:

Replacement needed

Outfall Water Conditions:

SPOTTY sheen

Outfall Odors:

NO odor

Additional Outfall Notes:

Inner boom is fully saturated/discolored

July 15, 2025 9:18 AM

Outfall Photo #1:



Outfall Photo #3:



Outfall Photo #2:



Outfall Photo #4:



July 15, 2025 9:18 AM

System O&M Data

Bldg Temp:

70

Comp Hours:

34,150.3

Coolant:

OK

Pressures and Flows

BSW-1 Flow

0

BSW-1 Press

6.5

BSW-2 Flow

0

BSW-2 Press

7.5

BSW-3 Flow

0

BSW-3 Press

7.5

BSW-4 Flow

0

BSW-4 Press

7.5

BSW-5 Flow

0

BSW-5 Press

7.5

BSW-6 Flow

0

BSW-6 Press

11

BSW-7 Flow

0

BSW-7 Press

5.5

BSW-8 Flow

0

BSW-8 Press

5

BSW-9 Flow

0

BSW-9 Press

4.5

System Notes:

All conditions are good.

ATG-Oronoco Site O&M Record

Date:

July 18, 2025 8:34 AM

Personnel:

Shelby Dyer, Damian Murphy

Weather and Tide Conditions:

Outfall Boom Material:

Replacement needed

Outfall Water Conditions:

MODERATE sheen

Outfall Odors:

SLIGHT odor

Additional Outfall Notes:

Crew on site to clean out manway to put in camera in. Stantec personnel will be switching out inner soft boom only.

July 18, 2025 8:34 AM

Outfall Photo #1:



Outfall Photo #3:



Outfall Photo #2:



Outfall Photo #4:



July 18, 2025 8:34 AM

System O&M Data

Bldg Temp:

97

Comp Hours:

34,181.6

Coolant:

OK

Pressures and Flows

BSW-1 Flow

0

BSW-1 Press

7

BSW-2 Flow

0

BSW-2 Press

7.5

BSW-3 Flow

0

BSW-3 Press

7.5

BSW-4 Flow

0

BSW-4 Press

7.5

BSW-5 Flow

0

BSW-5 Press

7.5

BSW-6 Flow

0

BSW-6 Press

11

BSW-7 Flow

0

BSW-7 Press

5

BSW-8 Flow

0

BSW-8 Press

5

BSW-9 Flow

0

BSW-9 Press

4.5

System Notes:

System running normal.

ATG-Oronoco Site O&M Record

Date:

July 23, 2025 8:27 AM

Personnel:

Shelby Dyer

Weather and Tide Conditions:

Outfall Boom Material:

Good, no action

Outfall Water Conditions:

MODERATE sheen

Outfall Odors:

NO odor

Additional Outfall Notes:

Will need to replaced outer soft boom soon.

July 23, 2025 8:27 AM

Outfall Photo #1:



Outfall Photo #3:



Outfall Photo #2:



Outfall Photo #4:



July 23, 2025 8:27 AM

System O&M Data

Bldg Temp:

84

Comp Hours:

34,234.1

Coolant:

OK

Pressures and Flows

BSW-1 Flow

0

BSW-1 Press

7

BSW-2 Flow

0

BSW-2 Press

7.5

BSW-3 Flow

0

BSW-3 Press

7.5

BSW-4 Flow

0

BSW-4 Press

7.5

BSW-5 Flow

0

BSW-5 Press

8

BSW-6 Flow

0

BSW-6 Press

11

BSW-7 Flow

0

BSW-7 Press

4

BSW-8 Flow

0

BSW-8 Press

5.5

BSW-9 Flow

0

BSW-9 Press

4.5

System Notes:

System running normal.
Also replaced sweep at
MH-93.

ATG-Oronoco Site O&M Record

Date:

July 28, 2025 8:31 AM

Personnel:

Shelby Dyer, RP Meredith, Damian Murphy

Weather and Tide Conditions:

Outfall Boom Material:

Replacement needed

Outfall Water Conditions:

SLIGHT sheen

Outfall Odors:

NO odor

Additional Outfall Notes:

Majority of Sheen is mostly located between inner and outer soft boom. Will be replacing outer soft boom today.

July 28, 2025 8:31 AM

Outfall Photo #1:



Outfall Photo #3:



Outfall Photo #2:



Outfall Photo #4:



July 28, 2025 8:31 AM

System O&M Data

Bldg Temp:

88

Comp Hours:

34,287.5

Coolant:

OK

Pressures and Flows

BSW-1 Flow

0

BSW-1 Press

7

BSW-2 Flow

0

BSW-2 Press

7.5

BSW-3 Flow

0

BSW-3 Press

7.5

BSW-4 Flow

0

BSW-4 Press

7.5

BSW-5 Flow

0

BSW-5 Press

8

BSW-6 Flow

0

BSW-6 Press

11

BSW-7 Flow

0

BSW-7 Press

5

BSW-8 Flow

0

BSW-8 Press

5

BSW-9 Flow

0

BSW-9 Press

4.5

System Notes:

System running normal.

ATG-Oronoco Site O&M Record

Date:

July 31, 2025 8:29 AM

Personnel:

Shelby Dyer, RP Meredith

Weather and Tide Conditions:

Outfall Boom Material:

Good, no action

Outfall Water Conditions:

SPOTTY sheen

Outfall Odors:

NO odor

Additional Outfall Notes:

Lots of debris in outfall.

July 31, 2025 8:29 AM

Outfall Photo #1:



Outfall Photo #3:



Outfall Photo #2:



Outfall Photo #4:



July 31, 2025 8:29 AM

System O&M Data

Bldg Temp:

89

Comp Hours:

34,318.9

Coolant:

OK

Pressures and Flows

BSW-1 Flow

0

BSW-1 Press

7

BSW-2 Flow

0

BSW-2 Press

7.5

BSW-3 Flow

0

BSW-3 Press

7.5

BSW-4 Flow

0

BSW-4 Press

7.5

BSW-5 Flow

0

BSW-5 Press

7.5

BSW-6 Flow

0

BSW-6 Press

11

BSW-7 Flow

0

BSW-7 Press

3.5

BSW-8 Flow

0

BSW-8 Press

5

BSW-9 Flow

0

BSW-9 Press

4.5

System Notes:

System running normal.

ATG-Oronoco Site O&M Record

Date:

August 8, 2025 10:14 AM

Personnel:

Damian Murphy

Weather and Tide Conditions:

Outfall Boom Material:

Good, no action

Outfall Water Conditions:

NO sheen

Outfall Odors:

NO odor

Additional Outfall Notes:

August 8, 2025 10:14 AM

Outfall Photo #1:



Outfall Photo #2:



Outfall Photo #3:



Outfall Photo #4:



August 8, 2025 10:14 AM

System O&M Data

Bldg Temp:

70

Comp Hours:

34,408.6

Coolant:

OK

Pressures and Flows

BSW-1 Flow

0

BSW-1 Press

7

BSW-2 Flow

0

BSW-2 Press

7.5

BSW-3 Flow

0

BSW-3 Press

8

BSW-4 Flow

0

BSW-4 Press

7.5

BSW-5 Flow

0

BSW-5 Press

8

BSW-6 Flow

0

BSW-6 Press

11

BSW-7 Flow

0

BSW-7 Press

4

BSW-8 Flow

0

BSW-8 Press

5.5

BSW-9 Flow

0

BSW-9 Press

4.5

System Notes:

ATG-Oronoco Site O&M Record

Date:

August 15, 2025 8:12 AM

Personnel:

Shelby Dyer, RP Meredith, Damian Murphy

Weather and Tide Conditions:

Outfall Boom Material:

Good, no action

Outfall Water Conditions:

SPOTTY sheen

Outfall Odors:

NO odor

Additional Outfall Notes:

Lots of debris.

August 15, 2025 8:12 AM

Outfall Photo #1:



Outfall Photo #3:



Outfall Photo #2:



Outfall Photo #4:



August 15, 2025 8:12 AM

System O&M Data

Bldg Temp:

85

Comp Hours:

34,483.8

Coolant:

OK

Pressures and Flows

BSW-1 Flow

0

BSW-1 Press

7

BSW-2 Flow

0

BSW-2 Press

0

BSW-3 Flow

0

BSW-3 Press

0

BSW-4 Flow

0

BSW-4 Press

1

BSW-5 Flow

0

BSW-5 Press

0

BSW-6 Flow

0

BSW-6 Press

0

BSW-7 Flow

0

BSW-7 Press

0

BSW-8 Flow

0

BSW-8 Press

5

BSW-9 Flow

0

BSW-9 Press

4.5

System Notes:

System running normal.

ATG-Oronoco Site O&M Record

Date:

August 21, 2025 8:42 AM

Personnel:

Shelby Dyer

Weather and Tide Conditions:

Outfall Boom Material:

Good, no action

Outfall Water Conditions:

NO sheen

Outfall Odors:

NO odor

Additional Outfall Notes:

Hard boom Repositioned but will need to be anchor down towards pier.

August 21, 2025 8:42 AM

Outfall Photo #1:



Outfall Photo #3:



Outfall Photo #2:



Outfall Photo #4:



August 21, 2025 8:42 AM

System O&M Data

Bldg Temp:

85

Comp Hours:

34,551.4

Coolant:

OK

Pressures and Flows

BSW-1 Flow

0

BSW-1 Press

7

BSW-2 Flow

0

BSW-2 Press

0

BSW-3 Flow

0

BSW-3 Press

4

BSW-4 Flow

0

BSW-4 Press

3

BSW-5 Flow

0

BSW-5 Press

1

BSW-6 Flow

0

BSW-6 Press

0

BSW-7 Flow

0

BSW-7 Press

0

BSW-8 Flow

0

BSW-8 Press

5

BSW-9 Flow

0

BSW-9 Press

4.5

System Notes:

System running normal.

ATG-Oronoco Site O&M Record

Date:

August 27, 2025 8:20 AM

Personnel:

Shelby Dyer, Damian Murphy, RP Meredith

Weather and Tide Conditions:

Outfall Boom Material:

Good, no action

Outfall Water Conditions:

NO sheen

Outfall Odors:

NO odor

Additional Outfall Notes:

Will need to reposition hard boom soon.

August 27, 2025 8:20 AM

Outfall Photo #1:



Outfall Photo #3:



Outfall Photo #2:



Outfall Photo #4:



August 27, 2025 8:20 AM

System O&M Data

Bldg Temp:

84

Comp Hours:

34,618.7

Coolant:

OK

Pressures and Flows

BSW-1 Flow

0

BSW-1 Press

7.5

BSW-2 Flow

0

BSW-2 Press

0

BSW-3 Flow

0

BSW-3 Press

0

BSW-4 Flow

0

BSW-4 Press

1.5

BSW-5 Flow

0

BSW-5 Press

1.5

BSW-6 Flow

0

BSW-6 Press

0

BSW-7 Flow

0

BSW-7 Press

0

BSW-8 Flow

0

BSW-8 Press

5.5

BSW-9 Flow

0

BSW-9 Press

5

System Notes:

System running normal.

ATG-Oronoco Site O&M Record

Date:

October 10, 2025 8:59 AM

Personnel:

Shelby Dyer

Weather and Tide Conditions:**Outfall Boom Material:**

Good, no action

Outfall Water Conditions:

NO sheen

Outfall Odors:

NO odor

Additional Outfall Notes:

Will need to do debris clean up at outfall soon and straighten out turbidity curtain also. Also saw sheen at MH-93 but did not smell any odor on used sweep. When ahead and replace sweep at MH-93.

October 10, 2025 8:59 AM

Outfall Photo #1:



Outfall Photo #3:



Outfall Photo #2:



Outfall Photo #4:



October 10, 2025 8:59 AM

System O&M Data

Bldg Temp:

73

Comp Hours:

35,117.7

Coolant:

OK

Pressures and Flows

BSW-1 Flow

0

BSW-1 Press

7.5

BSW-2 Flow

0

BSW-2 Press

1

BSW-3 Flow

0

BSW-3 Press

0

BSW-4 Flow

0

BSW-4 Press

1.5

BSW-5 Flow

0

BSW-5 Press

1.5

BSW-6 Flow

0

BSW-6 Press

0

BSW-7 Flow

0

BSW-7 Press

0

BSW-8 Flow

0

BSW-8 Press

6

BSW-9 Flow

0

BSW-9 Press

5

System Notes:

System running normal.

ATG-Oronoco Site O&M Record

Date:

October 16, 2025 8:26 AM

Personnel:

Shelby Dyer, Damian Murphy

Weather and Tide Conditions:

Outfall Boom Material:

Good, no action

Outfall Water Conditions:

NO sheen

Outfall Odors:

NO odor

Additional Outfall Notes:

I need to move turbidity curtain and set anchor at high tide. Too much debris to work around in area.

October 16, 2025 8:26 AM

Outfall Photo #1:



Outfall Photo #3:



Outfall Photo #2:



Outfall Photo #4:



October 16, 2025 8:26 AM

System O&M Data

Bldg Temp:

69

Comp Hours:

35,188.5

Coolant:

OK

Pressures and Flows

BSW-1 Flow

0

BSW-1 Press

7.5

BSW-2 Flow

0

BSW-2 Press

1

BSW-3 Flow

0

BSW-3 Press

0

BSW-4 Flow

0

BSW-4 Press

1.5

BSW-5 Flow

0

BSW-5 Press

1.5

BSW-6 Flow

0

BSW-6 Press

0

BSW-7 Flow

0

BSW-7 Press

0

BSW-8 Flow

0

BSW-8 Press

6

BSW-9 Flow

0

BSW-9 Press

5

System Notes:

System running normal.

ATG-Oronoco Site O&M Record

Date:

October 21, 2025 9:00 PM

Personnel:

Shelby Dyer

Weather and Tide Conditions:

Outfall Boom Material:

Good, no action

Outfall Water Conditions:

SPOTTY sheen

Outfall Odors:

NO odor

Additional Outfall Notes:

Straighten turbidity curtain and boom in outfall. Also did debris removal also. Took before and after pictures on mobile phone and texted to project manager. This was done during site observation.

October 21, 2025 9:00 PM

Outfall Photo #1:



Outfall Photo #2:



Outfall Photo #3:



Outfall Photo #4:



October 21, 2025 9:00 PM

System O&M Data

Bldg Temp:

75

Comp Hours:

35,249.2

Coolant:

OK

Pressures and Flows

BSW-1 Flow

0

BSW-1 Press

7.5

BSW-2 Flow

0

BSW-2 Press

8

BSW-3 Flow

0

BSW-3 Press

8

BSW-4 Flow

0

BSW-4 Press

8

BSW-5 Flow

0

BSW-5 Press

8

BSW-6 Flow

0

BSW-6 Press

11.5

BSW-7 Flow

0

BSW-7 Press

3

BSW-8 Flow

0

BSW-8 Press

5.5

BSW-9 Flow

0

BSW-9 Press

5

System running normal.
Also checked MH-93 and
smelled a very slight odor

but did not see any sheen.
Left sweep in place.

System Notes:

ATG-Oronoco Site O&M Record

Date:

November 17, 2025 9:52 AM

Personnel:

Shelby Dyer

Weather and Tide Conditions:**Outfall Boom Material:**

Good, no action

Outfall Water Conditions:

NO sheen

Outfall Odors:

NO odor

Additional Outfall Notes:

Soft boom was changed on 11-13-25

November 17, 2025 9:52 AM

Outfall Photo #1:



Outfall Photo #3:



Outfall Photo #2:



Outfall Photo #4:



November 17, 2025 9:52 AM

System O&M Data

Bldg Temp:

75

Comp Hours:

35,575.6

Coolant:

OK

Pressures and Flows

BSW-1 Flow

0

BSW-1 Press

8

BSW-2 Flow

0

BSW-2 Press

8.5

BSW-3 Flow

0

BSW-3 Press

8.5

BSW-4 Flow

0

BSW-4 Press

8.5

BSW-5 Flow

0

BSW-5 Press

9

BSW-6 Flow

0

BSW-6 Press

12

BSW-7 Flow

0

BSW-7 Press

3.5

BSW-8 Flow

0

BSW-8 Press

6.5

BSW-9 Flow

0

BSW-9 Press

5.5

System Notes:

Repaired air leaks for the high and low lines going to PDSH-301. Source of leaks was found on the two t-fittings between F-401on

the air lines coming from the nipples. Both nipples we're replaced and air line was cut enough for repair.

ATG-Oronoco Site O&M Record

Date:

December 16, 2025 9:06 AM

Personnel:

Shelby Dyer, Damian Murphy

Weather and Tide Conditions:

Outfall Boom Material:

Good, no action

Outfall Water Conditions:

NO sheen

Outfall Odors:

NO odor

Additional Outfall Notes:

None

December 16, 2025 9:06 AM

Outfall Photo #1:



Outfall Photo #2:



Outfall Photo #3:



Outfall Photo #4:



December 16, 2025 9:06 AM

System O&M Data

Bldg Temp:

Comp Hours:

Coolant:

Pressures and Flows

BSW-1 Flow

BSW-4 Flow

BSW-7 Flow

BSW-1 Press

BSW-4 Press

BSW-7 Press

BSW-2 Flow

BSW-5 Flow

BSW-8 Flow

BSW-2 Press

BSW-5 Press

BSW-8 Press

BSW-3 Flow

BSW-6 Flow

BSW-9 Flow

BSW-3 Press

BSW-6 Press

BSW-9 Press

System Notes:

Treatment system is down. Power outage on air compressor and camera at outfall. At 1114 restart

treatment system by resetting the Tripp-lite surge box . Treatment system is now running.