

City of Alexandria's Semi-Annual Report
ATG-Oronoco Site Summary
January 1, 2026 to June 30, 2026

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).

October 5, 2026

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Table of Contents

Acronyms / Abbreviations.....	ii
1 Introduction.....	1
1.1 Site Background	1
1.2 Scope of Work	3
2 Upland Area Remediation Program Summary	5
2.1 Recovery Well Network	5
2.2 NAPL Recovery	6
3 Pipe Integrity and Inspection Program Summary.....	7
3.1 Cured-in-Place Pipe Relining	7
3.2 New Manhole Structure	8
3.3 Pipe Inspections	8
3.4 Outfall Monitoring and Maintenance.....	8
3.5 Water Quality Testing	11
3.5.1 March 17, 2026 Sampling	11
3.5.2 June 9, 2026 Sampling.....	12
4 Robinson Terminal North Pier Removal and Sediment Remediation Program Summary	13
4.1 Pier Removal	13
4.2 Sediment Sampling	14
4.3 Sediment Remediation	14
List of Tables	
Table 1 - Summary of Free Product Recovery – First Half 2026.....	6
Table 2 - Summary of Outfall Inspection/Maintenance – First Half of 2026	10
Table 3 - Summary of March 2026 Stormwater Sampling Results.....	12
Table 4 - Summary of June 2026 Stormwater Sampling Results	13

List of Figures

Figure 1 - Site Location	2
Figure 2 - Site Layout with Remedial Systems	3
Figure 3 - Locations of New NAPL Recovery Wells	5

List of Appendices

Appendix 1 Operations and Maintenance Logs

Appendix 2 Figures from the Sediment Sampling Reports and Sediment Remedial Action Plan

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 January 1, 2026, to June 30, 2026. 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 January 1, 2026 to June 30, 2026

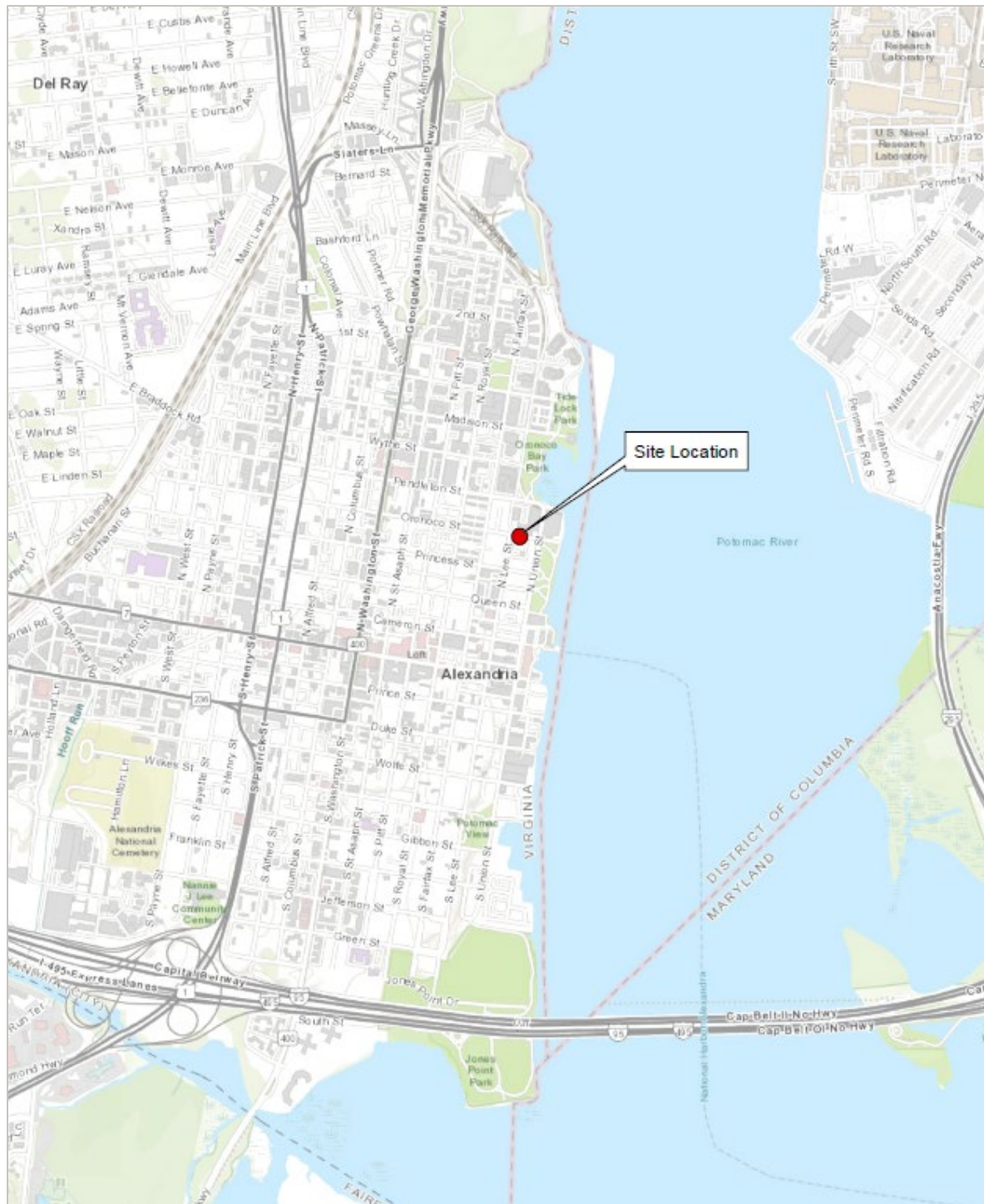


Figure 1 - Site Location

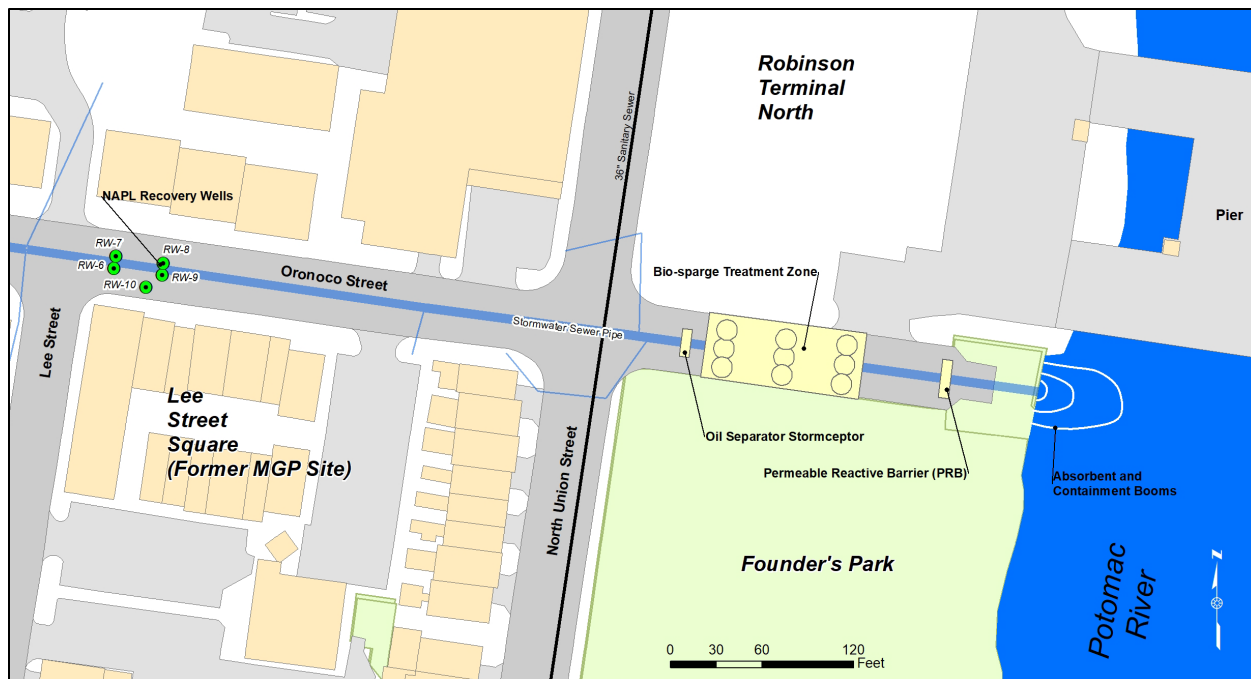


Figure 2 - Site Layout with Remedial Systems

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 January 1, 2026 to June 30, 2026

- 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 first half of 2026 (January 1 through June 30) 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 Network

Five 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.

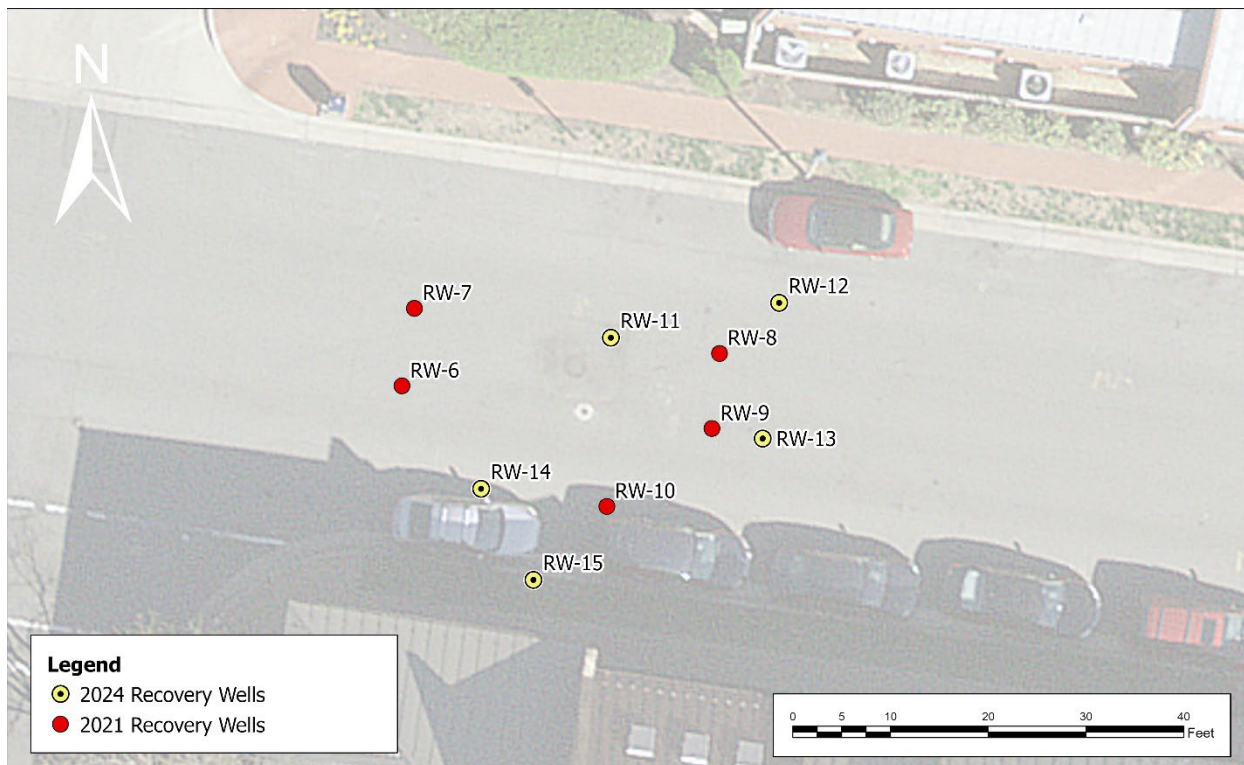


Figure 3 - Locations of New NAPL Recovery Wells

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 first half of 2026. **Table 1** below summarizes recovery activity from the recovery wells. The total recovered free product per event decreased during the first half of 2026 as product levels declined in the recovery wells and remained low. Trace or non-recoverable quantities of product were frequently observed through the monitoring period. 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 be completed in September 2026. A total of 6 gallons of NAPL was recovered during the first half of 2026. Records of free product recovery activities are attached in the maintenance logs presented in **Appendix 1**.

Table 1 - Summary of Free Product Recovery – First Half 2026

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)
1/6/2026	0	0	0	2.0	2.0
1/20/2026	0	0	0	0	0.0
2/3/2026	0	0	0	0	0.0
2/20/2026	0	0	0	2.0	2.0
3/13/2026	0	0	0	0	0.0
4/1/2026	0	0	0	0	0.0
4/8/2026	2.0	0	0	0	2.0
5/1/2026	0	0	0	0	0.0
5/12/2026	0	0	0	0	0.0
6/2/2026	0	0	0	0	0.0
6/15/2026	0	0	0	0	0.0
Totals	2.0	0	0	4.0	6.0
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 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.

3.1 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 first 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 were defects and NAPL staining observed at Manhole 92. The Contractor completed additional repairs on January 23, 2026, and more repairs were again completed in April 2026.

The City considers these repairs as a short-term solution and has engaged an engineering consultant to design the 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. The construction contract was awarded in March 2026 and the Notice to Proceed for construction was issued April 30, 2026. Active construction began in June and is currently ongoing. It should be noted this work includes removal of free-phase coal

tar during excavation performed as part of the manhole replacement and installation of two interceptor trenches and permanent sumps as part of the new manhole structure.

3.2 New Manhole Structure

Following the localized failure of the CIPP liner at Manhole 92 (MH92), the City selected a full manhole replacement as the long-term fix to restore a reliable, watertight structure and prevent future coal tar or groundwater intrusion. Construction began in June 2026 and is anticipated to be completed in September. The replacement effort includes several key components to prevent further intrusion:

- Removal of the existing MH92 structure and construction of a new cast-in-place concrete manhole designed to meet current traffic loading.
- Installation of continuous water-resistant waterstops at construction joints to maintain a watertight seal.
- Filling and sealing the annular space between the failed CIPP liner and the original CMP host pipe, with the invert rebuilt to match the existing pipe elevation.

Construction of the full Manhole 92 replacement began in June 2026, as described in Section 3.1. During initial excavation activities, groundwater and free-phase coal tar were observed entering the excavation from the south side of the structure. This confirms that NAPL remains in the vicinity of Manhole 92 and highlights the need for the ongoing replacement and remediation work, including coal tar removal and installation trenches designed to prevent future impacts to the storm sewer system.

3.3 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 most recent annual inspection was completed in March 2026. Additional details about the City's monitoring and corrective actions are provided in Section 3.3, below.

3.4 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

ATG-Oronoco Site Summary January 1, 2026 to June 30, 2026

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 first half of 2026. Multiple grouting repairs were made to MH-92 in January and April 2026. The City's contractor began replacement of MH-92 during late June 2026.

ATG-Oronoco Site Summary January 1, 2026 to June 30, 2026

Table 2 - Summary of Outfall Inspection/Maintenance – First Half of 2026

Date	Inspect	Repair/ Replace	Comments
1/6/2026	X		Minor sheen, no odor
1/13/2026	X	X	No sheen, no odor
1/20/2026	X		No sheen, no odor
1/27/2026	X		No sheen, no odor (significant ice at the outfall)
2/3/2026	X		No sheen, no odor (significant ice at the outfall)
2/10/2026	X		No sheen, no odor
2/20/2026	X		Sheen observed, contained within booms
2/27/2026	X	X	Sheen observed, replaced booms and placed new absorbents
3/6/2026	X		Sheen observed, contained within booms
3/9/2026	X		Sheen observed, contained within booms
3/17/2026	X	X	Boom disconnected at south anchoring point by large tree debris, cleared and reconnected, inner booms replaced, sheen present
3/27/2026	X		Sheen present
4/1/2026	X	X	Booms replaced, sheen present
4/8/2026	X		Spotty sheen, contained within booms
4/13/2026	X	X	Fresh sheen observed, contained within booms, booms replaced
4/21/2026	X		No sheen observed
5/1/2026	X		No sheen observed
5/8/2026	X		Sheen observed, contained within booms
5/12/2026	X		Sheen observed, contained within booms
5/21/2026	X	X	Moderate sheen, contained within booms, all absorbent booms replaced and large storm debris removed

Date	Inspect	Repair/ Replace	Comments
5/29/2026	X		No sheen observed
6/2/2026	X		No sheen observed
6/9/2026	X		Moderate sheen, contained within booms
6/15/2026	X		No sheen observed
6/24/2026	X		Moderate sheen, contained within booms

3.5 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 first half of 2026, the City collected stormwater samples on March 17, 2026, and June 9, 2026. Results from sampling events during the first half of 2026 are presented below.

3.5.1 March 17, 2026 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 3 - Summary of March 2026 Stormwater Sampling Results

Analyte/Parameter	Consent Order Limits	Sample Location		
		MH-93	Outfall	Trip Blank
Benzene (µg/L)	5.8 ug/L	44.6	63.4	BLOD
Naphthalene (µg/L)	8.9 ug/L	162	1080	BLOD
Total Dissolved Solids (mg/L)	NA	505	516	
TPH-Diesel Range Organics (DRO) (mg/L)	15 mg/L	0.440 J	3.12	
pH	NA	7.59	7.85	
Temperature (° C)	NA	12.2	13.2	

BLOD – Below Limit of Detection

NA – Not Applicable

3.5.2 June 9, 2026 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 4 - Summary of June 2026 Stormwater Sampling Results

Analyte/Parameter	Consent Order Limits	Sample Location		
		MH-93	Outfall	Trip Blank
Benzene (µg/L)	5.8 ug/L	1.23	1.19	BLOD
Naphthalene (µg/L)	8.9 ug/L	6.05	3.43	BLOD
Total Dissolved Solids (mg/L)	NA	487	469	
TPH-Diesel Range Organics (DRO) (mg/L)	15 mg/L	BLOD	BLOD	
pH	NA	8.26	8.15	
Temperature (° C)	NA	22.8	21.3	

BLOD – Below Limit of Detection

NA – Not Applicable

4 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.

4.1 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.

4.2 Sediment Sampling

The City 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 were agreed to 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 (TOC).

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.

The sampling activities and the laboratory results were described in the *Post Pier Demolition Sediment Sampling Report for the Alexandria Town Gas and Oronoco Outfall Site – Robinson Terminal North Pier*. Provided in Appendix 2 is Figure 3 from the Sediment Sampling Report which presents a summary of December 2025 sample locations with probable effect concentrations (PEC) for normalized total PAHs exceeding 22.8 mg/kg. Based on the 2025 results, the horizontal extents of contamination are restricted to:

- An area in front of the Oronoco St. outfall, including surface sediments sampled above reactive cap, and extending to underneath the southeast footprint of the former Pier
- An area underneath northwest footprint of the former Pier and extending north beyond the former footprint, bounded by the edge of the sampling extent.

The draft Sediment Sampling Report was provided to DEQ and the PRKN on April 9, 2026. Comments from DEQ were received via letter dated May 12, 2026. No comments were received from the PRKN. Responses to VDEQ comments were developed and a Final report prepared that incorporated the City's responses. The Final report addressing all comments was provided to DEQ and the PRKN on May 27, 2026.

4.3 Sediment Remediation

Because the sediment sampling discussed above identified probable effect concentrations exceeding 22.8 mg/kg total PAHs, the City prepared a sediment remediation action plan (RAP) as described below.

Remedial Action Objectives (RAOs) are narrative statements that serve as a basis for developing numerical remediation goals and remedial alternatives to protect human health and the environment. RAOs are specific to the areas and media where the site investigations identified unacceptable risks. The RAP presents the following RAO for the sediments: *reduce exposure of benthic organisms to PAHs in sediments in the biologically active zone (approximately the top 6 in. of surface sediment or cap) by maintaining total PAH concentrations below the PEC criterion of 22,800 µg/kg on a TOC-normalized basis.*

The RAP included a screening of remedial technologies potentially applicable to achieve the RAOs for the PAH impacted sediments. Technologies were evaluated and screened relative to effectiveness, ease of implementation, and cost. The retained technologies were then assembled into the following three specific alternatives to achieve the RAOs:

- ATG-1: Dredging to impact depths with backfilling and capping
- ATG-2: Shallow dredging and capping
- ATG-3: In-Situ treatment and limited dredging with capping

The impacted sediment zones were delineated into seven separate “remediation zones” based on constructability considerations. Provided in Appendix 2 is Figure 6-1 from the Sediment RAP which presents these remediation zones labeled A through G. These remediation zones encompass each of the impacted sediment zones and comprise more regularly shaped four- to six-sided polygons that are more practical from construction and implementation perspective. These remediation zones should be regarded as preliminary and will be refined further during the remedial design process. The combined area of the remediation zones is approximately 22,790 SF or 0.52 acres.

Alternatives ATG-1, ATG-2, and ATG-3 were evaluated against the following six criteria:

- Protection of the environment
- Reduction in toxicity, mobility, and/or volume
- Long-term effectiveness and permanence
- Short-term effectiveness and impacts
- Ease of implementation
- Cost

The alternatives were further ranked on a scale of 1 to 3 on five of the six criteria based on their comparative performance on each of the criteria. Based on the above evaluation, alternative ATG-3 had the highest total score (11) amongst the three alternatives and is the recommended alternative as it will be easier to implement compared to ATG-1 and ATG-2, requires handling of lower quantities of dredged materials, achieves the performance standard and provides long term protection, and will have the lowest projected impact on the surrounding community and the environment.

ATG-Oronoco Site Summary January 1, 2026 to June 30, 2026

Under ATG-3, remediation of the impacted sediments will be performed via a combination of:

- In-situ treatment with activated carbon (AC) of Zones A, B-1, C, and D
- Dredging to 1 ft. depth in Zones B-2 and F, and backfilling
- Dredging to 2 ft. depth in Zone G, and backfilling
- Shallow dredging (0.5 ft.) and capping in Zone E.

The draft RAP was submitted to PRKN and DEQ on June 5, 2026. Comments were received from DEQ on June 18, 2026 and from the PRKN on July 2, 2026. The City prepared responses to these comments and revised the RAP to incorporate these responses. As part of the response to these comments, the City agreed that the vertical and horizontal extent of impacted sediments in Zone G (POS-68) and south of POS-68 have not been fully delineated. Additional sampling will be conducted for PAHs and TOC to address this data gap during the remedial design phase. This additional sampling will be at POS-68 and about 25 ft. and 50 ft. south of POS-68. The City is in the process of procuring services for the remedial design and permitting. Once the DEQ approves the plan, the City will file applications for any necessary permits.

Appendix 1 Operations and Maintenance Logs

ATG-Oronoco Site O&M Record

Date:

January 6, 2026 10:07 AM

Personnel:

Shelby Dyer, RP Meredith

Weather and Tide Conditions:

Partly Cloudy, Cold

Rising Tide, High Tide

Outfall Boom Material:

Good, no action

Outfall Water Conditions:

SPOTTY sheen

Outfall Odors:

NO odor

Additional Outfall Notes:

,

January 6, 2026 10:07 AM

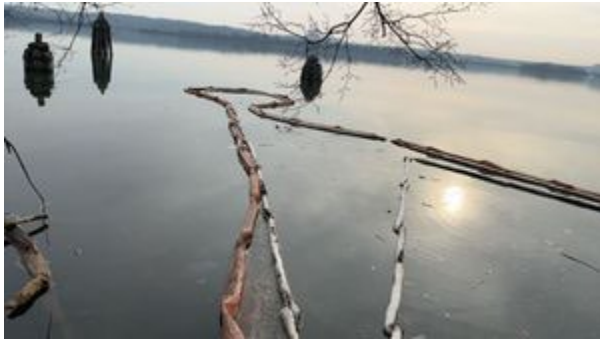
Outfall Photo #1:



Outfall Photo #3:



Outfall Photo #2:



Outfall Photo #4:



January 6, 2026 10:07 AM

System O&M Data

Bldg Temp:

78

Comp Hours:

35,954.1

Coolant:

Coolant Added

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

8.5

BSW-6 Flow

0

BSW-6 Press

9

BSW-7 Flow

0

BSW-7 Press

3

BSW-8 Flow

0

BSW-8 Press

6

BSW-9 Flow

0

BSW-9 Press

5.5

System Notes:

System running normal.
Site observation

ATG-Oronoco Site O&M Record

Date:

January 13, 2026 10:21 AM

Personnel:

Shelby Dyer, RP Meredith

Weather and Tide Conditions:

Outfall Boom Material:

Repairs needed

Outfall Water Conditions:

NO sheen

Outfall Odors:

NO odor

Additional Outfall Notes:

Will be doing repositioning of turbidity curtain and replacing of boom next to debris guard.

January 13, 2026 10:21 AM

Outfall Photo #1:



Outfall Photo #3:



Outfall Photo #2:



Outfall Photo #4:



January 13, 2026 10:21 AM

System O&M Data

Bldg Temp:

75

Comp Hours:

36,005.7

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

8.5

BSW-6 Flow

0

BSW-6 Press

9

BSW-7 Flow

0

BSW-7 Press

2

BSW-8 Flow

0

BSW-8 Press

6

BSW-9 Flow

0

BSW-9 Press

5.5

System Notes:

System is running normally. Switched out boom next to debris guard at outfall and repositioned

boom at outfall. Also changed out sweep at MH-93. Old sweep had staining on it with a strong odor.

ATG-Oronoco Site O&M Record

Date:

January 20, 2026 10:21 AM

Personnel:

Shelby Dyer, RP Meredith

Weather and Tide Conditions:

Outfall Boom Material:

Good, no action

Outfall Water Conditions:

NO sheen

Outfall Odors:

NO odor

Additional Outfall Notes:

None

January 20, 2026 10:21 AM

Outfall Photo #1:



Outfall Photo #2:



Outfall Photo #3:



Outfall Photo #4:



January 20, 2026 10:21 AM

System O&M Data

Bldg Temp:

65

Comp Hours:

36,063

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

8.5

BSW-6 Flow

0

BSW-6 Press

9.5

BSW-7 Flow

0

BSW-7 Press

3

BSW-8 Flow

0

BSW-8 Press

6.5

BSW-9 Flow

0

BSW-9 Press

5.5

System Notes:

System running normal.

ATG-Oronoco Site O&M Record

Date:

January 27, 2026 11:15 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:

Could not get a good look at boom due to outfall being heavily frozen. Site observation.

January 27, 2026 11:15 AM

Outfall Photo #1:



Outfall Photo #3:



Outfall Photo #2:



Outfall Photo #4:



January 27, 2026 11:15 AM

System O&M Data

Bldg Temp:

70

Comp Hours:

36,127.9

Coolant:

Coolant Added

Pressures and Flows

BSW-1 Flow

0

BSW-1 Press

8

BSW-2 Flow

0

BSW-2 Press

9

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

9.5

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

6

System Notes:

System running normal.

ATG-Oronoco Site O&M Record

Date:

February 3, 2026 9:58 AM

Personnel:

Shelby Dyer, RP Meredith

Weather and Tide Conditions:

Outfall Boom Material:

Good, no action

Outfall Water Conditions:

NO sheen

Outfall Odors:

NO odor

Additional Outfall Notes:

Could not get good view of outfall because it is frozen over with ice.

February 3, 2026 9:58 AM

Outfall Photo #1:



Outfall Photo #3:



Outfall Photo #2:



Outfall Photo #4:



February 3, 2026 9:58 AM

System O&M Data

Bldg Temp:

50

Comp Hours:

36,176.7

Coolant:

OK

Pressures and Flows

BSW-1 Flow

0

BSW-1 Press

8.5

BSW-2 Flow

0

BSW-2 Press

9.5

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

9.5

BSW-7 Flow

0

BSW-7 Press

3.5

BSW-8 Flow

0

BSW-8 Press

7

BSW-9 Flow

0

BSW-9 Press

6

System Notes:

System was down overnight due to high pressure alarm at PIT202. Logged in from panel box

and reset system. System is now running normally.

ATG-Oronoco Site O&M Record

Date:

February 10, 2026 10:22 AM

Personnel:

Shelby Dyer

Weather and Tide Conditions:

Outfall Boom Material:

Good, no action

Outfall Water Conditions:

SLIGHT sheen

Outfall Odors:

NO odor

Additional Outfall Notes:

Limited vision with boom due to outfall being iced over. Site observation. Also switched out sweep at MW-93. Did not smell any odor nor saw any staining on used sweep but changed it as a precautionary measure.

February 10, 2026 10:22 AM

Outfall Photo #1:



Outfall Photo #3:



Outfall Photo #2:



Outfall Photo #4:



February 10, 2026 10:22 AM

System O&M Data

Bldg Temp:

68

Comp Hours:

36,234.1

Coolant:

OK

Pressures and Flows

BSW-1 Flow

0

BSW-1 Press

8

BSW-2 Flow

0

BSW-2 Press

1.5

BSW-3 Flow

0

BSW-3 Press

5

BSW-4 Flow

0

BSW-4 Press

2

BSW-5 Flow

0

BSW-5 Press

2

BSW-6 Flow

0

BSW-6 Press

1

BSW-7 Flow

0

BSW-7 Press

0

BSW-8 Flow

0

BSW-8 Press

8

BSW-9 Flow

0

BSW-9 Press

5.5

System Notes:

System running normally.
Did emergency
maintenance on system on
2-8-26 due to high
pressure alarm at F-401.

Bled out air and restarted
system. Cause could be
due to extremely cold
weather because temp in
building was at 24.3F

ATG-Oronoco Site O&M Record

Date:

February 27, 2026 10:17 AM

Personnel:

Shelby Dyer, RP Meredith

Weather and Tide Conditions:

Outfall Boom Material:

Replacement needed

Outfall Water Conditions:

HEAVY sheen

Outfall Odors:

STRONG odor

Additional Outfall Notes:

300 ft of absorbent 5"X10' boom was replaced and 4 drums were used to bulk the used boom. Also one additional drum of used sweep and spill pads was taken off site with the drums that were used for boom replacement.

February 27, 2026 10:17 AM

Outfall Photo #1:



Outfall Photo #2:



Outfall Photo #3:



Outfall Photo #4:



February 27, 2026 10:17 AM

System O&M Data

Bldg Temp:

62

Comp Hours:

36,366.2

Coolant:

Coolant Added

Pressures and Flows

BSW-1 Flow

0

BSW-1 Press

8

BSW-2 Flow

0

BSW-2 Press

1.5

BSW-3 Flow

0

BSW-3 Press

5.5

BSW-4 Flow

0

BSW-4 Press

2

BSW-5 Flow

0

BSW-5 Press

2

BSW-6 Flow

0

BSW-6 Press

1

System running normal..
One drum was used on 2-
20-26 for boom and sweep
replacement in which was

BSW-7 Flow

0

BSW-7 Press

0

BSW-8 Flow

0

BSW-8 Press

6

BSW-9 Flow

0

BSW-9 Press

5.5

not put in previous survey
123.

System Notes:

ATG-Oronoco Site O&M Record

Date:

March 13, 2026 9:51 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:

Moderate to heavy sheen around the inner boom. But no odor. Will change out sweep at seed

March 13, 2026 9:51 AM

Outfall Photo #1:



Outfall Photo #3:



Outfall Photo #2:



Outfall Photo #4:



March 13, 2026 9:51 AM

System O&M Data

Bldg Temp:

60

Comp Hours:

36,466.5

Coolant:

Pressures and Flows

BSW-1 Flow

0

BSW-1 Press

7.5

BSW-2 Flow

0

BSW-2 Press

1.5

BSW-3 Flow

0

BSW-3 Press

5.5

BSW-4 Flow

0

BSW-4 Press

1.5

BSW-5 Flow

0

BSW-5 Press

2

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

5.5

System Notes:

System running normal.

ATG-Oronoco Site O&M Record

Date:

April 1, 2026 8:46 AM

Personnel:

Shelby Dyer, Damian Murphy

Weather and Tide Conditions:

Outfall Boom Material:

Replacement needed

Outfall Water Conditions:

MODERATE sheen

Outfall Odors:

STRONG odor

Additional Outfall Notes:

Will replace inner and outer soft boom and replace sweep at MH-93. Used 340 ft to replace used soft boom. 5 drums were used for replacement and another drum that was used for storm clean up on 3-17-26 was taken off site also.

April 1, 2026 8:46 AM

Outfall Photo #1:



Outfall Photo #3:



Outfall Photo #2:



Outfall Photo #4:



April 1, 2026 8:46 AM

System O&M Data

Bldg Temp:

79

Comp Hours:

36,616.1

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

7.5

BSW-4 Flow

0

BSW-4 Press

8

BSW-5 Flow

0

BSW-5 Press

6

BSW-6 Flow

0

BSW-6 Press

8

BSW-7 Flow

0

BSW-7 Press

10.5

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:

May 1, 2026 10:31 AM

Personnel:

Shelby Dyer

Weather and Tide Conditions:

Sunny, Warm

High Tide

Outfall Boom Material:

Good, no action

Outfall Water Conditions:

NO sheen

Outfall Odors:

NO odor

Additional Outfall Notes:

May 1, 2026 10:31 AM

Outfall Photo #1:



Outfall Photo #3:



Outfall Photo #2:



Outfall Photo #4:

May 1, 2026 10:31 AM

System O&M Data

Bldg Temp:

82

Comp Hours:

36,825.5

Coolant:

OK

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:

System off

ATG-Oronoco Site O&M Record

Date:

May 12, 2026 10:27 AM

Personnel:

Damian Murphy

Weather and Tide Conditions:

Outfall Boom Material:

Replacement needed

Outfall Water Conditions:

MODERATE sheen

Outfall Odors:

NO odor

Additional Outfall Notes:

Debris causing boom misplacement.

May 12, 2026 10:27 AM

Outfall Photo #1:



Outfall Photo #3:



Outfall Photo #2:



Outfall Photo #4:



May 12, 2026 10:27 AM

System O&M Data

Bldg Temp:

70

Comp Hours:

36,899

Coolant:

OK

Pressures and Flows

BSW-1 Flow

7.5

BSW-1 Press

BSW-4 Flow

2.5

BSW-4 Press

BSW-7 Flow

0

BSW-7 Press

BSW-2 Flow

0

BSW-2 Press

BSW-5 Flow

1.5

BSW-5 Press

BSW-8 Flow

6

BSW-8 Press

BSW-3 Flow

5

BSW-3 Press

BSW-6 Flow

0

BSW-6 Press

BSW-9 Flow

5

BSW-9 Press

System Notes:

ATG-Oronoco Site O&M Record

Date:

June 2, 2026 10:11 AM

Personnel:

Weather and Tide Conditions:

Outfall Boom Material:

Outfall Water Conditions:

Outfall Odors:

Additional Outfall Notes:

June 2, 2026 10:11 AM

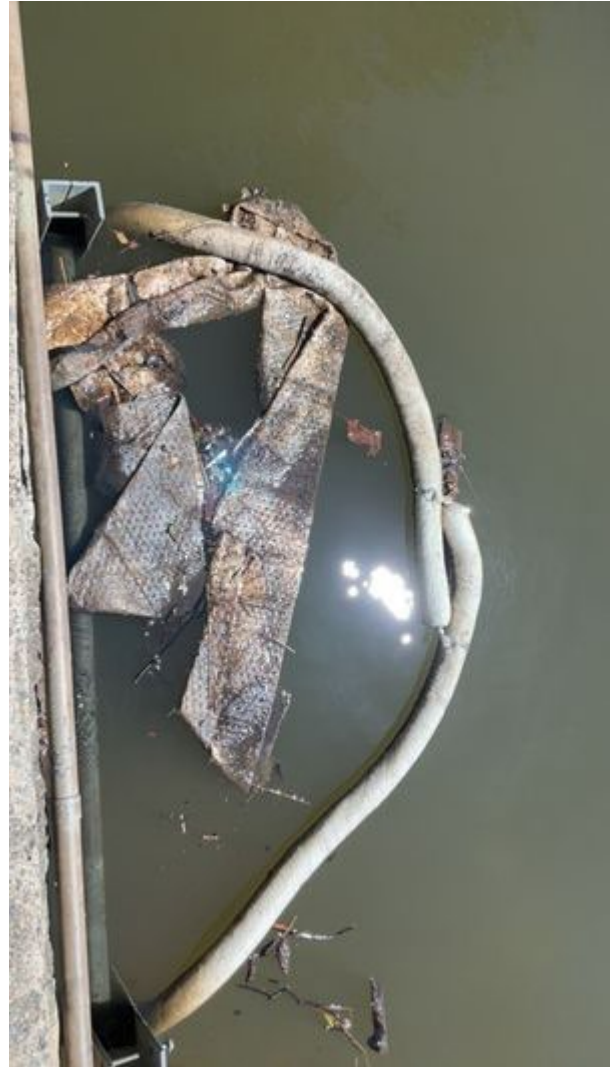
Outfall Photo #1:



Outfall Photo #2:



Outfall Photo #3:



Outfall Photo #4:



June 2, 2026 10:11 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:

ATG-Oronoco Site O&M Record

Date:

May 21, 2026 9:35 AM

Personnel:

Shelby Dyer, RP Meredith, Damian Murphy

Weather and Tide Conditions:

Outfall Boom Material:

Replacement needed

Outfall Water Conditions:

MODERATE sheen

Outfall Odors:

NO odor

Additional Outfall Notes:

Will also do debris clean up.

May 21, 2026 9:35 AM

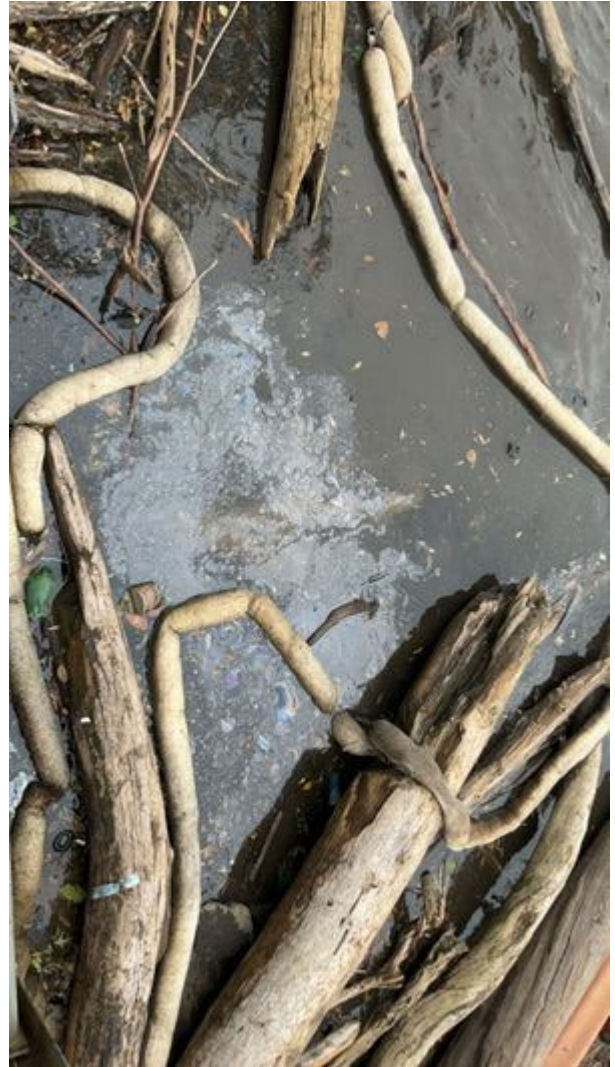
Outfall Photo #1:



Outfall Photo #2:



Outfall Photo #3:



Outfall Photo #4:



May 21, 2026 9:35 AM

System O&M Data

Bldg Temp:

78

Comp Hours:

36,958.4

Coolant:

Coolant Added

Pressures and Flows

BSW-1 Flow

0

BSW-1 Press

7.5

BSW-2 Flow

0

BSW-2 Press

2.5

BSW-3 Flow

0

BSW-3 Press

4.5

BSW-4 Flow

0

BSW-4 Press

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:

ATG-Oronoco Site O&M Record

Date:

May 29, 2026 10:30 AM

Personnel:

Shelby Dyer

Weather and Tide Conditions:

Sunny

Falling Tide

Outfall Boom Material:

Good, no action

Outfall Water Conditions:

NO sheen

Outfall Odors:

NO odor

Additional Outfall Notes:

May 29, 2026 10:30 AM

Outfall Photo #1:



Outfall Photo #3:



Outfall Photo #2:



Outfall Photo #4:

May 29, 2026 10:30 AM

System O&M Data

Bldg Temp:	Comp Hours:	Coolant:
75	37,012	OK

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:

ATG-Oronoco Site O&M Record

Date:

June 9, 2026 10:07 AM

Personnel:

Damian Murphy

Weather and Tide Conditions:

Sunny

Low Tide

Outfall Boom Material:

Good, no action

Outfall Water Conditions:

MODERATE sheen

Outfall Odors:

SLIGHT odor

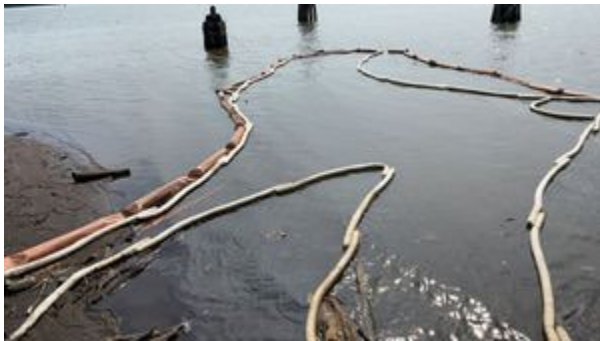
Additional Outfall Notes:

June 9, 2026 10:07 AM

Outfall Photo #1:



Outfall Photo #2:



Outfall Photo #3:



Outfall Photo #4:



June 9, 2026 10:07 AM

System O&M Data

Bldg Temp:

73

Comp Hours:

37,081.5

Coolant:

OK

Pressures and Flows

BSW-1 Flow

7.5

BSW-1 Press

BSW-4 Flow

1.5

BSW-4 Press

BSW-7 Flow

0

BSW-7 Press

BSW-2 Flow

0

BSW-2 Press

BSW-5 Flow

1.5

BSW-5 Press

BSW-8 Flow

10

BSW-8 Press

BSW-3 Flow

5

BSW-3 Press

BSW-6 Flow

0

BSW-6 Press

BSW-9 Flow

4

BSW-9 Press

System Notes:

ATG-Oronoco Site O&M Record

Date:

June 15, 2026 9:14 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:

Debris on south end of outfall but otherwise outfall and boom looks good.

June 15, 2026 9:14 AM

Outfall Photo #1:



Outfall Photo #3:



Outfall Photo #2:



Outfall Photo #4:



June 15, 2026 9:14 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
currently down. Will try to
reset soon.

ATG-Oronoco Site O&M Record

Date:

June 24, 2026 10:09 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:

Can see sheen on sediment at low tide. Also moderate sheen at SE end of outfall. See pictures 6 and 7.

June 24, 2026 10:09 AM

Outfall Photo #1:



Outfall Photo #3:



Outfall Photo #2:



Outfall Photo #4:



June 24, 2026 10:09 AM

System O&M Data

Bldg Temp:

70

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 still
down.

Appendix 2 Figures from the Sediment Sampling Reports and Sediment Remedial Action Plan

Path: L:\Legacy\USCHL\FP002\Data\Library\Gisprojects\Projects\Sediment Sample Report\MXD\Fig. 3. Total PAHs Normalized TOC Sediment Sample Exceedances.mxd

Notes

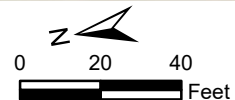
1. Results are in ug/kg.
2. TOC Normalized concentrations exceeding the Probable Effect Concentration (PEC) of 22,800 ug/kg are in **red font**.
3. Dup - Field Duplicate.
4. NS - Not Sampled.
5. Pier removed prior to sample collection.
6. Sample depth intervals as noted except where otherwise indicated in figure (inches): 0-6, 6-12, 12-24, 24-36.

AECOM

Legend

- Sediment Sample Location Results Exceedance
- Sediment Sample Location Results No Exceedance

Source
Orthoimergy from VGIN, 2025.

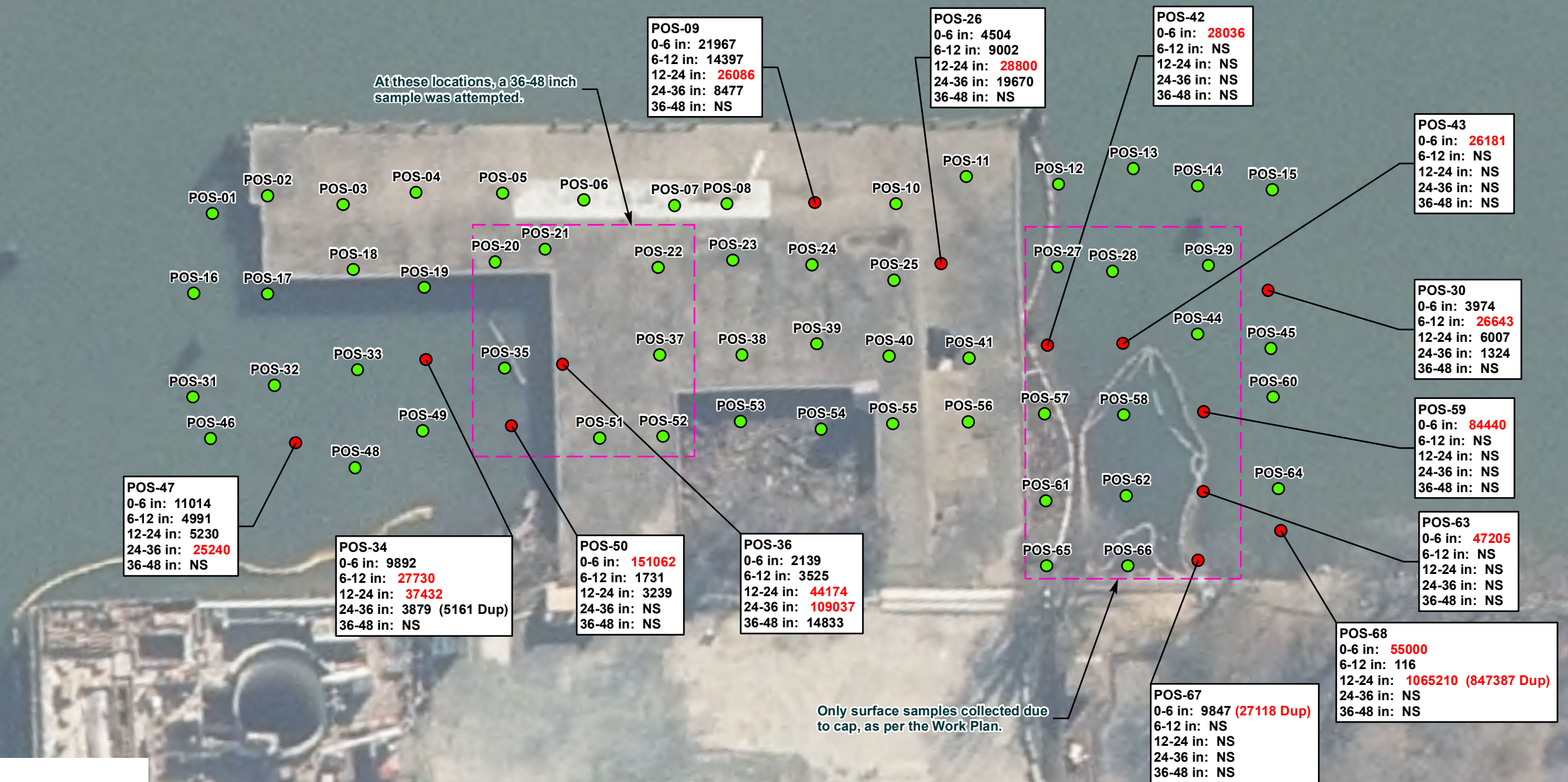


ALEXANDRIA TOWN GAS-ORONOCO
CITY OF ALEXANDRIA, VIRGINIA
60745382

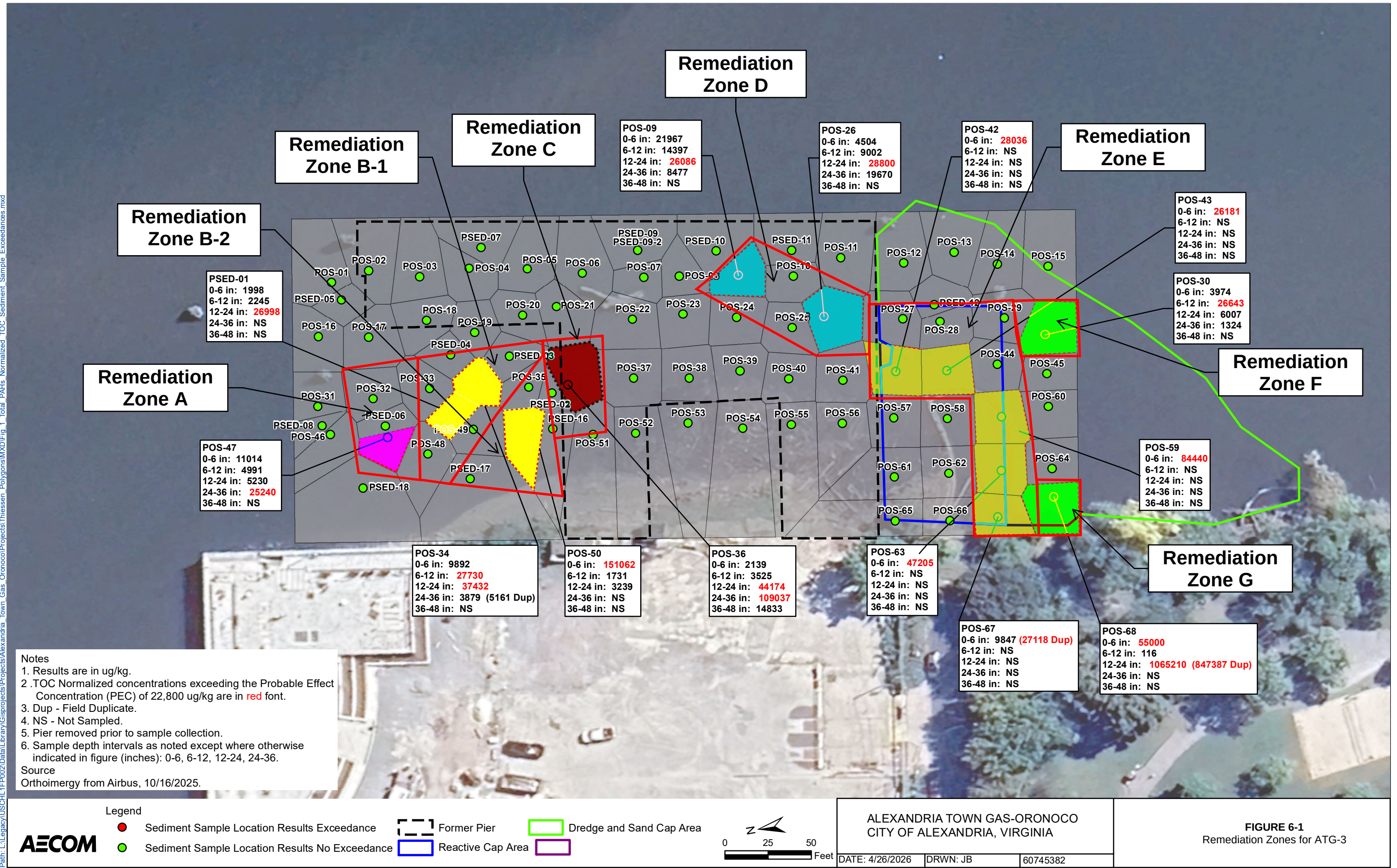
DATE: 3/10/2026

DRWN: JB

FIGURE 3
TOTAL PAHs NORMALIZED TOC
SEDIMENT SAMPLE EXCEEDANCES



Path: L:\Legacy\USCHL\FP002\Data\Library\Gisprojects\Projects\Thiessen_Polygons\MXD\Fig_1_Total_PAHs_Normalized_TOC_Sediment_Sample_Exceedances.mxd



PS-01
0-6 in: 1998
6-12 in: 2245
12-24 in: 26998
24-36 in: NS
36-48 in: NS

POS-47
0-6 in: 11014
6-12 in: 4991
12-24 in: 5230
24-36 in: 25240
36-48 in: NS

POS-34
0-6 in: 9892
6-12 in: 27730
12-24 in: 37432
24-36 in: 3879 (5161 Dup)
36-48 in: NS

POS-50
0-6 in: 151062
6-12 in: 1731
12-24 in: 3239
24-36 in: NS
36-48 in: NS

POS-36
0-6 in: 2139
6-12 in: 3525
12-24 in: 44174
24-36 in: 109037
36-48 in: 14833

POS-63
0-6 in: 47205
6-12 in: NS
12-24 in: NS
24-36 in: NS
36-48 in: NS

POS-67
0-6 in: 9847 (27118 Dup)
6-12 in: NS
12-24 in: NS
24-36 in: NS
36-48 in: NS

POS-68
0-6 in: 55000
6-12 in: 116
12-24 in: 1065210 (847387 Dup)
24-36 in: NS
36-48 in: NS

POS-09
0-6 in: 21967
6-12 in: 14397
12-24 in: 26086
24-36 in: 8477
36-48 in: NS

POS-26
0-6 in: 4504
6-12 in: 9002
12-24 in: 28800
24-36 in: 19670
36-48 in: NS

POS-42
0-6 in: 28036
6-12 in: NS
12-24 in: NS
24-36 in: NS
36-48 in: NS

POS-43
0-6 in: 26181
6-12 in: NS
12-24 in: NS
24-36 in: NS
36-48 in: NS

POS-30
0-6 in: 3974
6-12 in: 26643
12-24 in: 6007
24-36 in: 1324
36-48 in: NS

POS-59
0-6 in: 84440
6-12 in: NS
12-24 in: NS
24-36 in: NS
36-48 in: NS