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April 8, 2024

VIA ELECTRONIC FILING

Ms. Rosemary Chiavetta, Secretary
Commonwealth of Pennsylvania
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17120

In re: Joint Petition of Pennsylvania-American Water Company and the Pennsylvania Department of Environmental Protection Requesting an *Ex Parte* Emergency Order in Regard to Receivership of East Dunkard Water Authority

Docket No. P-2023-3043950

Dear Secretary Chiavetta

Pursuant to Appendix A of the Commission's Ratification Order entered November 20, 2024¹ and the Commonwealth Court Order dated February 8, 2024², please find attached the 60-day Initial Status Report of Pennsylvania-American Water Company regarding East Dunkard Water Authority ("Authority"). Consistent with the referenced Commonwealth Court Order, this report is being provided concurrently to the Commonwealth Court, the Pennsylvania Department of Environmental Protection and the Authority.

Should you have any questions, please feel free to contact me.

Sincerely,

Elizabeth Rose Triscari

cc: Paul Diskin, Director, Bureau of Technical Utility Services (*via electronic mail*)
Dan Searforce, Manager, Bureau of Technical Utility Services (*via electronic mail*)
David Screven, Chief Counsel, Law Bureau (*via electronic mail*)
All Parties on the Attached Certificate of Service (*via electronic mail*)

¹ See, paragraph 1(c) of Appendix A.

² See, paragraph 5(t) of the Commonwealth Court Order.

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Joint Petition of Pennsylvania-American :
Water Company and the Pennsylvania :
Department of Environmental Protection : Docket No. P-2023-3043950
Requesting an *Ex Parte* Emergency Order :
in Regard to Receivership of East :
Dunkard Water Authority :

CERTIFICATE OF SERVICE

I hereby certify that I have this 8th day of April served a true copy of the foregoing Status Report upon the parties, listed below and in the manner below in accordance with the requirements of 52 Pa. Code §1.54 (relating to service by a party).

SENT VIA ELECTRONIC MAIL ON APRIL 8, 2024

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Respectfully submitted,



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**EAST DUNKARD WATER AUTHORITY
INITIAL STATUS REPORT (60-DAY)
APRIL 8, 2024**

1. BACKGROUND

On February 8, 2024, the Pennsylvania Commonwealth Court (“Court”) issued an Order appointing Pennsylvania-American Water Company (“PAWC”) as a Receiver for the East Dunkard Water Authority (“Authority”) and the Authority’s property, facilities and assets, including the East Dunkard Public Water System (“System”).

Paragraph 5(t) of the Order requires PAWC to submit an initial status report to the Court, the Pennsylvania Department of Environmental Protection (“Department”), the Pennsylvania Public Utility Commission (“Commission”), and the Authority Board, within sixty (60) days of assuming operations and then quarterly thereafter. The status reports shall provide any relevant updates concerning the condition of the System and activities performed by PAWC pursuant to the Order. The status reports shall also include a list of Department Mandated Improvements and Commission Approved Projects, and a listing of any recommended additional capital improvements to address the objectives set forth in Paragraph 5(e) of the Order.

This document provides the 60-day Initial Status Report required by the Order¹. Conditions found and actions taken are summarized in Section 2. Improvement projects are discussed in Section 3.

2. CONDITIONS FOUND & ACTIVITIES PERFORMED

This section describes the conditions of the System found upon assumption of receivership operations by PAWC on February 9, 2024 and the corrective actions taken to date. Photographs referenced in the discussion below are found in Attachment 1 to this report. This section is organized in the following order of components of the System operations: (2.1)- Safety Program; (2.2) - Water Treatment Plant; (2.3) - Water Distribution System; (2.4) - SCADA System; (2.5) - Water Quality & Environmental Compliance Program; and (2.6) Public Outreach Program.

¹ Paragraph 5(e) of the Order requires PAWC to conduct an evaluation of the System, identify deficiencies in the System’s physical conditions, facilities and operational procedures, identify and prepare a plan of capital and operational procedures, identify and prepare a plan of capital and operational improvements to (i) improve System performance and compliance with applicable law, (ii) address or anticipate the obsolescence of portions of the System, (iii) reduce the cost of operating the System, (iv) provide cost savings or efficiency innovations to the System, or (v) comply with existing or anticipated changes to applicable laws and regulations, and report the results of such evaluation to the Court, Department, Commission and Authority (“the Improvements Plan”). PAWC is conducting this evaluation and will submit the Improvements Plan when complete, as a separate report from this 60-day Initial Status Report.

Note, in the subsections below, the numbered “actions taken” items correspond to the same numbered “conditions found” items.

2.1 Safety Program

PAWC has observed and reviewed the Authority’s safety procedures, programs and equipment for compliance with applicable regulations, industry standards and best practices, and took immediate action, as necessary.

2.1.1 Personal Protective Equipment (“PPE”)

Conditions found:

1. Employees had limited PPE.
2. PPE requirements were not visibly marked in the facility.
3. No automated external defibrillator (“AED”) on site.

Actions taken:

1. Provided critical PPE to all employees consisting of gloves, safety glasses, ear plugs, vests, and steel toed boots.
2. Installed “PPE required” signage (photo 1).
3. Ordered an AED unit.

2.1.2 Plant Water Supply Safety

Conditions found:

1. Determined that the plant’s potable water supply was tapped off the plant’s 10-inch transmission main rather than the 6-inch distribution main as originally believed. The tap location is before the point on the 10-inch main where regulatory disinfection and contact time (“CT”) requirements are met for Giardia log inactivation, thereby making the plant water supply unsafe for human consumption.

Actions taken:

1. Immediately advised all employees that the water was unsafe for human consumption and posted all sinks at the plant as “non-potable water”. Providing bottled water to employees until permanent solution can be made by re-locating the tap location to the 6-inch distribution main.

2.1.3 Chemical Safety

Conditions found:

1. No secondary containment on chemical drums.
2. Chemical tanks were not labeled.
3. Sodium hydroxide storage tank was not registered, as required by

the Department's Storage Tank Regulations.

4. The sodium hydroxide day tank fill button was not labeled and within sight of the day tank.
5. No overflow pipes on bulk chemical storage tanks.
6. Vent pipes on bulk chemical storage tanks were venting within the building.
7. Chemical fill ports were not labeled, locked or contained.
8. Chlorine gas safety deficiencies were present, including no safety signage, no working chlorine gas detector/alarm, no automatic shutoff system, and no windsock for evacuation purposes.
9. Waste chemicals were stored in plant area.
10. No fume hood in laboratory, which is preventing process control testing for manganese levels in the water.
11. Safety data sheets ("SDS's") not available for laboratory reagents.

Actions taken:

1. Installed secondary containment on chemical drums (photo 2).²
2. Installed temporary labels on chemical tanks (photo 3).
3. Applied for and received temporary storage tank registration from Department for sodium hydroxide tank.
4. Relocated and labeled the sodium hydroxide day tank fill button.
5. Installed overflow pipes to the bulk chemical storage tanks.
6. Installed tank vent pipes that properly vent outside the building.
7. Installed locks, labeled fill ports, and provided containment pan at chemical truck unloading area (photo 4).
8. Installed new leak detection system with emergency shut down, proper signage at entry door to identify hazard and PPE requirements, and new windsock identify wind direction in the event of an emergency (photo 5).
9. Removed fifteen (15) drums and two (2) large day tanks of waste chemicals from plant; packaged and ready for disposal by hazardous materials contractor (photo 6).
10. Purchased temporary fume hood for use until permanent solution.
11. Organized SDS's for laboratory reagents in a binder.

2.1.4 Slip/Fall/Struck-By Protection

Conditions found:

1. Poor housekeeping presented slip/trip/fall hazards throughout the facility.
2. Dangerous stairway leading to river sampling location.
3. Dangerous platform leading to lagoon sampling location.

² Satisfied paragraph 7(f) of the Court Order.

4. No life rings or rescue hooks for a fall into clarifier, filters or lagoon.
5. Missing section of guardrail on clarifier platform.
6. Guardrails on elevated platforms were missing kick plates which presents a hazard to employees from falling tools/equipment.
7. Several trip hazards due to deteriorated grating/concrete and uneven surfaces.
8. Inadequate lighting inside and outside plant.
9. Unsafe and unpassable access road leading from public road to Griffin Tank and its critical entry point sampling location.

Actions taken:

1. Removed junk/debris (filled one dumpster) and reorganized work spaces and equipment storage areas (photo 7).
2. Removed debris and installed handrail on stairway (photo 8).
3. Installed barricade on unsafe platform and redesignated the sampling point until permanent solution (photo 9).
4. Installed life rings and rescue hooks (photo 10).
5. Installed new guardrail section that provides permanent protection (photo 11).
6. Installed kick plates on elevated guard rails (photo 12).
7. Repaired grating and concrete surfaces, and painted uneven surfaces with yellow warning marks (photo 13).
8. Installed new interior and exterior lights for improved visibility.
9. Regraded and installed new gravel surface to Griffin Tank access road for safe passage of vehicles (photo 14).

2.1.5 Confined Space Safety

Conditions found:

1. Confined spaces not labeled.
2. No equipment to monitor for hazardous atmosphere.

Actions taken:

1. Installed signs on confined spaces (photo 1).
2. Ordered 3-gas monitor.

2.1.6 Electrical/Mechanical Safety

Conditions found:

1. Several overheated extension cords and inoperable electric outlets.
2. Boxes of paper stored next to transformer and breaker panel.
3. Missing guard on rotating part (clarifier mixer motor) presents pinch injury potential.
4. No electric shock protection mats in place near high risk electrical

- equipment.
5. No electric arc flash safety program in place.

Actions taken:

1. Replaced inoperable electric outlets and removed/disposed of extension cords.
2. Removed material to eliminate potential fire hazard (photo 15).
3. Installed protective guard to eliminate hazard (photo 16).
4. Installed electrical insulation matting under all high-risk electrical equipment.
5. Inventoried facility locations and began implementation of an arc flash safety program, including application of standard arc flash safety labels at five (5) remote sites (Bald Hill, Beals, Davistown, Laurel Hill and Rocky Hollow pump stations) and data collection at the Willowtree pump station that is needed for a custom arc flash calculation and labeling (photo 17).

2.1.7 Vehicle Safety

Conditions found:

1. Both pick-up trucks needed repairs and one was past due on state inspection.

Actions taken:

1. Past-due truck is under repair and state inspection is scheduled. Second truck will be repaired after past-due truck is back in service.

2.1.8 Safety Management

Conditions found:

1. No key management system in place.
2. No emergency evacuation plan.
3. No daily focus on safety practices.

Actions taken:

1. Changed locks on plant facility.
2. Prepared and posted emergency evacuation plan for plant facility.
3. Initiated pre-job safety tailgate talks and safety near-miss reporting.

2.2 Water Treatment Plant

PAWC has operated the plant, interviewed Authority employees, reviewed process control and compliance testing data, evaluated the adequacy and condition of plant equipment, and identified deficiencies and improvement opportunities. Immediate actions taken to improve the performance of the plant are listed below.

2.2.1 Intake & Chemical Feed Operations

Conditions found:

1. Intake screens frequently clog with leaves/debris from river.
2. Chemical feed pumps are aged and there is no redundancy in the event of a pump failure.
3. Coagulant dosage is adjusted based on operator's intuition rather than standardized testing.
4. Chlorine feed system consists of a single cylinder with no redundancy, no means to monitor the amount of product in the cylinder, no automatic switchover to another cylinder, and limited safety controls.
5. Chemical level readings in the coagulant and sodium hydroxide bulk storage tanks were inaccurate.

Actions taken:

1. Installed larger compressed air tank and backwash line at raw water station for better debris removal.
2. Ordered new duplicate chemical feed pumps for coagulant, sodium hydroxide and polyphosphate.
3. Initiated jar testing program to evaluate coagulant dosage prior to adjustment.
4. Applied for and received emergency permit from Department to replace entire chlorine feed system with new unit consisting of scales for measuring product quantity, dual cylinder feed with automatic switchover, and leak sensors with automatic shutdowns. Ordered new equipment.
5. Level transmitters in each bulk storage tank were re-calibrated and are now accurate.

2.2.2 Clarifier & Filter Operations

Conditions found:

1. Plant was being operated in a start-stop fashion, with approximately 10 to 12 shutdowns per day, leading to inconsistent treated water quality, hydraulic shocks to the transmission main and wasted filter backwash water.
2. Clarifier performance was inhibited by poor mixing due to failing motor/gearbox and a rotation setting that was contrary to

manufacturer's operating manual.

3. Automatic sludge blowdown feature on clarifier was inoperable.
4. Response to Department's 4th Deficiency Letter dated December 4, 2023 on the Filter Corrective Action Plan was still outstanding.
5. Filter media is at end of useful life and filter backwashing process is not effective due to aging components.
6. Filter turbidimeter sample line tubing was aged and dirty, leading to random spikes in filter effluent turbidity readings.
7. Pressure reducing valve ("PRV") on the filter backwash line was not operating properly, leading to lack of flow control.
8. Blower on air scour system of filter backwash has excessive vibration and noise.

Actions taken:

1. Initiated a steady state operation at lower production flow rate that has eliminated routine plant shutdowns entirely.
2. Replaced motor and controller on clarifier mixer (photo 16), purchased spare motor, ordered new gearbox, and reversed the rotation of the mixer to match manufacturer's specifications.
3. Repaired the automatic sludge blowdown feature on clarifier.
4. Submitted revised Filter Corrective Action Plan to Department on February 27, 2024³; received Department approval on March 13, 2024.
5. The filter rebuild project (called for in the approved Filter Corrective Action Plan and required under paragraph 7(e) of the Court Order) started on March 11, 2024 and is scheduled for completion by May 1, 2024. Filter 1 was rebuilt and Department issued Partial Operations Permit on March 19. Filter 1 was placed back in service on March 27. Filter 2 construction began on April 3.
6. Replaced sample tubing on all filter turbidimeters.
7. Repaired and performed maintenance on the filter backwash PRV.
8. Ordered equipment to repair blower on filter air scour system.

2.2.3 Post-Treatment & High Service Pumping Operations

Conditions found:

1. No real-time process monitoring in place for treated water (clearwell) quality.
2. One of two high service pumps was down and out for repair since October 2023, resulting in no redundancy on pumping operations to serve customers.
3. No backflow prevention or metering in place on finished water

³ Satisfied paragraph 7(e) of the Court Order.

being used in plant for sanitary/process water.

4. Entry point sample location at vault on effluent line from Griffin Tank was producing poor quality water due to tap age, condition and location. The current Hach CL10 analyzer at entry point vault is in poor condition and needs to be replaced.

Actions taken:

1. Installed NSF⁴-approved sample pump, turbidimeter and chlorine residual analyzer to monitor clearwell water quality in real time (photo 18).
2. Immediately contacted vendor to finalize repairs, received and installed repaired high service pump to restore redundancy.
3. Installed backflow preventer and meter on plant sanitary/process water line.
4. Reestablished a new sample tap at entry point for more representative sampling. Cleaned, flushed and recalibrated existing Hach CL 10 analyzer. Installed a new Evoqua Depolox analyzer that will provide chlorine residual, pH and temperature data.⁵ In the process of completing the 14-day initial calibration verifications on this instrument, required under Method 334 (photo 19).

2.2.4 Miscellaneous Plant Operations

Conditions found:

1. Plant wastewater lagoon was full of solids and very little freeboard existed, leading to violations of the permitted effluent limits.
2. Emergency generator for the plant had not been serviced or maintained for several years.

Actions taken:

1. Contractor was hired to remove solids and dispose off-site at a permitted disposal facility. Work is proceeding.
2. Contractor performed preventative maintenance on the plant generator including general service inspection and lubrication oil, coolant and filter changes.

⁴ National Science Foundation.

⁵ Recommendation #2 of SCADA System Evaluation Report submitted under paragraph 7(g) of the Court Order.

2.3 Water Distribution System

PAWC has operated the water distribution system, interviewed Authority employees, observed each of the remote pumping stations and water storage tanks, reviewed water quality testing data, and identified deficiencies and improvement opportunities. Immediate actions taken to improve the performance of the distribution system are listed below.

2.3.1 Water Mains, Services and Meters

Conditions found:

1. Leaks were left running on water mains and service lines. No proactive program to identify leaks and repair them promptly.
2. Typical leak repair process was to fix with repair clamps, which can be effective short-term but not a good long-term solution.
3. No procedures in place to follow the requirements in the Distribution System Corrective Action Plan (“CAP”) dated November 2020. This CAP was requested by the Department as a result of multiple customer water quality complaints and manganese sample results exceeding the Secondary Maximum Contaminant Levels.
4. No procedures in place to test for chlorine residual or use dechlorination agents when main breaks or controlled flushing are discharging to streams.
5. No GIS system was available to field employees to assist in real-time location of distribution assets.
6. Asset locations are missing from system mapping.
7. Inadequate number of blow-offs in system for effective flushing, particularly on dead end mains.
8. No program in place to identify and investigate defective customer meters.

Actions taken:

1. Implemented a practice to actively look for leaks in the system and make repairs within 24 hours of discovery. Repaired a total of thirteen (13) leaks to date. Eleven (11) of these leaks were running on day 1 of PAWC assuming receivership responsibility.
2. Implemented a new repair practice where sections of failed water main pipe are removed/replaced where possible, and use of repair clamps is only in extraordinary circumstances.
3. Implemented the operational aspects of the CAP, including prompt response and investigation of customer water quality complaints, sampling for iron/manganese levels at customer locations, and system flushing in response to system disturbances resulting in discolored water. Prepared SOPs for water quality

complaints, system flushing, boil water advisories and main break disinfection, and will be submitting these to the Department to close out the CAP.

4. Initiated chlorine residual testing and use of dechlorination agent during main beaks and flushing.
5. Developed GIS mapping application of distribution system assets to allow real-time use by field employees.
6. Located seven (7) blow-offs not marked on system maps during field work. Obtained location coordinates for map updates.
7. Installed one (1) new blow-off to facilitate flushing during discolored water event.
8. Began review of consecutive estimates and other customer metering criteria to identify potential metering issues. Ordered thirty five (35) new meters for use as replacements.

2.3.2 Pumping Stations & Storage Tanks

Conditions found:

1. Failed electrical equipment at Willowtree pump station is preventing it from operating as designed. Water is being purchased from Southwest Water Authority (“Southwest”) as a result.
2. One of the two 1994-vintage pumps at the Bald Hill pump station have failed and there is no redundancy.
3. Unknown accuracy of the storage tank level readings.

Actions taken:

1. Rewired and replaced four failed variable frequency drives (“VFD”) and replaced two check valves (photo 20). Activated the pump station and made valve adjustments to eliminate the use of purchased water in the Clark Tank service area. Plans are being developed to discontinue the remainder of the purchased water from Southwest.
2. Applied for and received emergency permit from Department to replace two pumps at Bald Hill pump station. Ordered new pumps.
3. Performed field evaluation of all storage tanks to confirm water level reading accuracy. Alicia Tank levels are not accurate and need to be remedied. All others were accurate.

2.4 SCADA System

PAWC completed an evaluation of the Supervisory Control and Data Acquisition (“SCADA”) system at the plant and submitted the results in a SCADA System Evaluation Report to the Department and the Authority on March 8, 2024, in accordance with Paragraph 7(g) of the Order. The Department approved the Report on March 13, 2024. This section will summarize the findings and actions taken as part of that evaluation.

PAWC evaluated the SCADA system by: visually observing the treatment plant and its process control components in operation; identifying and testing the communications network for process control signals; researching the present process control equipment and its capabilities; checking the online water quality analyzers for accuracy; testing the alarms generated for each compliance parameter; interviewing plant operators; and communicating with representatives from High Tide Technologies (“High Tide”), the vendor for the current SCADA and Human Machine Interface (“HMI”) system.

The treatment plant’s process control system architecture consists of a top-level High Tide SCADA/HMI system communicating with individual Process Logic Controllers (“PLC”) located at the raw water pump station, the high service pump station and the filtration units, and several online water quality analyzers.

2.4.1 High-Tide SCADA/HMI System

Conditions found:

1. The High Tide SCADA/HMI system is a Cloud, or web-based SCADA system. It communicates with the filtration PLC via the local plant Internet Protocol (“IP”) network and hard-wired input/output (“IO”) signals, it communicates to raw water and high service stations via wired IO signals, and it communicates with several remote distribution system sites over cellular modems. Plant operators use the High Tide web-based HMI to monitor plant and distribution status and alarms, and to record data. Status: operable; no immediate upgrades needed.

Actions taken:

1. None needed.

2.4.2 Raw Water & High Service Pump Station PLCs

Conditions found:

1. The raw water and high service pump stations are configured similarly. A Mitsubishi PLC is present at each station to control the pumping operations. Pump run status, pressure, wet well level, and flow rate signals are hard wired from each station to the plant

HMI system. Pump start/stop commands are hard wired from the plant HMI system back to each station. The pumps can be turned on and off remotely in the control room via the HMI computer. All pump speed settings must be locally adjusted at the VFD located within each pumping station. Status: operable; no immediate upgrades needed.

Actions taken:

1. None needed.

2.4.3 Filter Unit PLC

Conditions found:

1. The filters are equipped with an Allen Bradley MicroLogix PLC to control the filters. There is also an Allen Bradley touchscreen HMI at the filter control panel. Filter backwashes and valve control are automated and work well. The filter control PLC is on the internal plant IP network. Status: operable; no immediate upgrades needed.

Actions taken:

1. None needed.

2.4.4 Water Quality Compliance Data

Conditions found:

1. Internal span on filter 1 Individual Filter Effluent (“IFE”) turbidimeter was incorrect, causing the turbidity reading in the SCADA system to be 33% higher than the reading displayed locally at the turbidimeter.
2. All four IFE turbidimeters had signal-averaging enabled in the instruments. Filter 1 was set to 30 seconds, filter 2 and 3 were 60 seconds, and filter 4 was 90 seconds. Signal averaging during periods of steady plant operation can cause readings in the SCADA systems to not update for long periods of time, unless and until there is a significant change in water quality.
3. Calculated percent error readings between the IFE turbidimeter direct readings and the analog output being recorded in the High Tide SCADA system were unacceptably high. This is due to the scaling of the analog signal being set at 0-10 NTU while the turbidimeter direct readings are usually less than 0.1 NTU. PAWC’s standard for spanning of analog output from compliance turbidimeters is 0-2.5 NTU.
4. The entry point chlorine analyzer at the Griffin tank was initially inaccessible because of the poor condition of the access road

- leading from the public roadway up to the tank.
5. Entry point Hach CL10 chlorine residual analyzer at the Griffin tank was not reading over 2.0 mg/L in the High Tide system. PAWC's standard for spanning of entry point chlorine residual is 0-5 mg/L to ensure that we monitor for the maximum residual disinfectant level of 4.0 mg/L.
 6. EPA Method 334.0 weekly grab sample comparisons of the online chlorine residual analyzer not being done, as required by Department regulations.

Actions taken:

1. Corrected internal span on filter 1 IFE turbidimeter.
2. Reset signal-averaging on all IFE turbidimeters to 0 seconds.
3. Calibrated the analog output from the IFE turbidimeters and changed the spanning of analog turbidimeter signals in the SCADA system from 0-10 NTU to 0-2.5 NTU.⁶ These adjustments have eliminated the previously reported errors between the turbidimeter readings and the SCADA records (photo 21).
4. Regraded and installed new gravel surface to Griffin Tank access road for safe passage of vehicles (photo 14).
5. Reset span on Hach CL 10 chlorine residual analyzer to 0-5 mg/L.
6. Initiated weekly grab samples for Method 334.0 compliance and to spot check against the online readings being recorded in SCADA.

2.4.5 Real-Time Data Access, Alarming & Shutdowns

Conditions found:

1. No secure real-time remote access to SCADA water quality compliance data and no visibility to plant alarms by PAWC certified operators.
2. From comprehensive review of all plant alarms/shutdowns in SCADA, discovered that filter shutdowns on high turbidity were set at 5.0 NTU on the IFE turbidimeters, well over the regulatory standard of 1.0 NTU.

Actions taken:

1. Set up secure Web HMI system for PAWC certified operators to access real-time data from SCADA and receive text alarms.
2. Reset the filter shutdown parameter to 0.75 NTU on the IFE turbidimeters.

⁶ Recommendation #1 of SCADA System Evaluation Report submitted under paragraph 7(g) of the Court Order.

2.5 Water Quality & Environmental Compliance Program

PAWC has observed and reviewed the Authority's water quality and environmental compliance testing and reporting procedures versus regulatory requirements, interviewed Authority employees, evaluated the tools and equipment in place for compliance monitoring, reviewed compliance testing data and reported the data to the Department, and identified deficiencies and improvement opportunities. Immediate actions taken to improve the water quality and environmental compliance program are listed below.

2.5.1 Certified Drinking Water System Operator

Conditions found:

1. Paragraph 7(a) of the Order required PAWC to retain, and at all times thereafter maintain, the services of a qualified, properly-certified drinking water system operator ("Certified Operator"), who meets the requirements of 25 Pa. Code § 109. 704, the Water and Wastewater Systems Operator's Certification Act, 63 P.S. §§ 1001-1016, and 25 Pa. Code Chapter 302, Subchapter L, to direct and supervise operation of the System.
2. Paragraph 7(b) of the Order required PAWC to: (i) complete and electronically submit to the Department a Change of Available Operator Form ("CAO Form"), identifying the Certified Operator(s) retained pursuant to Paragraph 7(a); (ii) email a copy of the completed CAO Form to the Department at RA-EPSWSDW@pa.gov; and (iii) email a copy of the completed CAO Form to the Certified Operator(s) in responsible charge as required by 25 Pa. Code § 1206(a).
3. Paragraph 7(c) of the Order required that, promptly after designating the Certified Operator, PAWC shall provide training, direction and supervision to System staff to assure that all process control decisions (as defined in 25 Pa. Code § 302.101) at the System shall be made by either: (i) an appropriately Certified Operator; or (ii) staff operating in consultation with a Certified Operator for the System; or (iii) staff operating under Standard Operating Procedures ("SOPs") approved by the "operator-in-responsible charge", as defined in 25 Pa. Code § 302.101, for the System.

Actions taken:

1. On February 9, 2024, PAWC designated the following PAWC employees as Certified Operators serving as Operators in Responsible Charge: Tim Berdar, Kelly Hays, Tim Patterson. On the same date, PAWC designated the following PAWC employees as Certified Operators serving as backup Available Operators:

Brandy Braun, Jake Gentile, Joel Hilliard, Matt Macek, Jon Natale, and Jasun Stanton.

2. On February 9, 2024, PAWC completed and electronically submitted the CAO Forms to the Department, emailed the completed CAO Forms to the Department at RA-EPSWSDW@pa.gov, and emailed a copy of the completed CAO Forms to each of the Certified Operators identified in 1. above.
3. On February 12, 2024, PAWC trained System staff on the designation of the new Certified Operators and the requirement that all process control decisions at the System shall be made by either: (i) one of the Certified Operators in Responsible Charge or one of the backup Available Operators; or (ii) staff operating in consultation with one of the Certified Operators in Responsible Charge or one of the backup Available Operators.

2.5.2 Operator Training

Conditions found:

1. No operator training program in place.
2. No posted instructions for operators to follow when evaluating water quality data for compliance with drinking water regulations.

Actions taken:

1. Trained operators on compliance with drinking water regulations.
2. Prepared and posted Action Level Charts for plant operators to follow when water quality conditions change or test results indicate a change in plant performance.

2.5.3 Filter Bed Evaluation Program

Conditions found:

1. No program in place for quarterly Filter Bed Evaluations (“FBE”), as required by Department regulations.

Actions taken:

1. Prepared FBE program spreadsheets, performed 1st quarter 2024 FBEs, and submitted results to Department on April 5, 2024.⁷

2.5.4 Compliance Monitoring & Reporting

Conditions found:

1. No process in place to manually record 15-minute IFE turbidity readings from each filter when the plant lost SCADA communications, as required by Department regulations.

⁷ Satisfied paragraph 7(d) of the Court Order.

2. The daily CT calculation for minimum Giardia log removal was not using the peak flow from the plant, as required by Department regulations.
3. Lacking tools to track progress on required monitoring and compliance activities.
4. Lacking tools to store and track water quality data for compliance purposes.
5. Lacking tools to store and track 90-day turbidimeter calibration data.
6. No phosphate testing program in place, as required by permit.
7. Frequently occurring distribution system monitoring violations in non-routine weeks (week 4/5) when monthly coliform monitoring requirements had already been met.
8. No program in place to report annual residual waste quantities to Department, as required by Department regulations.
9. Opportunities for improvement in monitoring and reporting practices.

Actions taken:

1. Prepared a log sheet for recording 15-minute IFE turbidity readings and trained operators on its use.
2. Trained operators to download the High Service Pump flow readings and sort them to find the highest reading. The highest reading each day is now used in the daily CT calculation.
3. Prepared and posted 2024 monthly compliance calendar to ensure all required monitoring and compliance activities are completed (photo 22). Items include:
 - a. Weekly Entry Point (Griffin Tank) Method 334 comparison grabs.
 - b. Weekly routine distribution coliform/chlorine, iron/manganese, and phosphate monitoring.
 - c. Monthly, quarterly, and annual sampling requirements under Safe Drinking Water Act (“SDWA”).
 - d. 70-Day turbidimeter calibrations.
 - e. Quarterly Filter Bed Evaluations.
 - f. Quarterly Method 334 requirements.
 - g. National Pollutant Discharge Elimination System (“NPDES”) permit sampling.
 - h. Quarterly Alarm testing.
4. Prepared several spreadsheets to assist with compliance data management:
 - a. Total organic carbon (“TOC”) tracking sheet to store data and calculate running annual averages (“RAAs”).
 - b. Disinfection by-product (“DBP”) tracking sheet to store

- data and calculate locational running annual averages (“LRAAs”) and operational evaluation levels (“OELs”).
- c. Spreadsheet to track plant hours, turbidity readings, and turbidity performance data for SDWA reporting.
 - d. Customer complaint tracking log.
5. Prepared a turbidimeter calibration log sheet to document calibrations and flows of all turbidimeters.
 6. Initiated plant effluent/distribution system phosphate testing to comply with permit.
 7. Created a Week 4/Week 5 Distribution Monitoring Form to document chlorine readings for the Disinfectant Residual Rule, phosphate residual to comply with the phosphate permit conditions, and iron/manganese sample collection to comply with the Distribution Corrective Action Plan (“CAP”), and trained the lead sample collector on use of the log sheets.
 8. Prepared and submitted annual Form 26R residual waste report to Department.
 9. Implemented several process improvements, including:
 - a. Corrected SDWA reporting errors including LogG times (a time of 7am was being used each day) and updated the entry point chlorine method code to the correct code, 587.
 - b. Implemented practice of obtaining and recording 2-hour grab readings when the clearwell chlorine online meter is not functioning.
 - c. Secured access to Drinking Water Electronic Lab Reporting (“DWELR”) for compliance reporting by PAWC Certified Operators.
 - d. Secured access to electronic Discharge Monitoring Reports (“eDMR”) for monthly NPDES reporting by PAWC Certified Operators.
 - e. Secured access to Authority’s contract labs and external lab reports for review by PAWC Certified Operators.
 - f. Created SOP on preparing and submitting the Daily DEP Data submittals.
 - g. Evaluated each distribution sample site to ensure each zone of the distribution system is represented.
 - h. Compiled new Comprehensive Monitoring Plan and will submit to Department once finalized.
 - i. Changed from existing contract laboratories to PAWC’s central laboratory to shorten reporting times and improve reliability.

2.5.5 Monitoring & Reporting Violations

Conditions found:

1. Seventy-five (75) outstanding monitoring/reporting and public notification violations from 2022 and 2023 requiring resolution and public notice.

Actions taken:

1. Resolved outstanding violations with Department as follows:
 - a. Collected TOCs, VOCs, IOCs, Dinoseb (SOC) and nitrate/nitrite samples in 1st quarter 2024 to cover for missed samples in 2023.
 - b. Prepared Consumer Confidence Report (“CCR”), submitted to Department and posted electronically to customers on March 22, 2024. CCR provides required public notice for 75 violations from 2022 and 2023.

2.5.6 Method 334 Compliance

Conditions found:

1. Operators not familiar with Method 334 requirements.
2. No program in place for Method 334 testing and compliance.
3. No weekly comparison grab samples of the Griffin Tank entry point had been done since October 2023.

Actions taken:

1. Provided Method 334 training to operators.
2. Developed Method 334 testing program to cover the following items:
 - a. Handheld instrument Initial Demonstration of Capability (“IDC”).
 - b. Analyst IDCs.
 - c. Quarterly verifications.
3. Immediately began taking weekly comparison grab samples of the entry point chlorine residual analyzer and recording data on site.

2.5.7 Laboratory

Conditions found:

1. Not capable of performing process control tests for manganese due to off-gassing in lab area.
2. Low on lab supplies and reagents.
3. Bench pH meter and bench turbidimeter were in poor condition and not calibrated regularly.
4. No SOPs were in place for laboratory operations.

Actions taken:

1. Purchased temporary fume hood for operator safety while performing manganese tests.
2. Purchased numerous additional laboratory supplies and reagents to bring the laboratory into compliance and to ensure laboratory data is reliable and accurate. Implemented a laboratory reagent and equipment documentation binder.
3. Purchased and installed new bench turbidimeter, spectrometer and pH meter, trained operators on their use, and implemented regular calibration procedures (photo 23).
4. Preparing a Laboratory SOP binder for operator use.

2.5.8 New Regulations

Conditions found:

1. No plans in place for perfluoroalkyl and polyfluoroalkyl substances (“PFAS”) initial monitoring required in 1st quarter 2024.
2. No plans in place for Lead Service Line Inventory public facing map due by October 16, 2024 under the Lead and Copper Rule.

Actions taken:

1. Collected PFAS samples in 1st quarter 2024.
2. Gathering information on customer service lines to prepare public facing map.

2.5.9 Permits & Fees

Conditions found:

1. NPDES discharge permit expires May 31, 2024 and renewal permit application was not submitted to Department 180 days prior to expiration date, as required by Department regulations.
2. Annual drinking water and wastewater discharge fees under Chapter 302 were past due for 2023.
3. Emergency permit fees (\$200) were past due for applications submitted in 2023.

Actions taken:

1. Secured extension of permit application submittal date from Department. Preparing the permit renewal application.
2. Paid past due fees.
3. Paid past due fees.

2.6 Public Outreach Program

Over the past 60 days, PAWC has been keeping customers informed through various channels, including the Authority website, Facebook, phone, email, text, and mail. Specific examples of customer notifications include:

Discolored Water Event

- Phone and text messages
- Website and social media

Planned Valve Exercise

- Phone and text messages
- Website and social media
- Direct mail

Availability of the Consumer Confidence Report

- Phone and text messages
- Website and social media
- Direct mail

The company also hosted a plant tour and information session for local and state elected officials in the EDWA service area. The company will also be identifying and communicating milestone-related stories of PAWC's infrastructure upgrades directly to customers as they become available.

3. IMPROVEMENT PROJECTS

This section describes future improvement projects that have been identified since the assumption of receivership operations by PAWC on February 9, 2024. In accordance with the Order, this section includes a list of Department Mandated Improvements, Commission Approved Projects, and a listing of any recommended additional capital improvements to address the objectives set forth in Paragraph 5(e) of the Order.

3.1 Department Mandated Improvements

Prior to PAWC's assumption of receivership operations, the Authority had applied for and received grant funding from Greene County under the Department of Community and Economic Development's Community Development Block Grant ("CDBG") program. This CDBG is being used to fund several ongoing projects that are compliance-based and therefore "Department Mandated Improvements". Each project is discussed separately below.

3.1.1 Filter Rebuild Project

This project is required under paragraph 7(e) of the Court Order. The project has been permitted by the Department under Water Supply Permit No. 3023509MA issued on December 11, 2023. The scope of the project includes replacement of the filter media, filter backwash aeration piping, and filter backwash underdrain nozzles in each of the four filter cells. The status of this active project was discussed in Section 2.2.2.

3.1.2 Distribution System Mapping & Improvements Project

This project addresses one of the recommendations in the Authority's 2020 Distribution System CAP. The project includes the preparation of updated distribution system mapping using field-verified information and the design and installation of additional system valves, blowoffs and/or hydrants to improve leak isolation and flushing capabilities. This project is in the design phase. The Department has advised the Authority that a permit is not required for the project.

3.1.3 Plant Improvements Project

This project addresses numerous design deficiencies at the plant that have been identified by the Department in previous inspection reports, enforcement orders, Filter Plant Performance Evaluations and Sanitary Surveys. The current scope includes the following improvements:

1. Replace all water quality compliance analyzers (chlorine residual, turbidity, pH).
2. Add individual filter flow meters (influent, effluent, filter-to-waste).
3. Replace filter valve controllers.

4. Install new entry point water quality analyzers and an automated control valve on the influent to the Griffin Tank that will automatically shut down if disinfection treatment is compromised.
5. Install by-pass piping to allow the Griffin Tank to be taken out of service for maintenance.
6. Laboratory renovations (permanent fume hood, chemical containment cabinets).
7. Replace lagoon sampling access ramp with unit meeting all safety standards.
8. Replace failed VFDs and add surge protection at two pump stations (Davistown, Rocky Hollow).
9. Wiring and programming to tie new equipment into High Tide SCADA system.

The project is in the design phase. An application for a Public Water System Permit modification will be submitted to the Department when the design is finalized.

3.2 Commission Approved Projects

None at this time.

3.3 Recommended Additional Capital Improvements

PAWC is conducting the System evaluation required under Paragraph 5(e) of the Order. At the conclusion of the evaluation, PAWC will submit the Improvements Plan required under the Order. Any recommended additional capital improvements beyond those already discussed in this 60-day Status Report will be included in the Improvements Plan.

Attachment 1 Photographs

Photo 1 – Safety/PPE Signage

Issue: Safety signage not in place.

- PPE signage needed to identify PPE requirements.
- Signage not in place on exterior of chlorine room to identify chlorine hazard and PPE required.
- Confined spaces not labeled to identify requirements to protect personnel for entry.



Action Taken: Signage put in place to ensure personnel are aware of PPE requirements and hazards.

Photo 2 - Secondary Containment



Issue:

- Chemical Room did not have secondary containment in place.
- 55-gallon drums located around Clarifier without secondary containment.



Action Taken: Secondary containment installed outside Chemical room for 55-gallon drums.



Action Taken: Secondary containment installed in chemical room; plug installed in drain in chemical room floor.

Photo 3 - Chemical Tank Labeling



Issue: Labeling not in place on chemical tanks.



Action Taken: Temporary labeling installed.

Photo 4 - Chemical Fill Ports / Unloading Area

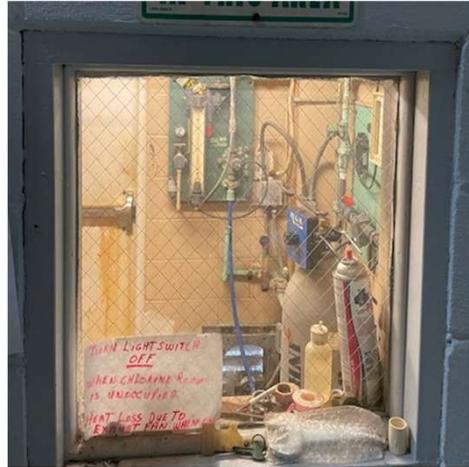


Issue: Chemical unloading area missing signage and labels to prevent unloading into wrong tank, no locks in place, no containment catch trays in place.



Action Taken: Locks installed, temporary signage in place, catch tray put in place for use while transferring chemical.

Photo 5 - Chlorine Gas Safety



Issue: No calibration records for chlorine leak detection system, no halogen valve in place, exterior has no signage in place. No windsock in place to identify wind direction in the event of a release.

Action Taken: Halogen valve installed. Leak detection system with emergency shut down installed. Proper signage installed at entry door to identify the hazard and PPE requirements. Windsock installed to identify wind direction in the event of an emergency.

Photo 6 – Waste Chemicals



Issue: 15 drums and 2 day-tanks on facility need properly disposed.



Action Taken: Waste being properly removed from facility and disposed.

Photo 7 - Housekeeping Slip/Trip/Fall Hazards



Issue: Material throughout garage area creating potential slip, trip, fall hazards.



Action Taken: Housekeeping conducted at facility to eliminate potential slip, trip, fall hazards.



Photo 8 - Stairway to River Sampling Location



Issue: Steps buried with no handrail in place. Access needed for sampling.



Action Taken: Debris/material removed from stairway; guardrail installed for safe access.

Photo 9 – Platform to Lagoon Sampling Location



Issue: Improper walking platform for sampling. Missing guardrails, material used is not designed for use as a walking platform.

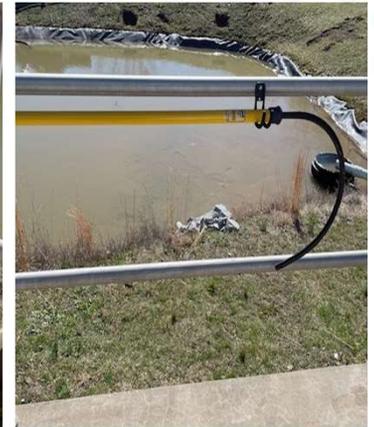


Action Taken: Initial action taken. Area barricaded off; platform not permitted to be utilized.

Photo 10 – Life Rings/Rescue Hooks

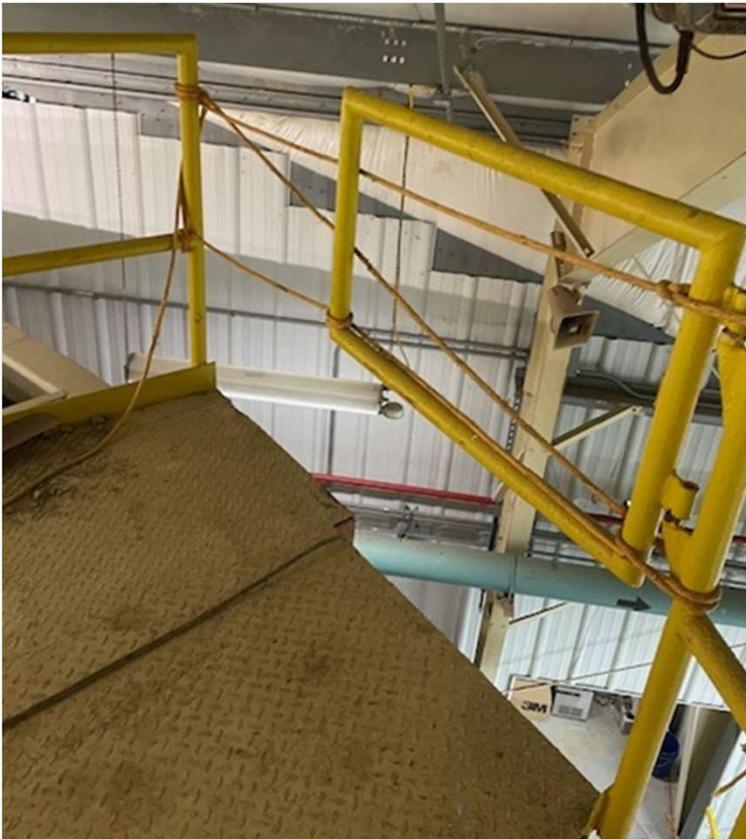


Issue: No life rings/rescue hooks in place for the filters, clarifier or lagoon.

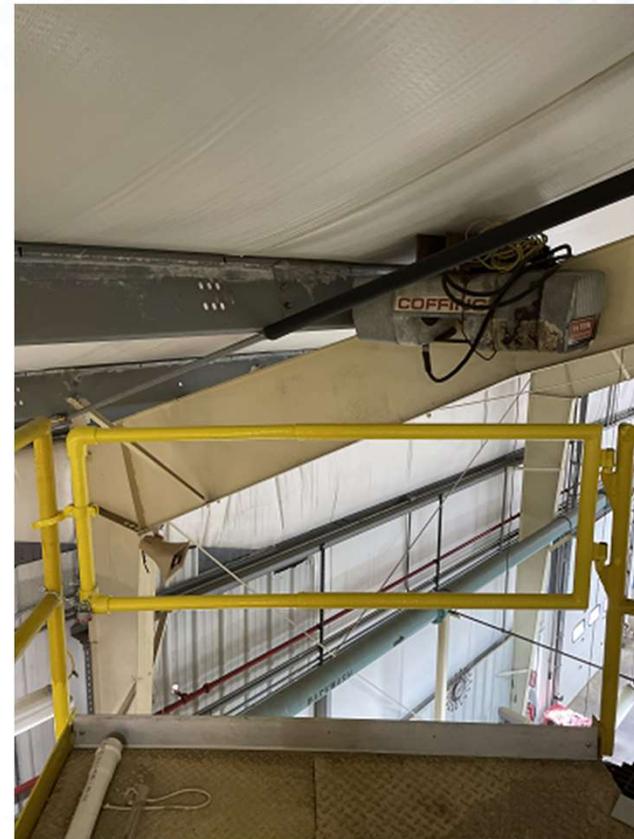


Action Taken: Rescue hook onsite. Life Rings installed at the filters, clarifier, lagoon for rescue.

Photo 11 – Clarifier Platform Guardrail

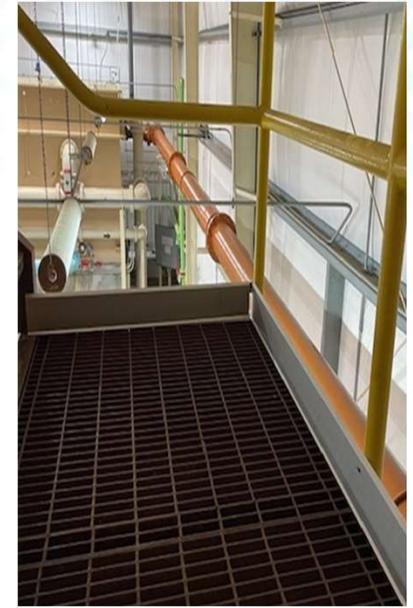


Issue: Fall hazard from unprotected guardrail.
Temporary rope protection in place.



Action Taken: Guardrail extended for complete protection.

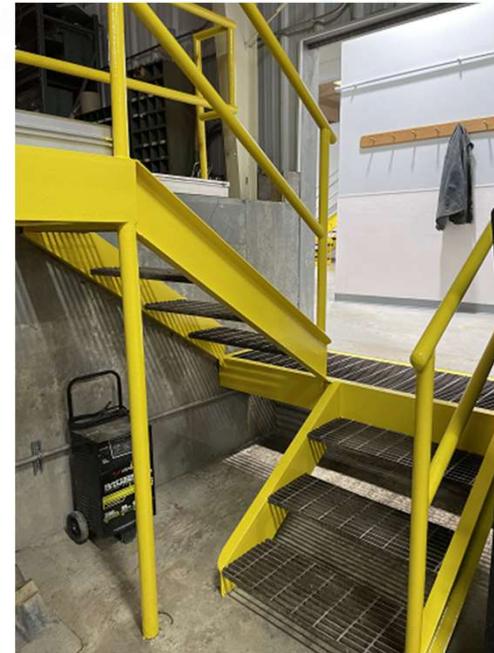
Photo 12 – Guardrail Kick Plates



Issue: Guardrails missing kick plates.

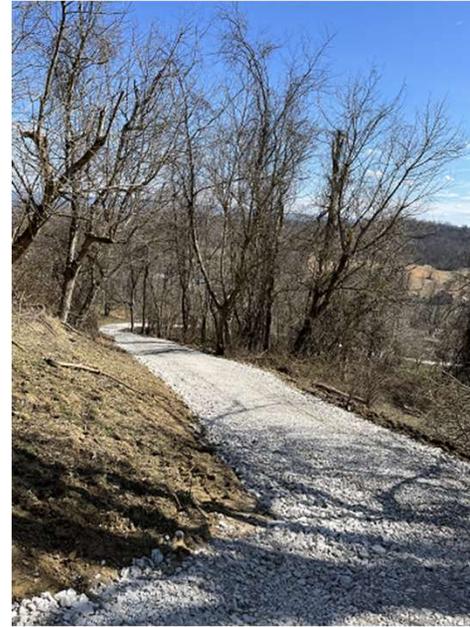
Action Taken: Kick plates installed on guardrails to prevent tools/material falling and impacting personnel.

Photo 13 – New Grating & Trip Hazard Markings



Action Taken: Replaced old grating and painted hazard markings on uneven surfaces.

Photo 14 – Griffin Tank Access Road



Issue: Unimproved dirt road through pasture was unsafe and not suitable for vehicle passage to Griffin Tank (system's entry point for sampling).

Action Taken: Regraded roadway and installed new gravel surface for safe passage of vehicles.

Photo 15 – Electrical Fire Hazards



Issue: Potential fire hazard due to paper/boxes stored next to transformer and breaker panel.

Action Taken: Material removed to eliminate potential fire hazard.

Photo 16 – Clarifier Mixer Motor Rotating Parts



Issue: Mixer motor missing guard on rotating part.



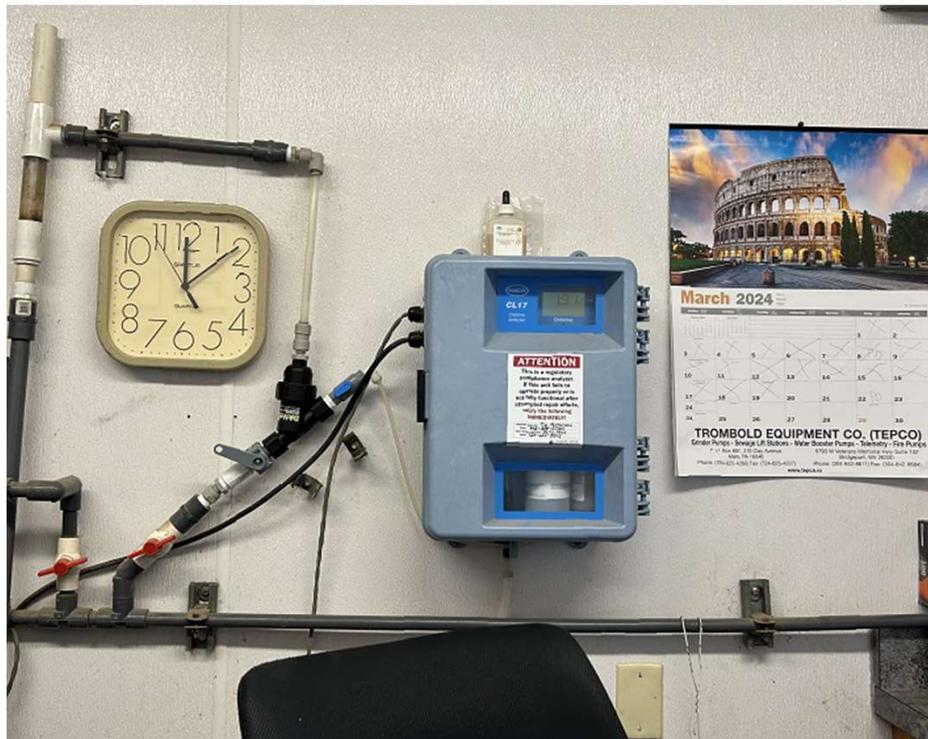
Action Taken: Initial protective guard installed.

Photo 17 – Arc Flash Safety Labeling



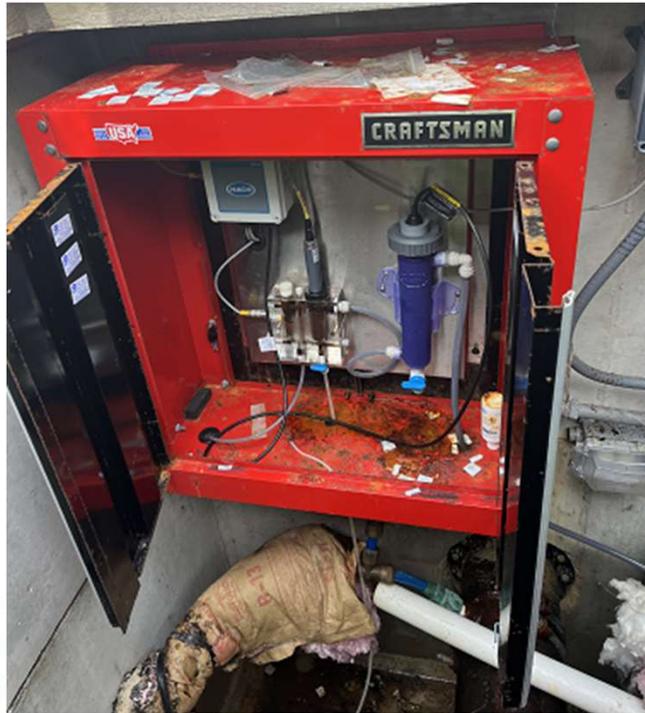
Action Taken: Began implementation of arc flash safety program by applying standard arc flash safety labels at five (5) remote pump stations.

Photo 18 – Clearwell Chlorine Residual Analyzer



Action Taken: Installed sample pump, turbidimeter and chlorine residual analyzer (shown) to monitor clearwell water quality.

Photo 19 – New Entry Point Chlorine Residual Analyzer



Issue: Entry point chlorine residual analyzer in poor condition and not reliable.



Action Taken: New Depolox chlorine residual analyzer installed on new sample tap.

Photo 20 – Repairs to Willowtree Pump Station



Issue: Station inoperable due to failed VFDs.



Action Taken: New VFDs installed and station is now operational. Purchased water expense is being reduced.

Photo 21 – Turbidimeter/SCADA Accuracy Verification



Action Taken: Calibrated the analog output from the IFE turbidimeters and changed the spanning of analog turbidimeter signals in the SCADA system from 0-10 NTU to 0-2.5 NTU. Verified accuracy.

Photo 22 – 2024 Compliance Calendar



Action Taken: Prepared and posted 2024 compliance calendar to track compliance monitoring requirements.

Photo 23 – New Lab Equipment & Calibration Logs



Action Taken: Purchased new bench turbidimeter, spectrometer and pH meter. Prepared and posted calibration log sheets for operator use.