Maryland Department of Environment
Water and Science Administration
Compliance Program
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Inspector: Samantha Coffman
AI ID: 8449

Site Name: Back River WWTP
Facility Address: 8201 Eastern Ave, Baltimore, MD 21224
County: Baltimore County

Start Date/Time: February 24, 2023 09:00 AM
End Date /Time: February 24, 2023 03:30 PM

Media Type(s): NPDES Municipal Major Surface Water

Contact(s): Ronald Wicks
Ronald Turner
Timothy Simmons
Mahmudul Hasan
Michael Hallmen
Andrea Buie

NPDES Municipal Major Surface Water

Permit / Approval Numbers: 15DP0581
NPDES Numbers: MD0021555
Inspection Reason: Follow-up (Non-Compliance)
Site Status: Active
Compliance Status: Noncompliance
Site Condition: Noncompliance
Recommended Action: Additional Investigation Required
Evidence Collected: Photos or Videos Taken, Visual Observation
Delivery Method: Email
Weather: Clear, Windy

Inspection Findings:

The Back River Wastewater Treatment Plant (WWTP) is an activated sludge process sewage treatment plant with biological nutrient removal by Modified Ludzack-Ettinger process, ferric chloride for phosphorus removal, denitrification filters for enhance nutrient removal (ENR), polishing sand filters, chlorination, and dechlorination. The flow is split at a junction box and the larger portion of the flow (up to 130.0 MGD) goes to Outfall 001 to the Back River via a step cascading aeration system and the remaining portion (up to 50.0 MGD) goes to Outfall 002, and sent to Tradepoint Atlantic. The effluent from Outfall 002 is further chlorinated and sent to a storage reservoir known as the High Head Reservoir. The water was once used by International Steel Group (ISG), formerly Bethlehem Steel Corp., for industrial cooling water. The steel mill is closed and Tradepoint Atlantic purchased the steel mill property and portions of this water discharges through 3 outfalls on the Tradepoint Atlantic property.

Tradepoint Atlantic discharges the wastewater from High Head Lake through outfalls 012, 013 and 014, under the authorization of their NPDES permit.

Coordinates and receiving waters for the Tradepoint Atlantic outfalls:

Outfall Number	Receiving Water Name	Latitude	Longitude
012	Patapsco River	39.00° 12.00' 48.00''	76.00° 29.00' 39.00''
013	Patapsco River	39.00° 13.00' 12.53''	76.00° 29.00' 43.32''
014	Bear Creek	39.00° 13.00' 39.00''	76.00° 29.00' 29.00''

The facility's activity code or standard industrial classification (SIC) is 4952 and the North American Industry Classification System (NAICS) is 2213. The receiving water is the Back River for Outfall 001, which is protected for Use II, water contact recreation and the protection of aquatic life and Outfall 002 discharges to the Bear Creek and the Patapsco River also protected for Use II waters.

On February 24, 2023, I conducted a follow-up compliance evaluation inspection at the Back River WWTP. I was accompanied by Ronald Wicks, Administrator with the Compliance Program, Water and Science Administration at the Maryland Department of the Environment (MDE/Department).

On-site Ronald Wicks and I met Ronald Turner, Timothy Simmons, Mahmudul Hasan, Michael Hallmen, and Andrea Buie representing the Back River WWTP. I began the inspection with an opening conference where I discussed follow-up items from previous evaluations with Back River WWTP representatives. Specific details regarding the treatment processes and plant operations listed below:

- Headworks (fine and coarse screening and grit removal system)
- Primary settling tanks (PST)
- Activated Sludge Plants
- Secondary clarifiers
- Denitrification filters (DNF)
- Operations and Maintenance (O&M)
- TRC & DO Quality Assurance
- PCB Minimization Plan (PMP)

Below is a summary of the discussions that occurred during the opening conference and information that I gathered during the progression of the inspection:

Headworks

An independent contractor, ProStart, is currently operating and maintaining the headworks.

Per the 1/26/23 inspection report: There have been complications with ventilation and the biological wet odor scrubber system in the headworks building that prevented satisfactory control and removal of hydrogen sulfide (H_2S) in the headworks building, The H_2S corroded the silver and copper circuit parts. The ambient concentration of H_2S in the headworks building affected electrical conductors and current carrying parts. According to ProStart, Odor Control System C was seeded approximately 3 weeks ago (early January 2023) and not yet fully activated. It is still going through the acclimation phase. According to the ProStart operator, the programmable logic controller (PLC) cards need to be replaced on Odor Control System C in order for it to function as designed. Parts are on order however there are supply chain issue delays. Ronald Wicks learned from ProStart that there have been false readings on the sensors especially after rainfall due to higher solids concentrations in the flushing water clogging sensors in the fine screen area of the headworks.

Per inspection today 2/24/23: According to Ronald Turner, Odor Control System C is still being seeded and there is no current status of the programmable logic controller (PLC) cards for Odor Control System C.

As a reminder:

- The Back River WWTP should ensure that the TSS concentration of the flushing water is maintained at an acceptable concentration.
- The Back River WWTP should ensure that the H_2S sensors are operative and reliable by checking the accuracy through routine frequent calibration checks.

During the 12/14/2022 inspection, Ronald Wicks requested that the Back River WWTP provide to the Department the results for ambient air monitoring at the headworks for lower explosive limits (LEL), oxygen (O_2) and H_2S for the 4th quarters of 2022. The Department received the requested data on 1/30/23.

PSTs

During the 1/26/23 inspection: the scum troughs on PST #1, #7, #8, and #11 were observed to be clogged with scum and required routine maintenance.

During my discussion with Ronald Turner today 2/24/23, Turner informed me that: Badger Daylighting has been contracted to do maintenance work. Badger Daylighting was at the facility last Friday [2/17/23], Saturday [2/18/23], and Monday [2/20/23] and cleared the scum on PST #7 and #1. PST #8 and #11 had to be pumped down. PST #7 is out of service for elevation check and re-balancing from previous contractor work. GMH will do the work on it. Once PST #7 repairs are done, PST #1 will go out of service to figure out the center drive malfunction. Then, PST #5 and #9 will get rehabilitation.

Activated Sludge Plants

Per the 1/26/23 inspection report:

- During previous inspection, Ronald Wicks observed that some of the mixers in the biological reactors and clarifiers were either not functioning or barely turning at Activated Sludge Plants #2 and #3. The mixers in these areas require maintenance. Some of the mixers in the reactors were not functioning as designed because rags were wound around the mixer shafts impeding operation and the many of the reactor basins need to be cleaned of solids and vegetation. During Ronald Wick's discussion with Turner, Turner informed Wicks that Badger, an independent contractor, is scheduled to remove the vegetation from the reactors. During previous inspections, Ronald Wicks observed that many of the mixers were not functioning due to various reasons.
- The DO monitoring probes used to continuously monitor the DO in the biological reactors are not functional. According to Back River WWTP staff, there is a DPW purchase request for 60 ChemScan stainless steel DO probes, controllers, and converters/expansion boxes and associated equipment to automatically monitor and control the DO at the activated sludge plants.

During my discussion with Ronald Turner today 2/24/23, Turner informed me that: ACE Environmental has been brought on for maintenance work (including the mixers). Badger has removed vegetation from reactors #5, #6, #7, and #8. Badger stopped on reactor #9 because #9 was taken offline today. They plan to have Badger continue doing #9 and then continue down the line. The DO monitoring and other associated equipment have been ordered and they are waiting for parts.

Secondary Clarifiers

Per the 1/26/23 inspection report: According to Turner, Badger has cleared vegetation and algae from most of the secondary clarifiers and according to Turner, there are 6 secondary clarifiers that still have to be cleared of algae and vegetation.

Per inspection today 2/24/23: According to Turner, the status is the same and there are 6 secondary clarifiers that still have to be cleared of algae and vegetation.

DNF

The DNFs are also managed by ProStart.

Per the 1/26/23 inspection report:

- There is an electrical issue with Quad 2 and now Quad 2 is functioning on a temporary power system. During the December 14, 2022 inspection, Ronald Wicks asked Bill Farrell, ProStart Manager, when permanent power would be installed to Quad 2. Farrell informed Wicks that Quad 2 is functioning satisfactorily using the temporary power supply, and it is up to Baltimore DPW to make the decision to connect a permanent power supply to Quad 2.
- Arch Foreman (ProStart operator) told Ronald Wicks that 51 of the 52 filters were online. Foreman told Wicks that filter #11 on Quad 3 was not functioning due to a control issue with the air valves for the filter. Foreman stated that the air valve was not functioning when ProStart took over in April of 2021. Foreman further stated that ProStart ordered parts to repair the air valve.

Per inspection today 2/24/23: According to Michael Hallmen, they are planning to have Eney Electric connect a permanent power supply for Quad 2. According to Ronald Turner, Calmi Electric has also been contracted to do other electrical work around the plant. According to Turner, parts have been ordered to repair the air valve for filter #11 on Quad 3.

Equipment and Maintenance Projects

I discussed the status of various operations and maintenance projects requiring attention.

- *Work Orders*
    - Previous inspection reports noted that: Operating conditions in many process areas require improvements due to unsatisfactory preventative maintenance (PM) program and unsatisfactory process controls. These conditions have led to failing treatment process due to poorly functioning equipment. To address this problem, the Department requested that the Back River WWTP prepare and implement an O&M program to initiate and track PM. According to Turner all work orders are now managed by ELKE Corp software, where work orders are prioritized, tracked, and filed with the current ELKE MIMS system. A coordination manager and operations supervisors review and check the status of all work orders.
    - Per inspection today 2/24/23: According to Michael Hallmen, Cityworks will eventually replace the ELKE system for work orders. According to Hallmen the approximate timeline for this is 2 years.

- *Assets Management*

    - Per the 1/26/23 inspection report: The Department determined that there was insufficient accountability for inventory and specified that inventory control must be included in the revised O&M program. According to Turner, both Atkins Inc. and Hazen and Sawyer are conducting plant-wide assets evaluations. Turner further stated that DPW has been working on an assets management plan since October of 2022, but he is unsure when the plan will be complete.

    - Per inspection today 2/24/23: According to Ronald Turner, Atkins is overseeing work on the assets management plan and it is still in progress. According to Turner, Atkins is still collecting data around the plant.

- *Wasting and Sludge Management Plan*

    - According to Turner, the wasting and sludge management plan is still in progress and part of it will be done by Atkins. According to Mahmudul Hasan, Back River staff and Atkins are working on determining mass balance modeling with an approximate timeline of a couple weeks. According to Turner, there is a legal issue (they are waiting on legal work with an approximate timeline of April or May) with Jacobs Engineering. According to Turner, once legal work is done, they anticipate Jacobs Engineering will be doing/overseeing operations and maintenance on the sludge line (everything except the headworks and scale works) for about 5 years.

- *Gravity Sludge Thickener (GST)*

    - Per the 1/26/23 inspection report: There are six GSTs and three are available for use. There are drive and gear box issues with the other three GSTs. **Two units are needed for designed capacity and one for current flow conditions.**

    - During my discussion with Ronald Turner today 2/24/23, Turner informed me that: GST #3 and #5 are in service. GST #1 is waiting to be repaired. GST #2 and #4 are holding tanks. GST #6, #7, and #8 have drive and gear box issues, and parts have been ordered for them.

- *Gravity Belt Thickener (GBT)*

    - Per the 1/26/23 inspection report: There are eight GBTs and currently there are four online (#3, 4, 7, and 8). **Six GBTs are needed for current flows and seven for design capacity.** GBT #1 has problems with the roller, #2 requires a complete rehabilitation, #5 has a torn belt and #6 has a problem with the pump.

    - During my discussion with Ronald Turner today 2/24/23, Turner informed me that: There are four GBTs operating (#4, 5, 7, and 8). GBT #5 has been fixed and is in service. GBT #1 has a belt roller issue. GBT #2 requires rehabilitation (long-term issue). GBT #3 has a belt roller issue. GBT #6 has a bearings issue. ACE has been hired to assist maintenance staff and assist with outstanding needs.

- *Dissolved Air Flotation (DAF) Tanks*

- Per the 1/26/23 inspection report: There are four DAF tanks on site. There are mechanical issues with DAF Tank #3 and #4 is missing the screw auger. According to Turner, #1 and #2 are normally used, however, there is an issue with the flushing water due to a break in the line. Therefore, during this inspection none are working.

- During my discussion with Ronald Turner today 2/24/23, Turner informed me that: Badger has cleaned out rags from DAF #1 and they expect it to be in service again by the end of the day. They are waiting on parts for DAF #2. The status of DAF #3 and #4 is the same, DAF #3 has mechanical issues and DAF #4 is missing the screw auger. ACE has been contracted to deal with the DAF issues.

- *Centrifuge Maintenance Plan*

  - Per the 1/26/23 inspection report: Centrifuges #1 and #3 have been in use. The shaft feed recently failed on #1 and parts are now on order for #2 and #4. During our discussions on the status of the Centrifuge Maintenance Plan, Turner told Wicks that Jacobs Engineering will be taking over all biosolids operations. Turner further stated that Jacobs Engineering will be responsible for preparing the Centrifuge Maintenance Plan.

  - During my discussion with Ronald Turner today 2/24/23, Turner informed me that: The status of the Centrifuge Maintenance Plan is the same and Jacobs Engineering will be responsible for preparing the Centrifuge Maintenance Plan. Centrifuge #1 and #3 are in operation and available for operation. Centrifuge #2 has a control board issue and they are in the process of determining if it is able to operate. They are still waiting for shaft parts for Centrifuge #4.

- *Updated Written Operations and Maintenance (O&M) Manual*

  - According to Turner, Atkins is overseeing the GAP analysis and preparing a plan. The timeframe for completion of the plan is still 3 months. Turner further stated that Atkins is taking care of asset management, training, safety, and performance optimization.

- *Evaluation of Current Staffing and Staffing Plan*

  - According to Turner, Atkins is overseeing work on the staffing plan. Turner stated that when Jacobs comes in, all the personnel currently working on sludge line will be moving to the other side of the plant.

TRC & DO Quality Assurance

- Per the 1/26/23 inspection report:
  - During the review, Ronald Wicks observed that there are insufficient quality assurance (QA) records available for the measurement of DO, SM 4500 O G. The operator that Wicks interviewed informed Wicks that he is not conducting specific QA measures specified by Standard Methods. The Back River WWTP must comply with the EPA requirements under 40 CFR Part 136.7 https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-136/section-136.7 and follow the QA requirements for DO found in Standard Methods 4020I and perform and document QA measures listed below:
    - Duplicate analysis must be performed to assess precision.

        - A zero-oxygen sample must be run.
        - There are no records evaluating the condition of the probe for the electrochemical DO sensor.
    - According to EPA's QA bulletin, the DO probe's oxygen-permeable membrane can be compromised by being punctured or by a coating adhering to it which may not be visible upon inspection. These situations result in high DO measurements when the probe is placed in waters with low DO levels. This problem cannot be detected when the DO meter is calibrated only at the 100 percent saturated air level. Initially, the Department specified that a zero oxygen must be conducted at a rate of 20%. However, to ensure consistently accurate DO measurements a zero-oxygen sample must be used for DO meter calibrations for each use.
    - Records in the facility's quality assurance logbook state that QA checks were performed for the Amperometric Titration Procedure SM 4500 Cl D for total residual chlorine (TRC) monitoring. However, no records for these checks were available. This was also noted on the June 2, 2022, inspection report.

- <u>During my discussion with Ronald Turner today 2/24/23, Turner informed me that:</u> Lab staff are considering submitting a DOC to switch from titration to a colorimeter for TRC monitoring. Lab staff have been testing to determine if titration and colorimeter results are the same.

PCB Minimization Plan (PMP)

- <u>Per the 1/26/23 inspection report:</u> The Back River WWTP has exceeded the waste load allocation for polychlorinated biphenyls (PCB) starting in 2021 and must prepare and submit a PCB Minimization Plan (PMP) to the Department for approval. This plan is overdue, which is a violation of Special Condition 2a of the permit. According to the Baltimore City DPW January 2023 Progress Report, the PMP will be submitted with the February 2023 Progress Report.

- <u>Per inspection today 2/24/23:</u> According to Ronald Wicks, the PCB Minimization Plan (PMP) was submitted to the Department on 2/17/23.

Site Review

After the opening conference, I conducted a site review beginning at the headworks. I was accompanied by Ronald Wicks, Timothy Simmons, and Andrea Buie.

Sewage enters the plant at the mechanical screen building where there are four course screening units, and each unit can treat flows up to 200 million gallons per day (MGD). Therefore, during normal flows one coarse screening unit is sufficient to treat the average daily flow. After coarse screening the sewage flows to the deep wet wells. There are two deep wet wells that are over 50 feet deep that receive wastewater from the Coarse Screening units. Wastewater travels from the deep wet wells through suction pipes that draw water into the Headworks Influent Pumping Station. The influent headworks pump station has 8 lift pumps. The lift pumps are used to pump the screened sewage from the wet wells to the fine screening system.

During this inspection, no problems were observed at the coarse screening units area. The floor by the coarse screening units was observed to be free of debris/rags. A strong odor was observed outside the mechanical screen building.

The next stop was at the fine screening building. The headworks is equipped with six fine screening units with a processing flow rate of up to 100 MGD each. The fine screened sewage then travels to the grit removal system. During this inspection, no problems were observed at the fine screening units area. The floor by the fine screening units was observed to be free of debris/rags.

Travelling bridges remove grit from the waste stream, and this is done at the rectangular tanks. Each traveling bridge has an 80 MDG capacity and under current flow conditions 2 bridges are required for satisfactory grit removal. There are 8 traveling bridges and each is connected to a grit unit. The bridges travel back and forth using submersible pump/suction plate systems, that continuously removes settled grit from the tanks and transfers the grit to the grit dewatering processes consisting of spinning classifiers. The classified grit is dried and then sent off-site for disposal. The sewage flows from the grit removal system to a junction box and then to the PSTs. During this inspection, the floor of the grit removal area was observed to be free of debris.

The next area of evaluation was at the PSTs. Inspection found that the scum troughs at PST #8 and #11 are no longer clogged with scum.

During the site review, Timothy Simmons informed me that: PST #1 is a flow through and the arms are not working because of a torquing problem with the center drive. PST #2 is being renovated, and a new catwalk and center drive are being installed. PST #3 and #4 are under construction for refurbishing. PST #5 is a flow through. PST #6 is in disrepair and needs rehabilitation. PST #7 is out of service for elevation correction. PST #9 needs rehabilitation, and the center drive and arm center parts are in. PST #10 is a flow through because PST #7 is out of service.

The primary settling is the first stage of treatment after the removal of trash and grit in the headworks building. The PSTs are designed to settle and remove the solids or sewage sludge from the wastewater by gravity and remove the floating scum and fats oil and grease (FOG). Typically, PSTs are designed to remove a large percentage of the total suspended solids (TSS) and reduce the biochemical oxygen demand (BOD_5) of the wastewater. Therefore, it is important to maintain the PSTs in good condition at all times.

After primary settling, the wastewater flows to the flow distribution building and from there the wastewater flows to the Activated Sludge Plants #2, #3 and #4 containing a series of biological reactors for nitrogen removal. Each Activated Sludge plant has six reactors. Activated Sludge Plants #2 and #3 have a three-pass train designated A, B and C for each reactor and #4 is a two-pass system. Activated Sludge Plant # 4 is a newly constructed addition to the secondary biological treatment. Construction was initiated during the ENR upgrades to the Back River WWTP covered under Contract 882 of the previous consent agreement. There are a total of 36 secondary clarifiers. Each Activated Sludge Plant has 12 secondary clarifiers.

During the next phase of this evaluation, Activated Sludge Plant #4 and #2 were observed. Mixers were observed to be functioning at Activated Sludge Plant #4. Part of Activated Sludge Plant #2 is down for repairs. Mixers were observed to be functioning at the in service/operating areas of Activated Sludge Plant #2.

During evaluation of secondary clarifiers 10A, 8A, 5A, and 7A, no excessive vegetation was observed. Per discussion with Ronald Turner today 2/24/23, there are 6 secondary clarifiers that still have to be cleared of algae and vegetation.

The next stop was at the DNF building. There are four filter quads, and each quad contains 13 Tetra Dentification Filters with 52 total filters. Baltimore City has a contract with ProStart to operate and maintain the DNF treatment process.

During an inspection of the filters in quads #1 and #2, there were still floating solids observed in the filter at the end of the quad (also observed during inspection on 1/26/23). A temporary power line was observed to be in use for Quad 2.

2/24/23 Solids and trash floating on water surface in the DNFs.

During inspection, backwash clarifier #2 was observed. Next to backwash clarifier #2, solids and trash were observed on the ground. According to Timothy Simmons, the grit removal facility services the backwash clarifier. The dumpsters at the grit removal facility were observed to have little to no grit in them.

2/24/23 Solids and trash on the ground next to backwash clarifier #2.

2/24/23 Solids and trash on the ground next to backwash clarifier #2.

We then traveled to the sand filters. The functioning sand filters are used to polish the wastewater coming from the DNF. According to Timothy Simmons, currently 32 of the 48 sand filters are online and functioning. I observed no problems during inspection of the functioning sand filters.

Next, I inspected the final effluent at the step aeration system. During an evaluation of the final effluent, I observed that the effluent was clear with no visible particulates.

During an inspection of the chlorine contact chambers, I observed no problems. At the request of the Department, the Back River WWTP installed floating booms upstream of the final overflow to preventing floating scum and solids observed during previous inspections from discharging to the surface waters of the State. These booms were in place and functioning satisfactorily. There was no evidence of floating material breaching the final booms during this evaluation.

2/24/23 Final Effluent at the step aeration system.

Next, I observed the monitoring point for Outfall 002. Tradepoint Atlantic had problems with pumps and starting 1/10/23 ceased accepting wastewater from the WWTP until the problem was resolved. They began accepting wastewater again on 1/25/23. At the time of inspection today 2/24/23, Outfall 002 was not in service. According to Back River WWTP staff, Outfall 002 is not working and they are not diverting any flow to it.

After the site review, we went back to the administration building for an exit conference to discuss my findings with Ronald Turner and Andrea Buie.

Only well-trained, dedicated plant operators can be expected to perform adequate physical inspections, repairs, and preventive maintenance. The Back River WWTP should ensure that all staff is adequately trained and committed to the satisfactory operations of the treatment plant. Optimal maintenance activities at the Back River WWTP can be multifaceted and requires a variety of operator skills to be effective. Therefore, adequate staff and ongoing staff training are necessary. There has not been adequate long-term planning for staff replacement and system upgrades and changes at the Back River WWTP. Many of the skills necessary for routine and preventive maintenance at the site are not readily available and goes beyond the routine wastewater apprenticeship training programs. The Back River WWTP should develop a plan to ensure that there are sufficient staff that are qualified for assigned tasks. A staffing plan must be developed to access current staffing levels, required staffing needs and a projection of future staffing requirements in order to evaluate and identify staffing needs at the WWTP. This must be done to ensure that the WWTP functions efficiently and complies with General Condition B3a and b of the NPDES permit.

The following violations were observed under Environment Article Title 9 for the Back River WWTP:

1. Crucial equipment maintenance and repairs are not being performed by the Back River WWTP at the level necessary to efficiently operate and maintain the treatment works as detailed in this report. In addition, there is a list of equipment requiring maintenance listed under Equipment and Maintenance Projects in this report. The Back River WWTP has failed to provide enough qualified staff to adequately operate and maintain the WWTP. This is a violation of General Condition B3a and b of the NPDES permit, which specifies the following:
    - Facilities shall be operated efficiently to minimize upsets and discharges of excessive pollutants.
    - The permittee shall provide an adequate operating staff qualified to carry out operation, maintenance and testing functions required to ensure compliance with this permit.

2. An independent contractor has cleared vegetation and algae from some of the secondary clarifiers, but the vegetation has not been removed from all of the clarifiers and weirs. Therefore, not all of the secondary clarifiers are functioning as designed for optimal and efficient wastewater treatment. This is a violation of General Condition B3 of the NPDES permit.

3. There has not been adequate long-term planning for staff replacement and system upgrades and changes at the Back River WWTP. A staffing plan is necessary to determine the gap between current staffing levels and required levels to comply with General Condition B3a and b of the NPDES permit.

4. Specific quality assurance measures are not being performed to verify accuracy and precision of the field testing for TRC and DO.

5. GBTs #1, 2, 3 and 6 are not online and need specific repairs to function as designed.

6. The DAF tanks are not online for various reasons listed above.

7. The DO monitoring probes used to continuously monitor the DO in the biological reactors are not functional. According to Ronald Turner, the DO monitoring and other associated equipment have been ordered and Back River WWTP staff are waiting for parts.

8. There are solids and trash on the ground next to backwash clarifier #2.

To bring this site into compliance with Environment Article Title 9, the Back River WWTP should make the following corrections:

A. With respect to item #1 above, the Back River WWTP should immediately comply with the requirements under General Condition B3 of the NPDES permit and adequately operate and maintain the treatment works.

B. With respect to item #2 above, all vegetation should be removed from the secondary clarifiers and routine maintenance should be performed to prevent the recurrence of the problem to minimize upsets and discharges of excessive pollutants as required under General Condition B3 a and b of the permit. The Back River WWTP should continue to provide 30-day updates on the progress in achieving the goal of removing all vegetation from the secondary clarifiers and reactors.

C. With respect to item #3 above, the Back River WWTP should immediately submit to the Department a comprehensive staffing plan. The plan should be implemented by the date of submission to the Department to ensure that there is sufficient staff to comply with the requirements of General Condition B3b of the NPDES permit.

D. With respect to item #4 above, the Back River WWTP should ensure that the QA measures specified in Standard Methods 4020I are followed to comply with General Condition A3 of the permit.

E. With respect to item #5 above, the Back River WWTP should comply with General Condition B3 of the NPDES permit and immediately make plans to perform the necessary repairs to the 4 GBTs. In addition, the Back River WWTP should keep the Department informed on the status of the repairs to the 4 GBTs in the monthly status report to be submitted to the Department.

F. With respect to item #6 above, the Back River WWTP should comply with General Condition B3 of the NPDES permit and immediately make plans to perform the necessary repairs to the DAF tanks. In addition, the Back River WWTP should keep the Department informed on the status of the repairs in the monthly status report to be submitted to the Department.

G. With respect to item #7 above, the Back River WWTP should keep the Department informed monthly on the status of the replacement of the DO sensors and associated equipment necessary to automatically monitor and control the DO in the reactors at the activated sludge plants. All equipment necessary for treatment must be kept in satisfactory condition in order to comply with the requirements of General Condition B3 of the NPDES permit.

H. With respect to item #8 above, the Back River WWTP should remove and properly dispose of the solids and trash on the ground next to backwash clarifier #2.

STATE LAW PROVIDES FOR PENALTIES FOR VIOLATIONS OF MARYLAND ENVIRONMENT ARTICLE TITLE 9 FOR EACH DAY THE VIOLATION CONTINUES. THE DEPARTMENT MAY SEEK PENALTIES FOR THE AFOREMENTIONED VIOLATIONS OF TITLE 9 ON THIS SITE FOR EACH DAY THE VIOLATION CONTINUES.

Inspector: Samantha Coffman 3/21/23 Received by: _____

Samantha Coffman /Date
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410-537-4188

Signature/Date

_____
Print Name