Today on 4/22/22, Mr. Nick Kaltenbach from MDE’s Annapolis Field Office and I met at the Back River WWTP to collect samples at various locations at the treatment plant to compare with samples collected in Back River by Blue Water Baltimore (BWB). We met Mr. Ronald Turner and Ms. Betty Jacobs representing the Back River WWTP. During a preliminary meeting with Mr. Turner and Ms. Jacobs, I discussed the purpose of the visit and the locations of where we wanted to collect samples. After the meeting, Mr. Kaltenbach and I traveled to the first sampling point, the chlorine contact chambers, accompanied by Ms. Jacobs. When we arrived, there was an operator with a high-pressure hose hosing down the sand filter effluent basin. I asked the operator to stop washing down the basin so that we could sample at the end of the contact chamber. I observed floating solids that resembled the floating solids reported during the 3/22/22, 3/26/22 and 4/16/22
inspections. The solids were also in the chambers that overflow to the step aeration cascade to the river. I collected a sample of the floating solids and with Mr. Kaltenbach's assistance the sample was put into a wide-mouth sampling container. I also observed that there was no one skimming the floating solids as the Baltimore DPW had agreed to during the 4/18/22 weekly meeting.

4/22/22 Floating solids in contact chamber
4/22/22 Floating solids skimmed from chlorine contact chamber
The next sampling stop was at the secondary clarifiers. I observed the same floating material found at the chlorine contact chamber floating on the surface of the secondary clarifiers as well. (See picture below). I also observed floating vegetation and algae growing in the outer channel of 14 A secondary clarifier, which was recently cleaned by the permittee. The facility should ensure that this is vegetation is removed and kept under control to prevent process control issues.

Secondary clarifier 14 A was selected for the collection of the next sample. Mr. Kaltenbach collected a sample of the floating solids floating on the surface of the secondary clarifier 14A. The final two samples were collected with the assistance of one of the operators working in the area. Samples were collected from the sludge waste line and from the return activated sludge (RAS) line. The wasted sludge is dewatered through a series of processes and disposed of off-site. The sludge from the RAS is returned to the aeration tank of the biological reactors to reseed the new wastewater entering the reactors. This is done to prevent loss of microorganisms from the aeration tank and maintain an adequate population for treatment.
The two sludge samples were collected in an adjacent utility building. During the collection of the two sludge samples by the operator, a line broke and water started pouring into the basement of the utility building from the ceiling above. Later Ms. Jacobs informed me that it was not a major problem. She stated that the flushing line broke and she called in a work order to maintenance to make the repairs.

4/22/22 Floating vegetation in the secondary clarifier.

4/22/22 Floating solids in clarifier 14A similar to floating solids in the contact chambers
With respect to the above MDE authorization, the following violations were observed under Environment Article Title 9 for the Back River WWTP:

1. The Back River WWTP is allowing partially treated solid material to be discharged to the surface waters of the State due to operational and process equipment maintenance problems.

2. There was evidence of regrowth of vegetation or new growth as well as algae in the secondary clarifiers.

3. The floating solids were not being skimmed as agreed to by the Baltimore DPW.

In order 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 must ensure that floating materials and partially treated solids do not discharge to waters of the State.

B. With respect to item 2 above, algae and other vegetation must be removed from all clarifiers as necessary, and the areas must be properly maintained going forward. This is especially important as temperatures rise with the approach of the growing season.

C. With respect to item 3 above, the Back River WWTP must begin skimming the final effluent of floating solids and material prior to the step aeration cascade system.

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

Inspector: Ronald Wicks 4/24/22
Ron Wicks /Date
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410-537-3510

Received by: 04/26/2022

Signature/Date
RONALD TURNER
Print Name