

## **Maryland Department of Environment**

Water and Science Administration Compliance Program 1800 Washington Blvd, Suite 420 Baltimore, MD 21230-1719 410-537-3510, 1-800-633-6101

**Inspector:** Ronald Wicks

**AI ID:** 3076

Site Name: Patapsco WWTP

Facility Address: 3501 Asiatic Ave, Curtis Bay, MD 21226

**County:** Baltimore City County

Start Date/Time: October 06, 2021 9:19AM End Date /Time: October 11, 2021 5:19PM

Media Type(s): NPDES Municipal Major Surface Water

Contact(s):

Neal Jackson, Plant Manager

Eric Johnson, Wastewater Operations Supervisor Robert Lombardi, Wastewater Operations Engineer

### **NPDES Municipal Major Surface Water**

Permit / Approval Numbers: 15DP0580

NPDES Numbers: MD0021601

Inspection Reason: Follow-up (Non-Compliance)

Site Status: Active

Compliance Status: Noncompliance

Recommended Action: Continue Routine Inspection

Evidence Collected: Photos or Videos Taken, Record Review, Visual Observation

**Delivery Method:** Email **Weather:** Clear Average

#### **Inspection Findings:**

The Patapsco WWTP is a 73 MGD capacity activated sludge with a pure oxygen fed reactor biological treatment with ferric chloride for removal of phosphorus. The treatment system has been recently upgraded to ENR standards. There is chlorination, dechlorination and post aeration prior to final discharge to the surface water of the State.

The average flow is approximately 55-57 MGD; however, during heavy rainfall flows can reach 213 MGD from infiltration from sewer lines. The receiving water is the Patapsco River, protected for Use II, water contact recreation and the protection of aquatic life.

Today I performed a follow up inspection to non-compliances observed during a Performance Audit Inspection (PAI) conducted on May 6, 2021. On this date, I met Mr. Neal Jackson, Mr. Eric

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Johnson, Mr. Robert Lombardi, Mr. Anthony Mannon, Mr. Kevin McFadden, and Mr. Clarence Fcight, representing the permittee on-site for this evaluation.

During a preliminary meeting with the above individuals, I discussed the objectives of this inspection and what I expected to cover. I explained that the focus of the inspection is a field analysis and evaluation of operational and treatment processes and a discussion of the corrective actions taken to date to correct the deficiencies observed during the May 2021 inspection. The first topic of discussion was the media leakage problem from the ENR filters. The ENR filters used are Veolia Water technologies (VWT), biological activated filter (BAF). According to Mr. Jackson, the media leakage problem is still ongoing. The problem was first observed by the permittee in 2020 when it was reported that media was being lost at cell #5. On September 21, 2021, the facility took the ENR filters offline so that a contractor, VWT could assess the BAF system. According to Mr. Jackson, VWT isolated the area on both sides of cell #5 to try to stop the leakage. VWT also looked at the possibility that the problem was caused by a backwash cycle timing issue. According to Mr., Jackson, VWT is evaluating the program data from the BAFF system to determine if the backwash cycle is too long on cell #5 causing the media to be pulled out by the backwash suction force. Mr. Jackson stated that Patapsco staff are waiting for VWT to contact them with the results of the data evaluation. In the BAFF process, wastewater flows upwards through the cells that contain tightly packed media that provides a surface for the microorganisms to attach to and grow. Air is added to the bottom of the cell to provide oxygen for the microorganisms to thrive.

During the initial preparation for this inspection, I reviewed the DMRs and MORs for the past three months (July 2021 – August 2021). I found several effluent violations. These violations include total nitrogen, total phosphorous, total ammonia, enterococci, and total suspended solids (TSS). See Table 1 below. I discussed the violations with the above individuals. According to Mr. Jackson the nutrient violations were associated with the reduced performance of the Liquid Oxygen Plant. The Liquid Nitrogen Plant is not functioning properly due to equipment failures and is producing liquid oxygen at a reduced capacity. The facility is purchasing liquid oxygen from a private contractor, Praxair, daily but the purchased oxygen uses a different delivery system into the reactors that does not produce optimal O<sub>2</sub> concentrations in stage two of the biological process. Therefore, the aerobic microorganisms are not receiving the quality an amount of oxygen required for optimal performance. Baltimore City has received a quote from Southern Design to make the repairs. According to Mr. Jackson, the City is in the process of reviewing the quote.

Next, I discussed the TSS and enterococci violations. Mr., Jackson told me that the on-site private solids handling contractor, Synagro Inc., is having problems with equipment failures and as a result the solids are not being processed at a consistent rate and at the amount needed for satisfactory plant operations. This issue has caused a high solids blanket in the secondary clarifiers because wasting cannot be performed at the necessary level. The wasting of the sludge is dependent on solids processing. In addition, the high solids concentration in the effluent makes it more difficult to effectively disinfect the effluent. The facility must increase the chlorine concentration to ensure proper disinfection, and as a result, additional dechlorination chemicals are required, which has lowered the DO of the final effluent. However, the minimum DO concentrations for June through August 2021 are between 5.0 and 5.5 mg/L, which meets the permitted minimum DO concentration of 5.0 mg/L. Mr. Jackson indicated that since July, the facility has made some progress in reducing the solids in the secondary clarifiers.

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In addition, during a review of the NetDMR data, I observed that the permittee failed to report the monthly average and the maximum weekly average loadings and concentrations for TSS for the month of August 2021. The permittee reported those fields as "*Laboratory Error*". The permittee reported to the Department that a sample collected on 8/30/2021, for TSS and BOD had been improperly marked as samples for enterococcus. The laboratory was able to analyze the BOD sample within the holding time but failed to analyze the TSS sample within the 7-day holding time. However, the permittee should still report the monthly average and the maximum weekly average loadings and concentrations for TSS for the month of August 2021 excluding the 8/30/2021 sample result. The permittee should submit an amended DMR to report the missing data.

**Table 1 Effluent Violations June – August 2021** 

Date	Parameter	Result	Permit Violation	Permit Limitation
June	Enterococcus	April Geomean 41	Exceeded Monthly	35 MPN/100 mL
2021		MPN/100 mL	Geomean	
June 8-	TSS	Weekly Average	Exceeded Weekly	30 mg/L
14		Concentration 55	Average Concentration	
2021		mg/L		
June	TSS	Weekly Average	Exceeded Weekly	27,000 lbs.
2021		loading 31,732 lbs.	Average Loading	
June	Ammonia as	Monthly Average	Exceeded Monthly	6.3 mg/L
2021	N	Concentration 7.5	Average Concentration	
		mg/L		
June 8 -	Total	Weekly Average	Exceeded Weekly	3.0 mg/L
14	Phosphorous	Concentration 3.4	Average Concentration	
2021		mg/L mg/L		
June 8-	Total	Weekly Average	Exceeded Weekly	1,830 lbs.
14	Phosphorous	1,845 lbs.	Average Loading	
2021				
June	Total	56,900.0 lbs.	Exceeded the Season	33,330 lbs.
2021	Phosphorous		5/1-10/31 Limit in June	
			2021. Will continue to	
			exceed the seasonal	
_			limit until 10/31/2021	
June	Total	97,400 lbs. total	Exceeded the 2021	66,700 lbs./year
2021	Phosphorous	cumulative annual	total cumulative annual	
		loading for June	loading for 2021 in	
		2021	May 2021 and will	
			continue to exceed the	
T	m . 1	1 100 500 0 11	limit until 12/31/2021	000 200 11
June	Total	1,108,500.0 lbs.	Exceeded the total	889,300 lbs. annual
2021	Nitrogen		annual cumulative	
			loading for 2021. The	
			limit was exceeded in	

May 2021   Will continue to exceed the limit until 12/31/2021		I			
July					
Duly 2021   TSS				continue to exceed the	
Duly 2021   Phosphorous   Ph				limit until 12/31/2021	
Duly 2021   Phosphorous   Ph					
Concentration 34 mg/L   Second the second the season of the second the season of the	July	TSS	Monthly Average	Exceeded Monthly	30 mg/L
July 2021   Phosphorous   Total Phosphorous   134,800.0 lbs. total cumulative annual loading for July 2021   Phosphorous   2021   May 2021 and will continue to exceed the limit until 12/31/2021   Support 12/31/2021   Phosphorous   Phospho	_			Average Concentration	
July 2021   Phosphorous   Ph			mg/L		
Phosphorous   Cumulative annual loading for July 2021   May 2021 and will continue to exceed the limit until 12/31/2021   Exceeded Weekly Average Concentration 3.1 mg/L mg/L   Average Concentration 3.7 mg/L mg/L	July	Total		Exceeded the 2021	66.700 lbs./year
July   Second   July   Second   Secon			1		00,700 10511 7 041
July   South   July   South   July   July   Ammonia as   July	2021	1 nosphorous			
July 8 -   Total   Weekly Average   Exceeded Weekly   Average Concentration   Members   Member					
July 8 -   14,   Phosphorous   Concentration 3.1   mg/L mg/L   Monthly Average   Phosphorous   Concentration 3.7   mg/L mg/L   Monthly Average   Phosphorous   Concentration 3.7   Monthly Average   Phosphorous   Concentration 2.8   Monthly Average   Phosphorous   Monthly Average   Phosphorous   Concentration 2.8   Monthly Average   Phosphorous   Monthly Average   Exceeded Monthly   Average Concentration   2.0 mg/L			2021		
July 8 -   Total   Phosphorous   Concentration 3.1   mg/L mg/L     July 15					
14, 2021   202	<b>7.1</b> 0		*** 11 .		
Duly   15	_		, ,	1	3.0 mg/L
July 15	-	Phosphorous	Concentration 3.1	Average Concentration	
- 21, 2021       Phosphorous mg/L mg/L       Concentration 3.7 mg/L mg/L       Average Concentration       2.0 mg/L         July 2021       Total Phosphorous mg/L       Monthly Average Concentration 2.8 mg/L       Exceeded Monthly Average Concentration       2.0 mg/L         July 2021       Total Phosphorous Phosphorous Phosphorous       94,300.0 lbs.       Exceeded the Season 5/1-10/31 Limit in June 2021. Will continue to exceed the seasonal limit until 10/31/2021       33,330 lbs.         July Ammonia as 2021       Monthly Average Concentration 9.5 mg/L       Exceeded the Season 5/1-10/31 Monthly Average Concentration       6.3 mg/L         July Ammonia as 2021       Monthly Average Loading 4,140 lbs.       Exceeded Monthly Average Loading Signature Properties of the Season 5/1-10/31 Limit Will continue to exceed the Season 5/1-10/31 Limit Will continue to exceed the seasonal limit until 10/31/2021       333,330 lbs.         July Total Nitrogen       Nitrogen       1,301,500.0 lbs.       Exceeded the Season 5/1-10/31 Limit Will continue to exceed the seasonal limit until 10/31/2021       889,300 lbs. annual annual cumulative loading for 2021. The limit was exceeded in May 2021. Will continue to exceed the limit until 12/31/2021         July Enterococcus       March Geomean       Exceeded Monthly St MPN/100 mL			mg/L mg/L		
Duly	July 15	Total	Weekly Average	Exceeded Weekly	3.0 mg/L
Duly	-21,	Phosphorous	Concentration 3.7	Average Concentration	
Total Phosphorous   Monthly Average Concentration 2.8 mg/L	2021		mg/L mg/L		
Description   Phosphorous   Concentration   2.8 mg/L	July	Total		Exceeded Monthly	2.0 mg/L
July 2021 Phosphorous Phosphor	-	Phosphorous	, ,	1	
July   Phosphorous   Phospho		1		8	
Phosphorous   S/1-10/31 Limit in June 2021. Will continue to exceed the seasonal limit until 10/31/2021     July	July	Total		Exceeded the Season	33,330 lbs.
July Ammonia as Nonthly Average Concentration  July Ammonia as Nonthly Average Exceeded the Season 5/1-10/31 Monthly Average Concentration  July Ammonia as Nonthly Average Exceeded Monthly Average Concentration  July Ammonia as Nonthly Average Exceeded Monthly Average Loading Notation Since Si	_		7 1,2 0 0 10 10 1		
Sulphane   Concentration   Exceeded the Season   Concentration   Sulphane   Exceeded the Season   Sulphane	2021	Thosphorous			
Suly   Ammonia as   Monthly Average   Exceeded the Season   S/1-10/31 Monthly   Average Concentration					
July 2021   Ammonia as Nonthly Average Concentration 9.5   S/1-10/31 Monthly Average Concentration     July 2021   Ammonia as Nonthly Average Exceeded Monthly Average Concentration     July 2021   Total Nitrogen   S16,400 lbs.     July 2021   Total Nitrogen   I,301,500.0 lbs.     July 2021   Total Nitrogen   I,301,500.0 lbs.     July 2021   Total Nitrogen   I,301,500.0 lbs.     July 2021   Indicate the seasonal limit until 10/31/2021     July 2021   Indicate the seasonal limit was exceeded in May 2021. The limit was exceeded in May 2021. Will continue to exceed the limit until 12/31/2021     July 2021   July 2021   Indicate the seasonal limit until 12/31/2021     July 2021   July 2021   Indicate the seasonal limit until 12/31/2021     July 2021   July 2021   Indicate the seasonal limit until 12/31/2021     July 2021   July 2021   Indicate the seasonal limit until 12/31/2021     July 2021   July 2021   July 2021   Indicate the seasonal limit until 12/31/2021     July 2021   July 2021   July 2021   July 2021   Indicate the seasonal limit until 12/31/2021     July 2021   July 2021   July 2021   July 2021   July 2021     July 2021   July 2021   July 2021   July 2021   July 2021     July 2021   July 20					
2021 N   Concentration 9.5 mg/L   Average Concentration     July	Inly	Ammonia as	Monthly Average		6.3 mg/I
July 2021Ammonia as NMonthly Average Loading 4,140 lbs.Exceeded Monthly Average Loading3,836 lbs.July 2021Total Nitrogen516,400 lbs.Exceeded the Season 5/1-10/31 Limit Will continue to exceed the seasonal limit until 10/31/2021333,330 lbs.July 2021Total Nitrogen1,301,500.0 lbs.Exceeded the total annual cumulative loading for 2021. The limit was exceeded in May 2021. Will continue to exceed the limit until 12/31/2021889,300 lbs. annualJulyEnterococcusMarch GeomeanExceeded Monthly35 MPN/100 mL			, ,		0.5 mg/L
July 2021Ammonia as NMonthly Average Loading 4,140 lbs.Exceeded Monthly Average Loading3,836 lbs.July 2021Total Nitrogen516,400 lbs.Exceeded the Season 5/1-10/31 Limit Will continue to exceed the seasonal limit until 10/31/2021333,330 lbs.July 2021Total Nitrogen1,301,500.0 lbs.Exceeded the total annual cumulative loading for 2021. The limit was exceeded in May 2021. Will continue to exceed the limit until 12/31/2021889,300 lbs. annualJulyEnterococcusMarch GeomeanExceeded Monthly35 MPN/100 mL	2021	IN .		_	
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JulyTotal 2021516,400 lbs.Exceeded the Season 5/1-10/31 Limit Will continue to exceed the seasonal limit until 10/31/2021333,330 lbs.JulyTotal Nitrogen1,301,500.0 lbs.Exceeded the total annual cumulative loading for 2021. The limit was exceeded in May 2021. Will continue to exceed the limit until 12/31/2021889,300 lbs. annualJulyEnterococcusMarch GeomeanExceeded Monthly35 MPN/100 mL					3,830 108.
Nitrogen    S/1-10/31 Limit Will continue to exceed the seasonal limit until 10/31/2021    July			-		222 220 11
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July Total 1,301,500.0 lbs. Exceeded the total annual cumulative loading for 2021. The limit was exceeded in May 2021. Will continue to exceed the limit until 12/31/2021  July Enterococcus March Geomean Exceeded Monthly 35 MPN/100 mL	2021	Nitrogen			
July Total 1,301,500.0 lbs. Exceeded the total annual cumulative loading for 2021. The limit was exceeded in May 2021. Will continue to exceed the limit until 12/31/2021  July Enterococcus March Geomean Exceeded Monthly 35 MPN/100 mL					
July 2021Total Nitrogen1,301,500.0 lbs.Exceeded the total annual cumulative loading for 2021. The limit was exceeded in May 2021. Will continue to exceed the limit until 12/31/2021889,300 lbs. annualJulyEnterococcusMarch GeomeanExceeded the total annual cumulative loading for 2021. The limit was exceeded in limit until 12/31/2021					
Nitrogen  annual cumulative loading for 2021. The limit was exceeded in May 2021. Will continue to exceed the limit until 12/31/2021  July Enterococcus March Geomean Exceeded Monthly 35 MPN/100 mL					
loading for 2021. The limit was exceeded in May 2021. Will continue to exceed the limit until 12/31/2021  July Enterococcus March Geomean Exceeded Monthly 35 MPN/100 mL	_		1,301,500.0 lbs.		889,300 lbs. annual
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JulyEnterococcusMarch GeomeanIimit until 12/31/2021Exceeded Monthly35 MPN/100 mL				1	
July   Enterococcus   March Geomean   Exceeded Monthly   35 MPN/100 mL					
	Julv	Enterococcus	March Geomean		35 MPN/100 mL
	2021		108.0 MPN/100 mL	Geomean	

August, 2021	Total Nitrogen	608,200.0 lbs.	Exceeded the Season 5/1-10/31 Limit Will continue to exceed the seasonal limit until 10/31/2021	333,330 lbs.
August, 2021	Total Nitrogen	1.393,300.0 lbs.	Exceeded the total annual cumulative loading for 2021. The limit was exceeded in May 2021. Will continue to exceed the limit until 12/31/2021	889,300 lbs. annual
August, 2021	Total Phosphorous	121,400.0 lbs.	Exceeded the Season 5/1-10/31 Limit in June 2021. Will continue to exceed the seasonal limit until 10/31/2021	33,330 lbs.
August, 2021	Total Phosphorous	161,900.0 lbs. total cumulative annual loading for August 2021	Exceeded the 2021 total cumulative annual loading for 2021 in May 2021 and will continue to exceed the limit until 12/31/2021	66,700 lbs./year
August, 2021	Total Phosphorous	Monthly Average Concentration 2.1 mg/L	Exceeded Monthly Average Concentration	2.0 mg/L
August, 2021	TSS	Monthly Average loading	Failed to report the Monthly Average loading to NetDMR	
August, 2021	TSS	Maximum weekly average loading,	Failed to report the Maximum weekly average loading to NetDMR	
August, 2021	TSS	Monthly Average Concentration	Failed to report the Monthly Average Concentration to NetDMR	
August, 2021	TSS	Maximum weekly average concentration	Failed to report the Maximum weekly average concentration to NetDMR	

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After the meeting, I conducted a site analysis starting at the headworks accompanied by Mr. Jackson, Mr. Johnson, Mr. Mannon, Mr. McFadden, and Mr. Feight,

The facility has two influent lines, domestic, which is 90% - 95% of the flow and industrial, which makes up the remaining 5% - 10% of the flow. The domestic waste enters the plant at the grit building where there are six grit chambers. Five of the chambers were in service during this inspection. The industrial flow and domestic flow are measured individually by separate venturi meters with secondary totalizing units and then the two waste streams combine at the fine screen building. The facility generates 60-70 tons of grit per month, which is landfilled off site. The sewage travels from the grit chambers to the fine screening units.

When I got to the fine screening building, I observed that there was debris and other waste on the ground outside, around the fine screening building. Some of the debris appear to have come from the fine screening building. Housekeeping practices at the roll-off area around the Fine Screen building must be improved. The area must be cleaned and kept clean. This should be addressed in the facility's SWPPP because there is a storm drain that discharges to the surface waters adjacent to the area.

The facility has eight screening units, four for each of the two trains. During my inspection of the fine screening units, I found that there were no changes from the May 6, 2021, inspection. However, the system was overwhelmed with collected trash on this occasion. The trash conveyors and collection hoppers were being overfilled with trash. The debris from the screens was falling off the conveyor belts and the trash collection hoppers were being overfilled. The current screening system alone at this point is not able to manage the incoming trash. The permittee should manually assist with maintaining the trash to prevent backups in the system. According to Mr. Johnson, the City has appropriated the funds to upgrade the bar screens by replacing all the internal parts and installing a more effective wash system. In addition, the conveyor belts will be replaced, and a new skirting system will be installed.



10/6/2021 Bar Screen units.



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10/2/2021 Trash collection hopper in fine screen building

The wastewater travels from the fine screening to the primary settling tanks (PST) for initial settling of the solids. The plant has six primary settling tanks with 3 passes. The bottom sludge from the tanks is gathered by screw collectors at the bottom of the tanks and collected in hoppers and then sent to gravity thickeners. During an inspection of the PSTs, I found that there was a significant improvement from my observations during the May 6, 2021, inspection. Today, all the PSTs were in operation. The scum and FOG solids that had clogged the system have been vacuumed out of the PSTs allowing the wastewater to freely flow through all the PSTs. Now that the scum and FOGs have been removed the skimmers can be manually turned on four of the PSTs. The permittee is using nets to skim the remaining PSTs. When I asked how often the skimmers are checked and turned, I was told every day, however the operator who turns the skimmer stated that he checks every other day. Mr. Jackson stated that there may be an operator on another shift that also checks and turns the skimmers. The satisfactory collection and elimination of FOG from the wastewater is an important process at the primary treatment stage. There should be a schedule designating when the skimmer should be checked and skimmed. The permittee should maintain a log showing date, time, name of the person who checks and turns the skimmers and skims with net each of the skimming units. The plant manager should determine how often the units should be checked and turned, however at minimum it should be at least once per day. During the inspection of the PSTs, I observed one skimmer that needed attention due to the floating scum that needed to be cleared from the trough. Mr. Jackson asked one of the operators to take care of the problem. Some of the skimming is done using nets. I observed that during the net skimming the scum/FOG

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that is collected is dumped on the walkway deck. This waste should be placed in a collection container or trash can for proper disposal to prevent reentry back into the system.



10/6/2021 PST now cleared of FOG and other solids



10/5/2021 PST requiring attention.



10/4/2021 Skimming the FOG/scum

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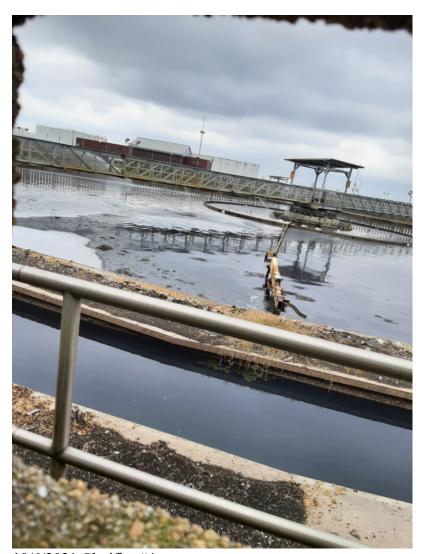
10/6/2021 Skimmed waste being dumped on the deck of the PST

The wastewater leaves the primary settling tanks and flows to high-pressure oxygen reactors. Each of the six settling tanks has an associated reactor. In the oxygen activated sludge reactor process, the first stage receives no oxygen and oxygen is added to the second stage to maintain a dissolved oxygen concentration of at minimum 6.0 mg/l up to 12.0 mg/L. As previously mentioned above, the on-site liquid oxygen plant is operating at a reduced capacity due to equipment problems and failures. The facility is not able to inject the purchased liquid oxygen with the same pressure as can be done using the onsite oxygen plant and because of this the second stage dissolved oxygen can only reach 5.0 mg/L, which is under the minimum 6.0 mg/L required for second stage nitrification in the biological treatment. Under normal operation with the oxygen plant in operation, the second stage DO is monitored by the operators and adjusted as necessary. The waste streams from reactors are split between eight secondary clarifiers. During this inspection, clarifiers #3 and #6A were out of service. Two of the RAS pumps on #6A were out of service. According to Mr. Johnson, there are no replacement parts for the 4 large clarifiers, however contract SC457 was approved to refurbish the large clarifiers. I observed that the skimming arm on clarifier #5A was broken and required repairs and clarifier # 4 had dried media with vegetation growing on the weir cover. The skimmer arm on clarifier #5A should be repaired and the media and vegetative growth should be removed from clarifier #4.



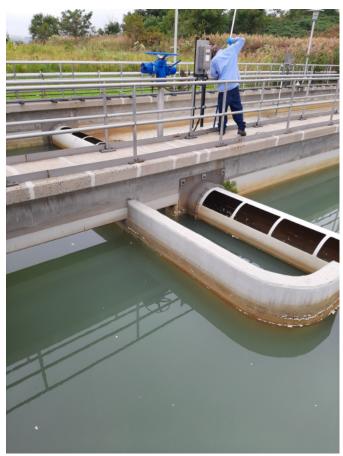
10/6/2021 Clarifier 5A

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10/6/2021 Clarifier #4

Next, I inspected the chlorine contact basins prior to the final discharge. There are 4 contact chambers and 3 of the 4 are currently online. Each contact chamber has 3 scum logs to remove floating scum. Moreover, because of fluctuations in flow, the scum logs must be manually raised and lowered according to the water level. I observed that an operator was at the contact basins collecting the floating scum using a net and monitoring the active scum log. The scum logs can only be used at one chlorine contact chamber at a time because the amount of collected scum overwhelms the system when the scum logs for two or more chambers are used simultaneously. The scum pit fills faster than it can be pumped off causing additional problems. The facility should find a way to ensure that all scum logs can be used concurrently. The facility should either invest in a larger scum pit or find a way to effectively pump out the scum from the scum pit using additional pumps or a pump that can keep up with the incoming scum going to the scum pit.



10/6/2021 operator manually skimming at the contact chamber

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10/6/2021 Final effluent.

The ENR filter building was the last stop during the site review. The facility has 22 biological aerated filters (nitrification and de-nitrification filters). As mentioned above, filter cell #5 has been identified as the malfunctioning cell that is leaking media. During the backwash procedure, I observed what appeared to be media going over the weir. Residual media can be seen on the horizontal beam in the backwash chamber.



10/6/2021 ENR Biological Aerated filter system

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10/6/2021 In the backwash chamber- filter media on center horizontal beam

After the site review, we returned to the administration building where I discussed my findings with by Mr. Jackson, Mr. Johnson, Mr. Mannon, Mr. McFadden, and Mr. Feight.

# With respect to the above MDE authorization, the following violations were observed for the Patapsco WWTP under Environment Article Title 9:

- 1. There have been a series of effluent violations for the period of my review, which were caused primarily by operational and maintenance problems.
- 2. The permittee is currently addressing performance problems with the High-Pressure Oxygen Plant, RAS pump failure on the out of service #6A clarifier, leaking media from the #5 biological aeration filter #5 and problems with the solids handling contractor, Synagro Inc. not being able to process solids at the level necessary for proper plant performance.
- 3. The permittee failed to report the monthly average and the maximum weekly average loadings and concentrations for TSS for the month of August 2021.
- 4. There was debris and other waste on the ground outside, around the fine screening building.
- 5. There was a large amount of debris and trash on the conveyor belts and hoppers in the fine screen building.

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6. The frequency of the checking and manual skimming of the PSTs was not definitely confirmed

- 7. The scum/FOG that is collected during the skimming with the nets is being dumped on the walkway deck
- 8. The scum logs can only be used at one chlorine contact chamber at a time because the amount of collected scum overwhelms the system when the scum logs for two or more chambers are used simultaneously.

To bring this site into compliance with Environment Article Title 9, the following corrections should be made by the Patapsco WWTP:

- A. With respect to item 1 above, the permittee should ensure that all process equipment is maintained appropriately, and routine service and preventative maintenance is performed to ensure satisfactory operation of the treatment works to ensure compliance with the effluent limitations of the permit. The permittee should make every effort to comply with the permit limitations.
- B. With respect to item # 2 above, the Patapsco WWTP should keep the Department informed on the status of the repairs and corrective actions taken to address the major problems with plant performance due to equipment failures, maintenance and process problems.
- C. With respect to item #3, within 30 days of the receipt of this report, the permittee should submit an amended DMR and report the monthly average and the maximum weekly average loadings and concentrations for TSS for the month of August 2021
- D. With respect to item #4 above, Housekeeping practices in the area around the fine screening building must be improved. The area should be cleaned and maintained free of debris that could compromise stormwater runoff. This should be addressed in the facility's SWPPP.
- E. With respect to item #5 above, the trash and debris in the fine screening building should be evaluated and addressed as necessary to ensure that the area is managed properly.
- F. With respect to item #6 above, there should be a schedule designating when the skimmers should be checked and manually skimmed. The permittee should maintain a log showing date, time, name of the person who checks and turns the skimmers and skims with a net at each of the skimming units.

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G. With respect to item #7 above, skimmed material should be placed in collection containers and disposed of properly.

H. With respect to item #8 above, FOG in the Patapsco River is a continuing problem, the permittee should find a way to address this problem as soon as possible considering the options mentioned above.

FOG in the influent has been a major problem that also needs to be addressed. Special Condition H states that "The permittee shall operate and maintain the pretreatment program in accordance with COMAR 26.08.08, the General Pretreatment Regulations for Existing and New Sources of Pollution (40 CFR Part 403) and the approved pretreatment program submission as approved on August 7, 1985, by the Department. The program must be updated if needed to comply with COMAR 26.08.08 or 40 CFR Part 403 or modifications to the State of Maryland Publicly Owned Treatment Works (POTW) Pretreatment Delegation Agreement signed on March 18, 2002. The terms of the POTW Pretreatment Delegation Agreement are expressly incorporated herein as if set forth in full.

Under 40 CFR Part 403, EPA has promulgated General Pretreatment Regulations that require the pretreatment programs to control pollutants which pass through or otherwise be incompatible with such works or interfere with POTW treatment processes. To meet these requirements may require detailed investigation or evaluation of FOG from food service establishments. The Pretreatment Program regulations at 40 CFR 403.5(b)(3) prohibit "solid or viscous pollutants in amounts which will cause obstruction" in the POTW and its collection system. The Patapsco WWTP should evaluate the pretreatment program to ensure that the program is effectively managing the compliance status of food service establishments and other IU to ensure compliance with 40 CFR Part 403.

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

Inspection Item	Status	Comments
Does the facility have a discharge permit?	No Violations	
	Observed	
Is the discharge permit current?	No Violations	
	Observed	
If the permit is not current, has facility applied	No Violations	

Inspection Date: Site Name: Facility Address: October 06, 2021 Patapsco WWTP

3501 Asiatic Ave, Curtis Bay,MD 21226

Inspection Item	Status	c water - Inspection Checklist  Comments
for renewal?	Observed	
Does the facility operate as authorized bytheir	No Violations	
current permit?	Observed	
Has the Permitee exceeded the permitted	No Violations	
capacity of the WWTP?	Observed	
Is the number and location of discharge points	No Violations	
as described in the discharge permit?	Observed	
Has permittee submitted correct name and	No Violations	
address of receiving waters?	Observed	
Is the permittee meeting the compliance	No Violations	
schedule per permit requirements?	Observed	
Has the operator or superintendent been	4 - Not	
certified by the Board in the appropriate	Evaluated	
1 1 1	Evaluated	
classification for the facility?	4 Not	
Are adequate records being maintained for the		
sampling date, time, and exact location;	Evaluated	
analysis dates and times; individual		
performing analysis; and analytical results?	4 37 /	
Are adequate records being maintained for the		
analytical methods/techniques used?	Evaluated	
Does the permittee retained a minimum of 3	No Violations	
years worth of monitoring records including	Observed	
raw data and original strip chart recordings;		
calibration and maintenance records; and		
reports?		
Do lab records reflect that lab and monitoring	4 - Not	
equipment are being properly calibrated and	Evaluated	
maintained?		
Does the permittee/laboratory use suitable	4 - Not	
QA/QC procedures and operate a formal	Evaluated	
quality assurance (QA) program using		
appropriate controls?		
Has the permittee submitted the monitoring	No Violations	
results on the proper Discharge Monitoring	Observed	
Report form?		
Do the Discharge Monitoring Reports reflect	Out of	See narrative section
permit conditions?	Compliance	
Has the permittee submitted these results	No Violations	
within the allotted time electronically?	Observed	
Is the facility being properly operated and	Out of	Funding issues regarding operations and maintenance See
maintained including:(a) stand-by power or	Compliance	Narrative
equivalent provisions available, (b) adequate		
alarm system for power or equipment failure		
available, (c) all treatments units are in		
service, .		

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Inspection Item	Status	Comments
Is sewage sludge managed correctly per	No Violations	
permit requirements?	Observed	
If a by-pass occurred since last inspection, has	No Violations	
the permittee submitted notice of the by-pass	Observed	
within the allotted time?		
If a non-complying discharge occurred since	No Violations	See Narrative
the last inspection, was the regulatory agency	Observed	
notified within the allotted time?		
If applicable, has the permitee complied with	Out of	See Narrative
all special conditions of their permit?	Compliance	
Have overflows occurred since the last	4 - Not	
inspection?	Evaluated	
Have records of overflows been maintained at	4 - Not	
the facility for at least five years?	Evaluated	
Are flow measuring devices properly installed	4 - Not	
and operated, calibration frequency of flow	Evaluated	
meter adequate, flow measurement equipment		
adequate to handle expected ranges of flow?		
Are discharge monitoring points adequate for	No Violations	
representative sampling?	Observed	
Do parameters and sampling frequency meet	No Violations	
the minimum requirements?	Observed	
Does the permittee use the method of sample	No Violations	
collection required by the permit?	Observed	
Are analytical testing procedures used	No Violations	
approved by EPA?	Observed	
If alternate analytical procedures are being	No Violations	
used, has proper approval been obtained?	Observed	
Has the permittee notified the Department of	No Violations	
the name and address of the commercial	Observed	
laboratory?		
Were discharges observed at the authorized	No Violations	
outfalls?	Observed	
or receiving waters have any visible	Observed	
pollutants observed?		
Were discharge samples collected?	No Violations	
	Observed	
Does this facility have coverage under a a	No Violations	
NPDES stormwater discharge permit?	Observed	
If the permittee has coverage under a NPDES	4 - Not	
storm water permit, has a storm water	Evaluated	
pollution prevention plan been developed and		
implemented as required?		
Are the permit conditions being met?	Out of	See Narrative

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Inspection Item	Status	Comments
	Compliance	

Ronald Wicks 10/11/2021 Ron, Wicks/Date ron.wicks@maryland.gov 410-537-3510	Received by: _	Signature/Date	
	_	Print Name	
	Ron, Wicks/Date ron.wicks@maryland.gov	Ron, Wicks/Date ron.wicks@maryland.gov	Ron, Wicks/Date ron.wicks@maryland.gov 410-537-3510  Signature/Date