

CITY OF BALTIMORE
BRANDON M. SCOTT,
Mayor



DEPARTMENT OF PUBLIC
WORKS
BUREAU OF WATER AND
WASTEWATER
YOSEF KEBEDE, PE
BUREAU HEAD
200 HOLLIDAY STREET, 3RD FLOOR
BALTIMORE, MARYLAND 21202

June 13, 2022

Via Electronic Mail

Ms. Sharon Talley
Chief
Enforcement Division, Compliance Program
Water Management Administration
Maryland Department of the Environment
1800 Washington Blvd.
Baltimore, MD 21230

Mr. Ronald Wicks
Administrator V
Water and Science Administration
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, Maryland 21230

RE: Patapsco Wastewater Treatment Plant (WWTP) Constituent Sampling

Dear Ms. Talley and Mr. Wicks:

This letter responds to your request made during our recent virtual meeting, held Thursday, June 9th, 1:30 p.m., on the topic of constituents observed in wastewater at Baltimore City's ("Baltimore" or the "City") Patapsco Wastewater Treatment Plant (WWTP). The City has recently conducted testing for gasoline range organics (GRO), toluene, and diesel range organics (DRO) as documented in Attachment A. You requested a summary of the City's plan to conduct additional sampling and forensic analysis to locate and mitigate the constituents.

As discussed in our meeting, the City intends to begin a sampling process and forensic analysis with the objective to identify and mitigate the source of these constituents. WWTP personnel have determined that the constituents originate from one of the two distinct areas that convey wastewater to the plant. This area includes about 10 percent of the total WWTP sewershed drainage area and drains to the WWTP through the Industrial Plant Influent Low Level Interceptor (IPI).

The City plans to proceed with the following sequential steps:

1. Conduct wastewater sampling and laboratory testing of the two branches of the IPI (Figure 1) to determine which, or if both, branch areas exhibit the constituents of concern. The City will conduct this sampling the week of June 13, 2022 and expects to receive results within 3 weeks.
2. Based on (1), conduct forensic interpretation analysis of the laboratory results to determine if exploratory data analysis and chemical pattern recognition can lead to identifying likely sources of the constituents. The City has compiled and mapped the following entities within the sewershed drainage area as possible constituent sources:
 - a. Standard Industrial Unit facilities (pre-treatment requirements)
 - b. EPA North American Industry Classification System Codes 447 (gasoline stations)
 - c. EPA Underground Storage Tank (UST) records
 - d. Alternative Fuel Stations
 - e. All industrial zoned parcels.
3. Conduct additional sampling as needed to further refine the location of source(s).



Figure 1 – Initial Sampling Locations

Ms. Talley and Mr. Wicks

June 13, 2022

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Please contact me directly with any questions or concerns.

Regards,



Michael Hallmen
Division Chief
Wastewater Facilities Division
Bureau of Water and Wastewater
Baltimore City DPW

Attachments

cc: Mr. Jason W. Mitchell
 Mr. Yosef Kebede, P.E.
 Mr. Mohammed Rahman
 Mr. Darnell Ingram
 Mr. Timothy Wolfe, P.E.
 Mr. David M. Wood, P.E.
 Mr. Lee Currey, MDE

Attachment A

June 9, 2022

Location: Patapsco WWTP
Subject: Hydrocarbon Sampling Campaign

Mr. Kebede,

Hazen and Sawyer engineers and scientists have been maintaining a sample collection and analysis campaign since February 2, 2022, to test for gasoline range organics (GRO), toluene, and diesel range organics (DRO) at the Patapsco WWTP. Samples were collected on Feb 2, March 4, April 12, and every Thursday of June and will continue on a weekly basis.

Thus far, all samples have been collected from inside the gates at the treatment plants and consist of the following locations and matrices. (A figure illustrating the current sampling locations is provided on the follow page.)

- Plant influent at Southwest Diversion (SWD) - liquid
- Plant influent at the Screen Room (IPI) – liquid
- Combined influent (CI) - liquid
- Primary sludge (PS) - sludge
- Waste activated sludge (WAS) - sludge
- Gravity sludge thickener #2 (GST) - sludge
- Synagro Influent Sludge (SBT) - sludge
- Synagro dewatered cake (Cake) - soil
- Synagro dewatering process centrate (Centrate) - liquid

All samples are collected, preserved, transported to Microbac Laboratory in Baltimore, MD according to following EPA protocols.

- EPA 8015D for gasoline range organics (GRO)
- EPA 8260D for toluene
- EPA 8015D for diesel range organics (DRO)

Due to the nature of the investigation, a representative from Syangro has also been accompanying Hazen staff to oversee sample collection protocol and collect their own samples for identical analysis at ALS Laboratories in Baltimore, MD. Results from the ALS and Microbac Laboratories have generally been in agreement, with deviations not exceeding 10%.

Please contact Aaron Thomas (Arthomas@hazenandsawyer.com) with any questions.

Regards,



Charles Portner

